

JEFFERSON PUD JOINT USE ATTACHMENT STANDARDS

TO BE USED IN CONJUNCTION WITH THE POLE
ATTACHMENT LICENSE AGREEMENT (PALA) AND
JOINT USE RULES AND REGULATIONS (JURR)

NOTE: STANDARDS APPROVED ON: X/X/XXXX



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1. REFERENCE STANDARDS

ALL CLEARANCES BETWEEN CONDUCTORS AND COMMUNICATION EQUIPMENT SHALL MEET THE MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE WASHINGTON ADMINISTRATIVE CODE (WAC) 296, THE NATIONAL ELECTRIC SAFETY CODE (NESC), THE NEC (NATIONAL ELECTRIC CODE), JOINT USE RULES AND REGULATIONS (JURR), THIS STANDARD, AND GOVERNING AGENCY.

2. DEFINITIONS

DISTRICT, PUD No. 1 - JEFFERSON COUNTY

LICENSEE - A COMMUNICATION COMPANY LICENSED IN THE STATE OF WASHINGTON THAT HAS SIGNED A POLE ATTACHMENT LICENSEE AGREEMENT (PALA) WITH JEFFERSON PUD.

ATTACHMENT - PER RCW 54.04.045(1)(A), MEANS THE AFFIXATION OR INSTALLATION OF ANY WIRE, CABLE, OR OTHER PHYSICAL MATERIAL CAPABLE OF CARRYING ELECTRONIC IMPULSES OR LIGHT WAVES FOR THE CARRYING OF INTELLIGENCE FOR TELECOMMUNICATIONS OR TELEVISION, INCLUDING, BUT NOT LIMITED TO ANY RELATED DEVICE, APPARATUS, OR AUXILIARY EQUIPMENT ATTACHED TO ANY POLE OWNED OR CONTROLLED IN WHOLE OR IN PART BY THE DISTRICT.

SUPPLY SPACE - THE SPACE USED ON JOINT-USE POLES WHERE SUPPLY FACILITIES ARE SEPARATED FROM THE COMMUNICATION SPACE BY THE COMMUNICATION WORKER SAFETY ZONE.

COMMUNICATION WORKER SAFETY ZONE - ALSO REFERRED TO AS 'SAFETY ZONE' OR 'SAFETY SPACE' IS THE VERTICAL SPACE ON A POLE SEPARATING THE SUPPLY SPACE FROM THE COMMUNICATION SPACE. THIS SPACE IS INTENDED TO PROVIDE A SAFE WORKING CLEARANCE FOR WORKERS IN THE COMMUNICATION SPACE (SEE WAC 296-45 AND NESC 235).

COMMUNICATION SPACE - THE SPACE USED ON JOINT-USE POLES WHERE COMMUNICATION FACILITIES ARE SEPARATED FROM THE SUPPLY SPACE BY THE COMMUNICATION WORKER SAFETY ZONE.

COMMUNICATION CABLE - A WIRE, CABLE, OR OTHER PHYSICAL MATERIAL CAPABLE OF CARRYING ELECTRONIC IMPULSES OR LIGHT WAVES FOR THE CARRYING OF INTELLIGENCE FOR TELECOMMUNICATIONS OR TELEVISION.

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3. GENERAL ATTACHMENT REQUIREMENTS

3.1 CABLES AND GUYS

GROUND CLEARANCES SHALL BE BASED ON CALCULATED WORST CASE DESIGN CONDITIONS (INITIAL AND FINAL TEMPERATURE, ICE & WIND) PER NESC.

COMMUNICATION CABLES SHALL BE ATTACHED TO THE SAME SIDE OF THE POLE AS THE POWER NEUTRAL CONDUCTOR. IF THE POWER NEUTRAL CONDUCTOR IS ON A PRIMARY CROSSARM, COMMUNICATION CABLES SHALL BE INSTALLED ON THE ROAD SIDE OF THE POLE. ADDITIONAL CABLES AND CLIMBING SPACE MAY BE ACCOMMODATED BY THE USE OF OVERLASHING AS DESCRIBED IN THE JOINT USE RULES and REGULATIONS.

ALL COMMUNICATION CABLES SHALL HAVE CABLE MARKERS ATTACHED TO THE CABLE THAT IDENTIFY THE OWNER OF THE CABLE AND EMERGENCY CONTACT INFORMATION LOCATED WITHIN SIX INCHES OF THE POLE (SEE FIGURE 3.4.2).

COMMUNICATION CABLES SHALL BE TENSIONED AND GUYED IN A WAY THAT DOES NOT ADVERSELY WEAKEN THE POLE OR ALTER THE PLUMB OF THE POLE OR CHANGE THE SAG CHARACTERISTICS OF POWER CONDUCTORS. COMMUNICATION CABLES SHALL BE ADEQUATELY GUYED TO WITHSTAND ALL TENSIONS ATTRIBUTED TO THE ATTACHMENT UNDER APPLICABLE NESC WIND AND ICE LOADING CONDITIONS.

THE LICENSEE SHALL PROVIDE THEIR OWN ANCHOR FOR COMMUNICATION GUYS AND MAINTAIN AT LEAST SIX FEET SEPARATION FROM EXISTING DISTRICT ANCHORS. COMMUNICATION GUYS MAY BE ATTACHED TO DISTRICT ANCHORS ONLY WITH WRITTEN PERMISSION AND ONLY IF GUY STRAIN INSULATORS ARE USED. LOAD CALCULATIONS MUST BE PROVIDED FOR DISTRICT REVIEW. ENGINEERING EVALUATION COSTS COULD BE CHARGED. REFER TO EXHIBIT 'A' JOINT USE RATE / FEE SCHEDULE.

3.2 POLE DRILLING

ANY HOLE FIELD DRILLED IN A POLE MUST BE TREATED BY DRENCHING WITH HIGH STRENGTH PENTA CHLOROPHENOL (PENTA) SOLUTION OR HIGH STRENGTH COPPER NAPHTHENATE (CU NAP) SOLUTION. CLASS 1 OR H1 POLES ALSO REQUIRE FIBER WASHERS IMPREGNATED WITH APPROPRIATE PRESERVATIVE MATERIAL.



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3. GENERAL ATTACHMENT REQUIREMENTS (CONTINUED)

3.4 RISERS

ON PRIMARY POLES, COMMUNICATION CABLES INCLUDING SERVICE DROPS TRANSITIONING FROM OVERHEAD TO UNDERGROUND SHALL BE INSTALLED IN RISER CONDUITS ON STANDOFF BRACKETS. LICENSEE RISERS SHALL BE INSTALLED AS SHOWN IN FIGURE 3.4.1. ALL COMMUNICATION CABLES, INCLUDING SERVICE DROPS, EXCEPT THE POLE GROUND SHALL BE INSTALLED IN CONDUIT AND MOUNTED ON 15 INCH STANDOFF BRACKETS TO PROVIDE A MINIMUM SIX INCH CLEARANCE FROM THE POLE. EXISTING STANDOFF BRACKETS SHALL BE USED WHEN AVAILABLE.

IF NEW STANDOFF BRACKETS ARE NEEDED, THE LICENSEES SHALL PROVIDE AND INSTALL STANDOFF BRACKETS APPROVED BY THE DISTRICT. LOWER STANDOFF BRACKETS SHALL BE SPACED EIGHT FT - TEN FT APART. THE TOP STANDOFF BRACKETS MAY HAVE CLOSER SPACING. (SEE FIGURE 3.4.2)

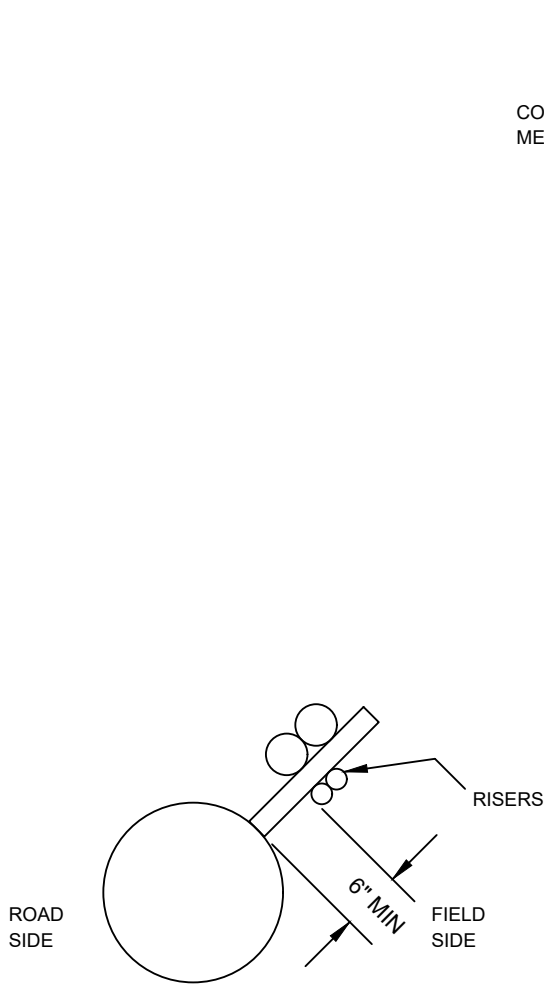


FIGURE 3.4.1

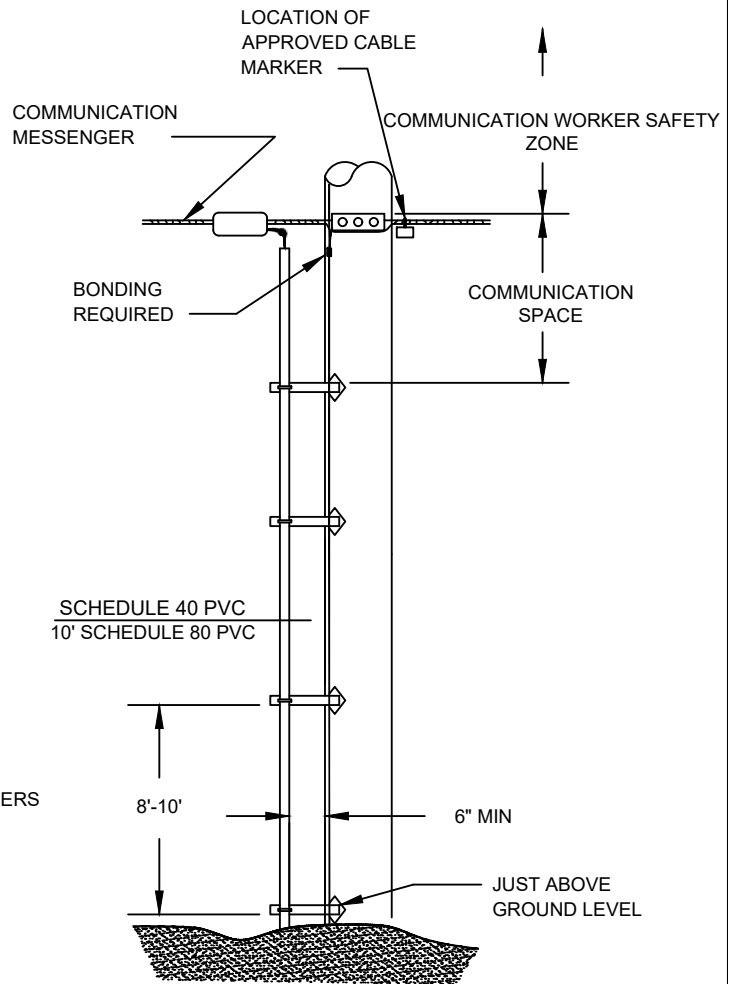


FIGURE 3.4.2

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3. GENERAL ATTACHMENT REQUIREMENTS (CONTINUED)

3.5 ENCLOSURES

POLE MOUNTED LICENSEE POWER SUPPLIES AND OTHER MISCELLANEOUS CABINETS AND ENCLOSURES ARE NOT ALLOWED FOR NEW APPLICATIONS. PLACE THESE A MINIMUM OF SIX FEET AWAY FROM BASE OF POLE OR PER REGULATORY AGENCY REQUIREMENTS.

