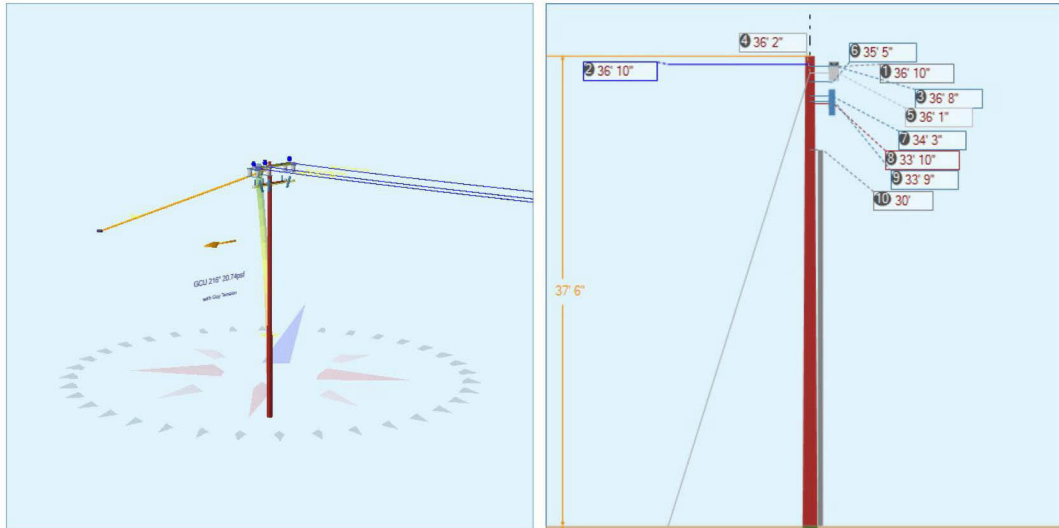


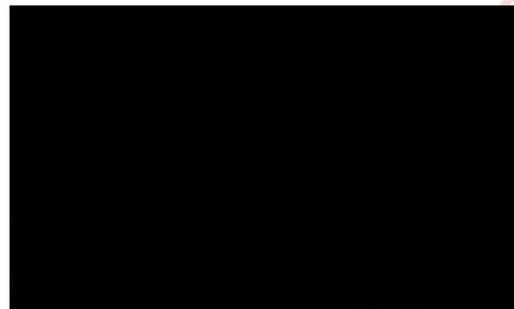


Pole Num:	0	Pole Length / Class:	45 / 3	Code:	HFTD 2-3 Peak Wind	Structure Type:	Deadend
PM Order Number	[REDACTED]	Species:	DOUGLAS FIR	GO 95 Rule:	At Installation (New)	Pole Strength Factor:	0.50
Estimator LAN ID	[REDACTED]	Setting Depth (ft):	7.50	Construction Grade:	B	Transverse Wind LF:	1.00
Sketch Location	LOC_103	G/L Circumference (in):	36.94	Loading District:	Heavy	Wire Tension LF:	1.00
Joint Pole Number	Unset	G/L Fiber Stress (psi):	7,600	Ice Thickness (in):	0.00	Vertical LF:	1.00
Notification	[REDACTED]	Allowable Stress (psi):	3,800	Wind Speed (mph):	90.00	Pole Factor of Safety:	2.28
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	20.74	Vertical Factor of Safety:	44.44
Latitude:	39.911440 Deg	Longitude:	-121.327593 Deg	Elevation:	1718.999944992 Feet	Bending Factor of Safety:	2.31



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	0.0	215.6
Groundline	0.0	215.6
Vertical	32.0	122.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	43,760	211.6
Groundline	43,760	211.6
GL Allowable	50,550	
Overturn	67,000	



Digitally signed

by [REDACTED]

Date: 2021.06.15

14:07:53 -07'00'

