

C*PT-MT-9F-B-OO10
 FIBERGLASS CROSSARM FOR 35/46/69KV SINGLE POLE
 STRUCTURE TV-5HC1F (SX)
 MID: 6000740586

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.


FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

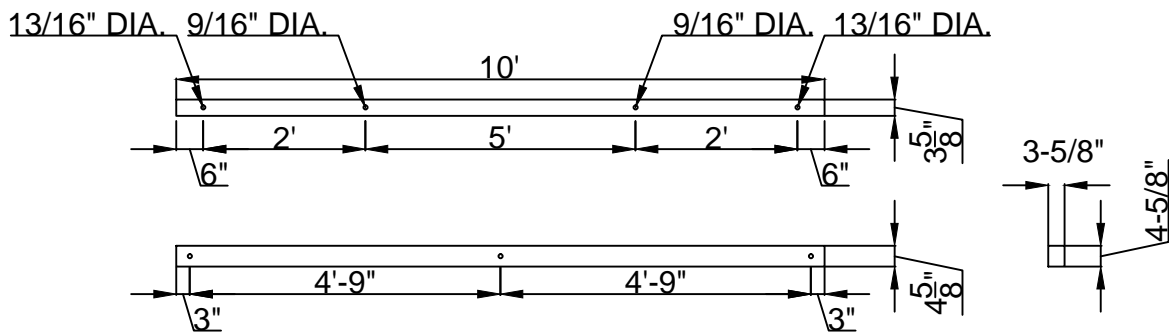
NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 5'

	TRANSMISSION CONSTRUCTION STANDARDS MANUAL	TRANSMISSION STANDARDS - CROSSARMS 35/46/69kV SINGLE CIRCUIT - MAINTENANCE - SINGLE ARM TANGENT POST 4-5/8" X 3-5/8" X 10'-0" FIBERGLASS CROSSARM DETAILS MID 6000740586				REVISION 00
						DATE 5/21/2015
Drwn. By: B. Franklin	Date Dr.: 1/6/2014	Checked By: Becken/Hart	Date Ck.: 12/24/2014	Approved By: Barry R. Hart	Date App.: 12/24/2014	TM2.23.MT-9F-B-OO10 Sheet 1



C*PT-MT-9F-C-OO10
 FIBERGLASS CROSSARM FOR MULTI-VOLTAGE SINGLE POLE
 STRUCTURE TV-5HC2F (DX)
 MID: 6000740588

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

NOTE B: FOR DOUBLE ARM TANGENT POST STRUCTURE.

NOTE C: THIS CU INLCUDES ONLY ONE (1) ARM. THEREFORE, 2 CUS MUST BE ORDERED TO COMPLETE THIS STRUCTURE.

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY

Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 5'

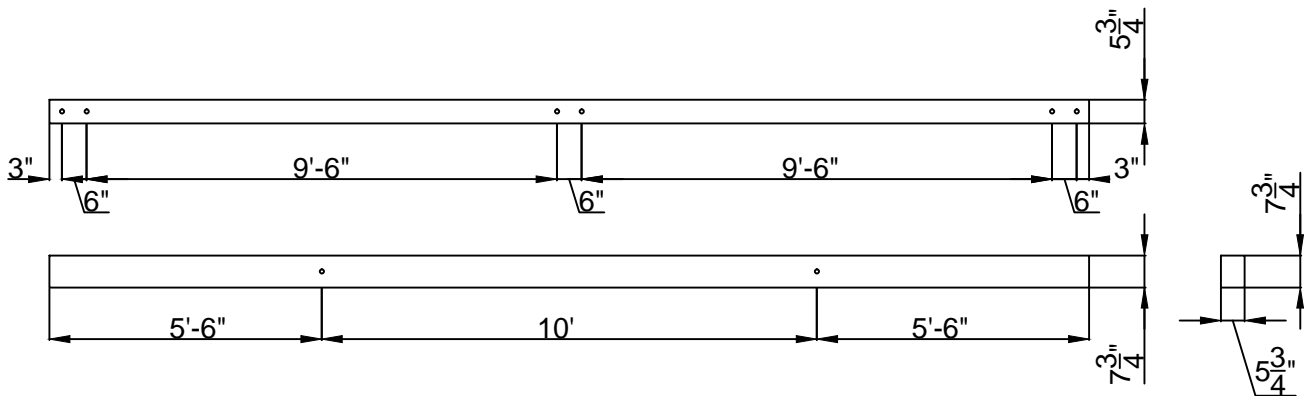


TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION STANDARDS - CROSSARMS
35/46/69KV SINGLE CIRCUIT - MAINTENANCE - DOUBLE ARM TANGENT POST
4-5/8" X 3-5/8" X 10'-0" FIBERGLASS CROSSARM DETAILS
MID 6000740588

REVISION
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DATE
5/21/2015

Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2.23.MT-9F-C-OO10	Sheet 1
B. Franklin	1/6/2014	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		



C*PT-MT-9L-B-CE21
 LAMINATED WOOD CROSSARM FOR MULTI-VOLTAGE
 H-FRAME TANGENT SUSPENSION STRUCTURE TV-5HSA (A)
 MID: 6000740610

