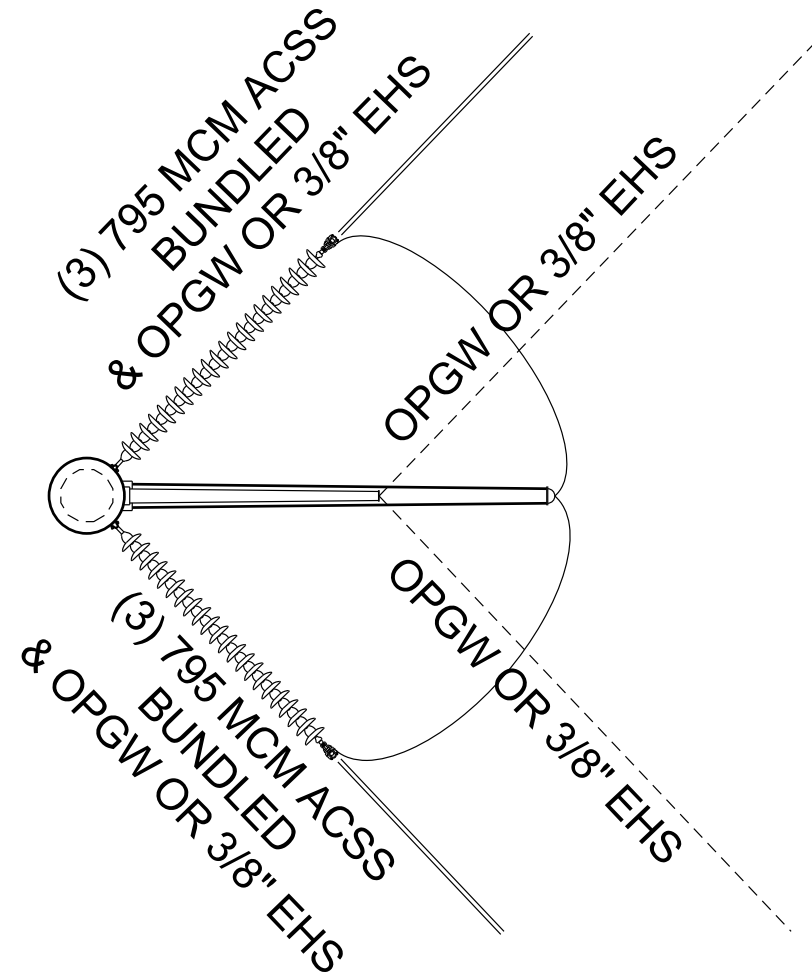
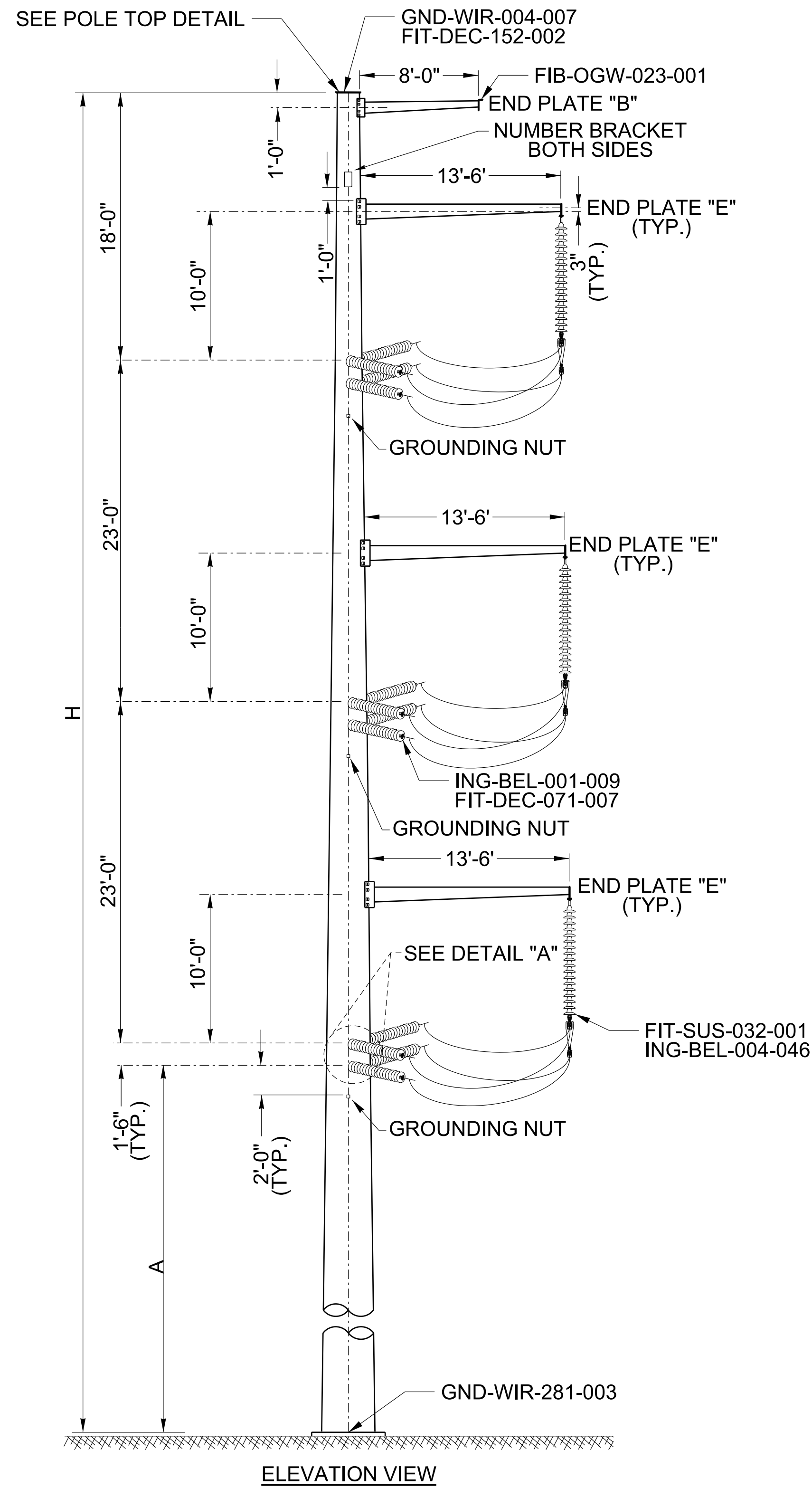


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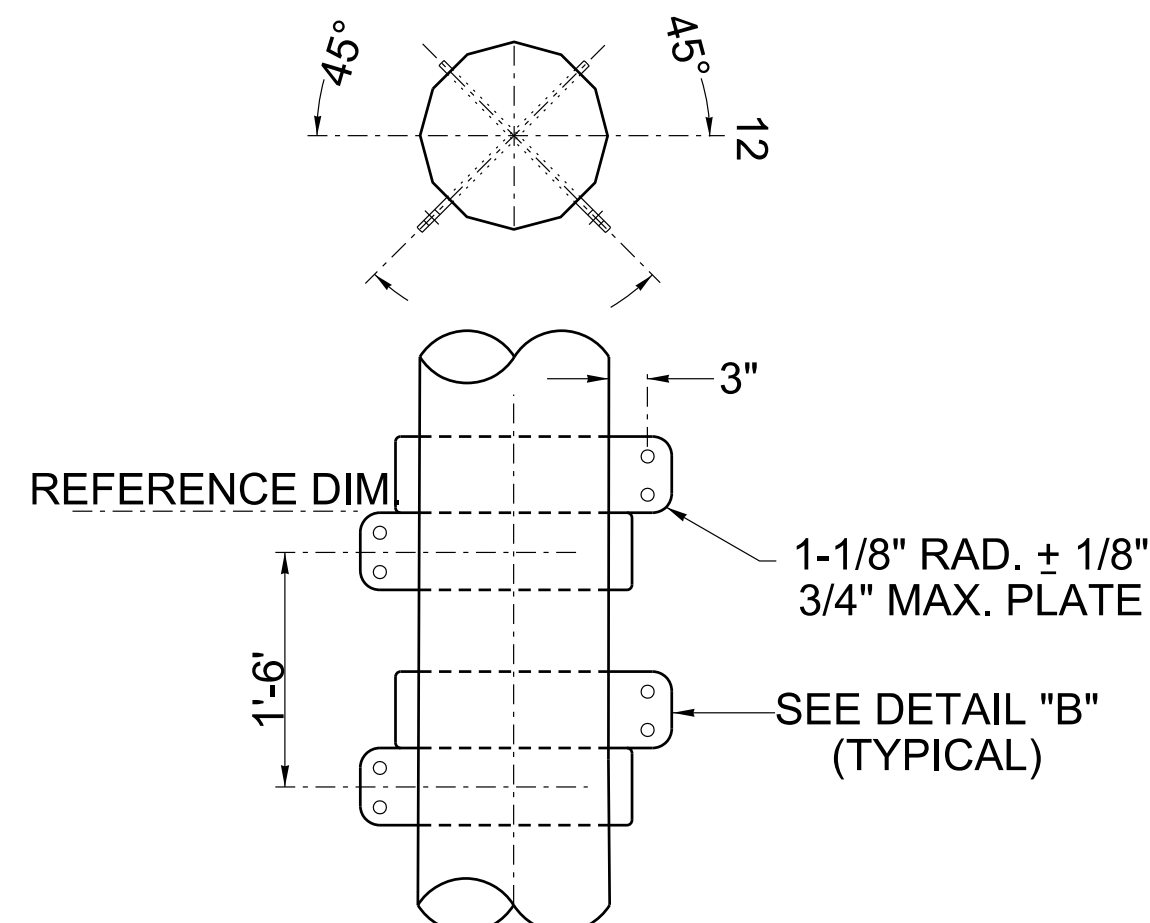


