Centek Engineering, Inc.
3-2 North Branford Road
Branford, Connecticut 06405
Phone: (203) 488-0580
Fax: (203) 488-8587

Steven L. Levine
Real Estate Consultant

HAND DELIVERED

October 10, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 751 Higgins Road, Cheshire (Tower Owner, AT&T)

Dear Ms. Bachman:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73: a) Notice in the form of a copy of this letter is being sent to the chief elected official of the municipality in which the affected cell site is located; and b) Since AT&T is the applicant hereunder, as well as the property owner of record and the tower owner/operator, notice is not being provided to AT&T.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical and environmental characteristics of the site will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not increase.

2. The proposed changes will not extend the site boundaries. The entire parcel is owned by AT&T, all modifications will occur on the tower itself, and the fenced area will not be enlarged.

3. The proposed changes will not increase the noise level at the site boundary by six decibels or more, or to levels that exceed state and local criteria.

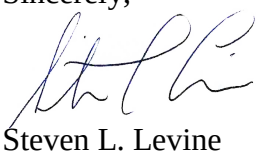
4. The changes will not add radio frequency sending or receiving capability which increases the total radio frequency electromagnetic radiation power density measured at the site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996, as amended, and the State Department of Energy and Environmental Protection, pursuant to Section 22a-162 of the Connecticut General Statutes.

5. The proposed changes will not impair the structural integrity of the facility, as determined in a certification provided by a professional engineer licensed in Connecticut.

For the foregoing reasons, AT&T respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 830-0380 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Steven L. Levine
Real Estate Consultant

cc: Michael A. Milone, Town Manager, Town of Cheshire

Attachments

NEW CINGULAR WIRELESS PCS, LLC
Equipment Modification

751 Higgins Road, Cheshire
Site Number 2036
Prior Decisions: Exempt Mods 9/88, 9/02 & 4/13

Tower Owner/Manager: AT&T Mobility

Property Owner of Record: AT&T Corporation

Equipment Configuration: Self-Supporting Lattice Tower

Current and/or Approved: Three KMW AM-X-CD16-65 antennas @ 255 ft
Two Andrew SBNH-1D6565C antennas @ 255 ft
Two TMA's @ 255 ft
Six Remote Radio Heads@ 255 ft
Four surge arrestors @ 255 ft
Four lines 1 5/8 inch coax
One fiber and two DC power cables
Underground equipment room

Planned Modifications: Install one KMW AM-X-CD16-65 antenna.
Install one TMA @ 255 ft.
Install two lines of 1 5/8 inch coax.

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 16.6 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 11.0 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							8.68
AT&T UMTS *	255	880 - 894	2	1077	0.0119	0.5867	2.03
AT&T UMTS *	255	1900 Band	2	1556	0.0172	1.0000	1.72
AT&T GSM *	255	880 - 894	1	538	0.0030	0.5867	0.51
AT&T GSM *	255	1900 Band	4	934	0.0207	1.0000	2.07
AT&T LTE *	255	734	1	1375	0.0076	0.4893	1.55
Total							**16.6%**

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							8.68
AT&T LTE	255	700 Band	1	500	0.0028	0.4667	0.59
AT&T LTE	255	1900 Band	1	500	0.0028	1.0000	0.28
AT&T LTE	255	2300 Band	1	500	0.0028	1.0000	0.28
AT&T UMTS	255	880 - 894	2	500	0.0055	0.5867	0.94
AT&T UMTS	255	1900 Band	1	500	0.0028	1.0000	0.28
Total							**11.0%**

* Per CSC records

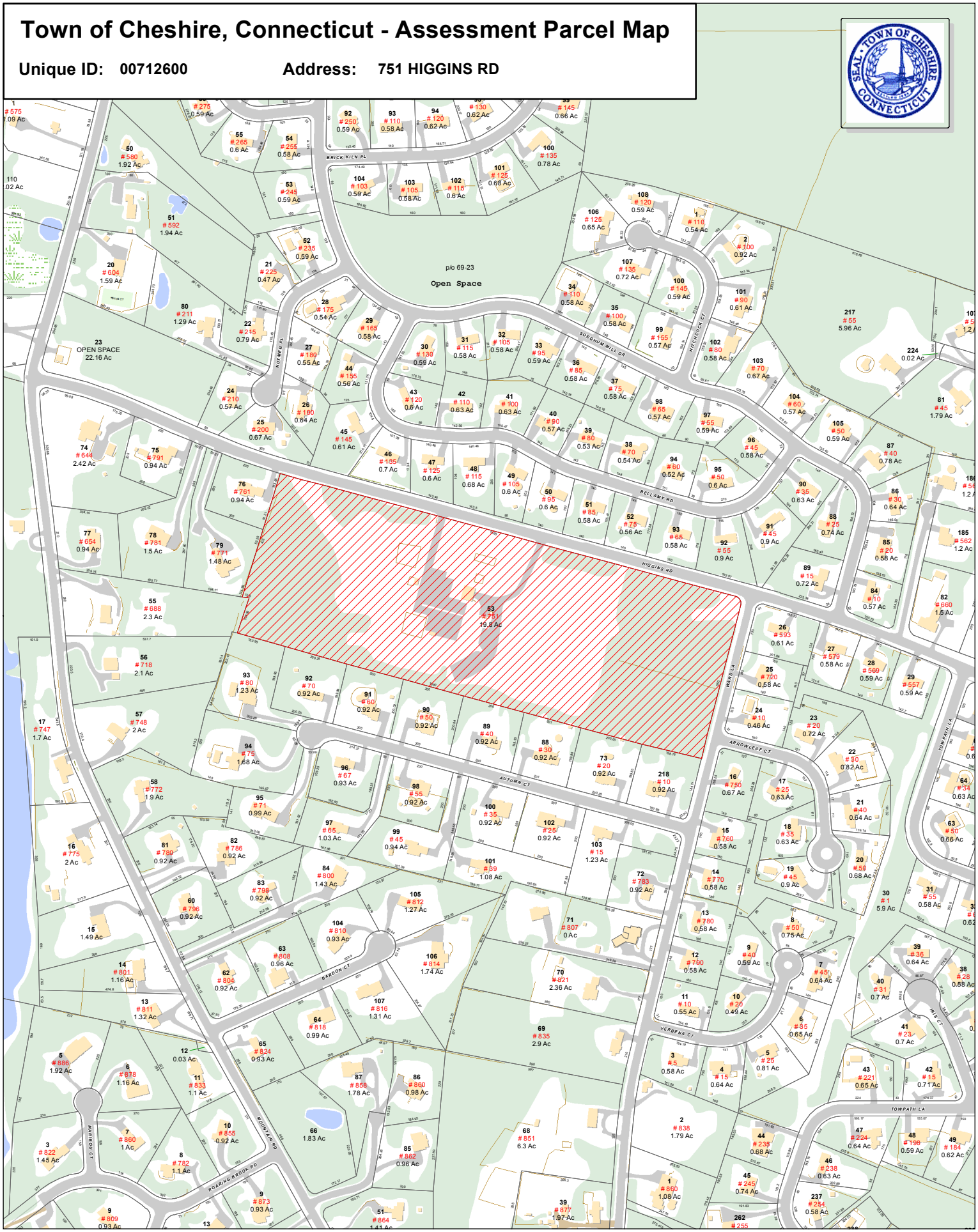
Structural information:

The attached structural analysis demonstrates that the tower has adequate structural capacity to accommodate the proposed modifications. (GPD Associates, 8/15/14)


PropertyRecordCards.Com
www.propertyrecordcards.com/PropertyResults.aspx?towncode=025&uniqueid=00712600
cheshire ct assessor records
The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2013.
Town of Cheshire
The bedding plant capital of Connecticut
Information on the Property Records for the Municipality of Cheshire was last updated on 10/10/2014.
Property Summary Information
Parcel Data And Values
Building
Outbuildings
Google Map
Parcel Information
Location: 751 HIGGINS RD
Property Use: Industrial
Primary Use: Light Industrial
Unique ID: 00712600
Map Block Lot: 69 53
Acres: 19.80
Zone: R-40
Volume / Page: 0148/0566
Developers Map / Lot: 285128
Census: 3434
Value Information
Appraised Value
70% Assessed Value
Land 434,893 304,430
Buildings 2,489,370 1,742,560
Detached Outbuildings 29,959 20,970
Total 2,954,222 2,067,960
Owner's Information
Owner's Data
AMER TEL & TEL CO
AT&T PROPERTY TAX UNIT
P O BOX 7207
BEDMINSTER NJ 07921
Back To Search
Print View
Information Published With Permission From The Assessor
Firefox automatically sends some data to Mozilla so that we can improve your experience.
Choose What I Share
9:34 AM
10/10/2014

Town of Cheshire, Connecticut - Assessment Parcel Map

Unique ID: 00712600 **Address:** 751 HIGGINS RD



Approximate Scale:

1 inch = 400 feet

Disclaimer:
This map is for informational purposes only.
All information is subject to verification by any user.
The Town of Cheshire and its mapping contractors
assume no legal responsibility for the information contained herein.

Map Produced April 2014

PROJECT INFORMATION

SCOPE OF WORK:	ADD (1) NEW ANTENNA WITH (2) ADDITIONAL LINES OF COAX FOR BETA SECTOR ON AN EXISTING LATTICE TOWER.
SITE ADDRESS:	751 HIGGINS ROAD CHESHIRE, CT 06410
LATITUDE:	41° 29' 14.78" (NAD 83)*
LONGITUDE:	72° 55' 45.55" (NAD 83)* *PER AT&T EXISTING PLANS
JURISDICTION:	CONNECTICUT SITING COUNCIL
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
NAME OF APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
TOWER OWNER:	AT&T CORPORATION f/k/a AMERICAN TELEPHONE AND TELEGRAPH CORPORATION
TOWER NUMBER:	N/A

DRAWING INDEX

		REV
T01	TITLE SHEET	1
G01	GENERAL NOTES	1
A01	SITE PLAN & SHELTER LAYOUT	1
A02	ELEVATION & CONSTRUCTION DETAILS	1
A03	CONSTRUCTION DETAILS	1
E01	GROUNDING DETAILS	1

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

STRUCTURAL NOTE:

1. AS REQUIRED BY THE TIA/EIA 222F – STANDARD, SAI COMMUNICATIONS, INC. SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE TOWER PREPARED BY A LICENSED CONNECTICUT STRUCTURAL ENGINEER CERTIFYING THAT, THE EXISTING TOWER, ANTENNA MOUNTS AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, CABLES, SUPPORTS AND APPURTENANCES AND COMPLIES WITH THE CURRENT CONNECTICUT STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, CABLES, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.

