

Design & Utility Exception Submittal Requirements

**Design Conference Session 6
1:00PM to 1:45 PM**

Speaker

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Presentation Issues?

- 1. How do I get approved in one submittal and not 4 submittals?**
- 2. What are typical deficiencies?**
- 3. Why review crash reports?**
- 4. What does as close to the R/W Line as practical mean?**

Justification & Documentation

SO! What types of problems do we typically encounter, why do they exist, and what do we do about it?

Schedule / Planning Issues

- PSM Schedule – Late or Not?
Initial Engineering Phase - PPM 13.6 par 1 says “standards, variations, and exceptions should be accomplished or near completion.” (& Exhibit 13-A)
- FDOT Rule 14-46.001 – Utilities have guaranteed times to respond.
- Design Speed – Planning Office Review
- Structural Issues – Structures Office Review
- FHWA Reviews – Applicable Projects

Reporting Requirements

- **PPM Volume 1, Chapters 2, 5, & 23**
- **UAM Chapters 5, 9, 13, (Exhibits)**
- **FDOT / FHWA – Exemption Agreement & 23 USC 106 Exception Process
Topic No. 700-000-020, PPM 24.1**
- **FHWA - FAPG 23 CFR 625.3(f)**
- **AASHTO Policy Mitigation Strategies for Design Exceptions**

Justification & Documentation

In order to EXPEDITE reviews and approvals, the next series of slides intends to identify issues that often arise and results in delays.

They can ONLY be addressed by the District!

Justification & Documentation

A color coded list of PPM requirements & typical submittal content findings follows:

CODING:

1. White Arial font - supplied by the District.
2. White *Underlined Italics* – justification insufficient.
3. Red font - seldom initially supplied.
4. Orange font - developed in the CO by the QA.

PPM Chapter 23.4 Justification

Min. FHWA evaluation requirements include:

A strong case can be made that:

- Required criteria are not applicable
- Safety is not compromised
- Environmental or community needs prohibit meeting criteria.

by not following the criteria.

PPM Chapter 23.4 Justification

Min. FHWA evaluation requirements include:

- Operational Impacts.
- Impacts on Adjacent Section.
- **Level of Service.**
- Safety Impacts.
- **Long term effects.**
- Costs.
- Cumulative Effects.

A case should not be made based solely on:

- *saving money, time, similar to other designs.*

PPM Chapter 23.5 Documentation

- a) **Exhibit 23-A Submittal/Approval Letter**
- b) Summarize included support docs:
 - 1) **Location map** or description,
 - 2) Typical section,
 - 3) **Aerial or Photo logs**,
 - 4) Crash History and analysis,
 - 5) **Plan sheets in area of the exception/variation**,
 - 6) **Profiles in area of vert. align. exception/variation**,
 - 7) Tabs of pole offsets for HC exception/variation, &
 - 8) Applicable Signed & Sealed Support Documents.
- c) Project description (general info, typical section, begin/end milepost, county section number). Include **Work Mix**, To – From, Objectives, Obstacles & Schedule.

PPM Chapter 23.5 Documentation

- d) Describe exception/variation element & applicable criteria. **Explain why criteria can't be met or is not applicable** & why it is appropriate.
- e) Describe amount & character of traffic, anticipated impact on Operations, Adjacent Sections, LOS, Safety, Long & Short Term Effects, anticipated Cumulative Effects, & if temporary or permanent?
- f) **Plan view or aerial photo of the exception location, showing right of way lines, & property lines of adjacent property.**
- g) **A photo of the area.**
- h) **Typical section or cross-section of exception location.**
- i) The milepost and station location of the exception.
- j) Any related work programmed or in future work plans.
- k) **The Project Schedule Management (PSM) Activities maintained by the Finance Management Office.**

PPM Chapter 23.5 Documentation

- l) All mitigating efforts. Explain any associated existing or future limitations as a result of public or legal commitments. Describe any practical alternatives, the selected treatment and why.
- m) Comment on the most recent 5-year crash history including all pertinent crash reports.
- n) *Describe anticipated cost (Social & FDOT - Benefit/Cost)*
- o) Summarize Conclusions
For the specified conditions the following additional documentation is required:
- p) Design speed on FIHS/SIS - typical sections at mid blocks & at intersections.
- q) Lane Width - identify alternative routes that meet criteria, signing & pavement markings, & how to handle drainage.
- r) Shoulder Width – how stalled vehicles & drainage handled.
- s) Bridge Width - provide approach rdwy & bridge plan view.