PLAN VIEW

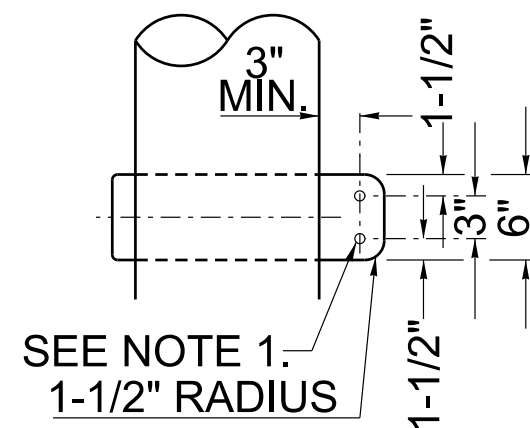
DIM.	
H	A
100'	34'0"
105'	39'6"
110'	44'6"
115'	49'6"
120'	54'6"
125'	59'6"
130'	64'6"
135'	69'6"
140'	74'6"
145'	79'6"
150'	84'6"
155'	89'6"
160'	94'6"
165'	99'6"
170'	104'6"
175'	109'6"
180'	114'6"

GENERAL NOTES

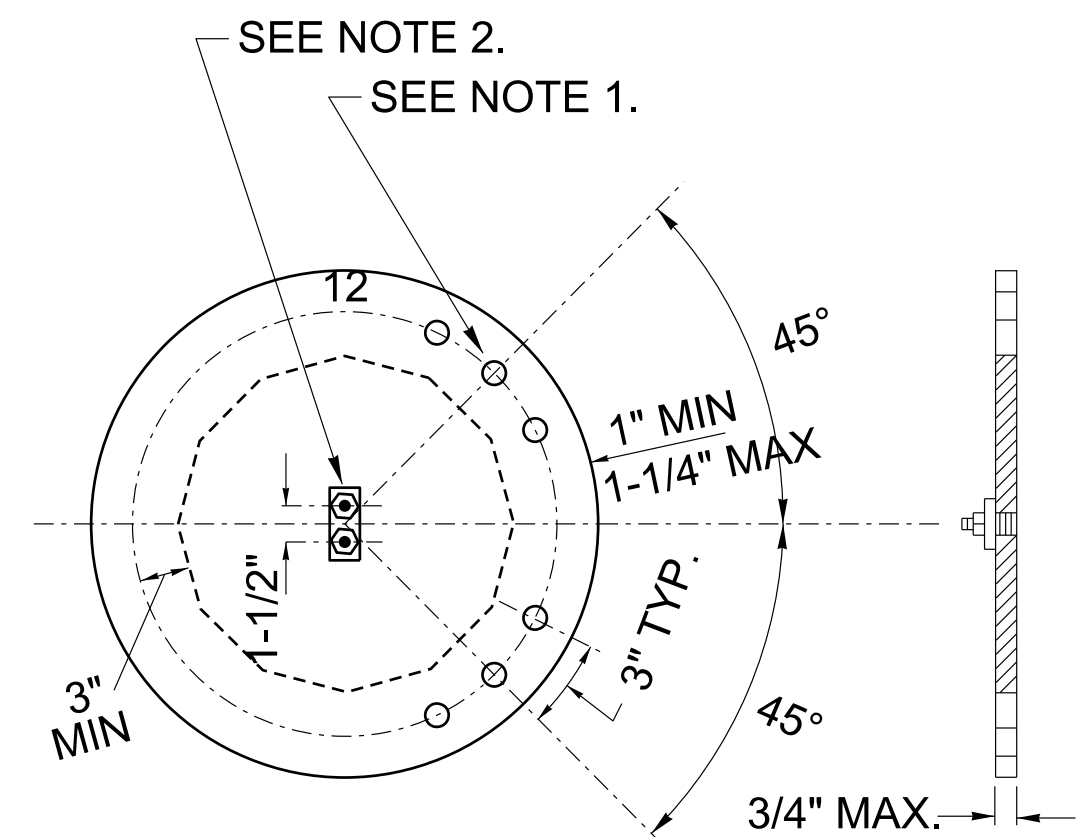
- 1" DIAMETER HOLE WITH 1/8" CHAMFER BOTH SIDES, TYPICAL.
- (2) 1/2" ALL THREAD STUDS, 1-1/2" APART, 1" MINIMUM PROTRUSION. INSTALL 3" X 1-1/4" COVER PLATE WITH NUTS. FOR PAINTED POLES PRIME, BUT DO NOT PAINT AREA UNDER COVER PLATE. COVER PLATE SHALL BE INSTALLED WHEN WEATHERING STEEL IS SPECIFIED.
- INSTALL STEP LUGS FROM 85' ABOVE BASE PLATE TO TOP OF POLE.
- POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
- SEE SHEET T-0-400 FOR GENERAL DETAILS.
- SEE SHEET T-0-400A FOR END PLATE DETAILS.
- SEE SHEET T-0-400C FOR ANCHOR BOLT CAGE DETAILS.
- STRAIN INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS.
- SUSPENSION INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS.
- STRUCTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.



DETAIL "A"
CONDUCTOR ATTACHMENT &
INSULATOR ATTACHMENT BRACKET



DETAIL "B"



POLE TOP DETAIL

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75° - 100° DEADEND STRUCTURE DRAWING STEEL SINGLE POLE - FOUNDATION		345kV	
	SD-T40-708	SCALE NONE	REV NONE

