Avista Joint Use Policies and Procedures

2024

(Updated 5-30-2024)

Contacts:

- **Manager – Jesse Butler jesse.butler@avistacorp.com**
- **Business Analyst – Elisabeth Rau elisabeth.rau@avsitacorp.com**
- **Team Lead – Scott Meredith scott.meredith@avistacorp.com**
- **Joint Use CPC – Bill Anderson – bill.anderson2@avistacorp.com**
- **Joint Use CPC – David Clark – david.clark@avistacorp.com**
- **Joint Use CPC – Chris Pieroni – chris.Pieroni@avistacorp.com**
- **Joint Use CPC – Will Schimmels – will.Schimmels@avistacorp.com**
- **Joint Use CPC – Tomas Stone – tomas.Stone@avistacorp.com**

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Avista Route Application Fee Structure

- **Wireline Route Application/Notification-**

Basic Charge:

All Avista service territories: **$600 base fee**

Per Pole Charge:

New pole contacts, over lashed contacts, communication riser etc.: $**42 per pole location**

Example:

An application/notification is submitted to attach to 5 new poles and over lash to 10 existing poles in Spokane WA.

Base fee = $600

Per Pole Charge = $42 (15 poles @ $42/pole)

Total cost = $1,230*

- **Avista Downtown Network**

All applications = $400*

- **Wireless Site Application –**

Site application fee=$3500/site*

Pre-application site screening fee=$250/site

SLA re-issue fee=$500/SLA re-issuance

Post application modification fee=$1000/application

Site reservation extension fee=$1000/site reservation extension

*Additional fees may be assessed if the size, scope or details of the project change from the originally submitted plan. Avista will inform requestor of additional fees prior to assessment.

JOINT USE NEW APPLICATION CHECKLIST

The following is required for each new submission:

☐ **Application–** (the fillable pdf is required, along with a digital signature)
- Exhibit A for New Attachments (Click here for link)
- Exhibit A for Underground Conduit (Downtown Network) (Click here for link)
- Exhibit B for Overlash Notifcations (Click here for link)

☐ **Design–** (refer to the design reference documents listed in the bullets below)

☐ **Email address for submission:** JointUse@avistacorp.com

☐ **Application fee –** see the separate fee schedule (these are due at the time of submission and will be billed to you separately by Avista.)(Click here for link)

The following design reference documents can be used to ensure that your design contains the crucial elements required to be considered acceptable:

- **Pole Attachment Application-Engineered Design Guidelines –** a brief overview of the items that should be included on the design drawing (Click here for link)
- **Design Example –** Use this as a template for your design (it does not have to be a carbon copy, but should be similar) (Click here for link)
- **Avista Distribution Construction Standards (Joint Use)**
  Current guidance for the installation of joint use cables on Avista poles (Click here for link)
  Current guidance for underground duct in Avista's downtown network (Click here for link)
- **WAC 480-54 - WA State Joint Use Regulations** (Click here for link)
- **Field Reference Card –** a quick reference for common clearance and separation requirements (Click here for link)

The following additional document can be used as a helpful resource:

- **Telecom Make-Ready Sign-Off –** an example of a document that can be used to request re-arrangements or make-ready work by others on the pole (Click here for link)

Click here to return to New Application Checklist

Rev 09-28-2022

Avista Use Only

EXHIBIT A

POLE ATTACHMENT PERMIT APPLICATION

This **Pole Attachment Permit Application ("Application")** is made pursuant to the Pole License Agreement for Wireline Attachments ("Agreement") between _____ ("Licensee") and Avista Corporation d/b/a Avista Utilities ("Licensor"). Terms used in the Application shall have the same meaning as such terms used in the Agreement unless otherwise indicated.

INSTRUCTIONS: Complete all required fields below and provide: (1) a completed copy of the Application; (2) a map identifying the specific Poles to which Licensee intends to install Attachments; (3) the proposed engineering, design, and construction plan for Licensee's proposed Attachment(s); and (4) the specifications for the proposed Attachment(s). Priority to construct will be established by the date the complete Application is received and approved. In order for an Application to be deemed "complete," Licensee must ensure that the Application satisfies the requirements of Section 4(a) of the Agreement, which are incorporated herein by reference.

Licensee shall include no more than one hundred (100) Poles in a single Application. All Poles included in a single Application must be located within the same circuit. Noncompliance with either of these restrictions may result in denial of an Application.

☐ Application for Use ☐ Termination of Use ☐ Other _____

Route	Starting Address:	
	Route Description:	
	Ending Address:	

		Messenger	Wire/Cable
Messenger and Wire/Cable	Messenger/Cable Type		
	Installed Tension at 0 C		
	Sag at 0 C		
	Weight (lbs per 1,000 ft)		
	Diameter (inches)		
	Proposed Attachment Height		
	Clearance Below Adjacent Attachment (inches)		
	Clearance Above Adjacent Attachment (inches)		

		New Contacts
Licensor-Owned Facilities Implicated	No. of Licensor-Owned Distribution Poles.	
	No. of Licensor-Owned Transmission Poles.	
	No. of Conduit Risers on Licensor-owned Poles.	
	No. of Attachments to Licensor-Owned anchors.	

Schedule	Construction Start Date	
	Construction Completion Date*	

* Pursuant to the Agreement, Licensee is required to complete construction of its Attachment(s) within ninety (90) days of the date on which it receives notice to proceed from Licensor.

FOR LICENSOR (AVISTA) USE ONLY

☐ **Received:** _____

☐ **Notified of Omissions:** _____

☐ **Approved as Complete:** _____

☐ **Permit from** _____ **to** _____

☐ **Other (see attachment):** _____

[SIGNATURES ON FOLLOWING PAGE]

TERMS AND CONDITIONS: Submission of this Application constitutes Licensee's acceptance of the standards and requirements set forth in the Agreement, including, but not limited to, the Policies and Procedures. Licensee understands that failure to meet a condition of approval constitutes a failure to install in accordance with the Permit, which may render the Permit denied. Licensor does not warrant the extent of its rights-of-way or easements. Before installing any Attachment to Licensor's Poles or placing any anchors, Licensee shall secure any required permission or consent from federal, state, county or municipal authorities, or from owners of the property upon which the Poles may be located, to install and maintain Licensee's Attachments thereon. Licensee shall not infer any such permission or consent from Licensor through the issuance by Licensor of a Permit. **UNDER NO CIRCUMSTANCES MAY LICENSEE PROCEED WITH INSTALLATION UNTIL AFTER LICENSEE RECEIVES NOTICE TO PROCEED FROM LICENSOR.**

Non-Refundable Application Processing Fee	$	Check No.	☐ Invoiced
Accounting: 001.456050.ED.WA/ID.DL – JOINT USE ADMIN			

[SIGNATURES]

For (Licensee): _____	**Avista Corporation d/b/a Avista Utilities**
By: _____	**By:** _____
Print Name/Job Title: _____	**Print Name/Job Title:** _____
Phone:	**Phone:** _____
Date: _____	**Date:** _____

* Pursuant to Section 4(b) of the Agreement, upon execution of this Application by Licensor, this Application shall serve as Licensee's Permit for the work identified herein. Licensee and/or any third-party contractor acting on Licensee's behalf shall have onsite a copy of the Permit and the Approved Print, as that term is defined in Section 8(a) of the Agreement, at all times while the work authorized by this Permit is being performed by Licensee and/or such third-party contractor. Licensor reserves its right to require discontinuance of any work being performed by Licensee and/or its third-party pursuant to this Permit if Licensee or its third-party contractor cannot produce—upon demand—a copy of the applicable Permit and Approved Print to Licensor or a third party acting on Licensor's behalf.

Click here to return to New Application Checklist

Rev. 8-30-2023

Avista Use Only

Exhibit A

CONDUIT LICENSE APPLICATION

This **Conduit License Application ("Application")** is made pursuant to the Conduit License Agreement ("Agreement") between _____("Licensee") and Avista Corporation d/b/a Avista Utilities ("Licensor"). Terms used in the Application shall have the same meaning as such terms used in the Agreement unless otherwise indicated.

INSTRUCTIONS: Complete all required fields below and provide: (1) a completed copy of the Application; (2) a map identifying the specific Conduit Route in which Licensee proposes to install Licensee's Facilities; (3) the proposed engineering, design and construction plan for Licensee's Facilities; and (4) the specifications for the proposed Licensee's Facilities. Priority to construct will be established by the date the complete Application is received and approved. In order for an Application to be deemed "complete," Licensee must ensure that the Application satisfies the requirements of Section 4(a) of the Agreement, which are incorporated herein by reference. A separate Application must be submitted for each Route.

☐ Application for Route ☐ Termination of Route ☐ Other _____

Route	Starting Lat/Long	
	Ending Lat/Long	
	Address	
	Legal Description	

Equipment	Type	
	Weight (lbs.)	
	Dimensions (L x H x D in.)	
	Installation Location	

FOR LICENSOR USE ONLY	
Received:	Approved as Complete:
Notified of Omissions:	Annual Fee:
Approval Date:	Conduit License Expiration Date:
Special Provisions:	

TERMS AND CONDITIONS: Submission of this Application constitutes Licensee's acceptance of the standards and requirements set forth in the Agreement, including, but not limited to, any applicable Policies and Procedures. Licensee understands that failure to meet a condition of approval constitutes a failure to install in accordance with the Conduit License, which may result in revocation of the Conduit License or constitute an event of default under the Agreement. Licensor does not warrant the extent of its rights-of-way or easements. Licensee shall secure any required permission or consent from federal, state, county or municipal authorities, or from owners of the property upon which the Conduit may be located, to install and maintain Licensee's Facilities thereon. Licensee shall not infer any such permission or consent from Licensor through the issuance by Licensor of a Conduit License. **UNDER NO CIRCUMSTANCES MAY LICENSEE PERFORM ANY WORK ON OR WITHIN LICENSOR'S CONDUIT. ALL SUCH WORK SHALL BE PERFORMED BY LICENSOR OR A CONTRACTOR WORKING UNDER LICENSOR'S DIRECTION.**

Non-Refundable Application Processing Fee	$	Check No.	☐	Invoiced
Accounting: 09802457.583000.115.Z57				

[SIGNATURES ON FOLLOWING PAGE]

[SIGNATURES]

For (Licensee): _____	**Avista Corporation d/b/a Avista Utilities**
By: _____	**By:** _____
Print Name/Job Title: _____	**Print Name/Job Title:** _____
Phone: _____	**Phone:** _____
Date: _____	**Date:** _____
* Pursuant to Section 4(b) of the Agreement, upon execution of this Application by Licensor, this Application shall serve as Licensee's Conduit License for the work identified herein.	

Click here to return to New Application Checklist

Rev 09-28-2022

Avista Use Only

EXHIBIT B

OVERLASH NOTIFICATION

This **Overlash Notification ("Notification")** is submitted pursuant to the Pole License Agreement for Wireline Attachments ("Agreement") between _____ ("Licensee") and Avista Corporation d/b/a Avista Utilities ("Licensor"). Terms used in the Notification shall have the same meaning as such terms used in the Agreement unless otherwise indicated.

INSTRUCTIONS: Complete all required fields below and provide Licensor with: (1) a completed copy of the Notification; (2) a map identifying the specific Poles on which Licensee intends to overlash existing facilities; (3) the proposed engineering, design and construction plan for Licensee's proposed Overlashing; (4) the specifications for the proposed Overlash(es); and (5) a pole loading analysis, including all information relied upon by the pole loading analysis.

Identify the type, size, weight per foot, and number of wires or cables to be Overlashed onto existing facilities on Licensor's Poles. Also provide the overall bundle size of the existing facilities onto which Licensee intends to Overlash such additional wires or cables.

☐ Notification of Proposed Overlashing ☐ Termination of Existing Overlash

Route	Starting Address:	
	Route Description:	
	Ending Address:	

Proposed Overlash(es)	Wire/Cable Type	
	Diameter(s) (inches)	
	Weight (lbs per ft)	
	No. of Wires/Cables	
Existing Facilities	Bundle Size	

Licensor-Owned Facilities Implicated	No. of Licensor-Owned Distribution Poles.	
	No. of Licensor-Owned Transmission Poles	

Schedule	Construction Start Date	
	Construction Completion Date	

TERMS AND CONDITIONS: Submission of this Notification constitutes Licensee's acceptance of the standards and requirements set forth in the Agreement, including, but not limited to, the Codes and Laws, the Policies and Procedures, and the Specifications. Licensor reserves its right under the Agreement and applicable law to deny the proposed Overlashing described in this Notification. **UNDER NO CIRCUMSTANCES MAY LICENSEE PROCEED WITH THE PROPOSED OVERLASHING DESCRIBED IN THIS OVERLASH NOTIFICATION IF LICENSOR PROVIDES WRITTEN NOTICE TO LICENSEE THAT LICENSOR HAS REJECTED THE PROPOSED OVERLASHING.** In the event Licensor determines that modifications to Poles or the existing facilities thereon are required to accommodate the proposed Overlashing, then Licensee shall satisfy the requirements of Section 10(d) of the Agreement before proceeding with the proposed Overlashing. If modifications are required, then **LICENSEE SHALL NOT PROCEED WITH THE PROPOSED OVERLASHING UNTIL LICENSEE RECEIVES NOTICE TO PROCEED FROM LICENSOR.** Before Overlashing any existing facilities on Licensor's Poles, Licensee shall secure any required permission or consent from federal, state, county or municipal authorities, or from owners of the property upon which the Poles may be located, to Overlash and maintain Licensee's wires or cables thereon.

For each Overlash Notification Licensee submits to Licensor, Licensee shall pay the Overlash Notification fees, as published in the Policies and Procedures, upon receipt of an invoice from Licensor.

For (Licensee): _____

By: _____

Print Name/Job Title: _____

Phone: _____

Date: _____

Pole Attachment Application Flow Chart

Applicant

Joint Use Dept

START:
Create engineered design that satisfies the requirements outlined in Avista's Engineered Design Guidelines. Proposed design shall meet all NESC/Avista standards requirements.

Tip: Ensuring engineered design is thorough and complete and adheres to the design standards in this document is the most effective way to ensure your application is processed quickly

Complete route application (Exhibit A/B) PDF with appropriate information and sign

Note: If application includes pole attachments proposed on transmission poles a separate pole analysis process and additional costs will apply. CPC will provide guidance on this process.

Submit engineered design PDF and route application form via email to jointuse@avistacorp.com

Both documents consistitute your "application" *

If application is deemed incomplete for any reason Avista will notify applicant of such. Application will not be accepted until resubmission with appropriate changes

Application is checked for completion, logged, assigned a route application number and assigned to a Joint Use Customer Project Coordinator (CPC)

Avista will respond with a confirmation email confirming receipt of application if it meets requirements. Applicant will be invoiced for RA fee.

If design requires changes, revise per CPC notes and resubmit directly to CPC.

Avista will field your application and respond within 45 days (or 15 business days for overlash) with approval or redline changes needed to application

Avista make-ready required:
Cost estimate will be provided to sign and return. Avista will proceed with work. (Plan for up to 60-75 days depending on nature of work)

CPC will confirm any changes to design and provide approval to construct or a "pending approval" notice with additional documentation

No Avista make-ready required:
Notice to proceed will be provided along with approval documents

Notice to proceed will be provided to applicant with approval documents

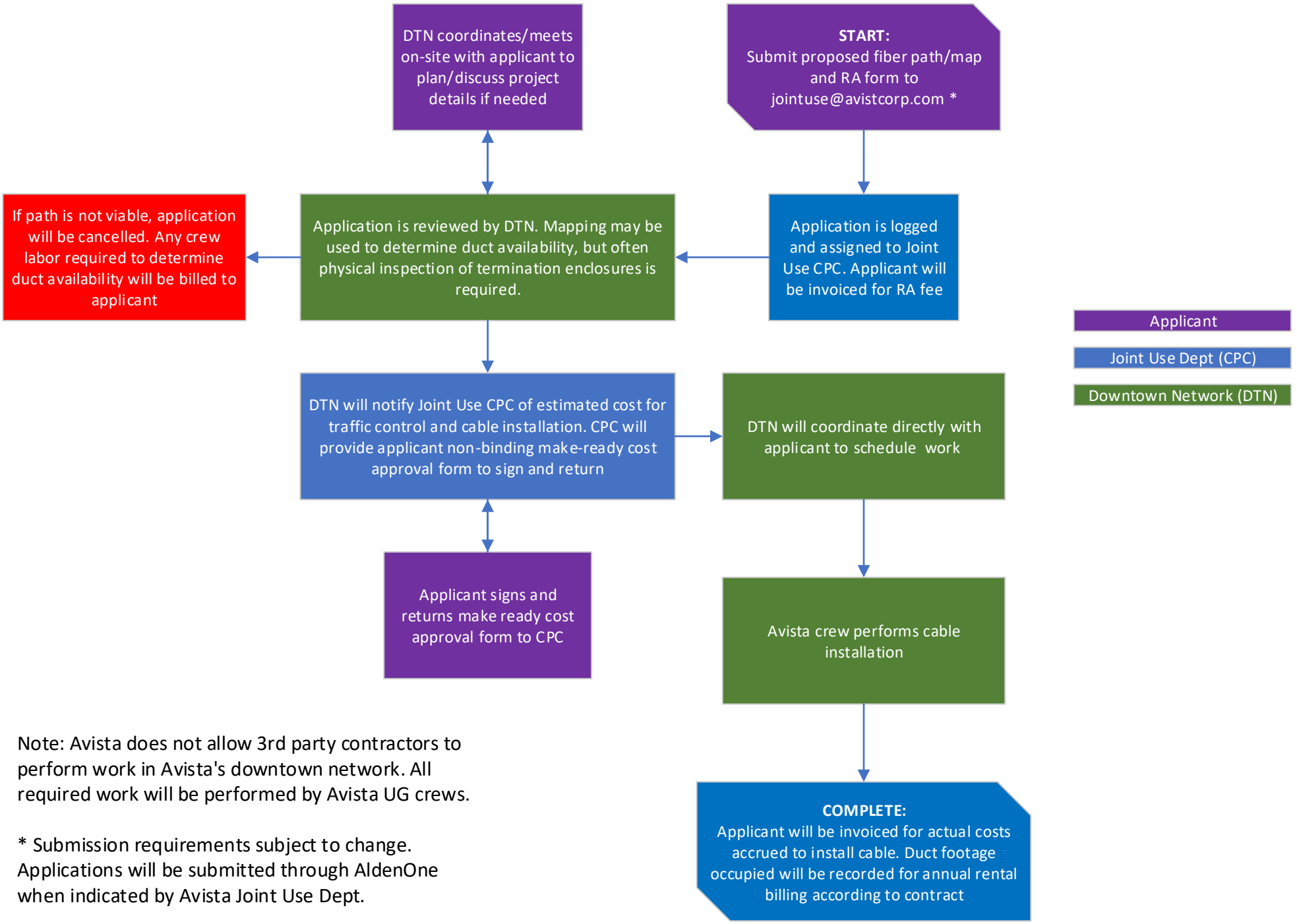
Applicant obtains permission or otherwise coordinates completion of communication-space make-ready with other licensees as needed. All make-ready MUST be completed at or before time of construction.

Applicant may complete construction per approved design document

Actual make-ready costs will be billed upon application completion

* Submission requirements subject to change. Applications will be submitted through the AldenOne platform when indicated by Avista Joint Use Dept.

Duct (Downtown Network) Application Flow Chart



Note: Avista does not allow 3rd party contractors to perform work in Avista's downtown network. All required work will be performed by Avista UG crews.

* Submission requirements subject to change. Applications will be submitted through AldenOne when indicated by Avista Joint Use Dept.

Rev 10/13/2023

SERVICE DROP ATTACHMENT REPORT

This Attachment Report is submitted per the **Joint Use Agreement** between AVISTA UTILITIES and _____, dated _____. Terms used in this Report have the same meaning as such terms in the Agreement unless otherwise indicated.

☐ Volunteer Report ☐ Field Audit Report for month of (Month/Year): _____

Record the attachment details below. Enter the pole number for the pole the drop originates from. If the new drop is supported mid-span by an Avista service ("drop") pole, check the box in the "Drop Pole?" column and record the pole tag number (if available).
Submit multiple copies of this document if necessary to capture all drops for monthly period.
Submit report(s) to jointuse@avistacorp.com

Pole Tag #	Drop Pole?	Drop Pole Tag #	Location (street address of customer served by drop)
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		

For _____:

By: _____

Title: _____

Phone: _____

Date: _____

For Avista Utilities:

By: _____

Title: _____

Phone: _____

Date: _____

Guidance for minimal tension self-supporting/integrated-messenger telecommunications service conductors (commonly referred to "drops" or "service drops") on Avista poles

Definition: A ‘service drop’ is a small, lightweight conductor designed to supply telecommunication service to an individual customer or premise from existing main distribution cables. It should not, nor is it intended to, replace or act as distribution conductor. Any cable lashed to external metallic strand is subject to Avista's new attachment/overlash application process and is not considered a service drop.

Service drops and self supporting service conductors may be installed without prior permit or notification to Avista only if they meet the following criteria:

1. **ALL** NESC and Avista standards must be met at the time of installation (e.g. clearances, capacity, climbing space, bonding, separations etc.).
2. New service drop must contact no more than 2 new poles or extend no more than 3 spans from existing distribution line.
3. Attachment at a pole with existing distribution cable attached must be made with ‘Q’-clamps (span clamps) from the licensees strand. Do not drive new j-hook where strand/span clamp can be used to attach drop.
4. Attachment to pole with no existing distribution attached must be made using ‘j’-hooks(drive hooks). No through-bolted/drilled hardware.
5. Service drops are subject to the 40" communication worker safety zone clearance. Lack of mid-span clearance for the service drop is not a valid reason to violate the 40" safety zone.
6. Up to 2 service drops may be stapled vertically on the pole for UG service. No U-guard or conduit may be used. More than 2 service drops require a new conduit riser on stand-off brackets and must be applied for in advance.
7. Service drops cannot cross, touch, or sag into adjacent conductors.
8. Minimal tension must be used during installation. Hand tension only. No mechanical advantage (e.g. hoist or pulleys)
9. Multi-port fiber terminals ("MFT") must be strand-mounted. Pole-mounted MFT's are not permitted (unless pre-approved in writing by Avista).

A post installation notification must be sent via email no later than the 10th of each month to jointuse@avistacorp.com detailing the Pole tag number, if the drop contacts a drop/service pole (and it's tag number), and the address of the customer being served for all drops installed in that period.

Avista may at its discretion inspect installations for code and standards compliance. Any infractions found will be communicated and must be corrected within 30 days of notification of same. This guidance is subject to change.

Make Ready Approval Form

Work Requested Of:

Contact Name

Avista Utilities

Phone Number

Work Requested By:

Project Name

City

State

WA

Make Ready

Station/pole	Description of Work	Non-binding estimate	Plus adder for

Total $ 0.00

Customer will be billed at actual costs which could be higher or lower than non-binding estimates.

Signature **Date**

Approved By (name)

Make ready estimates are valid for 30 days from the date provided. Estimates older than 30 days, or approved after 30 days, are subject to revisions of cost and completion time-lines.

Click here to return to New Application Checklist

Make Ready Sign-Off Sheet

Work Requested Of:

Contact Name | Phone Number

Work Requested By: | **Project Name**

City | State

Make Ready

Stationing	Description of Work

Please mark one:

☐ We will allow the requesters contractor do the necessary work.

☐ Will take care of the necessary work ourselves.

Initials	Date

If you have any problems or questions please call @

Click here to return to New Application Checklist

-

Pole Attachment Application- Engineered Design Guidelines

The applicant's engineered design is considered by Avista to be the instruction manual for the contractor physically constructing the proposed attachments. The required design elements listed below exist for the express purpose of ensuring the contractor responsible for construction will perform their work safely and in line with all applicable NESC and Avista standards, as well as ensuring Avista can field-verify and approve the application as quickly as possible.

Note: This guide references "omissions" in several places. An "omission" is considered crucial information missing from the design that may result in the application being returned to the applicant without processing.

All proposed construction by the applicant should strictly follow the Joint Use Specifications found in Section DO 1.4 of the Avista Electric Distribution Overhead Construction Standards provided by Avista Utilities.

Reference the Engineered Design Print for examples.

General Notes & Design Cover Page Details

- **Vicinity Map:** Provide an overall vicinity map showing the route highlighted in its entirety. Include the name of the community and show streets and known points for reference. Show a north arrow and *always* show north at the top of the page.
- **Scope of Project:** State a detailed description of the route and its purpose. Describe start and end points such as splice locations, riser sites converting from overhead to underground, etc. Describe vault locations. Provide addresses for either end of proposed path of construction.
- **Key & Abbreviations:** Show a key for symbols and abbreviations, including their definitions.
- **List of Contacts & Phone Numbers:** Identify the applicant/licensee, their contractor/field engineers, and include contacts for same. Include Avista and other licensee contacts if applicable.
- **Project Name:** State the project name and include the phase of the project (if it will be completed/applied for in multiple stages).
- **Fielded and Designed By:** Provide the name of the person who fielded the job and the name of who designed the job. Include the date of submittal.
- **Pole Counts:** List attachment totals for new and overlash contacts on any Avista distribution Poles, transmission poles, new conduit risers, and proposed attachments to Avista anchors. Show separate totals for poles owned by others and identify any other pole owners, such as Lumen or Ziply.
- **General Notes:** The examples below are strongly encouraged to be included on your design (if applicable to

design and proposed construction)

- All licensee attachments with strand must be bonded to the poles multi-ground neutral if present. All independent grounds must be removed.
- All supporting strand must be tensioned to meet NESC and Avista clearance and separation requirements.
- All service drops must be secured to a j-hook (or span clamp if applicant has strand present). Cut drops or drops not in use must be removed.
- All licensees must transfer where a new pole is present next to a topped pole. The highest licensee to be attached no higher than 23'-6" or 40" below lowest power, whichever is lowest. All attachments to maintain 12" spacing.
- When raising or lowering attachments, use existing holes where possible. Do not cross-drill within 3".
- New anchors must be manta-ray or helix type. Anchors must be placed at least 6' from other anchors and have at least a 3:1 guy ratio (ex: 21'-0" HOA = 7' minimum lead). Auxiliary eyes are not allowed. Sidewalk guys shall only be installed where a pedestrian path is present under the proposed guying.
- Transfer risers to existing standoff-off brackets if available. New risers must be placed on 15" stand-off brackets spaced every 8'. Maintain 5" belt room between riser and pole for belt room. Do not trap power risers. Climbing space must not be obstructed. Refer to DO-1.449 in Avista's Electric Distribution Overhead Construction Standards.
- Fiber storage loops (FSL) & splice enclosures shall be butterflied at pole on any span greater than 175ft. Snowshoe, loop, etc. shall not extend more than 50ft either direction from pole. FSL cannot be installed at a switch pole or on a wood arm. When possible, FSL and/or splice cases should be installed in an UG vault.

- **Pole Loading**: Refer to Avista Construction Standards DO 1.434, 1.437 and 1.440. Use the charts on these pages to determine pole loading. If the loading exceeds the maximum allowable span length, measure and provide the ground-line circumference (GLC) for Avista to determine actual loading calculations.
- **Revisions:** If revisions are needed, list the date, general revision information and name of the person providing the revisions.

Plan-View Page Details

- **General Provisions:** A scale, plan-view drawing on 11x17 pages for each segment of the route, *with all callout boxes shown on same page as their associated pole*. Show streets, roads and alleyways. Clearly identify areas where special permits are required, such as interstate and state highways, railroad and river crossings, etc. Show orientation to north. Do not clutter the page with details unnecessary to construction.
- **Page Numbers:** Number pages and indicate match lines for adjacent pages.
- **Construction Line:** The construction line indicating the placement of new facilities should be highlight in bold, color or both preferably. This helps to distinguish it from existing facilities.
- **Pole Stationing:** Each pole location shall have a number or stationing assigned to it for reference.

- **Side-of-Attachment (SOA):** The construction line drawing for the cable/messenger must be shown on the actual SOA that it will be located on. This must match the designation in the callout box for each pole. For dead-end poles, draw the cable/messenger intersecting with the center of the pole, then around the side of the pole it is intended to be located on. To determine the correct SOA, refer to Avista Overhead Construction Standard DO 1.422 and DO 1.425.

- **Mid-span Heights & Span Measurements**: Measurements of the lowest point of the lowest existing telecom cable mid-span shall be shown at any span that could be traversed by a vehicle, including along major roadways and highways where it is reasonably possible for a vehicle to travel off the roadway under the cable. Span lengths shall be listed for every span.

- **Pole Grounds**: Use a symbol at each pole location where a pole ground is present that telecom attachments must be bonded to.

- **Fiber Storage Loop:** Document proposed FSL locations and length of the fiber to be stored. Indicate the bundle size of the storage for loading. (See diagram at end of document)

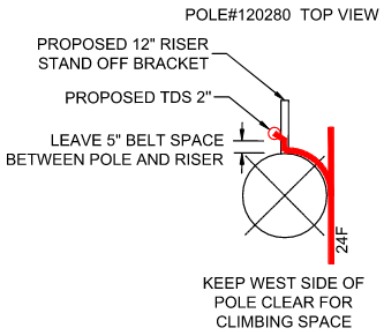
- **Cable Bundle Details:** A bundle diagram must be shown on each page of the design that corresponds to the proposed attachments (or overlash) for that page. The diagram shall include weight per foot, diameter size, etc. A new diagram must be shown anywhere the bundle size changes on the design.

- **Construction Type**: On each page there shall be at least one note near the construction line indicating the type of proposed construction. Example: “Place new 6m strand and lash 24F cable” or “Overlash new 144F cable to existing strand”. A new note should be placed anywhere construction changes on the design.

- **Line-of-Site Limits** - The line-of-site limits are often overlooked. This requires a separation greater than 40 inches based on conductor sag for spans longer than 350 feet. (See spec. DO 1.410) Note the separation to be obtained at the poles for each span longer than 350 feet.

- **New & Inter-set Poles:** Show locations for new inter-set poles or replacement poles. Identify the proposed height and class of the new pole required, and the reason it is required. Specify the party that will install and own the new pole. Include new inter-set poles in the pole counts. New inter-set poles need a callout box.

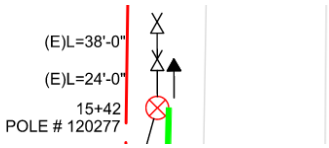
- **Riser Details:** A plan-view of any pole with a proposed riser shall be detailed on the print. This must document existing and proposed risers, stand-off brackets, etc. The diagram must designate climbing space. Example:



- **Joint Wood and Standoff Arms:** Fiberglass standoff arms (referred to as an “FGA”), wood, and “PUPI” arms should be shown on the construction line of the print on the correct side of the pole and noted in the callout box designating the position at each pole where one is to be placed. Climbing space must always be taken into

consideration. The stationing of all cables is shown on the example on page 6.

- **Guying:** All guying must be shown with appropriate symbology. Lead lengths for all anchors shall be documented. See example:



Pole Callout Details

For each pole on the plan view, there must be a corresponding "callout box" This is a box containing important pole details that are crucial in surveying the proposed construction effectively. The guidelines below outline the crucial elements that should be included in all callout boxes. See example callout at the end of this section.

- **Avista Pole Number:** An Avista pole tag number shall always be listed, except in cases where a tag is not present. In those cases list the stationing number from the plan view. Note: The presence of an Avista pole tag does not necessarily indicate Avista ownership. "F" tagged poles (an orange Avista tag with a pole number preceded by the letter F) indicate the pole is owned by the local phone carrier, and permission to attach must be granted by that party. Avista may provide pole ownership information when performing its field survey.

- **Pole Ground:** Note if a multi-ground neutral is present (MGN). If so, note attachments that need to bond to the MGN. If none is needed, no further note is required if a general note references to "bond to all available pole grounds" in the general construction notes.

- **Pole Height & Class:** The pole height and class as indicated by the "belly button" on the pole shall be noted. If pole height is not known, state an estimated pole height and note it as "EST". If the pole class is not known, provide a ground-line circumference (GLC) measurement. Note here if a pole is stubbed.

- **Height-of-Attachment (HOA) for Lowest Power & Street Lights:** (Note: *Do not measure into primary electric space with an extension tool*!) The lowest identified power attachment to the pole shall be documented accurately in feet and inches. Rounded or inaccurate figures will be considered an omission. The lowest power fixture shall be correctly identified, simple labels such as "secondary" is not sufficient. It is incumbent on the applicant to understand the NESC and Avista standards and ensure they are safely and accurately measuring these fixtures. Lowest power may be a neutral rack, a drip loop on a secondary service wire, the top of a riser, etc.

    - **Streetlights**: Streetlights constitute an exception from the 40" rule in the NESC. In cases where a streetlight is present, the bottom of the mast arm (and drip loop, if lower than the bottom of the mast arm) shall be documented accurately in feet and inches. Rounded or inaccurate figures will be considered an omission. Streetlights are *never* considered the lowest power attachment alone. If present, both the streetlight AND lowest power fixture must both be separately identified in the callout box.

- **Height-of-Attachment (HOA) for Telecom Attachments:** (Note: *Do not measure into primary electric space with an extension tool*!) Accurately identify the height of each attachment in feet and inches. Rounded or inaccurate figures will be considered an omission. Attachments shall be listed from highest attachment to lowest. Clearly identify what licensee is being measured. This is the responsibility of the applicant to identify, Avista will not provide this data. Not listing the owner of an attachment will constitute an omission. The HOA should also include the type of attachment (road side "RS", field side "FS", or dead end "DE"). All joint-use attachments to the pole shall be documented in the callout box. Proposed make-ready to raise or lower attachments must always list the final HOA where the attachment is being moved to.

- *The highest attachment MUST be at least 40" from the lowest power per the NESC. In cases where this is not met, applicant must propose a make-ready solution to satisfy this rule.*

- **Guying:** Proposed/existing attachments must always be appropriately guyed. All work related to guying (new anchors, make-ready related to moving down guys between anchors, etc.) shall be carefully documented in the make-ready notes at the bottom of the callout box. Un-guyed attachments MUST be addressed.

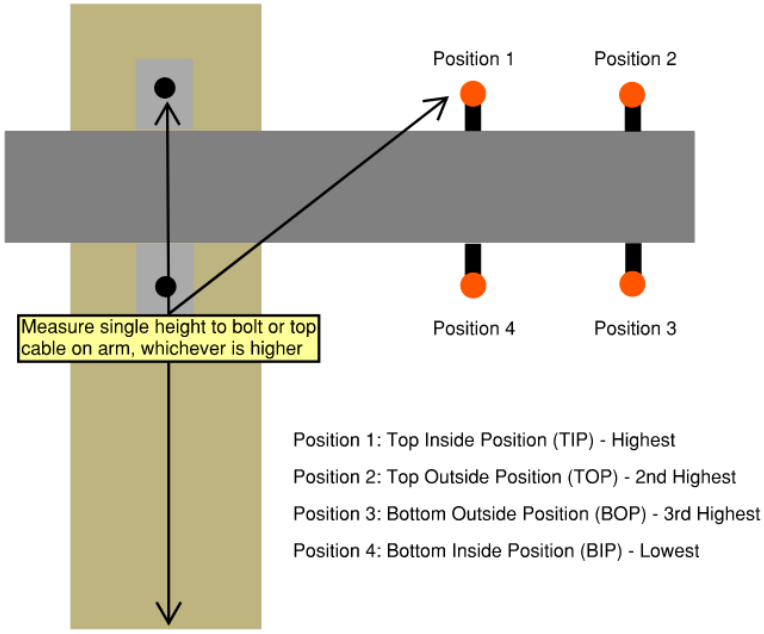
- **Make Ready Notes:** Callout boxes should always include space for notes and make-ready instructions. Any proposed make ready at the pole MUST be documented in clear, concise language.

- **Compliance of Existing Facilities:** If measurements reveal the existing facilities by any licensee are not in compliance; the applicant **MUST** provide a solution to correct the problem, calling out the proposed solution as make-ready work. This can be done by lowering or raising facilities, or requesting make-ready work by the pole owner, or many other potential solutions. While Avista will often modify these proposed solutions, the applicant is responsible for identifying the issue and attempting to provide a solution in the form of make-ready work. Not doing so will constitute an omission and may be grounds for returning the application for re-fielding.

Telecom Arm Positions

- Measuring & Documenting Arms: When measuring multiple attachments on arms, only reference one height of attachment and the position (TIP, TOP, BIP, or BOP). The height should be called out as either the top through bolt of the bracket or the highest cable mounted to the arm, whichever is higher. Call out proposed new arm installations in the same manner.

