



Conditions for Use

This slack span construction is for use when it is not possible to guy a pole and the pole is set in reasonably firm soil.

Construction Requirements

1. Install slack spans within the limits in [Table 2](#) on Page 4. Minimum stringing sags are based on (a) the maximum stringing tension not to exceed 75 lbs. and (b) the maximum conductor tension not to exceed 175 lbs. at conditions of maximum wind loading and minimum temperatures. When installed at the minimum stringing sag specified in [Table 2](#) on Page 4, the final sag at 130°F will be less than 3' 6".
2. Conductors may be strung to greater sags than shown in [Table 2](#) on page 4, but in no case may sags be less than those specified because they would increase the tension. Larger sags are acceptable provided proper clearances are maintained.
3. The setting depth of poles supporting slack span conductors must be in accordance with [Document 015203](#), except when minimum sags are used. Set 30, 35, and 40-foot pole sizes supporting three-phase conductors 6' deep to obtain sufficient resistance to withstand the overturning moment. Poles must be keyed or blocked in accordance with [Document 023058](#).
4. Do not install automatic splices or wedge dead-end in slack span construction. Automatic dead-ends are permissible for copper secondary slack span.
5. Do not use formed slack span dead ends in either severe or moderate corrosion areas. Use post clamp top insulators and slack span clamps.
6. Use post clamp top insulators and slack span clamps for copper conductors larger than #6.

Application Notes

1. The construction shown in this document is applicable as noted in [Table 2](#) on Page 4.
2. Slack spans should be kept as short as practical and in no case may they exceed the span length limitations shown in [Table 2](#).
3. Poles may be keyed or blocked in accordance with [Document 023058](#) where warranted as determined by experience and knowledge of local soil conditions.
4. For tap construction, use a composite arm or a double wood arm assembly to support two or three slack span conductors.
5. On wood arm assemblies, use braces on both crossarms to provide maximum support and prevent crossarms and insulators from tilting.
6. For dead-end construction, when the slack span arm is also dead-ending a span under tension, only one set of braces is required on double arm construction or, if one arm is adequate for the dead-end strain, it may be used alone.
7. On double wood arm construction, if at least 3" clearance cannot be maintained, or, if installing cutouts, move the slack span insulator to the "front" crossarm.

Table 1. Bill of Materials

Item	Description	Code	Document
1	Insulator, Pin or Post-Type, Tie Top, as Required	-	022088
2	Insulator, Post-Type, Clamp Top, as Required	-	022088
3	Pin, Insulator, or Stud, Post Insulator	-	022473
4	Dead-End, Slack Span, Formed, as Required, see Table 3 on Page 5	-	-
5	Clamp, Slack Span Dead-End, as Required, see Table 4 on Page 5	-	-
6	Crossarm Assembly, Wood, Slack Span Double Arm (see Table 4 , Document 015077)	-	015077
7	Crossarm Assembly, Wood, Dead-End, as Required	-	015077
8	Crossarm, Composite, as Required	-	068180
9	Bracket, Pole-Top, as Required	-	015190

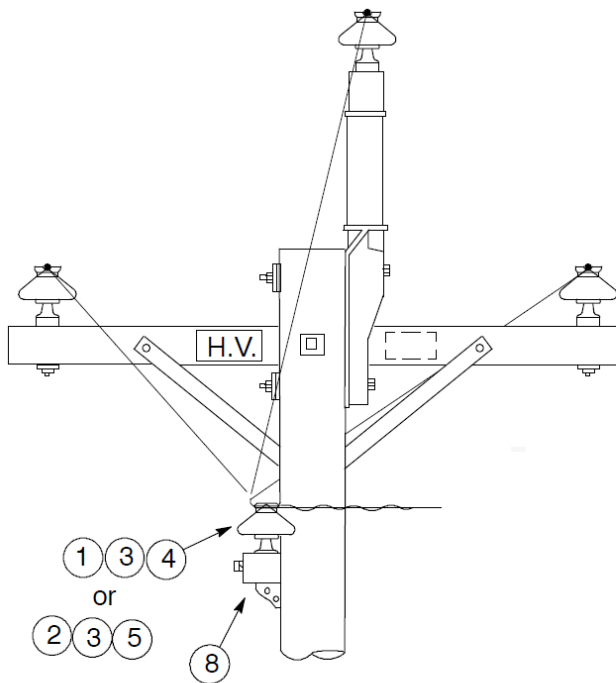


Figure 1. Three-Phase Tap Off Pole with Composite Arm (preferred)