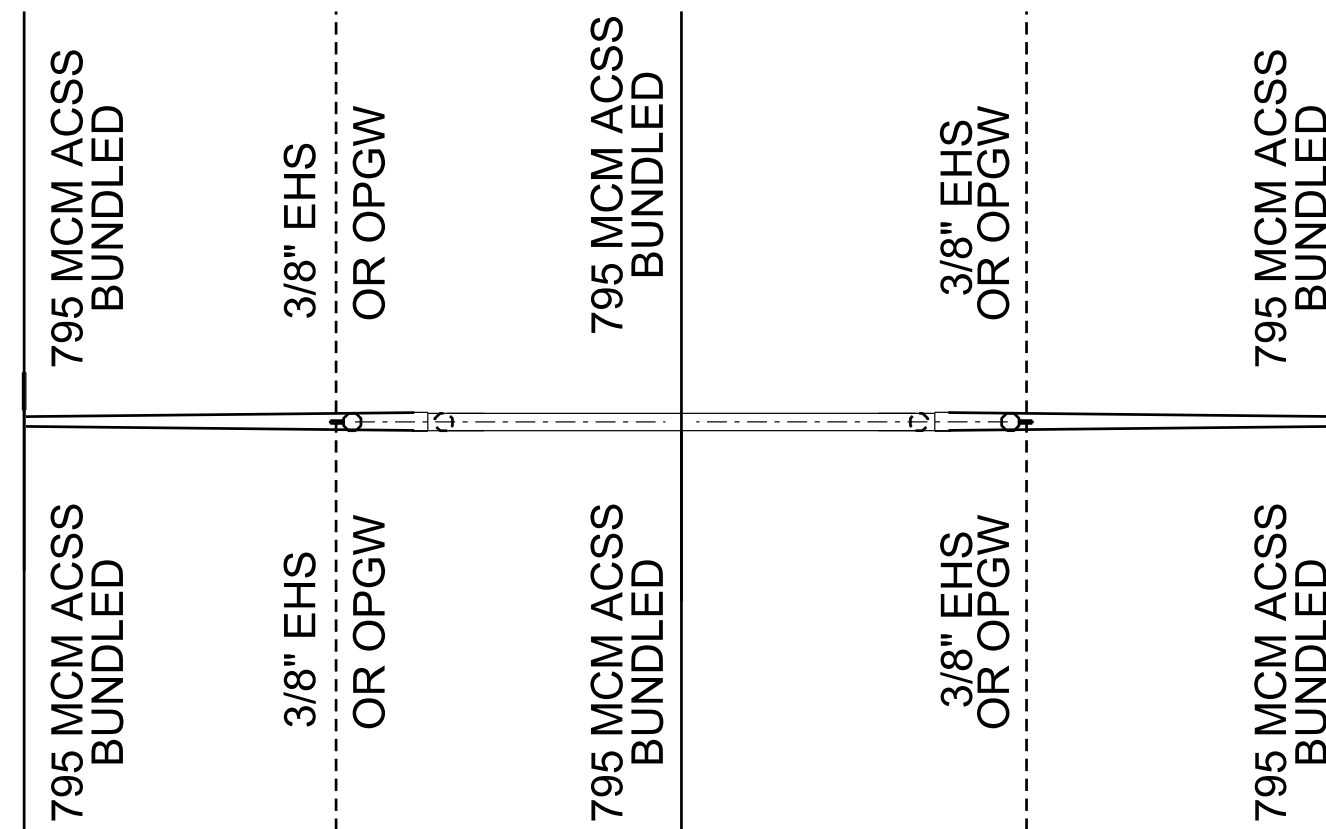
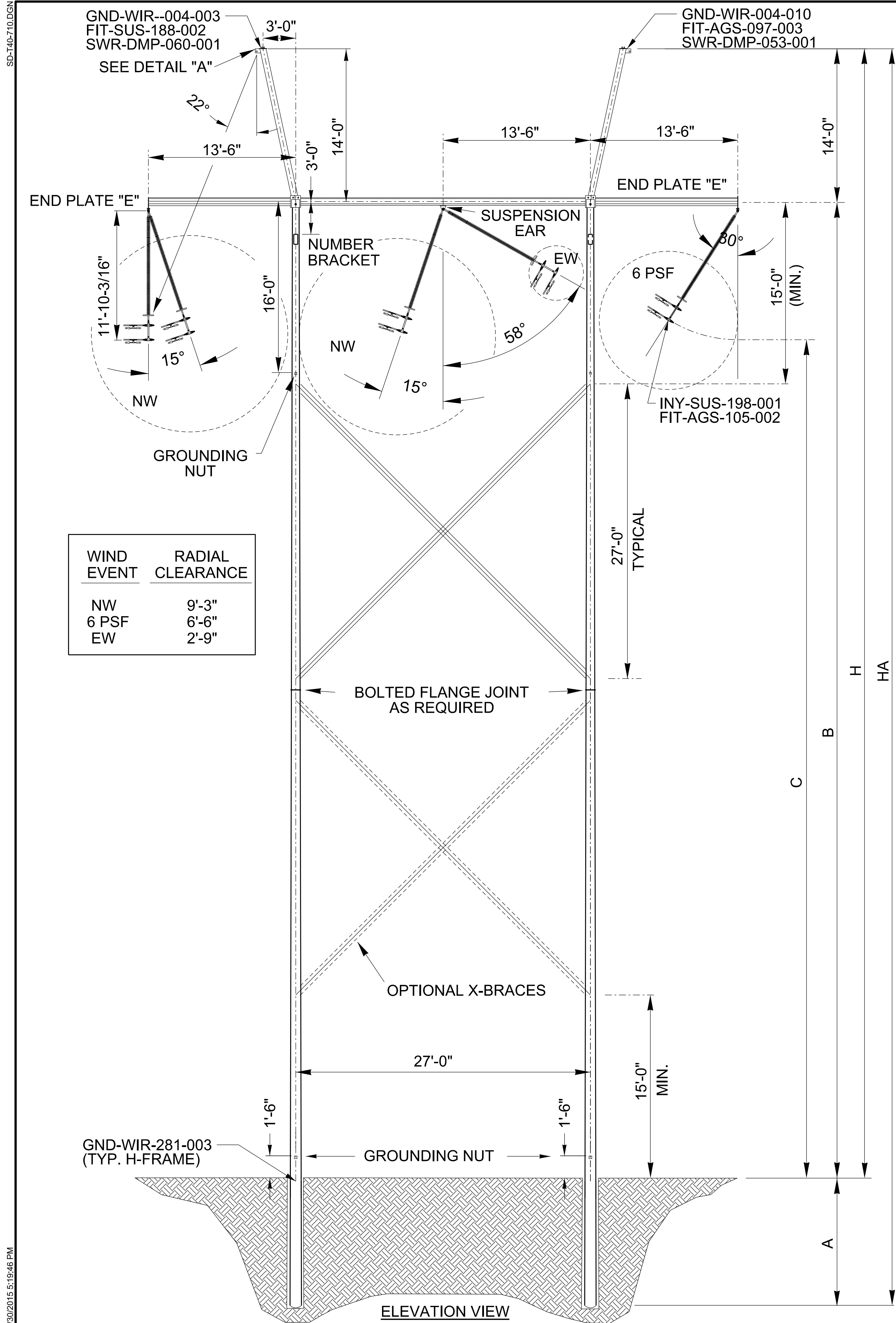


DIMENSIONS		
HA	HB	A
90'	77°0"	64°0"
95'	82°0"	69°0"
100'	87°0"	74°0"
105'	92°0"	79°0"
110'	97°0"	84°0"
115'	102°0"	89°0"
120'	107°0"	94°0"
125'	112°0"	99°0"
130'	117°0"	104°0"
135'	122°0"	109°0"
140'	127°0"	114°0"
145'	132°0"	119°0"
150'	137°0"	124°0"
155'	142°0"	129°0"
160'	147°0"	134°0"
165'	152°0"	139°0"
170'	157°0"	144°0"
175'	162°0"	149°0"
180'	167°0"	154°0"

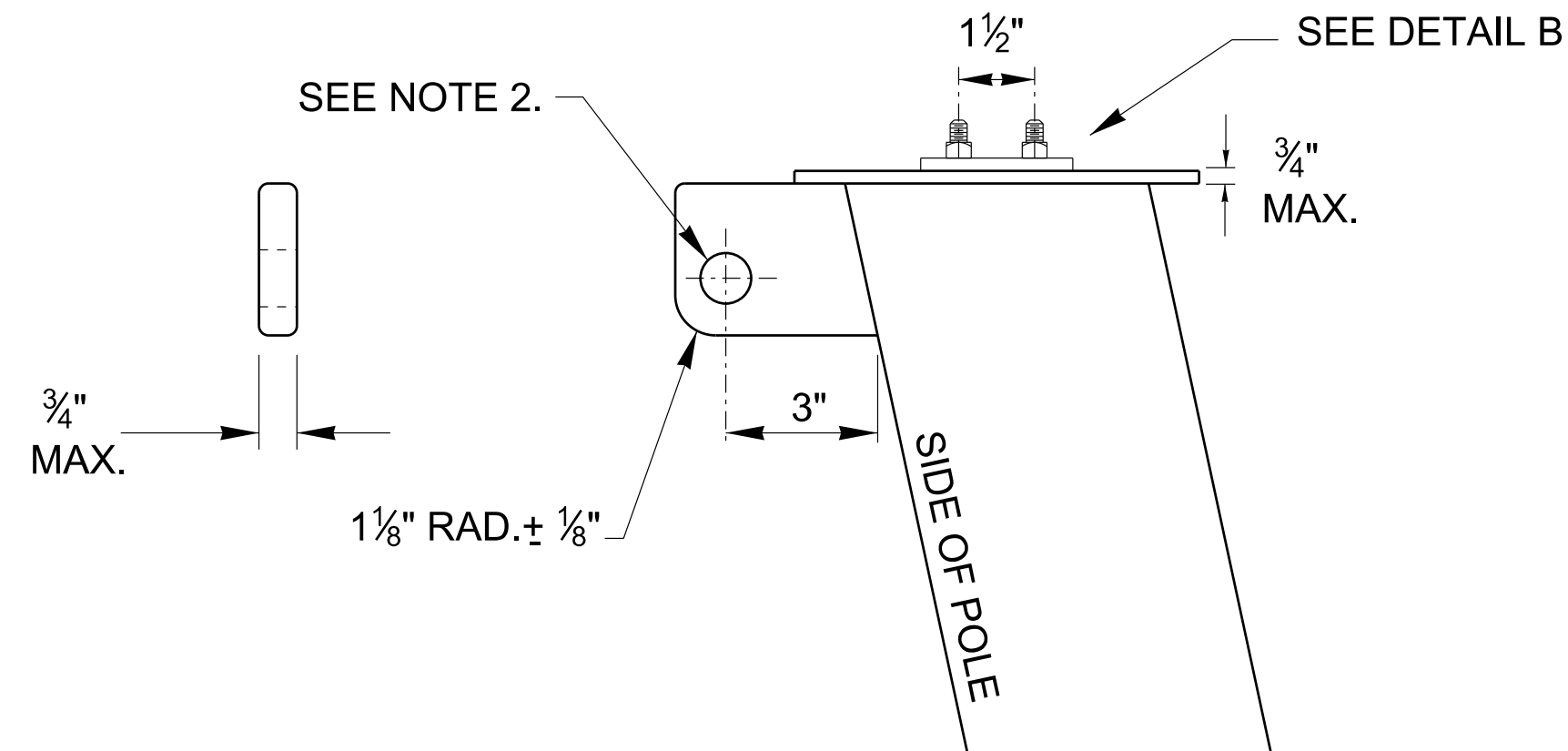
- ## GENERAL NOTES
1. 1" DIAMETER HOLE WITH 1/8" CHAMFER BOTH SIDES, TYPICAL.
 2. (2) 1/2" ALL THREAD STUDS, 1-1/2" APART, 1" MINIMUM PROTRUSION. INSTALL 3" X 1-1/4" COVER PLATE WITH NUTS. FOR PAINTED POLES PRIME, BUT DO NOT PAINT AREA UNDER COVER PLATE. COVER PLATE SHALL BE INSTALLED WHEN WEATHERING STEEL IS SPECIFIED.
 3. INSTALL STEP LUGS FROM 85' ABOVE BASE PLATE TO TOP OF POLE.
 4. POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
 5. SEE SHEET T-0-400 FOR GENERAL DETAILS.
 6. SEE SHEET T-0-400A FOR END PLATE DETAILS.
 7. SEE SHEET T-0-400C FOR ANCHOR BOLT CAGE DETAILS.
 8. SEE SHEET T-0-400D FOR FIBER OPTIC SPLICE DETAILS.
 9. STRAIN INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS. SUSPENSION INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS.
 10. STRUCTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.