MAXIMUM RISER DIAMETER IS TWO INCHES, UNLESS APPROVED BY THE DISTRICT.

POWER SUPPLIES SHALL BE DESIGNED FOR 120 VOLT, 15 AMP SINGLE-PHASE SERVICE.

ELECTRIC SERVICE FOR ANY EQUIPMENT THAT IS NOT A SELF CONTAINED POWER SUPPLY SHALL BE SERVED BY A DISTRICT INSTALLED UNDERGROUND SERVICE PEDESTAL OR OVERHEAD SERVICE DROP, PER CURRENT DISTRICT RATES AND SERVICE POLICIES.

A STATE ELECTRICAL INSPECTION SHALL BE OBTAINED PRIOR TO DISTRICT CONNECTION OF ANY POWER SUPPLY.

BATTERY PACK POWER SUPPLIES AND POWER SUPPLIES THAT MAY BE POWERED BY PORTABLE GENERATORS DURING OUTAGE CONDITIONS MUST BE EQUIPPED WITH FEEDBACK VOLTAGE PROTECTION.

3.6 BONDING AND GROUNDING

CONDUCTIVE MESSENGERS AND COMMUNICATION GUYS SHALL BE BONDED AND CONNECTED TO DISTRICT POLE GROUND WITHIN THE COMMUNICATION SPACE WHEN DISTRICT POLE GROUNDS ARE PRESENT. THE POLE GROUND SHALL NOT BE CUT OR DAMAGED WHEN CONNECTING LICENSEE GROUNDS.

IF A GROUND IS NEEDED AND NO DISTRICT POLE GROUND IS AVAILABLE, THE LICENSEE SHALL INSTALL THEIR GROUND AND EXTEND A #6 SOLID SOFT DRAWN COPPER GROUND WIRE UP TO THE TOP OF THE COMMUNICATION SPACE, LEAVING SUFFICIENT GROUND WIRE COILED TO REACH AND CONNECT TO THE DISTRICT'S NEUTRAL. IMMEDIATELY NOTIFY THE DISTRICT OFFICE AT (360) 385-5800 THAT THE GROUND WIRE IS READY FOR CONNECTION AND THE DISTRICT WILL EXTEND AND CONNECT THE GROUND WIRE TO THE DISTRICT'S NEUTRAL.

NOTE: NON-METALLIC/NON-CONDUCTIVE SELF-SUPPORTING MESSENGER (ADSS) DOES NOT REQUIRE BONDING AND GROUNDING.



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3. GENERAL ATTACHMENT REQUIREMENTS (CONTINUED)

3.7 DECORATIVE OBJECT ATTACHMENTS

ALL DECORATIVE FOREIGN ATTACHMENTS SUCH AS HANGING FLOWER BASKETS, BANNERS, OR CHRISTMAS LIGHTS SHALL REQUIRE A SEPARATE AGREEMENT.

DECORATIVE OBJECTS SHALL BE MOUNTED BETWEEN 15 TO 18 FEET ABOVE GROUND AND SHALL EXTEND NO FARTHER THAN 42 INCHES AWAY FROM THE POLE. MAXIMUM ALLOWABLE WEIGHT OF DECORATIVE OBJECT AND MOUNTING BRACKET IS 50 lbs. DECORATIVE OBJECTS SHALL NOT OVERHANG THE ROADWAY. BANNERS OR OTHER OBJECTS SHALL NOT BE STRUNG BETWEEN DISTRICT POLES OR BETWEEN A DISTRICT POLE AND ANY OTHER SUPPORTING MEMBER. (SEE FIGURE 3.7.1).

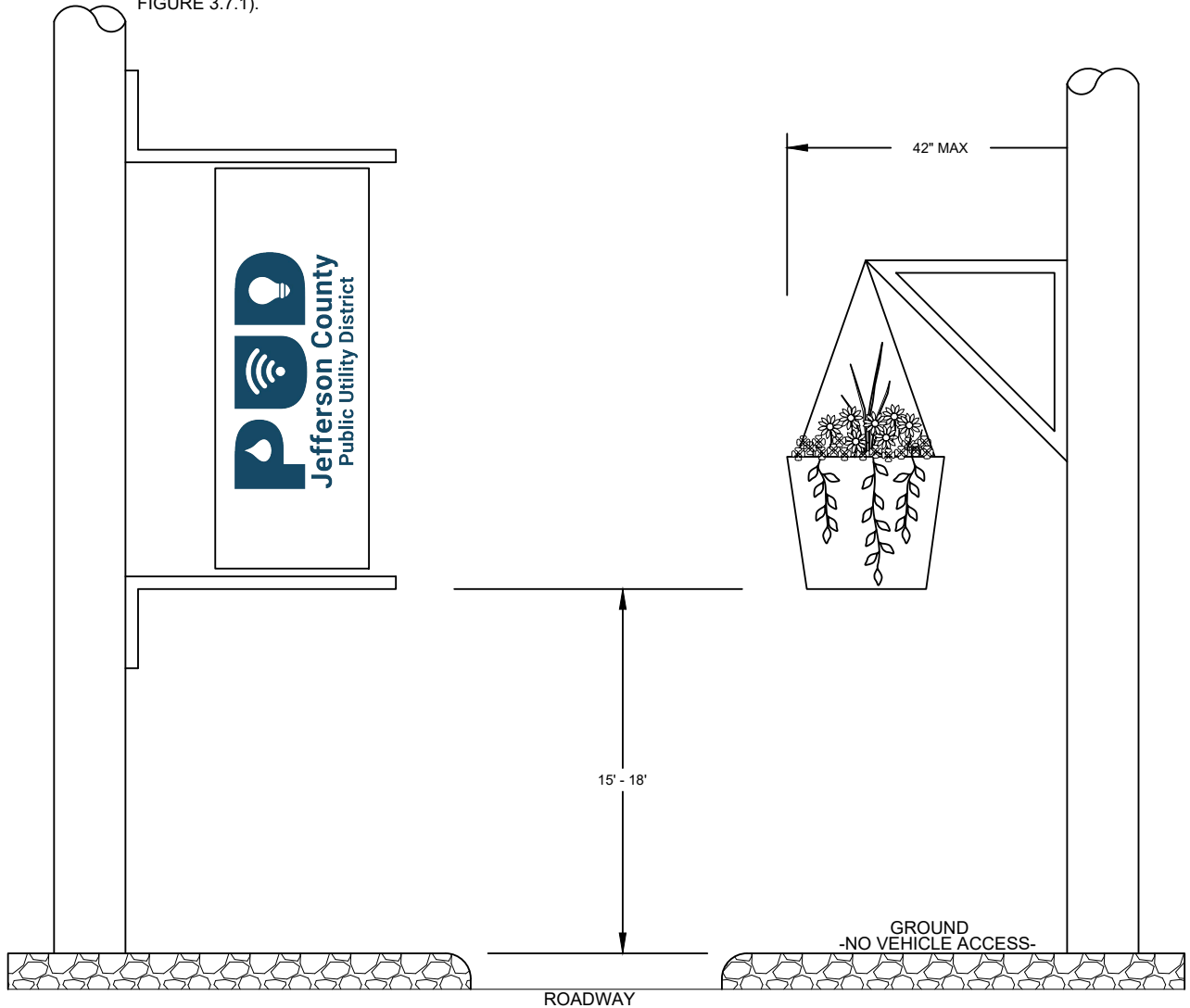


FIGURE 3.7.1

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4.0 CLEARANCE REQUIREMENTS

4.1 PROPER LOCATION OF COMMUNICATION ATTACHMENT (NEW CONSTRUCTION)

THE PROPER LOCATION FOR COMMUNICATION ATTACHMENT MUST ENSURE THAT A COMMUNICATION WORKER SAFETY ZONE OF 40" HAS BEEN ESTABLISHED.

COMMUNICATION ATTACHMENTS ARE SPACED 12" APART.

IF A DISTRICT COMMUNICATION CABLE IS WITHIN 40" OF: NEUTRAL, SECONDARY, PRIMARY OR ENERGIZED EQUIPMENT, THEN A COMMUNICATION WORKER SAFETY ZONE HAS NOT BEEN ESTABLISHED. LICENSEE COMMUNICATION ATTACHMENT MUST BE 30" BELOW DISTRICT COMMUNICATION ATTACHMENT THAT IS PLACED IN THE SUPPLY SPACE, AND A MINIMUM 40" TO POWER.

THE DISTRICT RESERVES THE FIRST TWO ATTACHMENT LOCATIONS BELOW THE COMMUNICATION WORKER SAFETY ZONE FOR ITS OWN COMMUNICATION FACILITIES TO BE LOCATED AT 40" AND 52" FROM LOWEST EQUIPMENT OR POWER. THE FIRST LOCATION FOR LICENSEE ATTACHMENT WILL BE AT 64" FROM LOWEST EQUIPMENT OR POWER (SEE FIGURE 4.1.1).

4.2 COMMUNICATION CROSSARMS

THE DISTRICT DOES NOT PERMIT COMMUNICATION CROSSARMS ON NEW CONSTRUCTION.

AS A GENERAL RULE, THE DISTRICT DOES NOT PERMIT THE USE OF COMMUNICATION CROSSARMS ON EXISTING POLES. THE REPLACEMENT OF A POLE VIA MAKE-READY WORK IS THE PRIMARY MEANS OF GAINING NECESSARY CLEARANCES WHEN ATTACHMENT SPACE IS NOT AVAILABLE.

