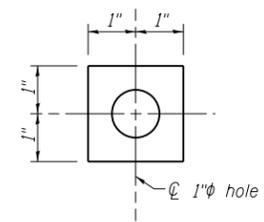
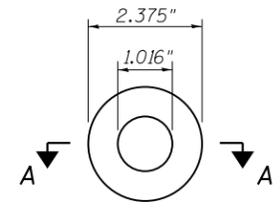


- CABLE RESTRAINER UNIT INSTALLATION PROCEDURE**
1. Align cable assembly angles with bumper assembly. For Bumper placement see Sheets 13 and 14 of 28.
 2. Install Cable Yield Indicator, Spherical Washers, Disc Springs, Washers and Nut on the indicator end of Seismic Restrainers.
 3. Place Spherical Washers and Nut on bolted end of restrainers. Place Thread Locking System on bolted end stud prior to installing nut and washers, and prior to setting the cable.
 4. Tighten nut on the cable at the indicator end of restrainer. The cable should be approximately straight with no sag.
 5. Place Thread Locking System on indicator end stud after tightening the cable but before backing off the nut. Back off the nut at restrainer indicator end a distance equal to maximum additional amount that the joint is expected to open, relative to existing ambient conditions. See Expansion Table on Sheet 13 of 28.
 6. If the cable needs to be secured from turning while tightening, use double nut locking technique on the stud to protect the threads.
 7. For Thread Locking System, see Special Provision for Seismic Restrainers.

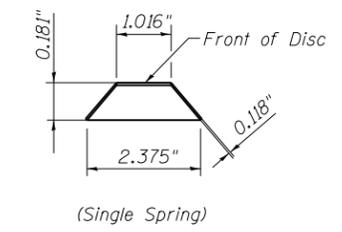
CABLE & BRACKET ASSEMBLY ELEVATION



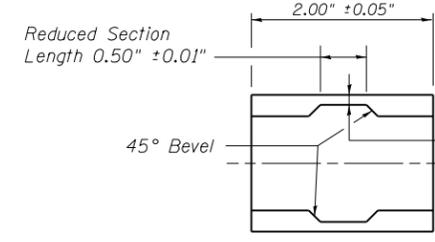
PAD DETAIL
 Pad "A" = 2"x2"x1/4" Plain Elastomeric Bearing Pad (50 Durometer)
 Pad "B" = 2"x2"x1" Washer



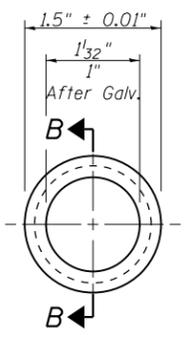
PLAN



SECTION A-A

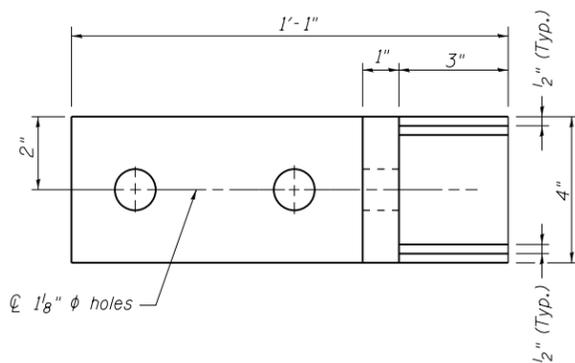


SECTION B-B

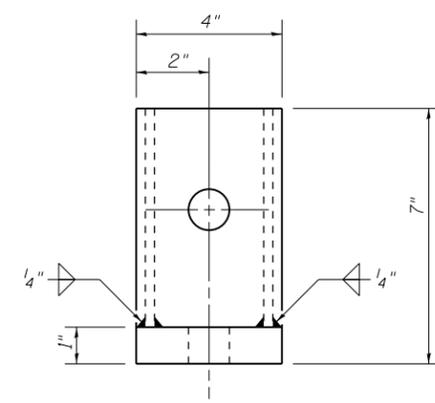


END VIEW

DISC SPRING



PLAN



SECTION C-C

BRACKET ASSEMBLY

CABLE YIELD INDICATOR

(All dimensions are before galvanizing except as noted)

Notes:
 Bracket Assembly shall be paid for as Furnishing and Erecting Structural Steel.
 HPPE Coated Cable swag fitting, incidentals and Yield Indicators shall be paid for as Seismic Restrainer.

FILE NAME = 0250002-74295-011.dgn	USER NAME =	DESIGNED - BB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SEISMIC RESTRAINERS & BRACKET DETAILS STRUCTURE NO. 025-0002	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BERNARDINI LOCHMULLER & ASSOCIATES, INC. 3 DAK DRIVE MARYVILLE, IL 62452 PHONE 618 295-4666 FAX 618 298-4666	CHECKED - ACS	REVISIONS	57			(25-4HB)I-4	EFFINGHAM	1760	1688	
PLOT SCALE =	DRAWN - WJS	REVISIONS	SN 025-0002			CONTRACT NO. 74295				
PLOT DATE = 1:55:58 PM 8/15/2013	CHECKED - CJF & BB	REVISIONS	SHEET NO. 11 OF 28 SHEETS							
						FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				