CONTACT INFORMATION

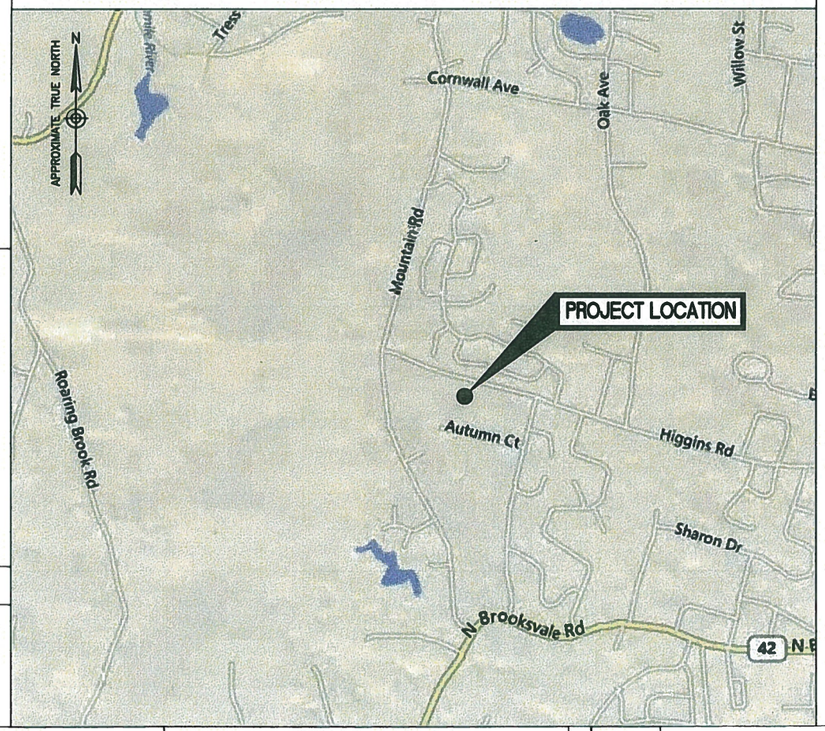
CONTACT	CONTACT	COMPANY	PHONE NO.
ENGINEERING:	GREG H. NAWROTZKI	DEWBERRY	(973) 576-9653
SAC:	CARL AQUILINA	SAI	(603) 560-6185
CONST.:	SCOTT KELLEY	SAI	(978) 979-7638

SITE NAME: CHESHIRE SW
SITE NUMBER: CT2036

VICINITY MAP

DIRECTIONS: (FROM 500 ENTERPRISE DRIVE, ROCKY HILL, CT):

HEAD NORTHEAST ON ENTERPRISE DRIVE TOWARD CAPITAL BOULEVARD. TURN LEFT ONTO CAPITAL BOULEVARD. TURN LEFT ONTO WEST STREET. TAKE RAMP FOR I-91 S. AT EXIT 18, TAKE RAMP RIGHT FOR I-691 WEST TOWARD WATERBURY/MERIDEN. AT EXIT 3, TAKE RAMP RIGHT FOR CT-10 TOWARD CHESHIRE/MILLDALE. TURN LEFT ONTO CT-10 HIGHLAND AVE. KEEP STRAIGHT ONTO CT-10/CT-68/CT-70/HIGHLAND AVE. KEEP STRAIGHT ONTO CT-10/S MAIN ST. TURN RIGHT ONTO HIGGINS RD. SITE WILL BE ON THE LEFT.



APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH PROJECT STANDARD NOTES, SYMBOLS AND DETAILS (SEE DRAWING INDEX FOR STANDARD NOTES AND DETAILS INCLUDED WITH TYPICAL DRAWING PACKAGE). CONTRACTOR WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
CONNECTICUT STATE BUILDING CODE (2005) & ALL SUBSEQUENT AMENDMENTS

ELECTRICAL CODE:
NATIONAL ELECTRICAL CODE (NEC 2005)

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS.
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), *MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION*
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM – DC POWER SYSTEMS – TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

Dewberry®
Dewberry Engineers Inc.
600 PARSIPPANY ROAD
SUITE 301
PARSIPPANY, NJ 07054
PHONE: 973.739.9400
FAX: 973.739.9710

SAI
500 ENTERPRISE DRIVE SUITE 3A
ROCKY HILL, CT 06067

CHESHIRE SW
SITE NO. CT2036
751 HIGGINS ROAD
CHESHIRE, CT 06410

at&t
500 ENTERPRISE DRIVE,
SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	10/13/14	ISSUED FOR CONSTRUCTION	JC	BSH	GHN
0	10/03/14	ISSUED FOR CONSTRUCTION	JC	BSH	GHN
A	01/28/14	PRELIMINARY SUBMISSION	JC	BSH	GHN

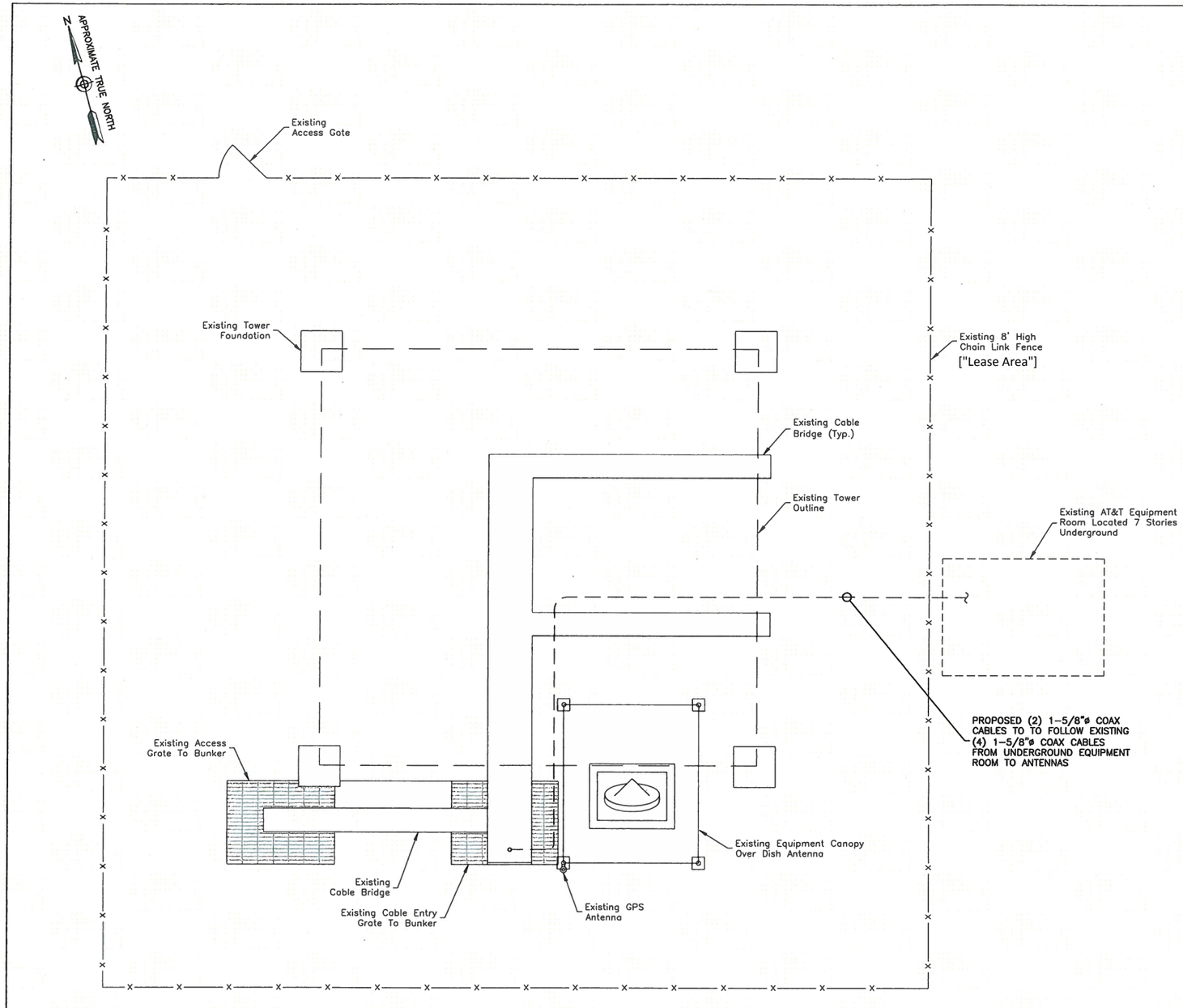
SCALE: AS SHOWN | DESIGNED BY: BSH | DRAWN BY: JC

STATE OF CONNECTICUT
JIANG YU
No. 23222
REGISTERED
PROFESSIONAL ENGINEER

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

TITLE SHEET

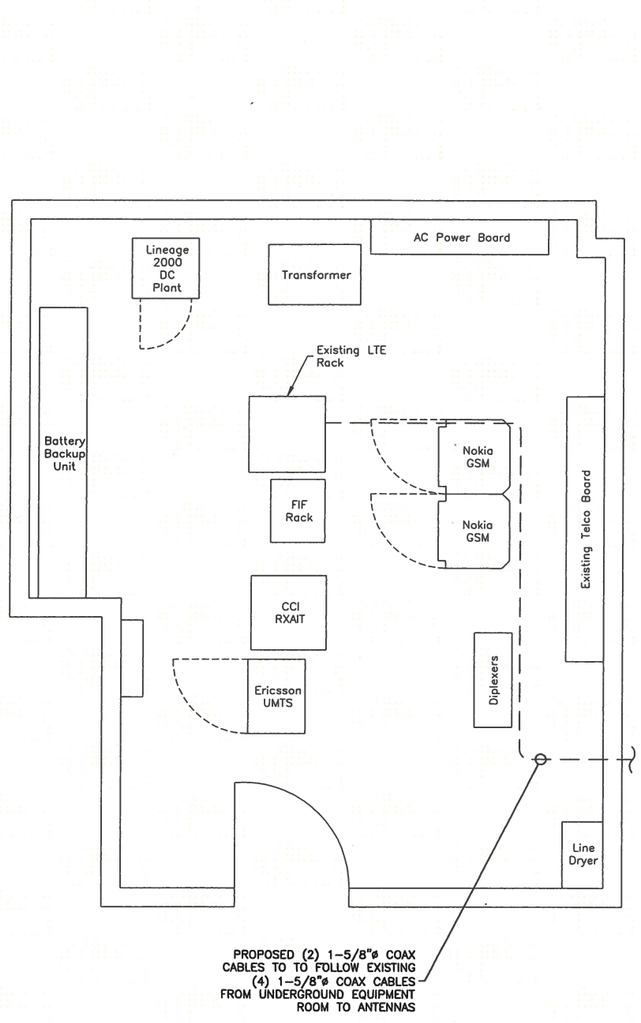
DEWBERRY NO.	DRAWING NUMBER	REV
50055106/50062682	T01	1



SITE PLAN 1

SCALE:1"=10' FOR 11"x17"
1"=5' FOR 22"x34"

0' 5' 10'



SHELTER LAYOUT DETAIL 2

SCALE: 1/4"=1' FOR 11"x17"
1/2"=1' FOR 22"x34"

0' 1' 2' 4'

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. MOUNT ALL ANTENNAS, COAX, SURGE ARRESTORS, RRU's, ETC. IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY OTHERS.
3. NOT ALL INFORMATION SHOWN FOR CLARITY.

STATE OF CONNECTICUT JIANG YU No. 23222 LICENSED PROFESSIONAL ENGINEER

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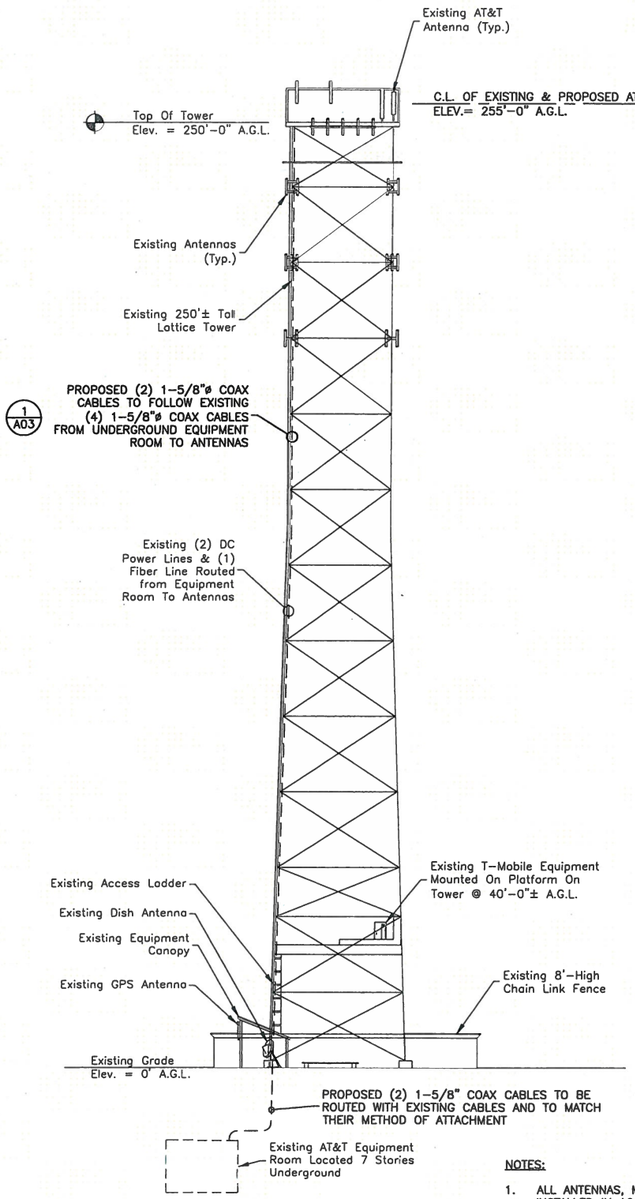
A	01/28/14	PRELIMINARY SUBMISSION	JC	BSH	GHN