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY

Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: NTS



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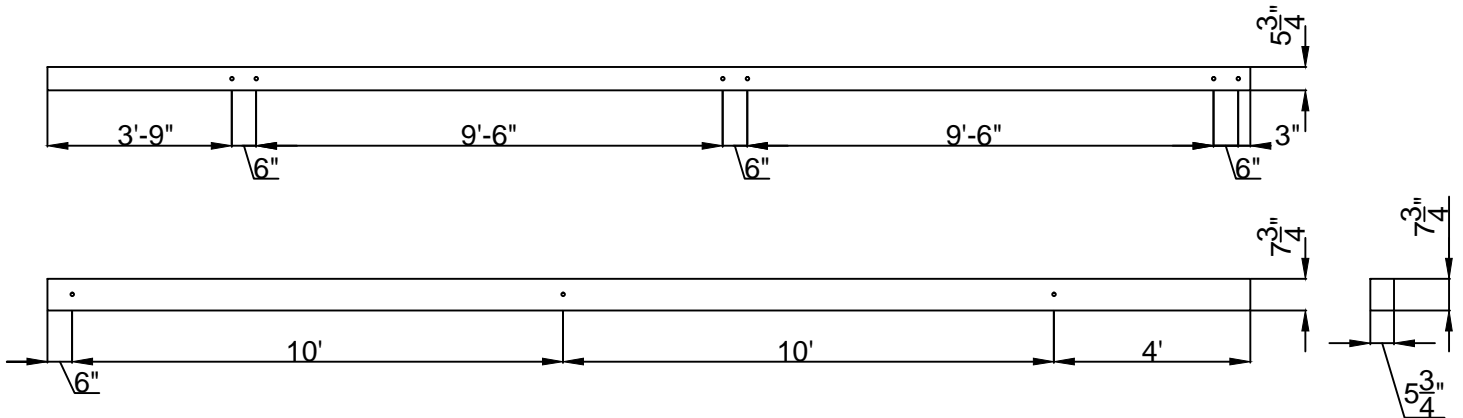
TRANSMISSION STANDARDS - CROSSARMS
35kv SINGLE CIRCUIT - H-FRAME - MAINTENANCE ONLY
5-3/4" X 7-3/4" X 21' LAMINATED WOOD CROSSARM DETAILS
MID 6000740610

REVISION
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DATE
5/21/2015

Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:
B. Franklin	10/09/2013	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014

TM2.23.MT-9L-B-CE21

Sheet 1



C*PT-MT-9L-B-CE24
 LAMINATED WOOD CROSSARM FOR MULTI-VOLTAGE
 H-FRAME STRUCTURES TV-5HA2A (B), TV-5HHYA (LD) AND TN-5HDSA (DA)
 MID: 6000740640

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: NTS

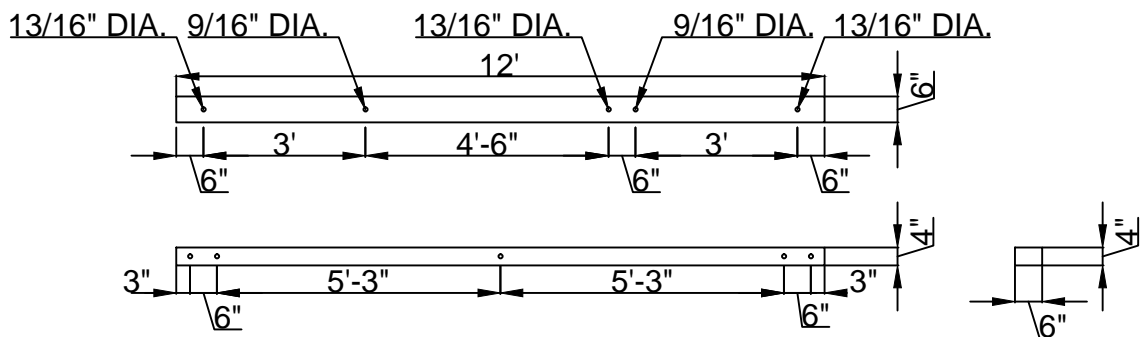


TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION STANDARDS - CROSSARMS
35/46/69kV SINGLE CIRCUIT - H-FRAME - MAINTENANCE ONLY
5-3/4" X 7-3/4" X 24'-6" LAMINATED WOOD CROSSARM DETAILS
MID 6000740640

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5/21/2015

Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2.23.MT-9L-B-CE24	Sheet 1
B. Franklin	10/09/2013	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		



C*PT-TT-9F-C-BB12

FIBERGLASS CROSSARM FOR DOUBLE ARM DEADEND MULTI-VOLTAGE SINGLE POLE STRUCTURES TN-6HTYK (BN-HS), TN-6HDAK (BN-DEAS), TV-6HTYK (BN-H) AND TV-6HDAK (BN-DEA)
MID: 6000740560

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

NOTE B: FOR DOUBLE ARM DEADEND STRUCTURE.

NOTE C: THIS CU INCLUDES ONLY ONE (1) ARM. THEREFORE, 2 CUS MUST BE ORDERED TO COMPLETE THE STRUCTURE.