HOWEVER, COMMUNICATION CROSSARMS MAY BE APPROVED BY THE DISTRICT IN LIMITED SCENARIOS WHEN THERE IS NO ADDITIONAL VERTICAL SPACE AVAILABLE ON CRITICAL POLES SUCH AS TRANSMISSION POLES, COMPLEX POLES, OR POLE TOP WIRELESS POLES.

IF A COMMUNICATION CROSSARM IS APPROVED FOR INSTALLATION, THE DISTRICT WILL BE RESPONSIBLE FOR THE INSTALLATION OF ALL COMMUNICATION CROSSARMS. THIS INSTALLATION WILL BE CONSIDERED MAKE-READY WORK. ONCE INSTALLED, THE COMMUNICATION CROSSARM WILL BE CONSIDERED A PART OF THE DISTRICT'S POLE. LICENSEES MAY BE REQUIRED TO RELOCATE THEIR EXISTING ATTACHMENT TO THE NEW COMMUNICATION CROSSARM TO MEET NESC CLEARANCE REQUIREMENTS.

4.3 DISTRIBUTION CLEARANCES AT SUPPORTS (NEW CONSTRUCTION)

IF THE PRIMARY AND NEUTRAL CONDUCTORS ARE MOUNTED ON A CROSSARM AT THE SAME LEVEL AND THERE IS NO OTHER SUPPLY EQUIPMENT MOUNTED BELOW THE PRIMARY ARM, THEN THE RECOMMENDED CLEARANCE BETWEEN THE SUPPLY SPACE AND THE COMMUNICATION SPACE IS 148 INCHES (SEE FIGURE 4.3.1).



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4.0 CLEARANCE REQUIREMENTS (CONTINUED)

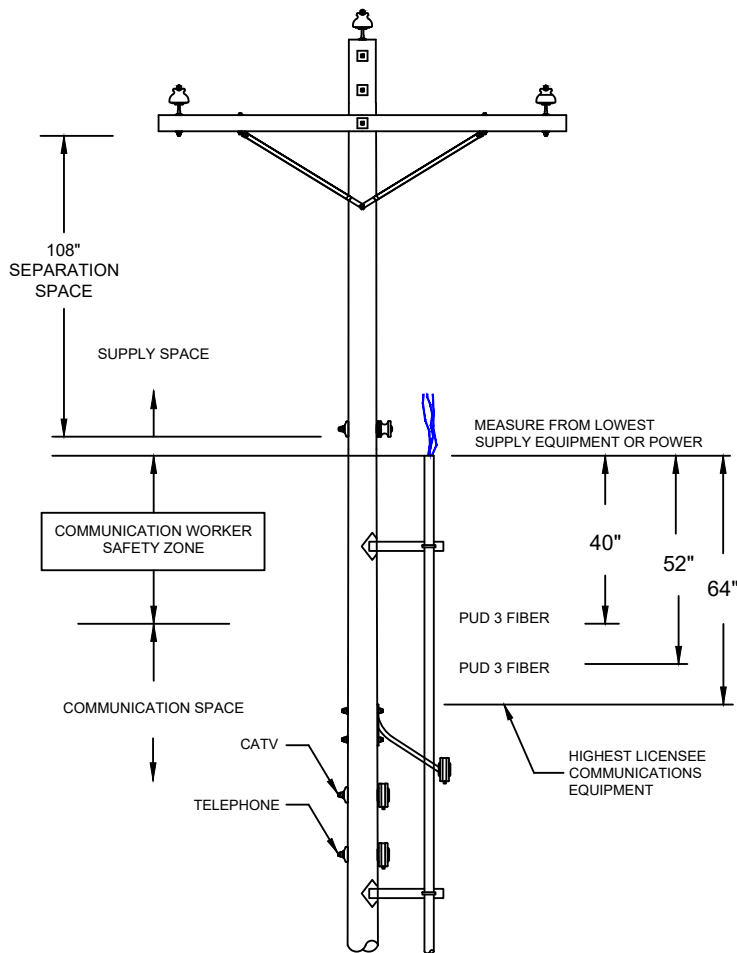


FIGURE 4.1.1

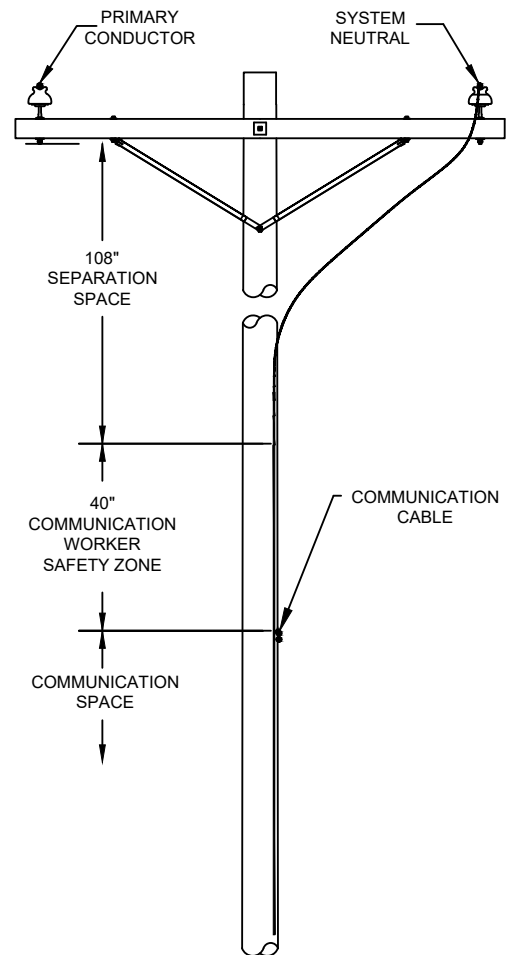


FIGURE 4.3.1

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4.0 CLEARANCE REQUIREMENTS (CONTINUED)

4.4 MID-SPAN DISTRIBUTION CLEARANCES (NEW CONSTRUCTION)

MIDSPAN CLEARANCE BETWEEN THE SUPPLY SPACE AND THE COMMUNICATION SPACE AT ANY POINT IN THE SPAN CANNOT BE LESS THAN 30 INCHES FROM THE SECONDARY / SERVICE / NEUTRAL CONDUCTORS AND 108 INCHES FROM DISTRIBUTION PRIMARY CONDUCTORS. MID-SPAN CLEARANCES ARE MEASURED BASED ON THE FINAL UNLOADED SAG AT THE MAXIMUM OPERATING TEMPERATURE OF THE SUPPLY CONDUCTORS (SEE FIGURES 4.4.1 & 4.4.2).

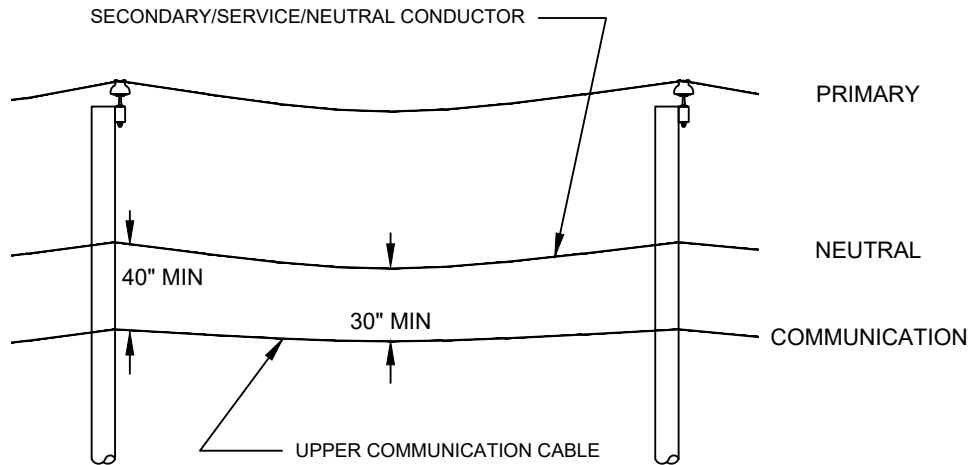


FIGURE 4.4.1

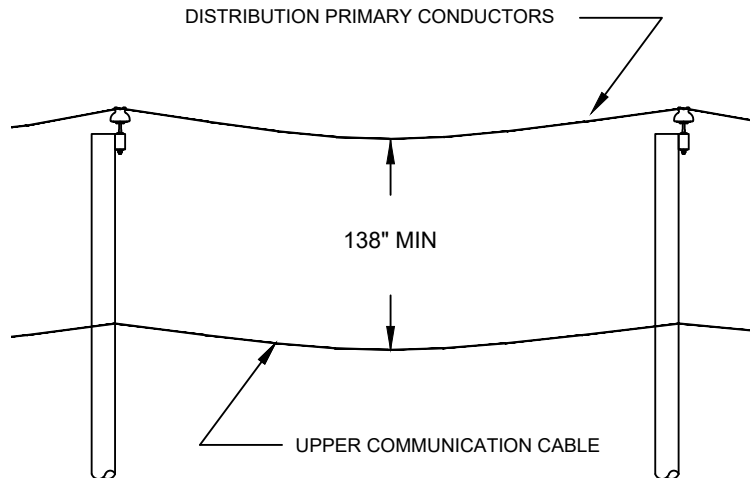


FIGURE 4.4.2

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4.0 CLEARANCE REQUIREMENTS (CONTINUED)

4.5 TRANSMISSION CLEARANCES

REQUESTS TO ATTACH TO TRANSMISSION POLES THAT HAVE NO UNDERBUILD WILL BE EVALUATED UPON REQUEST.

4.6 STREET LIGHT CLEARANCES

PROVIDED NESC MINIMUM CLEARANCES ARE MET, STREET LIGHTS MAY BE MOUNTED IN THE COMMUNICATION WORKER SAFETY ZONE. WHEN STREET LIGHTS ARE MOUNTED ABOVE COMMUNICATION CABLES, A MINIMUM OF 12 INCHES OF CLEARANCE MUST BE MAINTAINED BETWEEN THE TOP OF THE COMMUNICATION SPACE AND THE BOTTOM OF THE STREET LIGHT DRIP LOOP. THIS MAY BE REDUCED TO THREE INCHES IF THE DRIP LOOP IS COVERED WITH A NON-CONDUCTIVE COVERING (CONDUIT) EXTENDING AT LEAST TWO INCHES BEYOND THE LOOP. A MINIMUM OF 40" OF CLEARANCE MUST BE MAINTAINED BETWEEN THE TOP OF THE COMMUNICATION SPACE AND THE BOTTOM OF THE LUMINARY SUPPORT. THIS MAY BE REDUCED TO FOUR INCHES IF THE MAST ARM IS EFFECTIVELY GROUNDED (SEE FIGURE 4.6.1)

NOTE: COMMUNICATION CABLES WILL NOT BE ALLOWED ABOVE LUMINARY SUPPORT BRACKETS.

