



**SHIPMENT INVENTORY LIST  
INSTALLER'S / SUB-CONTRACTOR'S  
NOTICE**

**DO NOT DISCARD**

**The following bill of material should be utilized during the assembly process, for the correct location of materials and hardware.**

Failure to report material shortages or damaged goods within 48-hours of receipt will indicate that the sub-contractor has accepted all material in good condition.

Any non-reported problems and/or missing items are assumed to have occurred at the site, thus eliminating Tower Innovations from all responsibility.

If material problems are reported within 48-hours of receipt, Tower Innovations, will ship the item for replacement, and after that time any shortage will be billed to the sub-contractor.

**This form must be signed, mailed or faxed back to our office within 48-hours**

**Mailing Address:** Attn. Project Manager  
Tower Innovations  
Newburgh, IN 47630  
Phone: (812) 853-0595  
Fax: (812) 853-6652

**Work Order:** 5514-10

**SITE NAME:** Jeffers, MN.

Inventory Completed By: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Sub-Contractor's Company Name: \_\_\_\_\_



## STAGED MATERIAL CHECK LIST

SalesOrderNo: **5514-10**

Order Date 5/3/2010

Salesman No. 0001

Customer No. 0000051

2855 Highway 261  
Newburgh, IN 47630  
812-853-0595

**Sold To:**

Trillium Development, Inc.  
7958 County Rd 2  
Rice MN 56367  
USA

**Ship To:**

Trillium Development, Inc.  
7958 County Rd 2  
Rice MN 56367  
USA

**Confirm To:**

Barb Houdek

**Email Address:**

Site Name: **Jeffers, MN**

**Customer P.O.**

10623Jeffer

**Ship VIA**

DEDICATED TRUCK

**F.O.B.**

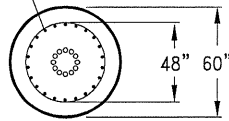
FACTORY

**Phone No.**

(320) 240-9086

Item No.	Description	Section / Piece Mark	Qty Ordered
<b>FOUNDATIONS</b>			
AB175X079F	ANCHOR BOLT 1-3/4" X 79" W/5 NUTS AND 1 LOCK F-1554-105 GALV.		18
SP06-1750-1200	SECURING PLATE DETAIL, 1/4" PLATE, (6) 1-13/16" HOLES FOR 1-3/4" BOLT ON A 12" BOLT CIRCLE		3
BP06-1750-1200	BEARING PLATE DETAIL 16" DIA. X 1/2" THICK, (6) 1-7/8" HOLES FOR 1-3/4" BOLTS ON A 12" BOLT CIRCLE		3
<b>KTA380-300-12</b>	<b>KIT, TEMPLATE ANGLE, 38' TO 30', INCLUDES HARDWARE TO ATTACH SECURING PLATES &amp; ADJOINING HARDWARE, FOR 3 FACES</b>		1
BT075X200G	BOLT 3/4" X 2" GALV, A-325		42
NU075G	NUT 3/4" GALV, A563 DH HVY HEX NUT		42
TA110-030-12	STD TEMPLATE ANGLE, 11' TO 3' C-C FACE, 1' SPACING, 2" X 2" X 1/4"		12
WL075G	SPLIT LOCKWASHER 3/4" GALV		42

VERTICAL REBAR EQUALLY SPACED  
SEE REBAR CHART FOR VERTICAL  
REBAR REQUIRED.



### REBAR CHART (1)-CAISSON

REBAR	REBAR SIZE	REBAR LENGTHS	REBAR DIA.	pcs. OF REBAR	TOTAL FT.
VERTS	#9 GRADE 60	30'	N/A	28	840'
TIES	#4 GRADE 60	N/A	48" $\phi$	35	440'