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INTERNAL INFORMATION: DO NOT COPY OR DISTRIBUTE WITHOUT EXPRESS WRITTEN CONSENT FROM XCEL ENERGY

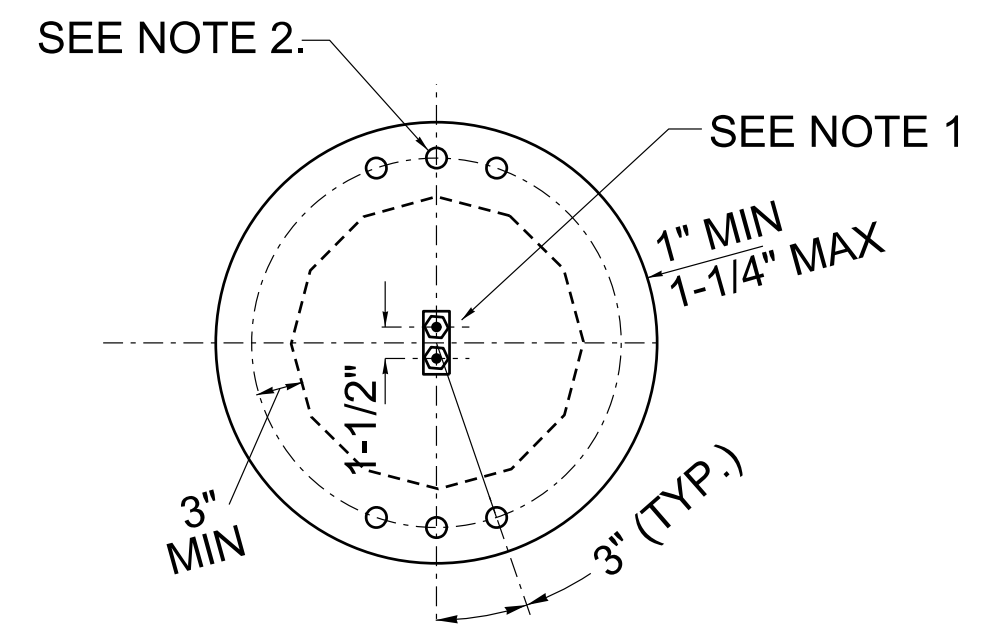
75° - 100° DEADEND - FIBER SPLICE	345kV
STRUCTURE DRAWING	
STEEL 3-POLE - FOUNDATION	



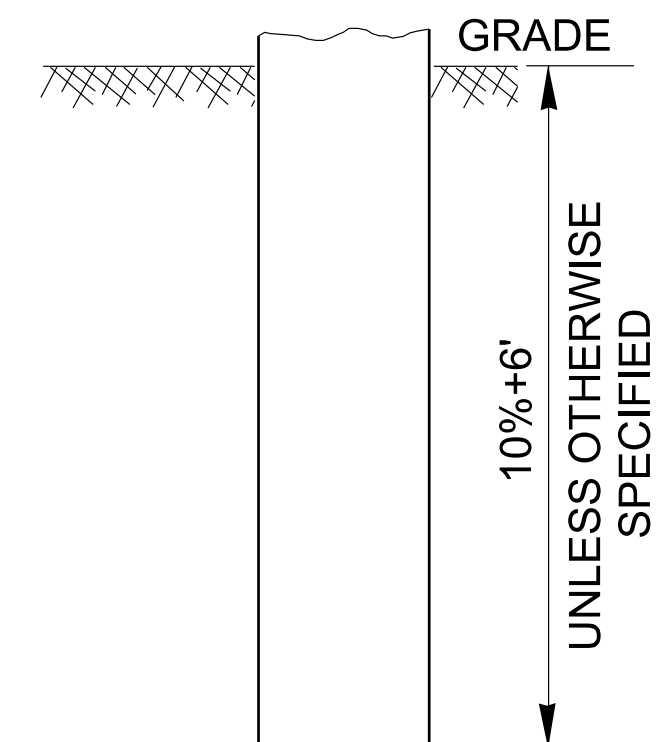
PLAN VIEW



DETAIL "A"



DETAIL "B"



DIRECT BURIAL DETAIL

DIMENSIONS				
HA	H	A	B	C
110'0"	93'0"	17'0"	79'0"	66'6"
115'0"	97'6"	17'6"	83'6"	71'0"
120'0"	102'0"	18'0"	88'0"	75'6"
125'0"	106'6"	18'6"	92'6"	80'0"
130'0"	111'0"	19'0"	97'0"	84'6"
135'0"	115'6"	19'6"	101'6"	89'0"
140'0"	120'0"	20'0"	106'0"	93'6"
145'0"	124'6"	20'6"	110'6"	98'0"
150'0"	129'0"	21'0"	115'0"	102'6"
155'0"	133'6"	21'6"	119'6"	107'0"
160'0"	138'0"	22'0"	124'0"	111'6"
165'0"	142'6"	22'6"	128'6"	116'0"
170'0"	147'0"	23'0"	133'0"	120'6"
175'0"	151'6"	23'6"	137'6"	125'0"
180'0"	156'0"	24'0"	142'0"	129'6"
185'0"	160'6"	24'6"	146'6"	134'0"
190'0"	165'0"	25'0"	151'0"	138'6"
195'0"	169'6"	25'6"	155'6"	143'0"
200'0"	174'0"	26'0"	160'0"	147'5"
205'0"	178'6"	26'6"	164'6"	152'0"

