



WIRELESS SERVICES (SMALL CELLS) DESIGN MANUAL

As presented at the
Transportation and Municipal Infrastructure
Council Committee Meeting
May 9, 2017

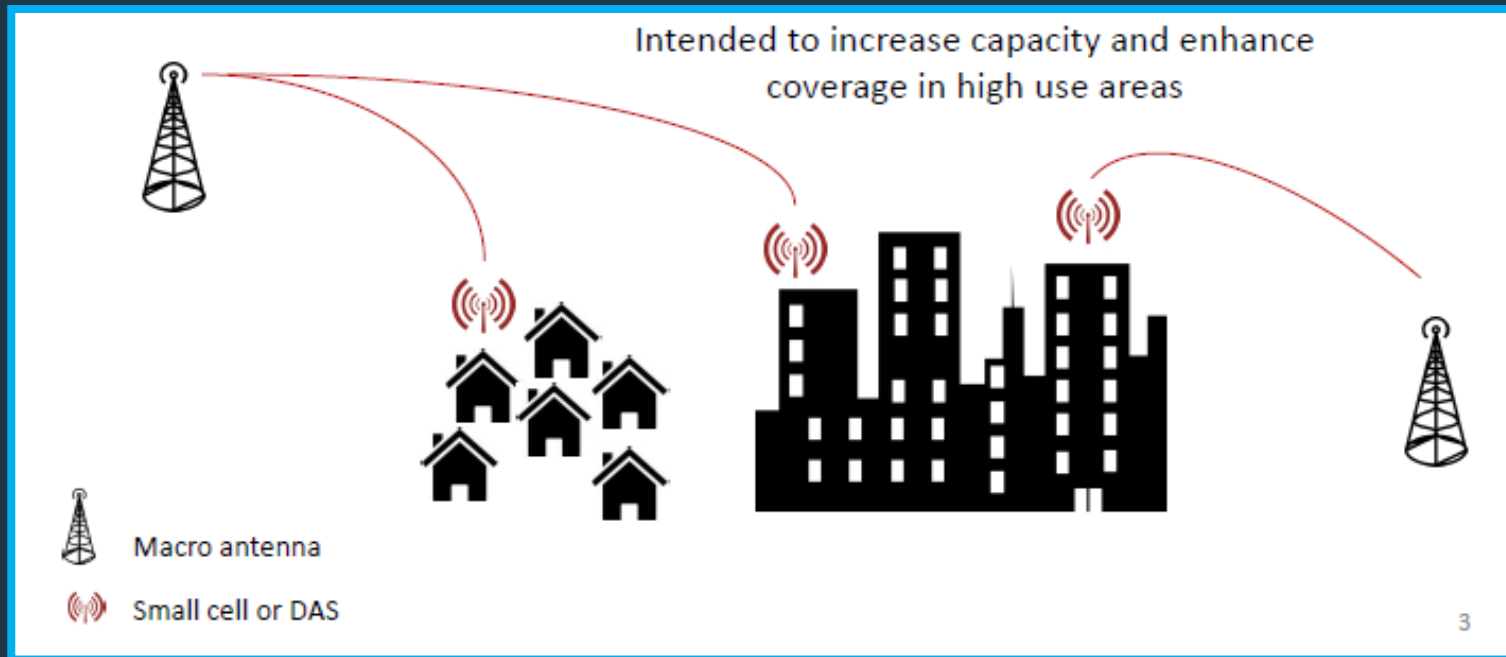
North Central Texas Council of Governments
Public Right-of-Way Roundtable
June 26, 2017





WHAT ARE SMART CELLS?

- ❖ Mobile phone and voice and data relays placed strategically to add capacity, **increase data speeds** and enhance area coverage.