SCALE: AS SHOWN | DESIGNED BY: BSH | DRAWN BY: JC

JIANG YU, P.E.
CONNECTICUT LICENSE NO. 0023222

SITE PLAN & SHELTER LAYOUT

DEWBERRY NO.	DRAWING NUMBER	REV
50055106/50062682	A01	1



NOTES:

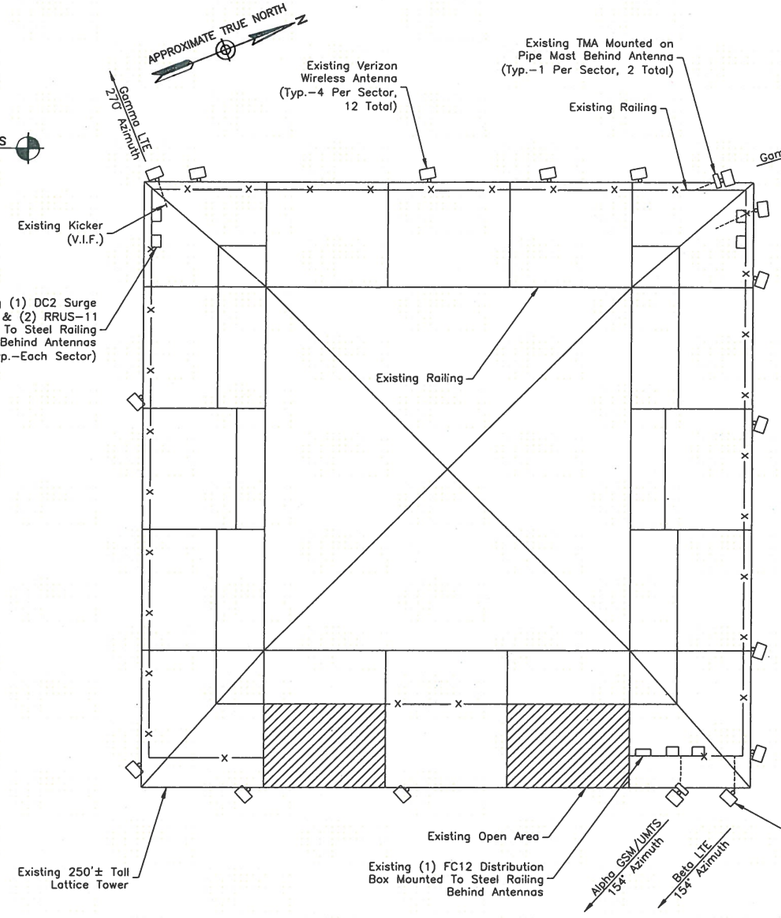
1. ALL ANTENNAS, MOUNTS, COAX, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY THE GPD GROUP.

A.G.L. = ABOVE GRADE LEVEL
C.L. = CENTER LINE

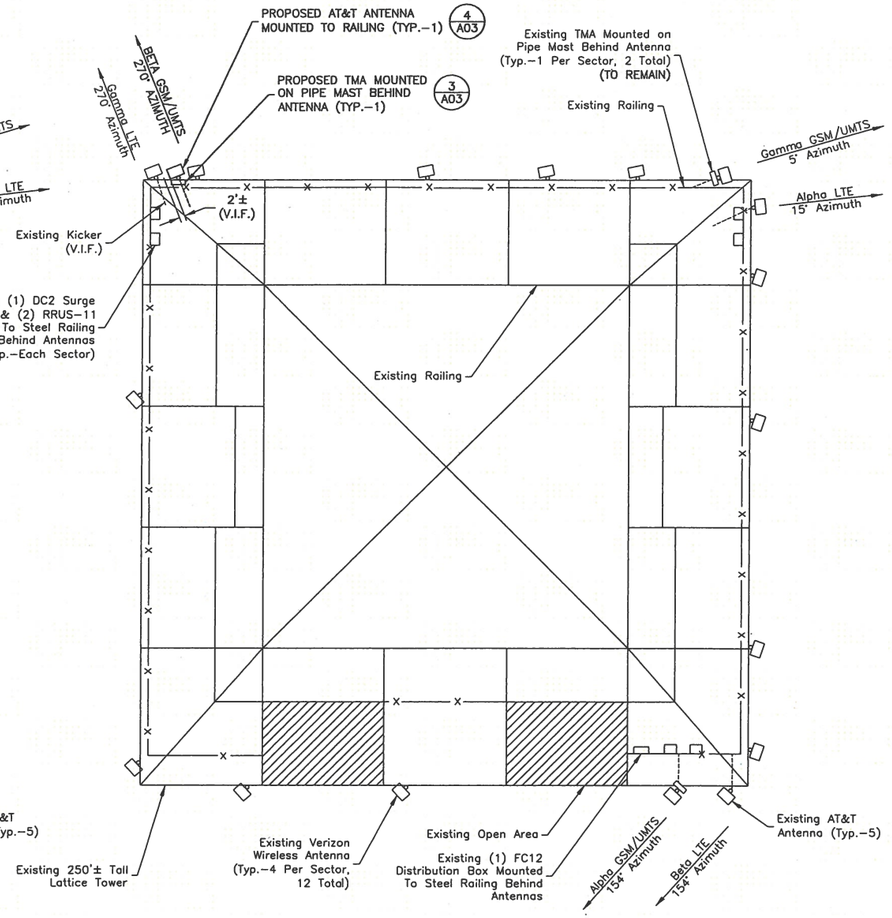
EAST ELEVATION (1)

SCALE: 1"=40' FOR 11"x17"
1"=20' FOR 22"x34"

0' 20' 40'



EXISTING @ 255' AGL



PROPOSED @ 255' AGL

PLATFORM ANTENNA ORIENTATION (2)

SCALE: 1"=10' FOR 11"x17"
1"=5' FOR 22"x34"

0' 5' 10'

NOTES:

1. AZIMUTHS BASED ON TRUE NORTH.
2. FINAL ANTENNA MOUNT DESIGN TO BE DETERMINED UPON COMPLETION OF TOWER MAPPING.

DESIGN CONFIGURATION

	ANTENNAS		AZIMUTH	
	EXISTING	PROPOSED	EXISTING	PROPOSED
ALPHA	GSM/UMTS – KMW AM-X-CD-16-65-00T-RET	GSM/UMTS – EXISTING ANTENNA TO REMAIN	154°	154°
	LTE – ANDREW SBNH-1D6565C	LTE – EXISTING ANTENNA TO REMAIN	15°	15°
BETA	—	GSM/UMTS – KMW AM-X-CD-16-65-00T-RET	—	270°
	LTE – KMW AM-X-CD-16-65-00T-RET	LTE – EXISTING ANTENNA TO REMAIN	154°	154°
GAMMA	GSM/UMTS – ANDREW SBNH-1D6565C	GSM/UMTS – EXISTING ANTENNA TO REMAIN	5°	5°
	LTE – KMW AM-X-CD-16-65-00T-RET	LTE – EXISTING ANTENNA TO REMAIN	270°	270°

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SCALE: AS SHOWN | DESIGNED BY: BSH | DRAWN BY: JC

STATE OF CONNECTICUT
JIANG XU
No. 23222
LICENSED PROFESSIONAL ENGINEER
CONNECTICUT LIC. NO. 23222

ELEVATION & CONSTRUCTION DETAILS

DEWBERRY NO.	DRAWING NUMBER	REV
50055106/50062682	A02	1

AT&T Towers
2300 Northlake Center Dr Ste 405
Tucker, GA 30084-4032
(404) 532-5855

Kevin Clements
520 South Main Street
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD#: 2013723.01.TAG0053.04 Rev. 1
August 15, 2014

REVISED STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**TAG0053**
	Site FA:	**10136365**
	Site Name:	**CHESHIRE**
	AT&T Project:	**3_Wireline Cingular Modification 6-18-2012**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2003 IBC, & ASCE 7-05** **85 mph fastest-mile with 0" ice** **38 mph fastest-mile with 3/4" ice**
SITE DATA:		**751 Higgins Road, Cheshire, CT 06410, New Haven County** **Latitude 41° 29' 15" N, Longitude 72° 55' 47" W** **Market: NEW ENGLAND** **250' Radio Relay Towers Self Support Tower**

Ms. Julie Overman,

GPD is pleased to submit this Revised Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	98.8%	Pass
Building Pedestal Ratio with Proposed Equipment:	Adequate	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T Towers. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,

John N. Kabak, P.E.
Connecticut #: PEN.0028336

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to AT&T Towers. This report was commissioned by Ms. Julie Overman of AT&T Towers.

This analysis is limited to the above grade tower structure. A detailed analysis of the below grade building structure is beyond the scope of this report; however, based on a comparison of the existing base reactions and the base reactions from the existing, proposed, and reserved loading case the below grade building structure will see a loading increase less than 5% in capacity. Therefore the below grade building structure will be sufficient to support the proposed loading per section 3403.2 of the 2003 IBC.

The proposed coax shall be stacked with the existing coax supplying the 252' elevation in a seven on eight on eight configuration on tower face D in order for the results of this analysis to be valid. See Appendix C for the proposed coax layout.

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	69.8%	Pass
Leg Bolts	94.8%	Pass
Diagonals	58.1%	Pass
Horizontals	51.5%	Pass
Redundant Members	64.1%	Pass
Inner Bracing	72.5%	Pass
Member Bolts	98.8%	Pass
Anchor Rods	32.1%	Pass
Building Pedestals	Adequate	Pass

ANALYSIS METHOD

RISA-3D (Version 11.0.0) and tnxTower (Version 6.1.4.1), commercially available software programs, were used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit by GPD.

DOCUMENTS PROVIDED

Document	Remarks	Source
Notice of Colocation Form	Not Provided	N/A
Site Lease Application	AT&T Application, dated 3/18/14, uploaded 4/2/14	Siterra
Original Building Drawings	AT&T Co. L-4 Junction Building, Cheshire, CT, dated 12/1/65	Siterra
Foundation Exploration	FDH Project #: 11-12049E-N1, dated 12/20/11	Siterra
Geotechnical Report	Not Provided	N/A
Previous Structural Analysis	GPD Project #: 2013723.01.TAG0053.02, dated 10/3/13	Siterra
Tower Mapping	Tower Engineering Professionals Project #: 111343, dated 4/8/11	Siterra
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE, dated 2/4/13	Siterra
Modification Drawings	GPD Project #: 2012856.05, dated 7/25/12	Siterra
Ground Mapping	GPD Project #: 2013723.01.TAG0053.01, dated 6/14/13	Siterra
Tower Mapping	GPD Project #: 2013723.01.TAG0053.03, dated 1/17/14	Siterra

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from the previous structural analysis by GPD (Project #: 2013723.01.TAG0053.02, dated 10/3/13), the tower mapping by GPD (Project #: 2013723.01.TAG0053.03, dated 1/17/14), site photos, and the provided preliminary tower summary and is assumed to be accurate.
12. This analysis is limited to the above grade tower structure. A detailed analysis of the below grade building structure is beyond the scope of this report; however, based on a comparison of the existing base reactions and the base reactions from the existing, proposed, and reserved loading case the below grade building structure will see a loading increase less than 5% in capacity. Therefore the below grade building structure will be sufficient to support the proposed loading per section 3403.2 of the 2003 IBC.
13. The reserved AT&T Mobility loading found in the previous structural analysis by GPD (Project #: 2013723.01.TAG0053.02, dated 10/3/13) was found to vary from existing loading found in the tower mapping by GPD (Project #: 2013723.01.TAG0053.03, dated 1/17/14). The existing/reserved AT&T Mobility loading has been modeled based on the loading reflected in the previous structural analysis.
14. The proposed coax shall be stacked with the existing coax supplying the 252' elevation in a seven on eight on eight configuration on tower face D in order for the results of this analysis to be valid.
15. The Verizon loading was based on the final configuration found in the 4_Verizon Mod Pre-NTP 4-23-13 Siterra Project at the request of Ms. Julie Overman of AT&T Towers.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD GROUP has performed a site visit to the tower to verify the antenna/coax loading but not the member sizes. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD GROUP in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

