
WELCOME

CPS Energy Quarterly Pole Attachment Workshop

January 25, 2018

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



HOUSEKEEPING

- **Sign-up Sheets**
- **Restrooms**
- **Evacuation / Staging**
- **Introductions in the room**



A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



SAFETY



.....

AFFORDABLE | RELIABLE | INNOVATIVE



PURPOSE OF TODAY'S WORKSHOP

- Provide update on the various initiatives of the CPS Energy Pole Attachment Program
- Continue constructive dialogue with Attaching Entities and have transparency

STATEMENT OF PURPOSE

- Applicable to all communications providers and other stakeholders for attachment of Communications Facilities, Wireless Installations, and Banner Attachments, CPSE Standards provide for a non-discriminatory, consistent, and streamlined approach for the access and use of CPS Energy Poles in a manner that will facilitate the delivery of the variety of communication services offered today, as well as to assist with speed-to-market processes for future technologies in a manner that is consistent with the safe and reliable operation of CPS Energy Facilities.

A F F O R D A B L E ∴ R E L I A B L E ∴ I N N O V A T I V E



TODAY'S AGENDA

CPS Energy
Quarterly Pole Attachment Workshop - January 25, 2018

CPS Energy EMC Auditorium
4514 Frank Bryant – San Antonio

Agenda #	Item	Presenter	
1	Welcome, Introductions & Safety	Jesse Lopez	10:00 – 10:10 am
2	Pole Attachment Webpage, Standards & Application Submittal	Jesse Lopez	10:10 – 10:25 am
3	Work Manager – CSI Program update & Business Case Authorization (BCA)	Jesse Lopez	10:25 – 10:35 am
4	Wireless – Pre-Certification & permitting	Jesse Lopez	10:35 – 10:45 am
5	Small cell installation process update & lessons captured in revised standards	Jesse Lopez	10:45 – 11:05 am
6	Wireless Standards next steps	Jesse Lopez	11:05 – 11:15 am
7	Discussion of Wireless Agreements Update	Gabriel Garcia	11:15 – 11:25 am
8	Banner Attachment Standards update	Gabriel Garcia	11:25 – 11:35 am
9	Discussion of Ongoing Pole Attachment Inventory	Claudia Valles-Tovar	11:35 – 11:45 am
10	Issues / Concerns	Jesse Lopez/Attendees	11:45 – 12:00 pm
11	Open Discussion / Questions	Attendees	12:00 – 12:30 pm
12	Mobilitie presentation	Celinda Gonzalez	12:30 – 12:50 pm
13	Final Wrap-up	Jesse Lopez	
14	Adjourn		

A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



POLE ATTACHMENT WEBPAGE

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



WEBSITE LAYOUT

Pole Attachment Services

CPS Energy Pole Attachment Program

CPS Energy's distribution system can facilitate the delivery of the variety of communication services offered today.

With a streamlined pole attachment process, we're dedicated to partnering with companies to assist with speed-to-market processes for future technologies.

CPS Energy's Pole Attachment Services Office is the single point of contact for all who wish to attach infrastructure to our distribution poles.

The Pole Attachment Services Office is responsible for:

- Registration
- Attachment agreements
- Applications for new pole attachments or removals
- Surveys of existing attachments
- Billing and collections for all the above services

For questions or more information on the pole attachment process, [SEND US AN EMAIL](#).

CPS Energy has released for the revised Pole Attachment Standards (the "Standards") today, December 6, 2017, which include the revised Wireless Attachment Standards and the addition of Banner Attachment Standards. CPS Energy continues to work diligently with stakeholders to ensure the Pole Attachment Standards improve operations for all attaching entities.

Part of our goal is also to improve communications with our stakeholders through quarterly workshops and by soliciting written comments to draft revisions to the Standards. We remind you that the principles of Safety, Reliability, and Customer Service, which guide our Pole Attachment Services Department, also guided the development of the proposed revisions to the Standards.

CPS Energy Pole Attachment Standards version 3.0 will become effective January 1, 2018. . The revised Pole Attachment Standards will be posted on the Pole Attachment Services page on CPS Energy's public website (www.cpsenergy.com/poleattachments). We will also post the redlined version on the CPS Energy website that shows the major additions and revisions to the Standards as a guide to assist stakeholders in understanding the proposed changes.



Pole Inventory Project

WEBSITE LAYOUT

Future Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop: Jan 25 2018
- ▶ Quarterly Pole Attachment Workshop: Apr 12 2018
- ▶ Quarterly Pole Attachment Workshop: Jul 26 2018
- ▶ Quarterly Pole Attachment Workshop: Nov 8 2018

[Map of Meetings/Workshops](#)

Previous Meetings/Workshops

- ▶ Quarterly Pole Attachment Workshop Nov 15 2017
- ▶ Quarterly Pole Attachment Workshop: May 11 2017
- ▶ Quarterly Pole Attachment Workshop: Aug 15 2017
- ▶ Quarterly Pole Attachment Workshop: Feb 16 2017
- ▶ EUCI Pole Attachment CPSE Case Study: Jan 2017
- ▶ Quarterly Pole Attachment Workshop: Nov 14 2016
- ▶ Quarterly Pole Attachment Workshop: Aug 22 2016
- ▶ Technical Workshop: Jul 11 2016
- ▶ Technical Workshop: Jun 2 2016
- ▶ Quarterly Pole Attachment Workshop: May 19 2016
- ▶ Quarterly Pole Attachment Workshop: Feb 17 2016

Pole Attachment Standards

- ▶ Pole Attachment Standards - V3 - Effective Jan 1 2018
- ▶ CPSE Pole Attachment Standards-V2-Effective Jan 1 2017
- ▶ CPS Energy FCC Rate Calculation Support Jan 2017
- ▶ Pole Attachment Unit Pricing - Effective Jan 1 2017

Pro Forma Agreements

- ▶ Standard Pole Attachment Agreement (Pro-Forma) Revised July 2016
- ▶ Wireless Addendum Final Revised Dec 2016
- ▶ Wireless Installation Agreement Final Revised Dec 2016
- ▶ Infrastructure Provider Sublicensee Wireless Installation Agreement Final Version Dec 2016

Helpful Links

- ▶ Certificate of Authority (City of San Antonio)
- ▶ NJUNS
- ▶ NEW! Approved Contractors
- ▶ Pole Inspection Guidelines

Special software is required to open PLA Client File links.

Forms

- ▶ A1 Registration and Annual Reporting Form
- ▶ B1 Standard Pole Attachment Application
- ▶ B2 Standard Wireless Installation Application
- ▶ B3 Banner Attachment Application
- ▶ B4 Request for Pre-Certification of Wireless System
- ▶ B5 Request for Waiver of Applicable Engineering Standards
- ▶ B7 Request for Temporary Attachment
- ▶ B8 Completion of Attaching Entity Construction
- ▶ B14 Pole Attachment Standards Revision Request (PASRR)
- ▶ B15 Pole Attachment Standards Revision Request (PASRR) Form

A F F O R D A B L E

R E L I A B L E

I N N O V A T I V E



APPROVED CONTRACTORS



Approved Pole Attachment Contractors



Engineering

Alan Plummer
BHC Rhodes
Byers Engineering
CCE Services, Inc.
Cobb Fendley
Merrick & Company
New Comm Technologies
Power Engineers, Inc.
Spectrum
Telcom Staffing, LLC
Texas Utility Engineering, Inc.
TRC, Inc.
Utilimap Corporation
Utilis Engineering

Electrical Distribution Construction

5-Star Electric
Canfer Utility Services
Chain Electric
L.E. Myers Co
Pike Electric
T&D Solutions

One-Touch Transfer Construction

A2 Total Telecom Services LLC
ADB Companies
B Robinson Inc.
BComm Constructors, LLC
Ervin Cable Construction, LLC
JC Communications
Quest Utility Construction, Inc.
S&S Cable Communications
Tero Technologies Inc.
TEXSTAR Enterprises, Inc.
TX Superior Communications, LLC