PROPOSED LEGISLATION - HB 2838



- ❑ Pre-emption of local authority to regulate City ROW
- ❑ Allows easy deployment “network nodes” from cell phone providers.
- ❑ Limits fees that municipalities can collect (permit fees, annual rates)
- ❑ Allows attachments on any type of poles located within public ROW



PROPOSED LEGISLATION - HB 2838 (CONTD)



Chapter 284. Deployment of Network Nodes in Public Right-of-Way

ALLOWS FOR:

1. Attachment of network nodes on existing poles
2. Add new poles and attach network nodes



PROPOSED LEGISLATION - HB 2838 (CONTD)



Chapter 284. Deployment of Network Nodes in Public Right-of-Way

□ Network Nodes

| Antenna without exposed elements | Antenna with exposed elements |
|--|---------------------------------------|
| Inside enclosure of up to 6 cu.ft. | Imaginary enclosure of up to 6 cu.ft. |
| Up to 3 ft above existing pole | Up to 3 ft above existing pole |
| Protrude up to 2 ft from the pole | Protrude up to 2 ft from the pole |
| Other Wireless Equipment associated with Network Node, attached to pole | |
| (i) Up to 28 cu.ft. | |
| (ii) Up to 5 ft tall | |
| (iii) Protrude up to 2 ft from the pole | |
| Ground-based Enclosures , separate from pole | |
| (i) Height up to 3'6" from grade | |
| (ii) Width up to 3'6" | |
| (iii) Depth up to 3'6" | |

PROPOSED LEGISLATION - HB 2838 (CONTD)



Chapter 284. Deployment of Network Nodes in Public Right-of-Way

- ❑ Advance approval required from the City to install new poles/attachment on decorative poles or in historic districts.
- ❑ New Poles
 - Height shall not exceed the greater of:
 - (i) No greater than 10 feet in height above the tallest existing utility pole located within 500 linear feet of the new pole in the same ROW; or
 - (ii) 50 feet above grade
 - Not allowed in ROW < 50' wide, and adjacent to SF/MF residential lots developed or undeveloped.

PROPOSED LEGISLATION - HB 2838 (CONTD)



Chapter 284. Deployment of Network Nodes in Public Right-of-Way

□ Sec. 284.108. DESIGN MANUAL.

- (a) A municipality may adopt a design manual for the installation and construction of network nodes and new node support poles in the public ROW that includes **additional installation and construction details** that do not conflict with this chapter.



DESIGN MANUAL - RECOMMENDATIONS

- Design criteria
- Application requirements




EXHIBIT "A"
CITY OF ARLINGTON
PUBLIC RIGHT-OF-WAY/EASEMENT CONSTRUCTION
PERMIT APPLICATION

Through the Contractor acting as an agent, the Service Provider shall perform all work in the public right-of-way/public easement in accordance with City ordinances, specifications, and standards as they apply to such work. No change shall be made to the plans under this permit without prior written approval from the City. **The Service Provider/Contractor must obtain a permit prior to commencing work. Permits are valid for 90 days.**

- **THIS FORM MUST BE COMPLETELY FILLED OUT PRIOR TO APPROVAL OF PERMIT.**
- Line locates must be obtained prior to construction. **Give 2 Working Days Notice**
 Water & Sanitary Sewer <http://www.arlington-tx.gov/water/line-locate-process/>
 Signals, Flashers, Street Lights & Fiber 817-459-5400
 Median and Parkway Irrigation 817-575-8308
- The City of Arlington Right-Of-Way Permit Inspector must be notified at rowinspector@arlingtontx.gov at least 48 hours prior to beginning construction.
- **(4) FOUR PLAN SETS must be attached.** The City of Arlington cannot provide copies for the applicant.
- A copy of this permit must be maintained on site at all times.