    - Where metallic support brackets exist above the arm, measure to the bolt where the brackets attach to the pole and call out as a separate attachment in the callout box.



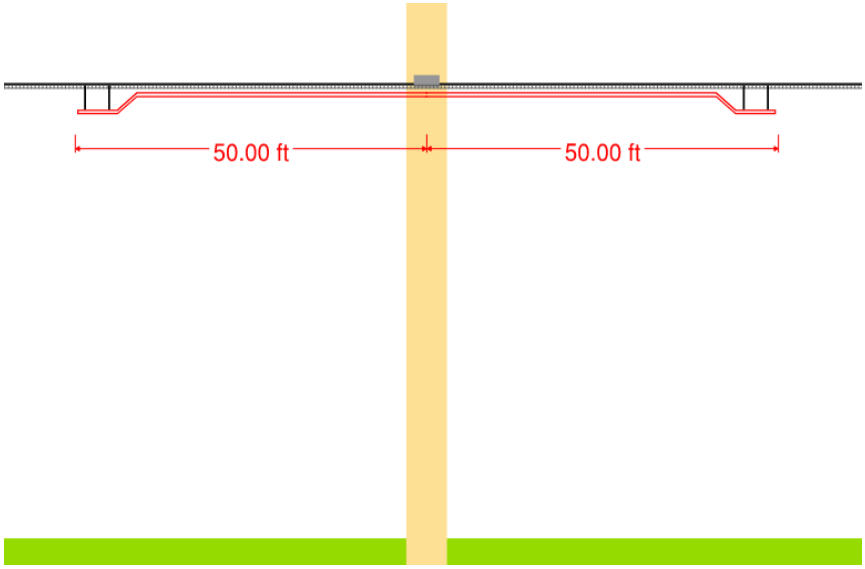
Callout Example with telecom arm:

PWR NAME & POLE #	Avista-166633				MGN: Yes	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-4					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
Riser		23'-9"			FS	
TDS		20'-0"	X-Arm	TIP	RS	20'-0" / TIP
Spectrum		20'-0"	X-Arm	TIP	RS	20'-0" / TOP
ZAYO		20'-0"	X-Arm	TOP	RS	20'-0" / BOP
Fatbeam		20'-0"	X-Arm	BOP	RS	20'-0" / BIP
MAKE READY NOTES:						
PROPOSED TDS: Frame in TIP on existing X-arm at 20'-0"						
Spectrum: Move from TIP to TOP						
ZAYO: Move from TOP to BOP						
Fatbeam: Move from BOP to BIP						

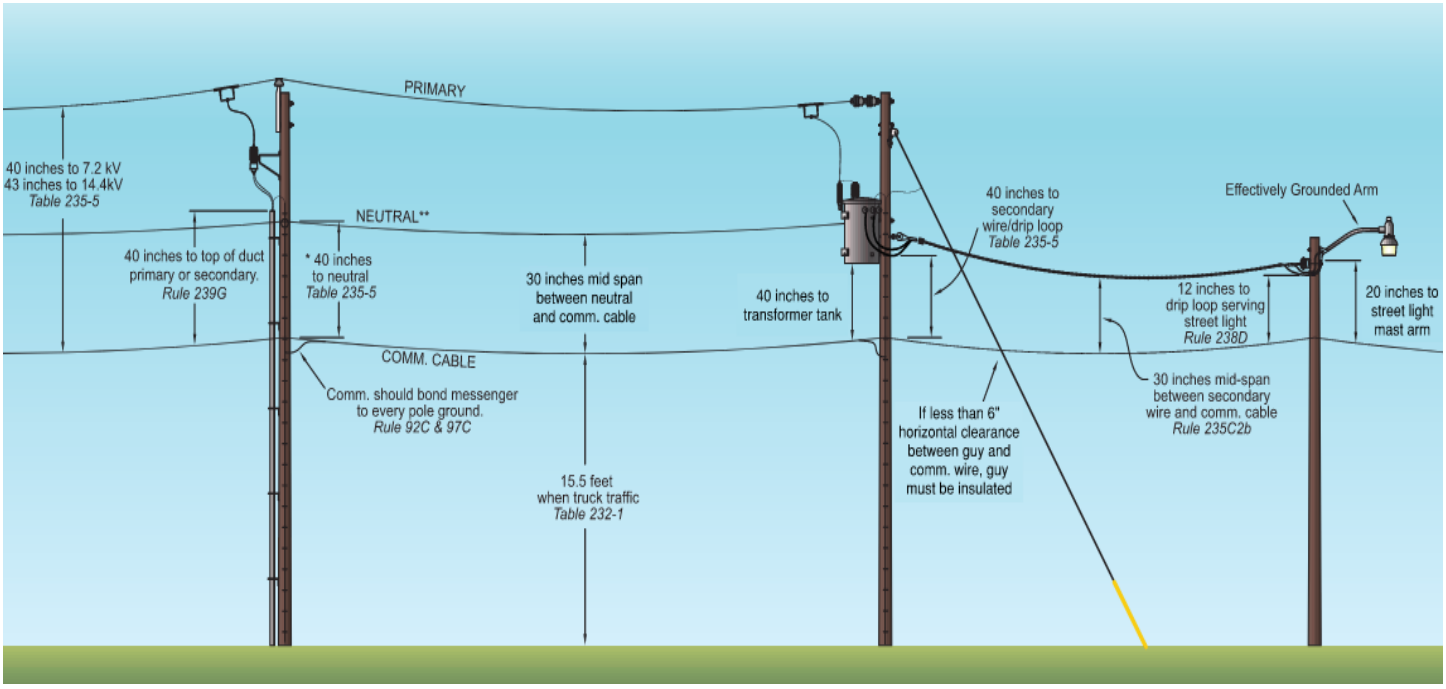
Callout Example:

PWR NAME & POLE #	AVISTA # 120283				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-7"			RS	
LUM		25'-9"			FS	
L DRIP LOOP		25'-9"			FS	
TDS	X	21'-0"			RS	
SPECTRUM	X	20'-0"			RS	
FATBEAM		19'-0"			RS	
MAKE READY NOTES:						
TDS: FRAME AT 21'-0" RS + BOND						
SPECTRUM: BOND						

Fiber Storage Loop Diagram:



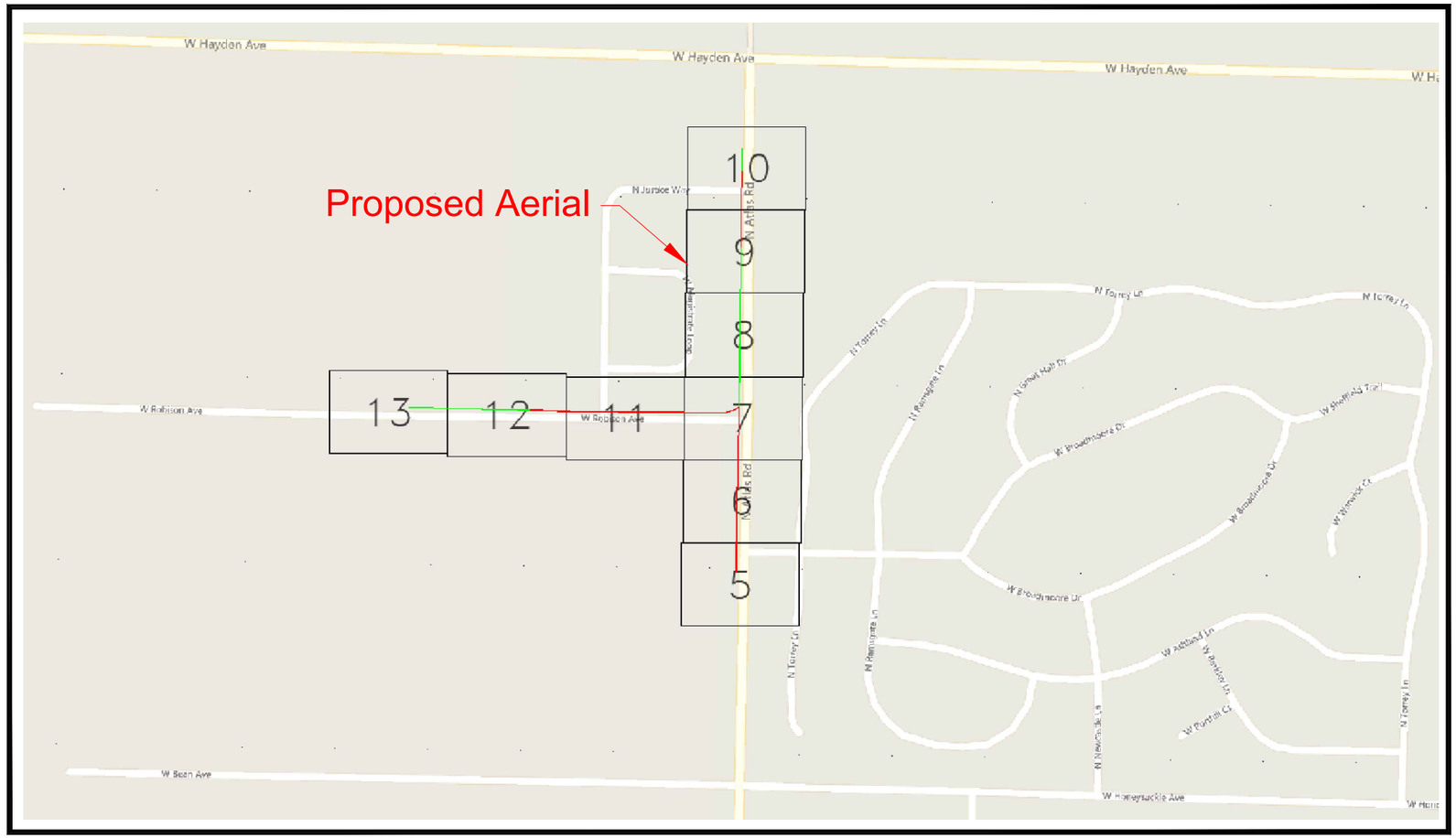
NESC Common Pole Clearance Diagram:



Click here to return to New Application Checklist

SAMPLE ONLY

VICINITY MAP



811

Know what's **below.**
Call before you dig.

811/800-227-2600

PROJECT CONTACTS:

TELECOM:

TELECOM APPLICANT NAME
ADDRESS
SAMPLE@APPLICANT.COM
555-456-7891

AVISTA

AVISTA CPC NAME
AVISTA JOINT USE CPC
SAMPLECPC@AVISTACORP.COM
555-456-7891

SCOTT MEREDITH
CUSTOMER PROJECT COORDINATOR, JOINT USE
509-202-2166

CITY OF COEUR D'ALENE

SHANE ROBERTS
STREETS AND ENGINEERING
(208) 769-2267

TELECOM:

SAMPLE CONTACT
DESIGN MANAGER
SAMPLE CONTACT@TELECOM.COM
555-456-7891

DRAWING INDEX:

SHEET TITLE: **COVER SHEET**

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER: 1	DATE:

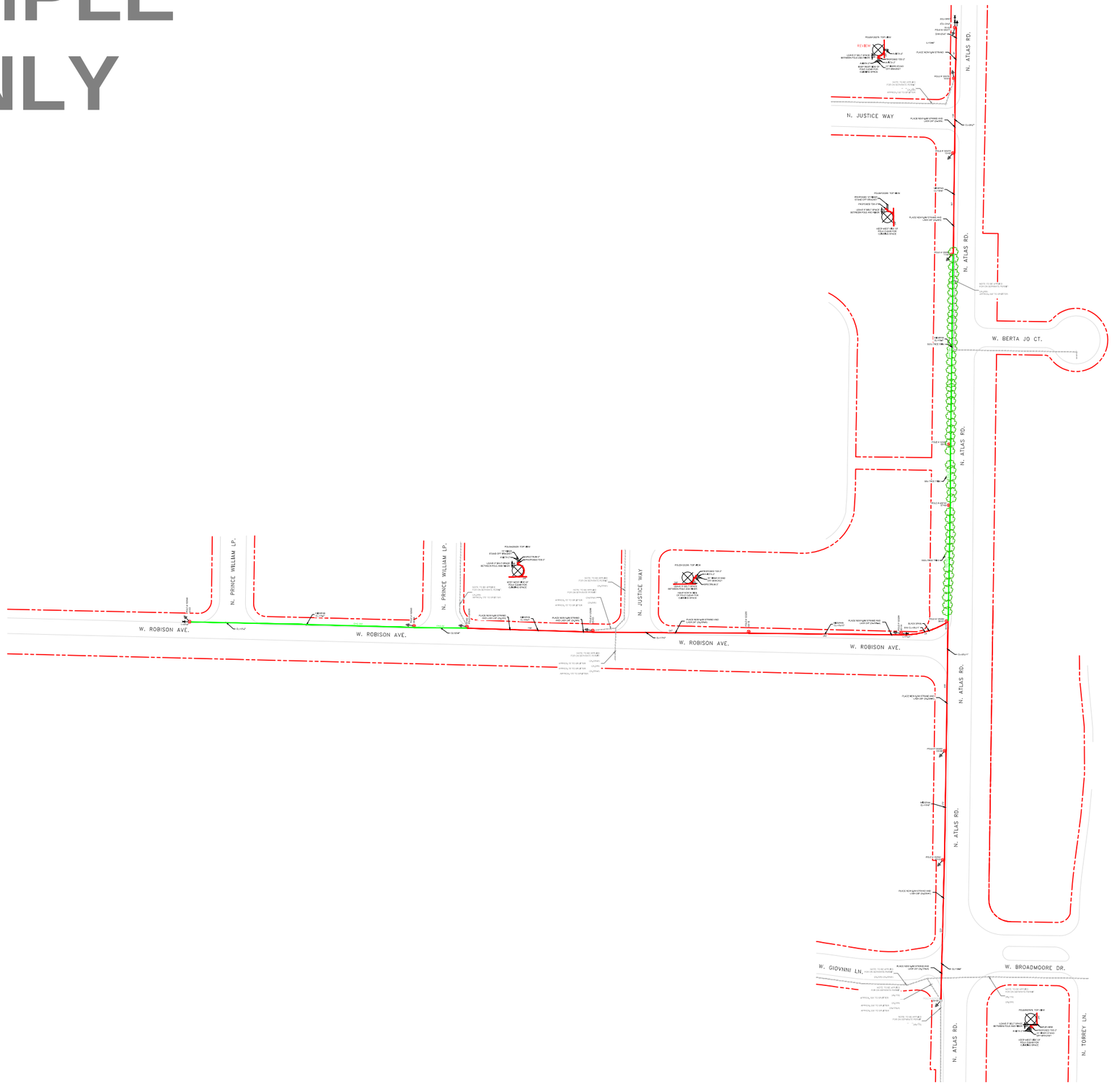
NORTH ARROW:

SCALE: N.T.S.

SHEET NUMBER: 1 OF 13

SAMPLE ONLY

AERIAL DESIGN OVERVIEW



PERMIT ID:

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

DRAWN BY
DATE
QUALITY CONTROL
DATE

SCALE:

N.T.S.

SHEET NUMBER:

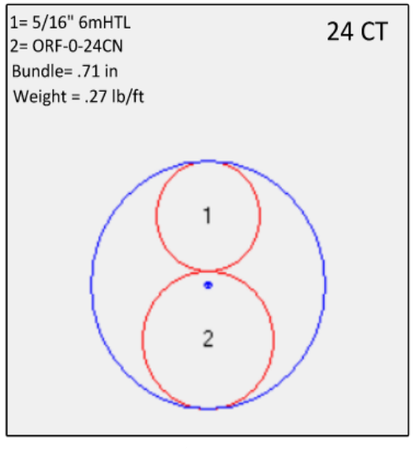
2

OF 13

SAMPLE ONLY

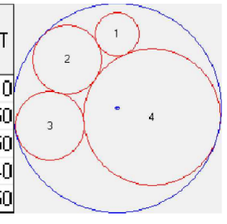
BILL OF MATERIALS

MATERIAL QUANTITIES	UOM	QTY
POLE COUNT	EA	16
6.6M STRAND	FT	2743'
SNOW SHOE	EA	0
ANCHOR	EA	2
DOWN GUY	EA	3
RISER	EA	5
GROUND ROD	EA	0
144F	FT	0'
96F	FT	0'
72F	FT	0'
48F	FT	0'
24F	FT	1,643'



APPLICATIONS FOR NEW ATTACHMENTS MAY SHOW A BUNDLE DIAGRAM OR LIST BUNDLE DIAMETER ON ROUTE APPLICATION FORM

No.	Selected Cables	NOMINAL DIAM (in)	CABLE WEIGHT (lb/ft)
1	1/4"6.6mEHS	0.250	0.1210
2	ORF-0-036-FF	0.396	0.0650
3	ORF-0-024-FF	0.396	0.0650
4	QR-715JCA	0.785	0.1440
	Bundle	1.199	0.3950



APPLICATIONS FOR OVERLASH ATTACHMENTS MUST SHOW A BUNDLE DIAGRAM ANYWHERE THE EXISTING BUNDLE DIAMETER WILL BE CHANGED

SHEET TITLE:
BILL OF MATERIALS

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER: 1	DATE:

NORTH ARROW:

SCALE:
N.T.S.

SHEET NUMBER:
3 OF 13

LEGEND AND SYMBOLS

- GROUND SYMBOL (EXISTING)
- DOWN GUY & ANCHOR (EXISTING)
- SIDEWALK DOWN GUY & ANCHOR (EXISTING)
- STORM MAN HOLE (EXISTING)
- SANITARY SEWER MAN HOLE (EXISTING)
- WATER MAN HOLE (EXISTING)
- POWER MAN HOLE (EXISTING)
- POWER POLE WITH ATTACHMENT (EXISTING)
- POWER POLE NO ATTACHMENT (EXISTING)
- STREET LIGHT POLE (EXISTING)
- S SWITCH POLE
- P POWER HAND HOLE (EXISTING)
- TELECOM PEDESTAL (EXISTING)
- STORM DRAIN (EXISTING)
- EXISTING TREE (SIGNIFICANT)
- END OF CABLE SPLICE CLOSURE (PROPOSED)
- ENVIRONMENT CHANGE
- F FIBER MARKER
- 60 60' FIBER STORAGE (1-SNOW SHOE)
- 60 60 120' FIBER STORAGE (2-SNOW SHOE)
- SPLICE NAME SPLICE LOCATION

- GROUND SYMBOL (PROPOSED)
- DOWNGUY ONLY - (E) ANCHOR
- DOWN GUY & ANCHOR (PROPOSED)
- SIDEWALK DOWN GUY & ANCHOR (PROPOSED)
- HAND HOLE (EXISTING) 30X60X30
- HAND HOLE (PROPOSED) 30X60X30
- HAND HOLE (EXISTING) 24X36X24
- HAND HOLE (PROPOSED) 24X36X24
- FIRE HYDRANT (EXISTING)
- CABINET STRUCTURE (EXISTING)
- CAUTION CAUTION SIGN FOR CROSSING (EXISTING)

- W WATER LINE
- SD STORM DRAIN LINE
- SS SANITARY SEWER LINE
- PROPOSED AERIAL
- OVER HEAD GUY
- FUTURE ROUTE
- RIGHT OF WAY
- C/L CENTER LINE OF ROAD
- EOP EDGE OF PAVEMENT
- C&G CURB AND GUTTER
- CL=__' AERIAL CLEARANCE
- S/W SIDEWALK
- DWY DRIVEWAY

ABBREVIATIONS:

CTL	CENTURY LINK
CMC	COMCAST
MCI	VERIZON
ZAYO	ZAYO
XO	XO
OHG	OVERHEAD GUY
DG	DOWN GUY
ANC	ANCHOR
BND	NEED BOND
MTA	METAL EXT ARM
FGA	FIBERGLASS EXT ARM
XARM	WOOD X ARM
FS	FIELD SIDE
RS	ROAD SIDE
BIP	BOTTOM INSIDE POS XARM
BOP	BOTTOM OUTSIDE POS XARM
TIP	TOP INSIDE POS XARM
TOP	TOP OUTSIDE POS XARM
HOA	HEIGHT OF ATTACHMENT
SLMA	STREET LIGHT MAST ARM
SL DL	STREET LIGHT DRIP LOOP
SVC	ELECTRIC SERVICE
1R	ONE RACK
3R	THREE RACK
DL	DRIP LOOP (OTHER THAN STREET LIGHT)
DE	DEAD END
FDE	FALSE DEAD END (SLACK SPAN)
MGN	MULTI-GROUND NEUTRAL
CS	CLIMBING SPACE (INCLUDE COMPASS DIRECTION FOR QUADRANT)
PUPI	FIBERGLASS XARM
IGND	INDEPENDENT GROUND
RSR	RISER
SOB	STAND-OFF BRACKET (FOR RISER)
CNDT	CONDUIT
XFRMR	TRANSFORMER
AA	ALLEY ARM
WCS	WORST CASE SAG CLEARANCE
WCS D/W CL	WORST CASE SAG DRIVEWAY CLEARANCE
WCS MS CL	WORST CASE SAG MID SPAN CLEARANCE

SHEET TITLE: LEGEND AND SYMBOLS

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

SCALE: N.T.S.

SHEET NUMBER: 4 OF 13

MATCH TO SHEET 6

W. GIOVNNI LN.

W. BROADMOORE DR.

N. ATLAS RD.

N. TORREY LN.

PLACE NEW 6.6M STRAND AND LASH 24F (24.33N-A)

CL=18'-6"

NOTE: TO BE APPLIED FOR ON SEPARATE PERMIT

(24.33N) (24.33N-A)

NOTE: TO BE APPLIED FOR ON SEPARATE PERMIT

(48.17S)

APPROX. 395' TO SPLITTER

(24.33N)

APPROX. 236' TO SPLITTER

(24.33N-A)

APPROX. 236' TO SPLITTER

NOTE: TO BE APPLIED FOR ON SEPARATE PERMIT

(48.17S)

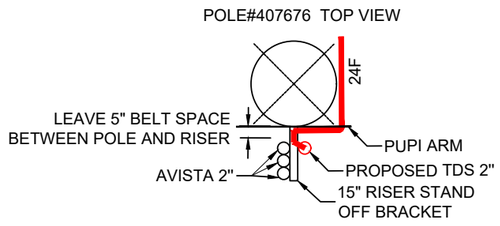
POLE # 407676
00+00

NOTE: TO BE APPLIED FOR ON SEPARATE PERMIT

(48.17S)

(24.33N)

POLE#407676 TOP VIEW



KEEP WEST SIDE OF POLE CLEAR FOR CLIMBING SPACE

PWR NAME & POLE #	AVISTA # 407676				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-10"			RS	
LUM		25'-2"			RS	
L DRIP LOOP		24'-4"			RS	
RISER		24'-4"			FS	
TDS	X	20'-10"	PUPI	TIP	RS	
SPECTRUM	X	NA			RS	20'-10" PUPI TOP RS
FATBEAM		20'-7"			RS	↑ 20'-10" PUPI BIP RS
MAKE READY NOTES:						
TDS: FRAME PUPI ARM AT 20'-10" ON SOUTH SIDE OF POLE RS TIP + BOND						
SPECTRUM: ATTACH TO PUPI ARM AT 20'-10" TOP RS + BOND						
FATBEAM: RAISE 3" TO PUPI ARM AT 20'-10" BIP RS						

SHEET TITLE: DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

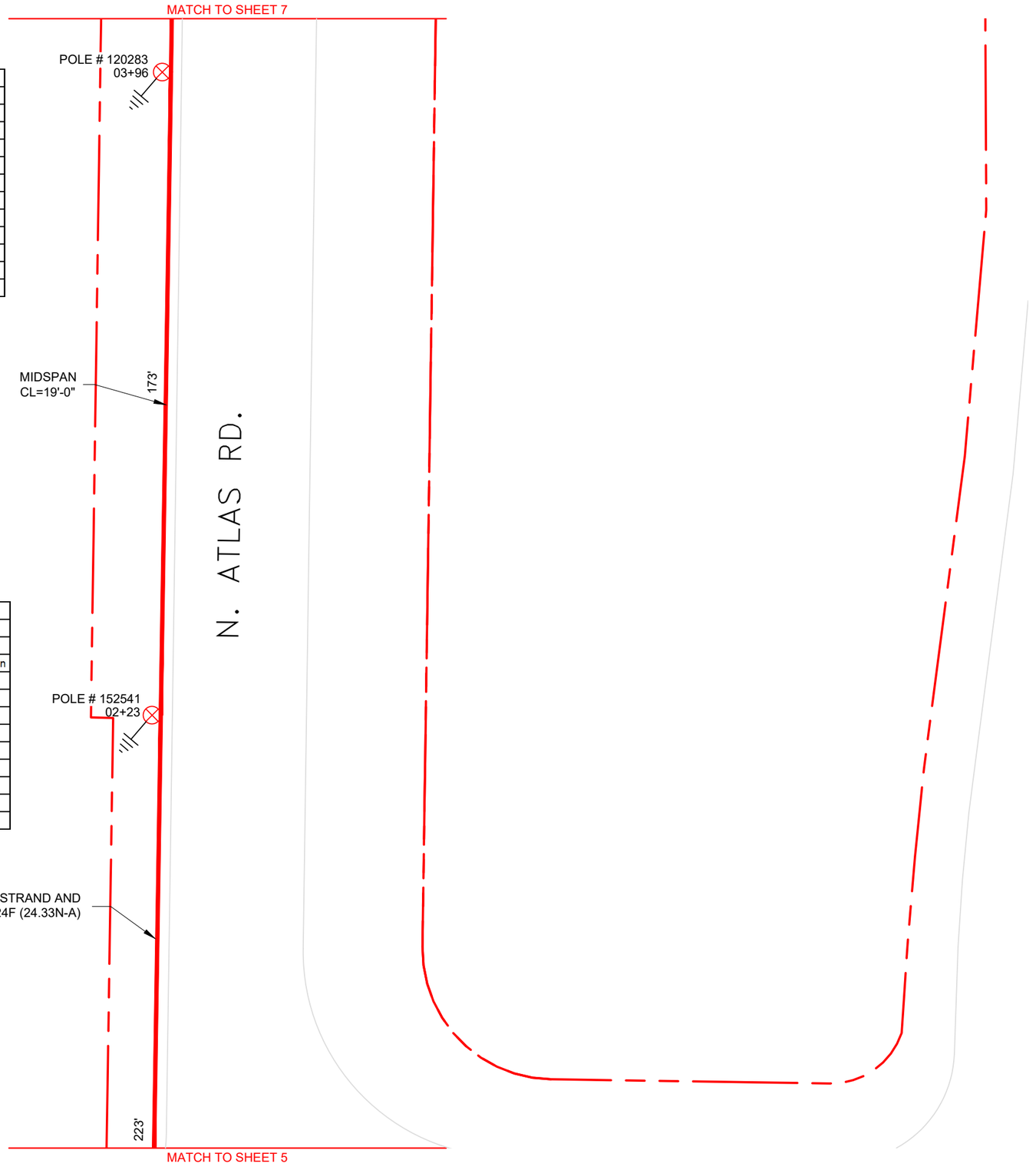
SCALE: 1" = 30'

20' 30' 50'

SHEET NUMBER: 5 OF 13

PWR NAME & POLE #	AVISTA # 120283				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-7"			RS	
LUM		25'-9"			FS	
L DRIP LOOP		25'-9"			FS	
TDS	X	21'-0"			RS	
SPECTRUM	X	20'-0"			RS	
FATBEAM		19'-0"			RS	
MAKE READY NOTES:						
TDS: FRAME AT 21'-0" RS + BOND						
SPECTRUM: BOND						

PWR NAME & POLE #	AVISTA # 152541				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
3-RACK		26'-9"			RS	
RISER		25'-6"			FS	
TDS	X	22'-2"			RS	
SPECTRUM		22'-2"			RS	↓ 21'-2"
FATBEAM		21'-2"			RS	↓ 20'-2"
MAKE READY NOTES:						
TDS: FRAME AT 22'-2" RS + BOND						
SPECTRUM: LOWER 12" TO 21'-2" RS						
FATBEAM: LOWER 12" TO 20'-2" RS						



SAMPLE ONLY

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

SCALE:
SCALE: 1" = 30'
20' 30' 50'

SHEET NUMBER:
6 OF 13

MATCH TO SHEET 8

160'± TREE TRIM

OHG 183'

PWR NAME & POLE #	AVISTA # 120284				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-4					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		27-8"			DE	
TDS	X	23'-0"			FDE	
SPECTRUM 1		23'-0"			DE	↓22'-0"
SPECTRUM 2		22'-6"			RS	↓21'-6"
MAKE READY NOTES:						
AVISTA: CHANGE OUT ANCHOR 17' EAST WITH 1" 3-EYE ANCHOR + DG TOP POSITION						
TDS: FRAME AT 23'-0" FDE + PL DG ON PROPOSED ANCHOR 17' EAST MIDDLE POSITION + BOND						
SPECTRUM 1:LOWER 12" TO 22'-0" RELOCATE DG TO PROPOSED ANCHOR BOTTOM POSITION DE						
SPECTRUM 2: LOWER 12" TO 21'-6" RS						

PLACE NEW 6.6M STRAND AND
LASH 24F (24.33N-A)

MIDSPAN
CL=19'-10"

242'

POLE # 120284
00+74

S/W CL=19'-11"

SLACK SPAN

74'

L=17'-0"

POLE # 120282
06+01

00+00

PWR NAME & POLE #	AVISTA # 120282				MGN: NO	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	50-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		30'-11"			RS	
TDS 1		26'-1"			FS/DE	
TDS 2		25'-1"			RS	
SPECTRUM 1		26'-1"			FS/DE	↓25'-0"
SPECTRUM 2		25'-11"			RS	↓24'-6"
FATBEAM		24'-11"			RS	↓23'-6"
MAKE READY NOTES:						
TDS 1: FRAME AT 26'-1" FS DE						
TDS 2: FRAME AT 25'-1" RS						
SPECTRUM 1: LOWER 13" TO 25'-0" FS/DE						
SPECTRUM 2: LOWER 17" TO 24'-6" RS						
FATBEAM: LOWER 17" TO 23'-6" RS						

MATCH TO SHEET 11

W. ROBISON AVE.

CL=20'-11"

205'

N. ATLAS RD.

PLACE NEW 6.6M STRAND AND
LASH 24F (24.33N-A)

MATCH TO SHEET 6

SAMPLE
ONLY

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

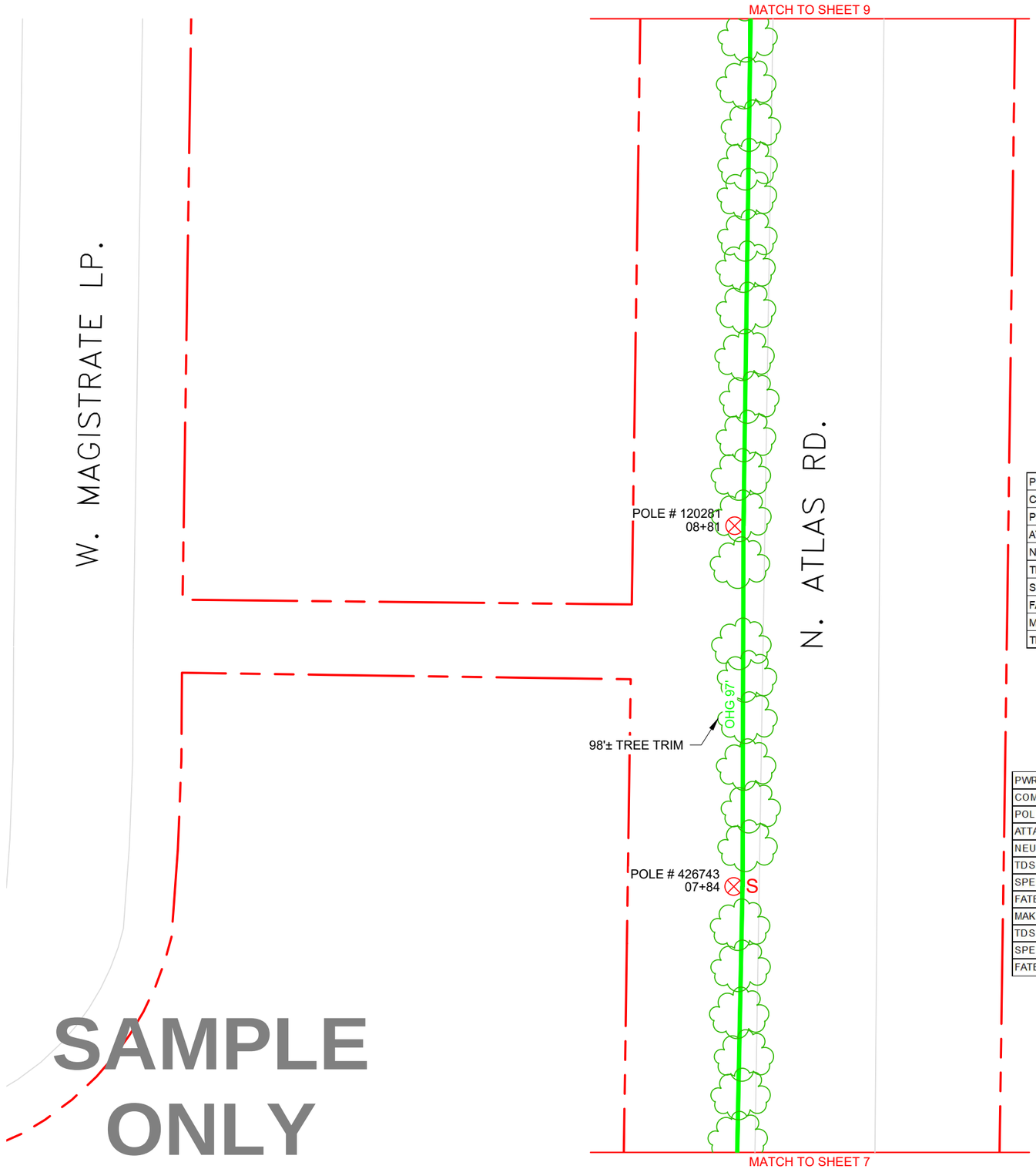
PLANS PREPARED BY:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

SCALE:
SCALE: 1" = 30'
20' 30' 50'

SHEET NUMBER:
7 OF 13



PWR NAME & POLE #	AVISTA # 120281				MGN: NO	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-1"			RS	
TDS OHG		23'-0"			RS	
SPECTRUM		22'-0"			RS	
FATBEAM		20'-11"			RS	
MAKE READY NOTES:						
TDS: FRAME AT 23'-0" RS						

PWR NAME & POLE #	AVISTA # 426743				MGN: NO	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3				SWITCH POLE	
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-7"			RS	
TDS OHG		23'-6"	FGA		RS	
SPECTRUM		23'-6"	FGA		RS	↓22'-6"
FATBEAM		22'-6"	FGA		RS	↓21'-6"
MAKE READY NOTES:						
TDS: FRAME AT 23'-6" ON FGA RS						
SPECTRUM: LOWER 12" TO 22'-6" RS						
FATBEAM: LOWER 12" TO 21'-6" RS						

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

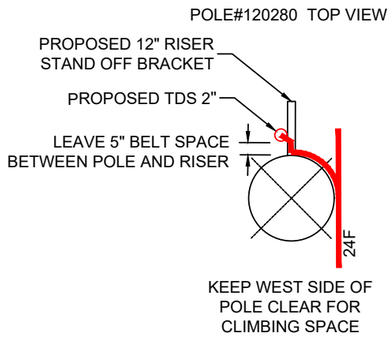
SCALE:

