Grant PUD

Joint Use Standards

For Pole Attachments including:
Cable Television
Fiber Optics
Telecommunications

REVISED: July 25, 2018
INTRODUCTION AND OVERVIEW

The information contained in these Joint Use Standards is intended to communicate the requirements for Pole Attachment requests received by Public Utility District No. 2 of Grant County, Washington (“Grant PUD”).

Companies interested in attaching to a Grant PUD pole must first sign a Pole Attachment License Agreement, which can be obtained by sending a request to PoleAttachments@gcpud.org.

Companies with a current Pole Attachment License Agreement with Grant PUD, who want to add or remove attachments, must submit a completed Application for Permit.

It is the Licensee’s responsibility to follow all Applicable Standards for attaching its facilities onto Grant PUD poles. Adherence to these guidelines, procedures, and requirements will improve the processing and approval of each Application for Permit.
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NOTES:
All attachments to Grant PUD poles must meet the following general requirements and the specific requirements in the joint use standards that follow.

1. All parties attaching to Grant PUD poles must have a signed joint use agreement (e.g., Pole Attachment License Agreement) with Grant PUD. Licensee must refer to their respective joint use agreement(s) with Grant PUD for specific attachment requirements.

2. Attachments to all Grant PUD anchors require pre-approval from the Grant PUD Joint Use Administrator. All unbalanced tensions must be guyed.

3. Attachment height greater than listed above (23’-6”) must be approved by the Grant PUD Joint Use Administrator prior to attachment.

4. Communication cable attachments must be on the same side of the pole as Grant PUD neutral, unless otherwise instructed by the Grant PUD Joint Use Administrator.

5. Communication cables must be in the communication space and separated from each other by twelve inches (12”) when attached directly to the pole; 12 inches vertical separation is specified by the Federal Communications Commission (FCC) and local State Commissions. Television cables must be installed above telephone cables unless an alternative is approved in advance by the Grant PUD Joint Use Administrator.

6. Ungrounded communications down guys must be insulated if the Grant PUD pole supports any supply conductors.

7. Holes resulting from removal or relocation of attachments must be filled with treated wood plugs that are an appropriate size or plastic plugs.

8. Through-bolt holes on Grant PUD poles must not be cross-drilled within three inches of each other.

9. Through-bolt ends on Grant PUD poles must not protrude more than two inches beyond the nut on the other side.

10. Additional clearances from ground and obstructions are the responsibility of the individual company and may require taller structures. Prior arrangements must be made with Grant PUD.

11. Subduct or squirrel guard must not be installed without the prior approval of the Grant PUD Joint Use Administrator.

12. Existing holes on Grant PUD poles shall be used for attachments and equipment mounting whenever possible.
REFERENCES:

NESC 279.A.2
NESC 238E
18.0010 Joint Use – New Poles
18.0200 Joint Use - Vertical Clearance at Supports
18.0210 Joint Use – Vertical Clearance at Midspan
18.0400 Joint Use – Climbing Space
18.1200 Joint Use – Guying
NOTES:
1. Each Licensee must obtain its own right-of-way (ROW) permits or easements as required and have these in place prior to installing any attachments to Grant PUD poles.

2. All attachments must comply with Grant PUD and National Electrical Safety Code (NESC) clearance and safety standards at the time of installation or alteration.

3. Each Licensee must guy and anchor its unbalanced loads.

4. Each Licensee must install its own guys. If the installed guy is not adequate or is improperly insulated, Grant PUD may install an appropriate guy at the sole cost of the respective Licensee.

5. A taller pole may be required to provide ground clearance.

REFERENCES:

NESC Table 232-1
NESC Table 235-5
NOTES:

1. If a Joint Use pole must be replaced, repaired, or relocated, all Licensees must be notified in writing. Oral notification is permitted in emergencies.

2. Licensees must rearrange, transfer, or remove their respective attachments within 30 calendar days of written notice. In emergencies, Grant PUD will make the change at the respective Licensee’s expense.

3. All attachments must comply with Grant PUD and NESC clearance and separation standards at the time of installation or alteration.

4. Notices of code or standard violations shall be sent via official letter and must be corrected in accordance with the requirements of the respective joint use agreement.