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 5'

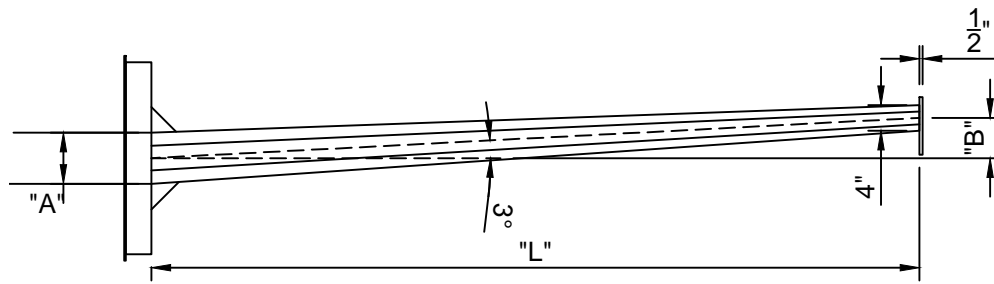


TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

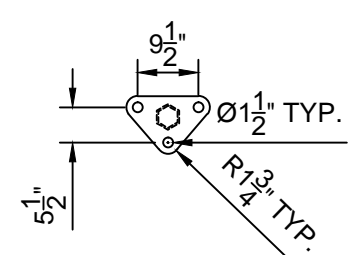
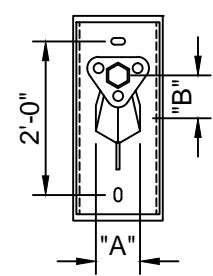
TRANSMISSION STANDARDS - CROSSARMS
35/46/69kV SINGLE CIRCUIT - DOUBLE ARM DEADEND
6" X 4" X 12'-0" FIBERGLASS CROSSARM DETAILS
MID 6000740560

REVISION
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DATE
5/21/2015

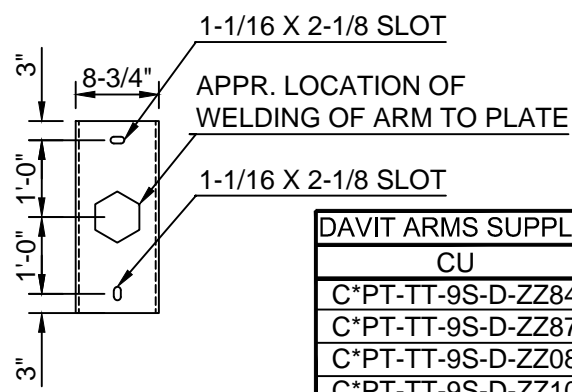
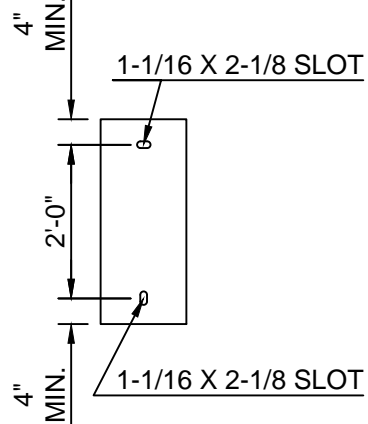
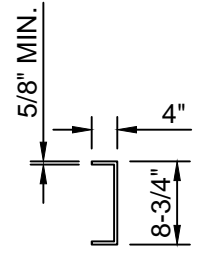
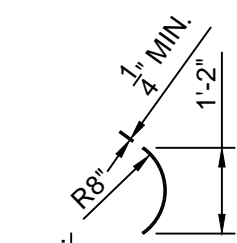
Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2.23.TT-9F-C-BB12	Sheet 1
B. Franklin	8/30/2013	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		



DAVIT ARM
PLATE THICKNESS: 1/4" MIN.



END PLATE
THICKNESS: 5/8" MIN. 3/4" MAX.



BEARING PLATE
THICKNESS: 1/4" MIN.
1'-4" X 2'-8" FLAT PLATE
BENT TO SHOWN RADIUS
(NOTE D)

BASE PLATE
THICKNESS: 5/8" MIN.

DAVIT ARMS SUPPLIED WITH CURVED BEARING PLATES				
CU	MID	"L"	"A"	"B"
C*PT-TT-9S-D-ZZ84	6000617074	4'-6"	8"	3"
C*PT-TT-9S-D-ZZ87	6000617058	6'-6"	8"	4"
C*PT-TT-9S-D-ZZ08	6000617063	8'-0"	10"	5"
C*PT-TT-9S-D-ZZ10	6000617070	10'-0"	12"	6"

DAVIT ARMS SUPPLIED WITH FLAT BEARING PLATES				
CU	MID	"L"	"A"	"B"
C*PT-TT-9S-H-ZZ84	6000617075	4'-6"	8"	3"
C*PT-TT-9S-H-ZZ87	6000617059	6'-6"	8"	4"
C*PT-TT-9S-H-ZZ08	6000617064	8'-0"	10"	5"
C*PT-TT-9S-H-ZZ10	6000617071	10'-0"	12"	6"

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: EACH ARM DAVIT ARM ON THIS SHEET SHALL BE DESIGNED TO WITHSTAND A VERTICAL LOAD OF 6 KIPS, A LOAD TRANSVERSE TO THE STRUCTURE CENTERLINE OF 2.5 KIPS AND A LOAD LONGITUDINAL WITH THE STRUCTURE CENTERLINE OF 2 KIPS. GIVEN LOADS ARE FACTORED.