Vegetation Management

Asplundh Tree Expert
Davey Tree Surgery
McCoy Tree Surgery

A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



POLE ATTACHMENT STANDARDS

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



PROGRAM PRINCIPLES AND VALUES

Safety

Reliability

Customer Service



A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



STANDARDS AND APPLICATION PROCESS

- **Complete pre-certification activities prior to submitting pole attachment application.**
- **Submission of Pole Attachment Application for small cell installation:**
 - Complete application may be submitted to poleapplications@cpsenergy.com
 - Complete applications include engineering design documents for the proposed small cell installation, including any make-ready/upgrade construction GIS designs.
- **Submission of Application for Electric Service for small cell installation:**
 - Complete application may be submitted to ce@cpsenergy.com

CSI PROGRAM ROADMAP

Long-Term Solution Strategy

Next Generation Solution Implementation

2016

Improve CPS Energy Date Management & Customer Commitments

- Proactive delivery of accurate Information
- Renewed commitment to roles & responsibilities for process
- Addition of Executive Account Directors
- Development of RFP for Long-Term Work Management Solution

2017

Enhance the Customer Experience & Satisfaction with CPS Energy New Construction Services & Processes

- Enhanced process that incorporates the pre-application stages of the customer relationship
- Enhanced Web enabled business service execution process
- Selection and Initiation of Business Processes for Next Generation Work Management Implementation

2018

A Proactive, Next Generation Customer Experience for New Construction

- Proactive engagement with Customers early in the new development process
- Proactive promotion of energy services & products to Customers at the conceptual stage of new developments
- New Solution Capabilities
- On-site design & estimation with the customer
- On-site customer commitment & payments capabilities
- Deployment of Next Generation Work Management

2019

A F F O R D A B L E R E L I A B L E I N N O V A T I V E



WORK MANAGER – CSI UPDATE

Construction Service Improvement

JAN. 2018

Happy New Year!

The CSI Team has been working hard to continue to improve your customer web portal. We're excited to let you know we are working on some new features you've been asking for.



New features coming:

MORE ACCESS



- More straightforward pre-application process
- Role-based security and access for your staff and contractors
- Access to view and modify work at the project level
- Applications for more work types of work and services

BETTER NOTIFICATION



- Ability to monitor and update tasks without having to login to the office
- Accessibility no longer limited to just a desktop
- Can be used by CPS Energy staff and Customers
- Email notifications of major milestones
- Choose communication types that best suit your for the milestone of your choice

PROJECT UPDATES



- Ability to manage and monitor updates and delays
- To easily identify and monitor delayed projects and work request
- Get email notifications with updates for delayed projects

CPS ENERGY INVOICES



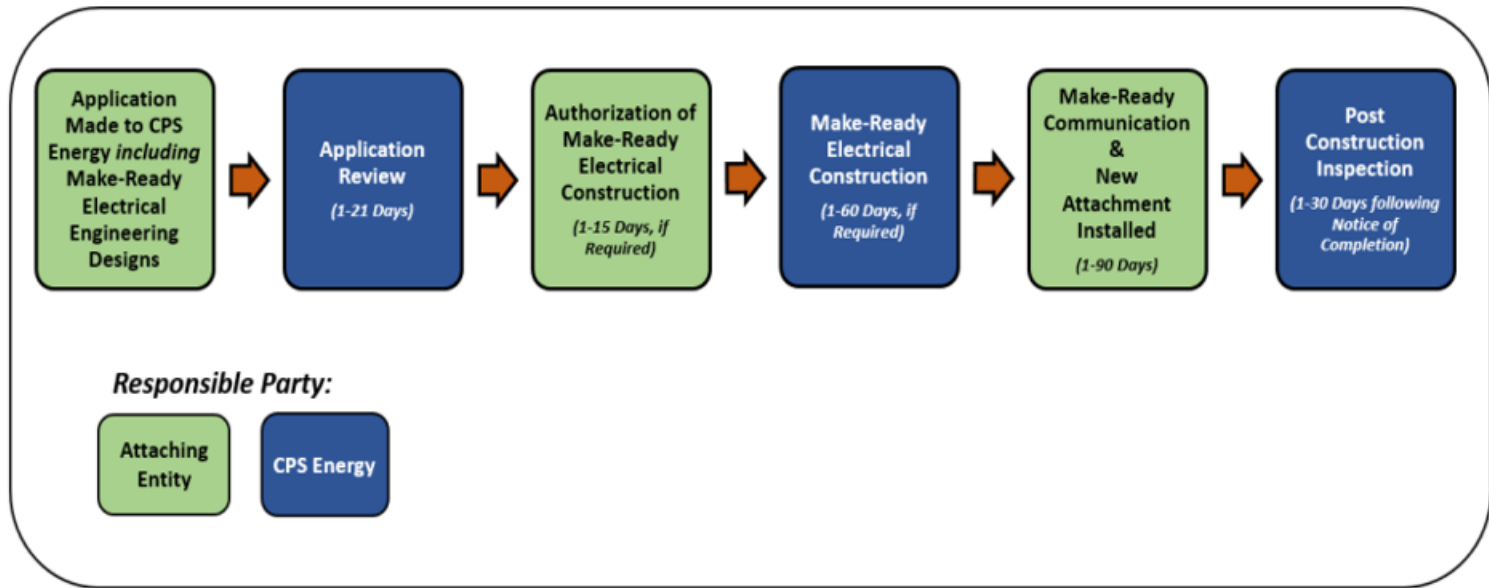
- Get access to construction charges and invoicing
- Increase payment options
- Notification when projects invoice is available
- Ability to securely pay invoices online
- Ability for specified registered users to view invoices online



To help us continue to improve, your feedback will be crucial during the months of development.

Stay tuned for more feedback session coming soon.

VISIBILITY OF APPLICATION

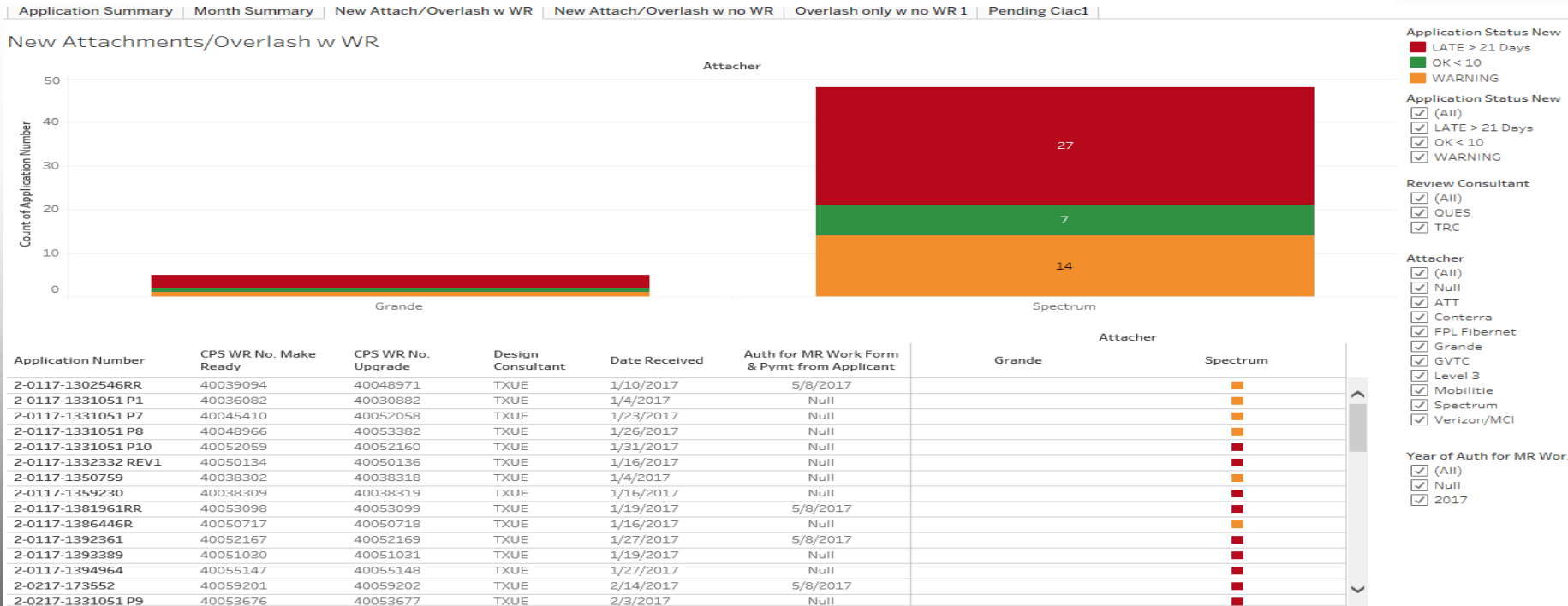


A F F O R D A B L E . . . R E L I A B L E . . . I N N O V A T I V E



DASHBOARDS

- Adoption of Business Case Authorization:
 - Introduces electronic process to create the BCA and Work Orders per application
 - Improves visibility of application status regardless of Make Ready work
 - Enhances oversight and management application process through reports and dashboards