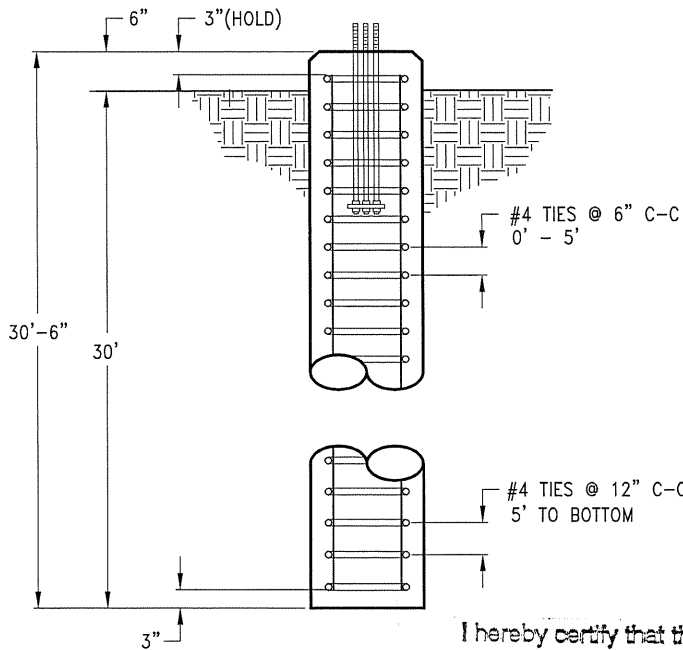
### REBAR CHART (3)-CAISSONS

REBAR	REBAR SIZE	REBAR LENGTHS	REBAR DIA.	pcs. OF REBAR	TOTAL FT.
VERTS	#9 GRADE 60	30'	N/A	84	2520'
TIES	#4 GRADE 60	N/A	48" $\phi$	105	1320'

APPROXIMATE CONCRETE REQ'D PER CAISSON = 22 YD<sup>3</sup>  
TOTAL CONCRETE = 66 YD<sup>3</sup>

#### NOTES:

- 1) ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 301 AND ACI318.
- 2) THIS FOUNDATION IS DESIGNED TO CONFORM ACI 318-02 AND EIA/TIA-222-F STANDARDS UTILIZING THE SOILS REPORT PREPARED BY BRAUN INTERTEC CORPORATION PROJ. NO. SP-08-01385B. A COPY SHALL BE PROVIDED TO THE FOUNDATION CONTRACTOR. SOIL CONDITIONS THAT DIFFER FROM THOSE DESCRIBED IN THE REPORT SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER/INSPECTOR. ALL COMMENTS OR RECOMMENDATIONS REGARDING CONSTRUCTION TESTING OR CONSTRUCTION MONITORING SHALL BE STRICTLY FOLLOWED.
- 3) ALL CONCRETE SHALL BE 4000 PSI AT 28 DAYS. CYLINDERS SHALL BE PROPERLY CAST WITH COPIES OF THE TEST REPORTS GOING TO THE RESIDENT ENGINEER/INSPECTOR.
- 4) ALL ADMIXTURES MUST BE ADDED SEPARATELY INTO FRESH CONCRETE AND SUFFICIENTLY MIXED. A NON-CORROSIVE CONCRETE SET ACCELERATE MAY BE UTILIZED IN COMPLIANCE WITH ASTM 494 TYPE C. A WATER REDUCING ADMIXTURE MAY BE UTILIZED IN COMPLIANCE WITH ASTM 494 TYPE A.
- 5) ALL BACKFILL SHALL BE PLACED IN 9 INCH LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS MEASURED BY ASTM D-698 UNLESS MORE STRINGENT COMPACTION IS REQUIRED BY THE SOIL REPORT.
- 6) MINIMUM CONCRETE COVER SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
- 7) CROWN TOP OF PIER FOR DRAINAGE AND CHAMFER ALL EXPOSED CONCRETE EDGES 1 INCH.
- 8) SEE TEMPLATE DRAWING & TEMPLATE DESIGN CHART FOR TOWER LAYOUT DIMENSIONS, USE OF TEMPLATE IS REQUIRED TO INSURE PROPER LOCATION AND ORIENTATION OF ANCHOR BOLTS.
- 9) GROUNDWATER MAY BE ENCOUNTERED.



#### REBAR SPlicing CHART

BAR SIZE	SPLICE LENGTH
3	25"
4	33"
5	41"
6	49"
7	71"
8	81"
9	91"
10	102"
11	111"

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

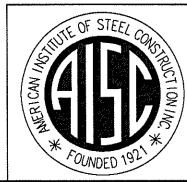
Print Name: Chad E. Tuttle

Signature: [Signature]

Date: 3/17/10 License # 42966

#### SPLICING NOTES:

- 1) STAGGER ALL SPLICES.
- 2) SPLICE CHART IS BASED ON 4000 PSI CONCRETE AND CLASS B SPLICE.
- 3) SPLICE REBAR ONLY WHEN NECESSARY.