NOTE B: ALL STEEL SHALL HAVE A YIELD STRENGTH OF 65KSI OR HIGHER.

NOTE C: ALL STEEL SHALL BE ASTM A871 GRADE 65 SELF-WEATHERING.

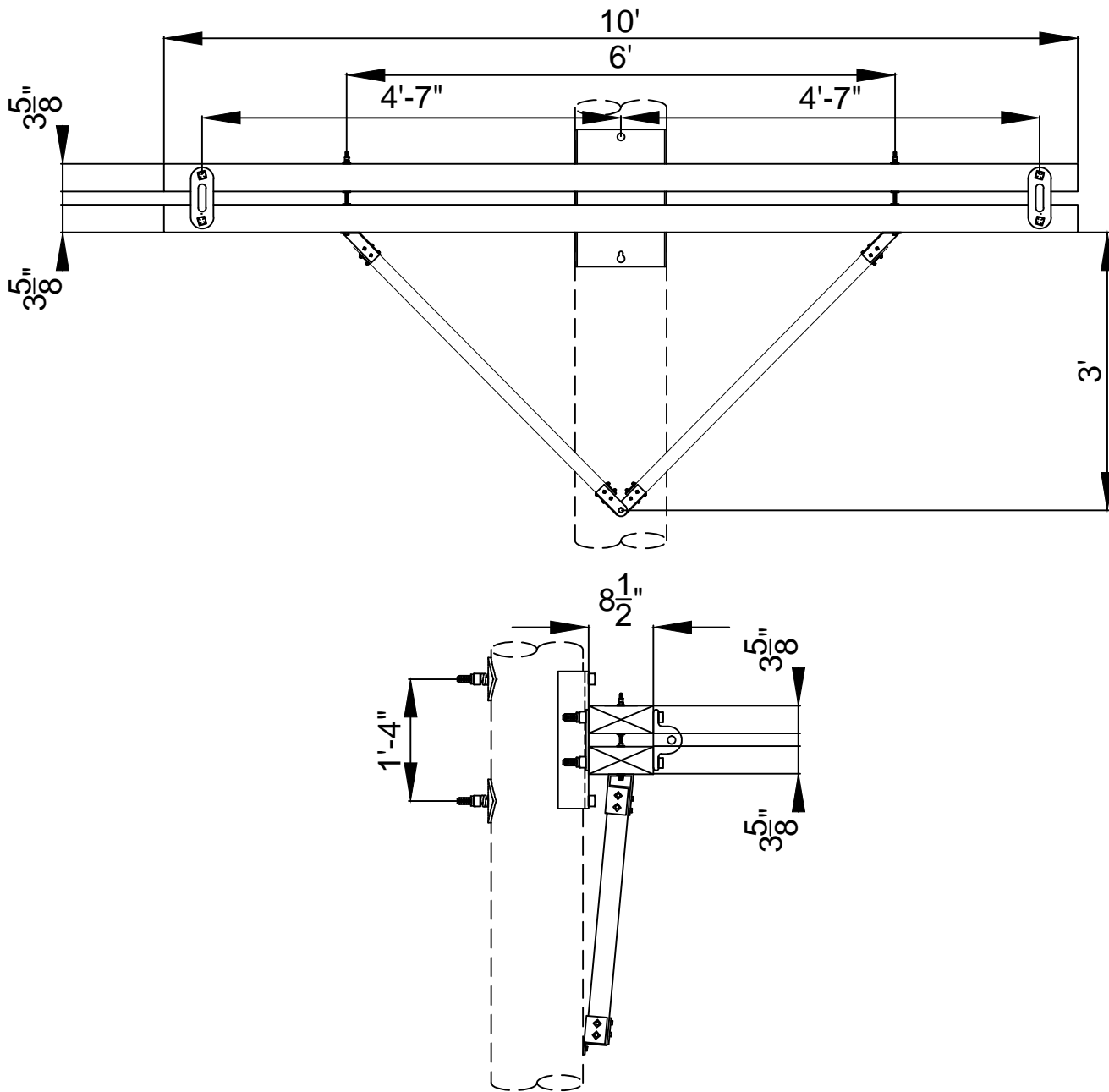
NOTE D: WHEN SUPPLYING A FLAT BEARING PLATE USE THE SAME SIZE BEARING PLATE WITHOUT BENDING THE PLATE. PLATE IS REQUIRED TO BE FLAT FOR LAMINATED WOOD POLE INSTALLATION.

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 30"

	TRANSMISSION CONSTRUCTION STANDARDS MANUAL	TRANSMISSION STANDARDS - CROSSARMS 34/46/69/115kV STEEL DAVIT ARM DETAILS				REVISION 00
						DATE 5/21/2015
Drwn. By: B. Franklin	Date Dr.: 8/24/2014	Checked By: Becken/Hart	Date Ck.: 12/24/2014	Approved By: Barry R. Hart	Date App.: 12/24/2014	TM2.23.TT-9S-X-XXXX Sheet 1



C*PT-TT-9W-A-OU10
 WOOD DEAD END CROSSARM ASSEMBLY
 BUCKARM DEAD END STRUCTURE TN-6HBAK AND TV-6HBAK
 HUGHES DE ASSEMBLY 2892-D
 CAPACITY: 11,800# PER ATTACHMENT
 MID: 6000740590