WORK MANAGER – PROCESS

- **If electrical make-ready work is required, a work request number must be provided on the pole attachment application**
- **Pole ID numbers on the permit application**
 - If a number is not in the field, find it in GIS. Shouldn't leave that field blank
- **Wait until CPS Energy receives payment for the work request (Task 3100 and 9200) before emailing the supervisor that Task 5000 is ready for approval**
- **Designer needs to update and revise the “required completion date” to reflect 60 days for construction complete before submitting work order to supervisor approval (Task 5000)**
- **Applicants to start creating their own Business Case Authorization**
 - Completed applications may be submitted to ce@cpsenergy.com

WIRELESS STANDARDS AND PROCESS UPDATE

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



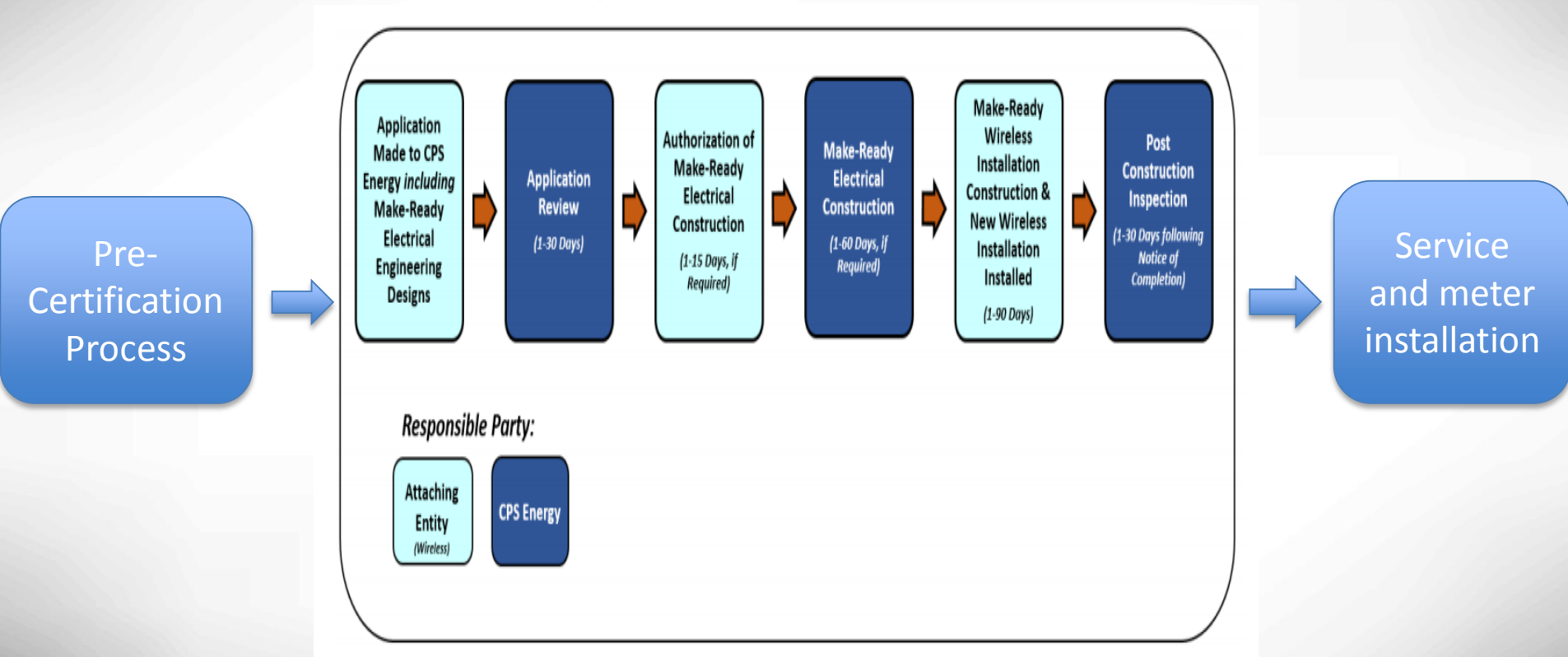
PRE-CERTIFICATION FORM SUBMITTAL

- **Attaching Entity shall submit a report certifying FCC OET 65 compliance for each applied or licensed Wireless Installation location**
- **Report must contain:**
 - A Statement of Compliance (or non-compliance)
 - Date of the report
 - Date of statement of compliance
 - CPS Energy Pole Number proposed for the Wireless Installation
 - Attaching Entity's site or identification number for the installation
 - Calculation of RF power at the transmitter or Remote Radio Heads
 - Calculation of RF power at the Antennas
 - Location of the applicable signage with above ground level height listed
- **Submittal to poleapplications@cpsenergy.com**

SMALL CELL PRE-CERTIFICATION ACTION ITEMS

- Design of small cell assemblies and mock-up for CPS and TRC review and approval
- Node/hot spot locations determined by small cell owner
- Ideal pole selected within node area and coordinates determined
- Submit coordinates to CPS/TRC to schedule formal site-walks and fill out Joint Field form
- Submit application to customer engineering for service to small cell before side-walk to include the ROW permit and address
- Perform side-walks to determine placement for all equipment location from where to draw power to small cell
 - Include all parties... CPS Energy, TRC, wireless provider, engineering firm, City of San Antonio (or relative jurisdiction)
- Radio Frequency/Intermodulation analysis of these locations in relation to the CPS zones
- Submit pole attachment applications with small cell pole loading analysis and power design for CPS approval
 - Includes field measurements, pole loading calculations, all relative CPS work requests for pole upgrade/make ready designs