REV. #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				S.D.A.	3/17/10
				CHECK	DATE
				A.W.L.	3/17/10
				APPROVAL	DATE
				A.J.H.	3/17/10

THIRD ANGLE PROJECTION

COMPANY CONFIDENTIAL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL. IT IS TO BE USED SOLELY FOR THE PURPOSE PROVIDED, AND IT IS NOT TO BE DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF TOWER INNOVATIONS

TOLERANCES

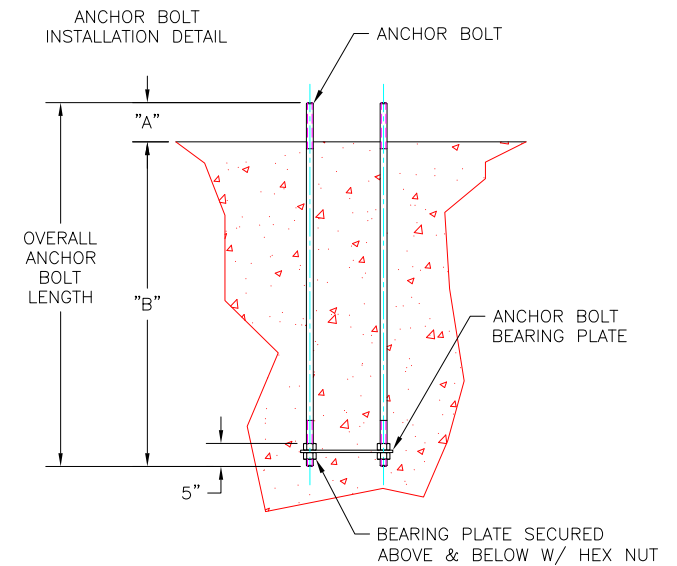
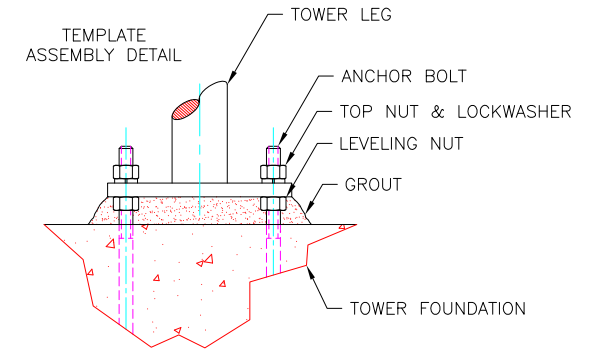
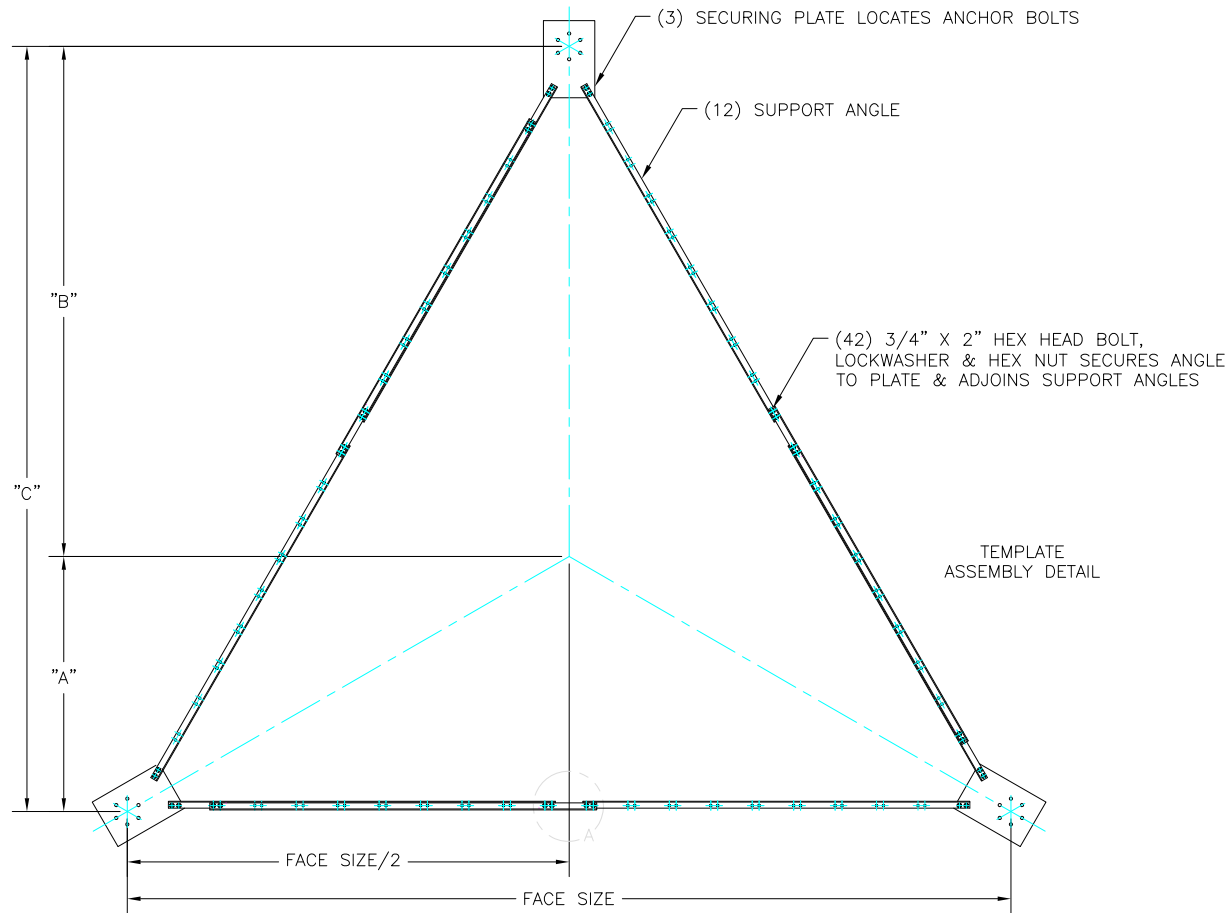
.X± 3/32" ANGLES± 2"  
.XX± 3/32" DRILLED HOLE± #1/32"  
.XXX± 1/16" BURNED HOLE± #1/16"

