

ANALYSIS OF VALMONT INDUSTRIES LIGHTING STRUCTURE  
 IN ACCORDANCE WITH AASHTO-2009 RQMTS. (FINAL DEFLECTED POSITION)  
 BY BNS 5/12/2014 VERSION Fuse 1.10.0.540 32-bit

SUBJECT: VERMONT, 34' & 31' MAST ARMS W/12' LUM ARM

FOLDER: VTTRAF FILE: 3431L12

STRESSES WITH WIND ACTING PERPENDICULAR TO EACH ARM

ANAL. LOCATION			GROUP LOAD NO.	COMB. STR. RATIO	APPLIED STRESS (KSI)			ALLOW. STRESS (KSI)		
ARM TYPE	ARM NO.	SITE			AXIAL	BEND.	SHEAR	AXIAL	BEND.	SHEAR
SIG	1	BASE	1	0.33	0.00	11.84	0.28	33.00	36.30	18.15
SIG	1	BASE	2	0.48	0.01	22.97	0.56	33.00	48.28	24.14
SIG	1	BASE	3	0.56	0.01	26.80	0.63	33.00	48.28	24.14
SIG	2	BASE	1	0.30	0.00	10.85	0.27	33.00	36.30	18.15
SIG	2	BASE	2	0.46	0.01	22.07	0.57	33.00	48.28	24.14
SIG	2	BASE	3	0.53	0.01	25.32	0.62	33.00	48.28	24.14
LUM	1	TOP	1	0.06	0.53	0.86	0.02	21.60	23.76	11.88
LUM	1	TOP	2	0.45	0.52	13.44	0.19	21.60	31.60	15.80
LUM	1	TOP	3	0.40	0.87	11.34	0.15	21.60	31.60	15.80
LUM	1	BOT	1	0.05	0.58	0.63	0.02	21.60	23.76	11.88
LUM	1	BOT	2	0.36	0.56	10.36	0.65	21.60	31.60	15.80
LUM	1	BOT	3	0.30	0.94	8.20	0.56	21.60	31.60	15.80