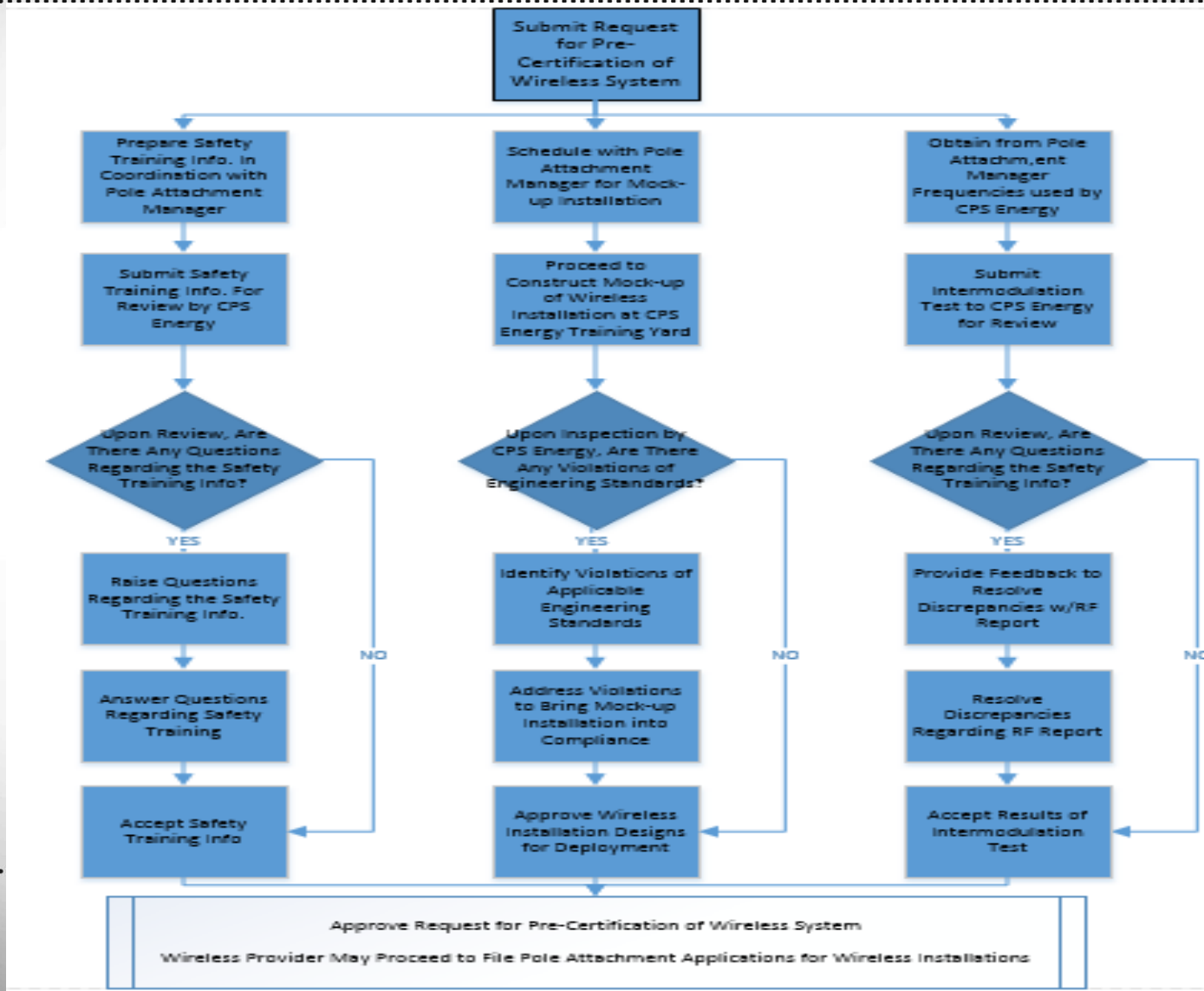
STANDARD PROCESS FOR SMALL CELL INSTALLATIONS



A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



PRE-CERTIFICATION PROCESS-POLE ATTACHMENT SERVICES



SERVICE & METER PROCESS-CPS ENERGY CUSTOMER ENGINEERING

- **Wireless Provider Duties**

- Pre-Certification Activities:

- Obtain address for pole site
- Coordinate joint meeting at pole site with CPSE Construction Services
- Submit request for electric service

- Construction Activities:

- Agree to expenses associated with installing facilities to provide electricity
- Electrician to build meter loop
- Coordinate city code inspection of meter loop equipment and get inspection permit from City of San Antonio

- **Customer Engineering Duties**

- Pre-Certification Activities:

- In-take of electric service request
- Establish service account for pole site under internal process
- Attend joint meeting at pole site

- Design/Construction Activities:

- Engineering design to provide electric service to pole site
- Provide invoice/receive payment for the installation of facilities to provide electricity
- Construction crews will construct and complete facilities to provide electricity at pole site
- City of San Antonio sends permit approval to CPS Energy
- Release service and meter request to install meter and energize facilities

SMALL CELL INSTALLATION- CPS ENERGY & COSA PERMITTING APPROVALS

- **Small cell attachment design approval (CPSE Pole)**
 - CPSE Pole Attachment Services pre-certification process
 - **Electric service for small cell installation (any pole)**
 - CPSE Customer Engineering
 - **Pole Attachment Permit for small cell (CPSE pole)**
 - CPSE Pole Attachment Services
 - **Addressing for pole site (any pole)**
 - City of San Antonio (COSA) Development Services Department (or equivalent local jurisdiction)
 - **Small cell Right of Way permit (any pole)**
 - City of San Antonio (COSA) Right of Way Management Office
 - **Inspection for Electric service (any pole)**
 - City of San Antonio (COSA) Development Service Department
 - **Post inspection for Small cell installation (CPSE pole)**
 - CPSE Pole Attachment Services
 - **Inspection for Small cell installation in Right of Way (any pole)**
 - City of San Antonio (COSA) Right of Way Management office
-

SMALL CELL SITE COORDINATION PROCESS UPDATE

- **Process for each proposed wireless installation to include five parties:**
 - City of San Antonio ROW Management Offices
 - City of San Antonio Development Services Department
 - CPSE Pole Attachment Services
 - CPSE Customer Engineering
 - Wireless Providers
- **Small cell installation site considerations:**
 - Wireless providers to schedule meetings with CPSE representatives and COSA to discuss proposed sites
 - Joint field survey by Wireless Provider and CPS Energy (Pole Attachment Services and Customer Engineering) at each proposed pole site or wireless project area
 - City of San Antonio regulations and community considerations to establish type of installation in Right of Way
 - Pole mounted vs Padmount equipment cabinets
 - Customer owned pole options wood vs steel
 - ROW aesthetic considerations-stealth pole options
 - CPSE Customer Engineering to verify and approve service delivery at proposed pole site
 - CPSE Pole Attachment Services
 - Pre-certification application completion
 - Mock up installation-approval of proposed small cell design
 - Review and approval of Small cell pole attachment application

A F F O R D A B L E ∴ R E L I A B L E ∴ I N N O V A T I V E



NETWORK NODE - JOINT REVIEW FORM



Wireless Installation: Preliminary Joint Field Survey Form:

CPS Energy Pole Attachment Services & Customer Engineering

It is the responsibility of the wireless provider to coordinate the joint review field meeting with all parties as required.

It is the responsibility of the wireless provider to submit the necessary pole attachment application and the electric service application for review and approval. This form is utilized only as a preliminary review of the proposed site prior to submittal of applications.

- **Completed form shall be submitted to CPS Energy as part of application process**
- **Copy of completed form shall be submitted to City as part of ROW Permit process**

Section 1: ROW Permit Information:

ROW permit # _____

Site Location Description (attach map):

Wireless Equipment, Cabinet, and Metering Type (Wireless provider shall include CPS Energy Customer Engineering in joint review field meeting for all services):

- Pole mounted (standard) Slab/Pad (requires City approval)

Is Electric Line Extension Required?

- Yes No

If yes, extension type (Requires City approval):

- Overhead Underground

Section 2: Proposed Wireless Equipment Installation:

Municipal Pole (Traffic Signal, Ped Illumination, other) (Wireless provider shall include the City and CPS Energy Customer Engineering representative in joint review field meeting if the proposed installation is on a City owned pole):

CPS Energy Pole (Wireless provider shall include CPS Energy Pole Attachment Services and CPS Energy Customer Engineering in joint review field meeting if the proposed installation is on a CPS Energy owned pole):

AT&T Pole (Wireless provider shall include CPS Energy Pole Attachment Services and CPS Energy Customer Engineering in joint review field meeting if the proposed installation is on a CPS Energy owned pole):

- AT&T with electric AT&T no electric

Wireless Provider Node Support Pole (Wireless provider shall include CPS Energy Customer Engineering in joint review field meeting)



IMPORTANT GOALS OF THE STANDARDS

- Stakeholders must recognize that there is a substantial amount of upfront work to be completed prior to the submission of a wireless application as part of the pre-certification process.
 - CPS Energy and stakeholders must implement a cooperative process to efficiently address the upfront work in order to avoid future problems during the design and construction phases of the project.
 - Establish a streamlined process that ensures non-discriminatory treatment of all stakeholders.
 - Give stakeholders options for different small cell installation scenarios.
 - Communication is key to achieve these goals.
-



