

NOTES:

1. RULING SPAN: 250'
2. GUY WIRES WILL BE UTILIZED AS REQUIRED BASED ON LINE ANGLES.
3. DRAWINGS PREPARED UNDER KUNHAL PARIKH - LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK

PRELIMINARY
NOT FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRWN	REV'D	APPR	COMP	APPD:	DATE:
B	8/31/2017	PRELIMINARY - ISSUED FOR BID	JDJ	KVP	KVP	S&L		
A	03/24/2017	PRELIMINARY - NOT FOR CONSTRUCTION	NJT	JDJ	-	S&L	PREP: NJT	CHKD: JDJ

SCALE:
NONE

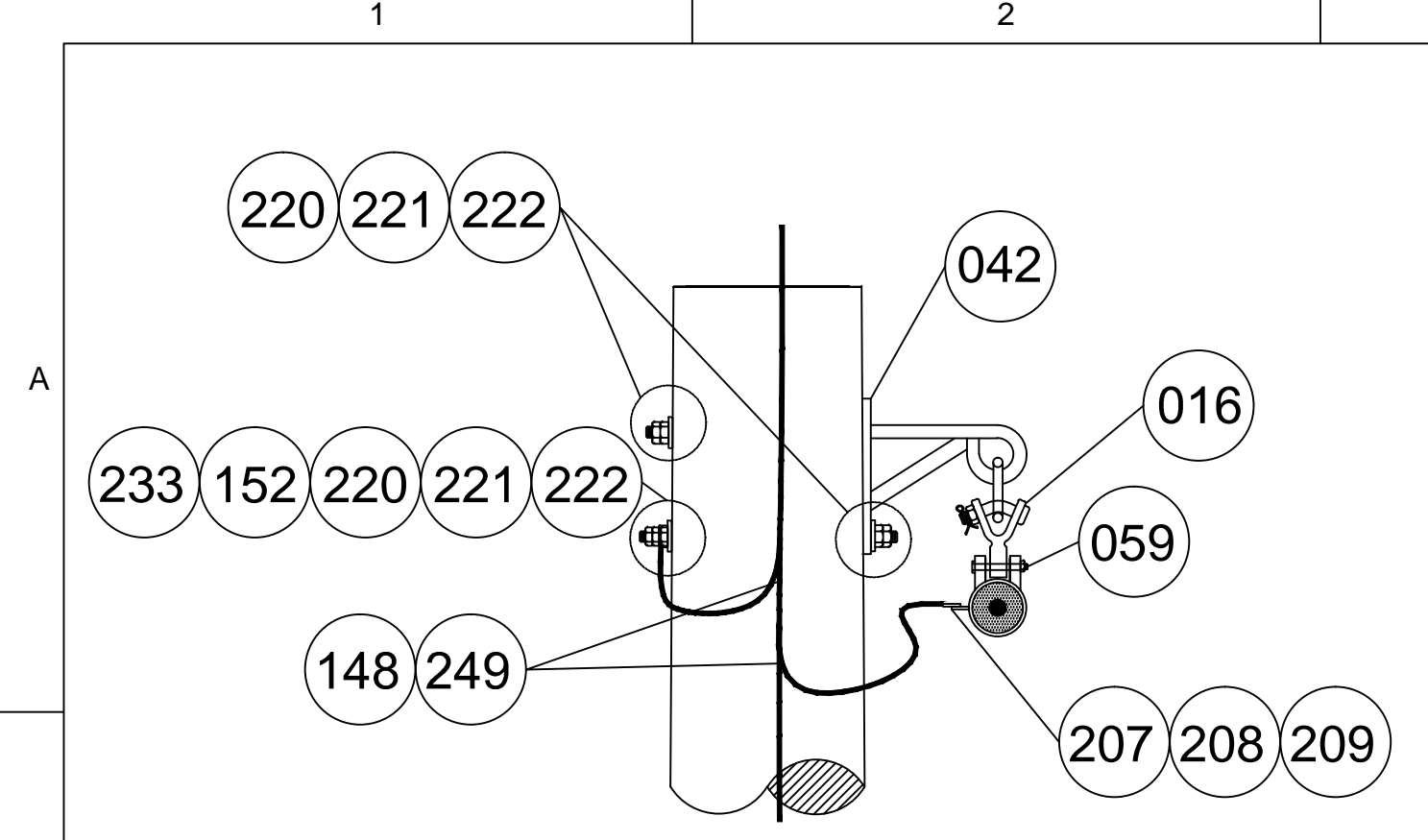
CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S /INSTALLER'S PERSONNEL (OR THAT OF ITS SUB-CONTRACTOR(S)) PERFORMING THE WORK.