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: INCHES

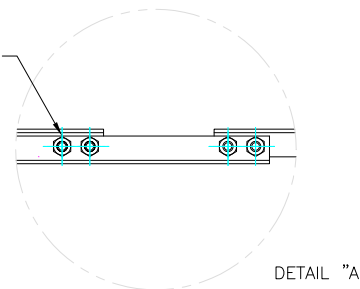
**Tower Innovations**  
PH# (812) 853-0595  
FAX# (812) 853-6652  
2855 HIGHWAY 261  
NEWBURGH, IN. 47630

TITLE  
**CAISSON FOUNDATION DESIGN**  
JEFFERS, COTTONWOOD CO., MN

DWG NO. **5514-F1 (22494)** REV **-**  
DO NOT SCALE DRAWING



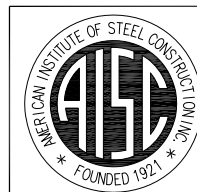
SUPPORT ANGLES MAY BE ADJUSTED @ 1' INCREMENTS FROM 38' TO 30' IN ORDER ACCOMMODATE ACTUAL TOWER DESIGN FACE SIZE



SPECIAL NOTE! VARIABLE DIMENSIONS FOR TEMPLATE ARE DERIVED FROM ACCOMPANYING TEMPLATE DESIGN CHART. DUE TO TOWER CONFIGURATIONS, SOME DIMENSIONS MAY NOT APPLY.

**ANCHOR BOLT INSTALLATION NOTES:**

1. POSITION & ATTACH ANCHOR BOLT ASSEMBLY IN TEMPLATE.
2. SECURE ANCHOR BOLTS & REBAR IN FORMS BEFORE POURING CONCRETE.
3. SET TOWER USING LEVELING NUTS TO PLUMB.
4. AFTER LEVELING, GROUT UNDER FLANGES W/ HIGH-STRENGTH, NON-METALLIC, NON-SHRINKING GROUT.