SERVICE PROVIDER:
The undersigned hereby makes application for a permit covering the proposed work at:
 Project Work Dates: Start Date: _____ Completion Date: _____
 Beginning Street Address / Cross Streets: _____
 Ending Street Address / Cross Streets: _____


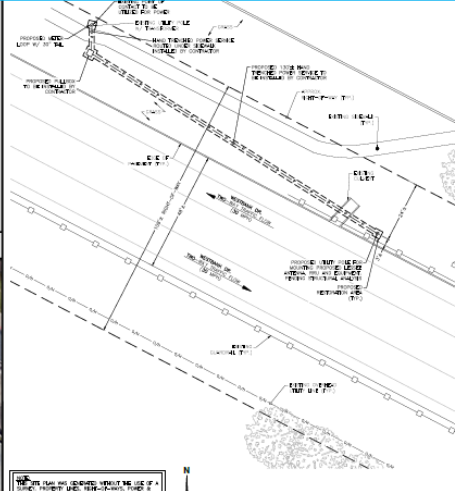



EXHIBIT PHOTO
SCALE: NOT TO SCALE

1




ENLARGED SITE PLAN
SCALE: 1/8" = 1'-0" (SEE SHEET SP-1)

3



AERIAL SITE LOCATION
SCALE: NOT TO SCALE

2



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DESIGN MANUAL - RECOMMENDATIONS



□ Attachment to Existing Poles

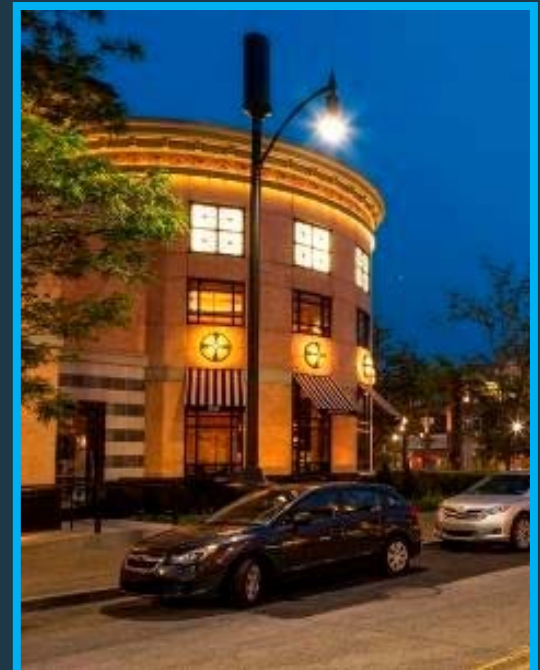
| Design Criteria | Application Requirements (ROW Permit & Electrical Permit) |
|--|---|
| Above ground facilities – concealed/enclosed as much as possible | Aerial Map & Street View |
| No aerial wires | Sealed engineering plans for structural stability |
| Electric meter – not to be mounted on pole | Scaled drawings of proposed above ground and under ground |
| Comply with visibility and accessibility standards, and not obstruct sidewalks | Before and after image/drawing |
| Vertical clearance & spacing | Interference analysis with existing |
| Color – to match existing pole color | |



DESIGN MANUAL - RECOMMENDATIONS

On Decorative poles

- Conceal
- Stealth pole



DESIGN MANUAL - RECOMMENDATIONS



□ New Poles

| Design Criteria | Application Requirements (ROW Permit, Commercial Building Permit, and Electrical Permit) |
|---|--|
| Wooden poles prohibited. Break-away poles; black powder-coated | Aerial Map & Street View |
| Above ground facilities – concealed/enclosed as much as possible | Sealed engineering plans for structural stability (Will require building permit) |
| Electric meter shall not be mounted on the pole | Scaled drawings of proposed above ground and under ground |
| Comply with visibility and accessibility standards, and not obstruct sidewalks | Before and after street view image |
| Vertical clearance | Interference analysis with existing |
| | Spaced at least 300' of another capable pole |



DESIGN MANUAL - RECOMMENDATIONS

- New poles encouraged to be shroud



WIRELESS DESIGN MANUAL



- ❑ Abandonment of network nodes and support poles
 - Relocation and removal at provider's expense
 - Restoration of ROW and infrastructure if damaged

- ❑ Other items covered:
 - Signage
 - Repair
 - Graffiti abatement
 - Inventory
 - Coordination with public works-meter key
 - Node support poles and ground equipment no closer than 2' from ROW line



Questions?