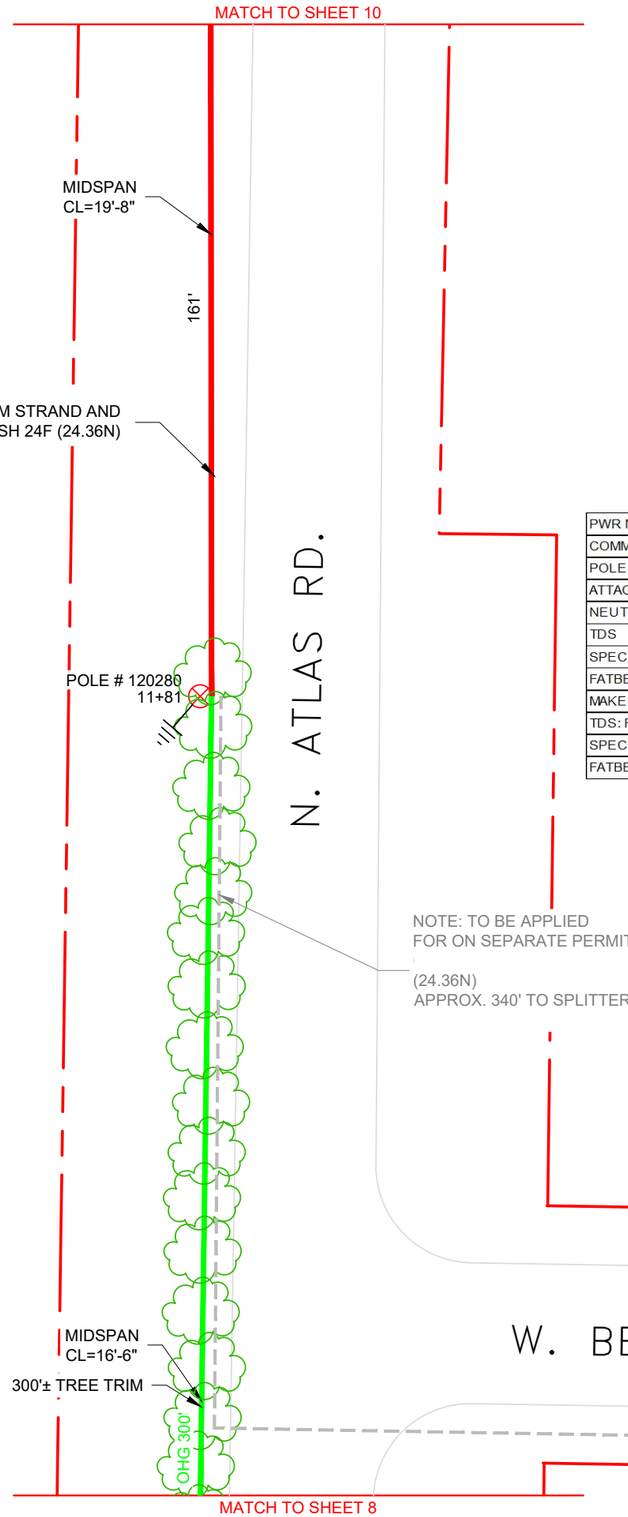
SCALE: 1" = 30'

20' 30' 50'

SHEET NUMBER:

8 OF 13





PWR NAME & POLE #	AVISTA # 120280				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	50-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		32'-11"			RS	
TDS	X	23'-8"			RS	
SPECTRUM		23'-8"			RS	↓22'-8"
FATBEAM		22'-8"			RS	↓21'-8"
MAKE READY NOTES:						
TDS: FRAME AT 23'-8" RS + BOND						
SPECTRUM: LOWER 12" TO 22'-8" RS						
FATBEAM: LOWER 12" TO 21'-8" RS						

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

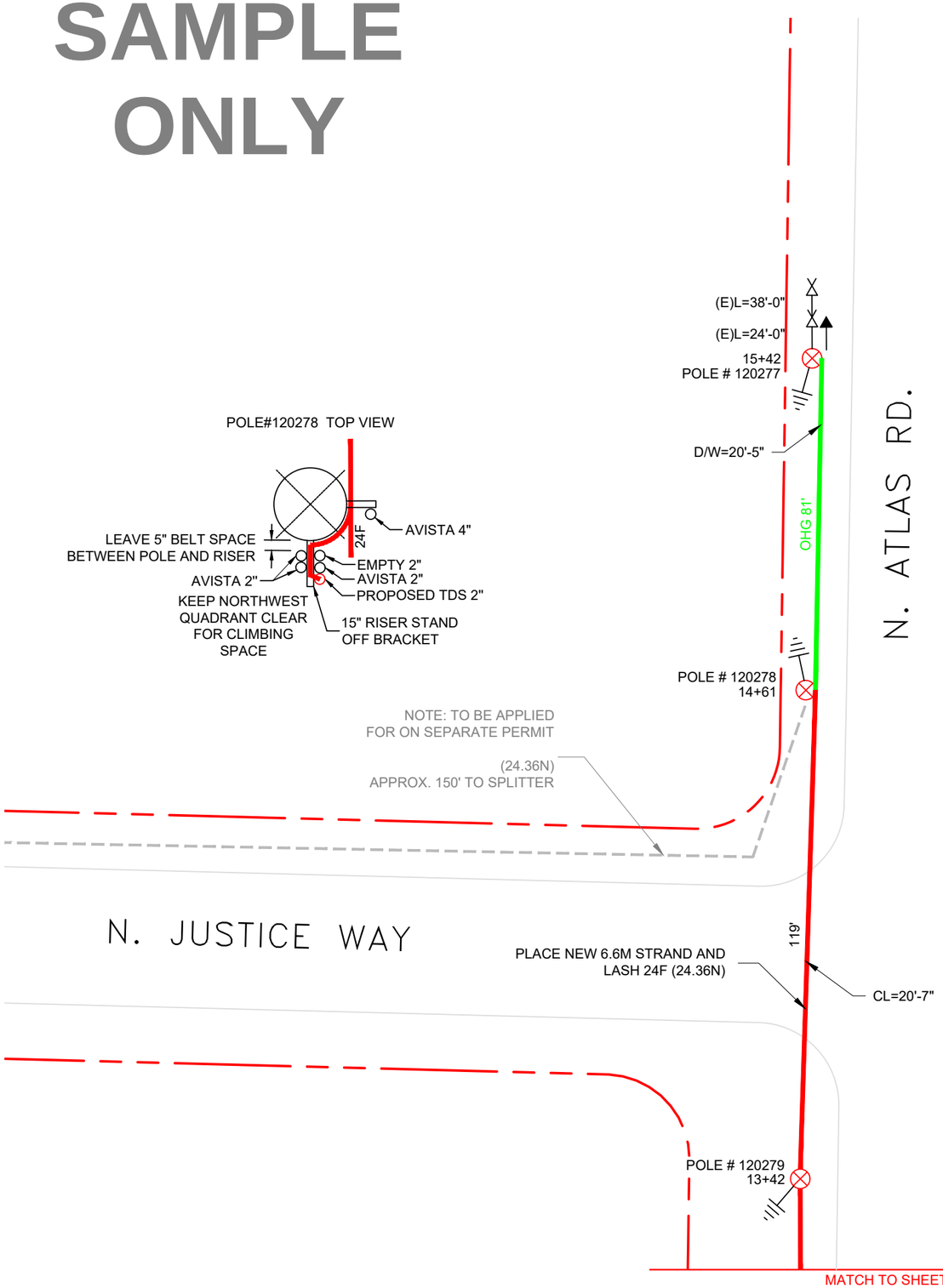
SCALE:

SCALE: 1" = 30'
20' 30' 50'

SHEET NUMBER:

9 OF 13

SAMPLE ONLY



PWR NAME & POLE #	AVISTA # 120277				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		24'-3"			DE	
TDS OHG	X	20'-10"			DE	
FATBEAM		20'-10"			DE	↓ 19'-10"
MAKE READY NOTES:						
TDS: FRAME AT 20'-10 DE + PL DG ON EXISTING 24' NORTH MIDDLE POSITION + BOND						
FATBEAM: LOWER 12" TO 19'-10" DE + RELOCATED DG ON EXISTING ANCHOR 24' NORTH BOTTOM POSITION						

PWR NAME & POLE #	AVISTA # 120278				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-2"			RS	
RISER		25'-10"			RS	
TDS	X	22'-4"	FGA		RS	
FATBEAM	X	22'-4"	FGA		RS	↓ 21'-4"
MAKE READY NOTES:						
TDS: FRAME AT 22'-4" ON FGA RS + BOND						
FATBEAM: LOWER 12" TO 21'-4" ON FGA RS + BOND						

PWR NAME & POLE #	AVISTA # 120279				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
3-RACK		26'-10"			RS	
LUM		23'-10"			RS	
L DRIP LOOP		23'-7"			RS	
TDS	X	21'-10"			FDE	
SPECTRUM		21'-10"			DE	↓ 20'-10"
FATBEAM		20'-10"			RS	↓ 19'-7"
MAKE READY NOTES:						
AVISTA: CHANGE OUT 12' MAST AND RAISE SL WITH RADIO 16" TO 25'-2"						
TDS: FRAME AT 21'-10" FDE + BOND						
SPECTRUM: LOWER 12" TO 20'10" DE + RE-TENSION DROPS						
FATBEAM: LOWER 15" TO 19'-7" RS						

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

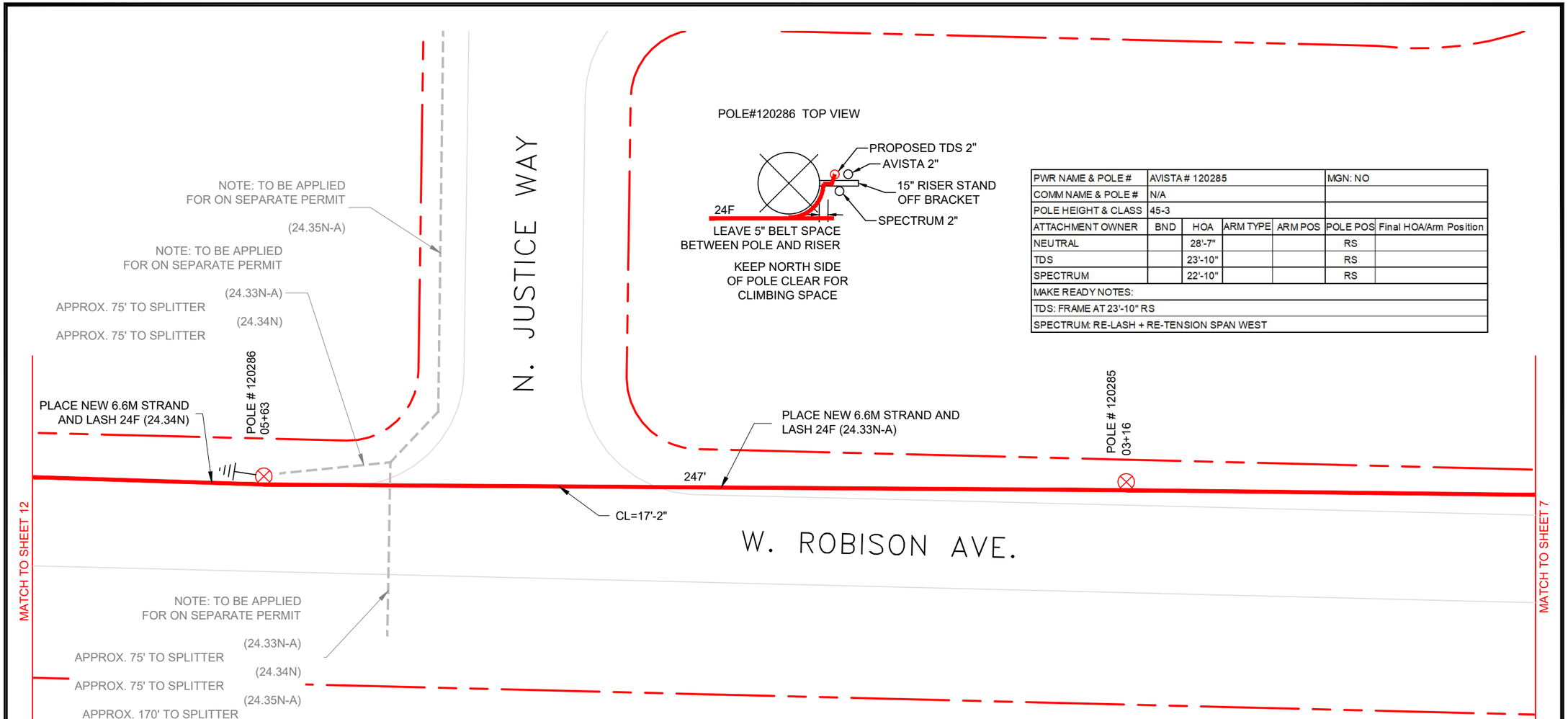
SCALE:

SCALE: 1" = 30'

20' 30' 50'

SHEET NUMBER:

10 OF 13



POLE#120286 TOP VIEW

LEAVE 5" BELT SPACE BETWEEN POLE AND RISER

KEEP NORTH SIDE OF POLE CLEAR FOR CLIMBING SPACE

PWR NAME & POLE #	AVISTA # 120285				MGN: NO	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		28'-7"			RS	
TDS		23'-10"			RS	
SPECTRUM		22'-10"			RS	
MAKE READY NOTES:						
TDS: FRAME AT 23'-10" RS						
SPECTRUM: RE-LASH + RE-TENSION SPAN WEST						

PWR NAME & POLE #	AVISTA # 120286				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
NEUTRAL		26'-6"			RS	
TDS	X	22'-6"			RS	
SPECTRUM	X	19'-11"			RS	↑ 21'-6"
MAKE READY NOTES:						
TDS: FRAME AT 22'-6" RS + BOND						
SPECTRUM: RAISE 19" TO 21'-6" + BOND, WILL HAVE TO SPLICE RISER CABLE IN ORDER TO RAISE						

SHEET TITLE: DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

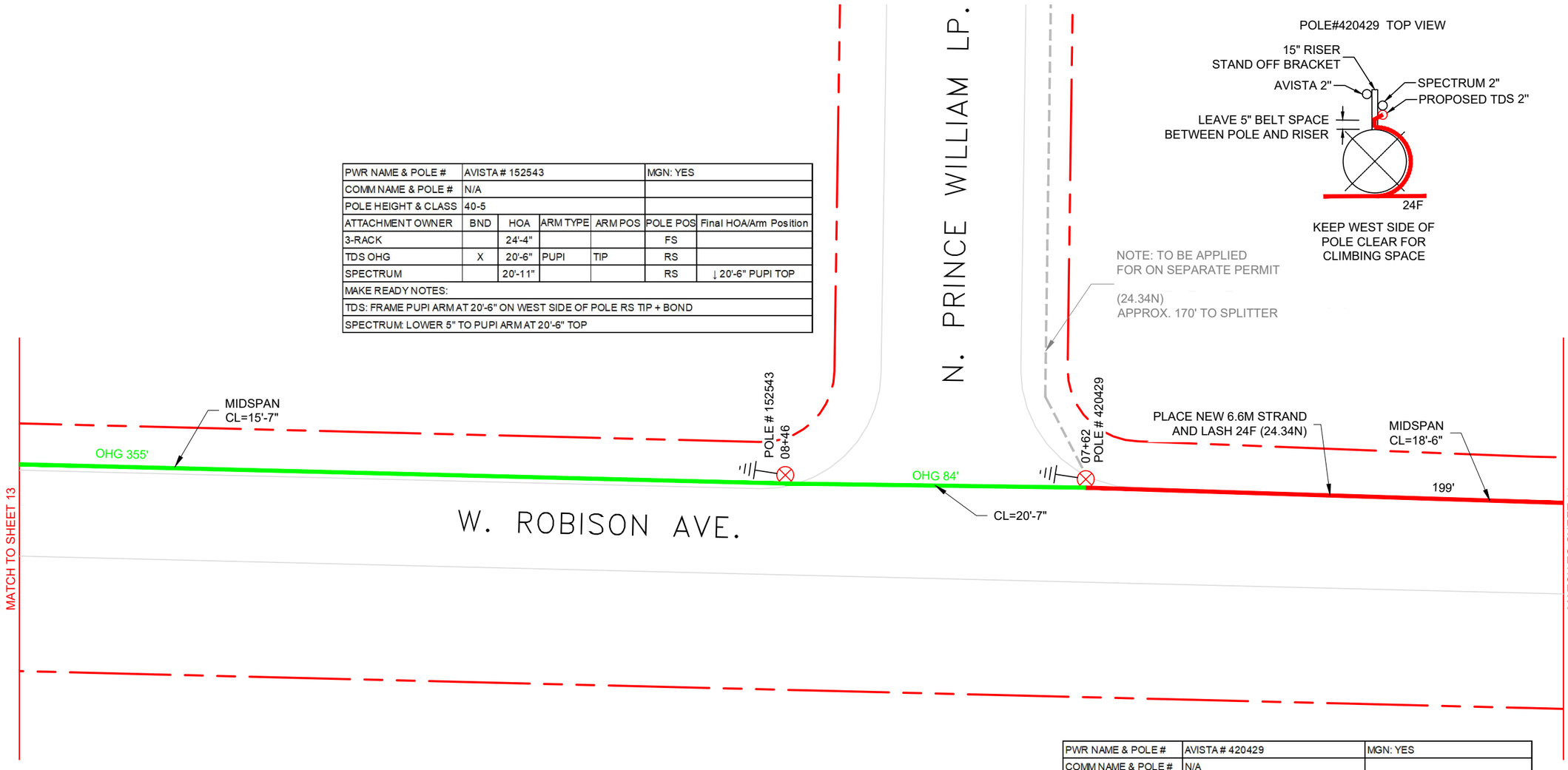
DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

SCALE: 1" = 30'

SHEET NUMBER: 11 OF 13

PWR NAME & POLE #	AVISTA # 152543				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	40-5					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
3-RACK		24'-4"			FS	
TDS OHG	X	20'-6"	PUPI	TIP	RS	
SPECTRUM		20'-11"			RS	↓ 20'-6" PUPI TOP
MAKE READY NOTES:						
TDS: FRAME PUPI ARM AT 20'-6" ON WEST SIDE OF POLE RS TIP + BOND						
SPECTRUM: LOWER 5" TO PUPI ARM AT 20'-6" TOP						



POLE#420429 TOP VIEW

KEEP WEST SIDE OF
POLE CLEAR FOR
CLIMBING SPACE

PWR NAME & POLE #	AVISTA # 420429				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	45-3					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
RISER		34'-4"			FS	
TDS	X	21'-11"	FGA		RS	
SPECTRUM		20'-11"	FGA		RS	
MAKE READY NOTES:						
TDS: FRAME AT 21'-11" ON FGA RS + BOND						

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

PROPRIETARY INFORMATION:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

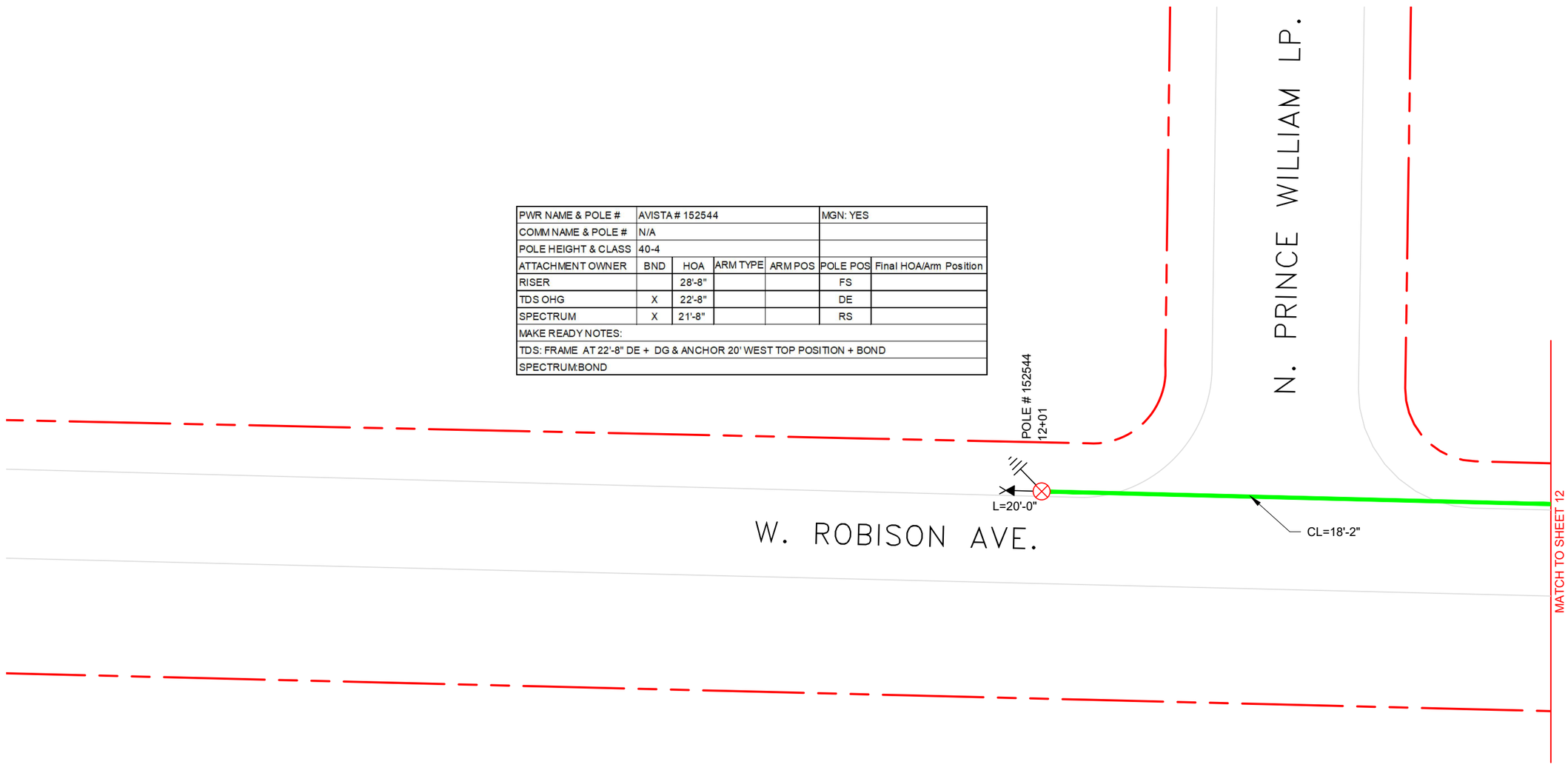
SCALE:

SCALE: 1" = 30'
20' 30' 50'

SHEET NUMBER:

12 OF 13

PWR NAME & POLE #	AVISTA # 152544				MGN: YES	
COMM NAME & POLE #	N/A					
POLE HEIGHT & CLASS	40-4					
ATTACHMENT OWNER	BND	HOA	ARM TYPE	ARM POS	POLE POS	Final HOA/Arm Position
RISER		28'-8"			FS	
TDS OHG	X	22'-8"			DE	
SPECTRUM	X	21'-8"			RS	
MAKE READY NOTES:						
TDS: FRAME AT 22'-8" DE + DG & ANCHOR 20' WEST TOP POSITION + BOND						
SPECTRUM:BOND						



SAMPLE ONLY

SHEET TITLE:
DESIGN

PERMIT ID:

REV	DATE	DESCRIPTION	

PLANS PREPARED BY:

DRAWN BY:	DATE:
CHECKED BY:	DATE:
SUBMITTAL NUMBER:	DATE:

NORTH ARROW:

SCALE:

SCALE: 1" = 30'

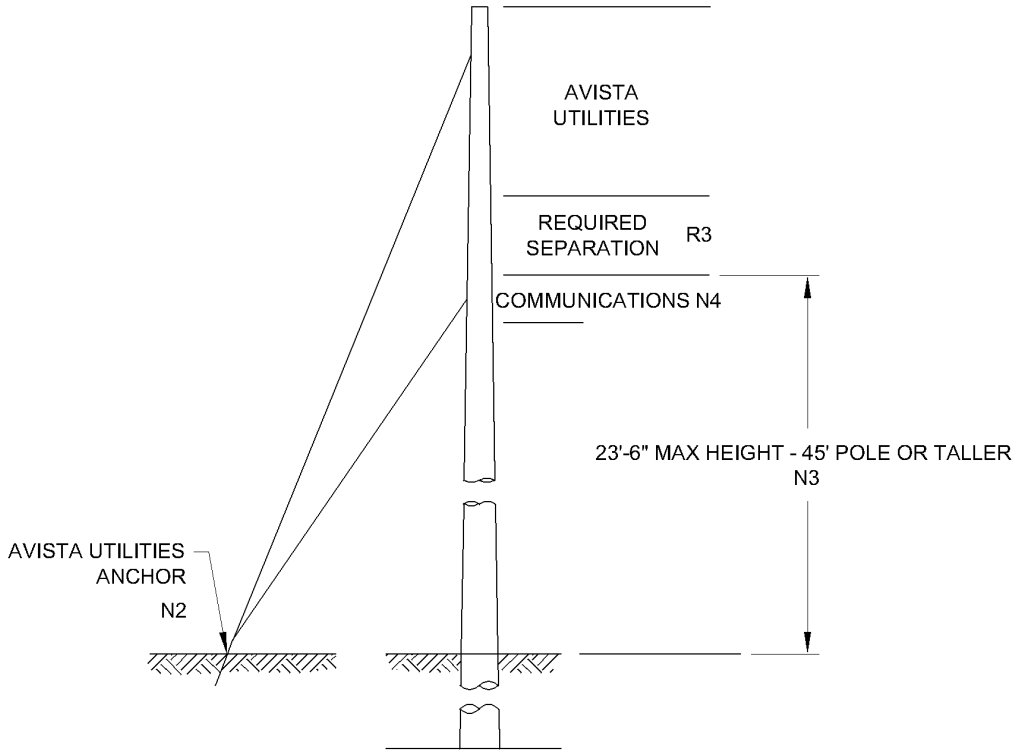
20' 30' 50'

SHEET NUMBER:

13 OF 13

Click here to return to New Application Checklist

Avista OVERHEAD Construction Standards Section 1.4 "Joint Use"



All attachments to Avista Utilities poles **must** meet the following general requirements and **the specific requirements in the joint use standards that follow:**

NOTES:

N1. All parties attaching to Avista Utilities poles must have a signed Joint Use Agreement with Avista Utilities. Joint Users must refer to their Joint Use Agreements with Avista Utilities for specific attachment requirements.

N2. **Attachments to all Avista Utilities anchors must be approved prior to attachment. All unbalanced tensions must be guyed.**

N3. Attachment height greater than listed above must be approved by Avista Utilities Joint Use Administrator prior to attachment. For agreements on 40ft poles, see DO-1.461 (R8).

N4. Communication cable attachments must be on the same side of the pole as Avista Utilities neutral, unless otherwise instructed by the Avista Utilities Joint Use Administrator.

N5. Communication cables must be in the communication space and separated from each other by 12 inches when attached directly to the pole; 12 inches vertical separation is specified by the FCC and local State Commissions. TV cables must be installed above telephone cables unless an alternative is approved in advance by the Avista Utilities Joint Use Administrator.

N6. Ungrounded communications down guys must be insulated if the pole supports any supply conductors (R1).

N7. Holes resulting from attachments removed or relocated must be filled with treated wood plugs that are an appropriate size or plastic plugs (R9).

N8. Through-bolt holes must not be cross-drilled within three inches of each other.

N9. Through-bolt ends must not protrude more than two inches beyond the nut on the other side.

N10. Additional clearances from ground and obstructions are the responsibility of the individual company and may require taller structures. Prior arrangements must be made with Avista Utilities.

N11. Subduct or squirrel guard must not be installed without the prior approval of the Avista Utilities Joint Use Administrator.

N12. All-Dielectric-Self-Supporting (ADSS) cable is not allowed for attachment unless approved by the Avista Utilities Joint Use Administrator.

N13. Existing holes shall be used for attachments and equipment mounting whenever possible.

REFERENCES:

R1. NESC 279.A.2.

R2. NESC 238E.

R3. Refer to DO-1.407 for Joint Use Vertical Clearance at Supports.

R4. Refer to DO-1.410 for Joint Use Vertical Clearance at Midspan.

R5. Refer to DO-1.422 for Climbing Space.

R6. Refer to DO-1.455 for Joint Use Guying.

R7. Refer to DO-1.458 for Joint Use Anchor Limits.

R8. Refer to DO-1.461 for Joint Use Agreements New Poles.

R8. Refer to Section DO-2.5 Guying and Anchoring.

R9. Refer to Material Spec 6682.200 for plastic plugs (stock number 668-1525 and 668-1530).

Avista Utilities		POLE HEIGHT
Single Circuit	In-line	45 feet
	Buck	50 feet
Double Circuit	In-line	60 feet
	One buck	60 feet
	Two bucks	65 feet

NOTES:

N1. Use the table above as a guide for the minimum pole height requirements for Avista Utilities use. Taller poles may be needed to provide adequate clearances and separation for all parties. Pole class must be considered using other standards (R5).

N2. Joint use must be coordinated before construction. Joint users may be required to pay for part or all of larger poles when the additional height or class is required to meet their needs.

N3. Poles are framed with the neutral down for single circuit and with attachment space for both TV and Telephone. New double circuit construction is framed with the neutral on the lower circuit cross arm and with attachment space for both TV and Telephone. Most of the existing double circuit construction may have neutral framed down.

N4. New attachments and changes must be coordinated through Avista Joint Use Administrator.

REFERENCES:

R1. NESC Table 232-1.

R2. NESC Table 235-5.

R3. Refer to DO-1.407 for Joint Use Vertical Clearance at Supports.

R4. Refer to DO-1.410 for Joint Use Vertical Clearance at Midspan.

R5. Refer to DO-1.434 through DO-1.440 for Joint Use Pole Strength Limits.

R6. Refer to DO-1.461 through DO-1.470 for Joint Use Agreements.

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Joint Use: Banners and Non-Utility Item Attachment Guidelines

DO-1.405

Construction Notes

N1. Banners are fabric panels limited to 20 square feet which are meant to inform or promote items of interest in the community. They are furnished and owned by a municipality, franchise agency, or other jurisdiction having authority.

N2. Non-utility items are attachments which are not in support of Avista's electric distribution system, nor are they 3rd party telecommunications attachments. They can be but are not limited to; signs, decorations, planters, memorials, etc.

N3. Prior to installation, all banners and non-utility items must be approved by the Avista Joint Use Department. All attachments are subject to any applicable federal, state or local permitting requirements or laws.

N4. Unauthorized banners, non-utility items, privately owned electric conductor, signs, billboards, placards or items meant to promote commercial ventures are strictly prohibited by law and are subject to immediate removal. (R11).

N5. Banners and non-utility items shall be attached below the communication worker safety zone and below lowest existing communications attachment.

N6. Banners and non-utility items shall not be energized. Battery or solar powered devices may be considered on a case by case basis.

N7. Irrigation systems in support of planters are not permitted

N8. Climbing Space shall be maintained at all times. Lack of climbing space may preclude installation.

N9. Banners and non-utility items shall not be strung between poles unless properly and independently guyed. All tensions on Avista poles must be balanced.

N10. State highways or other roadways may have specific requirements for clear zones and ground clearances (20 foot minimum mounting height) which could preclude installation.

N11. Banners should have air slits to reduce air drag during wind storms.

N12. Only one banner or non-utility item may be attached to each pole.

N13. Each structure must be analyzed and inspected for capacity and structural integrity prior a banner or non-utility item being installed.

Construction Notes Cont.

N14. Banners and non-utility items may be removed at any time by utility workers requiring access to the pole. Removal may be permanent if conditions changed precluding continued attachment.

N15. Surveillance cameras, or other similar sensors, for legal law enforcement activities are allowed on a temporary, warrant driven basis and requires an agreement between Avista and the law enforcement organization prior to installation.

N16. Attachment of electric conductors owned and operated by adjacent electric utilities are allowed on a case by case basis by Avista Distribution Engineering. All such attachments require a mutually approved written agreement.

N17. All installation, maintenance and removal of banners and non-utility items shall be at the sole expense of the requestor and completed by qualified utility workers.

References

R1. NESC Section 1.011.

R2. NESC Section 26.260.B.2 Structural Loading Requirements.

R3. NESC Section 217.A.4

R4. WAC 468-95-148 Event signs, banners and decorations.

R5. ANSI O5.1 Guidelines.

R6. Refer to DO-3.370 for Climbing Space requirements.

R7. Refer to DO-5.310 for Typical Light Installation.

R8. Refer to DO-5.335 for Wood Street Light Pole.

R9. Refer to DU-8.325 for Direct Bury Steel Standard with Davit Arm.

R10. Refer to DU-8.330 for Pedestal Base Steel Standard.

R11. Refer to Operations Resource Center-Unauthorized Attachments

Light Poles and Banner Attachment Size

Light Pole Manufacturer	Model/Stock No	Construction Standard	Banner Size			
			5 ft^2	10ft^2	15ft^2	20ft^2
Anchor Base Poles						
Visco, Inc.	VI-A9-S1/50"-OF/25' Avista Stock No. 512-0525	DU-8.330	OK	OK	OK	OK
Shakespeare	AC35-01S1DB01 Avista Stock No. 512-0395		OK	*NO*	*NO*	*NO*
Valmont	DS32-800A286-10S (or D) Avista Stock No. 512-0460 512-0462 512-0464 512-0466	DU-8.330	OK[1] OK[1]	OK[1] OK[1]	OK[1] OK[1]	OK[1] OK[1]
Direct Bury Poles – No Foundation						
Valmont	EM90-900A260-6S-GVHH Avista Stock No. 512-0535	DU-8.325	OK[2]	OK[2]	OK[2]	OK[2]
Wood Pole	Pole CDR 35' and 40' Avista Stock No. 341-1036 341-1040	DU-8.335, DO-5.310	Contact Distribution Design for specific structure requirements			

[1]Foundation must be encased around the top by concrete (sidewalk) or No banner size is allowed.

[2]Burial depths of greater than standard maybe required in soft, clayey, silty or wet soil types.

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Joint Use Vertical Clearance at Supports

DO-1.407

Construction Notes

N1. Communication attachments must meet all separation requirements for the voltage involved. A minimum separation of 40 inches must be maintained between the bottom of the secondary supply space and the top of the communication cable.

N2. The clearance between the cross arm and the communication attachment should be no less than 10’ 6” to ensure adequate space for future utility equipment. Any variance in this clearance must be approved by the Avista distribution standards department.

N3. Luminaires and traffic signal brackets are the only exceptions to the communication worker safety zone requirement of the NESC (See Streetlight Exception Illustration).

N4. Attachment height greater than listed above must be approved by Avista Utilities Joint Use Administrator prior to attachment. For agreements on 40ft poles, see DO-1.461 (R10).

N5. The horizontal clearance between the riser conduit and communication cables and hardware must be at least 2 inches (R3).

N6. All vertical clearances at the support are span length dependent (R7).

References

R1. NESC 235C2b(1), Table 235-5.

R2. NESC 238C, D and E.

R3. NESC 239F and G.

R4. NESC 236D-1.

R5. Refer to DO-1.401 for Joint Use General Requirements.

R6. Refer to DO-1.405 for Joint Use Banner Attachment Guideline.

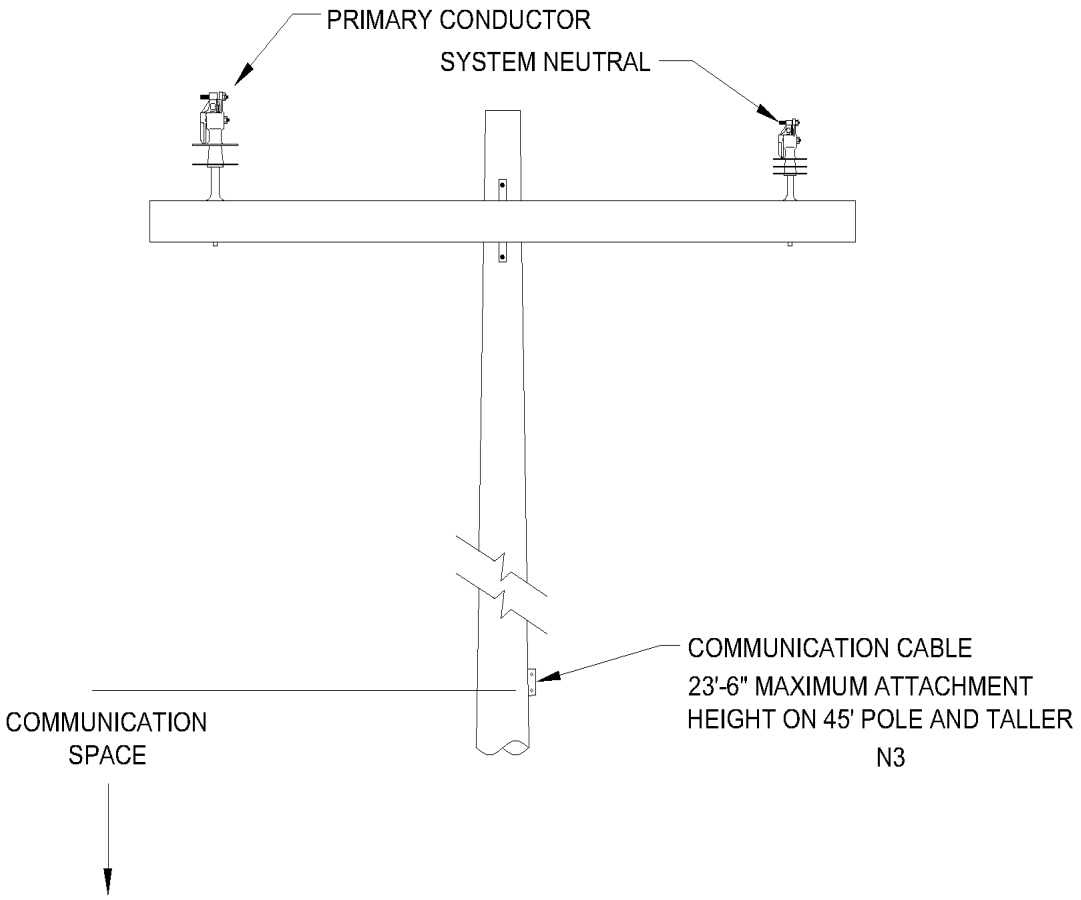
R7. Refer to DO-1.410 for Joint Use Vertical Clearance at Midspan.