GPD GROUP does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD GROUP provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the capability of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD GROUP, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

Tower Analysis Summary Form

General Info

Site Name	CHESHIRE
Site Number	TAG0053
FA Number	10136365
Date of Analysis	8/15/2014
Company Performing Analysis	GPD Group

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	SST	
Tower Height (top of steel AGL)	250'	
Tower Manufacturer	Radio Relay Towers	
Tower Model	Type "J"	
Tower Design	AT&T Co. Drawing #: NA4J03-902 Rev 3	6/5/1967
Original Building Drawings	AT&T Co. L-4 Junction Building, Cheshire, CT	12/1/1965
Geotech Report	n/a	
Tower Mapping	Tower Engineering Professionals Project #: 111343	4/8/2011
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE	2/4/2013
Tower Mapping	GPD Project #: 2013723.01,TAG0053.03	1/17/2014
Previous Structural Analysis	GPD Project #: 2013723.01,TAG0053.02	10/3/2013
Modification Design	GPD Project #: 2012856.05	7/25/2012
Ground Mapping	GPD Project #: 2013723.01,TAG0053.01	6/14/2013
Foundation Mapping	FDH Project #: 11-12049E-N1	12/20/2011

Design Parameters

Design Code Used	TIA/EIA-222-F, 2003 IBC 2005 CT BC & ASCE 7-05
Location of Tower (County, State)	New Haven, CT
Basic Wind Speed (mph)	85 (Fastest Mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	98.8%
Tower Base (%)	32.1%
Foundation (%)	Adequate
Foundation Adequate?	Yes

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

Steel Yield Strength (ksi)

Legs	36
Bracing Members	36
Connection Bolts	A307
Anchor Rods	C1015

Note: Material grades are assumed based on experience with similar towers.

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
Unknown	252	265	1	Lightning Rod	Unknown	4' Lightning Rod		1	Unknown	Top Platform	1	Unknown	5/8"	Face D
Unknown	252	263	1	Beacon	Unknown	Flash Beacon		1	Unknown	13' I Beam				
AT&T Mobility	252	255	4	Panel	KMW	AM-X-CD-16-65-00T-RET	125/154/235			On the same mount	10	Unknown	1-5/8"	Face D
AT&T Mobility	252	255	3	Panel	Andrew	SBNH-1D6565C	154/235			On the same mount				
Verizon	252	252	3	Panel	Commscope	LNX 6514 DS	30/140/260	4	Unknown	4' Standoff on platform	12	Unknown	1-5/8"	Face D
Verizon	252	252	3	Panel	Antel	BXA 70063/6CF	30/140/260			On the same mount	1	Fiber	5/8"	Face D
Verizon	252	252	3	Panel	Antel	BXA 171063/8CF	30/140/260			On the same mount				
Verizon	252	252	3	Panel	Antel	BXA 171063/12BF	30/140/260			On the same mount				
Verizon	252	252	6	Diplexer	RFS	FD9R6004/2C-3L				Behind The Antennas				
Verizon	252	252	3	RRU	Alcatel Lucent	ALU 2X40AWS				On the same mount				
Verizon	252	252	1	Box	RFS	DB-T1-6Z-8AB-0Z				On the same mount				
Verizon	252	252	1	GPS	Unknown	GPS				On the same mount				
Unknown	239.5							1	Unknown	Platform				
Sprint	225	225.6	6	Panel	Decibel	DB980H65E-M	30/130/210	8	Unknown	20' Pipe Mount	6	Unknown	1-5/8"	Face D
Nextel	210	212	6	Panel	Decibel	DB844H90E-XY	30/255	4	Unknown	14' T-Frame	6	Unknown	1-5/8"	Face D
T-Mobile (Omnipoint)	210	212	4	Panel	EMS	RR90-17-02DP	60/140			On same mounts	8	Unknown	1-5/8"	Face A
T-Mobile (Omnipoint)	210	212	2	Panel	RFS	APX16DWV-16DWVS	60/140			On same mounts	4	Unknown	1-5/8"	Face B
T-Mobile (Omnipoint)	210	212	2	TMA	Ericsson	KRY 112 144/1				On same mounts	1	RET Cable	1/4"	Face B
T-Mobile (Omnipoint)	210	212	2	TMA	Ericsson	KRY 112 89/5				On same mounts				
Unknown	210	212	4	RET	RFS	ACU-A20-N				On same mounts				
Unknown	210	207	1	Panel	Unknown	26"x26"x2" FP	160			On same mounts	1	Unknown	1/2"	Face D
Nextel	198	200	3	Panel	Andrew/Decibel	DB844H90E-XY	135	1	Unknown	14' T-Frame	3	Unknown	1-5/8"	Face D
SGI	190	196	2	Omni	Unknown	PG1-NOF-0091		2	Unknown	5' Standoff	2	Unknown	7/8"	Face D
SGI	171	177	1	Omni	Unknown	PG1-DOF-0093		1	Unknown	5' Standoff	1	Unknown	7/8"	Face D
Unknown	139.5							2	Unknown	Platforms w/ Rails				
AT&T Internet Services	85	88	1	Yagi	Wade	WL 7-13/S		3	Unknown	Standoffs	7	Unknown	5/8"	Face D
AT&T Internet Services	85	85	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	84	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	83	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	81	1	Yagi	Wade	WL 14-69/S				on the same mounts				
T-Mobile	40	40	1	BTS	Nortel	s8000		4	Unknown	Catwalk w/ Rails	4	Rigid Conduit	1"	Face A
T-Mobile	40	40	1	BTS	Ericsson	RBS 3106				On same mount	1	PVC	1"	Face A
T-Mobile	40	40	4	RRU	Ericsson	RRU 22 20W				On same mount				
T-Mobile	40	40	2	Power System	Ericsson	PBC02 MU				On same mount				
T-Mobile	40	41	1	Omni	Unknown	14" Omni				On same mount	1	Unknown	3/16"	Cabinet
T-Mobile	40	42	1	GPS	Unknown	GPS Antenna				On same mount	1	Unknown	3/16"	Cabinet
Unknown	37	37	1	Camera	Vicon Environmental	Camera - V8300H		1	Unknown	2.5' Box Mount	1	Rigid Conduit	1"	Face A
Unknown	36.5	36.5	1	GPS	Lucent	407517689		1	Unknown	3' Side Arm	1	Unknown	1/2"	Face D
Unknown	21	21	2	Box	Unknown	Junction Box		1	Unknown	Platform	5	Conduit	1"	Face A
Unknown	21	21	1	RRU	Unknown	28" x 15.5" x 10" RRU				on the same mount				
T-Mobile	4	4	1	Cabinet	Purcell	RAC35				Leg Mounted				

Note: (1) SBNH-1D6565C Antenna and (4) of the AT&T Mobility 1-5/8" coax at 252' shall be removed prior to the installation of the proposed configuration and have not been considered in this analysis. All other existing/reserved equipment shall be reused. The remaining AM-X-CD-16-65-00T-RET Antennas shall be reorientated into a 154/270 configuration, and the remaining SBNH-1D6565C Antennas shall be reorientated into a 5/15 configuration.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
AT&T Mobility	252	255	3	TMA	CCI	DTMABP7819VG12A				behind the antennas	2	DC Power	.645"	Face D
AT&T Mobility	252	255	6	RRU	Ericsson	RRUS-11				behind the antennas	1	Fiber	1.34"	Face D
AT&T Mobility	252	255	3	Surge Arrestor	Raycap	DC2-48-60-0-9E				behind the antennas				
AT&T Mobility	252	255	1	Surge Arrestor	Raycap	FC12-PC6-10E				on the existing mounts				

Note: The proposed equipment shall be installed in addition to the remaining existing/reserved loading at the same elevation. The proposed coax shall be stacked with the existing coax supplying the 252' elevation in a seven on eight on eight configuration on tower face D in order for the results of this analysis to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face

Centek Engineering, Inc.
3-2 North Branford Road
Branford, Connecticut 06405
Phone: (203) 488-0580
Fax: (203) 488-8587

Steven L. Levine
Real Estate Consultant

October 10, 2014

Honorable Michael A. Milone
Town Manager, Town of Cheshire
Town Hall, 84 South Main St.
Cheshire, Connecticut 06410

Re: Telecommunications Facility – 751 Higgins Road, Cheshire

Dear Mr. Milone

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The enclosed Notice fully sets forth the AT&T proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council's procedures, please contact the undersigned at 860-830-0380 or Ms. Melanie Bachman, Acting Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure

AT&T Towers
2300 Northlake Center Dr Ste 405
Tucker, GA 30084-4032
(404) 532-5855

Kevin Clements
520 South Main Street
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD#: 2013723.01.TAG0053.04 Rev. 1
August 15, 2014

REVISED STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**TAG0053**
	Site FA:	**10136365**
	Site Name:	**CHESHIRE**
	AT&T Project:	**3_Wireline Cingular Modification 6-18-2012**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2003 IBC, & ASCE 7-05** **85 mph fastest-mile with 0" ice** **38 mph fastest-mile with 3/4" ice**
SITE DATA:		**751 Higgins Road, Cheshire, CT 06410, New Haven County** **Latitude 41° 29' 15" N, Longitude 72° 55' 47" W** **Market: NEW ENGLAND** **250' Radio Relay Towers Self Support Tower**

Ms. Julie Overman,

GPD is pleased to submit this Revised Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	98.8%	Pass
Building Pedestal Ratio with Proposed Equipment:	Adequate	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T Towers. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,

John N. Kabak, P.E.
Connecticut #: PEN.0028336

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to AT&T Towers. This report was commissioned by Ms. Julie Overman of AT&T Towers.

This analysis is limited to the above grade tower structure. A detailed analysis of the below grade building structure is beyond the scope of this report; however, based on a comparison of the existing base reactions and the base reactions from the existing, proposed, and reserved loading case the below grade building structure will see a loading increase less than 5% in capacity. Therefore the below grade building structure will be sufficient to support the proposed loading per section 3403.2 of the 2003 IBC.

The proposed coax shall be stacked with the existing coax supplying the 252' elevation in a seven on eight on eight configuration on tower face D in order for the results of this analysis to be valid. See Appendix C for the proposed coax layout.

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	69.8%	Pass
Leg Bolts	94.8%	Pass
Diagonals	58.1%	Pass
Horizontals	51.5%	Pass
Redundant Members	64.1%	Pass
Inner Bracing	72.5%	Pass
Member Bolts	98.8%	Pass
Anchor Rods	32.1%	Pass
Building Pedestals	Adequate	Pass

ANALYSIS METHOD

RISA-3D (Version 11.0.0) and tnxTower (Version 6.1.4.1), commercially available software programs, were used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit by GPD.