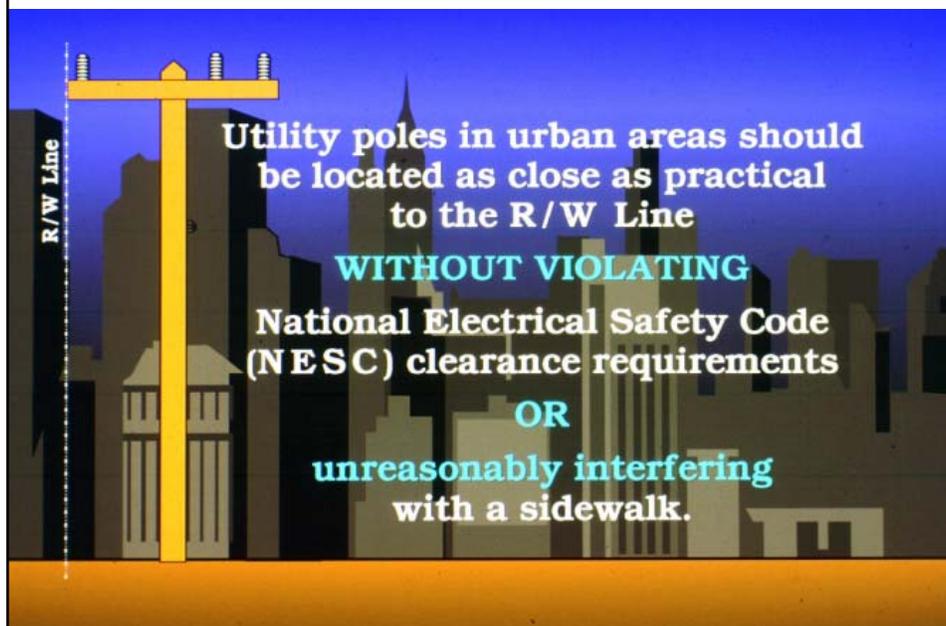
PPM Chapter 23.5 Documentation

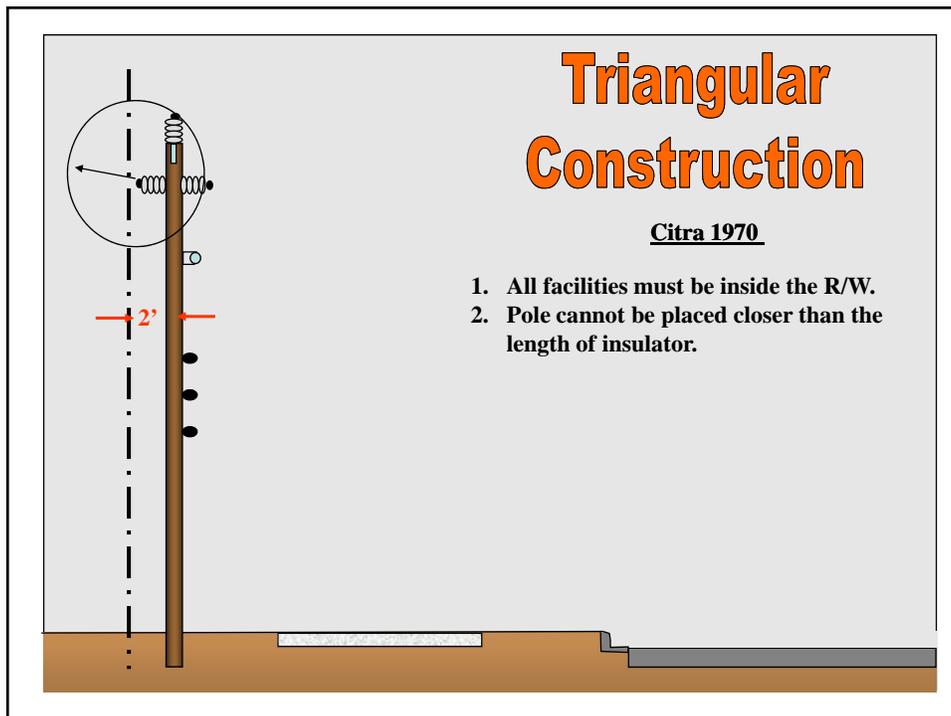
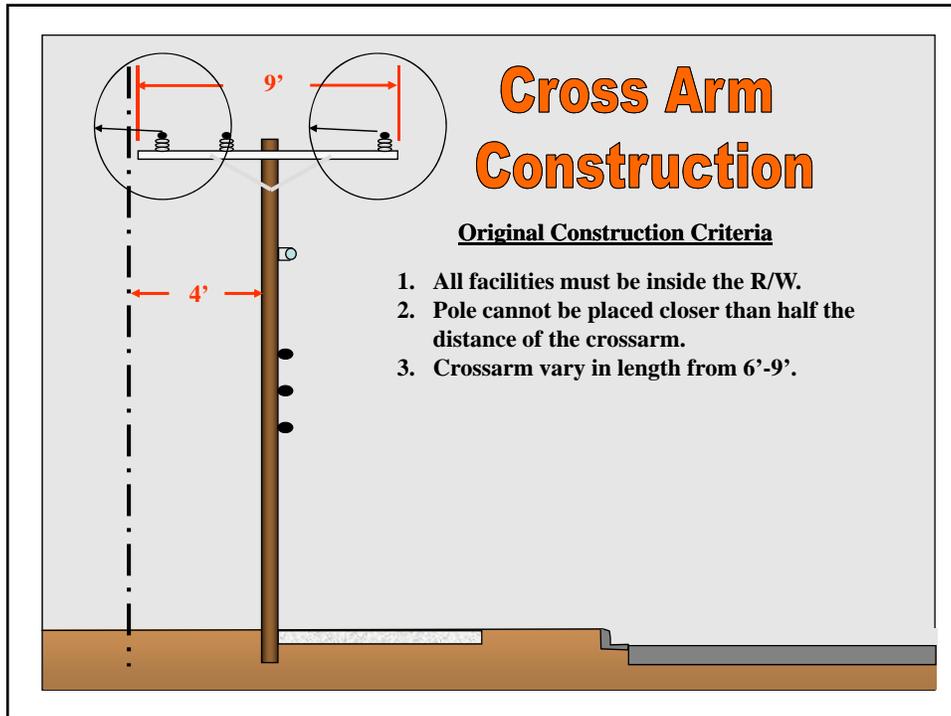
- t) Bridge with a design inventory load rating less than 1.0 - a written evaluation & recommendation by Maintenance Office & load rating calculations.
- u) Vertical Clearance - alternate routes meeting criteria.
- v) Cross-slope – detail how drainage & cross slope impacts at intersections are handled.
- w) Conditions adversely affecting capacity – provide an acceptable capacity analysis that calculates reduction for design year LOS & address proposed criteria vs. AASHTO compatibility with the project design & operation including adjacent sections.
- x) Superelevation – provide side friction factors for the curve for each lane of different cross-slope at the PC of the curve, the point of maximum cross-slope, & PT of the curve.