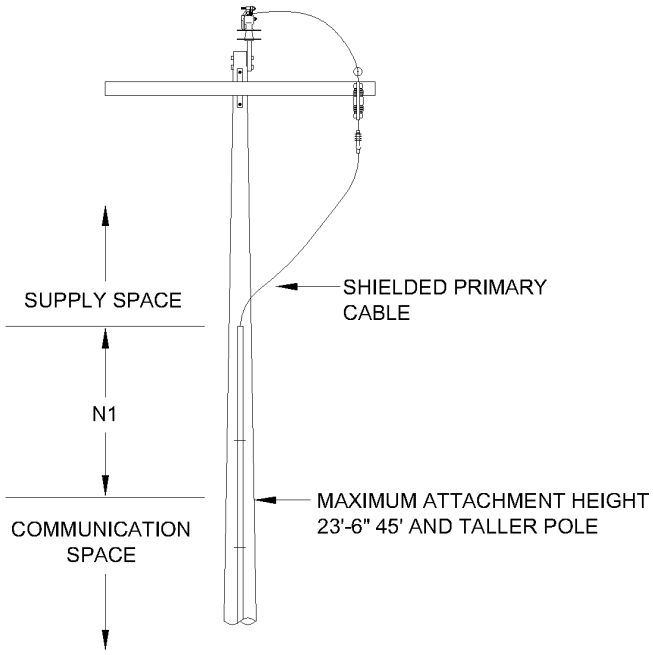
R8. Refer to DO-1.422 for Joint Use Climbing Space.

R9. Refer to DO-1.444 for Joint Use Antenna/Radio Mounting Requirements.

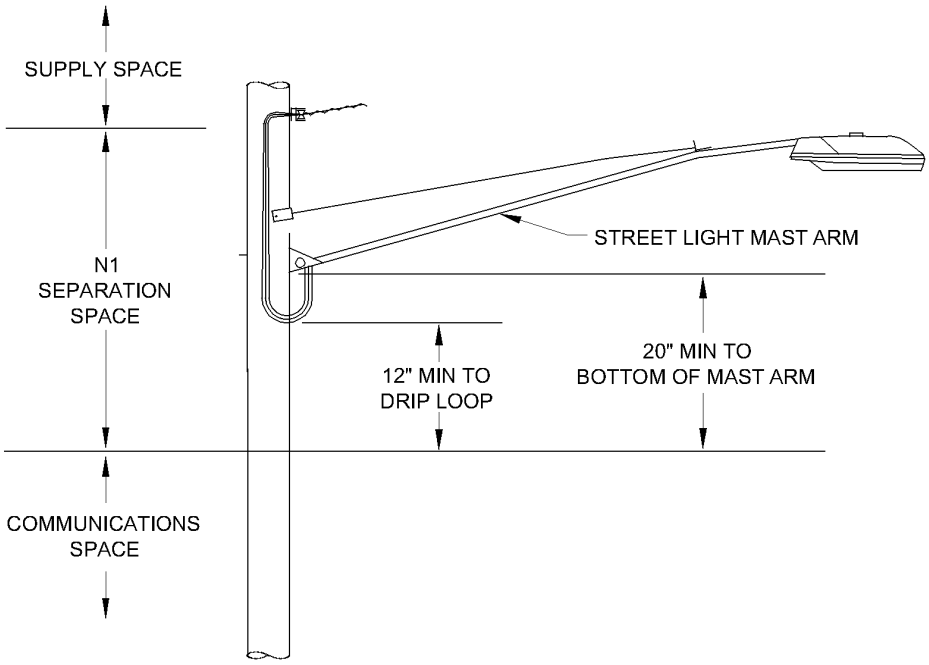
R10. Refer to DO-1.461 for Joint Use Agreements New Poles.

Joint Use Vertical Clearance at Supports





PRIMARY RISER CABLE



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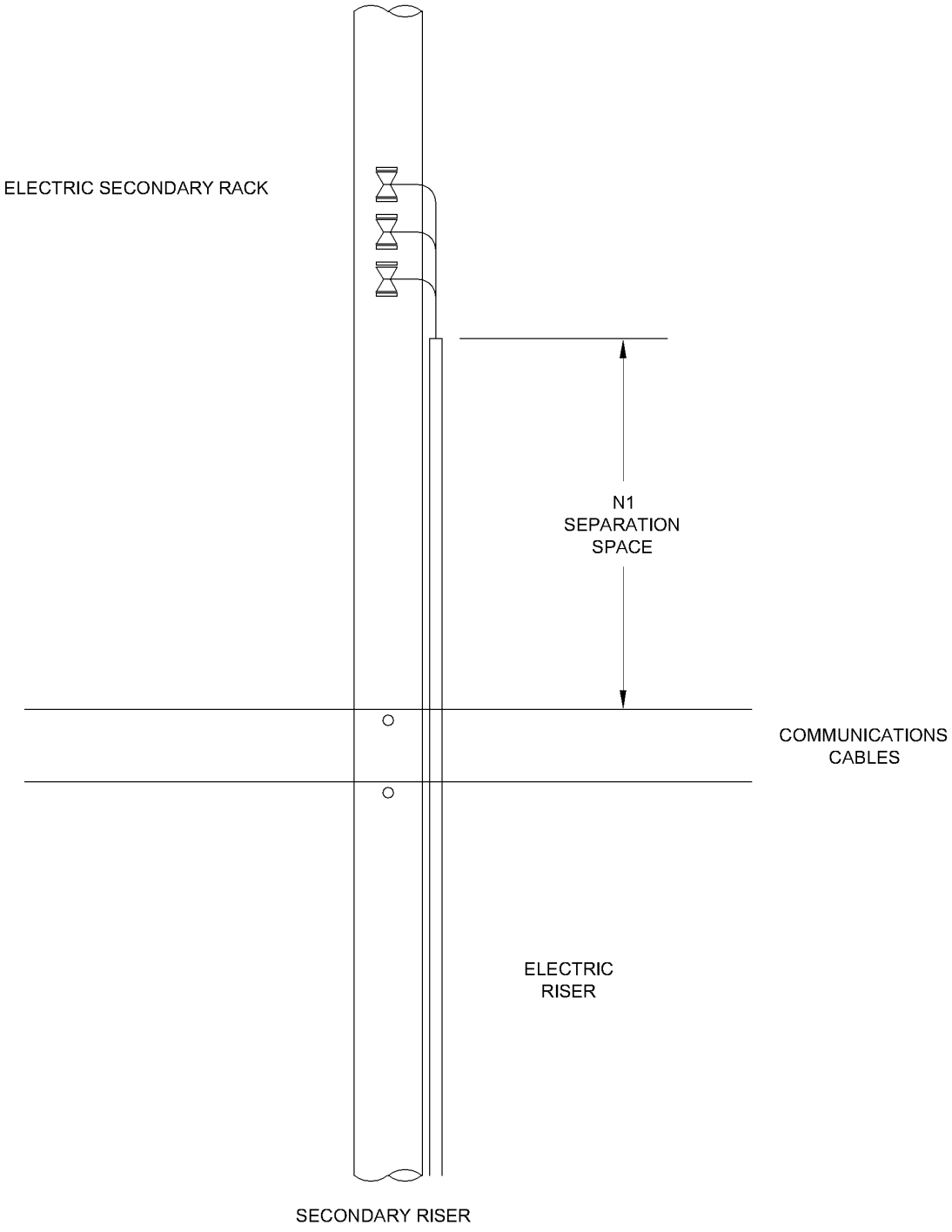
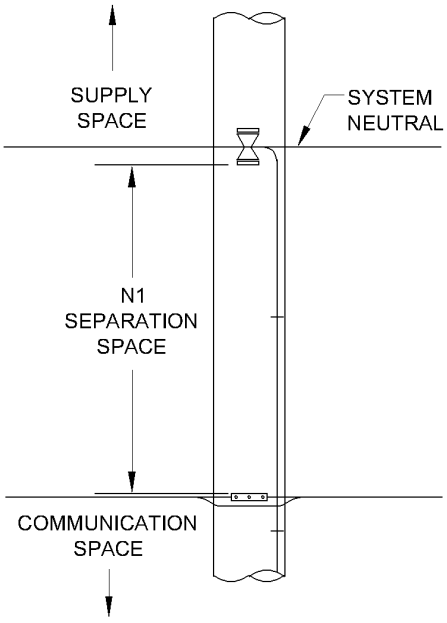
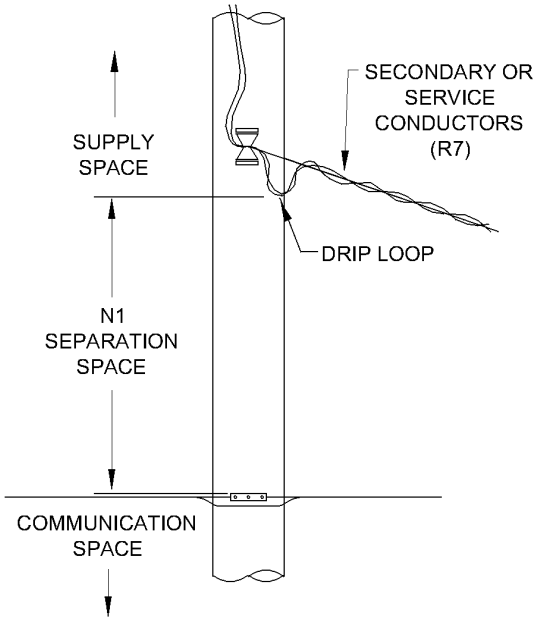
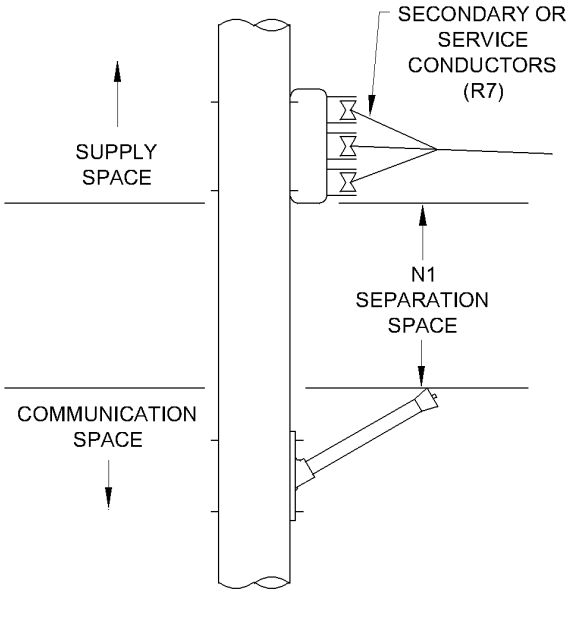
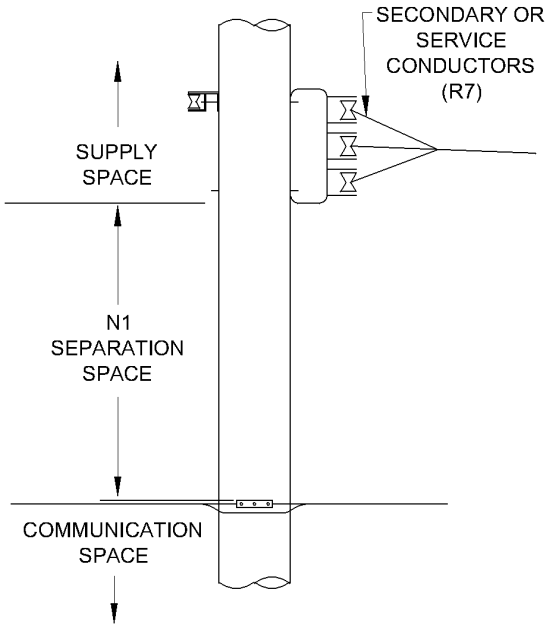

ELECTRIC SECONDARY RACK
N1
SEPARATION
SPACE
COMMUNICATIONS
CABLES
ELECTRIC
RISER
SECONDARY RISER

Joint Use Vertical Clearance at Supports









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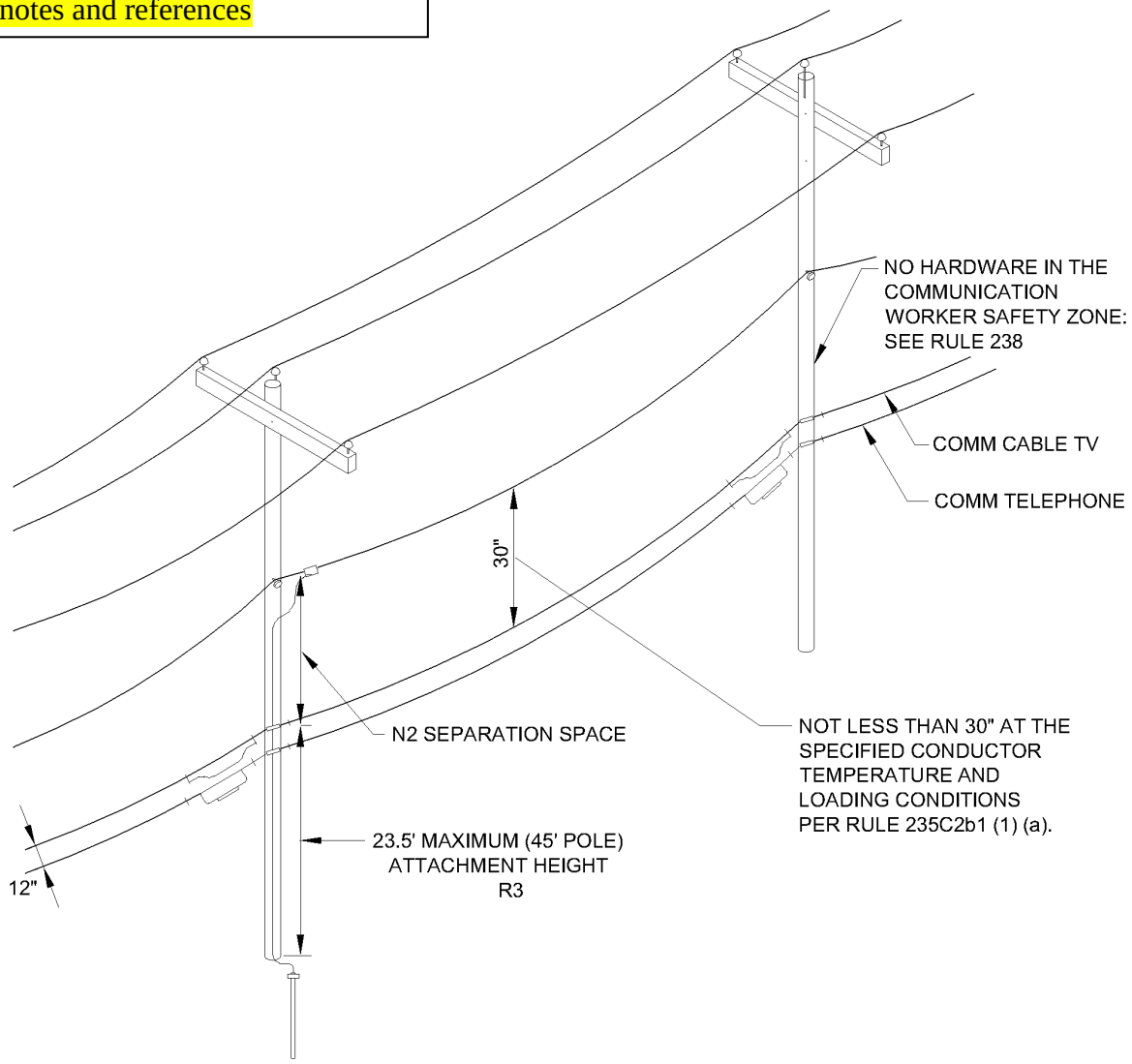
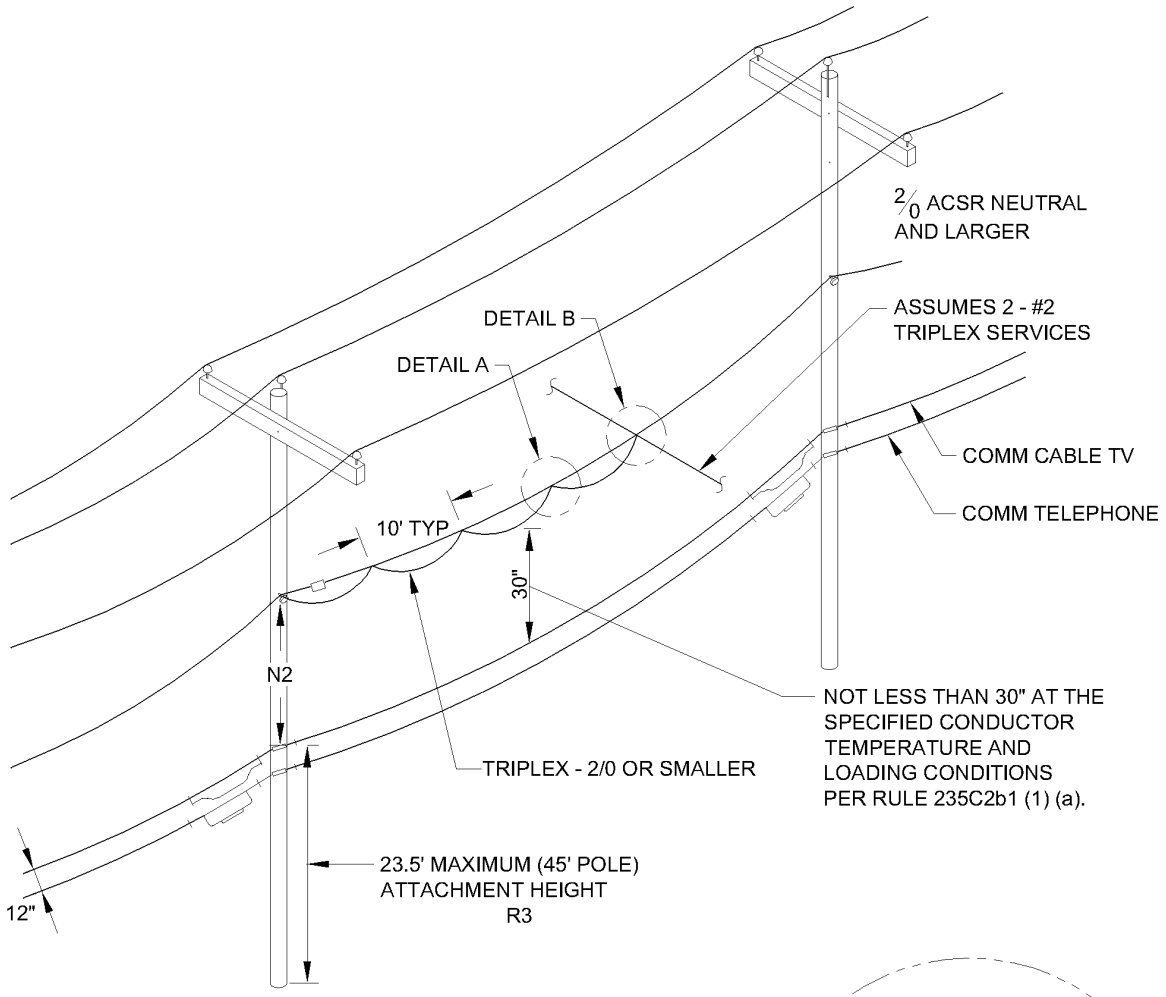
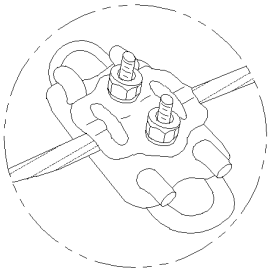
New pictures and significant edits to notes and references

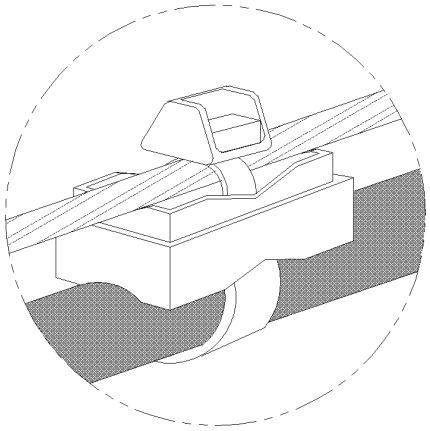


DISTRIBUTION STANDARDS AVISTA	**Joint Use Vertical Clearance at Midspan**	DATE 06-05-15 PAGE 1 of 3 SPEC DO-1.410





DETAIL B



DETAIL A

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Vertical Clearance** **at Midspan**	DATE 06-05-15 PAGE 2 of 3 SPEC DO-1.410

NOTES:

N1. In order to maintain the required 30” joint use clearance midspan, the maximum height above groundline at the supports shall be 20’6” for a 40 foot pole, and 23’6” for taller poles.

N2.

Pole Height	Maximum attachment height	Communications separation space at pole	Comments
40’	20’6”	44”	Very limited Joint Use Space
45’	23’6”	50”	Span Length limited
50’	23’6”	104”	
55’	23’6”	158”	
60’	23’6”	212”	
65’	23’6”	266”	

N3. Separation space for span lengths longer than 175’ (urban) and 300’ (rural) is calculated with the upper conductor at 176F (80C) and the lower conductor at 32F (0C). Clearances must be met with upper conductor (Avista Utilities) at 176F final unloaded sag and lower conductor (cable) at 32F final unloaded sag.

N4. When communications required ground clearances exceeds 23’6”, contact Avista Joint Use Administrator. Span length may need to be limited to allow the necessary additional vertical ground clearance at the pole.

N5. Sag communication cables below and parallel to the Avista Utilities neutral (below and parallel to Avista Utilities secondary conductors on poles without a primary circuit).

N6. For longer spans additional clearances may be required, based on line of site limitations with conductors at 60F, no wind, final unloaded sag (R1).

REFERENCES:

R1. NESC Section 235.

R2. NESC 238C.

R3. Refer to DO-1.401 for Joint Use General Requirements.

R4. Refer to DO-1.407 for Joint Use Vertical Clerance at Supports.

R5. Refer to DO-3.270 for Final Vertical Sag 176 Degrees F.

R6. Refer to DO-3.274 for Final Vertical Sag 32 Degrees F Neutral.

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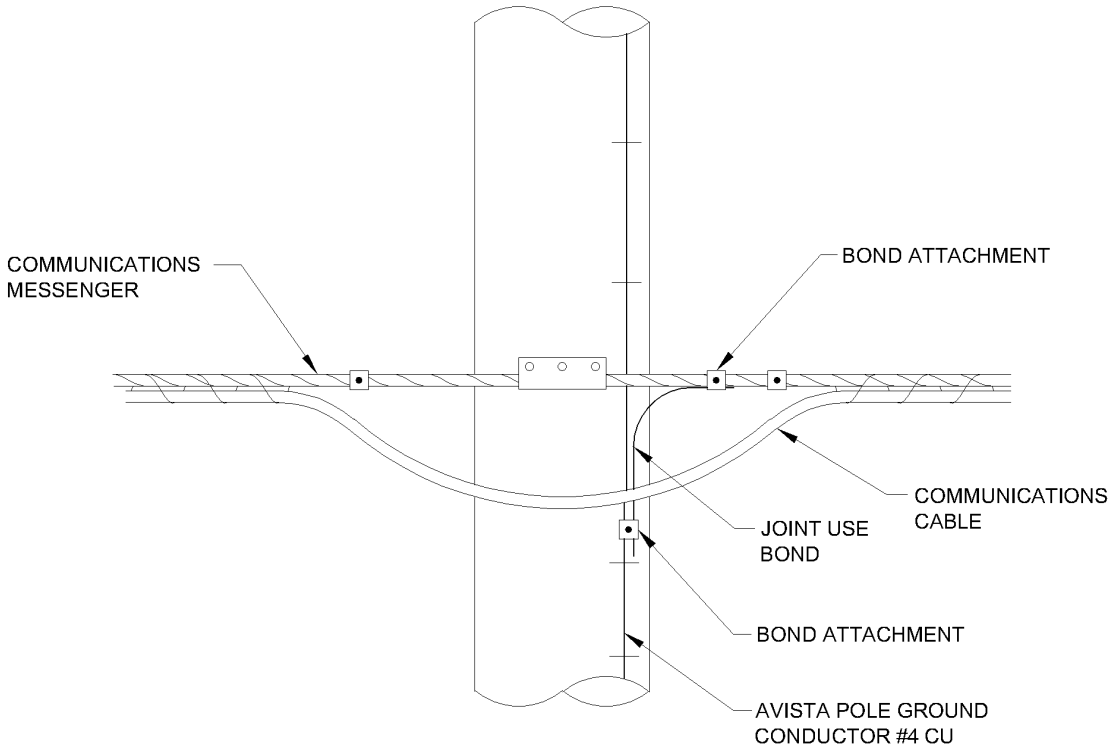

NOTES:

N1. Communication attachments with messenger wires requiring grounding must be connected by a bond attachment to the Avista Utilities vertical pole ground.

N2. Communication companies shall not install vertical pole grounds on Avista Utilities distribution poles with a primary neutral.

N3. Do not cut or damage the Avista Utilities vertical pole ground when attaching communications bond connections.

N4. Where messenger wires are adequate for system ground conductors, a minimum of four (4) connections in each mile to Avista Utilities vertical pole grounds are required. Otherwise, eight (8) connections in each mile to Avista Utilities vertical pole grounds are required.

N5. If additional grounding is required, the joint user must pay for Avista Utilities to install additional vertical pole grounds as a make-ready expense. Pole grounds, bonds to electric neutral or earth ground are not allowed on Avista Utilities air switch poles

REFERENCES:

R1. NESC 092 C.

R2. NESC 097 G.

DISTRIBUTION STANDARDS	**Joint Use Grounding**	DATE 04-04-14
		PAGE 1 of 1
		SPEC DO-1.419

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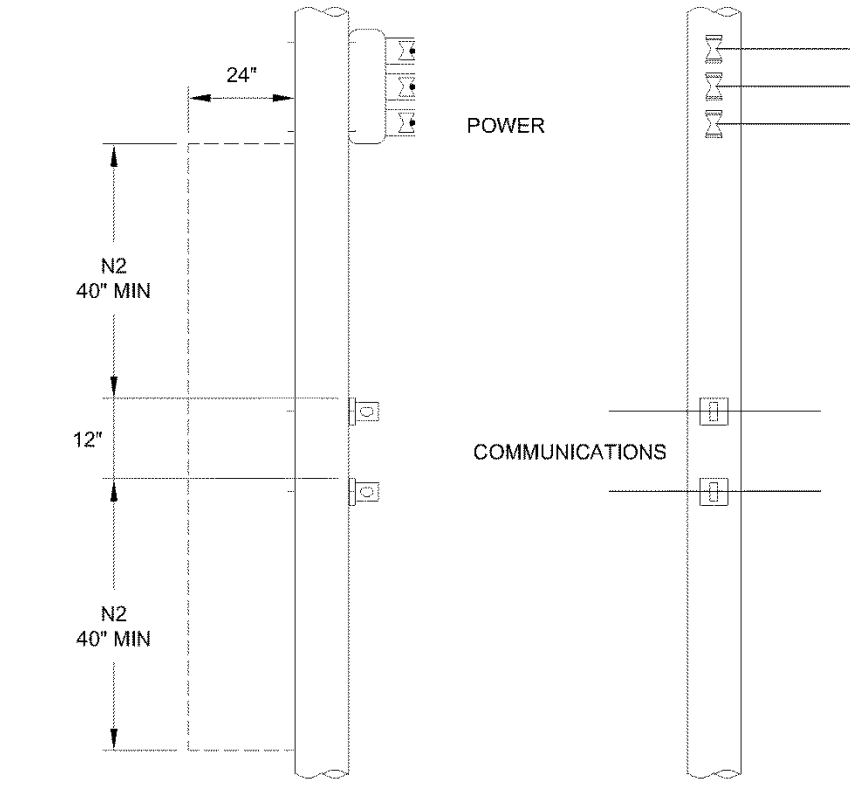

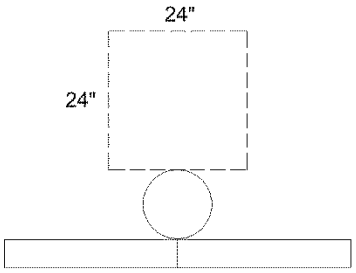

PREFERRED
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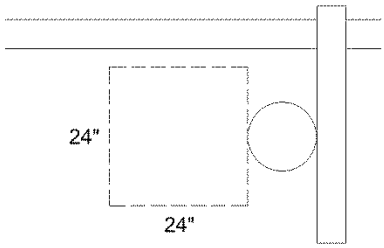

CROSSARM
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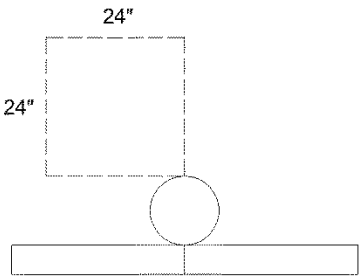

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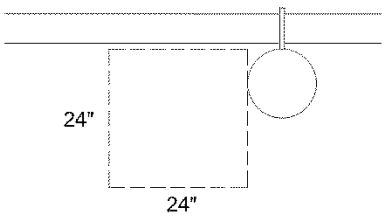

BRACKETS
CLIMBING SPACE

DISTRIBUTION STANDARDS AVISTA	**Joint Use Climbing Space**	DATE 12-14-15 PAGE 1 of 2 SPEC DO-1.422

NOTES:

N1. Where communication cables are attached to the pole, all such cables must be attached on the same side of the pole as the neutral or service rack of the electric utility, unless otherwise authorized by the Avista Utilities Joint Use Administrator.

N2. The climbing space through the communication cables must -
- be at least 24 inches by 24 inches.
- extend **at least** 40 inches above the upper cable and 40 inches below the lower cable.

N3. **Equipment must not be installed in the climbing space** (subscribers' drops, amplifiers, ground wires, conduits, risers, etc.).

N4. **Locate conduits, down guy bonds, ground wires and ground moldings outside the climbing space and under the power transformer or crossarm.**

N5. **Do not install pedestals, equipment or other obstacles within four feet around pole, especially on the climbing space side (R4).**

N6. For communications attached away from pole on a crossarm or bracket, cable must be at least 12 inches from center line of pole.

REFERENCES:

R1. NESC 235C1, 236.

R2. Refer to DO-1.407 for Vertical Clearances.

R3. Refer to DO-1.410 for Joint Use Vertical Clearance at Midspan.

R4. Refer to DO-3.306/DU-4.206 for Control Zone Street and Hydrants.

R5. Refer to DU-1.458 for Joint Use New Primary Risers.

R6. Refer to DU-1.460 for Joint Use New Secondary Risers.

Red Pole Condition Tag

Yellow Pole Condition Tag

Red Tag: Rejected/non-serviceable poles are red tagged to indicate that the pole cannot be rendered serviceable by re-enforcement and must be replaced.

Yellow Tag: Rejected/serviceable poles are yellow tagged to indicate that the pole may possibly be rendered serviceable by re-enforcement (stubbing).

NOTES:

N1. Pole condition tags are installed by the Wood Pole Management Group.

N2. Whether a yellow pole should be re-enforced or replaced is a judgment call based on several considerations described in Avista Wood Pole Management documents.

REFERENCES:

R1. Avista Specification for the inspection of wood poles S-622 latest revision.

R2. Refer to DO-2.675 for Pole Marking Tags.

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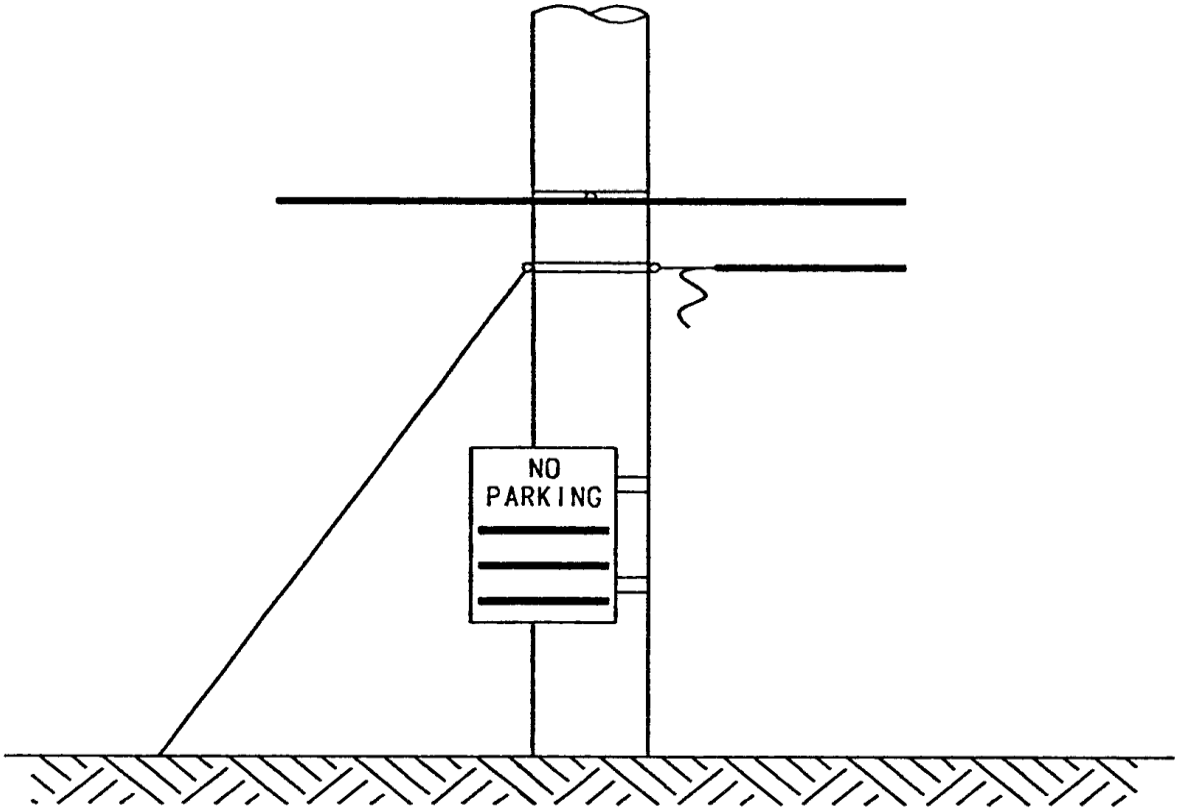

NOTES:

N1. All communication attachments on Avista Utilities steel distribution and transmission poles must be banded to the poles unless factory pre-drilled holes are available**. No field-drilled holes are permitted unless approved by the Joint Use Administrator.**

N2. Temporary sign attachments on Avista Utilities steel distribution, transmission and street light poles must be banded to the poles unless factory pre-drilled holes are available. **No field-drilled holes are permitted.**

N3. All attachments must be approved by Avista Utilities prior to installation.

N4. All attachments must meet Avista Utilities specifications for clearances.

N5. Communication cables must not be attached to steel street light poles.

REFERENCES:

R1. For clearance requirements, see DO-1.407.

R2. For communication crossarms, see DO-1.413.