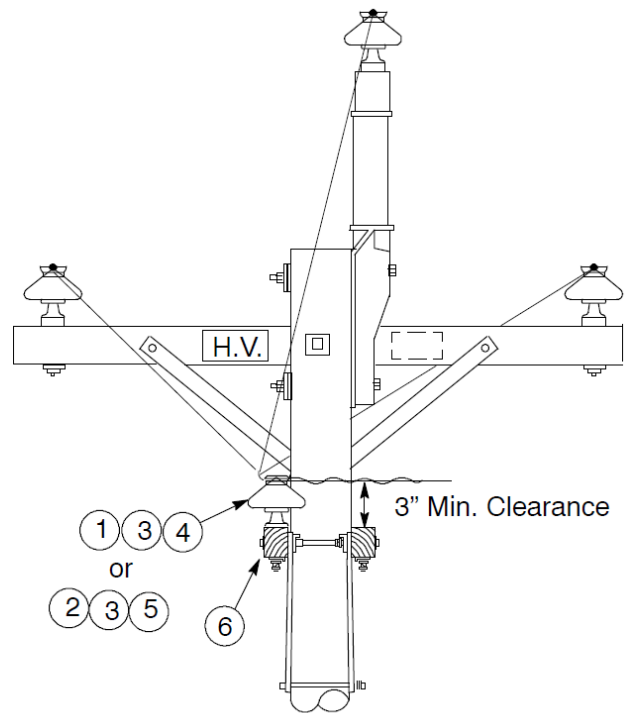


Figure 2. Three-Phase Tap Off Pole with Double Wood Arms

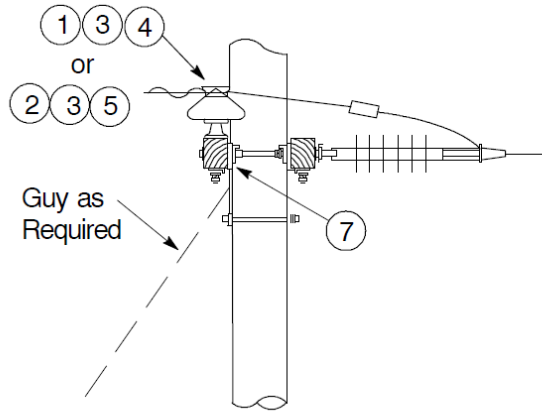


Figure 3. Dead-End Tension to Slack Span Crossarm Construction

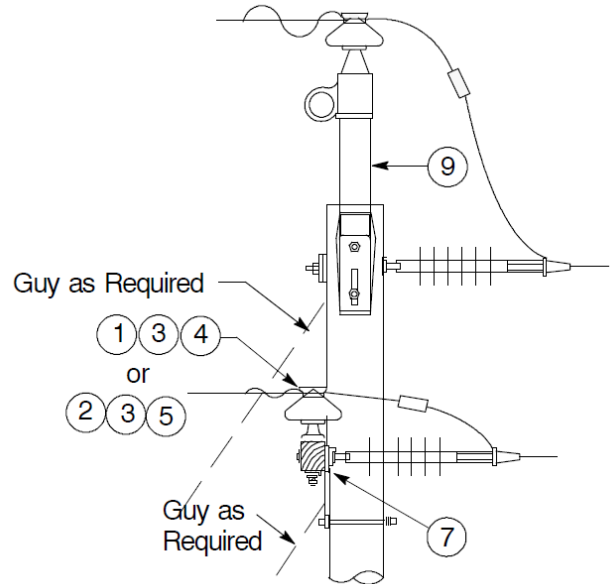


Figure 4. Dead-End Tension to Slack Span Triangular Construction

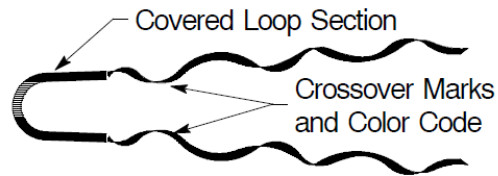


Figure 5. Formed Slack Span Dead-End
(Item 4 in [Table 1](#) on Page 2)
Not allowed in severe or moderate corrosion areas.

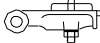
Table 2. Maximum Span Length and Minimum Stringing Sags