REVISED WIRELESS STANDARDS-MOCK UP INSTALLATIONS

- **The revised Pole Attachment Standards became effective January 1, 2018, which include the revised Wireless Attachment Standards**
- **Pole Attachment Services will have to work with Wireless Providers to do mock-ups of their proposed small cell installations at the EDS training grounds per the new revised Standards**
- **CPS Energy has developed the Standards with options for the wireless providers small cell installations:**
 - **Mid-Pole**
 - **Mid-span**
 - **Pole-Top Space**
 - **Pole mounted equipment cabinet**
 - **Slab mounted equipment cabinet**
 - **Node Support Pole**

CONSTRUCTION CREW BRIEFINGS OF WIRELESS STANDARDS

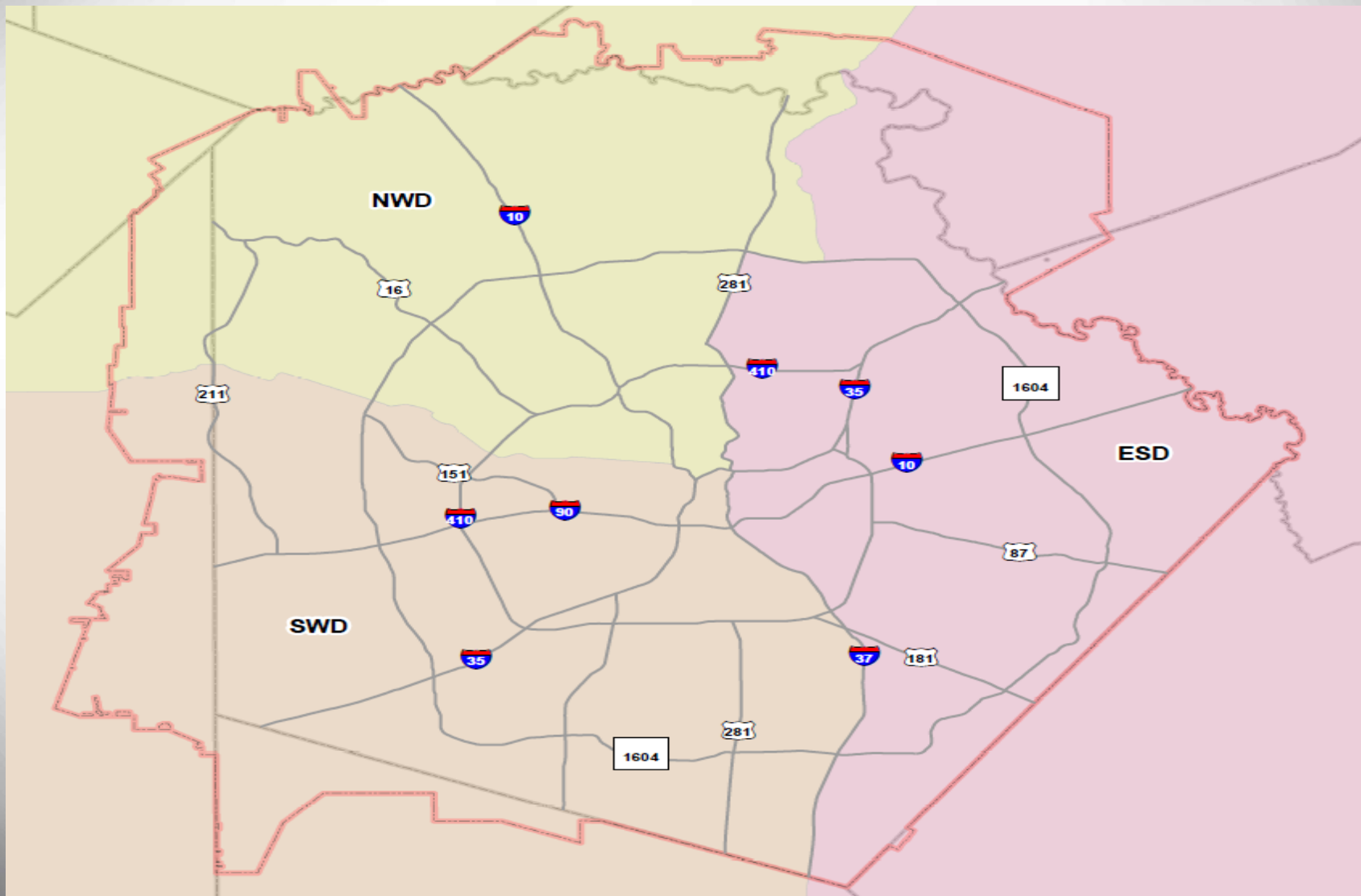
- Pole Attachment Services has completed briefings of the revised wireless standards to the three CPSE service centers
- The briefing included the approved small cell pole attachment installation designs for the following providers:
 - Mobilitie (T-Mobile)
 - Mobilitie (Sprint)
 - AT&T Mobility
 - Verizon (Node Support Pole)



A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



CPS ENERGY SERVICE DISTRICT BOUNDARIES



LESSONS LEARNED

- Reality: Communications Contractor \neq Electrician
 \neq Linemen



A F F O R D A B L

T I V E



CPS ENERGY APPROVED ELECTRICAL DISTRIBUTION CONSTRUCTION CONTRACTORS

- Any Pole-top space antenna installation will require one of the following contractors to install and maintain these type antennas on any CPSE pole

<i>Electrical Distribution Construction</i>
5-Star Electric Canfer Utility Services Chain Electric L.E. Myers Co Pike Electric T&D Solutions



A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



MID-POLE SMALL CELL INSTALLATIONS

- Wireless providers deploying mid-pole small cell installations may use their own communication contractors.