REV. #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				A.J.H.	12-8-08
				CHECK	DATE
				A.W.L.	12-8-08
				APPROVAL	DATE
				G.R.F.	12-8-08

THIRD ANGLE PROJECTION

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TOLERANCES  
 .X± 3/32" ANGLES± 2'  
 .XX± 3/32" DRILLED HOLES± #1/32"  
 .XXX± 1/16" BURNED HOLES± #1/16"

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN:  
 INCHES

**Tower Innovations** PH# (812) 853-0595  
 FAX# (812) 853-6652  
 2855 HIGHWAY 261  
 NEWBURGH, IN. 47630

**TEMPLATE INSTALLATION DETAIL**  
**3-LEG, 38' TO 30' FACE**

DWG NO. **FDI3-380-300-12** REV **-**

DO NOT SCALE DRAWING

## TEMPLATE DESIGN

Job No. : 5514

Base Size (In Feet) : 33.000

Site Location : Jeffers, MN

### Bearing Plate Information

Outer Dia.	# Holes	Bolt Drill	Bolt Circle	# Req'd
16	6	1.875	12	3

### Anchor Bolt Information

Material Type	Bolt Diameter	LGTH. (in)	# Req'd	"A" (In.)	Embed. Depth "B" (In.)
F1554-105	1.75	79	18	10.5	68.5