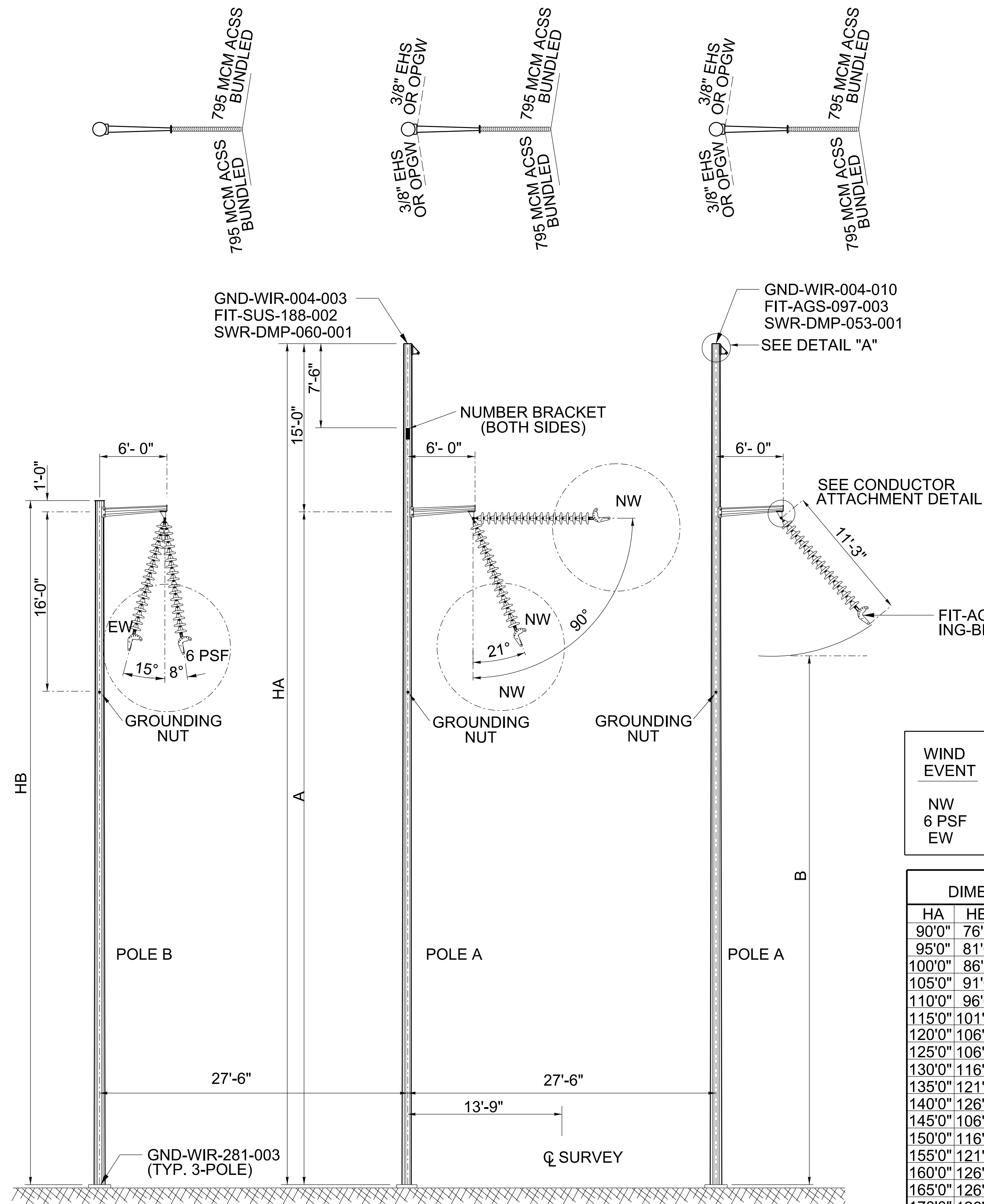
GENERAL NOTES

- (2) 1/2" ALL THREAD STUDS, 1-1/2" APART, 1" MINIMUM PROTRUSION. INSTALL 3" X 1-1/4" COVER PLATE WITH NUTS. FOR PAINTED POLES PRIME, BUT DO NOT PAINT AREA UNDER COVER PLATE. COVER PLATE SHALL BE INSTALLED WHEN WEATHERING STEEL IS SPECIFIED.
- 1" DIAMETER HOLE WITH 1/8" CHAMFER BOTH SIDES.
- INSTALL STEP LUGS FROM 85' ABOVE GROUND LINE TO TOP OF POLE.
- POLE HOLE DEPTH SHALL BE ACCURATE. WHEN HOLES DO NOT ALLOW STRUCTURE TO BE EVEN AND LEVEL, THE DEEP HOLE SHALL BE BACKFILLED AND THOROUGHLY TAMPED TO PROPER DEPTH.
- POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
- SEE SHEET T-0-400 FOR GENERAL DETAILS.
- SEE SHEET T-0-400A FOR ARM AND END PLATE DETAILS.
- SUSPENSION INSULATORS TO BE 345kV POLYMER INSULATORS.
- STRUCTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.
- BEARING PLATES TO BE MINIMUM 12" LARGER THAN POLE DIAMETER. PLATE THICKNESS IS TO BE 3/4".

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0° - 2° TANGENT STRUCTURE DRAWING STEEL H-FRAME - EMBEDDED				
Xcel Energy®		SD-T40-710	SCALE NONE	REV NONE

SD-T40-711.DGN

4/30/2016 5:20:39 PM

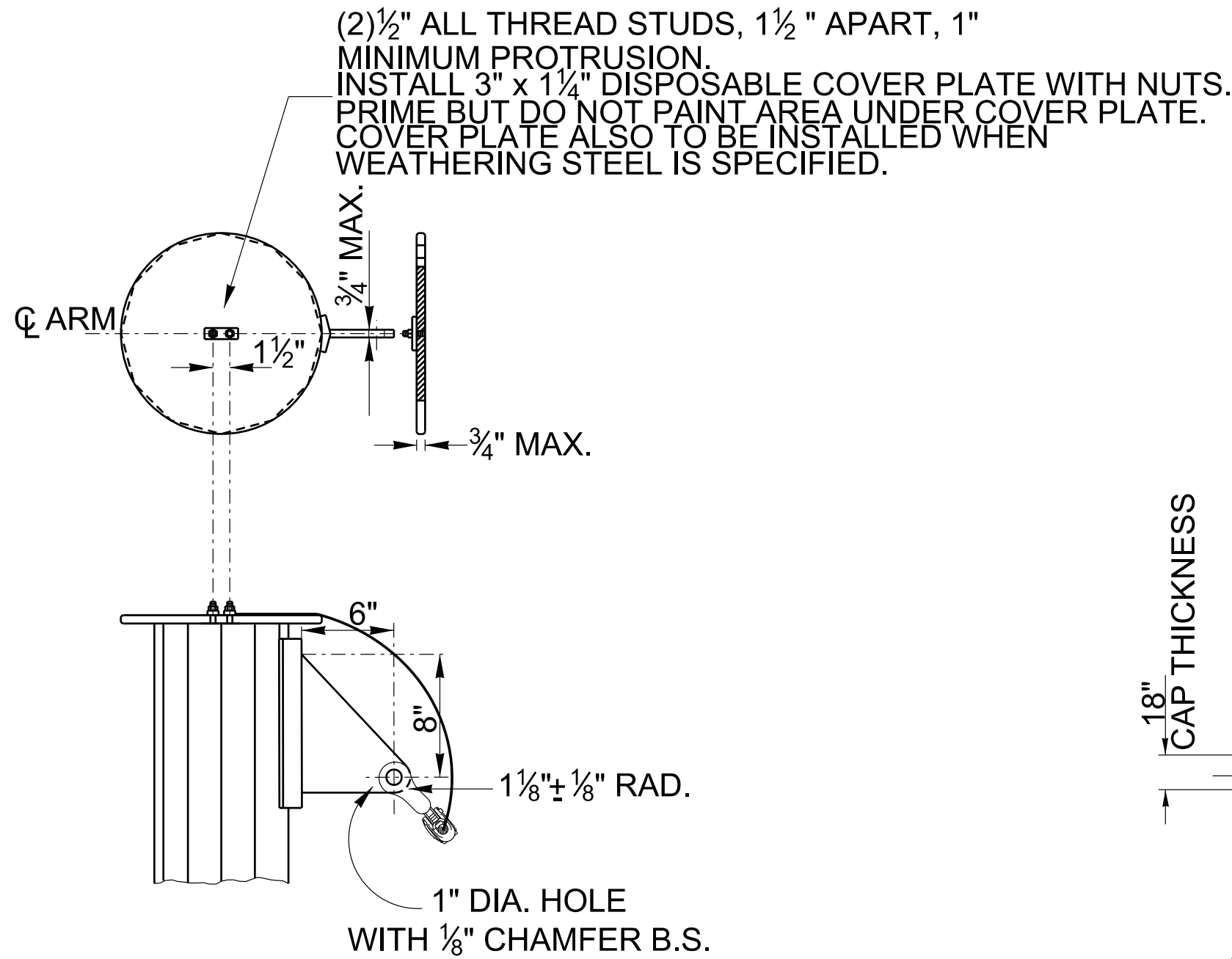


WIND EVENT	RADIAL CLEARANCE
NW	9'-3"
6 PSF	6'-6"
EW	2'-9"

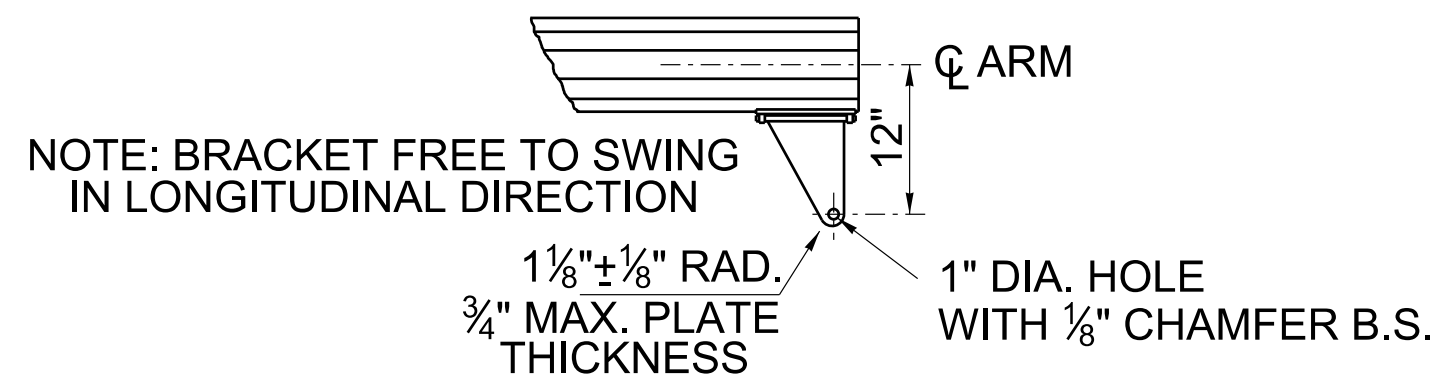
DIMENSIONS			
HA	HB	A	B
90'0"	76'0"	75'0"	61'0"
95'0"	81'0"	80'0"	66'0"
100'0"	86'0"	85'0"	71'0"
105'0"	91'0"	90'0"	76'0"
110'0"	96'0"	95'0"	81'0"
115'0"	101'0"	100'0"	86'0"
120'0"	106'0"	105'0"	91'0"
125'0"	106'0"	110'0"	96'0"
130'0"	116'0"	115'0"	101'0"
135'0"	121'0"	120'0"	106'0"
140'0"	126'0"	125'0"	111'0"
145'0"	106'0"	130'0"	116'0"
150'0"	116'0"	135'0"	111'0"
155'0"	121'0"	140'0"	126'0"
160'0"	126'0"	145'0"	131'0"
165'0"	126'0"	150'0"	136'0"
170'0"	126'0"	155'0"	141'0"
175'0"	126'0"	160'0"	146'0"
180'0"	126'0"	165'0"	151'0"

