

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, 20' MAST ARM (WORST CASE LOAD)

FOLDER: MATR335 FILE: 20

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) = 1.000
ASTM SPECIFICATION = A325
HORIZONTAL SPACING (IN) = 9.88
VERTICAL SPACING (IN) = 9.88

ATTACHMENT PLATE DATA
=====

HORIZONTAL WIDTH (IN) = 12.38
VERTICAL WIDTH (IN) = 12.38
THICKNESS (IN) = 1.000
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	0.25	2	10512	13.38	53.20

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	0.66	2	21.85	33.26	45	11.51