A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E

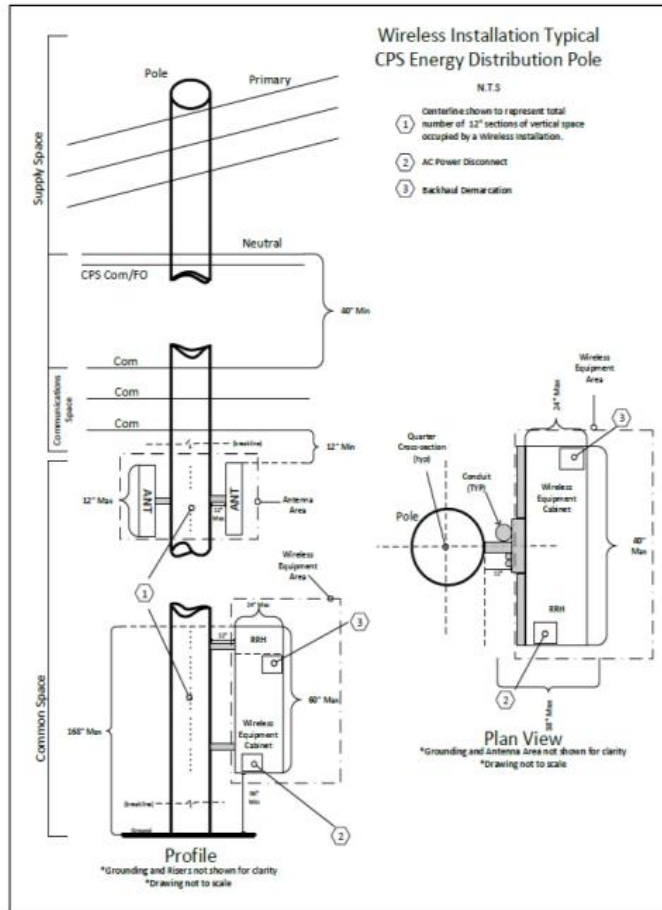


DRAWINGS- BEFORE & AFTER

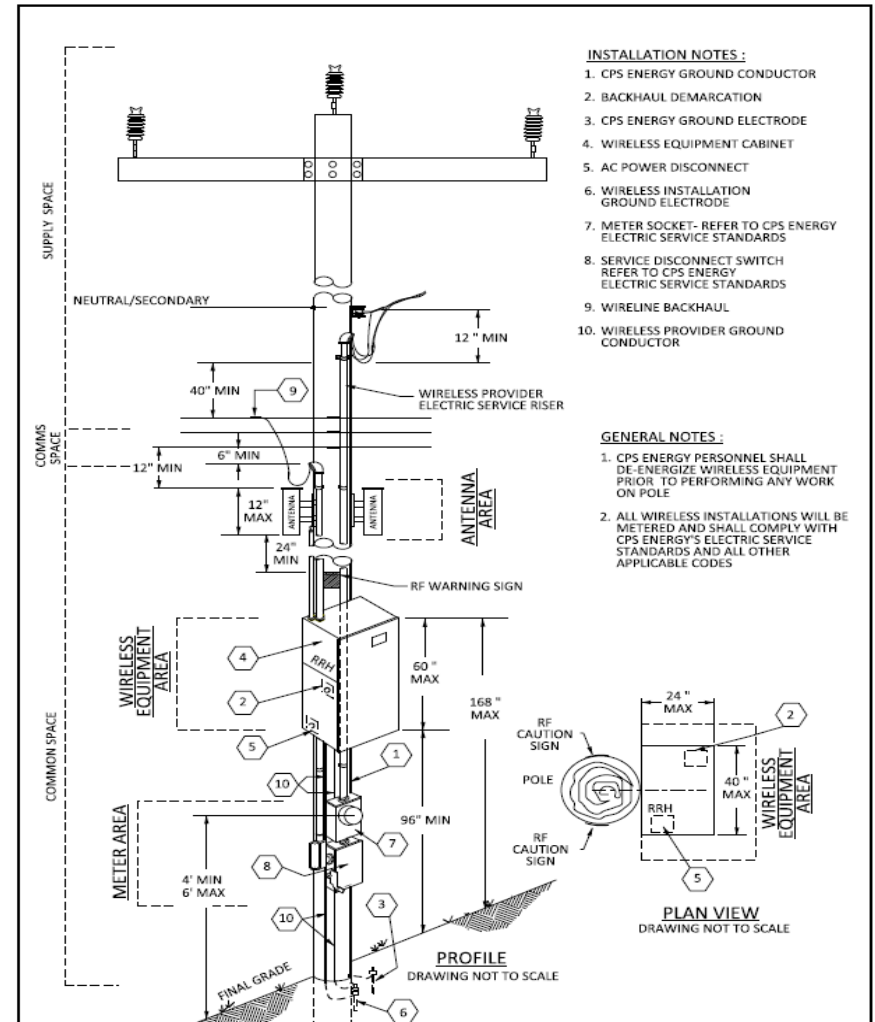


CPS Energy
Pole Attachment Standards

11: CPS Energy Typical Wireless Installation – Distribution Pole



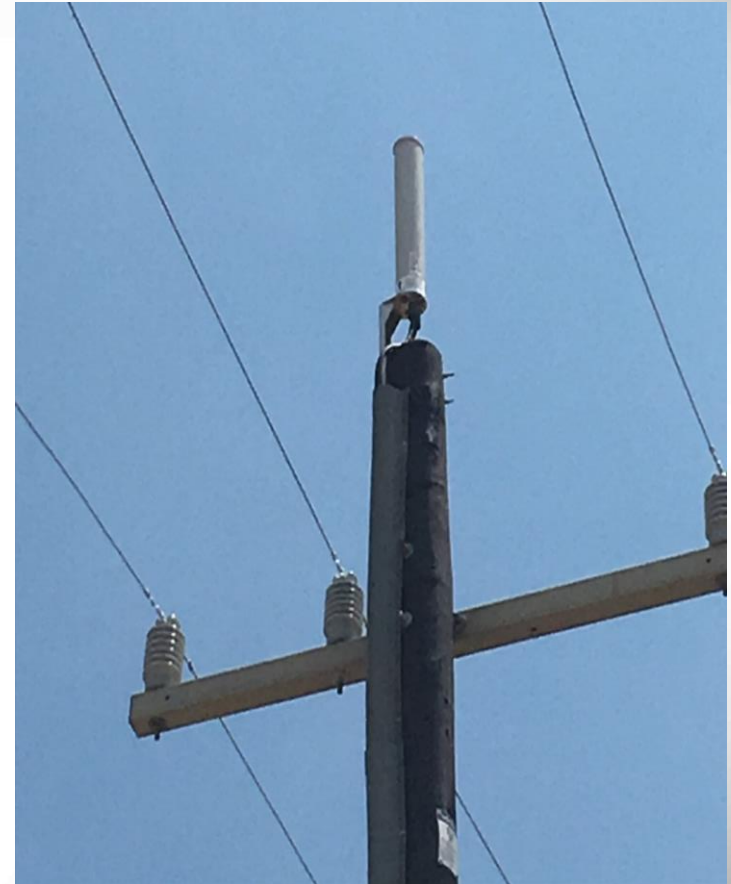
CPS ENERGY EXCEPTION WIRELESS ANTENNA INSTALLATION - MID POLE



LESSONS CAPTURED IN REVISED STANDARDS

- **Safety**

- Only contractors in the electrical space
- Pole top antenna 5' clearance from electrical primary
- No backup batteries permitted
- All wires must be protected by conduit or U-Guard
- All small cell equipment must be properly grounded
- All wireless antennas must have appropriate warning signs
- All wireless providers must complete interference testing before submitting pole attachment applications
- All small cell equipment will be de-energized prior to CPSE performing any work on pole
- Poles not accessible by bucket truck will not be available for small cell installation
- Ground cabinets must be 25' from pole
- Micro network nodes minimum clearance of 15" to 72" from pole



LESSONS CAPTURED IN REVISED STANDARDS

- **Reliability**

- Installation of electric meter for each small cell
 - Co-habitation of electric meter in ground equipment cabinet
 - Inspection of mock up installation and all field installations
 - Prohibition of macro cell equipment on poles
 - Determination of number of pole feet used by small cell installation as part of mock up process for billing purposes
 - Establishment of 10' cross-arm for electrical primary
 - Not allow small cell installations on poles subject to private easements
 - Establish multiple wireless installation options to address different ROW pole conditions
-



CUSTOMER SERVICE



A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



LESSONS CAPTURED IN REVISED STANDARDS

- **Customer Service**

- Require radio equipment to be enclosed in shroud cabinet on pole or ground cabinet in ROW
- Require pole mounted cabinet to be flush with pole
- Limit Mid-Pole antennas bracket to be installed no more than 12” from pole
- Require antenna to be embedded in cylinder enclosure or shroud cabinet
- Limit pole mounted cabinet to 5’ in height and ground cabinet to 42”x42”x42” consistent with Chapter 284
- Require all pole mounted equipment to be the same color as pole
- Make available Overhead fed streetlight poles for small cell installations

NEXT STEPS

- **Schedule mock-ups based on revised Standards**
 - **CPS Energy Safety Team will continue to provide input on new mock-up installations**
 - **Wireless Providers need to use approved engineering and electrical distribution construction contractors**
 - **Continue to work with all wireless communications providers on:**
 - Pre-Certification Process
 - Wireless Attachment Applications
 - Make Ready Work Orders for the Different Types of Installations
 - **CPS Energy continues to work with City of San Antonio ROW officials regarding a cooperative process for small cell installations**
-