5. Each Licensee must guy and anchor its unbalanced loads.

6. Each Licensee is responsible for the cost of transferring its own circuits and equipment.
NOTES:

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REFERENCES:

NESC Table 232-1
NESC Table 235-5
NOTES:

1. All telecommunication contractors working in Grant PUD duct systems or on Grant PUD poles (jointly defined as structures) must meet the following qualifications before commencing work.

2. All telecommunication workers must be knowledgeable in the safe work practices for Washington State, 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.

3. All telecommunication workers must be trained in first aid/CPR.

4. The telecommunication contractor must have a written accident prevention program addressing the telecommunications business and including but not limited to:
   - Confined or enclosed spaces requirements
   - Traffic control regulations
   - Electrical protective devices and safe work practices
   - Proper rigging and setup techniques
   - Hazard Communication Program
   - Ladder safety
   - Emergency action plan

5. The telecommunication contractor must have Material Safety Data Sheets (MSDS) readily available for the materials that its personnel are using.

6. The telecommunications contractor must provide traffic control.

7. At the request of Grant PUD, a pre-job safety conference may be held prior to each project with participation by contractor’s employees and Grant PUD representatives. Written minutes with lists of attendees shall be taken and copied to both companies.

8. The telecommunication worker’s electrical hazard training should include but not be limited to:
   - Touch and step potential hazards
   - Procedures for insulating a person from electrical conductors
   - Types of clothing to reduce burns in case of electrical arcs
   - Proper eye and face protection
   - Number of workmen required for safe working conditions
   - Where and when to use electrical protective equipment
   - Procedures for working in damp or wet locations near electrical equipment
   - Proper use and inspection of electrical test equipment
   - Applicable minimum working clearances from electric supply cable and conductors based on federal or state requirements
REFERENCES:

WAC 296-32-230 (Training)
OSHA 29CFR 1910.268(C)
NOTES:

1. Use the table above as a guide for the minimum pole height requirements for Grant PUD use. Taller poles may be required to provide adequate clearances and separation for all parties. Pole class must be considered using other standards. At a minimum, Grant PUD typical construction uses as 45 foot Class 2 pole.

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

3. Poles are framed with the neutral down for single circuit and with attachment space for both TV and Telephone. Most of the existing double circuit construction may have neutral framed down.

4. New attachments and changes must be coordinated through the Grant PUD Joint Use Administrator.

REFERENCES:

NESC Table 232-1
NESC Table 235-5
18.0200 Joint Use - Vertical Clearance at Supports
18.0210 Joint Use - Vertical Clearance at Midspan
18.0010 through 18.0040 Joint Use Agreements
**Priority Poles:** Two silver square tags are placed on rejected/non-serviceable poles to indicate that the pole cannot be rendered serviceable by re-enforcement and must be replaced prior to installing any additional attachments.

![Silver square tag](image1)

![Silver square tag](image2)

**Rejected Poles:** One silver square tag is placed on rejected/serviceable poles to indicate that the pole may possibly be rendered serviceable by re-enforcement (stubbing) prior to installing any additional attachments.

![Silver square tag](image3)

**NOTES:**

1. Pole condition tags are installed by the Grant PUD’s wood pole management contractor.

2. Whether or not a rejected/serviceable pole should be re-enforced, replaced or allowed to have new attachments installed is at the sole discretion of Grant PUD.
NOTES:

1. All communication attachments on Grant PUD steel distribution and transmission poles must be banded to the poles unless factory pre-drilled holes are available. **No field-drilled holes are permitted.**

2. Temporary sign attachments on Grant PUD 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.**

3. All attachments must be approved by Grant PUD prior to installation.

4. All attachments must meet Grant PUD specifications for clearances.

5. Communication cables are not permitted on Grant PUD steel street light poles.

REFERENCES:

18.0200 Joint Use - Vertical Clearance at Supports
JOINT USE – VERTICAL CLEARANCE AT SUPPORTS

PRIMARY CONDUCTOR

SYSTEM NEUTRAL

COMMUNICATIONS CABLES
23’-6” MAXIMUM ATTACHMENT HEIGHT ON 45’ POLES AND HIGHER
NOTES:

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

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

3. Attachment height greater than listed above must be approved by Grant PUD Joint Use Administrator prior to attachment.