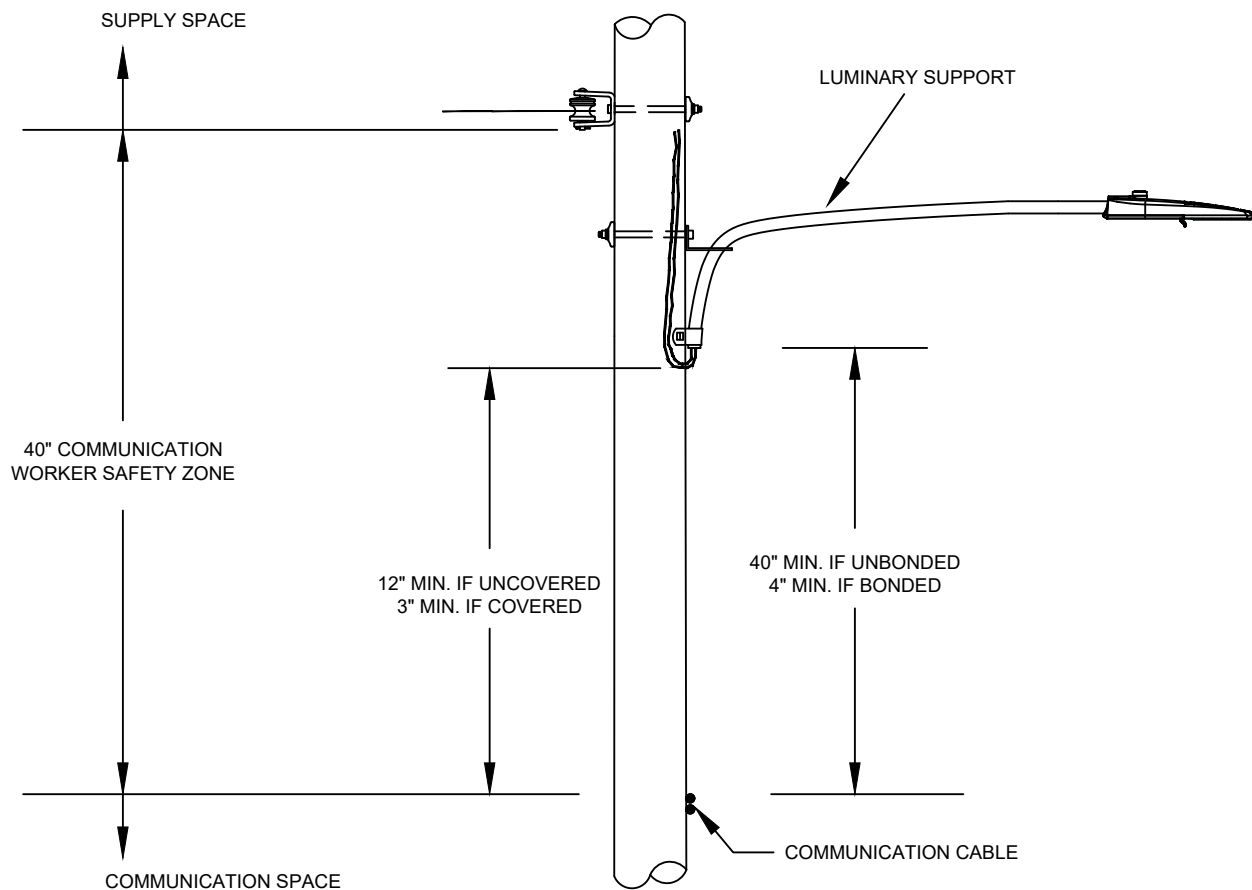


FIGURE 4.6.1

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4.0 CLEARANCE REQUIREMENTS (CONTINUED)

4.7 SECONDARY POLES AND METER LOOPS

COMMUNICATION CABLES SHALL HAVE A MINIMUM OF 12 INCHES OF CLEARANCE FROM CUSTOMER DRIP LOOP AT THE POINT OF ATTACHMENT AT THE CUSTOMER SERVICE ENTRANCE ON THE POLE OR BUILDING PER THE NEC (SEE FIGURE 4.7.1)

COMMUNICATION CABLES SHALL HAVE A MINIMUM OF 40 INCHES CLEARANCE FROM DISTRICT SECONDARY ELECTRICAL WIRES. IF BOTH CONDITIONS EXIST ON A POLE OR BUILDING, THE MINIMUM DISTANCE SHALL BE 40 INCHES PER THE NESC WHILE STILL MAINTAINING A MINIMUM OF 12 INCHES FROM DRIP LOOPS (SEE FIGURE 4.7.2)

NEC

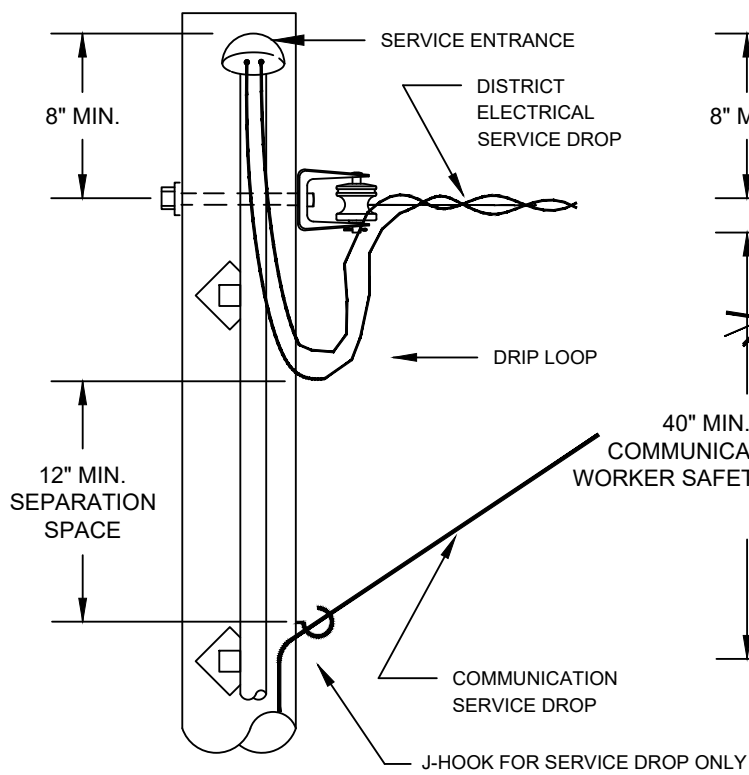


FIGURE 4.7.1

NESC

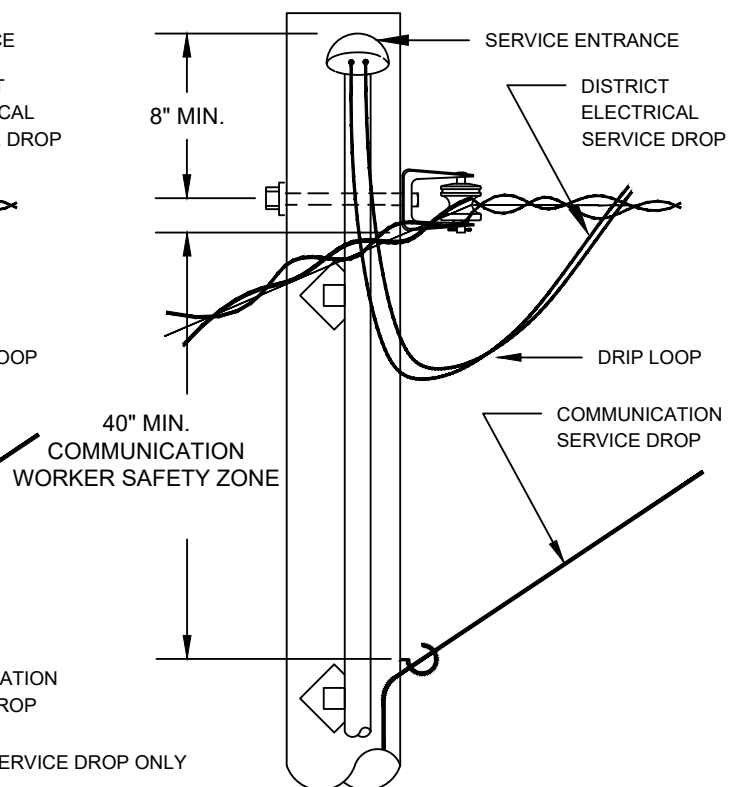


FIGURE 4.7.2

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4.0 CLEARANCE REQUIREMENTS (CONTINUED)

4.8 CLIMBING SPACE

TO PROVIDE ADEQUATE CLEARANCES ON THE POLE FOR SAFE CLIMBING BY DISTRICT PERSONNEL, A CLEAR CLIMBING SPACE OF 24 INCHES BETWEEN COMMUNICATION CABLES AND COMMUNICATION DROP WIRES MUST BE PROVIDED (SEE FIGURE 4.8.1). THIS SPACE MUST EXTEND 42 INCHES ABOVE AND BELOW THE HIGHEST AND LOWEST COMMUNICATION CABLES (SEE FIGURE 4.8.2). THE CLIMBING SPACE MAY BE ROTATED AROUND THE POLE FOR CONTINUED CLIMBING IF THE CLIMBING SPACES IN DIFFERENT QUADRANTS OVERLAP.