WIRELESS AGREEMENTS

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



TYPES OF WIRELESS ATTACHERS

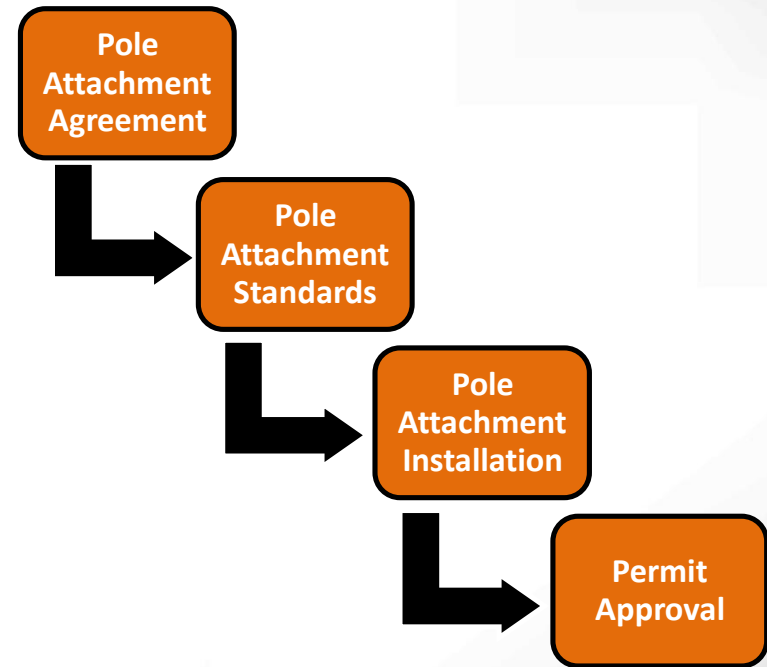
- **Wireless Carriers:** FCC licensed commercial wireless service providers with authority over specific radio frequencies utilized to operate a wireless network; not a PUC “certificated telecommunications providers” (CTPs).
 - **Cable Providers:** FCC licensed “cable operators” and holder of PUC “State-Issued Certificate of Franchise Authority” (SICFA).
 - **Video/Broadband Providers:** Not licensed by FCC, but holders of SICFA certificate of authority
 - **Infrastructure Providers:** Not licensed by FCC but may holders of PUC “Service Provider Certificate of Authority” (SPCOA); business model is to lease small cell wireless equipment to wireless carriers.
-

TYPES OF AGREEMENTS

- **Wireless Addendum:** Required for Attaching Entities who have a Wire Agreement but also want to install Wireless Installations
- **Wireless Installation Agreement:** Required for Attaching Entities to install Wireless Installations only
- **Infrastructure Provider Sublicensee Agreement:** Required for entities which do not own wireless infrastructure on CPS Energy poles, but lease wireless infrastructure from Infrastructure Providers

POLE ATTACHMENT AGREEMENT STRUCTURE

- An executed **Agreement** will grant the entity a license to attach to CPS Energy Poles contingent on securing an Attachment or Wireless Installation Permit.
- A **Permit** will grant authority to attach to a specific Pole provided there is compliance with the **Pole Attachment Standards**.
- A Pole Attachment or Wireless Installation Agreement without compliance with the Pole Attachment Standards does not authorize the access to any Poles.



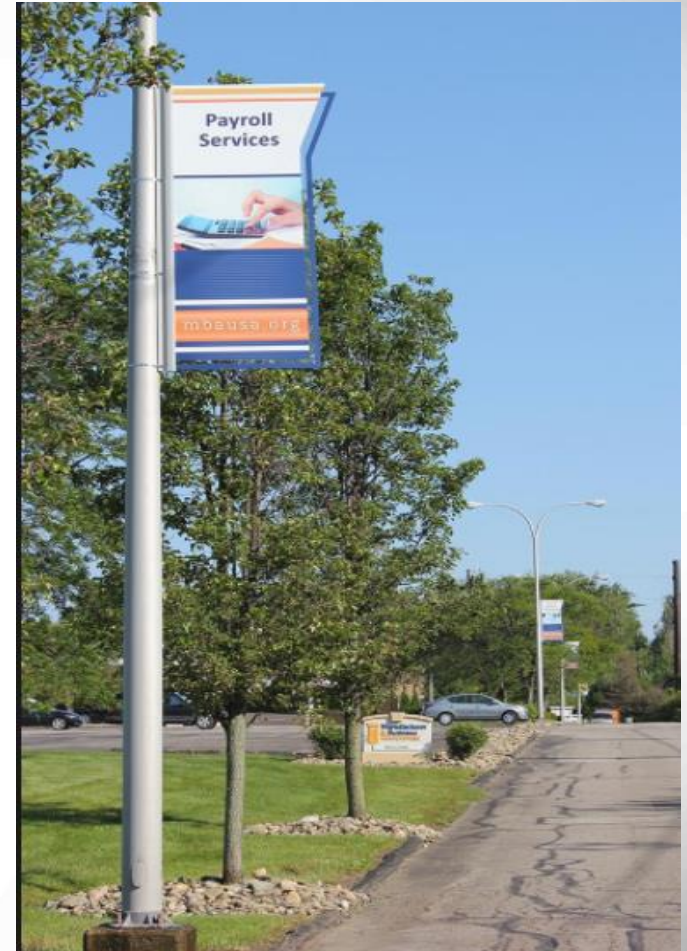
BANNER ATTACHMENTS

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E

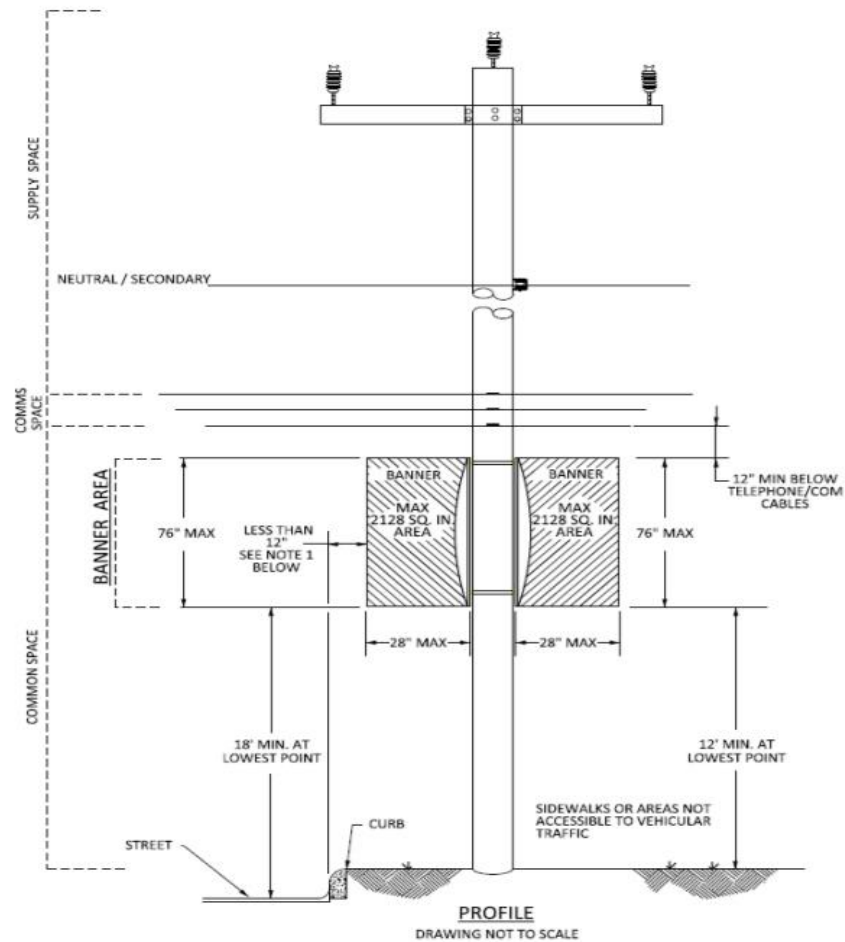


BANNER ATTACHMENTS ACTIVITIES

- The Banner Standards became effective January 1, 2018 as part of CPS Energy Pole Attachment Standards.
 - CPS Energy and Banner stakeholders resolved a pending competitive issue in early January 2018 that had held execution of new contracts.
 - Banner Attachers are encourage to execute the new Banner Attachment Agreement as soon as possible.
 - The agreements will be back dated to January 1, 2018.
-