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

5. All vertical clearances at the support are span length dependent.

REFERENCES:

NESC 235C2b (1) Table 235-5
NESC 238C, D and E
NESC 239F and G
NESC 236D-1
18.0000 Joint Use - General Requirements
18.0010 Joint Use - New Poles
18.0210 Joint Use - Vertical Clearance at Midspan
18.0400 Joint Use - Climbing Space
NO HARDWARE IN THE COMMUNICATION WORKER SAFETY ZONE. SEE RULE 238.

COMM CABLE TV

COMM TELEPHONE

23.5' MAXIMUM (45' POLE) ATTACHMENT HEIGHT

NOT LESS THAN 30' AT THE SPECIFIED CONDUCTOR TEMPERATURE AND LOADING CONDITIONS PER RULE 235C2b1 (1) (a).
NOT LESS THAN 30° AT THE SPECIFIED CONDUCTOR TEMPERATURE AND LOADING CONDITIONS PER RULE 23502b1 (1) (a).

23.5' MAXIMUM (45° POLE) ATTACHMENT HEIGHT
NOTES:

1. In order to maintain the required minimum thirty inch (30”) joint use clearance midspan, the **maximum** height above groundline at the supports shall be twenty feet six inches (20’6”) for a 40 foot tall pole and twenty three feet six inches (23’6”) for taller poles.

<table>
<thead>
<tr>
<th>Pole Height</th>
<th>Maximum attachment height</th>
<th>Communications separation space at pole</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>40’</td>
<td>20’6”</td>
<td>44”</td>
<td>Very limited Joint Use Space</td>
</tr>
<tr>
<td>45’</td>
<td>23’6”</td>
<td>50”</td>
<td>Span Length limited</td>
</tr>
<tr>
<td>50’</td>
<td>23’6”</td>
<td>104”</td>
<td></td>
</tr>
<tr>
<td>55’</td>
<td>23’6”</td>
<td>158”</td>
<td></td>
</tr>
<tr>
<td>60’</td>
<td>23’6”</td>
<td>212”</td>
<td></td>
</tr>
<tr>
<td>65’</td>
<td>23’6”</td>
<td>266”</td>
<td></td>
</tr>
</tbody>
</table>

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

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

4. Sag communication cables below and parallel to the Grant PUD neutral (below and parallel to Grant PUD secondary conductors on poles without a primary circuit).

5. For longer spans, additional clearances may be required, based on line of site limitations with conductors at 60°F, no wind, and final unloaded sag.

REFERENCES:

NESC Section 235.
NESC 238C.
18.0000 Joint Use - General Requirements
18.0200 Joint Use - Vertical Clearance at Supports
NOTES:

1. Licensee attachments with messenger wires requiring grounding must be connected by a bond attachment to the Grant PUD vertical pole ground.

2. Licensee shall not install vertical pole grounds on Grant PUD distribution poles with a primary neutral.

3. Licensee shall not cut or damage the Grant PUD vertical pole ground when attaching communications bond connections.

4. Where messenger wires are adequate for system ground conductors, each ground conductor shall be bonded to the Grant PUD vertical pole ground.

5. Pole grounds, bonds to electric neutral or earth ground are not allowed on Grant PUD air switch poles.

REFERENCES:

NESC 092C
NESC 097G
NOTES:

1. Where communication cables are attached to the Grant PUD pole, all such cables must be attached on the same side of the pole as the Grant PUD neutral or service rack, unless otherwise authorized by the Grant PUD Joint Use Administrator.

2. The climbing space through the communication cables must:
   • Be a minimum of 24 inches by 24 inches (24” x 24”)
   • Extend a minimum of 40 inches above the upper cable and 40 inches below the lower cable

3. **Pole Attachment Equipment shall not be installed in the climbing space** (Licensees’ drops, amplifiers, ground wires, conduits, risers, etc.).

4. The Licensee is responsible for locating conduits, down guy bonds, ground wires and ground moldings outside the climbing space and under the power transformer or crossarm.

5. The Licensee shall not install pedestals, equipment or other obstacles within four feet (4’) around a Grant PUD pole.

6. For communications attached away from the pole on a crossarm or bracket, the cable shall be a minimum of 12 inches (12”) from the centerline of the Grant PUD pole.