DISTRIBUTION STANDARDS	**Joint Use on Steel Pole**	DATE 03-11-04
AVISTA		PAGE 1 of 1
		SPEC DO-1.428

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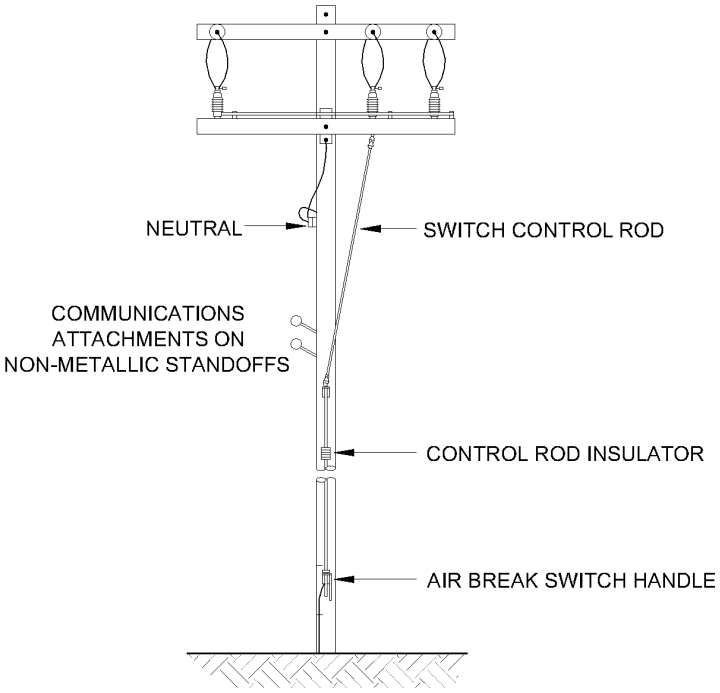

NOTES:

N1. The following communication facilities are not allowed on air switch poles:
- conduit risers,
- metallic brackets,
- power supplies and other boxes,
- bonds to electric neutral, pole ground or earth ground.

N2. Dead ends and down guying for communication attachments are not allowed on air switch poles. If side guying is required, a guy insulator must be installed. If the guy wire breaks, the guy insulator must be located so the bottom of the insulator is always above the communications attachments. Guy insulators must be rated for the highest voltage on the pole and for the full mechanical strength of the guy strand (R1). Guy insulators may be provided by Avista Utilities as a make-ready expense.

N3. Provide a minimum of 12 inches horizontal clearance between the air switch control rod and all metallic parts of the communications attachment including the messenger and bracket.

N4. Install cable attachments on **non-metallic standoffs** on the side of the pole opposite to or at 90 degrees from the switch control rod.

N5. All Communication attachments must be located above the switch control rod insulator.

N6. All attachments on air switch poles must be approved in advance by the Joint Use Administrator.

N7. Contact Avista Utilities Joint Use Administrator if the communication cable attachment cannot be installed on the same side of the pole as the electric neutral.

N8. If the attachment cannot be made as described herein, the joint user must pay for suitable modifications of the air switch pole as a make-ready expense.

REFERENCES:

R1. NESC 279A1.
R2. NESC 215C5.
R3. Refer to DO-4.520 for Three Phase 900 Amp Loadbreak Air Switch with STEEL BASE.
R4. Refer to DO-4.530 for Three Phase 900 Amp Loadbreak Air Switch with INSULATED BASE AS900/15-25.
R5. Refer to DO-4.540 for Three Phase 900 Amp 15kV/25kV Air Switch Hookstick with Fiberglass Base AS90025HOG.

Typical Large Conductor – Three Phase
Conductor: 2/0 ACSR and Larger Three Phase
Neutral: 2/0 ACSR

Table 1a: Line Angle: 0 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	180	NR	260	150	320*	205	380*	265	450*	335*	500*	405*
2	165	NR	240	140	290	185	345*	240	405*	300	465*	360*
3	155	NR	220	130	265	175	315*	220	365*	270	420*	325*
4	145	NR	210	120	250	160	290	205	340*	250	385*	300

Table 1b: Line Angle: 1 Degree, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	175	NR	235	120	300	180	370*	250	440*	320*
2	NR	NR	155	NR	205	105	260	155	320*	215	385*	275
3	NR	NR	140	NR	185	NR	230	140	285	190	340*	240
4	NR	NR	130	NR	170	NR	210	120	255	170	305*	215

Table 1c: Line Angle: 2 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	NR	NR	150	NR	215	100	285	165	360*	235
2	NR	NR	NR	NR	125	NR	180	NR	240	130	300	195
3	NR	NR	NR	NR	105	NR	150	NR	205	105	260	160
4	NR	NR	NR	NR	NR	NR	130	NR	175	NR	225	135

Table 1d: Line Angle: 3 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	NR	NR	NR	NR	130	NR	200	NR	275	150
2	NR	NR	NR	NR	NR	NR	NR	NR	155	NR	220	110
3	NR	NR	NR	NR	NR	NR	NR	NR	120	NR	175	NR
4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	145	NR

Typical Small Conductor – Three Phase
Conductor: Smaller than 2/0 ACSR Three Phase
Neutral: Smaller than 2/0 ACSR

Table 2a: Line Angle: 0 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	295	115	430*	250	500*	340*	500*	430*	500*	500*	500*	500*
2	260	100	375*	220	445*	290	500*	365*	500*	450*	500*	500*
3	235	NR	335*	195	395*	255	460*	320*	500*	390*	500*	460*
4	215	NR	310*	180	360*	230	410*	285	470*	345*	500*	410*

Table 2b: Line Angle: 1 Degree, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	Xfmr
1	250	NR	340*	160	430*	250	500*	345*	500*	445*	500*	500*
2	175	NR	290	130	360*	205	440*	280	500*	360*	500*	450*
3	150	NR	250	110	310*	170	375*	235	445*	305*	500*	380*
4	130	NR	225	100	275	150	330*	205	390*	265	450*	330*

Table 2c: Line Angle: 2 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	120	NR	250	NR	340*	160	440*	255	500*	360*	500*	470*
2	NR	NR	200	NR	275	115	350*	195	440*	275	500*	365*
3	NR	NR	170	NR	225	NR	290	150	360*	220	435*	295
4	NR	NR	145	NR	195	NR	250	120	305*	180	370*	245

Table 2d: Line Angle: 3 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Height/Class											
	40-5		40-4		45-3		50-2		55-1		60-H1	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	Wo	xfmr
1	NR	NR	160	NR	250	NR	350*	165	460*	270	500*	380*
2	NR	NR	115	NR	190	NR	265	110	350*	190	440*	280
3	NR	NR	NR	NR	140	NR	210	NR	280	140	350*	215
4	NR	NR	NR	NR	110	NR	165	NR	225	100	285	165

NOTES:

Use the following notes for distribution poles with a **3-phase** primary circuit. For transmission poles, contact the Avista Joint Use Administrator.

N1. The tables above are guidance on **existing** facilities only, for new construction use the overhead design guidelines. (R8)

N2. Determine the Pole Class:
a) Measure the above-ground height of the pole in feet.
b) Measure the circumference of the pole in inches at groundline.
c) For the above-ground height, use the following table to find the circumference that is **less than or equal to the measured circumference.**
d) Read the pole class from the top of the column.

ABOVE-GROUND HEIGHT	OVERALL LENGTH	CL 5	CL 4	CL 3	CL 2	CL 1	CL H-1
34.0	40	34.0	36.5	39.5	42.5	45.0	48.0
38.5	45	35.8	38.3	41.3	44.3	47.2	50.2
43.0	50	36.9	39.6	43.0	46.0	49.0	52.0
47.5	55		41.4	44.3	47.8	50.8	53.7
52.0	60		42.7	45.6	49.1	52.5	55.5

N3. For the desired number of joint use attachments (new plus existing), use the table above to determine the maximum allowable span length.

N4. Determine the actual average span length.
Actual average span length = the average of the two spans adjacent to the structure concerned. (R4)
a) If the actual average span length is **less than** the maximum allowable span length, the pole may have sufficient strength for the additional joint use.
b) If the actual average span length is **greater than** the maximum allowable span length, the pole does not have enough strength for the additional span length and must not be used or must be replaced at the expense of the communications company(s).

N5. All joint use attachments must be coordinated through the Avista Joint Use Administrator prior to attachment.

N6. Results are based on joint use attachments with an effective diameter of 1 inch separated by 12 inches at the attachment position. Larger attachments must be considered separately.

N7. Tables include provisions for transformer(s) attached to the pole. When adding a transformer(s) to an existing unguyed structure allowable span length is greatly decreased and side guying may be required.

N8. This specification is good for flat top and neutral down construction.

REFERENCES:

R1. Refer to ANSI O5.1-1 latest revision for Pole Top Circumference.

R2. Refer to ANSI O5-1 latest revision for Pole Circumference from Butt.

R3. Refer to ANSI O5.1 Annex B for Ultimate Groundline Moment.

R4. Refer to NESC 252-B4 for Average Span Length.

R5. Refer to NESC 253-1 for Wind on Pole Overload Factor.

R6. Refer to NESC 261-1A for Deterioration Adjustment.

R7. Refer to NESC-T250-1 for Wind Force on Conductor.

R8. Refer to DO-1.007 for Overhead Design Guidelines.

R9. Refer to DO-2.610 for Wood Pole Setting Depth.

R10. Refer to DO-2.615 for Wood Pole Dimensions – Weights.

R11. Refer to DO-2.625 for Unguyed Tangent Pole Span Length by Class.

Typical Small Conductor – Single Phase
Conductor: Smaller than 2/0 ACSR Single Phase
Neutral: Smaller than 2/0 ACSR

Table 1a: Line Angle: 0 Degree, 1-100kVA Transformer, * = N1						
Number of Joint Use Cables	Pole Height/Class					
	40-5		40-4		45-3	
	wo	xfmr	wo	xfmr	wo	xfmr
1	500*	355*	500*	500*	500*	500*
2	435*	280	500*	475*	500*	500*
3	370*	235	500*	400*	500*	475*
4	320*	210	460*	350*	500*	410*

Table 1b: Line Angle: 1 Degree, 1-100kVA Transformer, * = N1						
Number of Joint Use Cables	Pole Height/Class					
	40-5		40-4		45-3	
	wo	xfmr	wo	xfmr	wo	xfmr
1	465*	270	500*	500*	500*	500*
2	355*	200	500*	395*	500*	495*
3	290	160	445*	320*	500*	400*
4	245	130	385*	275	440*	335*

Table 1c: Line Angle: 2 Degree, 1-100kVA Transformer, * = N1						
Number of Joint Use Cables	Pole Height/Class					
	40-5		40-4		45-3	
	wo	xfmr	wo	xfmr	wo	xfmr
1	380*	185	500*	430*	500*	500*
2	275	120	460*	315*	500*	415*
3	210	NR	370*	245	440*	320*
4	170	NR	305*	195	360*	260

Table 3d: Line Angle: 3 Degree, 1-100kVA Transformer, * = N1						
Number of Joint Use Cables	Pole Height/Class					
	40-5		40-4		45-3	
	wo	xfmr	wo	xfmr	wo	xfmr
1	295	100	500*	345*	500*	490*
2	195	NR	380*	235	480*	335*
3	135	NR	290	165	360*	240
4	NR	NR	230	120	285	180

NOTES:

Use the following notes for distribution poles with a **single-phase** primary circuit.
For transmission poles, contact the Avista Joint Use Administrator.

N1. The tables above are guidance on **existing** facilities only, for new construction use the overhead design guidelines. (R8)

N2. Determine the Pole Class:
a) Measure the above-ground height of the pole in feet.
b) Measure the circumference of the pole in inches at groundline.
c) For the above-ground height, use the following table to find the circumference that is less than or equal to the measured circumference.
d) Read the pole class from the top of the column.

NOTES continued:

ABOVE-GROUND HEIGHT	OVERALL LENGTH	CL 5	CL 4	CL 3	CL 2	CL 1	CL H-1
34.0	40	34.0	36.5	39.5	42.5	45.0	48.0
38.5	45	35.8	38.3	41.3	44.3	47.2	50.2
43.0	50	36.9	39.6	43.0	46.0	49.0	52.0
47.5	55		41.4	44.3	47.8	50.8	53.7
52.0	60		42.7	45.6	49.1	52.5	55.5

N3. For the desired number of joint use attachments (new plus existing), use the table above to determine the maximum allowable span length.

N4. Determine the actual average span length.
Actual average span length = the average of the two spans adjacent to the structure concerned. (R4)
a) If the actual average span length is less than the maximum allowable span length, the pole may have sufficient strength for the additional joint use.
b) If the actual average span length is greater than the maximum allowable span length, the pole does not have enough strength for the additional span length and must not be used or must be replaced at the expense of the communications company(s).

N5. All joint use attachments must be coordinated through the Avista Joint Use Administrator prior to attachment.

N6. Results are based on joint use attachments with an effective diameter of 1 inch separated 12 inches at the attachment position. Larger attachments must be considered separately.

N7. Tables include provisions for transformer(s) attached to the pole. When adding a transformer(s) to an existing unguyed structure allowable span length is greatly decreased and side guying may be required.

N8. This specification is good for flat top and neutral down construction.

REFERENCES:

R1. Refer to ANSI O5.1-1 latest revision for Pole Top Circumference.

R2. Refer to ANSI O5-1 latest revision for Pole Circumference from Butt.

R3. Refer to ANSI O5.1 Annex B for Ultimate Groundline Moment.

R4. Refer to NESC 252-B4 for Average Span Length.

R5. Refer to NESC 253-1 for Wind on Pole Overload Factor.

R6. Refer to NESC 261-1A for Deterioration Adjustment.

R7. Refer to NESC-T250-1 for Wind Force on Conductor.

R8. Refer to DO-1.007 for Overhead Design Guidelines.

R9. Refer to DO-2.610 for Wood Pole Setting Depth.

R10. Refer to DO-2.615 for Wood Pole Dimensions – Weights.

R11. Refer to DO-2.625 for Unguyed Tangent Pole Span Length by Class.

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Typical Large Conductor - Double Circuit
Upper Circuit Conductor: 2/0 ACSR and Larger Three Phase
Upper Circuit Conductor: 2/0 ACSR and Larger Three Phase
Neutral: 2/0 ACSR and Larger

Table 1a: Line Angle: 0 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Class									
	60-3		60-2		60-1		60-H1		60-H2	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	140	NR	210	120	290	200	380*	295	490*	405*
2	135	NR	200	115	280	195	370*	285	475*	390*
3	130	NR	195	110	270	190	360*	275	460*	380*
4	130	NR	190	110	265	185	350*	270	450*	370*

Table 1b: Line Angle: 1 Degree, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Class									
	60-3		60-2		60-1		60-H1		60-H2	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	125	NR	210	120	300	215	410*	325*
2	NR	NR	120	NR	200	115	290	205	395*	310*
3	NR	NR	115	NR	195	110	280	195	380*	300
4	NR	NR	110	NR	185	105	270	190	370*	290

Table 1c: Line Angle: 2 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Class									
	60-3		60-2		60-1		60-H1		60-H2	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	NR	NR	130	NR	220	130	330*	240
2	NR	NR	NR	NR	120	NR	210	125	315*	230
3	NR	NR	NR	NR	115	NR	200	115	300	220
4	NR	NR	NR	NR	105	NR	190	110	290	210

Table 1d: Line Angle: 3 Degrees, 3-50kVA Transformers, * = N1

Number of Joint Use Cables	Pole Class									
	60-3		60-2		60-1		60-H1		60-H2	
	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr	wo	xfmr
1	NR	NR	NR	NR	NR	NR	140	NR	250	160
2	NR	NR	NR	NR	NR	NR	130	NR	235	150
3	NR	NR	NR	NR	NR	NR	120	NR	220	140
4	NR	NR	NR	NR	NR	NR	110	NR	210	130

NOTES:

Use the following notes for tangent distribution poles with a **tangent double primary circuit**. For transmission poles, contact the Avista Joint Use Administrator.

N1. The tables above are guidance on **existing** facilities only, for new construction use the verhead design guidelines. (R7)

N2. Determine the Pole Class:
- a) Measure the above-ground height of the pole in feet.
- b) Measure the circumference of the pole in inches at ground line.
- c) For the above-ground height, use the following table to find the circumference that is **less than or equal to the measured circumference**.
- d) Read the pole class from the top of the column.

ABOVE-GROUND HEIGHT	OVERALL LENGTH	CL 5	CL 4	CL 3	CL 2	CL 1	CL H1
34.0	40	34.0	36.5	39.5	42.5	45.0	48.0
38.5	45	35.8	38.3	41.3	44.3	47.2	50.2
43.0	50	36.9	39.6	43.0	46.0	49.0	52.0
47.5	55		41.4	44.3	47.8	50.8	53.7
52.0	60		42.7	45.6	49.1	52.5	55.5

N3. For the desired number of joint use attachments (new plus existing), use the table above to determine the maximum allowable span length.

N4. All joint use attachments must be coordinated through the Avista Joint Use Administrator prior to attachment.

N5. Results are based on joint use attachments with an **effective diameter of 1 inch** separated 12 inches at the attachment position. Larger attachments must be considered separately or determined as a combination of 1 inch attachments (a 2-inch cable would be considered 2 – 1 inch joint use attachments).

N6. Tables include provisions for transformer(s) attached to the pole. When adding a transformer(s) to an existing unguyed structure allowable span length is greatly decreased and side guying may be required.

N7. For Urban feeders and laterals, span lengths must be limited to 175 feet, unless specifically engineered for vertical and joint use clearances/separations. Contact Distribution Engineering for span lengths longer than 175 feet.

N8. For Rural feeders and laterals, span lengths must be limited to 300 feet, unless specifically engineered for horizontal, vertical and joint use clearances/separations. Contact Distribution Engineering for span lengths longer than 300 feet.

REFERENCES:

R1. Refer to ANSI O5.1-1 latest revision for Pole Top Circumference.

R2. Refer to ANSI O5-1 latest revision for Pole Circumference from Butt.

R3. Refer to ANSI O5.1 Annex B for Ultimate Groundline Moment.

R4. Refer to NESC Table 253-1 for wind on pole overload factor.

R5. Refer to NESC Table 261-1A for Deterioration Adjustment.

R6. Refer to NESC Table 250-1 for Wind Force on Conductor.

R7. Refer to DO-1.007 for Overhead Design Guidelines.

R8. Refer to DO-2.610 for Wood Pole Setting Depth.

R9. Refer to DO-2.615 for Wood Pole Dimensions – Weights.

R10. Refer to DO-2.625 for Unguyed Tangent Pole Class Span Length by Class.

R11. Refer to DO-2.630 for Deadend Structure Pole Class.

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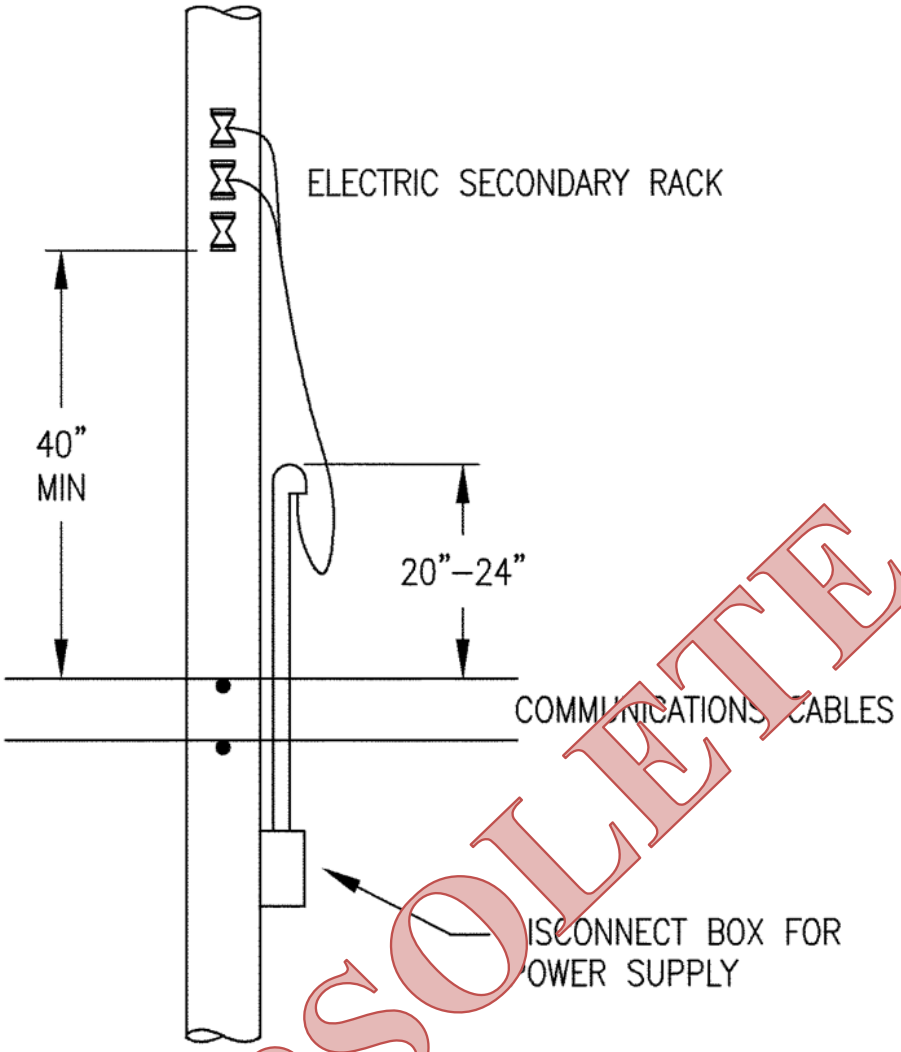

NOTES:

N1. Install communica… power supply weather heads to provide at least 12 inches of clearance betw…een th… bottom of the drip loop and the uppermost communication cable and attachmen… hardwa…e. The clearances are based on the distance required between the communicat… cable and the bottom of the drip loop at a street light mast arm.

N2. Communication power supplies and other equipment must be installed under the electric crossarm in a manner that will not block the climbing space (R3).

N3. All new power supplies with battery backup or other equipment must be installed on the ground in manholes or padmount gear (R4).

REFERENCES:

R1. NESC 238.

R2. For vertical clearances to electric conductors, see DO-1.407.

R3. For climbing space requirements, see DO-1.422 and DO-1.425.

R4. For manhole or padmount locations, see DO-1.446.

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Power Connections**	DATE 04-03-06 PAGE 1 of 1 SPEC DO-1.443

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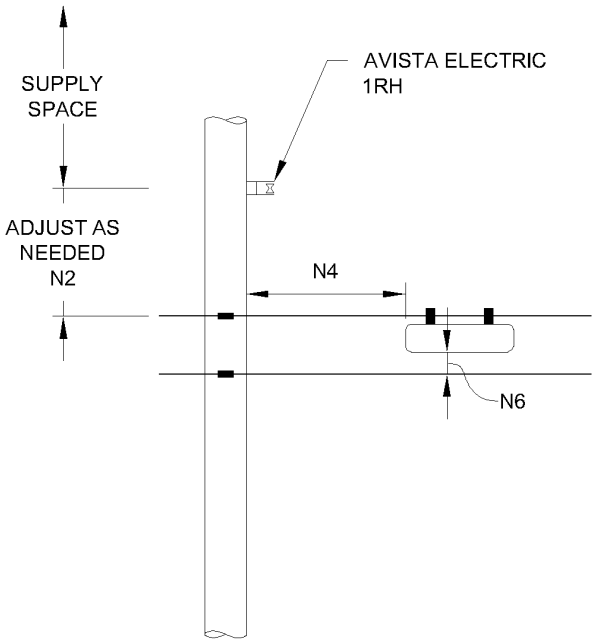
COMMUNICATIONS ANTENNA DEVICES WITH RF
ANTENNA STRAND MOUNTED



NOTES:

N1. Antenna/radio installations may not be allowed on poles with transformers, capacitors, primary cable terminations, underground dips, primary switches or primary metering or other locations where adequate clearance is not available (R7).

N2. Communication attachments must meet all separation requirements for the voltage involved. A minimum separation of 40 inches must be maintained between the bottom of the secondary supply space and the top of the communication cable or hardware.

N3. All attachments must be approved by Avista Utilities Joint Use Administrator prior to installation.

N4. For a strand mounted antenna, the antenna must be mounted a minimum of 4 feet from the pole plus the minimum safety distance as prescribed by the manufacturer. The device should not be placed farther than 8 feet from the pole to avoid clearance issues.

N5. The minimum horizontal clearance from the surface of the pole to the antenna/radio and/or the pole mounted unit shall be 4 feet.

NOTES cont:

N6. All NESC, NEC, state and local codes must be followed when installing an antenna. If the antenna is strand mounted, the joint user must have verified that NESC clearances between the joint users will be maintained after the antenna is mounted.

N7. Antennas/radios may be installed on streetlight poles without any utility primary wires or joint use attachments, provided the installation does not interfere with maintenance of the structure or streetlight.

N8. Installations shall not impede the climbing space on the pole (R6).

N9. Joint user shall clearly and conspicuously post signs indicating safe working distance (approach distances) from the device and contact information for field workers, including information for temporary disabling of antenna at the site.

N10. All metallic parts of the installation on the pole shall be bonded together and to Avista's system neutral or pole ground. Bracket arm shall be bonded to pole ground with #4 bare copper conductor. If no ground is present, one must be installed by the joint user (R5).

REFERENCES:

R1. NESC 235I.

R2. NESC 235C.

R3. NESC 238E.

R4. Refer to DO-1.407 for Joint Use Vertical Clearance at Supports.

R5. Refer to DO-1.419 for Joint Use Grounding.

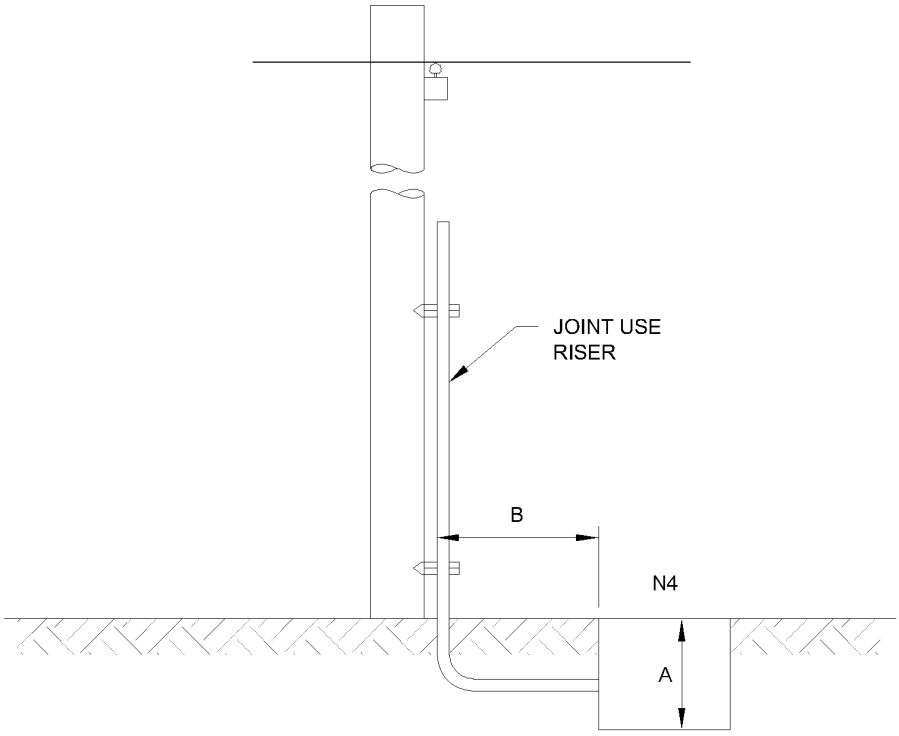
R6. Refer to DO-1.422 for Joint Use Climbing Space.

R7. Refer to DO-1.443 for Joint Use Power Connections.

R8. Refer to DO-1.444 for Joint Use Antenna/Radio Mounting General Requirements.

R9. Refer to DO-1.449 for Joint Use New Riser Installations.

R10. Refer to DO-5.310 for Typical Street and Area Light Installation on Primary Pole.



NOTES:

N1. Risers are not allowed on Avista Utilities air switch poles.

N2. No later than two business days prior to any excavation deeper than 12 inches, the excavator is required by law to mark the area of excavation and contact the local “One Call” office.

N3. Minimize the disturbance of soil, at the pole, to prevent loss of treated soil and premature deterioration of the butt of the pole.

N4. All excavations for handholes, manholes and vaults must be no closer, to the pole, than five feet or the depth of the excavation (A = B), whichever is greater.

N5. Backfill must be tamped or otherwise compacted to prevent settling and must be protected from erosion.

N6. The joint user is responsible for the cost of installing risers, conduits, ditches and manholes which it uses for its communications cables. Risers which connect to communication handholes, manholes or vaults will be owned and maintained by the communication company. Risers which connect to Avista Utilities handholes, manholes, or vaults will be owned and maintained by Avista Utilities.

N7. Equipment such as power supplies must be mounted under the electric crossarm and must not block space for additional communication attachments or climbing space. Large boxes should be installed below the communications space and approved by the Avista Utilities Joint Use Administrator prior to installation (R2).

REFERENCES:

R1. Refer to DO-1.431 for Joint Use on Air Switch Poles.

R2. Refer to DO-1.443 for Joint Use Power Connections.

R3. Refer to DO-1.449/DU-1.458/ESR for Joint Use New Riser Installations.

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Vault Installations**	DATE 06-12-14 PAGE 1 of 1 SPEC DO-1.446 / DU-1.460

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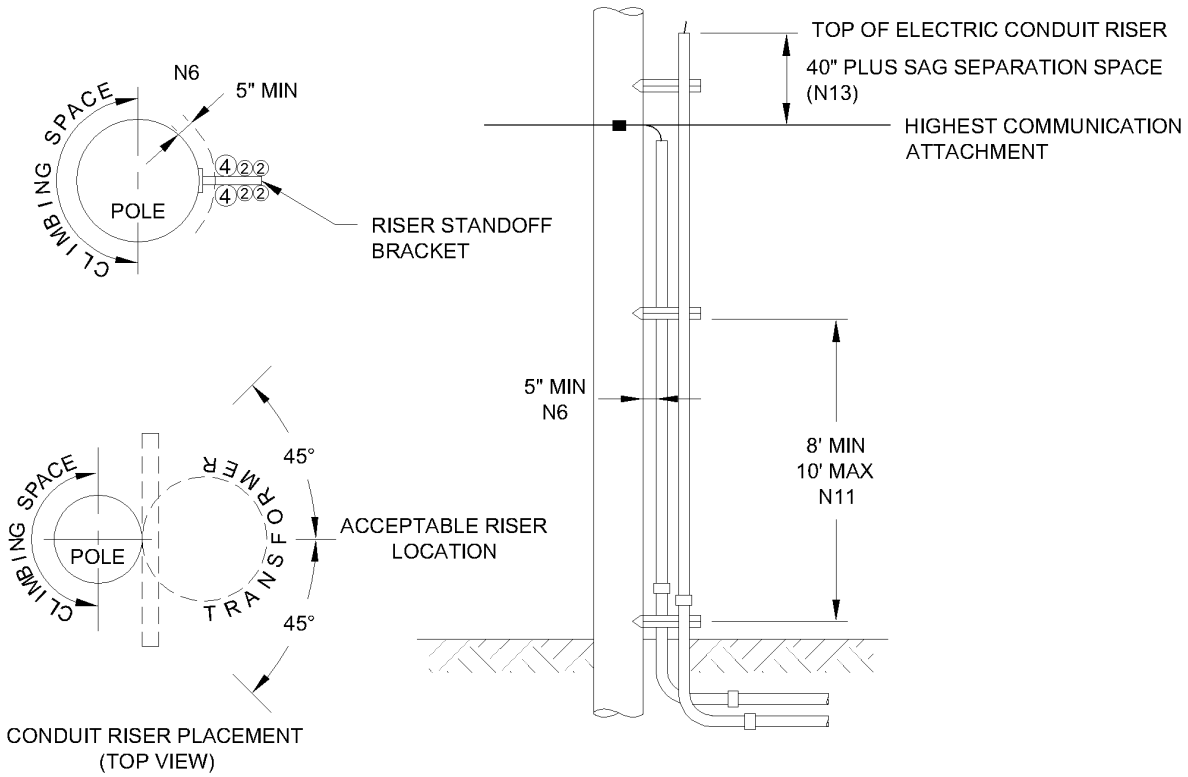


NOTES:

N1. Risers are not allowed on air switch poles (R1).

N2. Joint use risers are not allowed on substation riser poles.

N3. New riser installations will require that all conduit risers on the pole be strapped to one set of standoff brackets, including electric conduits.

N4. Joint use companies are limited to one (1) 4-inch conduit per pole or two (2) 2-inch conduits per pole, unless otherwise approved by the Avista Utilities Joint Use Administrator.

N5. Maximum total number of conduits for all companies, including Avista conduits, is four (4) 4-inch conduits on any pole. Two (2) 2-inch conduits may be counted as one (1) 4-inch conduit. No more than six conduit risers shall be placed on a set of standoff brackets. This is based on 15-inch standoff brackets. Longer standoffs for joint use require the prior approval of the Joint Use Administrator.

N6. All risers must be mounted to provide a minimum five-inch clearance between the face of the pole and the riser closest to the pole.

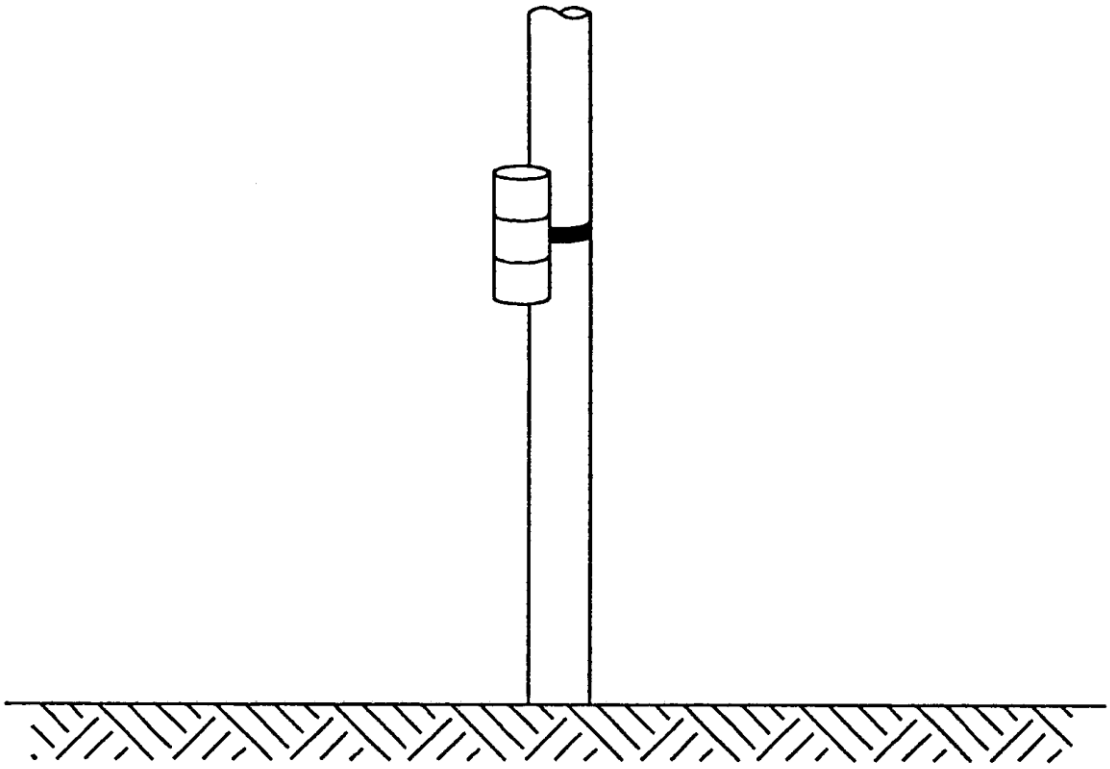
N7. If standoff brackets have electric conduits and need to be changed to longer brackets to accommodate additional communication conduit risers, then the change out of the brackets shall be done by Avista Utilities at the expense of the communication company. The electric conduits should be placed outside of the communication conduits whenever possible.

N8. Small communication service drops may be secured directly to the pole. When more than two small service drops are involved, those communication service drops are required to be installed in conduit on standoffs and must be located on the equipment side of the pole and not infringe on the pole climbing space.

N9. Small service splice boxes are allowed near the bottom of the pole so long as they are located on the equipment side of the pole and do not infringe on the pole climbing space.
N10. Locate the standoff brackets and conduit riser on the equipment side of the pole opposite the climbing space. Avoid trapping communication lines between the riser and the pole.
N11. Maintain a minimum of eight feet (ten feet maximum) between the ground line or lowest standoff bracket and the next higher bracket.
N12. Placement of standoff brackets and conduit risers should avoid vehicular traffic and not enter into a sidewalk or curb area.
N13. A minimum clearance of 40-inches shall be maintained for safety space between the top of the electric conduit and the highest communication attachment.
N14. When necessary, use split duct covering to wrap each individual conductor (1-inch, stock number 578-0280 and 2-inch, stock number 578-0282) for safety space clearances.
N15. An 18-inch standoff bracket should be used if there is joint use on a 600 amp, three-phase primary riser (three (3) four-inch conduits). This may result in the distance between the face of the pole and the riser closest to the pole to be less than the five-inch minimum clearance, which will require prior approval by the Avista Utilities Joint Use Administrator.
N16. Innerduct must not extend more than 4 inches beyond the top of the riser.