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY

Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: NTS



TRANSMISSION
 CONSTRUCTION
 STANDARDS
 MANUAL

TRANSMISSION STANDARDS - CROSSARMS
 69kV SINGLE CIRCUIT
 3-5/8" X 8-1/2" X 10' WOOD CROSSARM ASSEMBLY DETAILS
 MID 6000740590

REVISION
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DATE
5/21/2015

Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:
B. Franklin	10/02/2014	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014

TM2.23.TT-9W-A-OU10

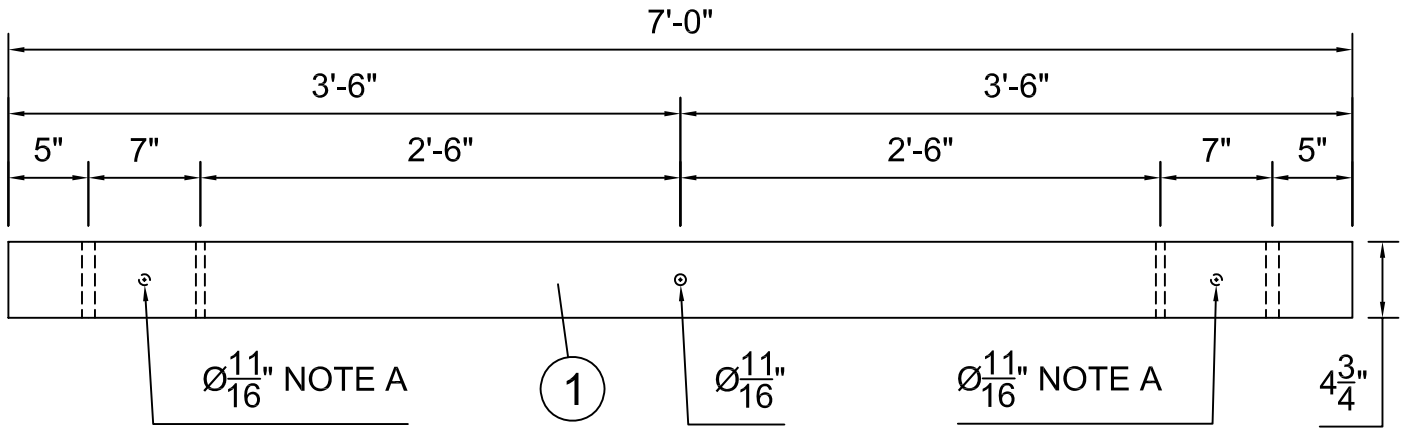
Sheet 1

BILL OF MATERIAL

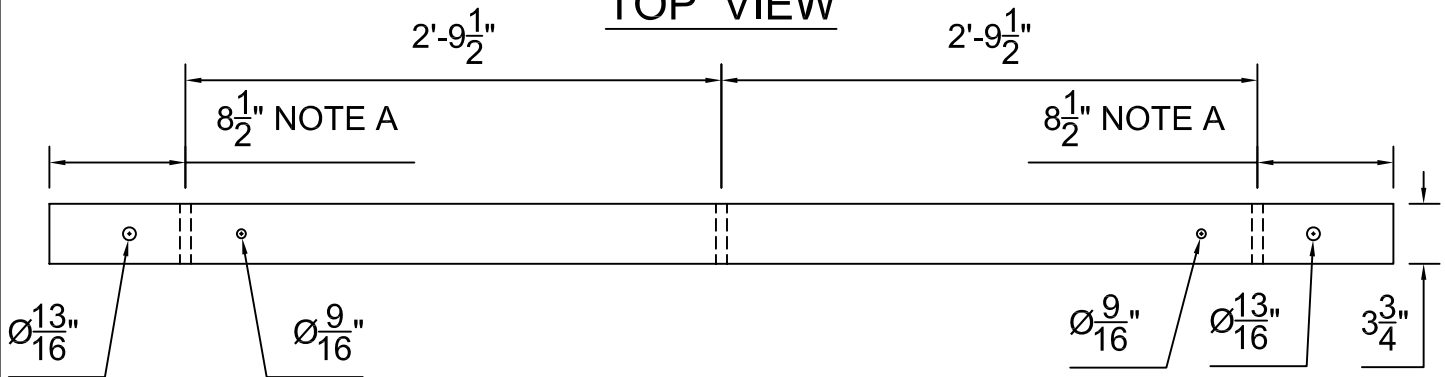
CU Type: UC_XARM

ITEM NO.	QTY	UOM	GLOBAL IUSA MID	CU: U*PT-TT-9W-X-AA07
1	1	ST	30923675	XARM WD 3-3/4X4-3/4X7F DF 04DG02A

FRONT VIEW



TOP VIEW




NOTE A: FIELD DRILL 11/16" DIAMETER HOLES FOR DOUBLE ARM APPLICATION.

CU Function: U_TL69 for 35kV & 46kV, U_TG69 for 69kV through 344kV, U_T345 for 345kV & greater.

For correct CU: substitute 2 for NYSEG, 3 for CMP or 4 for RG&E in place of asterisk (U*_).

Contact Engineering Standards - Transmission for the creation of new standards and CUs.

