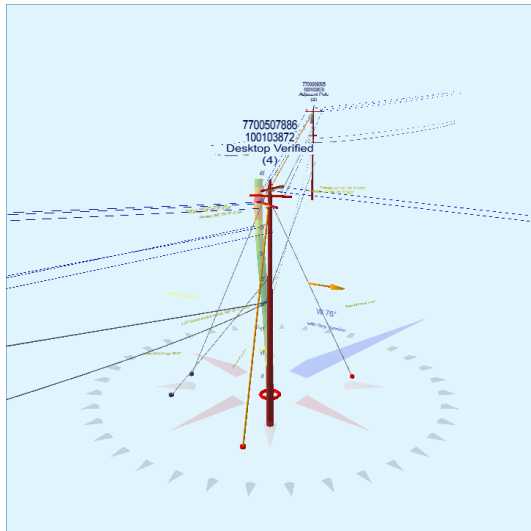


SAP Equip ID:	<b>100103872</b>	Pole Length / Class:	<b>50 / 2</b>	Code:	<b>GO 95</b>	Structure Type:	<b>Guyed Tangent</b>
PM Order Number	<b>Unset</b>	Species:	<b>DOUGLAS FIR</b>	GO 95 Rule:	<b>At Replace (Existing)</b>	Pole Strength Factor:	<b>0.38</b>
Estimator LAN ID	<b>Unset</b>	Setting Depth (ft):	<b>6.5</b>	Construction Grade:	<b>A</b>	Transverse Wind LF:	<b>1.00</b>
Sketch Location	<b>Unset</b>	G/L Circumference (in):	<b>53.97</b>	Loading District:	<b>Heavy</b>	Wire Tension LF:	<b>1.00</b>
Joint Pole Number	<b>Unset</b>	G/L Fiber Stress (psi):	<b>8,000</b>	Ice Thickness (in):	<b>0.25</b>	Vertical LF:	<b>1.00</b>
Notification	<b>Unset</b>	Allowable Stress (psi):	<b>2,971</b>	Wind Speed (mph):	<b>48.41</b>	Pole Factor of Safety:	<b>2.07</b>
Aux Data 6	<b>Unset</b>	Fiber Stress Ht. Reduc:	<b>No</b>	Wind Pressure (psf):	<b>6.00</b>	Vertical Factor of Safety:	<b>24.02</b>
Latitude:	<b>39.17356</b>	Longitude:	<b>-121.02924</b>	Elevation:	<b>2647.86'</b>	Bending Factor of Safety:	<b>2.24</b>



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Crossarm allowance 300 lbs			
Maximum	<b>128.6</b>	39.0	75.6
Groundline	<b>49.5</b>	0.0	252.7
Vertical	<b>11.1</b>	37.6	46.2

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Crossarm allowance 300 lbs			
Max Cap Util	<b>19,242</b>	1.3	75.6
Groundline	<b>48,159</b>	238.8	252.7
GL Allowable	<b>123,254</b>	GL Remaining Strength 100%	
Overturn	<b>35,300</b>	<b>Check Overturn</b>	

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	20.0	256.2		0.0	75.6	0.0	0.0
(Down)			42.0	0.0	75.6	0.0	0.0
Anchor	20.0	148.5		111.8	75.6	129.3	280.0
(Down)			40.5	83.1	75.6	96.2	280.0
Anchor	20.0	17.7		78.9	75.6	100.1	245.6
(Down)			39.0	58.6	75.6	74.4	245.6
Anchor	20.0	226.2		0.0	75.6	0.0	0.0
(Down)			24.5	0.0	75.6	0.0	0.0
System Capacity Summary:				Inadequate		Inadequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 238.8°										
	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	3,897	172.6	116,976	242.9	94.9	3,489	-777	-3	3,485	117.3
Comms	1,387	61.4	22,807	47.4	18.5	680	229	1	681	22.9
GuyBraces	-2,715	-120.2	-85,635	-177.8	-69.5	-2,554	17,180	74	-2,480	-83.5
Pole	-262	-11.6	-4,369	-9.1	-3.5	-130	2,350	10	-120	-4.0
Crossarms	-41	-1.8	-1,352	-2.8	-1.1	-40	150	1	-40	-1.3
Insulators	-9	-0.4	-268	-0.6	-0.2	-8	81	0	-8	-0.3
Pole Load	2,258	100.0	48,159	100.0	39.1	1,436	19,213	83	1,519	51.1
Pole Reserve Capacity			75,095		60.9	1,535			1,452	48.9

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 238.8°										
	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	1,134	50.2	29,736	61.8	24.1	887	16,625	72	959	32.3
Comm	1,386	61.4	22,791	47.3	18.5	680	238	1	681	22.9
Pole	-262	-11.6	-4,369	-9.1	-3.5	-130	2,350	10	-120	-4.0
<Undefined>	0	0.0	0	0.0	0.0	0	0	0	0	0.0
<b>Totals:</b>	2,258	100.0	48,159	100.0	39.1	1,436	19,213	83	1,519	51.1