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NEXTERA ENERGY RESOURCES, LLC
EIGHT POINT WIND, LLC
34.5 KV MULTI-CIRCUIT WOOD TANGENT STRUCTURE
FRAMING

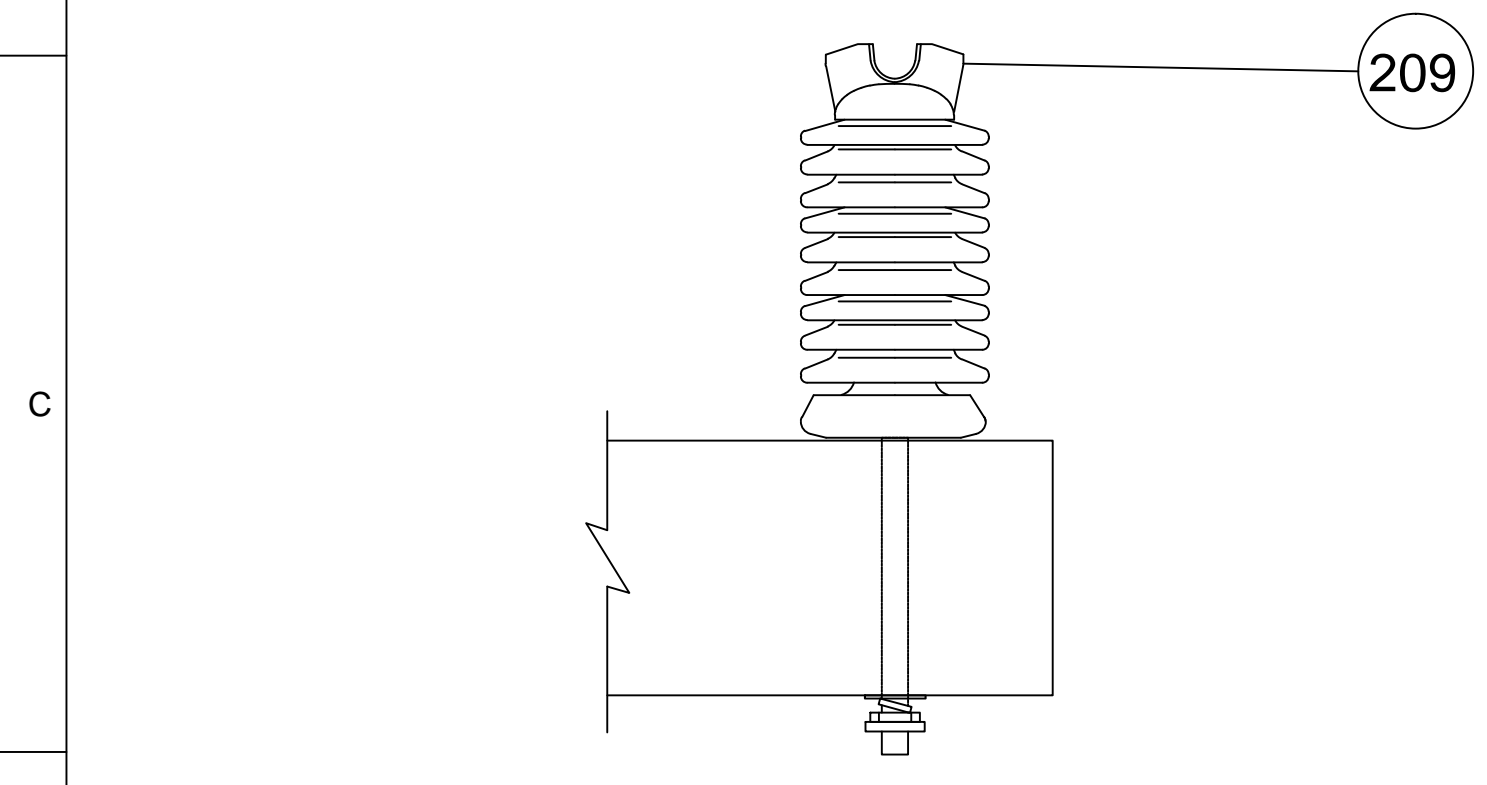
13139-045-OC1-0200



DETAIL

OPGW SUSPENSION (N.T.S.)

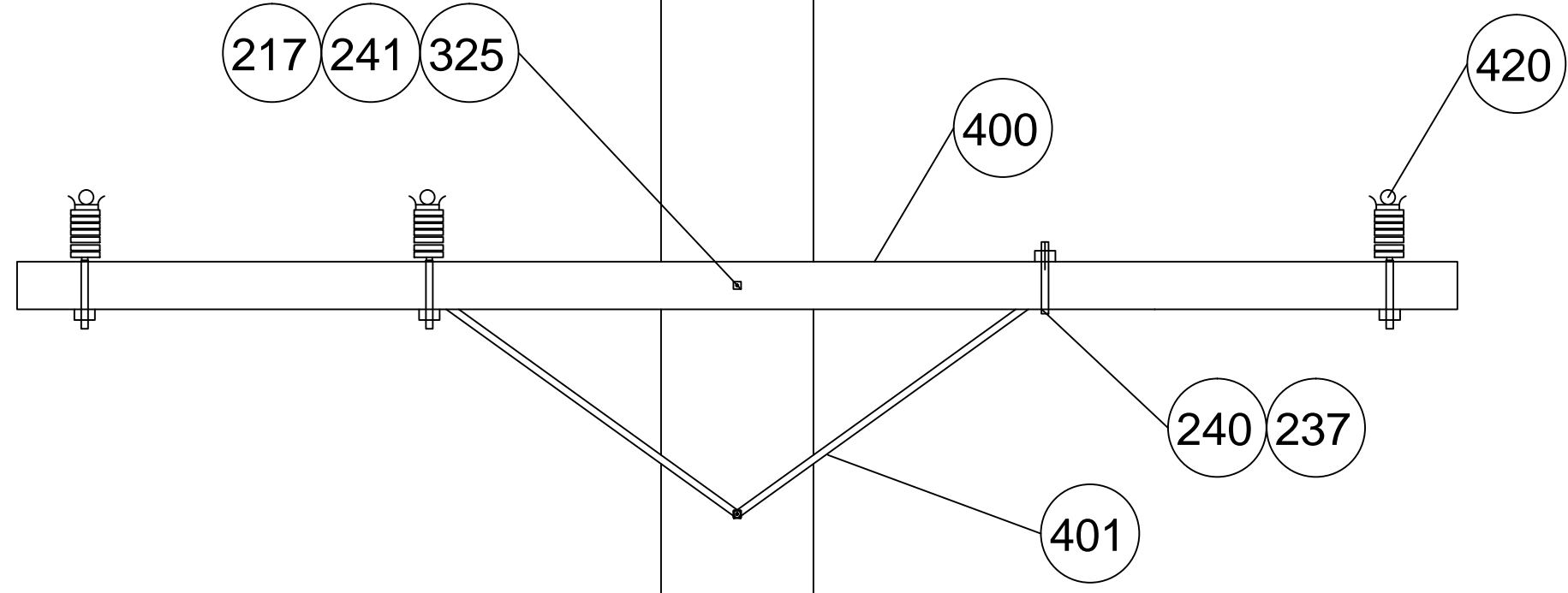
1
-



DETAIL

POST INSULATOR (N.T.S.)