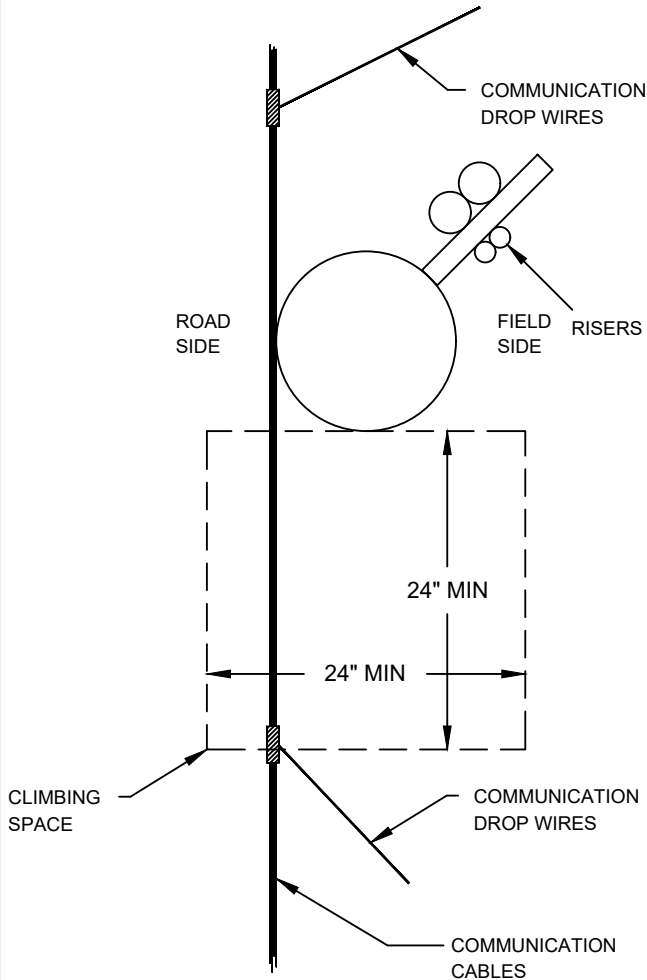


FIGURE 4.8.1

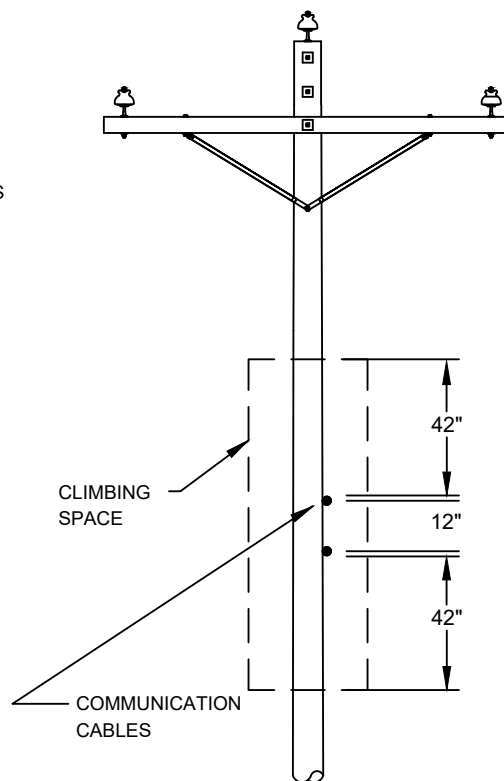


FIGURE 4.8.2

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5.0 POLE SPACE ALLOCATION

5.1 POLE ATTACHMENTS (NEW CONSTRUCTION)

50 FOOT MINIMUM POLES ARE STANDARD FOR NEW THREE PHASE CONSTRUCTION, 45 FOOT MINIMUM POLES FOR NEW SINGLE PHASE CONSTRUCTION. TYPICAL DISTRICT AND COMMUNICATION ATTACHMENTS ON 50 FOOT POLES ARE SHOWN IN FIGURE 5.1.1.

35 FOOT MINIMUM POLES ARE STANDARD FOR NEW SECONDARY ROAD CROSSINGS AND 30 FOOT MINIMUM POLES ARE STANDARD FOR SAME SIDE OF ROAD SECONDARY CONSTRUCTION.

SPACE IS RESERVED FOR DISTRICT COMMUNICATION ATTACHMENTS (RESERVED CAPACITY). NO LICENSEE ATTACHMENTS SHALL BE MADE WITHIN 64 INCHES OF NEUTRAL OR LOWEST SUPPLY EQUIPMENT. NO ATTACHMENTS WILL BE ALLOWED BELOW 18 FEET ON THE POLE.

A 12 INCH SPACING SHALL BE MAINTAINED BETWEEN ATTACHMENTS IN THE COMMUNICATION SPACE. NEW ATTACHMENTS MUST BE MADE BELOW THE DISTRICT RESERVED CAPACITY AT THE HIGHEST AVAILABLE POSITION IN THE COMMUNICATION SPACE.

COMMUNICATION SERVICE DROPS SHALL BE ATTACHED TO THEIR OWN MESSENGER OR CABLE, AND NOT TO THE POLE. J-HOOKS WILL ONLY BE ALLOWED ON DISTRICT POLES IF THE COMMUNICATION SERVICE DROP IS THE ONLY LICENSEE CONTACT ON THE POLE (SEE FIGURE 4.7.1)

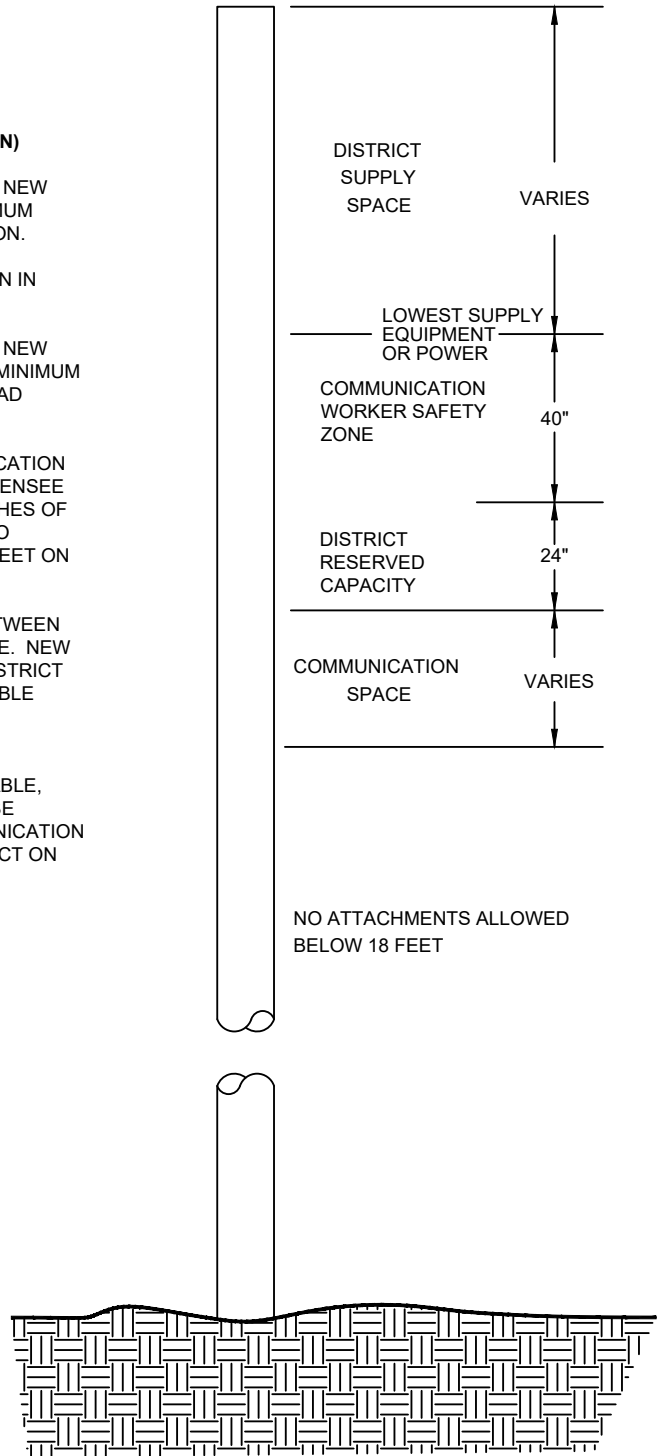


FIGURE 5.1.1

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6.0 POLE-TO-POLE GUY

6.1 POLE-TO-POLE GUY WIRES

POLE-TO-POLE GUY WIRES WHERE THE GUY IS ATTACHED BELOW THE COMMUNICATION SPACE ON ONE POLE USING THE NEXT POLE AS AN ANCHOR SHALL NOT BE PERMITTED. EXISTING POLE-TO-POLE GUY WIRES WHEN IDENTIFIED WILL REQUIRE REMOVAL OR REWORK (SEE FIGURE 6.1.1).

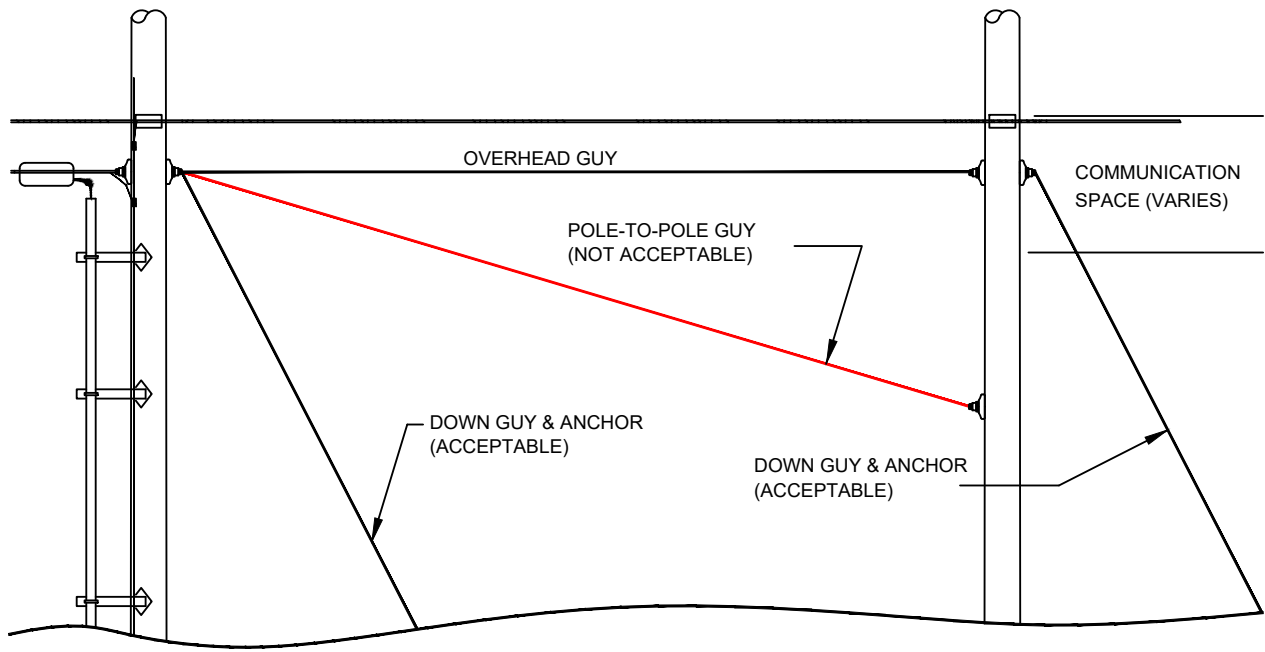


FIGURE 6.1.1

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7.0 JOINT USE ATTACHMENTS

7.1 SPLICE CASES, STORAGE LOOPS, SLACK SPAN, SNOW SHOES, OR OTHER EQUIPMENT.

TO LIMIT EXCESSIVE LOADING ON POLES AND ENSURE CLIMBING SPACE, THE FOLLOWING RESTRICTIONS APPLY:

SPLICE CASES: PREFERRED METHOD IS TO RISER DOWN USING STAND OFF BRACKETS (SEE FIGURE 3.4.2) AND PLACE SPLICE CASE IN A VAULT. ALTERNATELY, IF MOUNTED ON LICENSEE CABLE, SPLICE CASE MUST NOT BE CLOSER THAN THREE FEET TO THE POLE, AND NOT FURTHER THAN SIX FEET FROM THE POLE (SEE FIGURE 7.1.1). SPLICE CASES MUST NOT EXCEED 50 POUNDS.