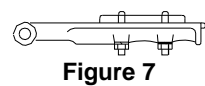
Loading District	Conductor Size		Maximum Span Length (feet)	Span Length (feet)									
	AWG or kcmil			40 or Less	50	60	70	80	90	100	110	120	
	Minimum Stringing Sag												
Light Loading	ACSR	4(6/1)	120	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 6"	
		2(7/1)	120	1' 0"	1' 0"	1' 0"	1' 0"	1' 6"	1' 6"	2' 0"	2' 6"	2' 6"	
		1/0(6/1)	90	1' 0"	1' 0"	1' 0"	1' 6"	2' 0"	2' 6"	-	-	-	
	All Al	1/0	110	1' 0"	1' 0"	1' 0"	1' 0"	1' 6"	1' 6"	2' 0"	2' 6"	-	
		4/0	80	1' 0"	1' 0"	1' 6"	2' 0"	2' 6"	-	-	-	-	
		397.5	60	1' 0"	2' 0"	2' 6"	-	-	-	-	-	-	
		715.5	50	2' 0"	3' 0"	-	-	-	-	-	-	-	
	Cu	6	120	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 6"	1' 6"	2' 0"	2' 6"	
		4	100	1' 0"	1' 0"	1' 0"	1' 6"	1' 6"	2' 0"	2' 6"	-	-	
		2	80	1' 0"	1' 0"	1' 6"	2' 0"	2' 6"	-	-	-	-	
		1/0	60	1' 0"	1' 6"	2' 6"	-	-	-	-	-	-	
		4/0	50	1' 6"	2' 6"	-	-	-	-	-	-	-	
		250	40	2' 6"	-	-	-	-	-	-	-	-	
	Tree Wire	4 ACSR	100	1' 0"	1' 0"	1' 0"	1' 6"	2' 0"	2' 0"	2' 6"	-	-	
		2 ACSR	80	1' 0"	1' 0"	1' 6"	1' 6"	2' 0"	-	-	-	-	
		1/0 AL	80	1' 0"	1' 0"	1' 6"	2' 0"	2' 6"	-	-	-	-	
		4/0 AL	60	1' 0"	1' 6"	2' 6"	-	-	-	-	-	-	
		397 AL	50	1' 6"	2' 6"	-	-	-	-	-	-	-	
	Heavy or Intermediate Loading	ACSR	2(7/1)	80	1' 0"	1' 0"	1' 0"	1' 0"	1' 6"	-	-	-	-
			1/0(6/1)	80	1' 0"	1' 0"	1' 0"	1' 6"	2' 0"	-	-	-	-
			4/0(6/1)	60	1' 0"	1' 6"	2' 0"	-	-	-	-	-	-
All Al		4/0	70	1' 0"	1' 0"	1' 6"	2' 0"	-	-	-	-	-	
		397.5	60	1' 0"	2' 0"	2' 6"	-	-	-	-	-	-	
		715.5	50	2' 0"	3' 0"	-	-	-	-	-	-	-	
Tree Wire		4 ACSR	70	1' 0"	1' 0"	1' 0"	1' 6"	-	-	-	-	-	
		2 ACSR	70	1' 0"	1' 0"	1' 6"	1' 6"	-	-	-	-	-	
		1/0 AL	60	1' 0"	1' 0"	1' 6"	-	-	-	-	-	-	
		4/0 AL	60	1' 0"	1' 6"	1' 6"	-	-	-	-	-	-	
		397 AL	50	1' 6"	2' 6"	-	-	-	-	-	-	-	

Table 3. Formed Slack Span Dead End – Approved for Purchase

Conductor Size AWG or kcmil	Manufacturer and Catalog Number	Color Code	Code
	Preformed Line Products (see Figure 5 on Page 3)		
4-6/1 ACSR	SSDE-9122	Orange	M184517
2-6/1 ACSR	SSDE-9124	Red	M184518
2-7/1 ACSR			
1/0 All-Aluminum	SSDE-9126	Yellow	M184519
1/0-6/1 ACSR			
4/0 All-Aluminum	SSDE-9129	Red	M184520
4/0-6/1 ACSR			
397.5 All-Aluminum	SSDE-9131	Green	M184521
715.5 All-Aluminum	SSDE-9133	Brown	M184522
6 Bare Copper	SSDE-MS-9141	Green	M184523

Table 4. Slack Span Dead-End Clamps

Fig. No.	Conductor Application	Applied Torque ft-lbs.	Mfr. & Cat. No.	Code	 Figure 6
			MacLean Power Systems		
6	#4ACSR, 1/0 AA	40-45	TSG-51-SL1	M18-4375	
	#6--1/0 BC	40-45	CTD-41F	M18-4379	
7	1/0 ACSR, 4/0 AA	40-45	TSG-74-SL1	M18-4376	
	397.5 kcmil AA	40-45	TSG-90-SL1	M18-4377	
	715.5 kcmil AA	40-45	TSG-125-SL1	M18-4378	
	2/0 BC-250 kcmil BC	40-45	CTD-73F	M18-4380	



References

Document Number	Document Title	Location
043591	Conductor Clamps for Post Type Insulators	

Revision Notes

Revision Number	Rev Date	Comments	Responsible Engineer
08	12/2016	Document moved into new template.	Eduardo Sanchez (ECS4)