DOCUMENTS PROVIDED

Document	Remarks	Source
Notice of Colocation Form	Not Provided	N/A
Site Lease Application	AT&T Application, dated 3/18/14, uploaded 4/2/14	Siterra
Original Building Drawings	AT&T Co. L-4 Junction Building, Cheshire, CT, dated 12/1/65	Siterra
Foundation Exploration	FDH Project #: 11-12049E-N1, dated 12/20/11	Siterra
Geotechnical Report	Not Provided	N/A
Previous Structural Analysis	GPD Project #: 2013723.01.TAG0053.02, dated 10/3/13	Siterra
Tower Mapping	Tower Engineering Professionals Project #: 111343, dated 4/8/11	Siterra
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE, dated 2/4/13	Siterra
Modification Drawings	GPD Project #: 2012856.05, dated 7/25/12	Siterra
Ground Mapping	GPD Project #: 2013723.01.TAG0053.01, dated 6/14/13	Siterra
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4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
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10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
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It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

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Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	CHESHIRE
Site Number	TAG0053
FA Number	10136365
Date of Analysis	8/15/2014
Company Performing Analysis	GPD Group

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	SST	
Tower Height (top of steel AGL)	250'	
Tower Manufacturer	Radio Relay Towers	
Tower Model	Type "J"	
Tower Design	AT&T Co. Drawing #: NA4J03-902 Rev 3	6/5/1967
Original Building Drawings	AT&T Co. L-4 Junction Building, Cheshire, CT	12/1/1965
Geotech Report	n/a	
Tower Mapping	Tower Engineering Professionals Project #: 111343	4/8/2011
Tower Mapping	Hudson Design Group, Site Name: CHESHIRE	2/4/2013
Tower Mapping	GPD Project #: 2013723.01,TAG0053.03	1/17/2014
Previous Structural Analysis	GPD Project #: 2013723.01,TAG0053.02	10/3/2013
Modification Design	GPD Project #: 2012856.05	7/25/2012
Ground Mapping	GPD Project #: 2013723.01,TAG0053.01	6/14/2013
Foundation Mapping	FDH Project #: 11-12049E-N1	12/20/2011

Design Parameters

Design Code Used	TIA/EIA-222-F, 2003 IBC 2005 CT BC & ASCE 7-05
Location of Tower (County, State)	New Haven, CT
Basic Wind Speed (mph)	85 (Fastest Mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	98.8%
Tower Base (%)	32.1%
Foundation (%)	Adequate
Foundation Adequate?	Yes

Modifications designed by GPD (Project #: 2012856.05, dated 7/25/12) have been installed and were considered in this analysis.

Steel Yield Strength (ksi)

Legs	36
Bracing Members	36
Connection Bolts	A307
Anchor Rods	C1015

Note: Material grades are assumed based on experience with similar towers.

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
Unknown	252	265	1	Lightning Rod	Unknown	4' Lightning Rod		1	Unknown	Top Platform	1	Unknown	5/8"	Face D
Unknown	252	263	1	Beacon	Unknown	Flash Beacon		1	Unknown	13' I Beam				
AT&T Mobility	252	255	4	Panel	KMW	AM-X-CD-16-65-00T-RET	125/154/235			On the same mount	10	Unknown	1-5/8"	Face D
AT&T Mobility	252	255	3	Panel	Andrew	SBNH-1D6565C	154/235			On the same mount				
Verizon	252	252	3	Panel	Commscope	LNX 6514 DS	30/140/260	4	Unknown	4' Standoff on platform	12	Unknown	1-5/8"	Face D
Verizon	252	252	3	Panel	Antel	BXA 70063/6CF	30/140/260			On the same mount	1	Fiber	5/8"	Face D
Verizon	252	252	3	Panel	Antel	BXA 171063/8CF	30/140/260			On the same mount				
Verizon	252	252	3	Panel	Antel	BXA 171063/12BF	30/140/260			On the same mount				
Verizon	252	252	6	Diplexer	RFS	FD9R6004/2C-3L				Behind The Antennas				
Verizon	252	252	3	RRU	Alcatel Lucent	ALU 2X40AWS				On the same mount				
Verizon	252	252	1	Box	RFS	DB-T1-6Z-8AB-0Z				On the same mount				
Verizon	252	252	1	GPS	Unknown	GPS				On the same mount				
Unknown	239.5							1	Unknown	Platform				
Sprint	225	225.6	6	Panel	Decibel	DB980H65E-M	30/130/210	8	Unknown	20' Pipe Mount	6	Unknown	1-5/8"	Face D
Nextel	210	212	6	Panel	Decibel	DB844H90E-XY	30/255	4	Unknown	14' T-Frame	6	Unknown	1-5/8"	Face D
T-Mobile (Omnipoint)	210	212	4	Panel	EMS	RR90-17-02DP	60/140			On same mounts	8	Unknown	1-5/8"	Face A
T-Mobile (Omnipoint)	210	212	2	Panel	RFS	APX16DWV-16DWVS	60/140			On same mounts	4	Unknown	1-5/8"	Face B
T-Mobile (Omnipoint)	210	212	2	TMA	Ericsson	KRY 112 144/1				On same mounts	1	RET Cable	1/4"	Face B
T-Mobile (Omnipoint)	210	212	2	TMA	Ericsson	KRY 112 89/5				On same mounts				
Unknown	210	212	4	RET	RFS	ACU-A20-N				On same mounts				
Unknown	210	207	1	Panel	Unknown	26"x26"x2" FP	160			On same mounts	1	Unknown	1/2"	Face D
Nextel	198	200	3	Panel	Andrew/Decibel	DB844H90E-XY	135	1	Unknown	14' T-Frame	3	Unknown	1-5/8"	Face D
SGI	190	196	2	Omni	Unknown	PG1-NOF-0091		2	Unknown	5' Standoff	2	Unknown	7/8"	Face D
SGI	171	177	1	Omni	Unknown	PG1-DOF-0093		1	Unknown	5' Standoff	1	Unknown	7/8"	Face D
Unknown	139.5							2	Unknown	Platforms w/ Rails				
AT&T Internet Services	85	88	1	Yagi	Wade	WL 7-13/S		3	Unknown	Standoffs	7	Unknown	5/8"	Face D
AT&T Internet Services	85	85	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	84	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	83	1	Yagi	Wade	WL 14-69/S				on the same mounts				
AT&T Internet Services	85	81	1	Yagi	Wade	WL 14-69/S				on the same mounts				
T-Mobile	40	40	1	BTS	Nortel	s8000		4	Unknown	Catwalk w/ Rails	4	Rigid Conduit	1"	Face A
T-Mobile	40	40	1	BTS	Ericsson	RBS 3106				On same mount	1	PVC	1"	Face A
T-Mobile	40	40	4	RRU	Ericsson	RRU 22 20W				On same mount				
T-Mobile	40	40	2	Power System	Ericsson	PBC02 MU				On same mount				
T-Mobile	40	41	1	Omni	Unknown	14" Omni				On same mount	1	Unknown	3/16"	Cabinet
T-Mobile	40	42	1	GPS	Unknown	GPS Antenna				On same mount	1	Unknown	3/16"	Cabinet
Unknown	37	37	1	Camera	Vicon Environmental	Camera - V8300H		1	Unknown	2.5' Box Mount	1	Rigid Conduit	1"	Face A
Unknown	36.5	36.5	1	GPS	Lucent	407517689		1	Unknown	3' Side Arm	1	Unknown	1/2"	Face D
Unknown	21	21	2	Box	Unknown	Junction Box		1	Unknown	Platform	5	Conduit	1"	Face A
Unknown	21	21	1	RRU	Unknown	28" x 15.5" x 10" RRU				on the same mount				
T-Mobile	4	4	1	Cabinet	Purcell	RAC35				Leg Mounted				

Note: (1) SBNH-1D6565C Antenna and (4) of the AT&T Mobility 1-5/8" coax at 252' shall be removed prior to the installation of the proposed configuration and have not been considered in this analysis. All other existing/reserved equipment shall be reused. The remaining AM-X-CD-16-65-00T-RET Antennas shall be reorientated into a 154/270 configuration, and the remaining SBNH-1D6565C Antennas shall be reorientated into a 5/15 configuration.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
AT&T Mobility	252	255	3	TMA	CCI	DTMABP7819VG12A				behind the antennas	2	DC Power	.645"	Face D
AT&T Mobility	252	255	6	RRU	Ericsson	RRUS-11				behind the antennas	1	Fiber	1.34"	Face D
AT&T Mobility	252	255	3	Surge Arrestor	Raycap	DC2-48-60-0-9E				behind the antennas				
AT&T Mobility	252	255	1	Surge Arrestor	Raycap	FC12-PC6-10E				on the existing mounts				

Note: The proposed equipment shall be installed in addition to the remaining existing/reserved loading at the same elevation. The proposed coax shall be stacked with the existing coax supplying the 252' elevation in a seven on eight on eight configuration on tower face D in order for the results of this analysis to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face

APPENDIX B

Software Output Files and Calculations

Tower Input Data

The main tower is a 4x free standing tower with an overall height of 250.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 33.50 ft at the top and 37.00 ft at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	*Face or Leg*	*Allow Shield*	*Component Type*	*Placement* *ft*	*Face Offset* *in*	*Lateral Offset (Frac FW)*	*#*	*# Per Row*	*Clear Spacing* *in*	*Width or Diameter* *in*	*Perimeter* *in*	*Weight* *plf*
LDF7-50A (1-5/8 FOAM)	B	Yes	Ar (CfAe)	210.00 - 37.00	0.0000	0.45	4	4	1.0000	1.9800		0.82
1" Rigid Conduit	C	Yes	Ar (CfAe)	20.00 - 8.00	0.0000	-0.45	6	6	1.0000	1.0000		0.50
1" Rigid Conduit	C	Yes	Ar (CfAe)	30.00 - 20.00	0.0000	-0.45	11	11	1.0000	1.0000		0.50
1" Rigid Conduit	C	Yes	Ar (CfAe)	37.00 - 30.00	0.0000	-0.45	5	5	1.0000	1.0000		0.50
LDF4RN-50A (1/2 FOAM)	C	Yes	Ar (CfAe)	210.00 - 8.00	0.0000	-0.35	1	1	0.6300	0.6300		0.15
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	210.00 - 37.00	2.0000	-0.45	8	8	1.0000	1.9800		0.82
RET Cable	B	Yes	Ar (CfAe)	210.00 - 37.00	0.0000	0.45	1	1	0.4400	0.4400		0.08
Power Cable (1/2")	C	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.35	1	1	0.6300	0.0000		0.15
2-1/4" Conduit	C	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.35	1	1	2.2500	2.2500		0.32
2.5" Rigid Conduit	C	Yes	Ar (CfAe)	40.00 - 8.00	0.0000	-0.3	1	1	2.5000	2.5000		3.00
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	171.00 - 8.00	8.0000	0	3	3	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	190.00 - 171.00	8.0000	0	2	2	1.0900	1.0900		0.33
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	198.00 - 8.00	0.0000	0.45	9	9	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	210.00 - 198.00	0.0000	0.45	6	6	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	225.00 - 8.00	0.0000	0.05	3	1	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	225.00 - 8.00	0.0000	-0.05	3	1	1.0000	1.9800		0.82
LDF7-50A (1-5/8 FOAM)	D	Yes	Ar (CfAe)	250.00 - 8.00	0.0000	0.02	18	6	1.0000	1.9800		0.82
LDF4.5-50 (5/8 FOAM)	D	Yes	Ar (CfAe)	85.00 - 8.00	6.0000	0	7	4	0.8700	0.0000		0.15
LDF4-50A (1/2 FOAM)	D	Yes	Ar (CfAe)	100.00 - 8.00	0.0000	0.055	1	1	0.6300	0.6300		0.15
Feedline Ladder Af	B	Yes	Af (CfAe)	209.00 - 8.00	0.0000	0.45	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	C	Yes	Af (CfAe)	212.00 - 8.00	2.0000	-0.42	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	D	Yes	Af (CfAe)	250.00 - 8.00	0.0000	0	1	1	2.5000	2.5000	10.0000	7.00
Feedline Ladder Af	D	No	Af (CfAe)	209.00 - 8.00	0.0000	0.43	1	1	2.5000	2.5000	10.0000	7.00
1.34" Fiber Cable	D	Yes	Ar (CfAe)	250.00 - 8.00	5.0000	0.02	1	1	1.3400	0.0000		0.82
0.645" DC Cable	D	Yes	Ar (CfAe)	250.00 - 8.00	5.0000	0.02	2	2	0.6450	0.0000		0.31
5/8" Fiber Cable	D	No	Ar (CfAe)	250.00 - 8.00	0.0000	0.02	1	1	0.6250	0.0000		0.50

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#		C_AA_A ft^2/ft	Weight plf
Climbing Ladder	C	No	CaAa (Out Of Face)	250.00 - 8.00	-24.0000	0	1	No Ice	0.29	7.90
								1/2" Ice	0.55	10.60
								1" Ice	0.81	13.30
								2" Ice	1.33	18.70
								4" Ice	2.37	29.50
Safety Line 3/8	C	No	CaAa (Out Of Face)	250.00 - 8.00	-24.0000	0	1	No Ice	0.04	0.22
								1/2" Ice	0.14	0.75
								1" Ice	0.24	1.28
								2" Ice	0.44	2.34
								4" Ice	0.84	4.46