2
-



DETAIL

TANGENT CROSSARM (N.T.S.)

3
-

BILL OF MATERIAL				
ITEM #	QTY	UNIT	DESCRIPTION	MANUFACTURER/PART #
16	1	EA	Y-CLEVIS EYE - 19K	MACLEAN YCE-65-625
42	1	EA	SHIELD WIRE BRACKET	HUGHES BROS. C4770.4-XX
59	1	EA	FIBERLIGN - SUSPENSION OPGW	PREFORMED 4300109
148	2	EA	CONNECTOR: #2 Cu to #2 Cu, COMPRESSION	BURNDY YGHC2C2
207	4	EA	1/2" HEX NUT, GALV	ELECTRIC MOTION EM12CN
208	7	EA	1/2" WASHER, GALV.	HUGHES BROS. RW2-50
209	7	EA	1/2" 13x1" LONG BOLT, GALV.	ELECTRIC MOTION EM12C1B
217	2	EA	3/4" BOLT, MACHINE, BY LENGTH	HUGHES BROS. HB7XX-XX
218	2	EA	5/8" BOLT, MACHINE, BY LENGTH	HUGHES BROS. HB6XX-XX
219	4	EA	5/8" BOLT, WASHER HEAD, W/ WASHER NUT	HUGHES BROS. WB6XX-XX
220	3	EA	2" (15/16" HOLE) WASHER, GALV	HUGHES BROS. RW2-80
221	4	EA	7/8" HEX NUT, GALV	HUGHES BROS. HN80
222	3	EA	7/8" LOCK NUT, GALV	HUGHES BROS. MF80
233	1	EA	7/8" x XX" ALL-THREAD, GALV (NO NUTS INCLUDED)	HUGHES BROS. TR8XX-FNN
235	2	EA	3/4" LOCKNUT, MF TYPE	HUGHES BROS. MF70
236	6	EA	5/8" LOCKNUT, MF TYPE	HUGHES BROS. MF60
237	4	EA	1/2" LOCKNUT, MF TYPE	HUGHES BROS. MF50
240	4	EA	1/2" BOLT, WASHER HEAD, BY LENGTH	HUGHES BROS. WB5XX-XX
241	6	EA	WASHER, FLAT, 2-1/4" SQ. X 3/16", 3/16" H.	HUGHES BROS. SW2-1/4-60-3-16
249	100	FT	#2 - 7 STRAND FLEXIBLE COPPER	ALL MAKES
400	2	EA	X-ARM, 4-5/8" X 5-5/8" X 12'0, #28	HUGHES BROS. TCD-11 TYPE 25
401	2	EA	BRACE, X-ARM, 60/30"	HUGHES BROS. 1152.10
420	3	EA	INSULATOR, 34.5 KV, VERTICAL POST	XXXXX

NOTES:

- MATERIAL LIST QUANTITY IS TOTAL QUANTITY PER STRUCTURE, UNLESS NOTED OTHERWISE.
- BOLTS SHALL PROTRUDE NO MORE THAN 4" PAST THE FACE OF THE ATTACHMENT. IF BOLTS INTERFERE WITH HARDWARE OR EXCEED ALLOWABLE PROTRUSION ALL THREAD BOLTS SHALL BE FIELD CUT AND SPRAY GALVANIZED ACCORDING TO ASTM A780.
- ALL THROUGH-BOLT NUTS SHALL NOT BE TENSIONED BEYOND A SNUG TIGHT CONDITION.
- GROUNDING NUTS SHALL BE 1/2" -13 UNC STAINLESS STEEL HEAVY HEX NUTS WELDED TO POLE. ITEM 209 SHALL BE USED IN LOCATIONS WHERE 5/8" HOLE IS NOT PRESENT.
- ALL HARDWARE SHALL BE GROUNDED TO EXTERNAL BOND WIRE RUNNING THE LENGTH OF THE POLE.