BANNER-SINGLE POLE DRAWINGS

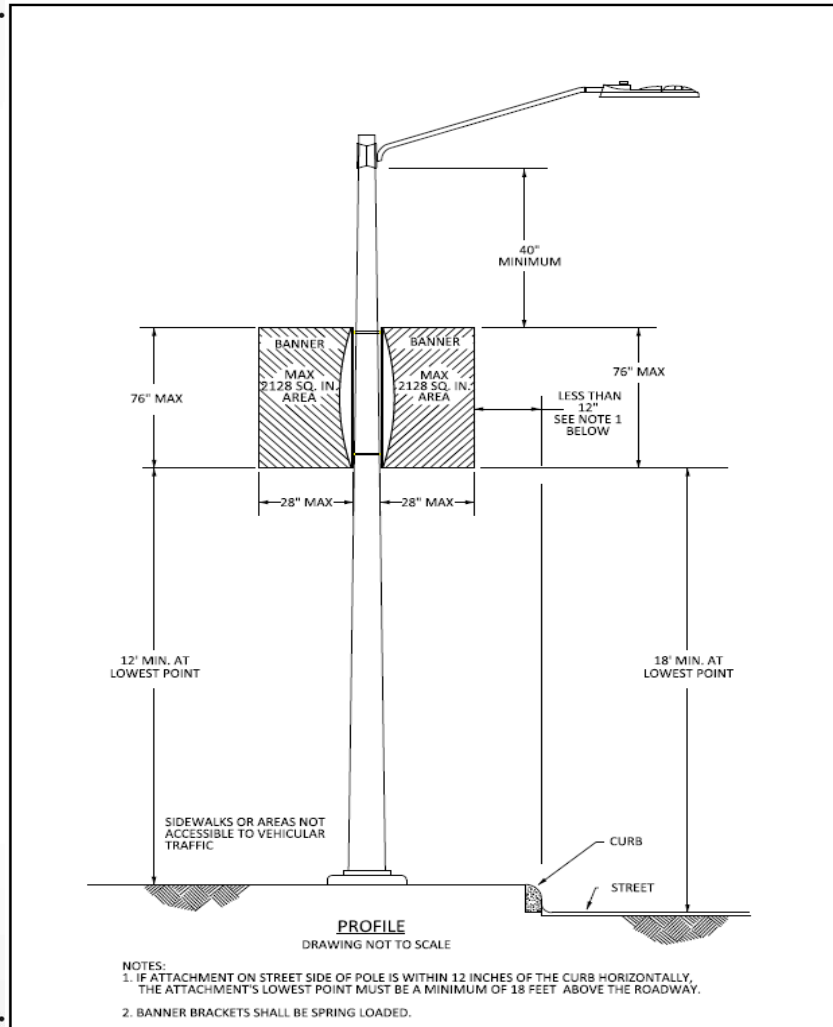


- NOTES:
1. IF ATTACHMENT ON STREET SIDE OF POLE IS WITHIN 12 INCHES OF THE CURB HORIZONTALLY, THE ATTACHMENT'S LOWEST POINT MUST BE A MINIMUM OF 18 FEET ABOVE THE ROADWAY
 2. BANNER BRACKETS SHALL BE SPRING LOADED.

A F F O R D A B L E ; R E L I A B L E ; I N N O V A T I V E



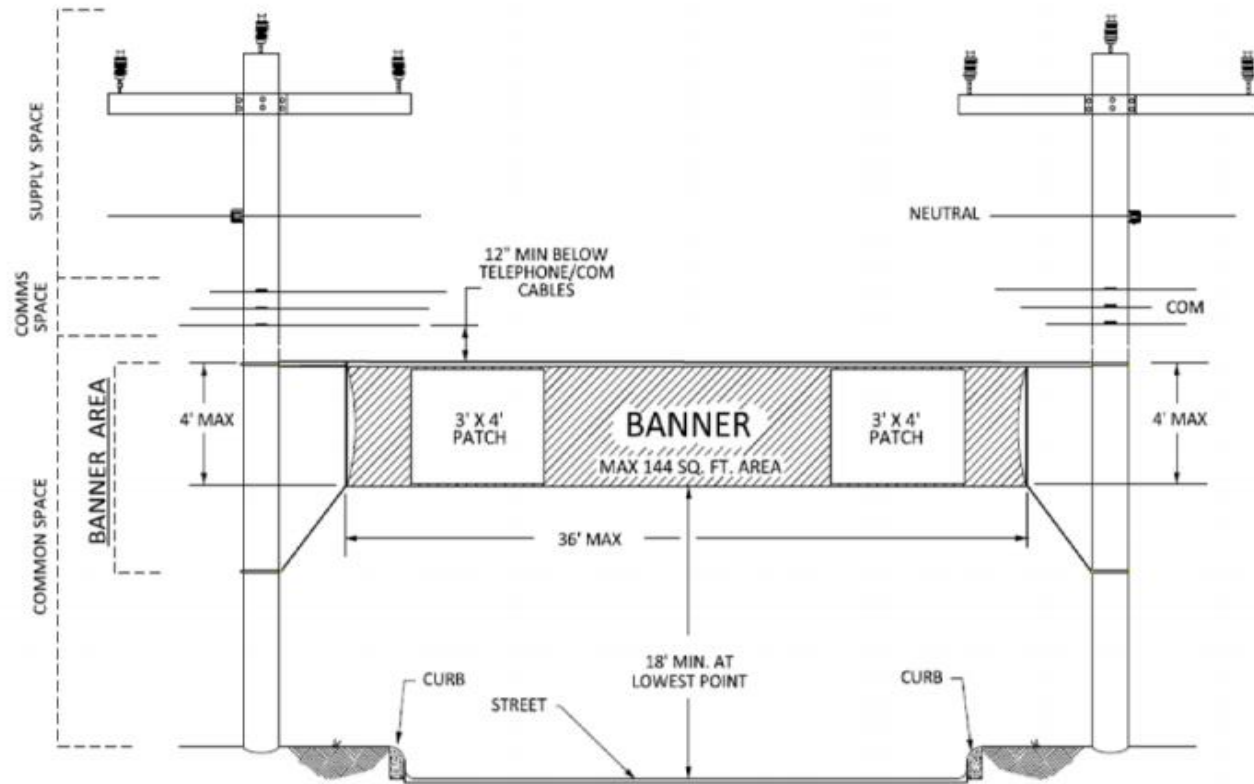
BANNER-STREETLIGHT DRAWINGS



A F F O R D A B L E R E L I A B L E I N N O V A T I V E



DOUBLE POLE BANNER DRAWINGS



PROFILE

DRAWING NOT TO SCALE

TECHNICAL SPECIFICATIONS

1. BANNERS SHALL BE 4' X 36' IN SIZE
2. BASIC FABRIC MUST BE 1/12" TO 4" OPEN-WEAVE NYLON OR POLYESTER NET
3. FRAME CONSTRUCTION WITH REINFORCED ALL-WEATHER NYLON WITH 1/4" HALLYARD SEWN INTO TOP AND BOTTOM OF BANNER, BANNER SNAPS SEWN ACROSS TOP EVERY 1.5"
4. LETTER AND TEXT PATCHES MUST BE MADE OF FADE-RESISTANT NYLON OR VINYL SEWN DIRECTLY ONTO NET BASE FABRIC. OPEN SPACE IS NEEDED TO ALLOW AIR TO BLOW THROUGH NET.
5. NAME AND CONTACT INFORMATION MUST BE PROVIDED ON BANNER.

UPDATE ON
**POLE ATTACHMENT INVENTORY
PROJECT**

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



POLE INVENTORY PROJECT

- Results meeting was held on January 9, 2018.
- Attacher packages were sent by certified mail on January 19, 2018.
 - For security, attaching entities will require a passcode to access the usb flash drive
 - Email cvalles-tova@cpsenergy.com to receive code
- Review period deadline is February 23, 2018.

CUSTOMER SERVICE

<https://www.youtube.com/watch?v=owo4G4Okza8>

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



QUESTIONS



A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E



MOBILITY PRESENTATION

A F F O R D A B L E | R E L I A B L E | I N N O V A T I V E