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Tower Top Platform	C	None		0.0000	252.00	No Ice	85.00	85.00	4425.00
						1/2" Ice	97.00	97.00	5752.50
						1" Ice	110.00	110.00	7080.00
						2" Ice	135.00	135.00	9735.00
						4" Ice	183.00	183.00	15045.00
(2) AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
AM-X-CD-16-65-00T-RET w/ 6' Mount Pipe	B	From Face	2.00 0.00 3.00	-10.0000	252.00	No Ice	8.26	6.37	83.24
						1/2" Ice	8.81	7.18	148.46
						1" Ice	9.36	8.00	222.18
						2" Ice	10.50	9.70	393.50
						4" Ice	12.88	13.33	871.17
SBNH-1D6565C w/ Mount Pipe	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice	11.45	9.36	86.35
						1/2" Ice	12.06	10.68	170.71
						1" Ice	12.69	11.71	264.63
						2" Ice	14.03	13.82	484.75
						4" Ice	17.05	18.22	1088.19
SBNH-1D6565C w/ Mount Pipe	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice	11.45	9.36	86.35
						1/2" Ice	12.06	10.68	170.71
						1" Ice	12.69	11.71	264.63
						2" Ice	14.03	13.82	484.75
						4" Ice	17.05	18.22	1088.19
(2) RRUS-11	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice	3.25	1.37	47.62
						1/2" Ice	3.49	1.55	68.42
						1" Ice	3.74	1.74	92.25
						2" Ice	4.27	2.14	149.81
						4" Ice	5.43	3.04	309.89

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(2) RRUS-11	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	47.62 68.42 92.25 149.81 309.89
(2) RRUS-11	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.25 3.49 3.74 4.27 5.43	1.37 1.55 1.74 2.14 3.04	47.62 68.42 92.25 149.81 309.89
DTMABP7819VG12A	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DTMABP7819VG12A	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DTMABP7819VG12A	B	From Face	2.00 0.00 3.00	-10.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.44 0.56 0.69 0.97 1.63	19.00 26.12 35.11 59.49 139.29
DC2-48-60-0-9E	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
DC2-48-60-0-9E	A	From Face	2.00 0.00 3.00	-15.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
DC2-48-60-0-9E	B	From Face	2.00 0.00 3.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.66 0.77 0.90 1.17 1.82	16.00 24.84 35.66 63.99 152.85
FC12-PC6-10E	D	From Face	2.00 0.00 3.00	-41.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.45 2.66 2.88 3.34 4.37	1.00 1.15 1.31 1.64 2.43	20.35 36.62 55.57 102.30 236.51
GPS	A	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.17 0.24 0.32 0.51 1.02	0.17 0.24 0.32 0.51 1.02	0.87 3.85 7.85 19.56 62.07
LNX-6514DS w/ Mount Pipe	A	From Face	2.00 -15.00 0.00	-45.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.65 9.31 9.93 11.20 13.87	7.08 8.27 9.18 11.02 15.06	64.56 133.71 210.90 393.00 902.39
BXA-70063/6CF w/ Mount Pipe	A	From Face	2.00 15.00	-45.0000	252.00	No Ice 1/2" Ice	8.23 8.99	5.66 6.92	46.20 107.95

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	9.71	8.04	177.61
						2" Ice	11.09	9.94	344.61
						4" Ice	13.97	13.94	826.88
BXA-171063/8CF w/Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	3.14	3.51	28.90
			-15.00			1/2" Ice	3.52	4.13	61.61
			0.00			1" Ice	3.92	4.76	99.83
						2" Ice	4.80	6.06	195.70
						4" Ice	6.71	9.09	492.46
BXA-171063-12BF w/ Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	4.97	5.23	40.46
			15.00			1/2" Ice	5.52	6.39	86.08
			0.00			1" Ice	6.04	7.26	139.09
						2" Ice	7.09	9.05	270.85
						4" Ice	9.36	12.82	671.33
LNX-6514DS w/ Mount Pipe	C	From Face	4.00	35.0000	252.00	No Ice	14.20	14.28	70.39
			0.00			1/2" Ice	15.02	15.85	191.27
			0.00			1" Ice	15.85	17.48	322.55
						2" Ice	17.45	20.03	620.70
						4" Ice	20.76	25.33	1399.70
4' Standoff	C	From Face	2.00	35.0000	252.00	No Ice	3.41	3.41	80.00
			0.00			1/2" Ice	4.47	4.47	104.00
			0.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00
						4" Ice	11.08	11.08	272.00
BXA-70063/6CF w/ Mount Pipe	C	From Face	4.00	35.0000	252.00	No Ice	8.23	5.66	46.20
			10.00			1/2" Ice	8.99	6.92	107.95
			0.00			1" Ice	9.71	8.04	177.61
						2" Ice	11.09	9.94	344.61
						4" Ice	13.97	13.94	826.88
4' Standoff	C	From Face	2.00	35.0000	252.00	No Ice	3.41	3.41	80.00
			10.00			1/2" Ice	4.47	4.47	104.00
			0.00			1" Ice	5.50	5.50	128.00
						2" Ice	7.49	7.49	176.00
						4" Ice	11.08	11.08	272.00
BXA-171063/8CF w/Mount Pipe	D	From Face	2.00	45.0000	252.00	No Ice	3.14	3.51	28.90
			5.00			1/2" Ice	3.52	4.13	61.61
			0.00			1" Ice	3.92	4.76	99.83
						2" Ice	4.80	6.06	195.70
						4" Ice	6.71	9.09	492.46
BXA-171063-12BF w/ Mount Pipe	D	From Face	2.00	45.0000	252.00	No Ice	4.97	5.23	40.46
			0.00			1/2" Ice	5.52	6.39	86.08
			0.00			1" Ice	6.04	7.26	139.09
						2" Ice	7.09	9.05	270.85
						4" Ice	9.36	12.82	671.33
LNX-6514DS w/ Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	8.23	5.66	46.20
			-5.00			1/2" Ice	8.99	6.92	107.95
			0.00			1" Ice	9.71	8.04	177.61
						2" Ice	11.09	9.94	344.61
						4" Ice	13.97	13.94	826.88
BXA-70063/6CF w/ Mount Pipe	B	From Face	2.00	15.0000	252.00	No Ice	8.23	5.66	46.20
			5.00			1/2" Ice	8.99	6.92	107.95
			0.00			1" Ice	9.71	8.04	177.61
						2" Ice	11.09	9.94	344.61
						4" Ice	13.97	13.94	826.88
BXA-171063/8CF w/Mount Pipe	C	From Face	4.00	35.0000	252.00	No Ice	3.14	3.51	28.90
			15.00			1/2" Ice	3.52	4.13	61.61
			0.00			1" Ice	3.92	4.76	99.83
						2" Ice	4.80	6.06	195.70

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						4" Ice	6.71	9.09	492.46
4' Standoff	C	From Face	2.00 15.00 0.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.41 4.47 5.50 7.49 11.08	3.41 4.47 5.50 7.49 11.08	80.00 104.00 128.00 176.00 272.00
BXA-171063-12BF w/ Mount Pipe	C	From Face	4.00 15.00 0.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.97 5.52 6.04 7.09 9.36	5.23 6.39 7.26 9.05 12.82	40.46 86.08 139.09 270.85 671.33
4' Standoff	C	From Face	2.00 15.00 0.00	35.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.41 4.47 5.50 7.49 11.08	3.41 4.47 5.50 7.49 11.08	80.00 104.00 128.00 176.00 272.00
(2) FD9R6004/2C-3L	A	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.08 0.14 0.20 0.34 0.74	3.10 5.40 8.79 19.61 62.87
(2) FD9R6004/2C-3L	B	From Face	2.00 5.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.08 0.14 0.20 0.34 0.74	3.10 5.40 8.79 19.61 62.87
(2) FD9R6004/2C-3L	C	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.00 0.00 0.00 0.00 0.00	0.08 0.14 0.20 0.34 0.74	3.10 5.40 8.79 19.61 62.87
ALU 2X40AWS	A	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.76 4.03 4.30 4.88 6.14	2.23 2.46 2.69 3.19 4.28	47.60 73.74 103.28 173.40 363.13
ALU 2X40AWS	B	From Face	2.00 5.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.76 4.03 4.30 4.88 6.14	2.23 2.46 2.69 3.19 4.28	47.60 73.74 103.28 173.40 363.13
ALU 2X40AWS	C	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.76 4.03 4.30 4.88 6.14	2.23 2.46 2.69 3.19 4.28	47.60 73.74 103.28 173.40 363.13
DB-T1-6Z-8AB-0Z	C	From Face	2.00 0.00 0.00	0.0000	252.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.60 5.92 6.24 6.91 8.37	2.33 2.56 2.79 3.28 4.37	44.00 80.13 120.22 213.04 454.67
(2) DB980H65E-M w/ 20' Mount Pipe	B	From Face	1.00 15.00 0.60	0.0000	225.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.11 10.01 11.94 15.84 23.43	7.94 10.34 12.76 17.66 26.85	124.30 199.77 291.06 513.32 1159.44
(2) DB980H65E-M w/ 20' Mount Pipe	C	From Face	1.00	0.0000	225.00	No Ice	8.11	7.94	124.30