Drawing Scale: 1" = 1'-0"

	IBERDROLA USA TRANSMISSION CONSTRUCTION STANDARDS MANUAL		TRANSMISSION CROSSARM DETAILS FOR 35/46KV APPLICATIONS 3-3/4" X 4-3/4" X 7' WOOD CROSSARM GLOBAL IUSA MID: 30923675 OLD MID: 1004015020			Revision 00
	DATE / /2014					DATE / /2014
Drwn. By: L.A. Best	Date Dr.: 6/15/2012	Checked By: Shepard/Becken/Hart	Date Ck.: / /2014	Approved By: Barry R. Hart	Date App.: / /2014	Sheet 1

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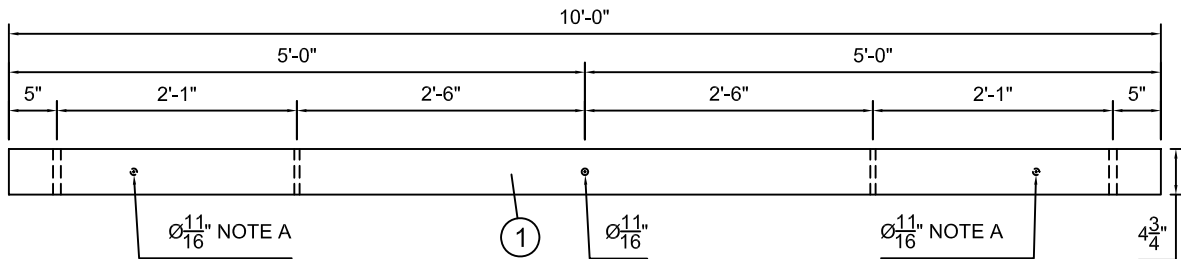
ANSIA 8-1/2" X 11"

BILL OF MATERIAL

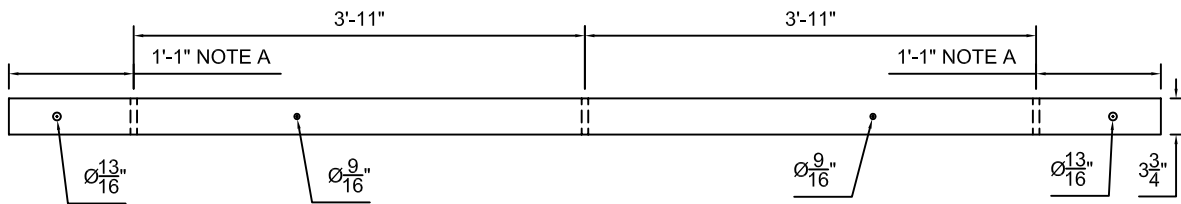
CU Type: UC_XARM

ITEM NO.	QTY	UOM	GLOBAL IUSA MID	CU: U*PT-TT-9W-X-AA10
1	1	ST	30923672	XARM WD 3-3/4X4-3/4X10F DF 04DG31A

FRONT VIEW



TOP VIEW



NOTE A: FIELD DRILL 11/16" DIAMETER HOLES FOR DOUBLE ARM APPLICATION.

CU Function: U_TL69 for 35kV & 46kV, U_TG69 for 69kV through 344kV, U_T345 for 345kV & greater.

For correct CU: substitute 2 for NYSEG, 3 for CMP or 4 for RG&E in place of asterisk (U* _).

Contact Engineering Standards - Transmission for the creation of new standards and CUs.

Drawing Scale: 1" = 20



IBERDROLA USA
TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION CROSSARM DETAILS
FOR 35/46KV APPLICATIONS
3-3/4" X 4-3/4" X 10' WOOD CROSSARM
GLOBAL IUSA MID: 30923672 OLD MID: 1004016020

Revision	00
DATE	/ /2014

Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2.23.TT-9W-X-AA10	Sheet 1
L.A. Best	6/15/2012	Shepard/Becken/Hart	/ /2014	Barry R. Hart	/ /2014		

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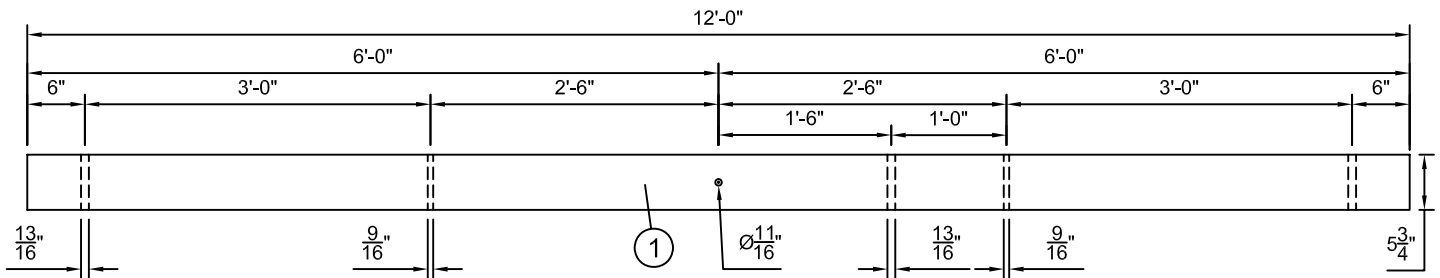
ANSIA 8-1/2" X 11"