LICENSEE STORAGE LOOPS (COILS) ARE NOT ALLOWED ON POLES.

SLACK SPAN AND SNOW SHOES: A SLACK SPAN IS LIMITED TO A MAXIMUM OF 25 FEET ON EITHER SIDE OF THE POLE AND A MAXIMUM OF 100 FEET OF SLACK PER POLE. SNOW SHOES SHOULD BE EQUALLY SPACED FROM POLE TO DISTRIBUTE WEIGHT EVENLY.

IF LICENSEE PERFORMS WORK ON EXISTING POLES WITH SPLICE CASES, STORAGE LOOPS, SLACK SPANS OR OTHER EQUIPMENT ATTACHED TO POLES, THE LICENSEE IS REQUIRED TO MEET CURRENT SPECIFICATIONS. (SEE FIGURE 7.1.1)

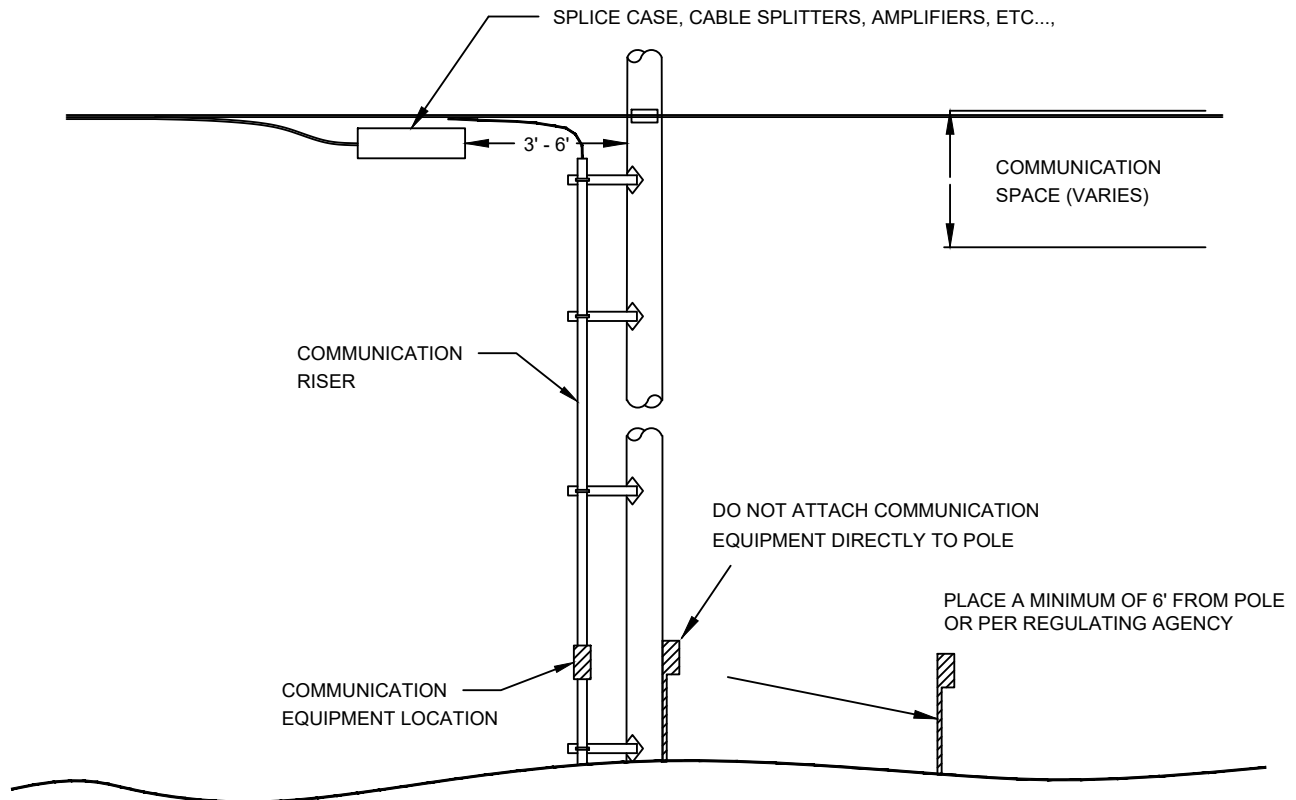


FIGURE 7.1.1

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8.0 POLE TOP WIRELESS

8.1 POLE TOP WIRELESS

INSTALLATIONS MUST MEET ALL APPLICABLE; FAA, FCC, NESC, NEC, FEDERAL, STATE, MUNICIPAL, LOCAL CODES, THE DISTRICT JOINT USE RULES AND REGULATIONS AND POLE ATTACHMENT STANDARDS AND PERMITTING REQUIREMENTS. LICENSEE IS SOLELY RESPONSIBLE FOR IDENTIFYING AND OBTAINING ALL PERMITS AND PERMISSIONS AT THEIR SOLE EXPENSE.

THE DISTRICT DOES NOT ALLOW ANTENNA/RADIO INSTALLATIONS IN THE COMMUNICATION SPACE OR COMMUNICATION WORKER SAFETY ZONE. ALL INSTALLATIONS MUST BE ABOVE THE ELECTRIC SUPPLY SPACE ON A POLE OF SUFFICIENT HEIGHT TO ALLOW FOR MINIMUM VERTICAL SEPARATION FROM ANTENNA TO ELECTRIC CONDUCTORS.

LICENSEE MUST INSTALL AND MAINTAIN SIGNAGE MADE OF A NON-CORROSIVE AND DURABLE MATERIAL, SUITABLE FOR OUTDOOR USE, AND RESISTANT TO ULTRAVIOLET RADIATION THAT INDICATES THE NAME OF THE EQUIPMENT OWNER AND OPERATOR; 24-HOUR EMERGENCY CONTACT INFORMATION; POTENTIAL FOR RF EXPOSURE INCLUDING HORIZONTAL AND VERTICAL DISTANCE FROM THE ANTENNA AT WHICH IT IS SAFE TO WORK CONTINUOUSLY; A UNIQUE IDENTIFIER FOR THE SITE; AND EMERGENCY SHUT OFF DETAILS. ALL SIGNAGE MUST BE APPROVED BY THE DISTRICT AND MEET ALL APPLICABLE ANSI AND FCC STANDARDS.

LICENSEE MUST INSTALL AND MAINTAIN A CLEARLY MARKED UL-LISTED LOAD-BREAK DISCONNECT SWITCH LOCATED ON THE COMMUNICATION PEDESTAL OR AT A LOCATION ON THE POLE THAT IS OPERABLE FROM THE GROUND TO DE-ENERGIZE THE POLE TOP WIRELESS ANTENNA/RF EMITTER (OPERATIONAL AND BACKUP POWER) WITHOUT NOTIFICATION AND AT THE DISTRICT'S DISCRETION, DURING SITUATIONS WHERE DISTRICT PERSONNEL WILL BE WORKING ON OR AROUND THE POLE. THE SWITCH MUST BE READILY ACCESSIBLE AND CAPABLE OF BEING LOCKED IN EITHER THE OPEN OR CLOSED POSITION AND INCLUDE A STANDARD DISTRICT DOUBLE HASP WITH LOCK FROM THE LICENSEE (ALLOWING OPERATION OF SWITCH BY EITHER PARTY). THE DISCONNECT SWITCH BLADES, JAWS, AND AIR-GAP BETWEEN THEM SHALL ALL BE CLEARLY VISIBLE WHEN THE SWITCH IS IN THE OPEN POSITION.



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8.0 POLE TOP WIRELESS (CONTINUED)

8.2 GUY POLE, PREFERRED INSTALLATION

FIGURE 8.2.1 SHOWS THE PREFERRED INSTALLATION FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A GUY POLE.

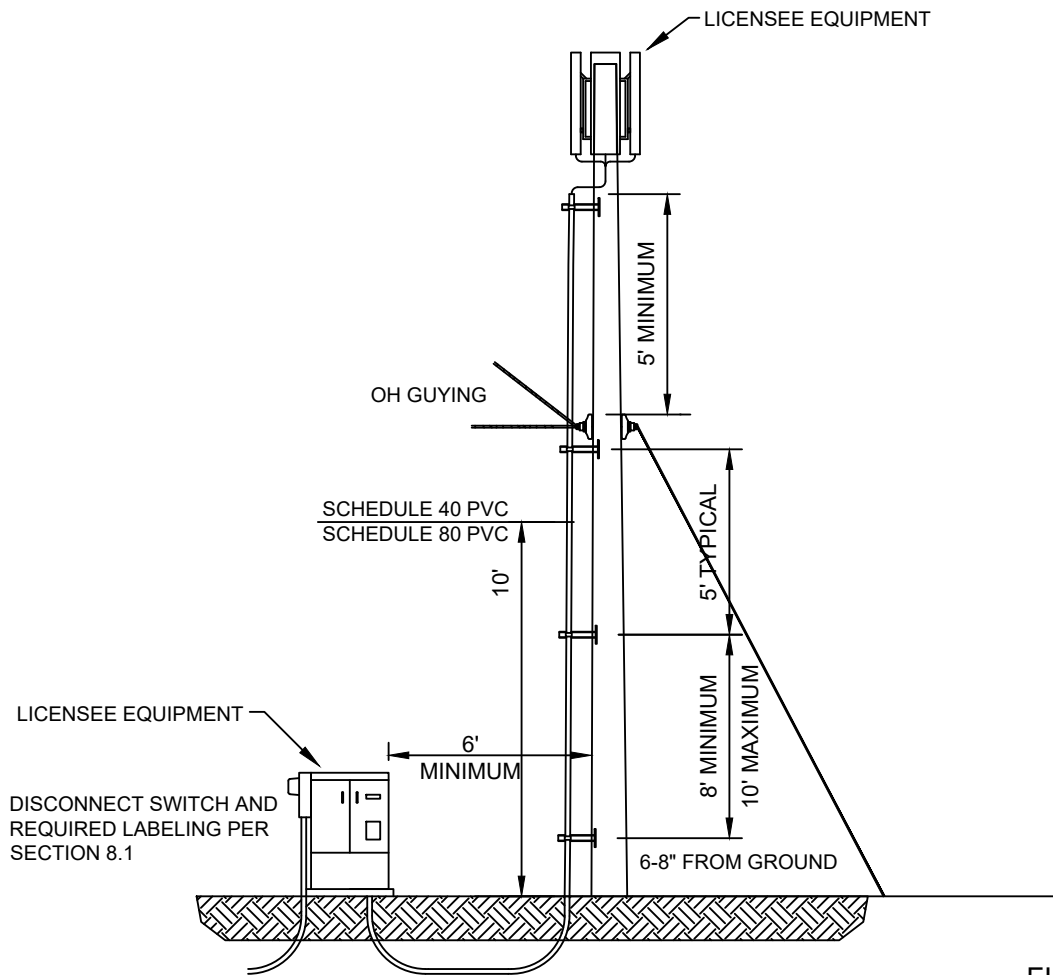


FIGURE 8.2.1

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8.0 POLE TOP WIRELESS (CONTINUED)