REFERENCES:

R1. NESC 217A2c, Table 238-1.
R2. Refer to DO-1.431 for Joint Use on Air Switch Poles.
R3. Refer to DO-1.446 for Joint Use Vault Installations.
R4. Refer to DO-4.520 for Three Phase 900 Amp Loadbreak Air Switch with Steel Base
R5. Refer to DO-4.530 for Three Phase 900 Amp 15/25 kV Loadbreak Air Switch with Insulated Base AS.
R6. Refer to DO-4.540 for Three Phase 900 Amp 15/25 kV Air Switch Hookstick with Fiberglass Base AS90025HOG.
R7. Refer to DU-7.520 for Secondary Risers.



NOTES:

N1. All attachments must be approved by Avista Utilities Joint Use Administrator prior to installation.

N2. Temporary attachments must meet all requirements for regular attachments including all clearance and climbing space requirements.

N3. Temporary attachments must be secured with hardware suitable to support the load.

N4. Temporary attachment should not be installed on steel or fiberglass streetlight poles. Attachments on steel distribution poles must be banded (N7).

N5. At the termination of the temporary attachment, all related hardware and materials must be promptly removed at the sole expense of the attaching party. All pole holes must be filled with treated wood plugs that are an appropriate size or plastic plugs (R1).

N6. Temporary attachments are those which are intended to be in place no longer than six months.

N7. Under emergency conditions, non-standard supports for existing cables may be used at the communication company's sole risk. Non-standard supports must be replaced with regular supports within 30 days after the end of the emergency.

REFERENCES:

R1. Refer to DO-1.401 for Joint Use General Requirements.

R2. Refer to DO-1.405 for Joint Use Banner Attachment Guideline.

R3. Refer to DO-1.407 for Joint Use Vertical Clearance at Supports.

R4. Refer to DO-1.422 for Joint Use Climbing Space.

R5. Refer to DO-1.428 for Joint Use on Steel Poles.

R6. Refer to DO-3.306 for Control Zone Streets and Hydrants.

DISTRIBUTION STANDARDS AVISTA	**Joint Use Temporary Attachments**	DATE 04-02-14 PAGE 1 of 1 SPEC DO-1.452

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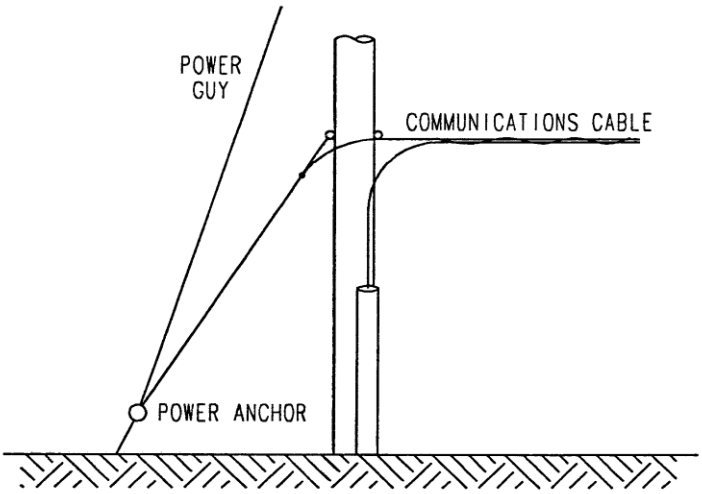

NOTES:

N1. Each company is responsible for determining and installing appropriate guying to balance the maximum horizontal tension of its cables. Communications cable tension must be balanced with guying at all deadends and corners and at such other locations as required by codes and regulations.

N2. Communication guys may be attached to Avista Utilities anchors only if all of the following conditions are met (R6):

a. Communication guy attachment is insulated or grounded
b. The anchor has adequate strength
c. DC currents on the guy will not contribute to anchor corrosion

N3. Do not cross down guys.

N4. Bonding of the communication messenger to the down guy must be installed on the non-climbing side of the pole (R4).

N5. **Do not install "marriage" clamps** or similar devices that would fasten two span guys together for ground clearance.

N6. Do not install pole-to-pole span guying that uses the pole as an anchoring device without the use of a down guy to an anchor.

N7. Guys may be grounded with a bolted connection to a messenger that has at least 4 grounds per mile throughout its length. If the messenger does not have at least 4 grounds per mile or has excessive DC current, the guy must be insulated (R4).

N8. Guys that are not grounded must be insulated with an insulator rated for the highest voltage on the pole and for the full mechanical strength of the guy strand (R3).

N9. Guy markers shall be installed on all communication down guys.

REFERENCES:

R1. NESC 215C2
R2. NESC 92C
R3. NESC 279
R4. Refer to DO-1.419 for Joint Use Grounding Requirements.
R5. Refer to DO-1.431 for Joint Use on Air Switch poles.
R6. Refer to DO-1.458 for Joint Use Anchor Limits.
R7. Refer to Section 2.5 for Avista Guying and Anchoring.

DISTRIBUTION STANDARDS AVISTA	**Joint Use Guying**	DATE 02-18-14 PAGE 1 of 1 SPEC DO-1.455

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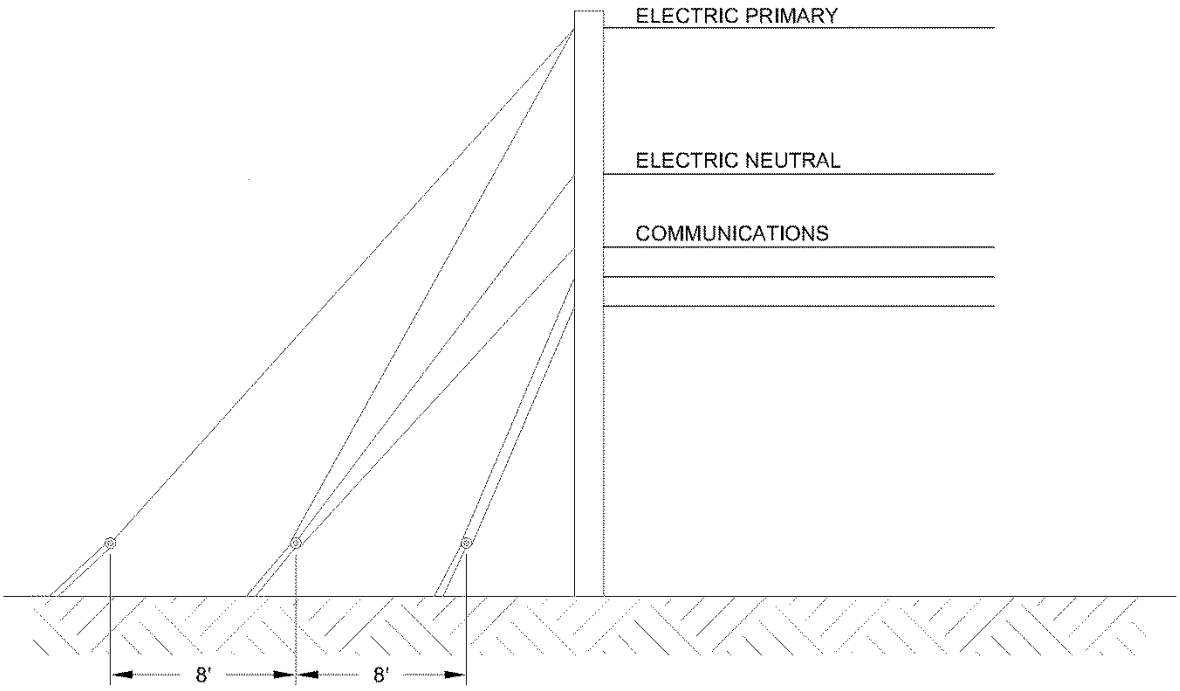

Typical 556 AAC primary feeder shown

NOTES:

N1. Joint Use anchor attachments that exceed 2.6k pounds horizontal maximum tension must have Avista Joint Use Administrator approval before installation.

N2. To identify the size and type of anchor,
- a. measure the diameter of the rod (5/8, 3/4, or 1 inch),
- b. examine the anchor rod eye:
  - 1. plate (X) anchors have eyes which are integral with the rod (cast as one piece).
  - 2. screw (S) anchors have eye nuts which are screwed onto the rods.

5/8 inch rod is limited to one guy attachment.
3/4 inch rod is limited to two guy attachments.
1 inch rod or larger is limited to three guy attachments.

N3. To identify the size of each guy,
Measure the diameter of the strand (1/4, 5/16, 3/8, 7/16, or 1/2 inch),
Refer to Page 7 of DO-2.507 for guy strength limits.
- 1/4 is rated at 4000 lbs.
- 5/16 (non EHS) is rated at 7000 lbs.

Older guy wire such as the 1/4 and 5/16 non EHS should be changed to conform to the recommended guying standards.

N4. Use the following procedure to determine the remaining anchor capacity.
   a. Identify the size and type of the existing anchor (N2, R3, and R4).
   b. Identify the size of each existing guy attached to the anchor (N3, R3, and R4).
   c. Add the limits of all guys attached to the anchor.
   d. Subtract the sum of the guy limits from the anchor limit.
   e. There shall be no more guy attachments per anchor than the number of eyes.
   f. Check the anchor limit to the associated soil type and holding capability.
   g. If the result is greater than the limit of the proposed guy, the anchor may be used. If the result is less than the limit of the proposed guy attachment, a separate anchor must be installed.

N5. Depending on existing horizontal tensions, guy lead length and pole class (R1) a new anchor may be placed no less than 8 feet closer to the pole than the nearest existing anchor. If there is not enough room closer to the pole, contact Avista Joint Use Administrator about installing an anchor outside of existing anchors and moving existing guys back. Preference is to use Manta Ray anchors so that the new anchor does not disturb existing Avista anchor(s).

N6. New anchors must be a minimum of 10 feet inside the nearest Avista Utilities transmission anchor.

N7. Maximum working tensions in undisturbed soil and (in fill):

	Undisturbed soils	Disturbed soils (in fill)
5/16 EHS guy	10,080 lbs	
3/8 guy	10,350 lbs	
7/16 guy	16,380 lbs	
5/8X	N/A	(8,550) lbs
3/4X	N/A	(12,600) lbs
1X (24 in plate /10 ft rod)	N/A	(21,200) lbs
1X-7 (24 in plate / 7 ft rod)	N/A	(17,100) lbs (R5.)
1(14)-7 (14in screw used as plate)	N/A	(13,000) lbs (R5.)
1S1 (10")	22,500 lbs	N/A
1S1-14 (14")	27,000 lbs	N/A
1S3 (10",12",14")	N/A	(27,000) lbs (Class 7)
MR-1	Proof Test	N/A
MR-SR	Proof Test	N/A

REFERENCES:

R1. Refer to DO-1.434 to DO-1.442 for Joint Use Strength Limits.
R2. Refer to DO-1.455 for Joint Use Guying.
R3. Refer to DO-2.507 for Down Guy and Anchor Selection.
R4. Refer to DO-2.510 for Down Guy and Anchor Selection Example.
R5. Refer to DO-2.518 for Special Anchor Application 1” x7’ Rod Plate 1X or Screw Anchor 1S1-14.
R6. Refer to DO-2.520 for Evaluating Existing Down Guy and Anchors.

Joint use requested by:	TV/Telecom Cable Company	Verizon	Qwest
Normal Pole Length (N3)	As Required for Avista Utilities	40 Foot Class 4	40 Foot Class 4
Usual Owner (N7)	Avista Utilities	Avista Utilities	Avista Utilities
Taller Pole Install for: (N8) Owner only Renter only Both parties, Govt, or Property owner	At Owner's Expense Renter pays added cost Renter pays 1/2 added cost		
Space on 40 foot Pole: Avista Utilities Telephone direct attachment Telephone crossarm	N/A	top 8 feet 20'-8" to 21'-8" 19'-8" to 21'-8"	top 8 feet 20'-2" to 21'-8" 20'-2" to 21'-8"
Space on 35 foot Pole: Avista Utilities TV/Telephone	N/A	N/A	Top 1.5 feet 21'-8" to 22'-2"
Bonding	Installed at renter's expense		
Normal Anchor installed by (N9)	Avista Utilities	Owner	Owner
Guys installed by	Cable Company (N10)	Renter	Renter

NOTES:

N1. Each company must obtain its own ROW permits or easements as required.

N2. All attachments must comply with Avista Utilities and NESC clearance and separation standards at the time of installation or alternation.

N3. Height and location of pole, its owner and its suitability for joint use must be agreed in writing before construction.

N4. Cable company must have a signed agreement and signed copy of application before attaching.

N5. The pole owner may deny the joint use of any pole due to concerns for capacity, safety, reliability, or engineering consideration.

N6. Each party must guy and anchor its unbalanced loads.

N7. Avista Utilities can elect whether or not to install the joint use pole. Renter can install the pole if Avista Utilities does not. Avista Utilities will buy cable company poles for the remaining value if Avista Utilities must attach.

N8. A taller pole may be required to provide ground clearance, separation between utilities or both.

N9. An Avista Utilities anchor may be used by the communication company only when the loading imposed by the NESC does not exceed its capacity. When the anchor is not adequate, the communication company must install an anchor at its own sole cost or pay the full cost of replacing the Avista Utilities anchor with an anchor adequate for the total load as a make-ready expense.

N10. The communication company must install its own guys. If the installed guy is not adequate or is improperly insulated, Avista Utilities can install an appropriate guy at the sole cost of the communication company.

REFERENCES:

R1. Community Television Joint Pole Agreement.

R2. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and GTE Northwest Incorporated (Verizon Northwest).

R3. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and Pacific Northwest Bell Telephone Company (formerly U.S. West, now Qwest Communications).

R4. Master License Agreement.

Joint use requested by:	TV/Telecom Company	Frontier	CenturyLink – Qwest Legacy	Avista Utilities
Cost of rearrangement paid by:	Renter	Party making request (N7)		
Cost of pole replacement paid by: Avista Utilities Pole Verizon Pole Qwest Pole	 Renter (N11) --- ---	 Verizon (N7) Verizon (N9) ---	 Qwest (N7) --- Qwest (N10)	 Avista Utilities Avista Utilities(N8) Avista Utilities(N7)
Bonding	Installed at renter's expense			

NOTES:

N1. Each company **must** obtain its own ROW permits or easements as required.

N2. All attachments **must** comply with Avista Utilities and NESC clearance and separation standards at the time of installation or alternation.

N3. The party wishing to attach to another's pole **must** notify the pole owner in writing.

N4. TV/Telecom companies **must** have a signed agreement and a signed copy of application before attaching.

N5. The pole owner may deny the joint use of any pole due to concerns for capacity, safety, reliability, or engineering considerations.

N6. **Each party must guy and anchor its unbalanced loads.**

N7. The party requesting joint use must pay the remaining value plus removal less salvage of the existing pole plus the labor cost for installing the new pole plus cost of transferring existing circuits and equipment.

N8. Normally, Avista Utilities will pay as in N7 above. If the pole supports an Avista Utilities primary circuit, Avista Utilities will assume ownership of the pole, replace the pole and pay Frontier only the remaining value of the existing pole plus the cost of transferring Frontier facilities.

N9. If Avista Utilities has attachments on the Frontier pole, Avista Utilities has the option of replacing and assuming ownership of the new pole. Frontier will pay the labor cost for installing the new pole plus the cost of transferring existing circuits and equipment. If Frontier retains ownership and Avista Utilities does the replacement, Frontier will also pay for the cost of materials for the new pole.

N10. Avista Utilities will replace the pole and will assume ownership of the new pole, CenturyLink-Qwest Legacy will pay as in N7 above.

N11. TV/Telecom Companies are responsible for the cost of any rearrangement or transfer of its cables and equipment.

REFERENCES:

R1. Community Television Joint Pole Agreement

R2. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and GTE Northwest Incorporated (formerly Verizon, now Frontier Communications).

R3. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and Pacific Northwest Bell Telephone Company (formerly U.S. West and Qwest Communications, now CenturyLink-Qwest Legacy).

R4. Master License Agreement.

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Joint use requested by:	TV/Telecom Company	Frontier	CenturyLink-Qwest Legacy	Avista Utilities
Pole installed	Avista Utilities	Avista Utilities	Avista Utilities (N8)	Avista Utilities
Costs Paid by	TV/Telecom Company	Frontier (N5)	CenturyLink – Qwest Legacy (N5)	Avista Utilities (N6)
Owner of Pole	Avista Utilities	Avista Utilities	Avista Utilities	Avista Utilities

NOTES:

N1. Each company **must** obtain its own ROW permits or easements as required.

N2. All attachments **must** comply with Avista Utilities and NESC clearance and separation standards at the time of installation or alteration.

N3. The party wishing to attach to another's pole **must** notify in writing.

N4. Each party **must** guy and anchor its unbalanced loads.

N5. When the telephone company requests the interset pole, it will pay to Avista Utilities the labor cost for installing the new pole plus the cost of necessary modifications to adjacent structures plus the cost of attaching existing electric circuits and equipment.

N6. When Avista Utilities requests the interset pole, it will pay to the telephone company the cost of attaching existing telephone circuits and equipment. TV/Telecom companies will attach at their own expense.

N7. When both parties need the interset pole, or it is required by public authority, or property owners, the telephone company will pay to Avista Utilities 1/2 the labor cost for installing the new pole. Each party will attach at its own expense.

N8. Avista Utilities has the option of installing and owning poles requested by CenturyLink – Qwest Legacy.

REFERENCES:

R1. Community Television Joint Pole Agreement.

R2. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and GTE Northwest Incorporated (formerly Verizon, now Frontier).

R3. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and Pacific Northwest Bell Telephone Company (formerly U.S. West and Qwest Communications, now CenturyLink – Qwest Legacy).

R4. Master License Agreement.

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Joint use requested by:	TV/Telecom Company	Frontier	CenturyLink-Qwest Legacy
Cost of replacement paid by: (N7) For Avista Utilities Poles For TV or Telephone Poles (N8) with electric primary without electric primary	Avista Utilities --- --- ---	Avista Utilities --- Avista Utilities (N9) Frontier	Avista Utilities --- Avista Utilities (N11) Avista Utilities (N11)
Location of New Pole (N10)	In same hole or immediately adjacent		

NOTES:

N1. If a joint use pole must be replaced, repaired, or relocated, all joint users **must** be notified in writing. Oral notification is permitted in emergencies.

N2. If one party does not agree that the change is needed or wishes to discontinue joint use of the pole, the party wanting the change shall become the owner of the pole and be totally responsible for installation, removal and disposal.

N3. Renter **must** rearrange, transfer, or remove within 30 days of written notice. In emergencies, Avista Utilities will make the change at the renter's expense.

N4. All attachments **must** comply with Avista Utilities and NESC clearance and separation standards at the time of installation or alternation.

N5. Notices of code or standard violations must be in writing and **must be corrected within 30 days.**

N6. **Each party must guy and anchor its unbalanced loads.**

N7. Each party is responsible for the cost of transferring its own circuits and equipment.

N8. If Avista Utilities wishes to contact a pole originally installed by a TV/Telecom company, Avista Utilities will buy the pole for the installed cost less depreciation.

N9. Avista Utilities will become Owner of new pole after replacement.

N10. For Frontier, maximum distance from center line of new pole to cable terminal will be 18 inches. For all companies, if agreement cannot be reached on new location, owner can abandon existing pole to the other party or reimburse for costs; no reimbursement is required if replacement is required by public authority or property owner.

N11. Avista Utilities may buy the pole from CenturyLink – Qwest Legacy for the remaining value and then be responsible for replacement. If the pole was damaged by a third party (e.g. car hit pole), Avista Utilities may, at its option, replace and assume ownership.

REFERENCES:

R1. Community Television Joint Pole Agreement.

R2. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and GTE Northwest Incorporated (formerly Verizon, now Frontier Communications).

R3. General Agreement for Joint Use of Wood Poles between WWP (now Avista Utilities) and Pacific Northwest Bell Telephone Company (formerly U.S. West and Qwest Communications, now CenturyLink – Qwest Legacy).

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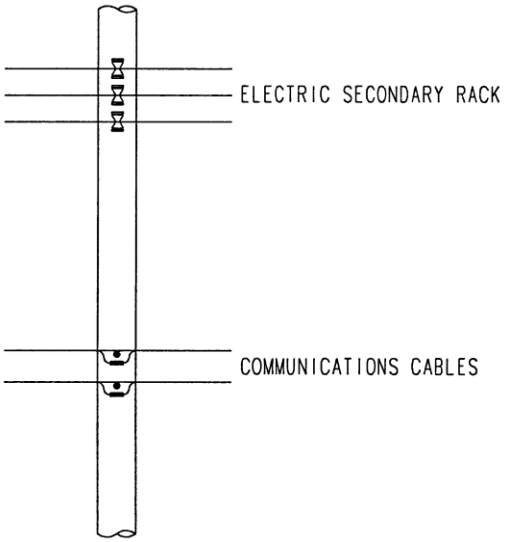

NOTES:

N1. Cables attached to Avista Utilities structures must be tagged at the time of installation at each pole and at each duct face.

N2. Each tag must include the company's name and a 24-hour emergency number to permit notification by Avista Utilities, police, or fire personnel when the cable has been or is in danger of becoming damaged.

N3. Tag color must be

Yellow	Telephone Companies (e.g. Verizon, Century Tel, Qwest)
Red	Cable TV Companies
Orange	Commercial Fiber Optic Companies (e.g. Time Warner, XO Communications, Electric Lightwave, Columbia Fiber Solutions)
Green	Non-commercial Fiber Optic Attachments (cable owned, operated and used solely by one party who is a school district, bank, credit union, car dealership, etc)

N4. The tag material, the lettering and the color must be durable, suitable for outdoor use and resistant to ultraviolet light.

N5. A coiled-tension, snap-on tag 7 to 10 inches long is recommended. Do not use "hang-tags."

N6. Tags must be replaced when they are damaged or the color or lettering deteriorate enough to inhibit recognition.

N7. The messenger must be tagged if the cable will be installed more than 90 days after the messenger is attached.

REFERENCES:

R1. Tags should be similar to the product offered by Electromark Company, 6188 West Port Bay Road, Wolcott, NY 14590 (315) 594-8085.

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NOTES:

All telecommunication contractors working in Avista Utilities duct systems or on Avista Utilities poles (jointly
defined as structures) must meet the following qualifications before work starts (N1 through N4).

N1. All workers must be knowledgeable in the safe work practices for the State in which they are working, including but not limited to OSHA 29CFR 1910.268; Sections 42 and 43 of the National Electric Safety Code (NESC); and Chapter 296-32 of the Washington Administrative Code (R1).

N2. All workers must be trained in first aid/CPR
.

N3. The contractor must have a written accident prevention program addressing the telecommunications business and including but not limited to:

a) confined or enclosed spaces requirements,
b) traffic control regulations,
c) electrical protective devices and safe work practices,
d) proper rigging and setup techniques,
e) Hazard Communication Program,
f) ladder safety,
h) and emergency action plan.

N4. The contractor must indemnify and hold Avista Utilities harmless, provide additional insurance and waive its immunity under the Industrial Insurance Act (RCW 51).

N5. Material Safety Data Sheets (MSDS) must be readily available for the materials that the workmen are using.

N6. A standby person is required on the street surface whenever a person is in an Avista Utilities vault or manhole.

N7. The contractor must provide traffic control.

N8. At the request of Avista Utilities a pre-job safety conference may be held prior to each project with participation by contractor's employees and Avista Utilities representatives. Written minutes with lists of attendees shall be taken and copied to both companies.

N9. The electrical hazard training should include but not be limited to:

a) touch and step potential hazards,
b) procedures for insulating a person from electrical conductors,
c) types of clothing to reduce burns in case of electrical arcs,
d) proper eye and face protection,
e) number of workmen required for safe working conditions,
f) where and when to use electrical protective equipment,
g) procedures for working in damp or wet locations near electrical equipment,
h) proper use and inspection of electrical test equipment,
i) and applicable minimum working clearances from electric supply cable and conductors based on federal or state requirements.

REFERENCES:

R1. WAC 296-32-230 (Training) & OSHA 29CFR 1910.268(C)

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Joint Use Antenna/Radio Installation Requirements

DO-1.491

Scope and Purpose

Installation and maintenance requirements for all joint use / licensee owned or operated wireless equipment on Avista facilities. This includes all Local Exchange Carrier (LEC), Interexchange Carrier (IXC), and other approved third parties.

Definitions

N1. The term *wireless equipment* as used herein shall be interpreted in the broadest possible sense and include radios, antennas, equipment enclosures, mounts, mast arms, associated hardware, power cabling, communication cabling, and any other component that would not be present in the absence of the wireless equipment. Continuous PVC conduit risers are excluded from this definition. Supplement descriptors used in conjunction with *wireless equipment* such as “associated hardware”, “antennas” are redundant, and used only for extra emphasis.

N2. Clearances shall be measured from the furthest point including antennas, mounts, mast arms, exposed cabling, cabling drip loops, top of conduit risers where cabling is exposed, or any other associated hardware (R1).

General Requirements

N3. All third party commercial wireless equipment attachments must adhere to these standards, be party to an Avista *Joint Use Master License Agreement (JUMLA)*, and receive prior approval from the Avista Joint Use Administrator (R16).

N4. All installations must meet all applicable; FAA, FCC, NESC, NEC, federal, state, municipal, local codes, and permitting requirements. Requestor is solely responsible for obtaining all permits and permissions at their sole expense.

Pole Selection

N5. Wireless equipment shall not be installed on *Complex Poles*. *Complex Poles* are defined as poles with capacitors, regulators, reclosers, primary switches, transformers, primary metering, primary riser/dip, deadend-buck-deadend, and other similarly sized distribution equipment or framing. The transformer powering the wireless equipment shall be installed on an adjacent pole (R1, R2, R5, R6).

N6. Wireless equipment shall not be installed on poles with electric transmission without approval from Avista’s Transmission Engineering Department.

N7. Only a single wireless equipment owner/operator is allowed per pole. Poles with existing Joint User or Avista owned wireless equipment attachments must not be utilized.

N8. Wireless equipment shall only be installed on truck accessible wood poles located either within the public right of way (“ROW”) or on solely owned Avista real estate.

N9. Wireless equipment shall not impede pole climbing space. Climbing space is mandatory on all poles, including truck accessible, to accommodate for pole top rescue and apprentice helpers (R3, R4, R19, R22).

N10. Wireless equipment shall be mounted on the same side of the pole as cross arms to maximize pole climbing space.

N11. Wireless equipment shall not interfere with the installation, accessibility or maintenance of any electrical or communication infrastructure including but not limited to cross arms, mast arms, conduit risers, electrical equipment, electrical conductors, communication cables, streetlights, or any other infrastructure (R4).

N12. For secondary, streetlight, and guy poles without any attached primary, wireless equipment may only be installed on class 1 or larger wood poles.

N13. For primary poles, Avista shall determine the minimum pole class necessary to support the wireless equipment.

Above Electric Supply Space

N14. Wireless equipment and associated hardware *Above Electric Supply Space* shall maintain a minimum 6 foot vertical clearance (N2) from the highest electric attachment (R1, R2).

N15. Wireless equipment and antennas *Above Electric Supply Space* shall extend no more than 15 feet above the highest electric attachment (R14).

Electric Supply Space

N16. Wireless equipment and associated hardware in the *Electric Supply Space* shall maintain a minimum 36-inch vertical clearance (N2) from the lowest primary attachment. On existing poles only where it is not possible to obtain this required clearance, the vertical clearance (N2) may be reduced to 26 inches if portions of wireless equipment and associated hardware that will be closer than 36 inches are insulated to the proper voltage class rating with no exposed conductive surfaces prior to installation on pole (R1, R2, R9).

N17. Wireless equipment and associated hardware in the *Electric Supply Space* shall maintain a minimum 12-inch vertical clearance (N2) from the highest system neutral (standard construction), secondary, or electric service attachment and a minimum 52 inch vertical clearance (N2) from the highest joint use wireline attachment. Wireless equipment and associated hardware on flat top primary construction without lower electric attachments needs only to maintain the vertical clearance to the *Communication Space* regardless if joint use wireline attachments exist or not (R1, R2, R5, R6, R7, R19).

Below Electric Supply Space

N18. Wireless equipment and associated hardware and cable attachments are strictly prohibited from occupying any location below the *Electric Supply Space* including the *Communication Worker Safety Zone*, *Communication Space*, and *Ground Clearance Space*. Any cabling or conductors passing through these zone shall be installed in a continuous PVC conduit riser on standoff brackets that extends a minimum of 40 inches above the *Communication Space* (R1, R7, R9, R19).

N19. Communication equipment shall not impede or inhibit *Communication Space* cable attachments, including future attachments. The designated *Communication Worker Safety Zone* and *Communication Space* shall not be encroached upon (R1, R5, R17).

Power

N20. Wireless equipment shall have clearly identifiable, labeled, UL-listed, visible-open, disconnect for each power source including battery backup. Disconnect(s) shall be grouped together at a single readily accessible location and be compatible with lockout, tag out procedures to allow for safe de-energization of all wireless and RF emitting equipment. Pole mounted disconnect(s) shall be located beyond any RF exposure boundaries. Pedestal or ground mounted disconnects shall be lockable in either the open or closed position and include a standard Avista double hasp with lock from the requestor, allowing operation of switch by either party (R11, R26).

N21. Unless fixed rate billing is authorizedby Avista's Joint Use Administrator, all electric service for the site must be metered and meet all requirements of Avista's Electric Service Requirements (Blue Book). Metering gear, remote radio units (RRU), if not integrated with the antenna, and associated facilities must be pedestal or ground mounted no closer than 5 feet to the adjacent utility pole (R20, R26).

N22. Avista may de-energize RF emitting equipment without notice if deemed necessary for safety reasons.

Grounding

N23. Poles with wireless equipment must have a pole ground with theft deterrent. When installing a pole ground, care must be taken to ensure that lighting mast arms, system neutrals, and service neutrals are properly bonded to ground (R23, R24).

N24. All exposed metallic surfaces shall be bonded to ground. Equipment mounts shall be bonded to the pole ground with #4 AWG bare copper (R18).

N25. Antennas with exposed ungrounded surfaces necessary for operation, including painted or powder-coated, may remain ungrounded only when located at the top of the pole above all energized equipment and conductors.

Conduit Risers

N26. Cabling or conductors passing from one defined zone to another shall be installed in a 2-inch PVC conduit riser on standoff brackets installed at 8 to 10 foot intervals and maintain a 5 inch minimum spacing between the pole and conduit (R21).

N27. Conduit risers extending below the *Communication Space* shall remain continuous until dip underground to terminate at a ground mounted pedestal, vault or other enclosure no closer than 5 feet from the utility pole. Wireless equipment cabling and conductors shall not be exposed at any point below the *Electric Supply Space* (R20).

N28. A conduit riser extending through primary conductors shall extend a minimum of 6 feet above and below the primary conductors and standoff 5 inch on the opposite side of the pole as the center phase conductor. In flat top primary construction, the conduit riser will be on the same side as the neutral conductor.

N29. All cables contained within a conduit riser shall have an insulation withstand voltage rating greater than the highest voltage cable contained therein (R1, R2, R7, R21).

RF Emissions

N30. All RF emitting antennas shall be installed so that a utility worker shall not be subjected to RF radiation greater than the Maximum Permissible Exposure (MPE) Limits for General Population/Uncontrolled Exposure when working in accordance with posted signage. (R10, R12).

N31. Durable and ultraviolet light (UV) resistant signage indicating the potential for RF exposure, emergency contact information, ownership, and emergency shut off instructions shall be installed and maintained. All signage must meet all applicable ANSI and FCC standards and be approved by Avista Joint Use Administrator (R10).

N32. A Non-Ionizing Electromagnetic Radiation (NIER) report shall be provided for each equipment type/model. The NIER report shall specify minimum approach distances to the general public as well as to the electrical and communication workers that are not trained for working in an RF environment (uncontrolled) when accessing the pole directly by climbing or aerial lift.

Installation and Maintenance

N33. All installation and maintenance above the *Communication Space* must be performed by a qualified electrical utility worker furnished by Avista as per the terms of the *Joint Use Master License Agreement (JUMLA)* and at the sole expense of the requestor (R8, R16).

N34. If it is anticipated that the minimum approach distance to energized parts may be breached for the installation or maintenance of wireless equipment those energized part(s) shall be properly guarded, de-energized or grounded. (R9).