REFERENCES:

NESC 235C1, 236
18.0200 Joint Use - Vertical Clearance at Supports
18.0210 Joint Use - Vertical Clearance at Midspan
18.1000 Joint Use - New Riser Installations
NOTES:

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

2. The following Joint Use facilities are not allowed on Grant PUD air switch poles:
   - Conduit risers
   - Metallic brackets
   - Power supplies and other boxes
   - Bonds to electric neutral, pole ground or earth ground

3. Dead ends and down guying for Joint Use attachments are not allowed on Grant PUD air switch poles. If side guying is required, the Licensee shall install a guy insulator. If the guy wire breaks, the guy insulator must be located so the bottom of the insulator is always above the Joint Use attachments. Guy insulators must be rated for the highest voltage on the Grant PUD pole and for the full mechanical strength of the guy strand.

4. Licensee shall provide a minimum of 12 inches (12”) horizontal clearance between the air switch control rod and all metallic parts of the Licensee’s attachment including the messenger and bracket.

5. Licensee shall install its attachments on non-metallic standoffs on the side of the pole opposite to or at 90 degrees from the switch control rod.

6. All Joint Use attachments must be located above the switch control rod insulator.

7. Contact the Grant PUD Joint Use Administrator if the proposed attachment cannot be installed on the same side of the pole as the electric neutral.

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

REFERENCES:

NESC 279A1
NESC 215C5
ELECTRIC SECONDARY RACK

40” MIN

20”–24”

COMMUNICATIONS CABLES

DISCONNECT BOX FOR POWER SUPPLY
NOTES:

1. Licensee shall install communication power supply weather heads to provide at least 12 inches (12”) of clearance between the bottom of the drip loop and the uppermost communication cable and attachment hardware. The clearances are based on the distance required between the communication cable and the bottom of the drip loop at a street light mast arm.

2. Licensee shall install communication power supplies and other equipment under the electric crossarm in a manner that will not impede the Grant PUD pole’s climbing space.

3. All new power supplies with battery backup or other equipment must be installed on the ground in manholes or padmount gear unless the Grant PUD Joint Use Administrator approves an alternate installation method.

REFERENCES:

NESC 238
18.0200 Joint Use - Vertical Clearance at Supports
18.0400 Joint Use - Climbing Space
18.0900 Joint Use - Vault Installations
NOTES:

1. **Pole Attachment Risers are not allowed on Grant PUD air switch poles.**

2. By law, Joint Use excavation work, deeper than 12 inches, requires the Licensee to provide no less than two business days’ notice to the local “One Call” office to mark the area of proposed excavation.

3. Licensee shall minimize the disturbance of soil, around the Grant PUD pole, to prevent loss of treated soil and premature deterioration of the butt of the pole.

4. Licensee shall excavate handholes, manholes and vaults no closer to the pole than five feet (5’) or the depth of the excavation, whichever is greater.

5. Licensee shall ensure backfill is tamped or otherwise compacted to prevent settling and erosion.

6. Licensee equipment such as power supplies, must be mounted under the electric crossarm and must not block pole space for additional communication attachments or climbing space.

7. Licensee shall obtain prior approval from the Grant PUD Joint Use Administrator for installing large boxes. If approved, the Licensee shall install these large boxes below the communications space.

REFERENCES:

18.0500 Joint Use - Air Switch Poles
18.0700 Joint Use - Power Connections
18.1000 Joint Use - New Riser Installations
NOTES:

1. **Joint Use risers are not allowed on Grant PUD Air Switch poles.**

2. **Joint use risers are not allowed on Grant PUD substation feeder riser poles.**

3. New Joint Use riser installations require all conduits on the pole be strapped to one set of standoff brackets, including Grant PUD electric conduits.

4. Licensees are limited to one (1) 4-inch conduit per pole or two (2) 2-inch conduits per pole, unless otherwise approved by the Grant PUD Joint Use Administrator.

5. Maximum total number of conduits for all Licensees, including Grant PUD conduits, is four (4) 4-inch conduits on any one 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.

6. All Joint Use risers must be mounted to provide a minimum of five inches (5”) clearance between the face of the pole and the riser closest to the pole.

7. If standoff brackets have electric conduits and need to be changed to longer brackets to accommodate additional Joint Use conduit risers, the change out of the brackets shall be done by Grant PUD at the expense of the respective Licensee.

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

9. Licensees may install small service splice boxes near the bottom of the Grant PUD pole, but no less than eight feet from ground line, so long as these are located on the equipment side of the pole and do not infringe on the pole climbing space.