## 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	2 (7/1) ACSR (SPARATE) HVY	PG&E	42.00	32.61	0.3250	0.05	0.107	69.8	54.6	69.8	1,690	-20,511	-2	-5	-20,518
Primary	2 (7/1) ACSR (SPARATE) HVY	PG&E	42.00	32.61	0.3250	0.05	0.107	67.2	52.4	67.2	1,690	-20,428	-11	-7	-20,447
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	40.50	32.67	0.7240	1.13	0.373	165.6	321.8	165.6	3,440	4,907	17	-542	4,382
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	40.50	32.67	0.7240	1.15	0.373	167.4	321.1	167.4	3,440	5,399	-17	-544	4,838
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	39.00	23.92	0.7240	0.99	0.373	151.8	185.7	151.8	3,440	23,365	-21	-396	22,948
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	39.00	42.92	0.7240	0.99	0.373	151.8	185.7	151.8	3,440	23,365	-19	-396	22,950
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	39.00	42.92	0.7240	0.99	0.373	151.8	185.7	151.8	3,440	23,365	8	-396	22,976
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	43.50	8.00	0.7240	1.13	0.373	166.4	321.4	166.4	3,440	5,559	0	-583	4,976
											<b>Totals:</b>	<b>45,019</b>	<b>-45</b>	<b>-2,869</b>	<b>42,105</b>

Comm		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)
Overlashed Bundle	2.25" Communication Bundle	Comm	20.00	12.43	0.3060	4.18	0.165	162.9	322.2	162.9	2,200	1,462	11	-352	1,122
Telco	CU CABLE	Comm	19.91	12.43	2.0000		2.300	162.9	322.2	162.9			56	-242	-187
Overlashed Bundle	2.25" Communication Bundle	Comm	20.00	12.43	0.3060	3.68	0.165	151.8	185.7	151.8	2,200	7,668	11	-270	7,408
Telco	CU CABLE	Comm	19.91	12.43	2.0000		2.300	151.8	185.7	151.8			52	-186	-134
											<b>Totals:</b>	<b>9,129</b>	<b>130</b>	<b>-1,050</b>	<b>8,209</b>

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	Crossarm	PG&E	42.00	5.89	76.2	76.2	50.00	4.50	3.50	96.00	-7	-336	-343
Normal	Crossarm	PG&E	40.50	6.05	328.5	328.5	50.00	4.50	3.50	96.00	0	-12	-12
Normal	Crossarm	PG&E	39.00	6.21	197.7	197.7	50.00	4.50	3.50	96.00	6	-137	-132
Totals:											-1	-486	-487

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)
Deadend	Insulator	PG&E	42.00	29.50	154.9	0.0	8.99	3.00	8.00	0	-12	-12
Deadend	Insulator	PG&E	42.00	-29.50	357.5	0.0	8.99	3.00	8.00	0	-12	-12
Deadend	Insulator	PG&E	40.50	29.50	46.9	0.0	8.99	3.00	8.00	0	-11	-11
Deadend	Insulator	PG&E	40.50	-29.50	250.1	0.0	8.99	3.00	8.00	0	-11	-11
Deadend	Insulator	PG&E	39.00	19.25	269.8	0.0	8.99	3.00	8.00	0	-11	-11
Deadend	Insulator	PG&E	39.00	40.50	279.0	0.0	8.99	3.00	8.00	0	-11	-11
Deadend	Insulator	PG&E	39.00	-40.50	116.4	0.0	8.99	3.00	8.00	0	-11	-11
Deadend	Insulator	PG&E	43.50	0.00	0.0	328.5	8.99	3.00	8.00	0	-12	-12
Post	Insulator	Comm	20.00	0.00	200.8	200.8	8.99	3.00	8.00	0	-6	-6
									Totals:	0	-96	-96

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)
	Down	PG&E	42.00	0.00	20.00	0.5	100.00	256.2	64.1	0.409	49.83	0.00
	Down	PG&E	40.50	0.00	20.00	0.5	100.00	148.5	63.3	0.409	48.44	1.27
	Down	PG&E	39.00	0.00	20.00	0.5	100.00	17.7	62.5	0.409	47.05	0.87
	Down	PG&E	24.50	0.00	20.00	0.5	100.00	226.2	50.5	0.409	34.12	0.00

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 Tension² (lbs)	Applied Tension³ (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL³ (ft-lb)
	Down	2.60e+7	26,900	0.50	13,450	700	0	0	0	0	0	0	38
	Down	2.60e+7	26,900	0.50	13,450	700	12,933	12,933	11,175	9,985	5,019	-25	-1,470
	Down	2.60e+7	26,900	0.50	13,450	700	10,005	10,005	7,886	6,992	3,647	-2,749	-104,515
	Down	2.60e+7	26,900	0.50	13,450	700	0	0	0	0	0	0	0
Totals:										16,976	8,666	-2,774	-105,947

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 <sup>2</sup> (lbs)	Load at Pole MCU <sup>3</sup> (lbs)	Max Required Capacity <sup>2</sup> (%)
Anchor		30.00	20.00	256.2	20,000	0.50	10,000	0	0	0.0
Anchor		30.00	20.00	148.5	20,000	0.50	10,000	12,933	11,175	129.3
Anchor		30.00	20.00	17.7	20,000	0.50	10,000	10,005	7,886	100.1
Anchor		30.00	20.00	226.2	20,000	0.50	10,000	0	0	0.0

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	37.65	36.97	14.23	9.91	7.96	17.19	2.38e+6	60.00	57.00	43.50	173,267	1730.86	9.01