### Securing Plate Information

# Holes	Bolt Drill	Bolt Circle	# Req'd
6	1.8125	12	3

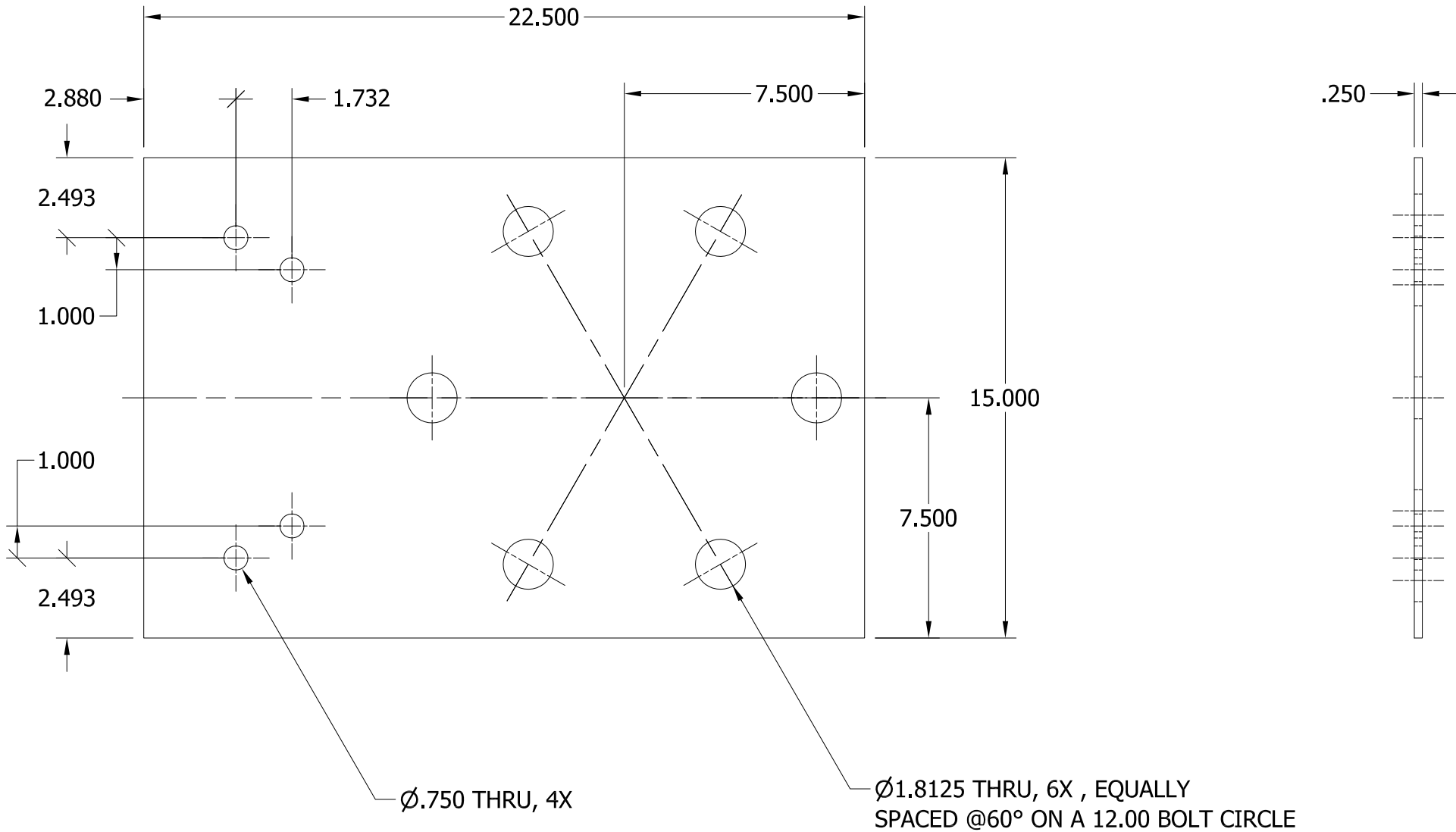
\*\* *ANGLES SUPPLIED ARE FOR APPROXIMATE BOLT LOCATION ONLY.*

\*\* **PLEASE CHECK THE DISTANCE FROM OUTER MOST BOLT HOLES  
( BOLTS FARTHEST FROM THE TOWER CENTER ).**

### Template Assembly

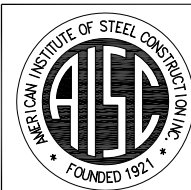
Face Size	"A" (ft)	"B" (ft)	"C" (ft)
33	9.526	19.053	28.579

Outer Bolt Distance Should Be = 33 feet - 10.39 inches



NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. PART MADE FROM ASTM A36 MATERIAL.
3. FINISH: BLACK.



REV. #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				A.J.H.	2-8-98
				CHECK	DATE
				R.A.M.	2-8-98
				APPROVAL	DATE
				R.E.H.	2-8-98

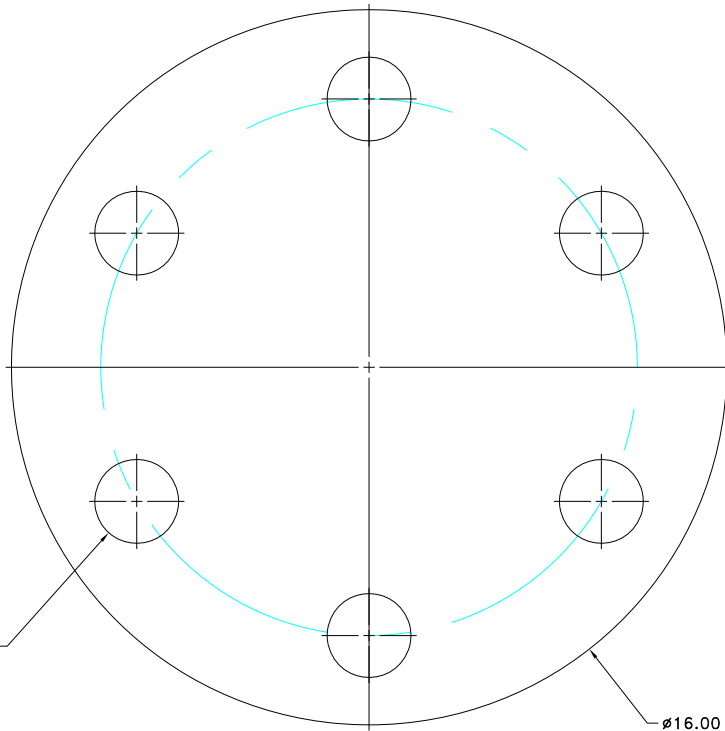
  

TOLERANCES	
.X±	3/32" ANGLES± 2'
.XX±	3/32" DRILLED HOLES± #1/32"
.XXX±	1/16" BURNED HOLES± #1/16"

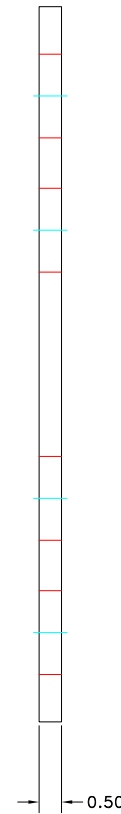
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN:	
INCHES	

	PH# (812) 853-0595
	FAX# (812) 853-6652
2855 HIGHWAY 261	
NEWBURGH, IN. 47630	
TITLE	
6-HL SECURING PL	
1-3/4" Ø ANCHOR BOLT / 12" B.C.	
DWG NO.	REV
SP06-1750-1200	-
DO NOT SCALE DRAWING	



(6) #1.88 HLS.EQ.SPD. ON  
A 12.00" B.C.