8.3 GUY POLE, ALTERNATE INSTALLATION

FIGURE 8.3.1 IS AN ALTERNATE METHOD FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A GUY POLE. THE ALTERNATE METHOD OF INSTALLATION WOULD NEED TO BE APPROVED BY THE DISTRICT, UPON NEED RELATED TO THIRD PARTY APPROVALS.

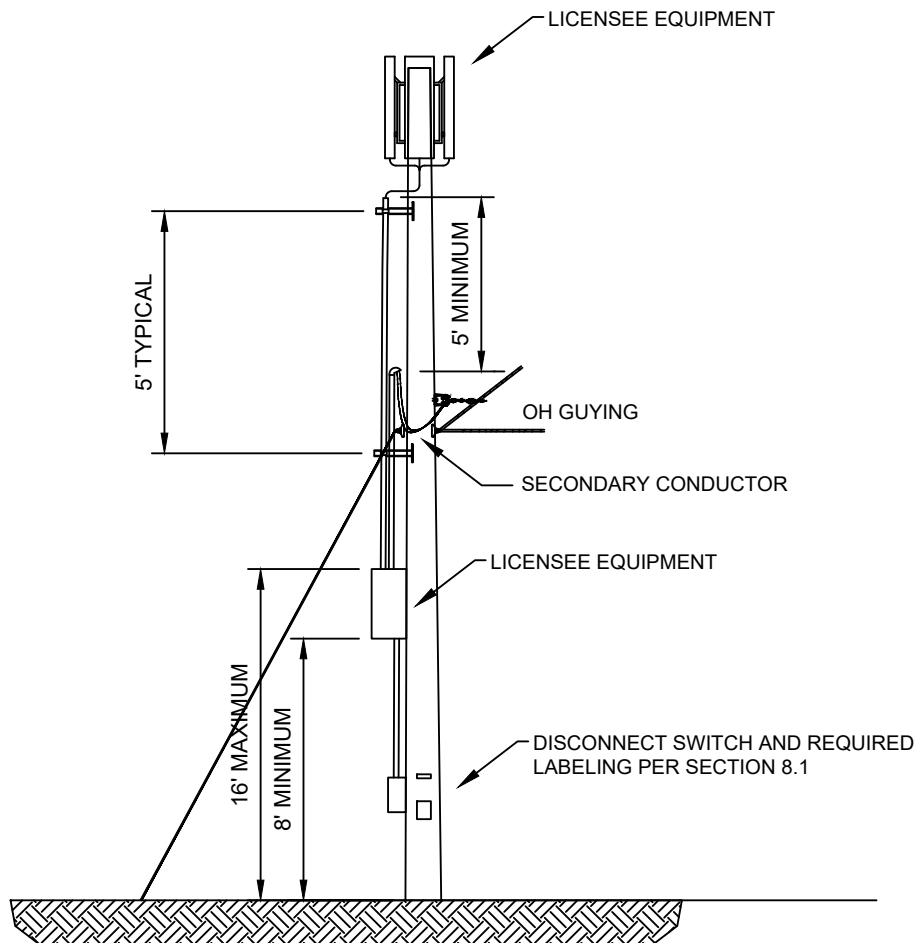


FIGURE 8.3.1

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8.0 POLE TOP WIRELESS (CONTINUED)

8.4 LIGHT POLE, PREFERRED INSTALLATION

FIGURE 8.4.1 IS THE PREFERRED INSTALLATION FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A LIGHT POLE.

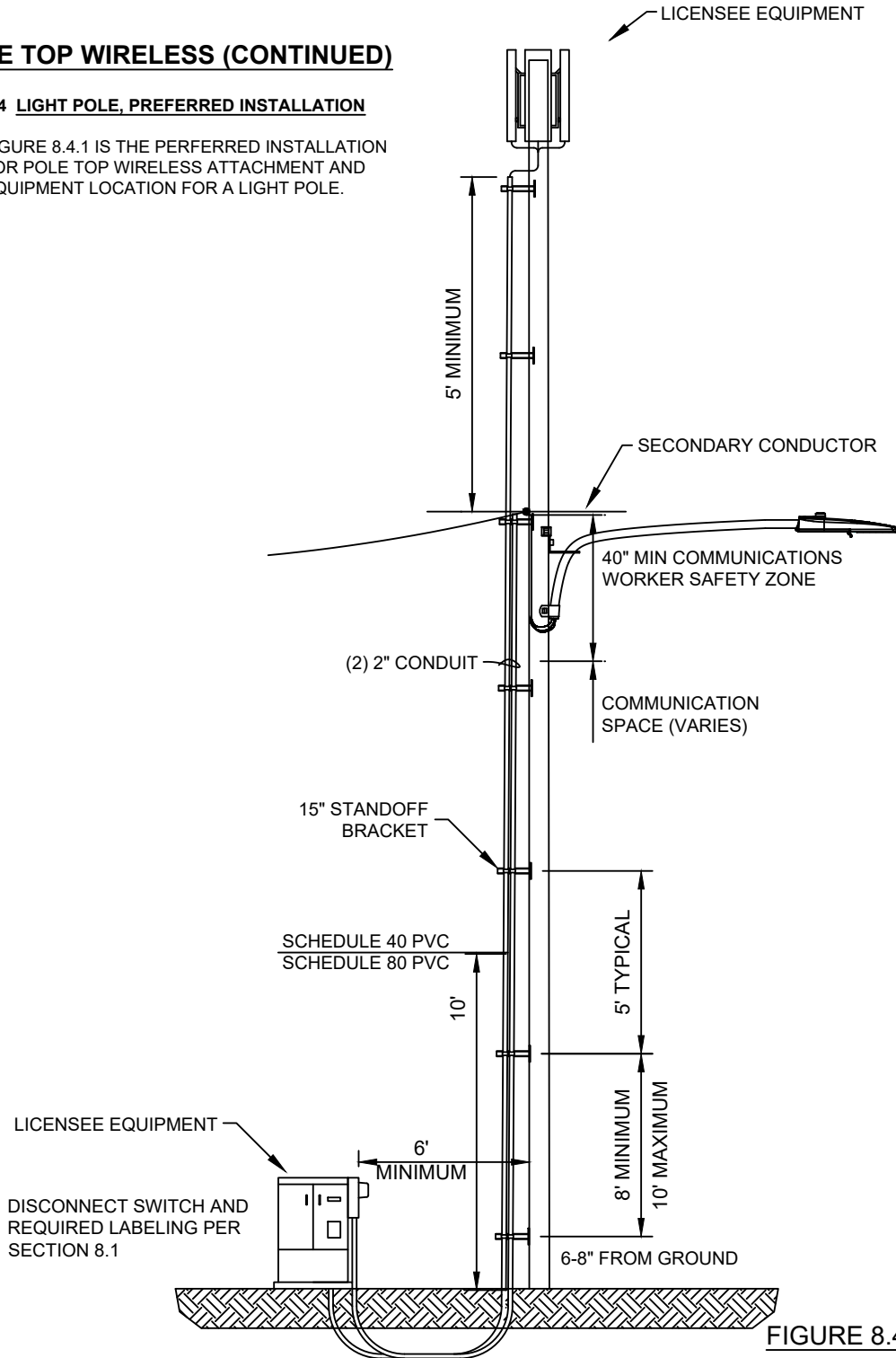


FIGURE 8.4.1

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8.0 POLE TOP WIRELESS (CONTINUED)

8.5 LIGHT POLE, ALTERNATE INSTALLATION

FIGURE 8.5.1 IS AN ALTERNATE METHOD FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A LIGHT POLE. THE ALTERNATE METHOD OF INSTALLATION WOULD NEED TO BE APPROVED BY THE DISTRICT, UPON NEED RELATED TO THIRD PARTY APPROVALS.