BILL OF MATERIAL

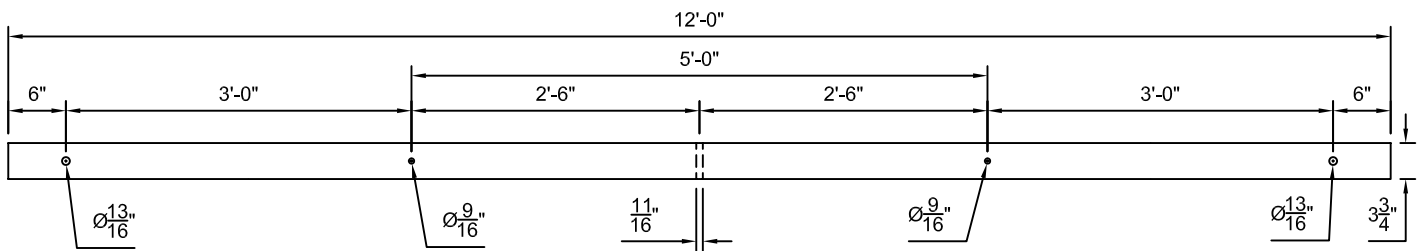
CU Type: UC_XARM

ITEM NO.	QTY	UOM	GLOBAL IUSA MID	CU: U*PT-TT-9W-X-AB12
1	1	ST	30923676	XARM WD 3-3/4X5-3/4X12F DF 04DG22A

FRONT VIEW



TOP VIEW



FOR MAINTENANCE OR SPECIAL APPLICATION PURPOSES ONLY: DO NOT USE FOR NEW TRANSMISSION CONSTRUCTION EXCEPT WHEN APPROVED BY ELECTRIC SYSTEM ENGINEERING - TRANSMISSION SECTION.

CU Function: U_TL69 for 35kV & 46kV, U_TG69 for 69kV through 344kV, U_T345 for 345kV & greater.

For correct CU: substitute 2 for NYSEG, 3 for CMP or 4 for RG&E in place of asterisk (U* _).

Contact Engineering Standards - Transmission for the creation of new standards and CUs.

Drawing Scale: 1" = 20



IBERDROLA USA
TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

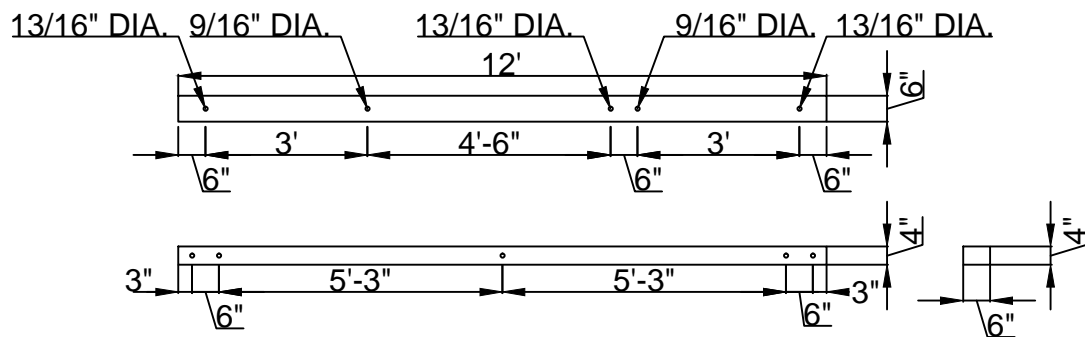
TRANSMISSION CROSSARM DETAILS
FOR 35/46KV APPLICATIONS
3-3/4" X 5-3/4" X 12' WOOD CROSSARM
GLOBAL IUSA MID: 30923676 OLD MID: 1004016522

Revision
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DATE
/ /2014

Drwn. By: L.A. Best	Date Dr.: 6/28/2013	Checked By: Shepard/Becken/Hart	Date Ck.: / /2014	Approved By: Barry R. Hart	Date App.: / /2014	TM2.23.TT-9W-X-AB12	Sheet 1
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ANSIA 8-1/2" X 11"



C*PT-TT-5F-C-BB12
 FIBERGLASS CROSSARM FOR 35KV SINGLE POLE HENDRIX
 OPEN WIRE TRANSITION DEADEND ARMS
 STRUCTURE TZ-5SDTH (HXTOW)
 MID: 6000740584

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

NOTE B: FOR DOUBLE ARM TANGENT SUSPENSION STRUCTURE.

NOTE C: THIS CU INCLUDES ONLY ONE (1) ARM. THEREFORE, 2 CUS MUST BE ORDERED TO COMPLETE THE STRUCTURE.