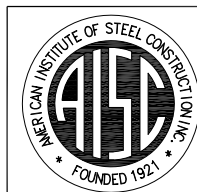
Ø16.00



0.50

BEARING PLATE DETAIL  
P/N : BP06-1750-1200  
MATR'L : 1/2" PL (ASTM A36)  
FINISH : BLK

NOTES:  
DEBUR AND REMOVE SLAG.



REV. #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				A.J.H.	2-19-10
				CHECK	DATE
				A.W.L.	2-19-10
				APPROVAL	DATE
				S.D.A.	2-19-10

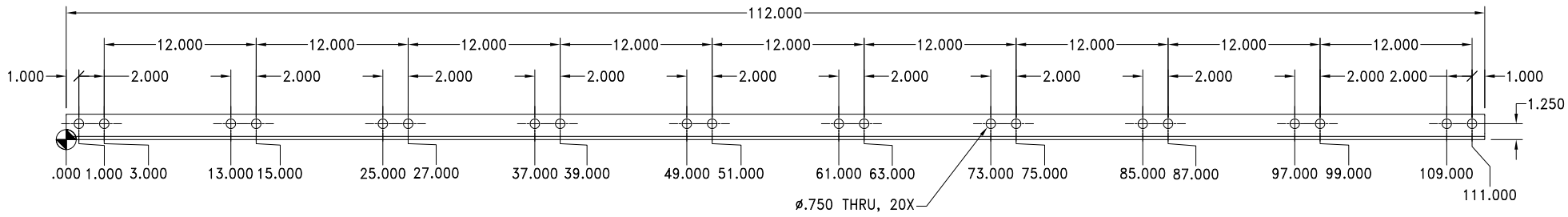
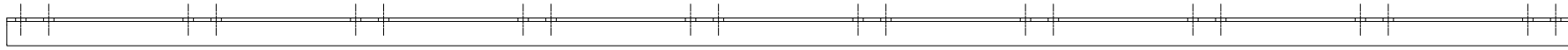
  

THIRD ANGLE PROJECTION	COMPANY CONFIDENTIAL. INFORMATION CONTAINED HEREIN IS CONFIDENTIAL. IT IS TO BE USED SOLELY FOR THE PURPOSE PROVIDED, AND IT IS NOT TO BE DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF TOWER INNOVATIONS	TOLERANCES .X± 3/32" ANGLES± 2° .XX± 3/32" DRILLED HOLE± #1/32" .XXX± 1/16" BURNED HOLE± #1/16"	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: INCHES
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TITLE	6-HL BEARING PLATE 1-3/4" Ø ANCHOR BOLT / 12" B.C.
DWG NO.	BP06-1750-1200
REV	-

DO NOT SCALE DRAWING



P/N : TA110-030-12 DETAIL  
 MATR'L : 2" X 2" X 1/4" ANGLE IRON (ASTM A36)  
 FINISH : BLACK

NOTES:  
 1. REMOVE ALL BURRS AND SHARP EDGES.



REV. #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				R.R.H.	5-8-07
				CHECK	DATE
				A.J.H.	5-8-07
				APPROVAL	DATE
				G.R.F.	5-8-07

TOLERANCES	
.X±	3/32" ANGLES± 2'
.XX±	3/32" DRILLED HOLES± #1/32"
.XXX±	1/16" BURNED HOLES± #1/16"

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN:	
	INCHES



PH# (812) 853-0595  
 FAX# (812) 853-6652  
 2855 HIGHWAY 261  
 NEWBURGH, IN. 47630

TITLE	
STANDARD TEMPLATE ANGLE	
DWG NO.	REV
TA110-030-12	-
DO NOT SCALE DRAWING	