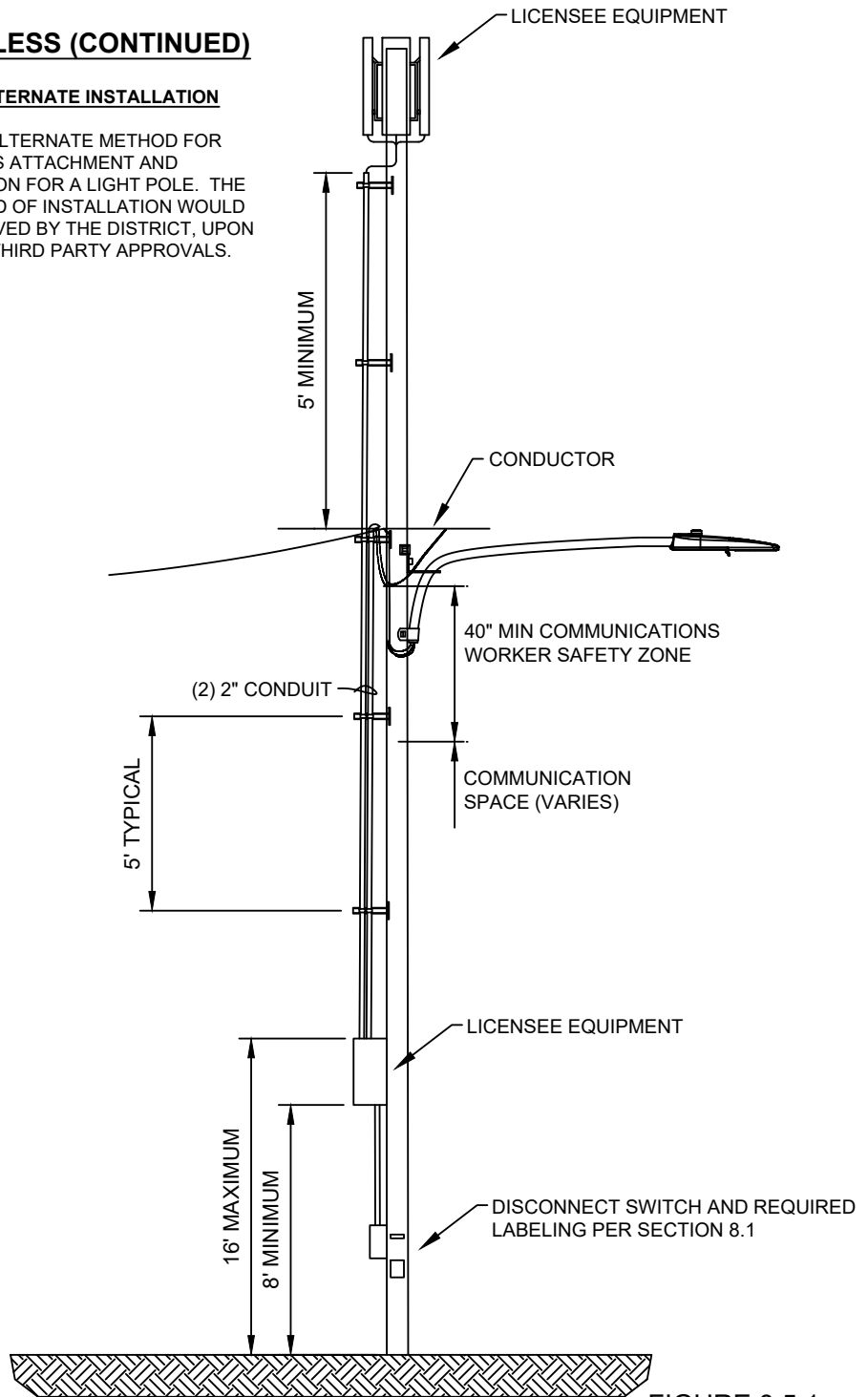


FIGURE 8.5.1

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8.0 POLE TOP WIRELESS (CONTINUED)

8.6 PRIMARY POLE, PREFERRED INSTALLATION

FIGURE 8.6.1 IS THE PREFERRED INSTALLATION FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A PRIMARY DISTRIBUTION POLE.

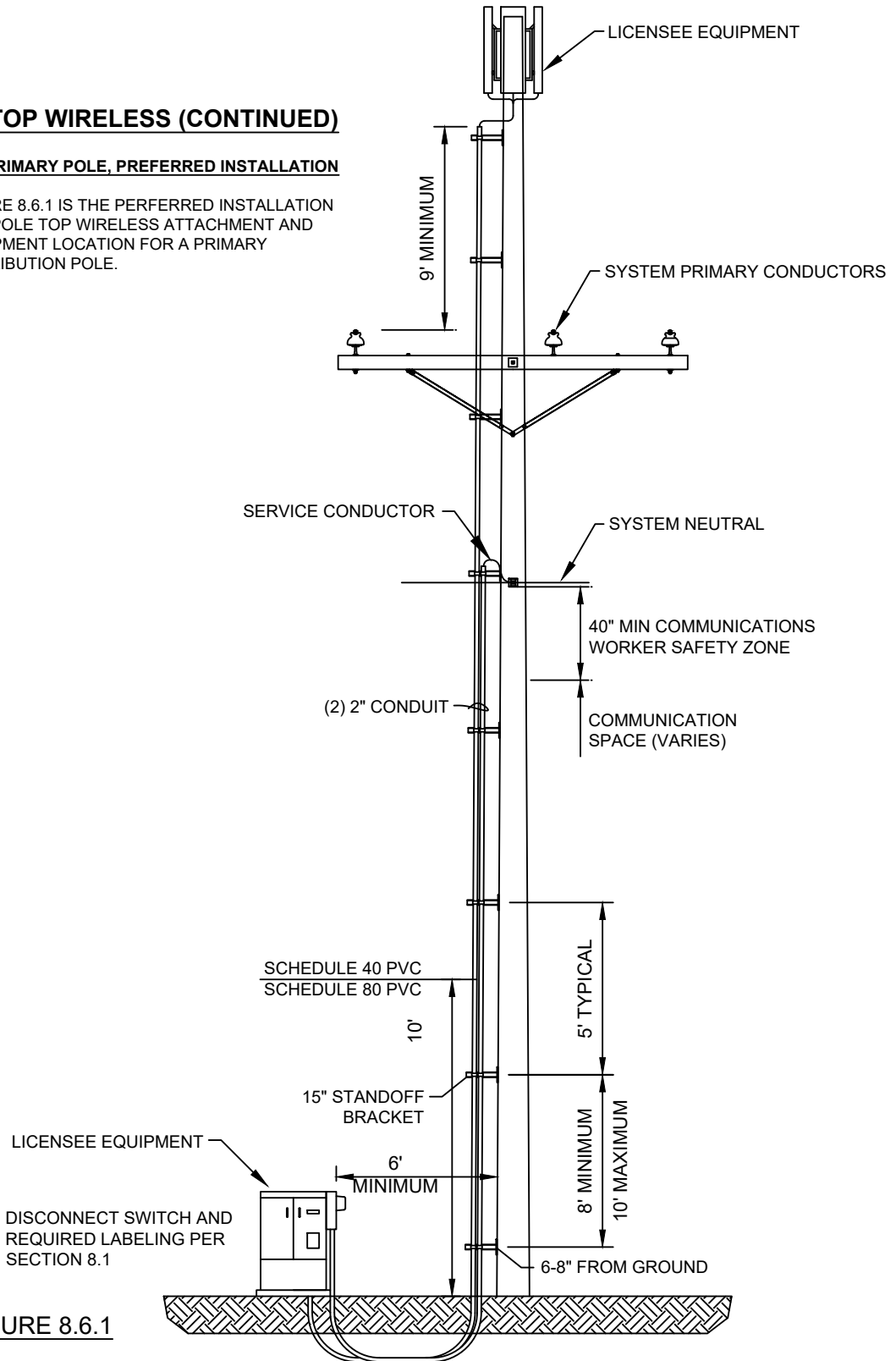


FIGURE 8.6.1

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8.0 POLE TOP WIRELESS (CONTINUED)

8.7 PRIMARY POLE, ALTERNATE INSTALLATION

FIGURE 8.7.1 IS AN ALTERNATE METHOD FOR POLE TOP WIRELESS ATTACHMENT AND EQUIPMENT LOCATION FOR A PRIMARY DISTRIBUTION POLE. THE ALTERNATE METHOD OF INSTALLATION WOULD NEED TO BE APPROVED BY THE DISTRICT, UPON NEED RELATED TO THIRD PARTY APPROVALS.

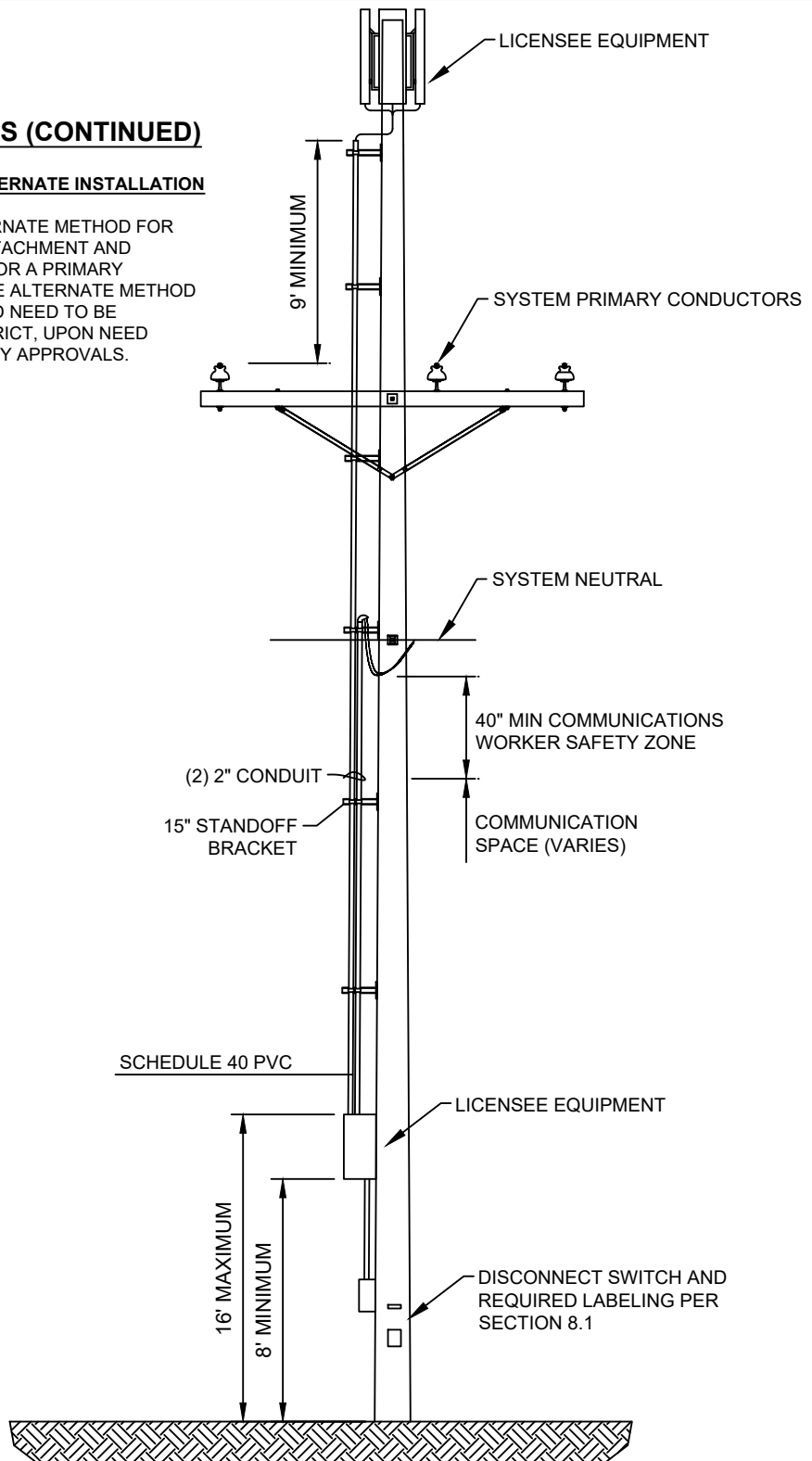


FIGURE 8.7.1

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