GENERAL NOTES

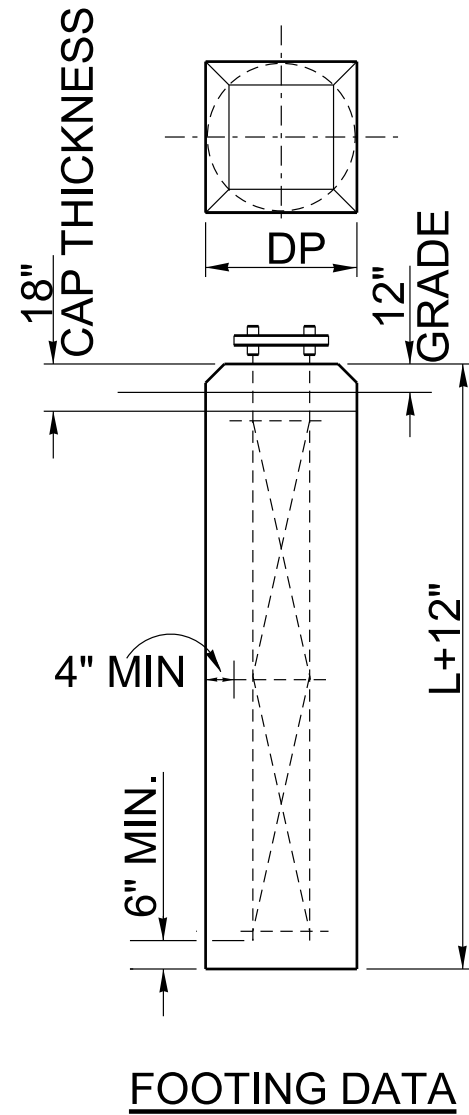
- 1" DIAMETER HOLE WITH 1/8" CHAMFER BOTH SIDES, TYPICAL.
- (2) 1/2" ALL THREAD STUDS, 1-1/2" APART, 1" MINIMUM PROTRUSION. INSTALL 3" X 1-1/4" COVER PLATE WITH NUTS. FOR PAINTED POLES PRIME, BUT DO NOT PAINT AREA UNDER COVER PLATE. COVER PLATE SHALL BE INSTALLED WHEN WEATHERING STEEL IS SPECIFIED.
- INSTALL STEP LUGS FROM 85' ABOVE BASE PLATE TO TOP OF POLE.
- POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
- SEE SHEET T-0-400 FOR GENERAL DETAILS.
- SEE SHEET T-0-400A FOR END PLATE DETAILS.
- SEE SHEET T-0-400C FOR ANCHOR BOLT CAGE DETAILS.
- SUSPENSION INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS.
- RUPTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.



STATIC CONNECTION
DETAIL "A"



CONDUCTOR ATTACHMENT

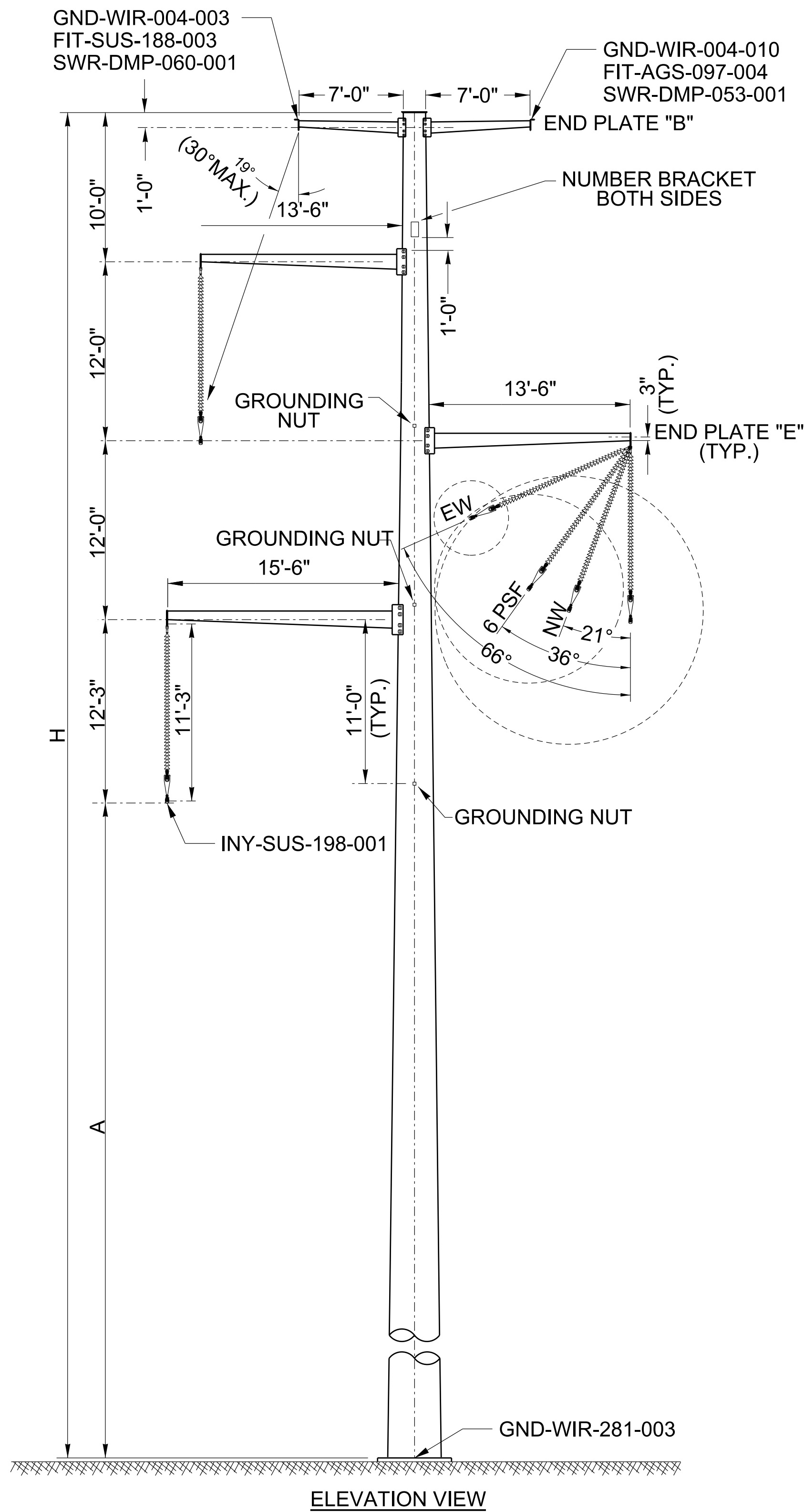


FOOTING DATA

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10° - 18° RUNNING ANGLE		345kV	
STRUCTURE DRAWING			
STEEL 3-POLE - FOUNDATION			
 Xcel Energy [®]	SD-T40-711	SCALE NONE	REV NONE