Guy System Component Summary					Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	Lead Length (ft)	Lead Angle (deg)	Height (ft)	Nominal Capacity (%)	Wind Angle (deg)	Max* Load Capacity (%)	Wind Angle (deg)	
Anchor - 18M	42.0	302.0		33.3	215.6	37.7	120.0	
EHS 3/8 (Down)			36.2	77.8	215.6	88.1	120.0	
System Capacity Summary:					Adequate		Adequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 211.6°										
	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	470	30.4	17,541	40.1	34.7	1,301	96	1	1,302	34.3
GuyBraces	-19	-1.2	-703	-1.6	-1.4	-52	2,057	19	-33	-0.9
GenericEquipments	253	16.4	9,361	21.4	18.5	695	240	2	697	18.3
Pole	617	40.0	11,792	27.0	23.3	875	1,137	10	885	23.3
Crossarms	6	0.4	208	0.5	0.4	15	551	5	20	0.5
Risers	155	10.1	3,146	7.2	6.2	233	0	0	233	6.1
Insulators	63	4.1	2,416	5.5	4.8	179	111	1	180	4.7
Pole Load	1,544	100.0	43,760	100.0	86.6	3,246	4,192	39	3,285	86.4
Pole Reserve Capacity			6,790		13.4	554			515	13.6

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 211.6°										
	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
PG&E	927	60.0	31,968	73.1	63.2	2,372	3,055	28	2,400	63.2
Pole	617	40.0	11,792	27.0	23.3	875	1,137	10	885	23.3
Totals:	1,544	100.0	43,760	100.0	86.6	3,246	4,192	39	3,285	86.4

Detailed Load Components:

Power	Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)	
Primary	1/0 (6/1) ACSR XLPE TW	PG&E	36.83	62.02	0.7480	4.60	0.284	225.0	122.0	225.0	1,872	423	9	5,345	5,777

Primary	1/0 (6/1) ACSR XLPE TW	PG&E	36.83	32.89	0.7480	4.60	0.284	225.0	122.0	225.0	1,872	423	7	5,345	5,775
Primary	1/0 (6/1) ACSR XLPE TW	PG&E	36.83	62.02	0.7480	4.60	0.284	225.0	122.0	225.0	1,872	423	-9	5,345	5,759
Totals:												1,268	7	16,035	17,310

GenericEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Box	Insulator Bracket	PG&E	36.66	57.28	122.0	0.0	10.00	3.00	30.00	--	6.00	48	762	810
Cylinder	Switch Insulator	PG&E	36.07	59.12	196.6	0.0	10.00	14.00	--	8.00	--	48	593	640
Cylinder	Switch Insulator	PG&E	36.07	57.16	216.3	0.0	10.00	14.00	--	8.00	--	47	593	640
Box	Insulator Bracket	PG&E	36.66	22.73	122.0	0.0	10.00	3.00	30.00	--	6.00	18	762	781
Cylinder	Switch Insulator	PG&E	36.07	27.03	176.5	0.0	10.00	14.00	--	8.00	--	18	593	611
Cylinder	Switch Insulator	PG&E	36.07	22.42	223.1	0.0	10.00	14.00	--	8.00	--	18	593	611
Box	Insulator Bracket	PG&E	36.66	57.28	122.0	0.0	10.00	3.00	30.00	--	6.00	-47	762	715
Cylinder	Switch Insulator	PG&E	36.07	57.16	27.7	0.0	10.00	14.00	--	8.00	--	-48	593	545
Cylinder	Switch Insulator	PG&E	36.07	59.12	47.4	0.0	10.00	14.00	--	8.00	--	-47	593	545
Box	Switch SB	PG&E	35.41	57.28	122.0	0.0	10.00	1.00	36.00	--	3.00	-47	305	257
Box	Switch SB	PG&E	35.41	57.28	122.0	0.0	10.00	1.00	36.00	--	3.00	48	305	352
Box	Switch SB	PG&E	35.41	22.73	122.0	0.0	10.00	1.00	36.00	--	3.00	18	305	323
Cylinder	Pothead	PG&E	33.75	46.14	122.0	0.0	20.00	25.00	--	5.00	--	73	608	681
Cylinder	Pothead	PG&E	33.75	46.14	122.0	0.0	20.00	25.00	--	5.00	--	-73	608	534
Cylinder	Pothead	PG&E	33.75	22.13	122.0	0.0	20.00	25.00	--	5.00	--	30	608	638
Cylinder	Arrester	PG&E	34.25	44.05	302.0	0.0	20.00	12.00	--	3.00	--	73	175	248
Cylinder	Arrester	PG&E	34.25	44.05	302.0	0.0	20.00	12.00	--	3.00	--	-73	175	102
Cylinder	Arrester	PG&E	34.25	18.12	302.0	0.0	20.00	12.00	--	3.00	--	30	175	205
Totals:												134	9,104	9,238