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY

Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 5'

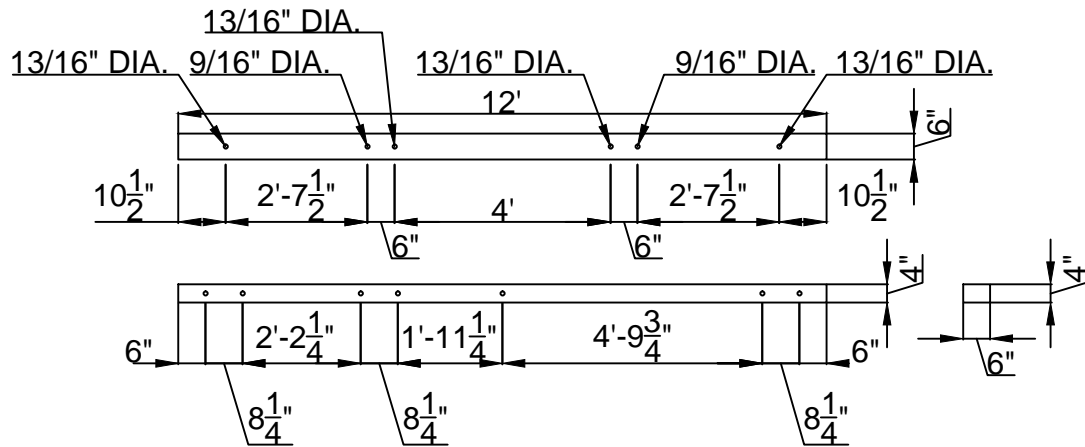


TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION STANDARDS - CROSSARMS
35kV SINGLE CIRCUIT - OPEN WIRE TRANSITION ARMS
6" X 4" X 12'-0" FIBERGLASS CROSSARM DETAILS
MID 6000740584

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B. Franklin	8/30/2013	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		



C*PT-TT-5F-M-BB12
 FIBERGLASS CROSSARM FOR 35KV SINGLE POLE
 RISER EQUIPMENT MOUNTING ARMS
 STRUCTURES TN-5HTDK (DRS) AND TN-5HTRK (DRSB)
 MID: 6000740580

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: 1" = 5'

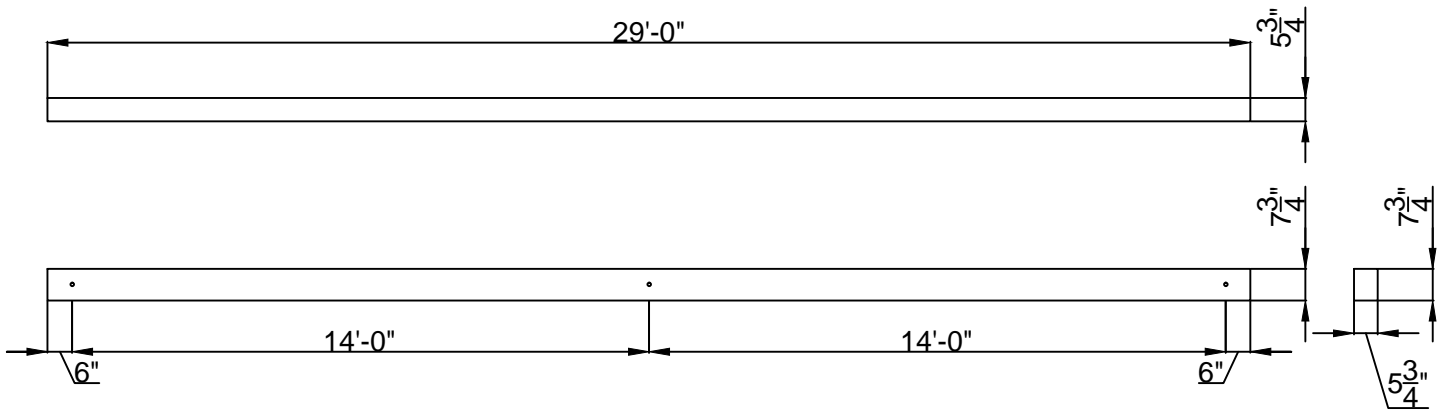


TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION STANDARDS - CROSSARMS
35kV SINGLE CIRCUIT - RISER EQUIPMENT MOUNTING
6" X 4" X 12'-0" FIBERGLASS CROSSARM DETAILS
MID 6000740580

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DATE
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Drwn. By:	Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2.23.TT-5F-M-BB12	Sheet 1
B. Franklin	8/30/2013	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		



C*PT-TT-6L-B-CE29
 LAMINATED WOOD CROSSARM FOR 69KV H-FRAME
 RISER STRUCTURES TN-6HTDK AND TN-6HTRK
 MID: 6000740758

CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THRU 344KV, T345 FOR 345KV & GREATER.

FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*_).

NOTE A: DRILLING: ALL HOLES - 15/16" DIAMETER UNLESS OTHERWISE NOTED

NOTE B: WHEN USING TO MOUNT SWITCH, SWITCH MOUNTING BOLT HOLES SHALL BE FIELD DRILLED BY CONTRACTOR.

NOTE C: THIS ARM IS USED FOR MOUNTING OF THE SWITCH, LIGHTNING ARRESTERS, AND UNDERGROUND TERMINATORS FOR 69KV RISER STRUCTURES.

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY

Contact Engineering Standards - Transmission Section for the creation of new standards and CUs.

Drawing Scale: NTS



TRANSMISSION
CONSTRUCTION
STANDARDS
MANUAL

TRANSMISSION STANDARDS - CROSSARMS
 69kV SINGLE CIRCUIT - H-FRAME
 5-3/4" X 7-3/4" X 29' LAMINATED WOOD CROSSARM DETAILS
 MID 6000740758

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B. Franklin	10/07/2014	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		