SD-T40-715.DGN

4/30/2016 5:28:08 PM

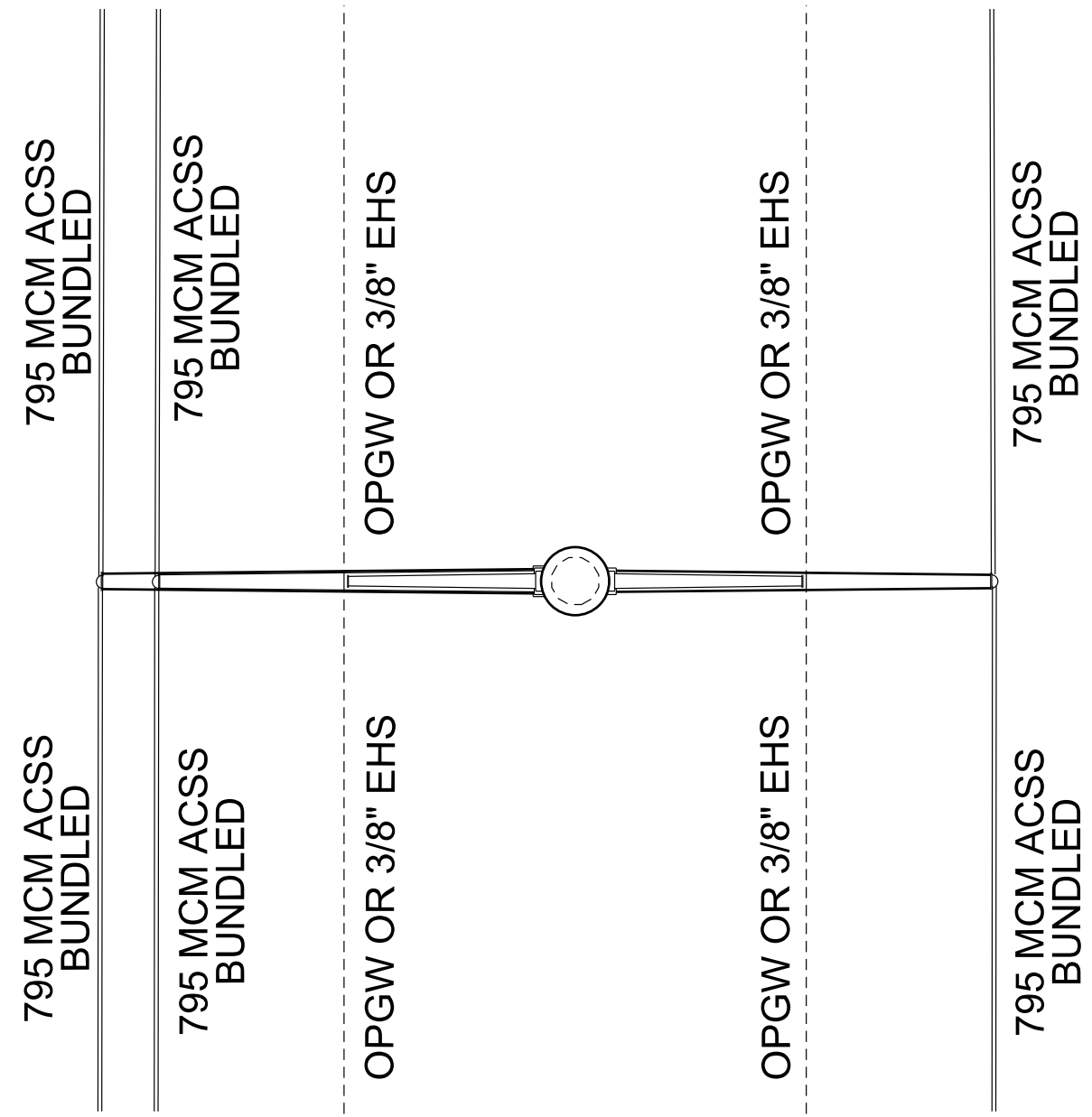


WIND EVENT	RADIAL CLEARANCE
NW	9'-3"
6 PSF	6'-6"
EW	2'-9"

DIMENSIONS	
H	A
90'0"	43'3"
95'0"	48'3"
100'0"	53'3"
105'0"	58'3"
110'0"	63'3"
115'0"	68'3"
120'0"	73'3"
125'0"	78'3"
130'0"	83'3"
135'0"	88'3"
140'0"	93'3"
145'0"	98'3"
150'0"	103'3"
155'0"	108'3"
160'0"	113'3"
165'0"	118'3"
170'0"	123'3"
175'0"	128'3"
180'0"	133'3"

GENERAL NOTES

1. INSTALL STEP LUGS FROM 85' ABOVE BASE PLATE TO TOP OF POLE.
2. POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
3. SEE SHEET T-0-400 FOR GENERAL DETAILS.
4. SEE SHEET T-0-400A FOR ARM END PLATE AND DEADEND EAR DETAILS.
5. SEE SHEET T-0-400C FOR ANCHOR BOLT CAGE DETAILS.
6. SUSPENSION INSULATORS ARE TO BE 345KV POLYMER INSULATORS.
7. STRUCTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.

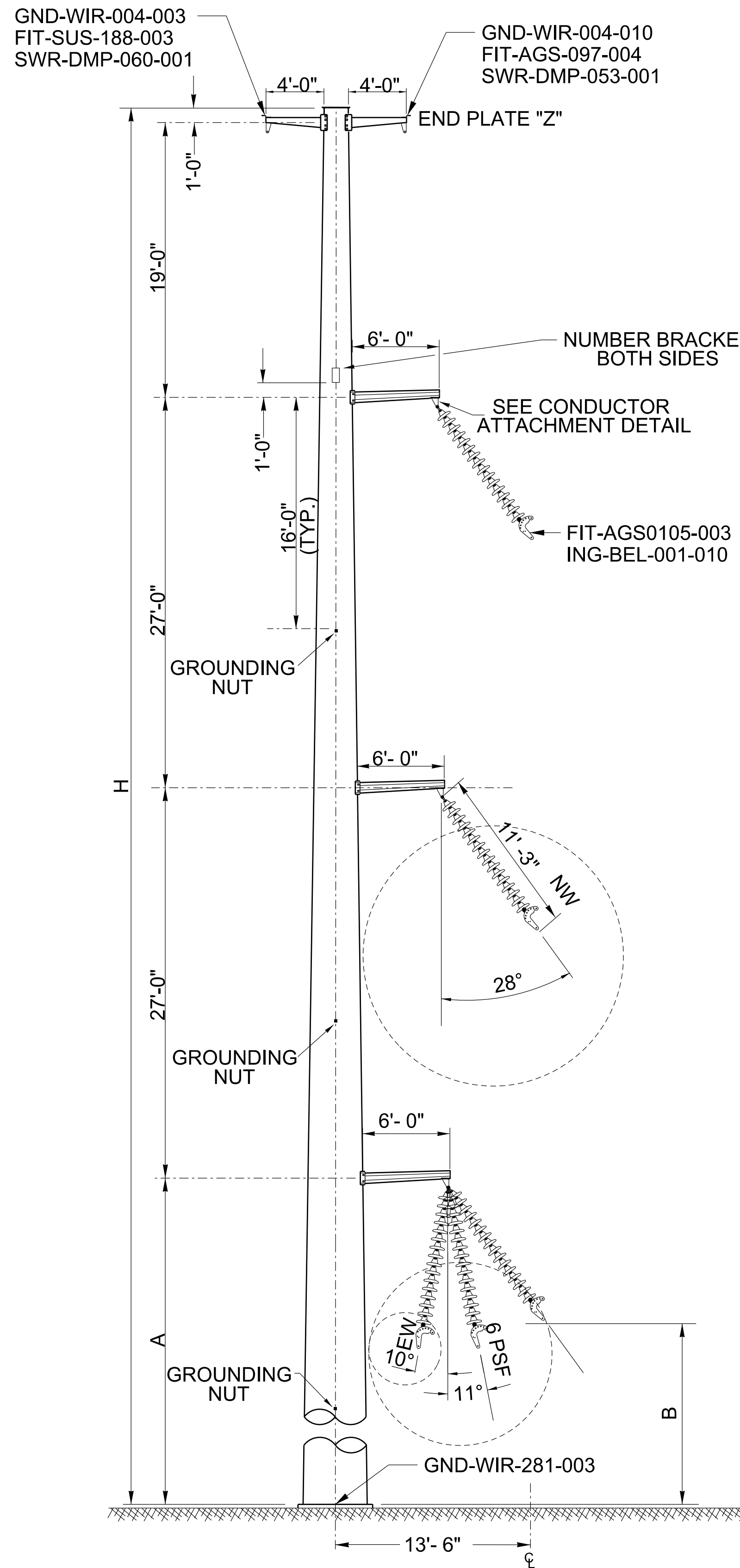


PLAN VIEW

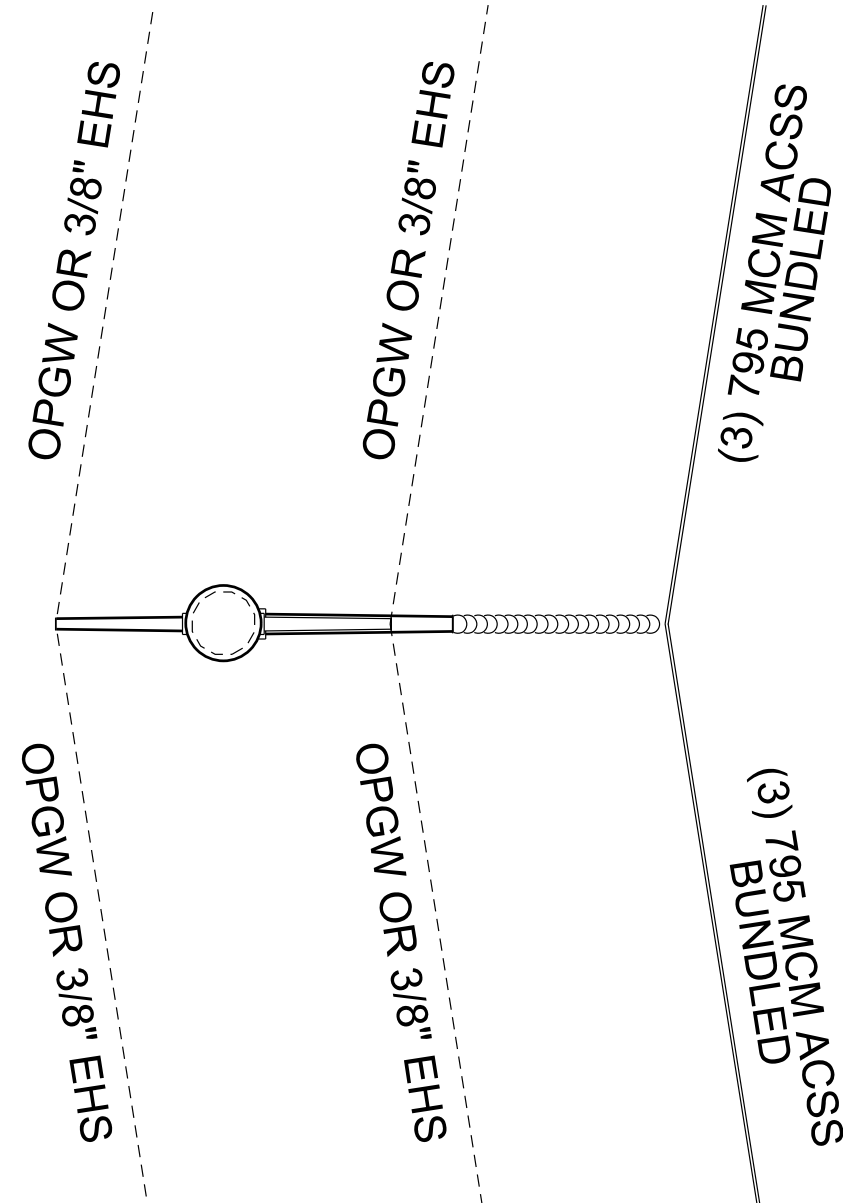
THIS MAP/DOCUMENT IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS.YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS, MANUALS AND SPARS. INTERNAL INFORMATION; DO NOT COPY OR DISTRIBUTE WITHOUT EXPRESS WRITTEN CONSENT FROM XCEL ENERGY			
0° - 2° TANGENT STRUCTURE DRAWING STEEL SINGLE POLE - FOUNDATION		345kV	
Xcel Energy®	SD-T40-715	SCALE NONE	REV NONE