Crossarm		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)	
Normal	US Air Switch 900A - Deadend	PG&E	36.83	5.70	122.0	122.0	515.00	4.25	4.00	126.00	1	142	144	
Normal	Cutout Arm w/Arresters and Potheads	PG&E	33.83	4.88	122.0	122.0	36.00	4.00	2.00	92.00	0	61	61	
Totals:												2	203	205

Riser		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Riser 4" PG&&E 167.0°	Riser 4" PG&&E	PG&E	30.00	6.09	167.0	167.0	30.00	360.00	4.00	4.00	360.00	0	3,105	3,105
Totals:												0	3,105	3,105

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Post	Post 12 (P/N 2)	PG&E	37.01	57.00	206.3	0.0	13.00	6.00	12.00	62	386	448
Post	Post 12 (P/N 2)	PG&E	37.01	22.00	197.5	0.0	13.00	6.00	12.00	24	386	410

Post	Post 12 (P/N 2)	PG&E	37.01	-57.00	37.7	0.0	13.00	6.00	12.00	-62	386	324
Deadend	Dead-End 18.75 (P/N 2)	PG&E	36.83	57.00	206.3	0.0	4.00	3.90	18.75	19	387	406
Deadend	Dead-End 18.75 (P/N 2)	PG&E	36.83	22.00	197.5	0.0	4.00	3.90	18.75	7	387	394
Deadend	Dead-End 18.75 (P/N 2)	PG&E	36.83	-57.00	37.7	0.0	4.00	3.90	18.75	-19	387	368
Underhung	Single Bolt	PG&E	36.66	57.00	206.3	0.0	5.00	3.00	0.00	24	0	24
Underhung	Single Bolt	PG&E	36.66	22.00	197.5	0.0	5.00	3.00	0.00	9	0	9
Underhung	Single Bolt	PG&E	36.66	-57.00	37.7	0.0	5.00	3.00	0.00	-24	0	-24
Underhung	Single Bolt	PG&E	36.66	-57.00	37.7	0.0	5.00	3.00	0.00	-24	0	-24
Underhung	Single Bolt	PG&E	36.66	57.00	206.3	0.0	5.00	3.00	0.00	24	0	24
Underhung	Single Bolt	PG&E	36.66	22.00	197.5	0.0	5.00	3.00	0.00	9	0	9
Bolt	Cutout	PG&E	34.00	44.00	205.7	0.0	5.00	5.00	0.00	18	0	18
Bolt	Cutout	PG&E	34.00	-44.00	38.3	0.0	5.00	5.00	0.00	-18	0	-18
Bolt	Cutout	PG&E	34.00	18.00	196.8	0.0	5.00	3.00	0.00	8	0	8
Bolt	Lightning Arrester	PG&E	34.00	44.00	205.7	180.0	5.00	3.00	0.00	18	0	18
Bolt	Lightning Arrester	PG&E	34.00	-44.00	38.3	180.0	5.00	3.00	0.00	-18	0	-18
Bolt	Lightning Arrester	PG&E	34.00	18.00	196.8	180.0	5.00	3.00	0.00	8	0	8
Totals:										65	2,319	2,384

Guy Wire and Brace	Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)	
EHS 3/8	Down	PG&E	36.17	0.00	42.00	0.375	75.00	302.0	19.8	0.273	46.95	1.77

Guy Wire and Brace (Loads and Reactions)	Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension ^{*2} (lbs)	Maximum Tension ² (lbs)	Applied Tension ³ (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL ³ (ft-lb)	
EHS 3/8	Down	2.30e+7	15,400	0.50	7,700	700	6,781	6,781	5,992	2,028	5,639	-35	-694
Totals:										2,028	5,639	-35	-694

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load ² (lbs)	Load at Pole MCU ³ (lbs)	Max Required Capacity ² (%)
Anchor - 18M	PG&E	6.00	42.00	302.0	36,000	0.50	18,000	6,781	5,992	37.7

Pole Buckling													
Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	32.00	34.83	10.44	5.42	7.32	11.77	2.38e+6	60.00	57.00	37.50	92,861	931.58	22.22

Notes		
Date	Author	Description
8/3/2015	[REDACTED]	Install C/O Arm min 2.5 ft below Primary Conductor
Install C/O Arm min 2.5 ft below Primary Conductor		
3/22/2021	[REDACTED]	Note [REDACTED]
Riser and terminations to be installed on phase 2 PM [REDACTED]		