ANALYSIS OF VALMONT INDUSTRIES LIGHTING STRUCTURE
IN ACCORDANCE WITH AASHTO-1994 RQMTS. (FINAL DEFLECTED POSITION)
BY MLS 03/31/2010 VERSION Fuse 1.9.0.363

SUBJECT: MASSACHUSETTS, 35' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 35

THIS PAGE PROVIDES THE PERTINENT INFORMATION CONCERNING THE ANALYSIS
OF THE ARM-TO-POLE ATTACHMENT COMPONENTS OF THE SIGNAL AND SIGN ARMS.

********** INPUT DATA **********

ARM 1

CONNECTION BOLT DATA		
NUMBER	=	4
BOLT DIAMETER (IN)	=	1.250
ASTM SPECIFICATION	=	A325
HORIZONTAL SPACING (IN)	=	13.88
VERTICAL SPACING (IN)	=	13.88
ATTACHMENT PLATE DATA		
HORIZONTAL WIDTH (IN)	=	17.88
VERTICAL WIDTH (IN)	=	17.88
THICKNESS (IN)	=	1.500
YIELD STRENGTH (KSI)	=	36
GUSSET THICKNESS (IN)		
- VERTICAL	=	0.250
- HORIZONTAL	=	0.250

ATTACHMENT TYPE

ARM 1: SIMPLEX - THRU BOLTS

********** RESULTS **********

ANALYSIS OF SIGNAL/SIGN ARM SIMPLEX BOLTS

ARM	MAX. BOLT CSR	GROUP LOAD NO.	TENSION LBS	APPLIED STRESS KSI	ALLOWABLE STRESS KSI
1	0.50	2	28680	23.37	46.55

ANALYSIS OF SIGNAL/SIGN ARM SIMPLEX PLATES

ARM	MAX. PLATE CSR	GROUP LOAD NO.	APPLIED STRESS KSI	ALLOWABLE STRESS KSI	SLOPE OF BEND LINE DEGREES	LENGTH OF BEND LINE IN
1	0.72	2	24.09	33.26	45	15.29