Figure 1: Streetlight and Secondary Pole Wireless Attachments

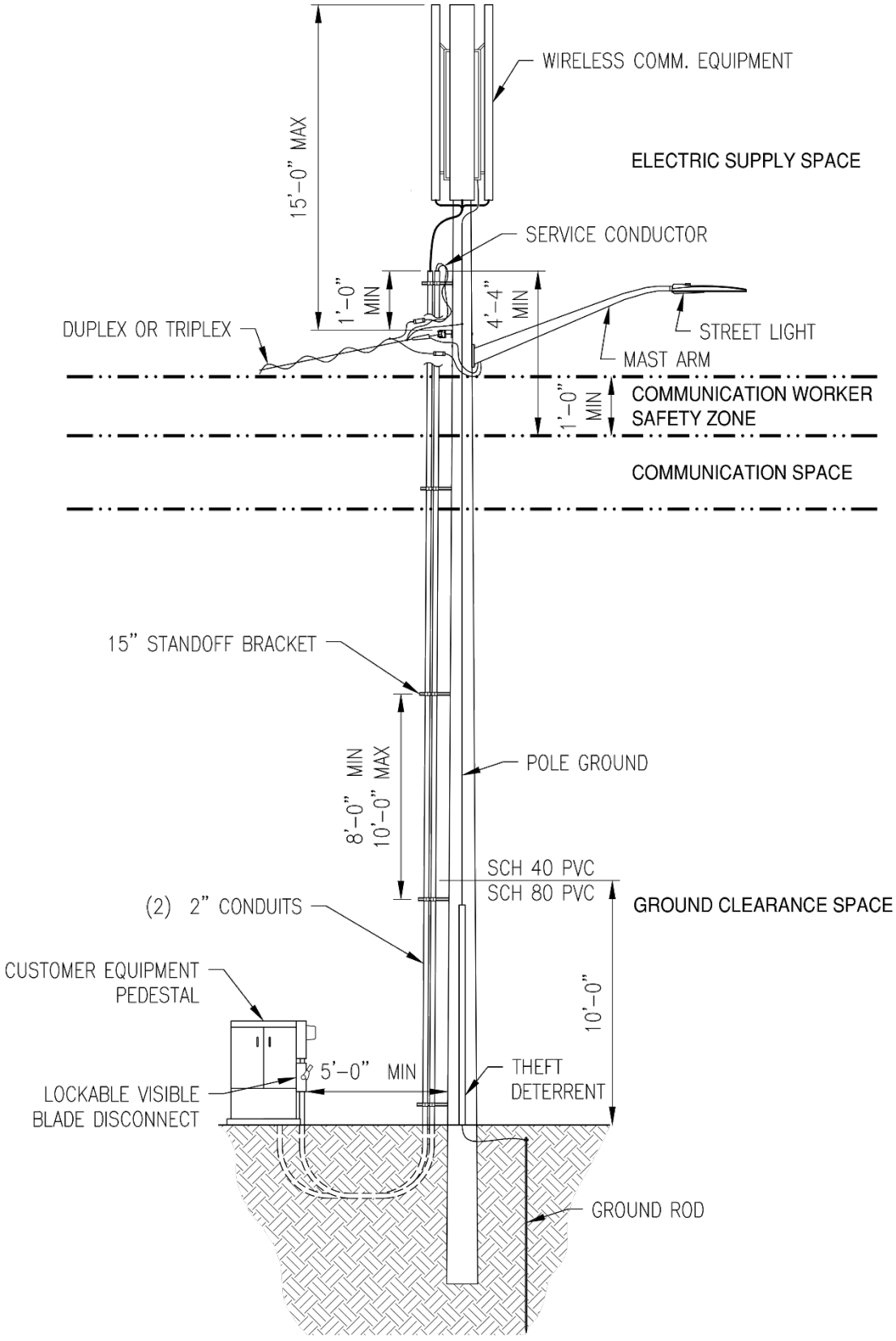


Figure 2: Primary Pole Supply Space Wireless Attachments

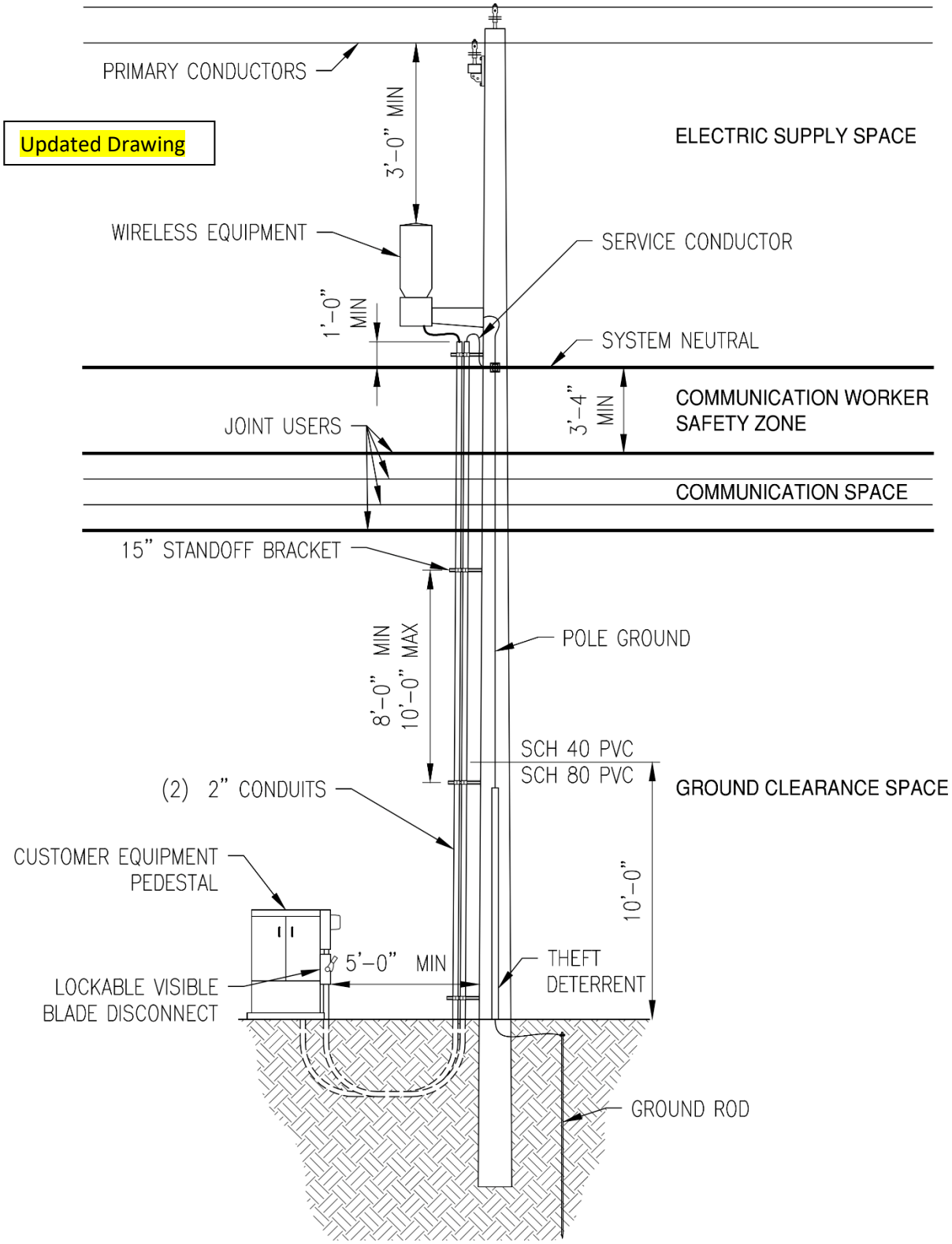
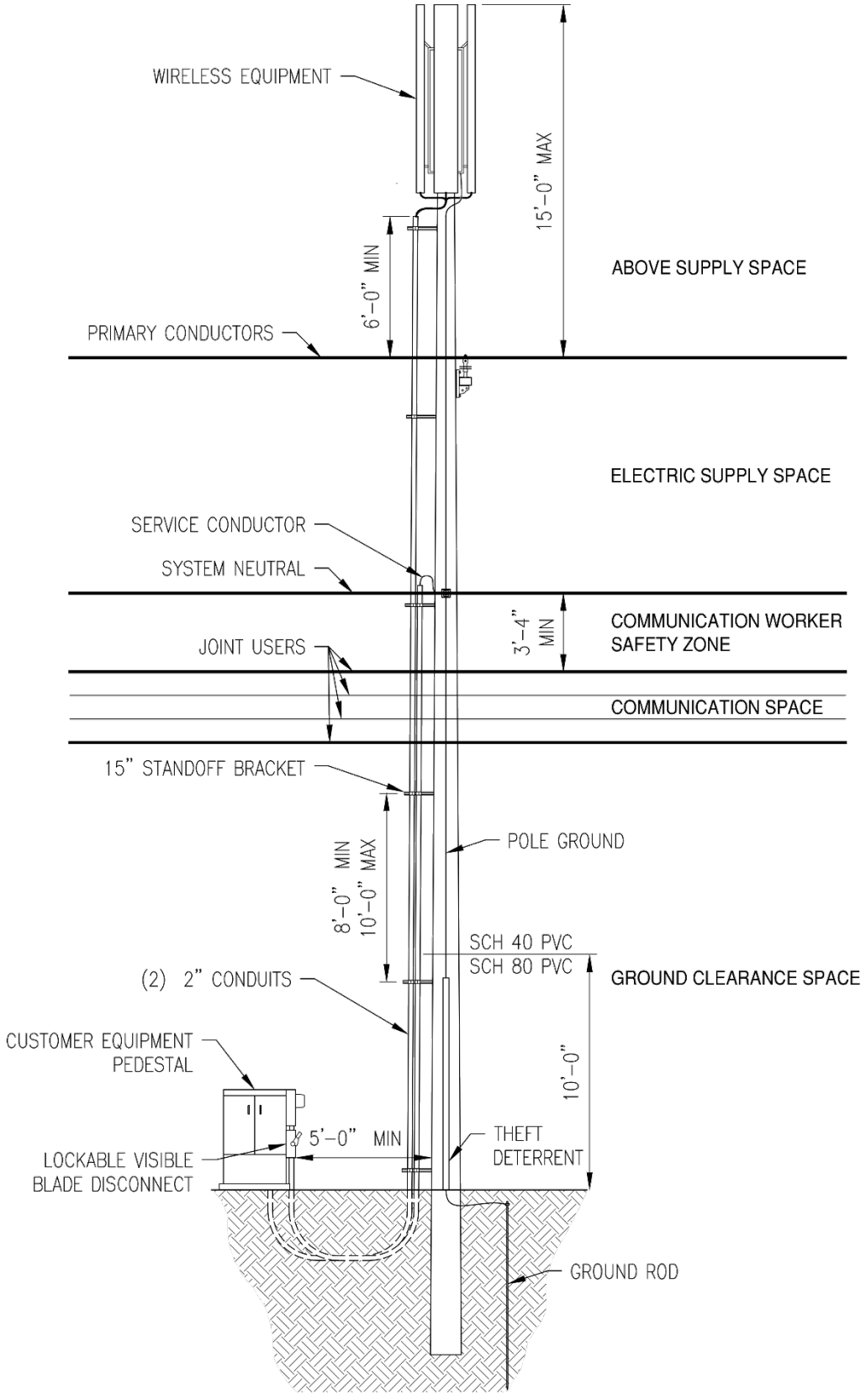


Figure 3: Primary Pole Above Supply Space Wireless Attachments



Click here to return to New Application Checklist

Avista UNDERGROUND Construction Standards Section 1.4 "Joint Use"

NOTES:

N1. Other companies will be allowed to share the Avista Utilities trench when they meet the following general joint use requirements and the specific requirements in the joint use standards that follow. Joint Users should refer to existing Joint Use Agreements with Avista Utilities for additional requirements.

N2. Communication cables must be bonded to the concentric neutrals of the power cables at 1320-foot intervals except where random lay installations.

N3. Prior to the beginning of work, the parties must agree to the allocations of work and costs.

N4. At least 12 inches vertical separation must be provided where only one utility crosses another.

N5. Water mains must be installed with at least five feet of horizontal separation from electric cables.

N6. Communication or signal cables must **not** be installed in the same conduit with electric cables.

N7. The use of **conduit colored "black with red stripes" is prohibited** due to its similarity with Avista Utilities' primary electric distribution cable. **"Red" conduit is also prohibited** due to it being the color used by Avista Utilities for primary electric distribution cable installed in conduit.

N8. **"Orange" conduit, colored continuously through the wall, is preferred for communication or signal cable**. The use of other colors is subject to approval prior to installation. Avista Utilities reserves the right to refuse installation or increase separation in support of this requirement.

N9. Power and communication cables must have NESC 350G markings.

N10. Each party must obtain its own right-of-way.

N11. Each party must immediately report the occurrence of any damage and must reimburse the owner for the damage caused by the negligence of their forces.

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REFERENCES:

R1. Avista Utilities Gas Standard 3.14, page 2.
R2. NESC 350G
R3. NESC 353A & B
R4. NESC 354D1g
R5. NESC 354E
R6. Avista Electric Service and Meter Requirements.

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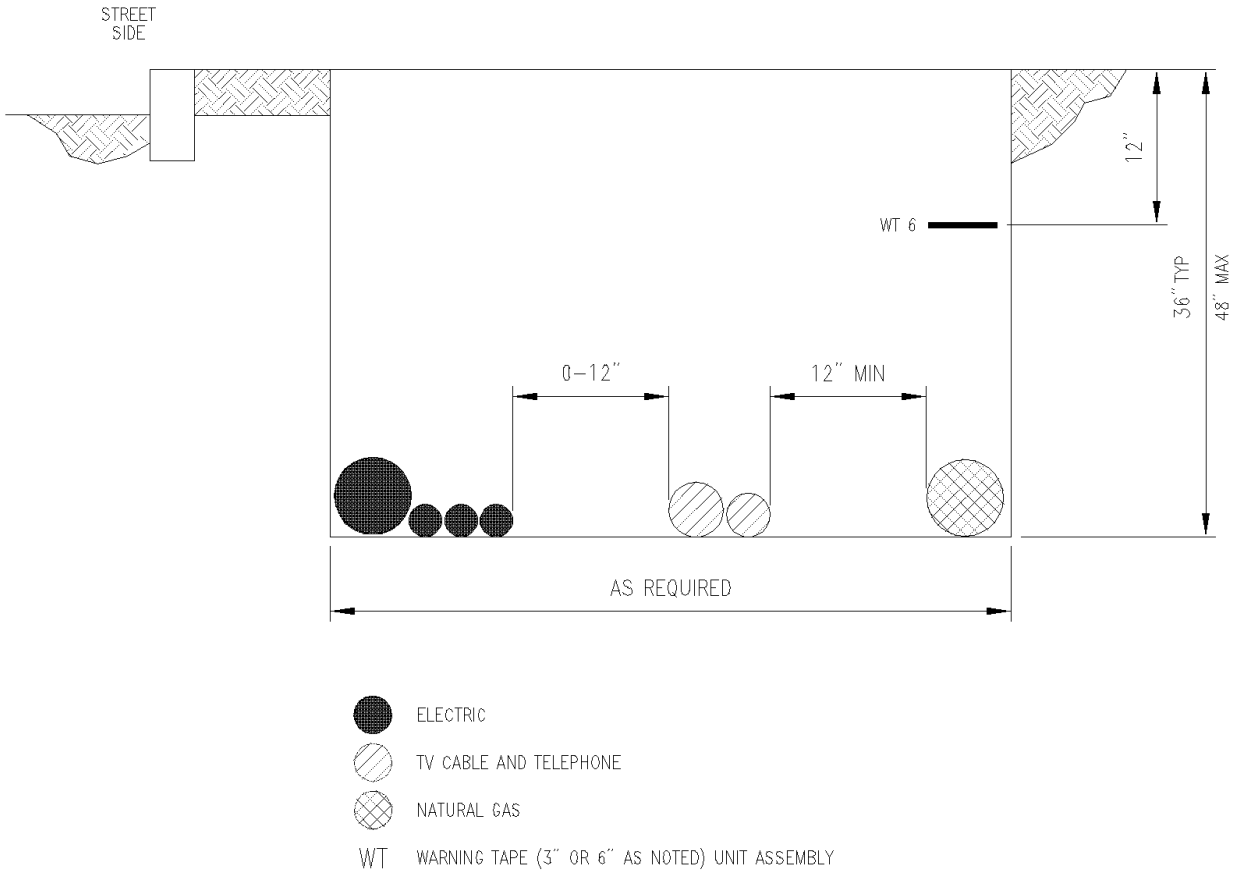

NOTES:

N1. Electric and communication cables may be installed with less than 12 inches separation when the general joint use requirements and the requirements of this standard are met.

N2. All parties with less than 12 inches separation must agree to random lay.

N3. All cables must have at least 12 inches radial separation from underground structures such as natural gas lines, fuel lines, building foundations, other cables not in random lay, etc.

N4. The electric primary must be grounded at 660-foot (8 per mile) intervals if in random lay.

N5. Random lay with insulating jacket power cables is allowed only for primary cables with at least 1/2–capacity neutrals (#2, #1, 1/0 and 4/0).

N6. Random lay is allowed with all service wires except 3-wire 480 volt ungrounded.

N7. Primary and secondary cable is preferred to be installed in conduit.

N8. If primary cable is direct buried (not in conduit) six-inch separation to secondary multiplex cable is recommended.

REFERENCES:

R1. NESC Section 35 and Section 33.

R2. Refer to General Requirements, Construction Standard DU-1.410.

R3. Refer to Joint Use Controlled Lay, Construction Standard DU-1.421.

R4. Avista Electric and Meter Requirements.

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Random Lay**	DATE 11-29-10 PAGE 1 of 1 SPEC DU-1.420

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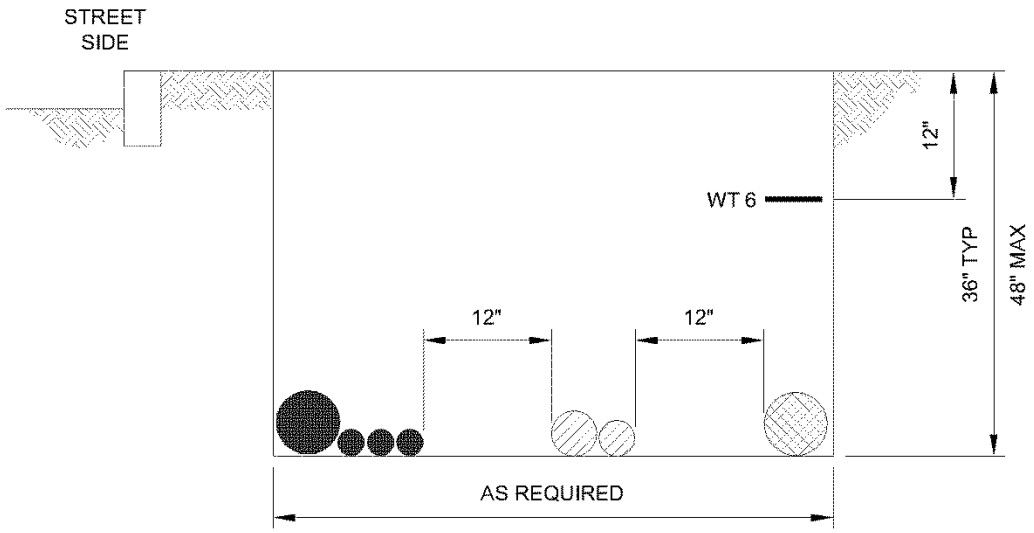

ELECTRIC
TV CABLE AND TELEPHONE
NATURAL GAS
WT WARNING TAPE (3" OR 6" AS NOTED) UNIT ASSEMBLY

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NOTES:

N1. Where the joint parties do not agree to be in random lay, the general joint use requirements and the requirements of this standard must be met.

N2. All parties not in random lay must have at least 12 inches radial separation from underground structures such as natural gas lines, fuel lines, sewer lines, building foundations, other cables not in random lay, etc.

N3. Communications cables may be in random lay with less than 12 inches separation to power cables (#2, #1, 1/0 and 4/0) with at least 1/2–capacity neutrals (R3). Random lay is allowed with all service wires except 3-wire 480 volt ungrounded.

N4. Primary and secondary cable is preferred to be installed in conduit.

N5. If primary cable is direct buried (not in conduit) six inch separation to secondary multiplex cable is recommended

REFERENCES:

R1. NESC Section 33 and Section 35.

R2. Refer to DU-1.410 General Requirements.

R3. Refer to DU-1.420 Joint Use Random Lay.

R4. Refer to DU-1.440 Joint Use Stubbing Plan.

R5. Avista Electric and Meter Requirements.

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Controlled Lay**	DATE 01-05-15 PAGE 1 of 1 SPEC DU-1.421

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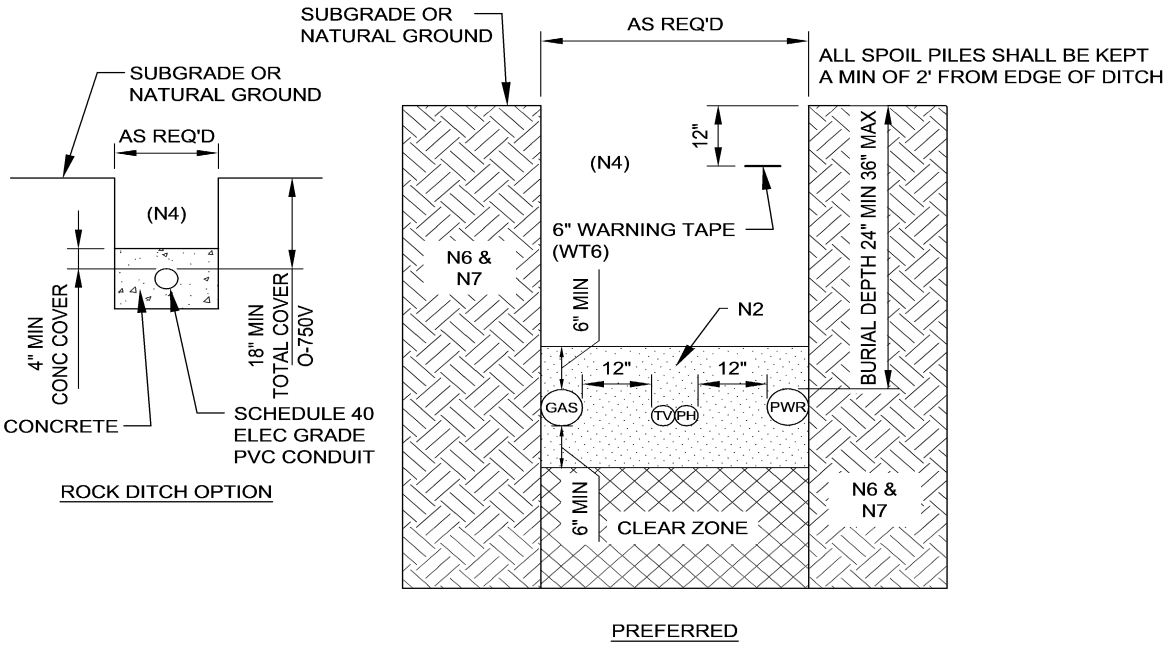

NOTES:

N1. Gas service pipe and electric conduit should not be run in the water ditch. Avista requires 5' separation between water mains and electric cable. R2

N2. Bedding and padding for services in conduit shall be classified as select backfill. Select backfill is clean, screened material consisting of 3/4" minus rock and sand free of rubbish, cinders, chemical refuse or other materials that could cause damage to the conduit.

N3. All customer ditches must pass Avista Utilities inspection.

N4. Approved backfill shall not contain any rock larger than 4 inches.

N5. Electric and communication cables may be installed with less than 12 inches separation when the general joint use requirements and the requirements of this standard are met. All parties with less than 12 inches separation must agree to random lay. Refer to DU-1.420.

N6. All cables must have at least 12 inches radial separation from URD structures such as natural gas lines, fuel lines, building foundations, other cables not in random lay, etc.

N7 Gas services should be installed with a 5' minimum longitudinal separation from sewer utility pipelines or storm drains or at further distances as specified by the appropriate regulating agency.

REFERENCES:

R1. NESC Section 35

R2. Refer to DU-1.410 for Joint Use General Requirements

R3. Refer to DU-1.420 for Joint Use Random Lay.

R4. Refer to DU-7.450 for Service Cable Ditch

R5. Refer to Gas Standard Trenching and Backfilling 3.15.

R6. Refer to Electric Service and Meter Requirements.

DISTRIBUTION STANDARDS AVISTA	**Joint Use** **Service Ditch Detail**	DATE 01-07-17 PAGE 1 of 1 SPEC DU-1.430 /DU-7.450/ESR

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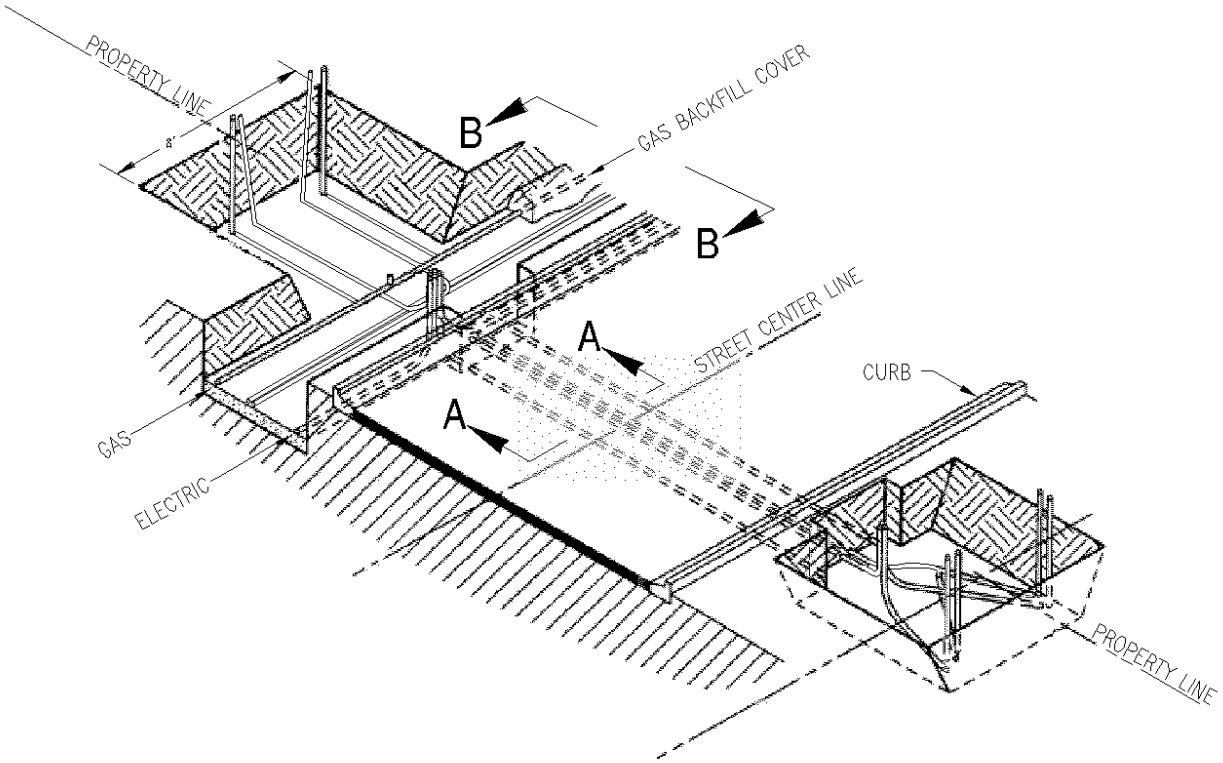
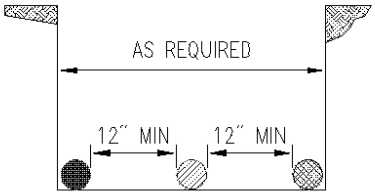
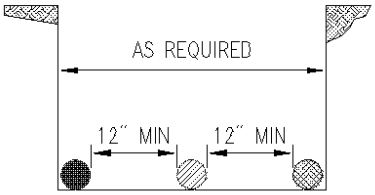


SECONDARY STREET CROSSING



SECTION A-A

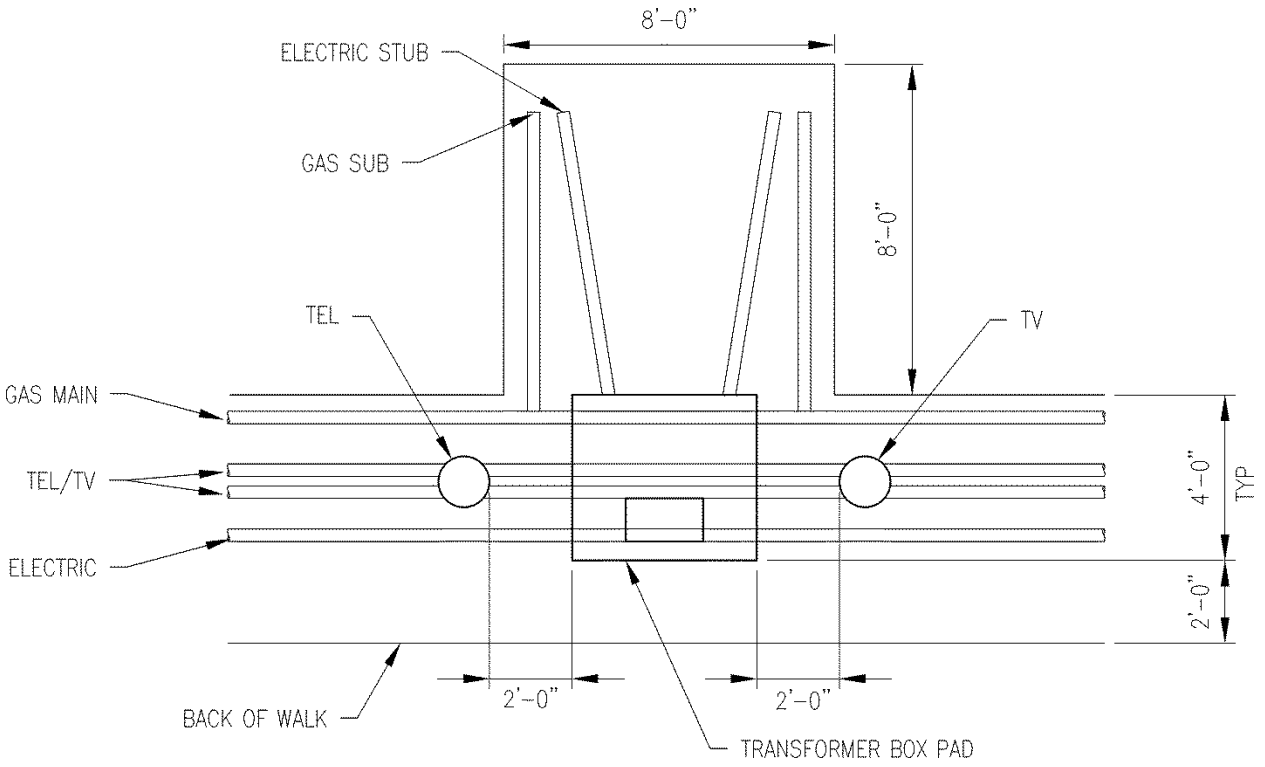
MAIN DITCH



SECTION B-B

ELECTRIC
TV CABLE AND TELEPHONE
NATURAL GAS

DISTRIBUTION STANDARDS	**Joint Use Stubbing Plan**	DATE 01-05-15
		PAGE 1 of 3
		SPEC DU-1.440



NOTES:

N1. All companies should agree on the termination plan before work begins.

N2. It is recommended that all facilities be stubbed out behind their enclosures, sidewalks and swales to avoid soil disturbance after equipment is in place.

N3. Facilities shall normally be set on the property line to split them between the two properties. However, an offset may be necessary to avoid disturbing or covering the property stake.

N4. Bedding and padding for stub out conduits shall be classified as select backfill. Select backfill is clean, screened material consisting of ¾" minus rock and sand free of rubbish, cinders, chemical refuse or other materials that could cause damage to the conduit.

N5. It is recommended that water services not be on the same property corner as electric and communications.

N6. 24 inches minimum is required between transformer pad or secondary handhole and TV or telephone pedestal. Transformer box pads are typically 42" wide by 44" deep at the transformer mounting surface. The box pads have flared sides and the bases are 57" wide by 60" deep. Clearances shown are to the top surface of the box pad.

NOTES cont:

N7. If phone or TV pedestals are metallic, refer to DU-4.512 (R3) for bonding.

N8. Do not install gas service tees under transformer box pad.

N9. Gas main location will be designated by the local Avista Utilities Construction Office.

REFERENCES:

R1. NESC Section 35.

R2. Refer to DU-1.421 Joint Use Controlled Lay.

R3. Refer to DU-4.200 for Burial Depths for URD Cable.

R4. Refer to DU-4.512 for Grounding/Bonding of Adjacent Equipment.

R5. Refer to DU-7.450 for Service Cable Ditch.

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Joint Use Vault Installations

DO-1.446

DU / ESR / J-STD

Construction Notes

N1. Risers are not allowed on Avista Utilities air switch poles.

N2. No later than two business days prior to any excavation deeper than 12 inches, the excavator is required by law to mark the area of excavation and contact the local “One Call” office.

N3. Minimize the disturbance of soil, at the pole, to prevent loss of treated soil and premature deterioration of the butt of the pole.

N4. All excavations for handholes, manholes and vaults must be no closer, to the pole, than five feet or the depth of the excavation (A = B), whichever is greater.

N5. Backfill must be tamped or otherwise compacted to prevent settling and must be protected from erosion.

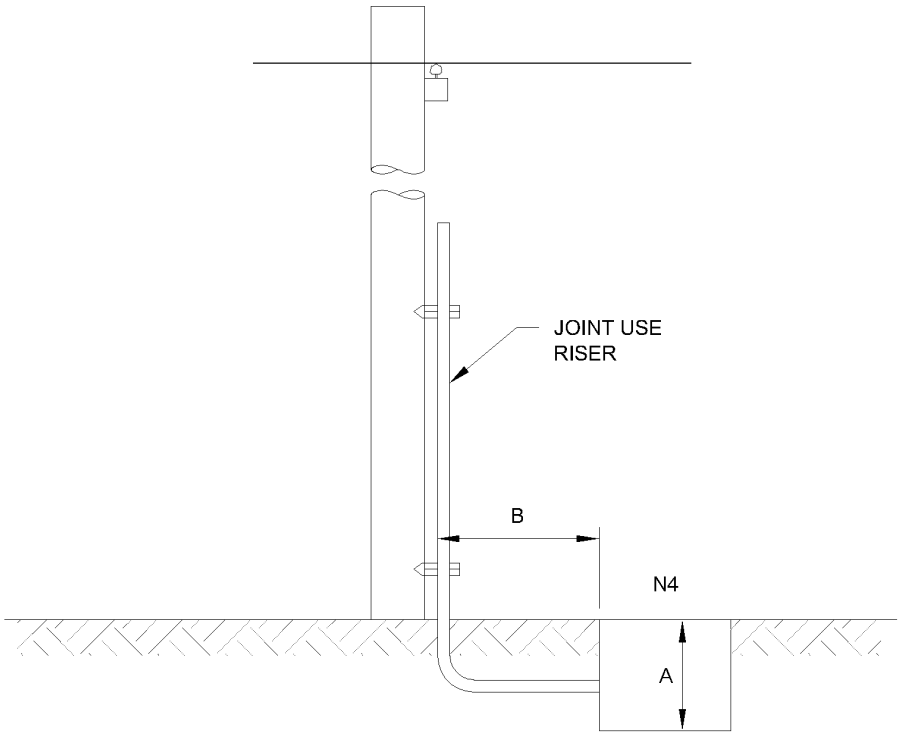
N6. The joint user is responsible for the cost of installing risers, conduits, ditches and manholes which it uses for its communications cables. Risers which connect to communication handholes, manholes or vaults will be owned and maintained by the communication company. Risers which connect to Avista Utilities handholes, manholes, or vaults will be owned and maintained by Avista Utilities.

N7. Equipment such as power supplies must be mounted under the electric crossarm and must not block space for additional communication attachments or climbing space. Large boxes should be installed below the communications space and approved by the Avista Utilities Joint Use Administrator prior to installation (R2).

References

R1. Refer to DO-1.431 for Joint Use on Air Switch Poles.

R2. Refer to DO-1.449/DU-1.458/ESR for Joint Use New Riser Installations.


JOINT USE
RISER
B
N4
A

Construction Notes

N1. Risers are not allowed on air switch poles (R1).

N2. Joint use risers are not allowed on substation riser poles.

N3. New riser installations will require that all conduit risers on the pole be strapped to one set of standoff brackets, including electric conduits.

N4. Joint use companies are limited to one (1) 4-inch conduit per pole or two (2) 2-inch conduits per pole, unless otherwise approved by the Avista Utilities Joint Use Administrator.

N5. Maximum total number of conduits for all companies, including Avista conduits, is four (4) 4-inch conduits on any pole. Two (2) 2-inch conduits may be counted as one (1) 4-inch conduit. No more than six conduit risers shall be placed on a set of standoff brackets. This is based on 15-inch standoff brackets. Longer standoffs for joint use require the prior approval of the Joint Use Administrator.

N6. All risers must be mounted to provide a minimum five-inch clearance between the face of the pole and the riser closest to the pole.

N7. If standoff brackets have electric conduits and need to be changed to longer brackets to accommodate additional communication conduit risers, then the change out of the brackets shall be done by Avista Utilities at the expense of the communication company. The electric conduits should be placed outside of the communication conduits whenever possible.

N8. Small communication service drops may be secured directly to the pole. When more than two small service drops are involved, those communication service drops are required to be installed in conduit on standoffs and must be located on the equipment side of the pole and not infringe on the pole climbing space.

N9. Small service splice boxes are allowed near the bottom of the pole so long as they are located on the equipment side of the pole and do not infringe on the pole climbing space.

N10. Locate the standoff brackets and conduit riser on the equipment side of the pole opposite the climbing space. Avoid trapping communication lines between the riser and the pole.

N11. Maintain a minimum of eight feet (ten feet maximum) between the ground line or lowest standoff bracket and the next higher bracket.

N12. Placement of standoff brackets and conduit risers should avoid vehicular traffic and not enter into a sidewalk or curb area.

N13. A minimum clearance of 40-inches shall be maintained for safety space between the top of the electric conduit and the highest communication attachment.

N14. When necessary, use split duct covering to wrap each individual conductor (1-inch, stock number 578-0280 and 2-inch, stock number 578-0282) for safety space clearances.

N15. An 18-inch standoff bracket should be used if there is joint use on a 600 amp, three-phase primary riser (three (3) four-inch conduits). This may result in the distance between the face of the pole and the riser closest to the pole to be less than the five-inch minimum clearance, which will require prior approval by the Avista Utilities Joint Use Administrator.

N16. Innerduct must not extend more than 4 inches beyond the top of the riser

References

R1. NESC 217A2c, Table 238-1.

R2. Refer to DO-1.431 for Joint Use on Air Switch Poles.