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			-15.00			1/2" Ice	10.01	10.34	199.77
			0.60			1" Ice	11.94	12.76	291.06
						2" Ice	15.84	17.66	513.32
						4" Ice	23.43	26.85	1159.44
(2) DB980H65E-M w/ 10' Mount Pipe	D	From Face	1.00	0.0000	225.00	No Ice	5.24	5.07	66.40
			10.00			1/2" Ice	6.13	6.46	114.34
			0.60			1" Ice	7.04	7.88	172.79
						2" Ice	8.45	9.87	317.93
						4" Ice	11.64	14.05	747.19
10' x 2.5" Pipe	B	From Face	1.00	0.0000	225.60	No Ice	2.50	2.50	50.00
			-10.00			1/2" Ice	3.53	3.53	68.64
			0.00			1" Ice	4.58	4.58	93.79
						2" Ice	5.98	5.98	164.26
						4" Ice	8.54	8.54	390.10
10' x 2.5" Pipe	D	From Face	1.00	0.0000	225.60	No Ice	2.50	2.50	50.00
			-15.00			1/2" Ice	3.53	3.53	68.64
			0.00			1" Ice	4.58	4.58	93.79
						2" Ice	5.98	5.98	164.26
						4" Ice	8.54	8.54	390.10
(3) DB844H90E-XY w/Mount Pipe	A	From Leg	1.00	60.0000	210.00	No Ice	3.58	5.40	35.55
			0.00			1/2" Ice	4.20	6.49	79.42
			2.00			1" Ice	4.73	7.30	129.38
						2" Ice	5.86	8.96	251.21
						4" Ice	8.27	12.49	616.53
(3) DB844H90E-XY w/Mount Pipe	D	From Leg	1.00	15.0000	210.00	No Ice	3.58	5.40	35.55
			0.00			1/2" Ice	4.20	6.49	79.42
			2.00			1" Ice	4.73	7.30	129.38
						2" Ice	5.86	8.96	251.21
						4" Ice	8.27	12.49	616.53
14' T-Frame	A	From Leg	0.50	60.0000	210.00	No Ice	18.21	0.00	492.00
			0.00			1/2" Ice	23.76	0.00	690.25
			0.00			1" Ice	29.31	0.00	888.50
						2" Ice	40.41	0.00	1284.99
						4" Ice	62.61	0.00	2077.98
14' T-Frame	D	From Leg	0.50	15.0000	210.00	No Ice	18.21	0.00	492.00
			0.00			1/2" Ice	23.76	0.00	690.25
			0.00			1" Ice	29.31	0.00	888.50
						2" Ice	40.41	0.00	1284.99
						4" Ice	62.61	0.00	2077.98
(2) RR90-17-02DP w/Mount Pipe	B	From Leg	1.00	0.0000	210.00	No Ice	4.91	3.64	43.55
			0.00			1/2" Ice	5.57	4.70	84.46
			2.00			1" Ice	6.14	5.48	131.77
						2" Ice	7.32	7.08	249.23
						4" Ice	9.81	10.47	609.50
(2) RR90-17-02DP w/Mount Pipe	C	From Leg	1.00	-10.0000	210.00	No Ice	4.91	3.64	43.55
			0.00			1/2" Ice	5.57	4.70	84.46
			2.00			1" Ice	6.14	5.48	131.77
						2" Ice	7.32	7.08	249.23
						4" Ice	9.81	10.47	609.50
APX16DWV-16DWVS-C w/Mount Pipe	B	From Leg	1.00	0.0000	210.00	No Ice	7.78	3.81	66.25
			0.00			1/2" Ice	8.48	4.88	118.28
			2.00			1" Ice	9.09	5.66	177.07
						2" Ice	10.33	7.26	318.57
						4" Ice	12.96	10.65	731.30
APX16DWV-16DWVS-C w/Mount Pipe	C	From Leg	1.00	-10.0000	210.00	No Ice	7.78	3.81	66.25
			0.00			1/2" Ice	8.48	4.88	118.28
			2.00			1" Ice	9.09	5.66	177.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						2" Ice	10.33	7.26	318.57
						4" Ice	12.96	10.65	731.30
KRY 112 144/1	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	11.00 14.18 18.58 31.87 81.78
KRY 112 144/1	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	11.00 14.18 18.58 31.87 81.78
KRY 112 89/5	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.64 0.76 0.88 1.15 1.80	0.43 0.53 0.64 0.89 1.48	15.40 20.46 27.07 45.73 110.29
KRY 112 89/5	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.64 0.76 0.88 1.15 1.80	0.43 0.53 0.64 0.89 1.48	15.40 20.46 27.07 45.73 110.29
14' T-Frame	B	From Leg	0.50 0.00 0.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
14' T-Frame	C	From Leg	0.50 0.00 0.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98
ACU-A20-N	B	From Leg	1.00 0.00 2.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.08 0.12 0.17 0.30 0.67	0.14 0.19 0.25 0.40 0.80	1.04 2.32 4.41 11.80 44.85
ACU-A20-N	C	From Leg	1.00 0.00 2.00	-10.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.08 0.12 0.17 0.30 0.67	0.14 0.19 0.25 0.40 0.80	1.04 2.32 4.41 11.80 44.85
26"x 26" Flat Panel	C	From Leg	1.00 0.00 -3.00	0.0000	210.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.60 5.92 6.24 6.91 8.37	0.52 0.67 0.83 1.21 2.09	15.00 38.43 65.30 130.11 309.52
(3) DB844H90E-XY w/Mount Pipe	C	From Leg	1.00 0.00 2.00	-15.0000	198.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.58 4.20 4.73 5.86 8.27	5.40 6.49 7.30 8.96 12.49	35.55 79.42 129.38 251.21 616.53
14' T-Frame	C	From Leg	0.50 0.00 0.00	-15.0000	198.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.21 23.76 29.31 40.41 62.61	0.00 0.00 0.00 0.00 0.00	492.00 690.25 888.50 1284.99 2077.98

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
PG1-NOF-0091	A	From Leg	3.50 -3.50 6.00	-45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	A	From Leg	1.75 -1.75 0.00	-45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.72 4.11 5.50 8.28 13.84	12.93 17.82 22.71 32.49 52.05	145.70 223.26 300.83 455.95 766.20
PG1-NOF-0091	B	From Leg	3.50 3.50 6.00	45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	B	From Leg	1.75 1.75 0.00	45.0000	190.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.72 4.11 5.50 8.28 13.84	12.93 17.82 22.71 32.49 52.05	145.70 223.26 300.83 455.95 766.20
PG1-DOF-0093	B	From Leg	3.50 3.50 0.00	45.0000	171.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.40 2.23 3.07 4.13 6.22	1.40 2.23 3.07 4.13 6.22	7.50 18.71 35.15 84.32 252.12
5' Standoff	B	From Leg	1.75 1.75 0.00	45.0000	171.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.72 4.11 5.50 8.28 13.84	12.93 17.82 22.71 32.49 52.05	145.70 223.26 300.83 455.95 766.20
WL14-69/S	B	From Leg	1.00 0.00 -4.00	-28.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	B	From Leg	1.00 0.00 0.00	-28.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	C	From Leg	1.00 0.00 -2.00	-39.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL14-69/S	D	From Leg	1.00 0.00 -1.00	-32.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.74 4.61 6.34 9.79	2.88 3.74 4.61 6.34 9.79	5.00 6.50 8.45 11.00 17.00
WL7-13	D	From Leg	1.00 0.00 3.00	-32.0000	85.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.88 3.73 4.59 6.29 9.71	2.88 3.73 4.59 6.29 9.71	25.00 32.50 40.00 55.00 85.00
s8000	C	None		0.0000	40.00	No Ice 1/2" Ice	13.22 13.73	32.52 33.28	970.00 1179.36

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						1" Ice	14.25	34.05	1398.09
						2" Ice	15.33	35.60	1864.48
						4" Ice	17.57	38.82	2918.35
RBS 3106	C	None		0.0000	40.00	No Ice	17.85	12.60	1875.00
						1/2" Ice	18.42	13.07	2040.02
						1" Ice	19.00	13.55	2213.20
						2" Ice	20.17	14.54	2584.85
						4" Ice	22.64	16.61	3434.70
Purcell RAC35	C	None		0.0000	4.00	No Ice	8.17	6.81	120.00
						1/2" Ice	8.55	7.17	188.06
						1" Ice	8.95	7.54	261.43
						2" Ice	9.77	8.30	424.89
						4" Ice	11.50	9.93	824.15
(4) RRU 22 20W	C	None		0.0000	40.00	No Ice	1.57	2.58	35.00
						1/2" Ice	1.74	2.80	57.07
						1" Ice	1.92	3.03	82.20
						2" Ice	2.31	3.51	142.40
						4" Ice	3.18	4.57	308.00
(2) PBC02 MU	C	None		0.0000	40.00	No Ice	1.45	3.76	45.00
						1/2" Ice	1.62	4.02	70.25
						1" Ice	1.80	4.29	98.83
						2" Ice	2.19	4.85	166.74
						4" Ice	3.07	6.09	351.04
14" Omni	C	None		0.0000	41.00	No Ice	0.13	0.13	5.00
						1/2" Ice	0.22	0.22	6.76
						1" Ice	0.31	0.31	9.48
						2" Ice	0.53	0.53	18.44
						4" Ice	1.11	1.11	54.68
GPS	C	None		0.0000	42.00	No Ice	0.17	0.17	0.87
						1/2" Ice	0.24	0.24	3.85
						1" Ice	0.32	0.32	7.85
						2" Ice	0.51	0.51	19.56
						4" Ice	1.02	1.02	62.07
Camera	B	From Leg	1.50 0.00 0.00	0.0000	37.00	No Ice	0.13	0.06	2.00
						1/2" Ice	0.18	0.09	3.30
						1" Ice	0.25	0.14	5.42
						2" Ice	0.40	0.25	12.91
						4" Ice	0.80	0.59	46.33
2.5' Box Mount	B	From Leg	1.50 0.00 0.00	0.0000	37.00	No Ice	1.36	1.36	20.00
						1/2" Ice	2.45	2.45	40.00
						1" Ice	3.50	3.50	64.00
						2" Ice	5.74	5.74	103.00
						4" Ice	10.12	10.12	181.00
GPS	D	From Face	3.00 0.00 0.00	0.0000	36.50	No Ice	0.17	0.17	0.87
						1/2" Ice	0.24	0.24	3.85
						1" Ice	0.32	0.32	7.85
						2" Ice	0.51	0.51	19.56
						4" Ice	1.02	1.02	62.07
3' Side Arm	D	From Face	1.50 0.00 0.00	0.0000	36.50	No Ice	0.93	0.93	44.94
						1/2" Ice	1.13	1.13	54.87
						1" Ice	1.37	1.37	67.25
						2" Ice	1.89	1.89	99.94
						4" Ice	3.06	3.06	201.37
Platform	B	From Face	0.00 10.00 0.00	0.0000	21.00	No Ice	5.61	2.70	100.00
						1/2" Ice	7.01	3.38	125.00
						1" Ice	8.42	4.05	150.00
						2" Ice	11.22	5.40	200.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						4" Ice	16.83	8.10	300.00
(2) Junction Box (40"x14"x9")	B	From Face	0.00 10.00 0.00	0.0000	21.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.88 3.88 3.88 3.88 3.88	2.50 2.50 2.50 2.50 2.50	50.00 50.00 50.00 50.00 50.00
Platform	C	None		0.0000	239.50	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	75.38 94.22 113.06 150.75 226.13	75.38 94.22 113.06 150.75 226.13	10500.00 13000.00 15500.00 20500.00 30500.00
Catwalk	B	From Face	0.00 0.00 0.00	0.0000	139.50	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	75.38 94.22 113.06 150.75 226.13	4.08 5.09 6.11 8.15 12.23	1250.00 1600.00 1950.00 2650.00 4050.00