10. Licensees shall locate the standoff brackets and conduit riser on the equipment side of the Grant PUD pole opposite the climbing space. Licensees shall avoid trapping communication lines between the riser and the pole.

11. Licensees shall maintain a minimum of eight feet (ten feet maximum) between the ground line or lowest standoff bracket and the next higher bracket.

12. Licensees shall install the first (or lowest) standoff bracket no more that twelve inches (12”) from ground line.

13. Licensees shall ensure placement of standoff brackets and conduit risers avoid vehicular traffic and not enter into a sidewalk or curb area.
14. Licensees shall ensure a minimum clearance of 40 inches (40”) is maintained for safety space between the top of the electric conduit and the highest communication attachment.

15. Innerduct must not extend more than 4 inches (4”) beyond the top of the Joint Use riser.

REFERENCES:

NESC 217A2c, Table 238-1
18.0500 Joint Use - Air Switch Poles
18.0900 Joint Use - Vault Installations
NOTES:

1. Joint Use temporary attachments are those which are intended to be in place no longer than six months.

2. All Joint Use temporary attachments must be approved by Grant PUD Joint Use Administrator prior to installation.

3. Joint Use temporary attachments must meet all requirements for regular attachments including all clearance and climbing space requirements.

4. Joint Use temporary attachments must be secured with hardware suitable to support the load.

5. Joint Use temporary attachments are not allowed on steel or fiberglass streetlight poles.

6. Joint Users shall band temporary attachments on steel distribution poles.

7. At the termination of the time period allotted for a joint use temporary attachment, all associated hardware and materials must be promptly removed at the sole expense of the respective Licensee. The Licensee shall ensure all Grant PUD pole holes are filled with treated wood plugs that are an appropriate size or plastic plugs.

8. **Under emergency conditions only**, non-standard supports for existing joint use cables may be used at the respective Licensee’s sole risk. Non-standard supports must be replaced with regular supports within 30 calendar days after the end of the emergency.

REFERENCES:

18.0000 Joint Use - General Requirements
18.0120 Joint Use - Steel Poles
18.0200 Joint Use - Vertical Clearance at Supports
18.0400 Joint Use - Climbing Space
NOTES:

1. Licensee is responsible for determining and installing appropriate guying to balance the maximum horizontal tension of its attachments. Licensee shall balance communications cable tensions utilizing guying at all Grant PUD pole deadends and corners and at such other locations as required by codes and regulations.

2. Licensee guys may attach to Grant PUD anchors only if all of the following conditions are met:
   - Communication guy attachment is insulated or grounded
   - The anchor has adequate strength
   - Direct Current (DC) on the guy will not contribute to anchor corrosion

3. **Licensee shall not cross down guys.**

4. Licensee shall install bonding of the communication messenger to the down guy on the non-climbing side of the Grant PUD pole.

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

6. Licensee shall not install span guying on Grant PUD poles without the use of a down guy to an anchor.

7. Joint Use guys may be grounded using 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.

8. Joint Use 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.

9. Joint Use guy markers shall be installed on all Joint Use down guys.

REFERENCES:

NESC 215C2
NESC 92C
NESC 279
18.0000 Joint Use - Grounding Requirements
18.0500 Joint Use - Air Switch poles
JOINT USE - CABLE IDENTIFICATION
(TAGGING)

ELECTRIC SECONDARY RACK

COMMUNICATIONS CABLES
NOTES:

1. Licensee shall tag its attachments at each Grant PUD structure and at each duct face at the time of installation.

2. Each Joint Use tag must include the Licensee’s Company name and a 24-hour emergency number to permit notification by Grant PUD or local authorities should the attachment be found to be damaged or in danger of becoming damaged.

3. Joint Use tag colors shall be

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>Telephone Companies</td>
</tr>
<tr>
<td>Red</td>
<td>Cable TV Companies</td>
</tr>
<tr>
<td>Orange</td>
<td>Commercial Fiber Optic Companies</td>
</tr>
<tr>
<td>Green</td>
<td>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.)</td>
</tr>
</tbody>
</table>

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

5. Licensee shall remove and replace its Joint Use tags when they are damaged or the color or lettering deteriorate enough to inhibit recognition.

6. Should the Licensee install a messenger, it shall be tagged if the cable will be installed more than 90 calendar days after the messenger is attached.

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