PPM Chapter 23.5 Documentation

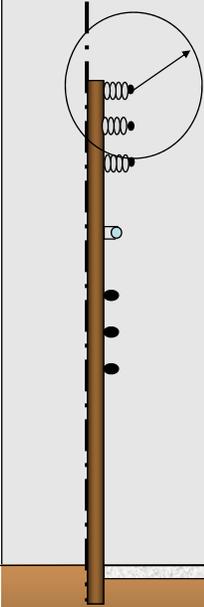
y) Areas with crash histories & when B/C analysis is requested - Provide time value \$ analysis for benefit & cost to society over the life of the exception. In general practice, B = reduction in crash cost & C = construction and maintenance implementation costs over the life of the project. Analysis may be performed by using either the Roadside Safety Analysis Program (RSAP) or Historical Crash Method (HCM) depending on applicability. RSAP is applicable for prediction of roadside object crashes & HCM is applicable to sites with a crash history. Use a 5% time value of money for both methods. The HCM uses the **Highway Safety Improvement Program Guideline (HSIPG) cost per crash by facility type** to estimate benefit to society while the cost to society is estimated by the cost of right of way, construction, and maintenance.

Pole issues the need defining!

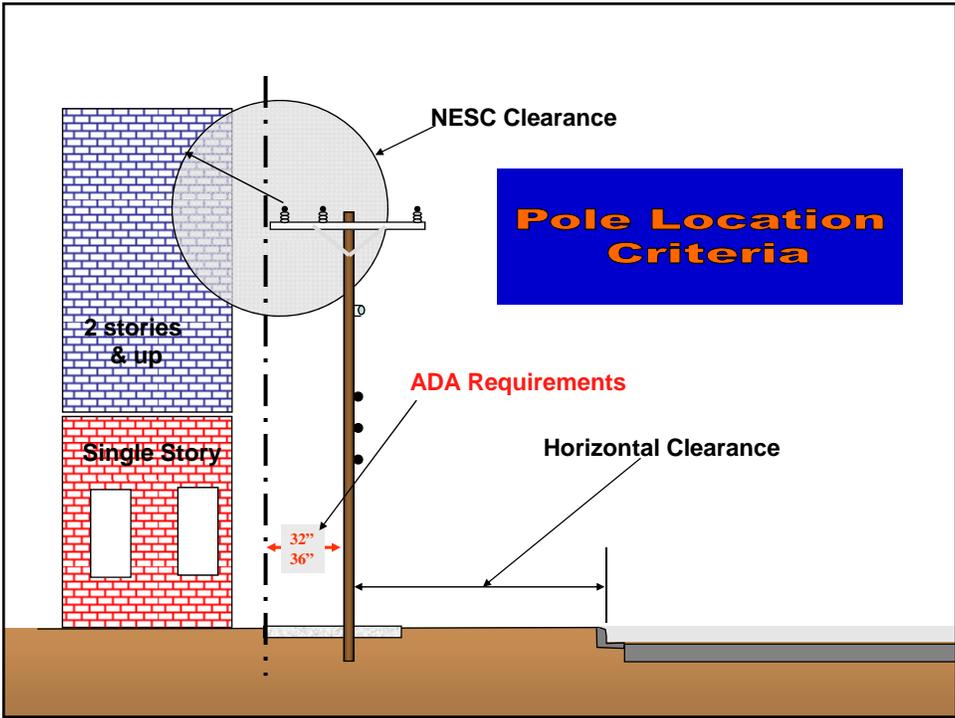




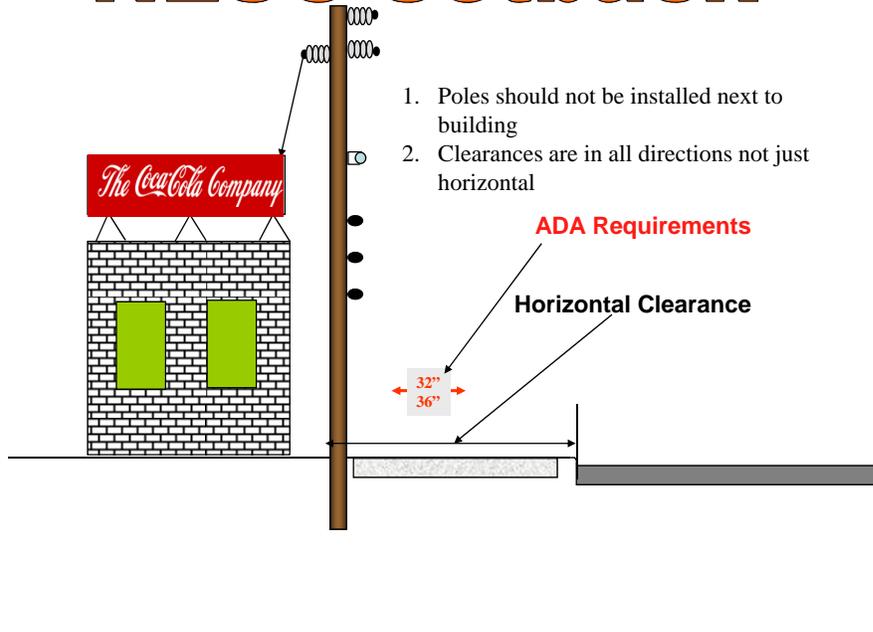
Vertical Construction



- 1. All facilities must be inside the R/W.
- 2. Pole can be placed at R/W Line as long as there is no NESC Clearance problems.

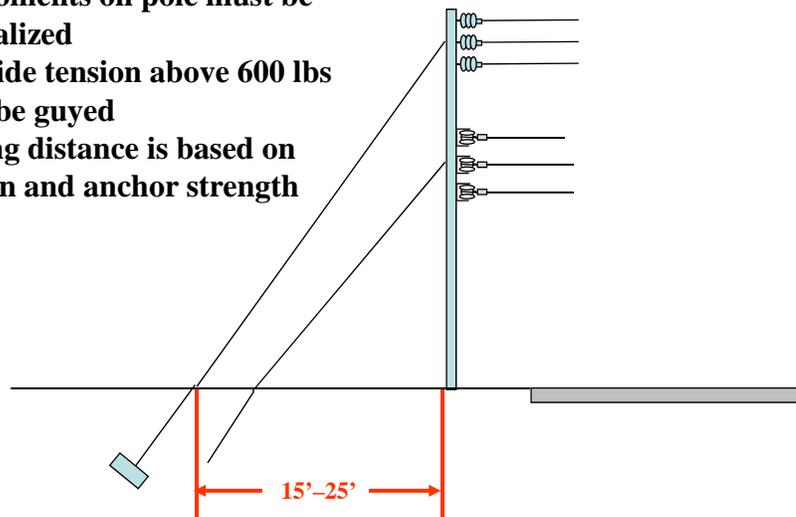


NEESC Setback



Anchoring Requirements

1. All moments on pole must be neutralized
2. Any side tension above 600 lbs must be guyed
3. Guying distance is based on tension and anchor strength



Exceptions Overlooked?



FINAL QUESTIONS?