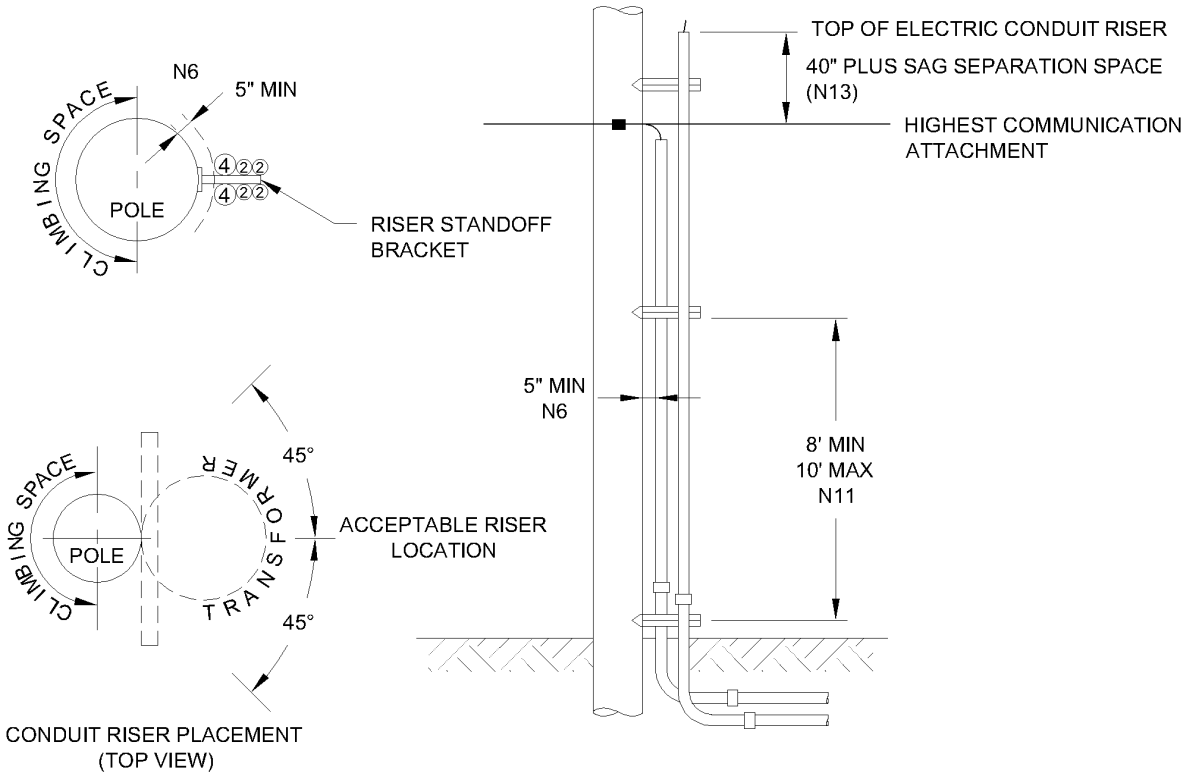
R3. Refer to DO-1.446 for Joint Use Vault Installations.

R4. Refer to DO-4.520 for Three Phase 900 Amp Loadbreak Air Switch with Steel Base

R5. Refer to DO-4.530 for Three Phase 900 Amp 15/25 kV Loadbreak Air Switch with Insulated Base AS.

R6. Refer to DO-4.540 for Three Phase 900 Amp 15/25 kV Air Switch Hookstick with Fiberglass Base AS90025HOG.

R7. Refer to DU-7.520 for Secondary Risers.


TOP OF ELECTRIC CONDUIT RISER
40" PLUS SAG SEPARATION SPACE
(N13)
HIGHEST COMMUNICATION
ATTACHMENT
N6
5" MIN
CLIMBING SPACE
POLE
4 2 2
4 2 2
RISER STANDOFF
BRACKET
5" MIN
N6
8' MIN
10' MAX
N11
45°
TRANSFORMER
ACCEPTABLE RISER
LOCATION
45°
CONDUIT RISER PLACEMENT
(TOP VIEW)

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Chapter 480-54 WAC
ATTACHMENT TO TRANSMISSION FACILITIES

Last Update: 10/21/15

WAC

WAC 480-54-010 Purpose, interpretation, and application. (1) This chapter implements chapter 80.54 RCW "Attachment to Transmission Facilities."

(2) The commission will consider Federal Communications Commission orders promulgating and interpreting its pole attachment rules and federal court decisions reviewing those rules and interpretations as persuasive authority in construing the provisions in this chapter.

(3) The rules in this chapter apply to all owners, occupants, and requesters as defined in this chapter without regard to whether those entities are otherwise subject to commission jurisdiction.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-010, filed 10/21/15, effective 1/1/16.]

WAC 480-54-020 Definitions. **"Attachment"** means any wire, cable, or antenna for the transmission of intelligence by telecommunications or television, including cable television, light waves, or other phenomena, or for the transmission of electricity for light, heat, or power, and any related device, apparatus, or auxiliary equipment, installed upon any pole or in any telecommunications, electrical, cable television, or communications right of way, duct, conduit, manhole or handhole, or other similar facilities owned or controlled, in whole or in part, by one or more owners, where the installation has been made with the consent of the one or more owners consistent with the rules in this chapter.

"Attachment agreement" means an agreement negotiated in good faith between an owner and a utility or licensee establishing the rates, terms, and conditions for attachments to the owner's facilities.

"Carrying charge" means the costs the owner incurs to own and maintain poles, ducts, or conduits without regard to attachments. Those costs are comprised of the owner's administrative, maintenance, and depreciation expenses, commission-authorized rate of return on investment, and applicable taxes. When used to calculate an attachment rate, the carrying charge may be expressed as a percentage of the net pole, duct, or conduit investment.

"Communications space" means the usable space on a pole below the communications workers safety zone and above the vertical space for meeting ground clearance requirements under the National Electrical Safety Code.

"Conduit" means a structure containing one or more ducts, usually placed in the ground, in which cables or wires may be installed.

"Duct" means a single enclosed raceway for conductors, cable, or wire.

"Facility" means a pole, duct, conduit, manhole or handhole, right of way, or similar structure on or in which attachments can be made. "Facilities" refers to more than one facility.

"Inner duct" means a duct-like raceway smaller than a duct that is inserted into a duct so that the duct may carry multiple wires or cables.

"Licensee" means any person, firm, corporation, partnership, company, association, joint stock association, or cooperatively organized association, other than a utility, that is authorized to construct attachments upon, along, under, or across the public ways.

"Make-ready work" means engineering or construction activities necessary to make a pole, duct, conduit, right of way, or other support equipment available for a new attachment, attachment modifications, or additional attachments. Such work may include rearrangement of existing attachments, installation of additional support for the utility pole, or creation of additional capacity, up to and including replacement of an existing pole with a taller pole.

"Net cost of a bare pole" means (a) the original investment in poles, including purchase price of poles and fixtures and excluding cross-arms and appurtenances, less depreciation reserve and deferred federal income taxes associated with the pole investment, divided by (b) the number of poles represented in the investment amount. When an owner owns poles jointly with another utility, the number of poles for purposes of calculating the net cost of a bare pole is the number of solely owned poles plus the product of the number of the jointly owned poles multiplied by the owner's ownership percentage in those poles. In the unusual situation in which net pole investment is zero or negative, the owner may use gross figures with appropriate net adjustments.

"Occupant" means any utility or licensee with an attachment to an owner's facility that the owner has granted the utility or licensee the right to maintain.

"Occupied space" means that portion of the facility used for attachment that is rendered unusable for any other attachment, which is presumed to be one foot on a pole and one half of a duct in a duct or conduit.

"Overlashing" means the tying of additional communications wires or cables to existing communications wires or cables attached to poles.

"Owner" means the utility that owns or controls the facilities to or in which an occupant maintains, or a requester seeks to make, attachments.

"Pole" means an above-ground structure on which an owner maintains attachments, which is presumed to be thirty-seven and one-half feet in height. When the owner is an electrical company as defined in RCW 80.04.010, "pole" is limited to structures used to attach electric distribution lines.

"Requester" means a licensee or utility that applies to an owner to make attachments to or in the owner's facilities and that has an agreement with the owner establishing the rates, terms, and conditions for attachments to the owner's facilities.

"Right of way" is an owner's legal right to construct, install, or maintain facilities or related equipment in or on grounds or property belonging to another person. For purposes of this chapter, "right of way" includes only such legal rights that permit the owner to allow third parties access to those rights.

"Unusable space," with respect to poles, means the space on the pole below the usable space, including the amount required to set the depth of the pole. In the absence of measurements to the contrary, a pole is presumed to have twenty-four feet of unusable space.

"Usable space," with respect to poles, means the vertical space on a pole above the minimum grade level that can be used for the attachment of wires, cables, and associated equipment, and that includes space occupied by the owner. In the absence of measurements to the contrary, a pole is presumed to have thirteen and one-half feet of usable space. With respect to conduit, "usable space" means capacity within a conduit that is available or that could, with reasonable effort and expense, be made available, for the purpose of installing wires, cable, and associated equipment for telecommunications or cable services, and that includes capacity occupied by the owner.

"Utility" means any electrical company or telecommunications company as defined in RCW 80.04.010, and does not include any entity cooperatively organized or owned by federal, state, or local government, or a subdivision of state or local government.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-020, filed 10/21/15, effective 1/1/16.]

WAC 480-54-030 Duty to provide access; make-ready work; timelines. (1) An owner shall provide requesters with nondiscriminatory access for attachments to or in any facility the owner owns or controls, except that if the owner is an electrical company as defined in RCW 80.04.010, the owner is not obligated to provide access for attachment to its facilities by another electrical company. An owner may deny such access to specific facilities on a nondiscriminatory basis where there is insufficient capacity or for reasons of safety, reliability, and generally applicable engineering principles; provided that the owner may not deny access to a pole based on insufficient capacity if the requester is willing to compensate the owner for the costs to replace the existing pole with a taller pole and otherwise undertake make-ready work to increase the capacity of the pole to accommodate an additional attachment including, but not limited to, using space- and cost-saving attachment techniques, such as boxing (installation of attachments on both sides of the pole at approximately the same height) or bracketing (installation of extension arms), to the extent that the owner uses, or allows occupants to use, such attachment techniques in the communications space of the owner's poles.

(2) All rates, terms, and conditions made, demanded, or received by any owner for any attachment by a licensee or by a utility must be fair, just, reasonable, and sufficient and must be included in an attachment agreement with the licensee or utility. Parties may mutually agree on terms for attachment to or in facilities that differ from those in this chapter. In the event of disputes submitted for commission resolution, any party advocating rates, terms, or conditions that vary from the rules in this chapter bears the burden to prove those rates, terms, or conditions are fair, just, reasonable, and sufficient.

(3) Except for overlashing requests described in subsection (11) of this section, a requester must submit a written application to an owner to request access to its facilities. The owner may recover from the requester the reasonable costs the owner actually and reasonably

incurs to process the application, including the costs of inspecting the facilities identified in the application and preparing a preliminary estimate for any necessary make-ready work, to the extent these costs are not, and would not ordinarily be, included in the accounts used to calculate the attachment rates in WAC 480-54-060. The owner may survey the facilities identified in the application and may recover from the requester the costs the owner actually and reasonably incurs to conduct that survey. The owner must provide the requester with an estimate of those costs prior to conducting a survey. The owner must complete any such survey and respond in writing to requests for access to the facilities identified in the application within forty-five days from the date the owner receives a complete application, except as otherwise provided in this section. A complete application is an application that provides the information necessary to enable the owner to identify and evaluate the facilities to or in which the requester seeks to attach.

(4) If the owner denies the request in an application for access, in whole or in part, the owner's written response to the application must include an explanation of the reasons for the denial for each facility to which the owner is denying access. Such a response must include all relevant information supporting the denial.

(5) To the extent that it grants the access requested in an application, the owner's written response must inform the requester of the results of the review of the application. Within fourteen days of providing its written response, the owner must provide an estimate of charges to perform all necessary make-ready work, including the costs of completing the estimate. Make-ready work costs are nonrecurring costs that are not included in carrying charges and must be costs that the owner actually and reasonably incurs to provide the requester with access to the facility.

(a) The requester must accept or reject an estimate of charges to perform make-ready work within thirty days of receipt of the estimate. The owner may require the requester to pay all estimated charges to perform make-ready work as part of acceptance of the estimate or before the owner undertakes the make-ready work subject to true-up to the reasonable costs the owner actually incurs to undertake the work.

(b) An owner may withdraw an outstanding estimate of charges to perform make-ready work any time after thirty days from the date the owner provides the estimate to the requester if the requester has not accepted or rejected that estimate. An owner also may establish a date no earlier than thirty days from the date the owner provides the estimate to the requester after which the estimate expires without further action by the owner.

(6) For requests to attach to poles, the owner must determine the time period for completing the make-ready work and provide that information in a written notice to the requester and all known occupants with existing attachments on the poles that may be affected by the make-ready work. The owner and the requester must coordinate the make-ready work with any such occupants, as necessary.

(a) For attachments in the communications space, the notice shall:

(i) Specify where and what make-ready work will be performed.

(ii) Set a date for completion of make-ready work that is no later than sixty days after the notice is sent. For good cause shown, the owner may extend completion of the make-ready work by an additional fifteen days.

(iii) State that any occupant with an existing attachment may modify that attachment consistent with the specified make-ready work before the date set for completion of that work. Any occupant with an existing attachment that does not comply with applicable safety requirements must modify that attachment to bring it into compliance before the date set for completion of the make-ready work. The occupant shall be responsible for all costs incurred to bring its attachment into compliance.

(iv) State that the owner may assert its right to fifteen additional days to complete the make-ready work.

(v) State that if make-ready work is not completed by the completion date set by the owner (or fifteen days later if the owner has asserted its right to fifteen additional days), the owner and the requester may negotiate an extension of the completion date or the requester, after giving reasonable notice to the owner, may hire a contractor from the list of contractors the owner has authorized to work on its poles to complete the specified make-ready work within the communications space. If the owner does not maintain a list of authorized contractors, the requester may choose a contractor without the owner's authorization.

(vi) State the name, telephone number, and email address of a person to contact for more information about the make-ready work.

(b) For wireless antennas or other attachments on poles in the space above the communications space, the notice shall:

(i) Specify where and what make-ready work will be performed.

(ii) Set a date for completion of make-ready work that is no later than ninety days after notice is sent. For good cause shown, the owner may extend completion of the make-ready work by an additional fifteen days.

(iii) State that any occupant with an existing attachment may modify the attachment consistent with the specified make-ready work before the date set for completion of that work. Any occupant with an existing attachment that does not comply with applicable safety requirements must modify that attachment to bring it into compliance before the date set for completion of the make-ready work. The occupant shall be responsible for all costs incurred to bring its attachment into compliance.

(iv) State that the owner may assert its right to fifteen additional days to complete the make-ready work.

(v) State the name, telephone number, and email address of a person to contact for more information about the make-ready work.

(7) For the purpose of compliance with the time periods in this section:

(a) The time periods apply to all requests for access to up to three hundred poles or 0.5 percent of the owner's poles in Washington, whichever is less.

(b) An owner shall negotiate in good faith the time periods for all requests for access to more than three hundred poles or 0.5 percent of the owner's poles in Washington, whichever is less.

(c) An owner may treat multiple requests from a single requester as one request when the requests are filed within the same thirty-day period. The applicable time period for completing the optional survey or required make-ready work begins on the date of the last request the owner receives from the requester within the thirty-day period.

(8) An owner may extend the time periods specified in this section under the following circumstances:

(a) For replacing existing poles to the extent that circumstances beyond the owner's control including, but not necessarily limited to, local government permitting, landowner approval, or adverse weather conditions, require additional time to complete the work; or

(b) During performance of make-ready work if the owner discovers unanticipated circumstances that reasonably require additional time to complete the work. Upon discovery of the circumstances in (a) or (b) of this subsection, the owner must promptly notify, in writing, the requester and other affected occupants with existing attachments. The notice must include the reason for the extension and date by which the owner will complete the work. The owner may not extend completion of make-ready work for a period any longer than reasonably necessary and shall undertake such work on a nondiscriminatory basis with the other work the owner undertakes on its facilities.

(9) If the owner determines that a survey is necessary for responding to a request for attachment to poles and fails to complete a survey of the facilities specified in the application within the time periods established in this section, a requester seeking attachment in the communications space may negotiate an extension of the completion date with the owner or may hire a contractor from the list of contractors the owner has authorized to work on its poles to complete the survey. If the owner does not maintain a list of authorized contractors, the requester may choose a contractor without the owner's authorization.

(10) If the owner does not complete any required make-ready work within the time periods established in this section, a requester seeking attachment in the communications space may negotiate an extension of the completion date with the owner or may hire a contractor from the list of contractors the owner has authorized to work on its poles to complete the make-ready work within the communications space:

(a) Immediately, if the owner declines to exercise its right to perform any necessary make-ready work by notifying the requester that the owner will not undertake that work; or

(b) After the end of the applicable time period authorized in this section if the owner has asserted its right to perform make-ready work and has failed to timely complete that work.

If the owner does not maintain a list of authorized contractors, the requester may choose a contractor without the owner's authorization.

(11) An occupant need not submit an application to the owner if the occupant intends only to overlash additional communications wires or cables onto communications wires or cables it previously attached to poles with the owner's consent under the following circumstances:

(a) The occupant must provide the owner with written notice fifteen business days prior to undertaking the overlashing. The notice must identify no more than one hundred affected poles and describe the additional communications wires or cables to be overlashed so that the owner can determine any impact of the overlashing on the poles or other occupants' attachments. The notice period does not begin until the owner receives a complete written notice that includes the following information:

(i) The size, weight per foot, and number of wires or cables to be overlashed; and

(ii) Maps of the proposed overlash route, including pole numbers if available.

(b) A single occupant may not submit more than five notices or identify more than a total of one hundred poles for overlashing in any

ten business day period. The applicable time period for responding to multiple notices begins on the date of the last notice the owner receives from the occupant within the ten business day period.

(c) The occupant may proceed with the overlashing described in the notice unless the owner provides a written response, within ten business days of receiving the occupant's notice, prohibiting the overlashing as proposed. The owner may recover from the requester the costs the owner actually and reasonably incurs to inspect the facilities identified in the notice and to prepare any written response. The occupant must correct any safety violations caused by its existing attachments before overlashing additional wires or cables on those attachments.

(d) The owner may refuse to permit the overlashing described in the notice only if, in the owner's reasonable judgment, the overlashing would have a significant adverse impact on the poles or other occupants' attachments. The refusal must describe the nature and extent of that impact, include all relevant information supporting the owner's determination, and identify the make-ready work that the owner has determined would be required prior to allowing the proposed overlashing. The parties must negotiate in good faith to resolve the issues raised in the owner's refusal.

(e) A utility's or licensee's wires or cables may not be overlashed on another occupant's attachments without the owner's consent and unless the utility or licensee has an attachment agreement with the owner that includes rates, terms, and conditions for overlashing on the attachments of other occupants.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-030, filed 10/21/15, effective 1/1/16.]

WAC 480-54-040 Contractors for survey and make-ready work. (1) An owner should make available and keep up-to-date a reasonably sufficient list of contractors it authorizes to perform surveys and make-ready work in the communications space on its poles in cases where the owner has failed to meet deadlines specified in WAC 480-54-030.

(2) If a requester hires a contractor for purposes specified in WAC 480-54-030, the requester must choose a contractor included on the owner's list of authorized contractors. If the owner does not maintain such a list, the requester may choose a contractor without the owner's approval of that choice.

(3) A requester that hires a contractor for survey or make-ready work must provide the owner with prior written notice identifying and providing the contact information for the contractor and must provide a reasonable opportunity for an owner representative to accompany and consult with the contractor and the requester.

(4) Subject to commission review in a complaint proceeding, the consulting representative of an owner may make final determinations, on a nondiscriminatory basis, on the attachment capacity of any pole and on issues of safety, reliability, and generally applicable engineering principles.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-040, filed 10/21/15, effective 1/1/16.]

WAC 480-54-050 Modification costs; notice; temporary stay. (1) The costs of modifying a facility to create capacity for additional attachment, including but not limited to replacement of a pole, shall be borne by the requester and all existing occupants and owner that directly benefit from the modification. Each such occupant or owner shall share the cost of the modification in proportion to the amount of new or additional usable space the occupant or owner occupies on or in the facility. An occupant or owner with an existing attachment to the modified facility shall be deemed to directly benefit from a modification if, within sixty days after receiving notification of such modification, that occupant or owner adds to its existing attachment or otherwise modifies its attachment. An occupant or owner with an existing attachment shall not be deemed to directly benefit from replacement of a pole if the occupant or owner only transfers its attachment to the new pole.

(2) The costs of modifying a facility to bring an existing attachment into compliance with applicable safety requirements shall be borne by the occupant or owner that created the safety violation that necessitated the modification. Such costs include, but are not necessarily limited to, the costs incurred by the owner or other occupants to modify the facility or conforming attachments. An occupant or owner with an existing conforming attachment to a facility shall not be required to bear any of the costs to rearrange or replace the occupant's or owner's attachment if such rearrangement or replacement is necessitated solely to accommodate modifications to the facility to bring another occupant's or owner's attachment into conformance with applicable safety requirements to remedy a safety violation caused by another occupant or owner. The owner and each occupant shall bear their own costs to modify their existing attachments if required to comply with applicable safety requirements if an owner or occupant did not create a safety violation that necessitated the modification.

(3) An owner shall provide an occupant with written notice prior to removal of, termination of service to, or modification of (other than routine maintenance or modification in response to emergencies) any facilities on or in which the occupant has attachments affected by such action. The owner must provide such notice as soon as practicable but no less than sixty days prior to taking the action described in the notice; provided that the owner may provide notice less than sixty days in advance if a governmental entity or landowner other than the owner requires the action described in the notice and did not notify the owner of that requirement more than sixty days in advance.

(4) A utility or licensee may file with the commission and serve on the owner a "petition for temporary stay" of utility action contained in a notice received pursuant to subsection (3) of this section within twenty days of receipt of such notice. The petition must be supported by declarations or affidavits and legal argument sufficient to demonstrate that the petitioner or its customers will suffer irreparable harm in the absence of the relief requested that outweighs any harm to the owner and its customers and that the petitioner will likely be successful on the merits of its dispute. The owner may file and serve an answer to the petition within seven days after the petition is filed unless the commission establishes a different deadline for an answer.

(5) An owner may file with the commission and serve on the occupant a petition for authority to remove the occupant's abandoned attachments. The petition must identify the attachments and provide sufficient evidence to demonstrate that the occupant has abandoned those

attachments. The occupant must file an answer to the petition within twenty days after the petition is filed unless the commission establishes a different deadline for an answer. If the occupant does not file an answer or otherwise respond to the petition, the commission may authorize the owner to remove the attachments without further proceedings.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-050, filed 10/21/15, effective 1/1/16.]

WAC 480-54-060 Rates. (1) A fair, just, reasonable, and sufficient rate for attachments to or in facilities shall assure the owner the recovery of not less than all the additional costs of procuring and maintaining the attachments, nor more than the actual capital and operating expenses, including just compensation, of the owner attributable to that portion of the facility used for the attachments, including a share of the required support and clearance space, in proportion to the space used for the attachment, as compared to all other uses made of the facility, and uses that remain available to the owner.

(2) The following formula for determining a fair, just, reasonable, and sufficient rate shall apply to attachments to poles:

$$\textit{Maximum Rate} = \textit{Space Factor} \times \textit{Net Cost of a Bare Pole} \times \textit{Carrying Charge Rate}$$

$$\textit{Where Space Factor} = \frac{\text{Occupied Space}}{\text{Total Usable Space}}$$

(3) The following formula for determining a fair, just, reasonable, and sufficient rate shall apply to attachments to ducts or conduits:

$$\textit{Maximum Rate per Linear ft./m.} = \left[\frac{1}{\text{Number of Ducts}} \times \frac{1 \text{ Duct}}{\text{Number of Inner Ducts}}\right] \times \left[\frac{\text{Number}}{\text{of Ducts}} \times \frac{\text{Net Conduit Investment}}{\text{System Duct Length (ft./m.)}}\right] \times \textit{Carrying Charge Rate}$$

(Percentage of Conduit Capacity) (Net Linear Cost of a Conduit)

simplified as:

$$\textit{Maximum Rate per Linear ft./m.} = \left[\frac{1 \text{ Duct}}{\textit{No.} \text{ of Inner Ducts}}\right] \times \left[\frac{\textit{Net} \text{ Conduit Investment}}{\text{System Duct Length (ft./m.)}}\right] \times \textit{Carrying Charge Rate}$$

If no inner duct or only a single inner duct is installed, the fraction "1 Duct divided by the Number of Inner Ducts" is presumed to be 1/2.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-060, filed 10/21/15, effective 1/1/16.]

Reviser's note: The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

WAC 480-54-070 Complaint. (1) Whenever the commission shall find, after hearing had upon complaint by a licensee or by a utility, that the rates, terms, or conditions demanded, exacted, charged, or collected by any owner in connection with attachments to its facilities are not fair, just, and reasonable, or by an owner that the rates or charges are insufficient to yield a reasonable compensation for the attachment, the commission will determine the fair, just, reasonable, and sufficient rates, terms, and conditions thereafter to be observed and in force and fix the same by final order entered within three hundred sixty days after the filing of the complaint. The commission will enter an initial order resolving a complaint filed in conformance with this rule within six months of the date the complaint is filed. The commission may extend this deadline for good cause. In determining and fixing the rates, terms, and conditions, the commission will consider the interest of the customers of the licensee or utility, as well as the interest of the customers of the owner. Except as provided in this rule, the commission's procedural rules, chapter 480-07 WAC, govern complaints filed pursuant to this rule.

(2) A utility or licensee may file a formal complaint pursuant to this rule if:

(a) An owner has denied access to its facilities;

(b) An owner fails to negotiate in good faith the rates, terms, and conditions of an attachment agreement; or

(c) The utility or licensee disputes the rates, terms, or conditions in an attachment agreement, the owner's performance under the agreement, or the owner's obligations under the agreement or other applicable law.

(3) An owner may file a formal complaint pursuant to this rule if:

(a) Another utility or licensee is unlawfully making or maintaining attachments to or in the owner's facilities;

(b) Another utility or licensee fails to negotiate in good faith the rates, terms, and conditions of an attachment agreement; or

(c) The owner disputes the rates, terms, or conditions in an attachment agreement, the occupant's performance under the agreement, or the occupant's obligations under the agreement or other applicable law.

(4) The execution of an attachment agreement does not preclude any challenge to the lawfulness or reasonableness of the rates, terms, or conditions in that agreement, provided that one of the following circumstances exists:

(a) The parties made good faith efforts to negotiate the disputed rates, terms, or conditions prior to executing the agreement but were unable to resolve the dispute despite those efforts, and such challenge is brought within six months from the agreement execution date; or

(b) The party challenging the rate, term, or condition was reasonably unaware of the other party's interpretation of that rate, term, or condition when the agreement was executed.

(5) A complaint authorized under this section must contain the following:

(a) A statement, including specific facts, demonstrating that the complainant engaged or reasonably attempted to engage in good faith, executive-level negotiations to resolve the disputed issues raised in the complaint and that the parties failed to resolve those issues despite those efforts; such negotiations must include the exchange of reasonably relevant information necessary to resolve the dispute in-

cluding, but not limited to, the information required to calculate rates in compliance with WAC 480-54-060;

(b) Identification of all actions, rates, terms, and conditions alleged to be unjust, unfair, unreasonable, insufficient, or otherwise contrary to applicable law;

(c) Sufficient data or other factual information and legal argument to support the allegations to the extent that the complainant possesses such factual information; and

(d) A copy of the attachment agreement, if any, between the parties.

(6) The commission will issue a notice of prehearing conference within five business days after the complaint is filed. The party complained against must answer the complaint within ten business days from the date the commission serves the complaint. The answer must respond to each allegation in the complaint with sufficient data or other factual information and legal argument to support that response to the extent the respondent possesses such factual information.

(7) A licensee or utility has the burden to prove its right to attach to or in the owner's facilities and that any attachment requirement, term, or condition an owner imposes or seeks to impose that the licensee or utility challenges violates any provision of chapter 80.54 RCW, this chapter, or other applicable law. An owner bears the burden to prove that the attachment rates it charges or proposes to charge are fair, just, reasonable, and sufficient or that the owner's denial of access to its facilities is lawful and reasonable.

(8) If the commission determines that a rate, term, or condition complained of is not fair, just, reasonable, and sufficient, the commission may prescribe a rate, term, or condition that is fair, just, reasonable, and sufficient. The commission may require the inclusion of that rate, term, or condition in an attachment agreement and to the extent authorized by applicable law, may order a refund or payment of the difference between any rate the commission prescribes and the rate that was previously charged during the time the owner was charging the rate after the effective date of this rule.

(9) If the commission determines that an owner has unlawfully or unreasonably denied or delayed access to a facility, the commission may order the owner to provide access to that facility within a reasonable time frame and in accordance with fair, just, reasonable, and sufficient rates, terms, and conditions.

(10) Nothing in this section precludes an owner or occupant from bringing any other complaint that is otherwise authorized under applicable law.

[Statutory Authority: RCW 80.01.040, 80.04.160, 80.54.020, and 80.54.060. WSR 15-21-090 (Docket U-140621, General Order R-582), § 480-54-070, filed 10/21/15, effective 1/1/16.]

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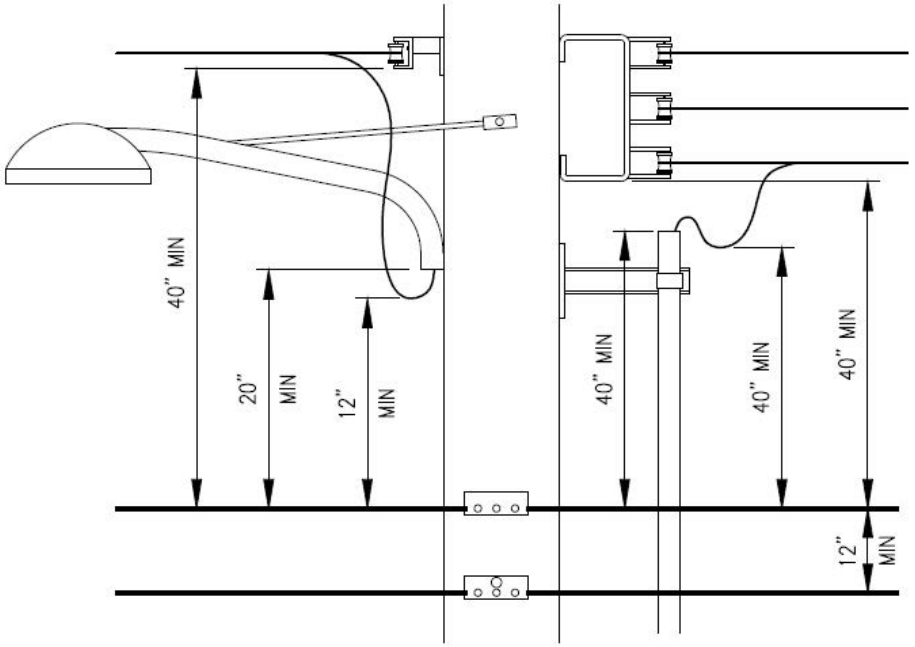
At the Pole

- ☐ Is highest JU attachment at least 40" below lowest power?
- ☐ Is there a street light on the pole?
  - ☐ If yes, is JU 20" below the lowest part of the arm and still 40" below all other power?
- ☐ Is there a power riser attached to the pole?
  - ☐ If yes, is JU 40" below the top of the of the riser conduit or drip loop, whichever is lowest?
- ☐ Is there a pole ground on the pole?
  - ☐ If yes, are all JUers bonded to the pole ground?
- ☐ Do any of the JU cables deadend or make and angle at the pole?
  - ☐ If yes, are they properly guyed and anchored? Is the down guy bonded to the strand?
- ☐ Is there a section of the pole from the base to the top that would allow for pole top rescue?
  - ☐ This space should be at least one full quadrant.
  - ☐ This space should be at least 2'-0" square and have no equipment or cabling in it.



At the Pole

- ☐ Is highest JU attachment at least 40" below lowest power?
- ☐ Is there a street light on the pole?
  - ☐ If yes, is JU 20" below the lowest part of the arm and still 40" below all other power?
- ☐ Is there a power riser attached to the pole?
  - ☐ If yes, is JU 40" below the top of the of the riser conduit or drip loop, whichever is lowest?
- ☐ Is there a pole ground on the pole?
  - ☐ If yes, are all JUers bonded to the pole ground?
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  - ☐ If yes, are they properly guyed and anchored? Is the down guy bonded to the strand?
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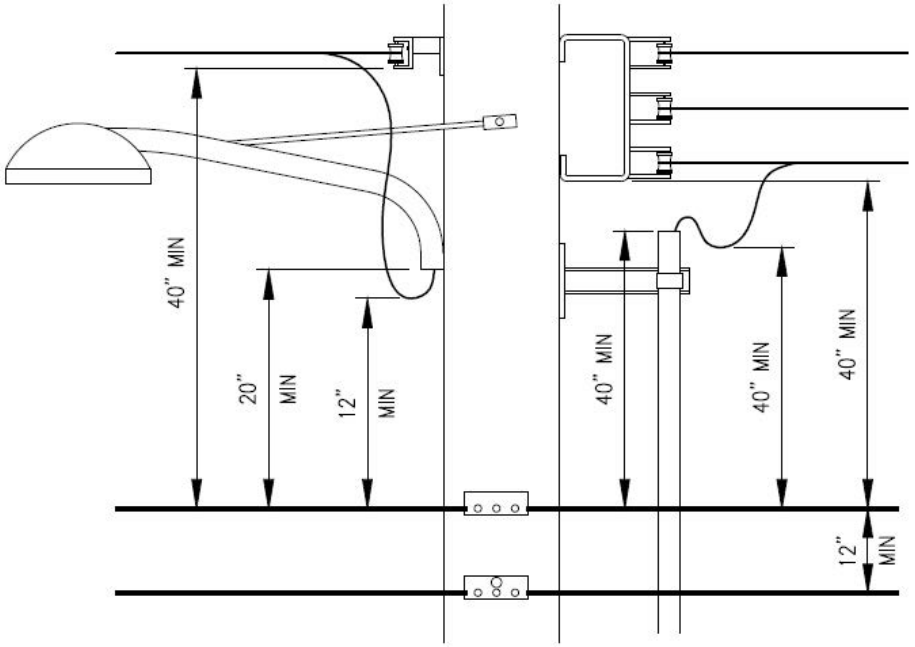
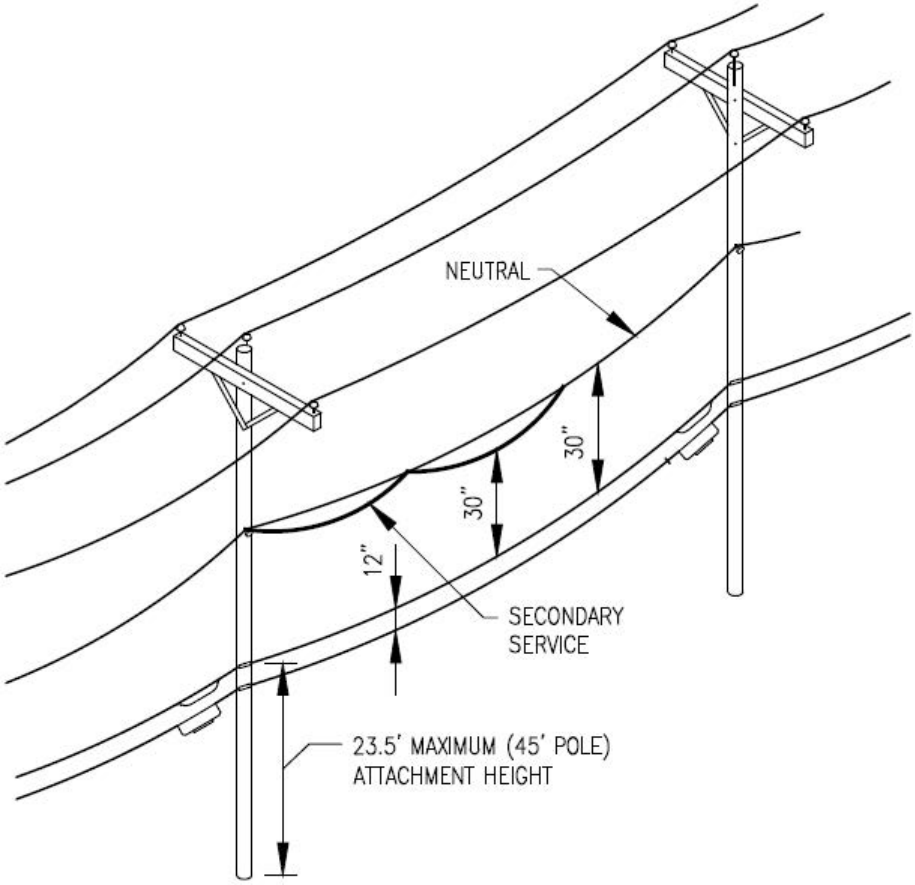


Midspan Clearances

- ☐ Are the cables crossing over a road, driveway, or anyplace designate for vehicle traffic?
  - ☐ If yes, are the cables at least 15'-6" above the road or driveway?
- ☐ Are the cables crossing over a railroad track?
  - ☐ If yes, are the cables at least 23'-6" over the top of the rails?
- ☐ Are the cables at least 12'-0" at their lowest point in areas accesible to pedestrians only?
- ☐ Are any of the JU cables crossing eachother?
  - ☐ If yes, can they be retentioned to match eachother?
- ☐ Is there at least 30" clearance from any neutral or service conductors to Juers?



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