PRELIMINARY
NOT FOR CONSTRUCTION

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRWN	REV'D	APPR	COMP	SCALE: NONE	PREP: JDJ CHKD: KVP
A	08/31/2017	PRELIMINARY - ISSUED FOR BID	JDJ	KVP	KVP	S&L	PREP: JDJ CHKD: KVP	
NO	DATE	REVISIONS AND RECORD OF ISSUE	DRWN	REV'D	APPR	COMP	APPD: KVP DATE: 08/31/2017	

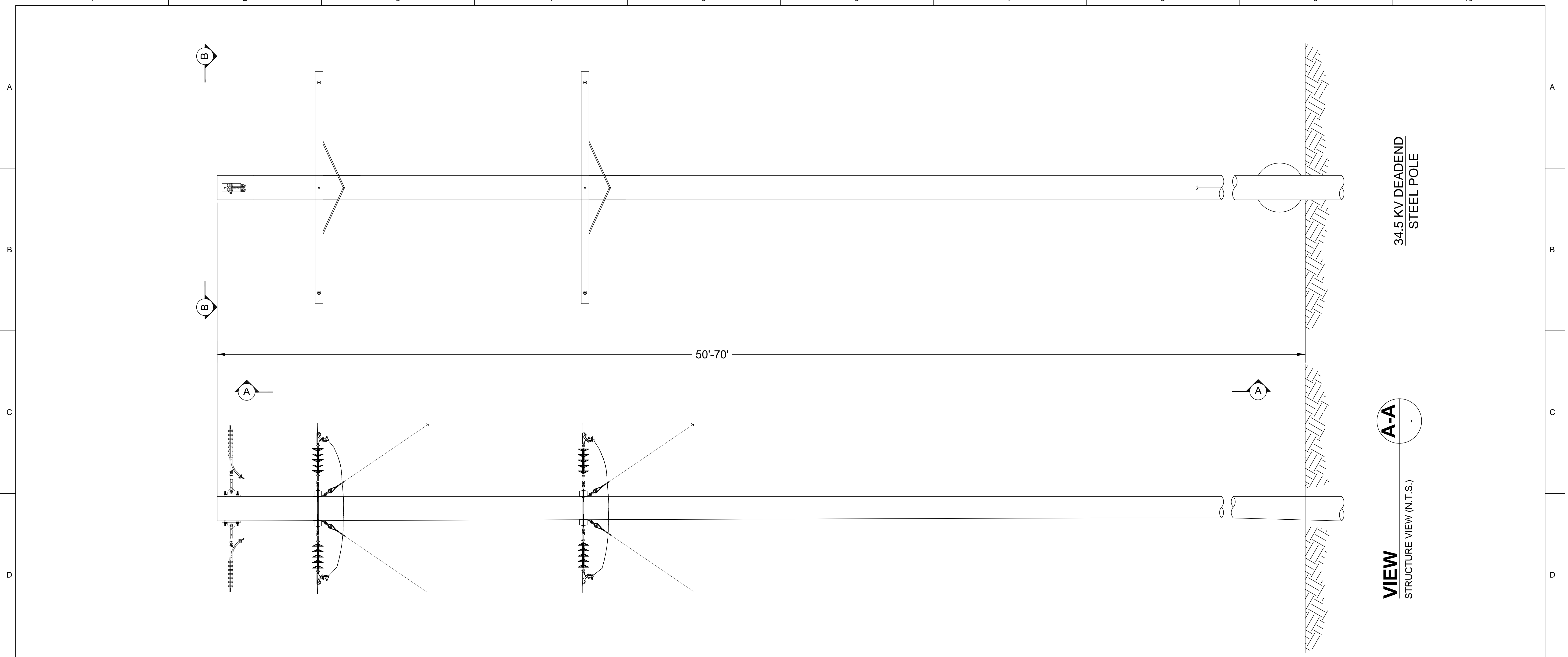
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NEXTERA ENERGY RESOURCES, LLC
EIGHT POINT WIND, LLC
34.5 MULTI-CIRCUIT WOOD TANGENT STRUCTURE
DETAILS