SD-T40-716.DGN

4/30/2016 5:17:31 PM



ELEVATION VIEW



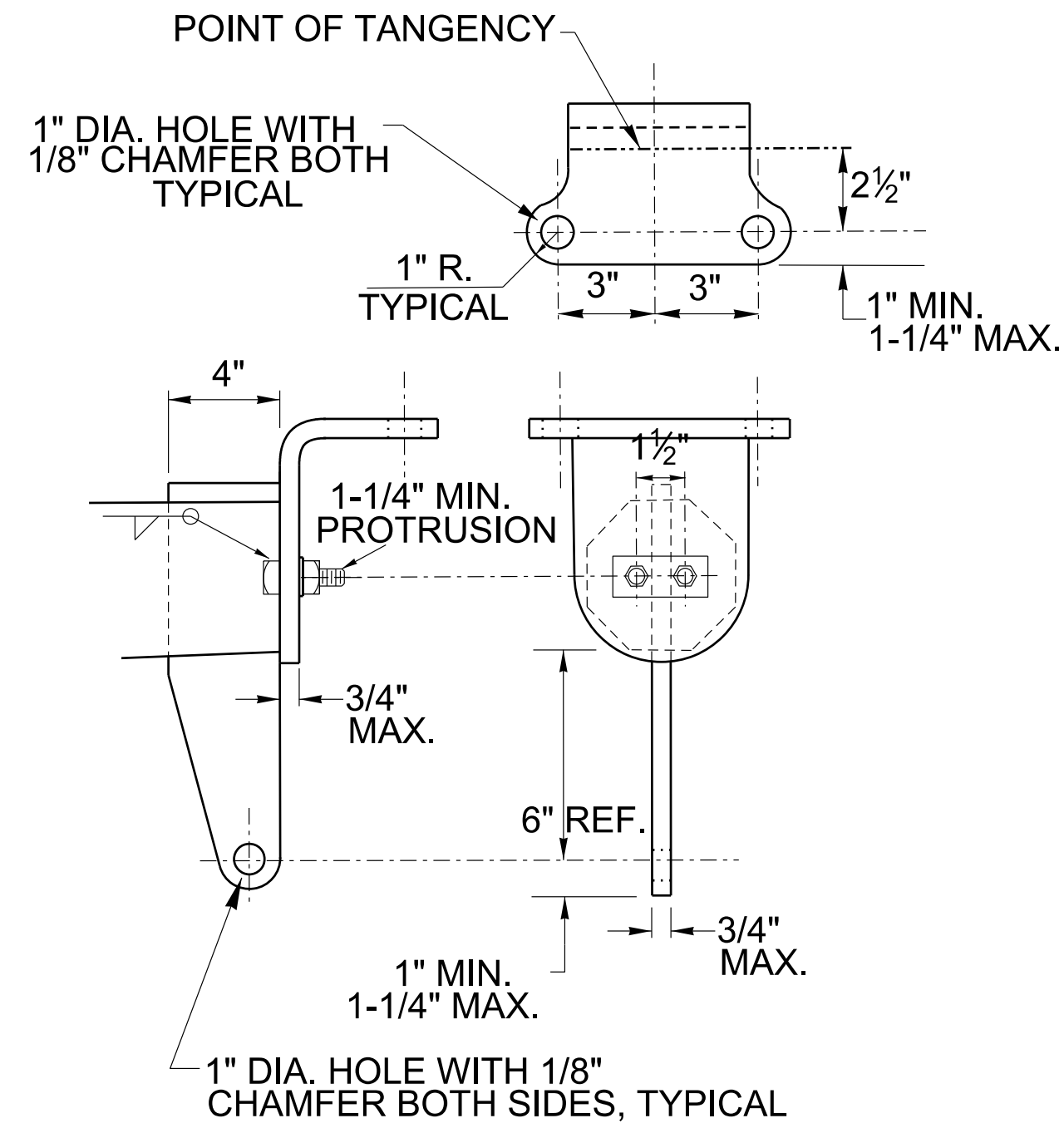
PLAN VIEW

WIND EVENT	RADIAL CLEARANCE
NW	9'-3"
6 PSF	6'-6"
EW	2'-9"

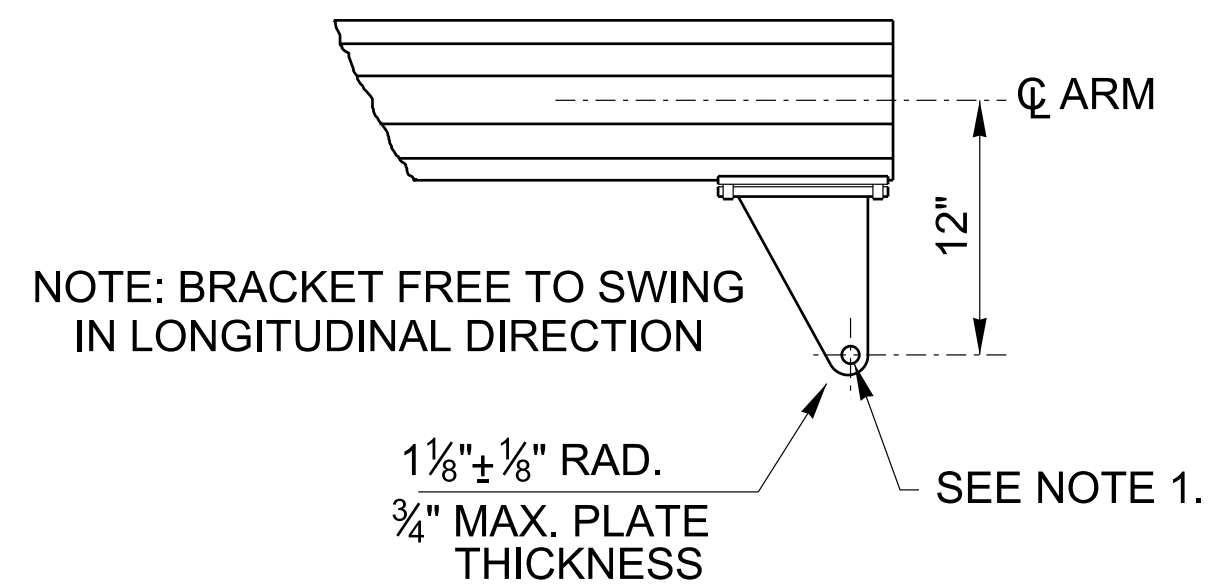
DIMENSIONS		
H	A	B
115'	41'0"	30'9"
120'	46'0"	35'9"
125'	51'0"	40'9"
130'	56'0"	45'9"
135'	61'0"	50'9"
140'	66'0"	55'9"
145'	71'0"	60'9"
150'	76'0"	65'9"
155'	81'0"	70'9"
160'	86'0"	75'9"
165'	91'0"	80'9"
170'	96'0"	85'9"
175'	101'-0"	90'9"
180'	106'-0"	95'9"

GENERAL NOTES

1. INSTALL STEP LUGS FROM 85' ABOVE BASE PLATE TO TOP OF POLE.
2. POLE NUMBER SHALL BE INSTALLED ON EACH POLE AS REQUIRED.
3. SEE SHEET T-0-400 FOR GENERAL DETAILS.
4. SEE SHEET T-0-400A FOR ARM END PLATE AND DEADEND EAR DETAILS.
5. SEE SHEET T-0-400C FOR ANCHOR BOLT CAGE DETAILS.
6. SUSPENSION INSULATORS ARE TO BE 345KV TOUGHENED GLASS INSULATORS.
7. STRUCTURE DESIGN SHOWN IS FOR CONFIGURATION ONLY. ENGINEERING STRENGTH CALCULATIONS AND STRUCTURE DESIGN DETAILS MUST BE PERFORMED FOR EACH PROJECT.



END PLATE "Z"



CONDUCTOR ATTACHMENT

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6° - 16° RUNNING ANGLE
STRUCTURE DRAWING
STEEL SINGLE POLE - FOUNDATION

345kV

SD-T40-716
SCALE NONE
REV NONE