13139-035-OC1-0201

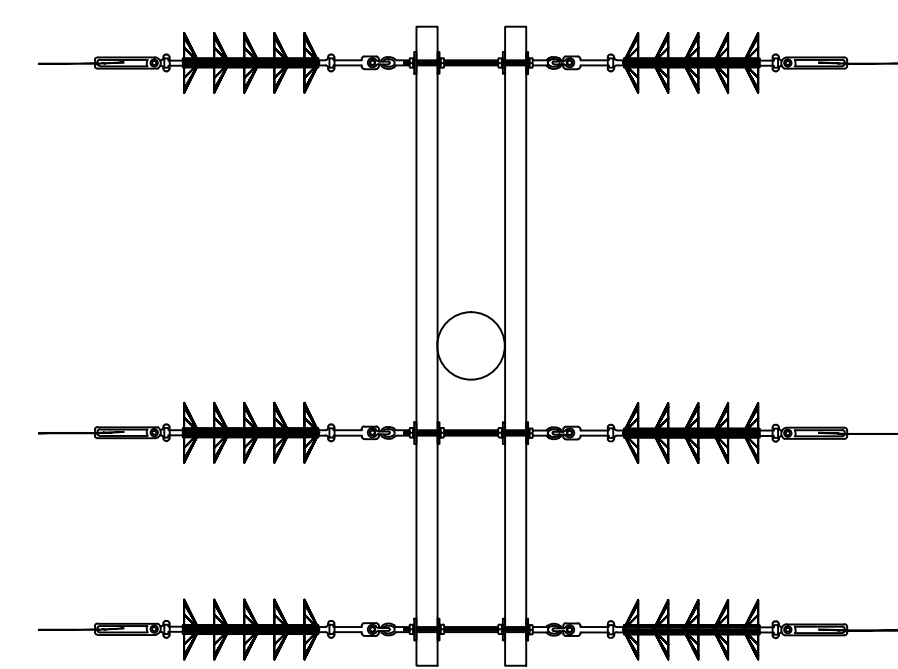


34.5 KV DEADEND
STEEL POLE

50'-70'

A-A

VIEW
STRUCTURE VIEW (N.T.S.)



VIEW
CROSS-ARM DETAIL (N.T.S.)

B-B

- NOTES:**
1. RULING SPAN: 250'.
 2. GUY WIRES SHALL BE INLINE WITH THE CONDUCTOR AND SHIELD WIRE.
 3. GUY WIRES SHALL BE INSTALLED AT 45°.
 4. GUY STRAIN INSULATORS WILL BE REQUIRED WHEN GUY IS WITHIN 1' OF CONDUCTOR, GUY SHALL NOT GET ANY CLOSER THAN 9"
 5. DRAWINGS PREPARED UNDER KUNHAL PARIKH - LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK

PRELIMINARY
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							NONE	JDJ	KVP	08/31/2017
A	08/31/2017	PRELIMINARY - ISSUED FOR BID	JDJ	KVP	KVP	S&L		JDJ	KVP	

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NEXTERA ENERGY RESOURCES, LLC
EIGHT POINT WIND, LLC
34.5 KV MULTI-CIRCUIT STEEL DEADEND
STRUCTURE FRAMING

13139-045-OC1-0210