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1...	Density[k/...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36	29000	11200	.295	.65	.49	36	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_LEG_T1	L6x6x1/2	Column	Single Angle	A36	Typical	5.75	19.9	19.9	.501
2	TWR_LEG_OUTER_T1	2L2 1/2x2 1/2x1/4x3/8	Column	Single Angle	A36	Typical	2.38	3.347	1.41	.049
3	TWR_TOP_GIRT_T1	2L3x4x5/16x3/8	Beam	Wide Flange	A36	Typical	4.18	15.508	3.29	.136
4	TWR_DIAG_T1	2L3x4x5/16x3/8	Column	None	A36	Typical	4.18	15.508	3.29	.136
5	TWR_DIAG_OUTER_T1	2L3 1/2x4x5/16x3/8	Column	None	A36	Typical	4.49	15.551	5.1	.146
6	TWR_RED_HORZ_T1	L2 1/2x2 1/2x3/16	Beam	None	A36	Typical	.902	.547	.547	.011
7	TWR_RED_HORZ_2_T1	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
8	TWR_HORZ_OUTER_...	W12x26	Beam	None	A36	Typical	7.65	17.3	204	.3
9	TWR_RED_HORZ_3_T1	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
10	TWR_RED_HORZ_4_T1	L2 1/2x2 1/2x3/16	Beam	None	A36	Typical	.902	.547	.547	.011
11	TWR_RED_DIAG_T1	L2 1/2x2 1/2x3/16	Column	Single Angle	A36	Typical	.902	.547	.547	.011
12	TWR_LEG_T2	W6x20	Column	Wide Flange	A36	Typical	5.87	13.3	41.4	.24
13	TWR_DIAG_T2	2L3x2 1/2x3/8x3/8	Column	None	A36	Typical	3.84	5.153	3.31	.18
14	TWR_RED_HORZ_T2	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
15	TWR_RED_HORZ_2_T2	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
16	TWR_RED_DIAG_T2	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
17	TWR_RED_HORZ_3_T2	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
18	TWR_RED_DIAG_2_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
19	TWR_RED_DIAG_3_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
20	TWR_RED_HIP_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
21	TWR_RED_HIP_2_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
22	TWR_RED_HIPDIA_T2	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
23	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
24	TWR_INNER_SUPP_T2	W10x30	Beam	Wide Flange	A36	Typical	8.84	16.7	170	.622
25	TWR_INNER_SQ_T2	W8x13	Beam	Wide Flange	A36	Typical	3.84	2.73	39.6	.087
26	TWR_INNER_CORNE...	W8x13	Beam	Wide Flange	A36	Typical	3.84	2.73	39.6	.087
27	TWR_LEG_T3	W6x20	Column	Wide Flange	A36	Typical	5.87	13.3	41.4	.24
28	TWR_HORZ_T3	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
29	TWR_DIAG_T3	2L3x2 1/2x3/8x3/8	Column	None	A36	Typical	3.84	5.153	3.31	.18
30	TWR_RED_HORZ_T3	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
31	TWR_RED_HORZ_2_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
32	TWR_RED_DIAG_T3	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
33	TWR_RED_HORZ_3_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
34	TWR_RED_DIAG_2_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
35	TWR_RED_DIAG_3_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
36	TWR_RED_HIP_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
37	TWR_RED_HIP_2_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
38	TWR_RED_HIPDIA_T3	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
39	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
40	TWR_INNER_SUPP_T3	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
41	TWR_INNER_SQ_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
42	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
43	TWR_INNER_TRI_T3	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
44	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
45	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
46	TWR_LEG_T4	W6x25	Column	Wide Flange	A36	Typical	7.34	17.1	53.4	.461
47	TWR_HORZ_T4	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
48	TWR_DIAG_T4	2L3x2-1/2x1/2x3/8	Column	None	A36	Typical	5	6.999	4.167	.417
49	TWR_RED_HORZ_T4	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
50	TWR_RED_HORZ_2_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
51	TWR_RED_DIAG_T4	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
52	TWR_RED_HORZ_3_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
53	TWR_RED_DIAG_2_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
54	TWR_RED_DIAG_3_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
55	TWR_RED_HIP_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
56	TWR_RED_HIP_2_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
57	TWR_RED_HIPDIA_T4	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
58	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
59	TWR_INNER_SUPP_T4	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
60	TWR_INNER_SQ_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
61	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
62	TWR_INNER_TRI_T4	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
63	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
64	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
65	TWR_LEG_T5	W8x31	Column	Wide Flange	A36	Typical	9.13	37.1	110	.536
66	TWR_HORZ_T5	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
67	TWR_DIAG_T5	2L3x2-1/2x1/2x3/8	Column	None	A36	Typical	5	6.999	4.167	.417
68	TWR_RED_HORZ_T5	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
69	TWR_RED_HORZ_2_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
70	TWR_RED_DIAG_T5	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
71	TWR_RED_HORZ_3_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
72	TWR_RED_DIAG_2_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
73	TWR_RED_DIAG_3_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
74	TWR_RED_HIP_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
75	TWR_RED_HIP_2_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
76	TWR_RED_HIPDIA_T5	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
77	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
78	TWR_INNER_SUPP_T5	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
79	TWR_INNER_SQ_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
80	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
81	TWR_INNER_TRI_T5	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
82	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
83	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
84	TWR_LEG_T6	W8x40	Column	Wide Flange	A36	Typical	11.7	49.1	146	1.12
85	TWR_HORZ_T6	2L3x2 1/2x5/16x3/8	Beam	None	A36	Typical	3.242	4.255	2.845	.106
86	TWR_DIAG_T6	2L4x3x3/8x3/8	Column	None	A36	Typical	4.97	8.508	7.93	.233
87	TWR_RED_HORZ_T6	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
88	TWR_RED_HORZ_2_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
89	TWR_RED_DIAG_T6	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
90	TWR_RED_HORZ_3_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
91	TWR_RED_DIAG_2_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
92	TWR_RED_DIAG_3_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
93	TWR_RED_HIP_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
94	TWR_RED_HIP_2_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
95	TWR_RED_HIPDIA_T6	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
96	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
97	TWR_INNER_SUPP_T6	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
98	TWR_INNER_SQ_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
99	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
100	TWR_INNER_TRI_T6	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
101	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
102	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
103	TWR_LEG_T7	W10x54	Column	Wide Flange	A36	Typical	15.8	103	303	1.82
104	TWR_HORZ_T7	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
105	TWR_DIAG_T7	2L4x3x3/8x3/8	Column	None	A36	Typical	4.97	8.508	7.93	.233
106	TWR_RED_HORZ_T7	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
107	TWR_RED_HORZ_2_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
108	TWR_RED_DIAG_T7	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
109	TWR_RED_HORZ_3_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
110	TWR_RED_DIAG_2_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
111	TWR_RED_DIAG_3_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
112	TWR_RED_HIP_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
113	TWR_RED_HIP_2_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
114	TWR_RED_HIPDIA_T7	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
115	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
116	TWR_INNER_SUPP_T7	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
117	TWR_INNER_SQ_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
118	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
119	TWR_INNER_TRI_T7	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
120	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
121	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
122	TWR_LEG_T8	W10x60	Column	Wide Flange	A36	Typical	17.7	116	341	2.48
123	TWR_HORZ_T8	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
124	TWR_DIAG_T8	2L4x3x1/2x3/8	Column	None	A36	Typical	6.5	11.536	10.1	.542
125	TWR_RED_HORZ_T8	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
126	TWR_RED_HORZ_2_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
127	TWR_RED_DIAG_T8	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
128	TWR_RED_HORZ_3_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
129	TWR_RED_DIAG_2_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
130	TWR_RED_DIAG_3_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
131	TWR_RED_HIP_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
132	TWR_RED_HIP_2_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
133	TWR_RED_HIPDIA_T8	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
134	TWR_RED_HIPDIA_2_...	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
135	TWR_INNER_SUPP_T8	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
136	TWR_INNER_SQ_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
137	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
138	TWR_INNER_TRI_T8	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
139	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
140	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
141	TWR_LEG_T9	W10x68	Column	Wide Flange	A36	Typical	19.9	134	394	3.56
142	TWR_HORZ_T9	2L3x2 1/2x3/8x3/8	Beam	None	A36	Typical	3.84	5.153	3.31	.18
143	TWR_DIAG_T9	2L4x3x1/2x3/8	Column	None	A36	Typical	6.5	11.536	10.1	.542
144	TWR_RED_HORZ_T9	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
145	TWR_RED_HORZ_2_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
146	TWR_RED_DIAG_T9	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
147	TWR_RED_HORZ_3_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
148	TWR_RED_DIAG_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
149	TWR_RED_DIAG_3_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
150	TWR_RED_HIP_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
151	TWR_RED_HIP_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
152	TWR_RED_HIPDIA_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
153	TWR_REDHIPDIA_2_T9	2L2 1/2x2 1/2x3/16x...	Column	None	A36	Typical	1.8	2.499	1.09	.021
154	TWR_INNER_SUPP_T9	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
155	TWR_INNER_SQ_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
156	TWR_INNER_CORNE...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
157	TWR_INNER_TRI_T9	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
158	TWR_INNER_BRACE_...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021
159	TWR_INNER_LADDER...	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
160	TWR_LEG_T10	W12x79	Column	Wide Flange	A36	Typical	23.2	216	662	3.84
161	TWR_HORZ_T10	2L4x3x1/2x3/8	Beam	None	A36	Typical	6.5	11.536	10.1	.542
162	TWR_DIAG_T10	2L4x4x1/2x3/8	Column	None	A36	Typical	7.5	25.217	11.1	.625
163	TWR_RED_HORZ_T10	L3x3x3/16	Beam	None	A36	Typical	1.09	.96	.96	.014
164	TWR_RED_HORZ_2_T...	2L2 1/2x2 1/2x3/16x...	Beam	None	A36	Typical	1.8	2.499	1.09	.021

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
165	TWR_RED_DIAG_T10	L3x3x3/16	Column	None	A36	Typical	1.09	.96	.96	.014
166	TWR_RED_HORZ_3_T...	2L2 1/2x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.38	3.347	1.41	.049
167	TWR_RED_DIAG_2_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
168	TWR_RED_HORZ_4_T...	2L3x3x1/4x3/8	Beam	None	A36	Typical	2.88	5.535	2.49	.06
169	TWR_RED_DIAG_3_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
170	TWR_RED_DIAG_4_T10	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
171	TWR_RED_DIAG_0_T10	L2.5x2.5x8	Column	None	A36	Typical	2.26	1.22	1.22	.188
172	TWR_RED_HORZ_0_T...	L2.5x2.5x3	Column	None	A36	Typical	.901	.535	.535	.011
173	TWR_RED_HIP_1_T10	LL4x4x8x3	Column	None	A36	Typical	7.5	25.1	11	.644
174	TWR_RED_HIP_3_T10	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
175	TWR_RED_HIPDIA_1_...	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
176	TWR_RED_HIPDIA_3_...	LL3x3x3x3	Column	None	A36	Typical	2.18	4.09	1.9	.027
177	TWR_INNER_GIRT_T10	C4x7.2	Column	None	A36	Typical	2.13	.425	4.58	.082

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_INNER_SUPP_T1	2C12x20.7x0.375	Beam	A36_Gen	12.18	17.311	258	.74
2	TWR_HORZ_T2	2C10x20x0.375	Beam	A36_Gen	11.76	13.025	157.8	.74
3	TWR_INNER_SUPP_T2	2C12x20.7x0.375	Beam	A36_Gen	12.18	17.311	258	.74
4	TWR_INNER_SUPP_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
5	TWR_INNER_SQ_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
6	TWR_INNER_CORNER_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
7	TWR_INNER_LADDER_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
8	TWR_INNER_TRI_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16
9	TWR_INNER_BRACE_T10	2C4x7.25x0.375	Beam	A36_Gen	4.26	2.647	9.18	.16

Basic Load Cases

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(Memb...	Surface(Plate/Wall)
1	Dead	None		-1		40	354	40		
2	No Ice Wind 0 deg	None				40	878	120		
3	No Ice Wind 45 deg	None				80	906	160		
4	No Ice Wind 90 deg	None				40	880	120		
5	No Ice Wind 135 deg	None				80	880	160		
6	No Ice Wind 180 deg	None				40	878	120		
7	No Ice Wind 225 deg	None				80	906	160		
8	No Ice Wind 270 deg	None				40	880	120		
9	No Ice Wind 315 deg	None				80	880	160		
10	Ice	None				40	354	822		
11	Temperature Drop	None						1309		
12	Ice Wind 0 deg	None				40	850	120		
13	Ice Wind 45 deg	None				80	850	160		
14	Ice Wind 90 deg	None				40	858	120		
15	Ice Wind 135 deg	None				80	834	152		
16	Ice Wind 180 deg	None				40	850	120		
17	Ice Wind 225 deg	None				80	850	160		
18	Ice Wind 270 deg	None				40	858	120		
19	Ice Wind 315 deg	None				80	834	152		
20	Service Wind 0 deg	None				40	796	120		
21	Service Wind 45 deg	None				80	774	160		
22	Service Wind 90 deg	None				40	808	120		
23	Service Wind 135 deg	None				80	776	152		
24	Service Wind 180 deg	None				40	796	120		
25	Service Wind 225 deg	None				80	774	160		
26	Service Wind 270 deg	None				40	808	120		

Basic Load Cases (Continued)

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(Memb...	Surface(Plate/Wall)
27	Service Wind 315 deg	None				80	776	152		

Load Combinations

	Description	Solve	PD...	SRSS	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	Dead Only	Yes			1	1	28	1	29	1	0		0		0		0		0	
2	Dead+Wind 0 deg - No Ice	Yes			1	1	2	1	28	1	29	1	0		0		0		0	
3	Dead+Wind 45 deg - No Ice	Yes			1	1	3	1	28	1	29	1	0		0		0		0	
4	Dead+Wind 90 deg - No Ice	Yes			1	1	4	1	28	1	29	1	0		0		0		0	
5	Dead+Wind 135 deg - No Ice	Yes			1	1	5	1	28	1	29	1	0		0		0		0	
6	Dead+Wind 180 deg - No Ice	Yes			1	1	6	1	28	1	29	1	0		0		0		0	
7	Dead+Wind 225 deg - No Ice	Yes			1	1	7	1	28	1	29	1	0		0		0		0	
8	Dead+Wind 270 deg - No Ice	Yes			1	1	8	1	28	1	29	1	0		0		0		0	
9	Dead+Wind 315 deg - No Ice	Yes			1	1	9	1	28	1	29	1	0		0		0		0	
10	Dead+Ice+Temp	Yes			1	1	10	1	11	1	28	1	29	1	0		0		0	
11	Dead+Wind 0 deg+Ice+Temp	Yes			1	1	12	1	10	1	11	1	28	1	29	1	0		0	
12	Dead+Wind 45 deg+Ice+Temp	Yes			1	1	13	1	10	1	11	1	28	1	29	1	0		0	
13	Dead+Wind 90 deg+Ice+Temp	Yes			1	1	14	1	10	1	11	1	28	1	29	1	0		0	
14	Dead+Wind 135 deg+Ice+Temp	Yes			1	1	15	1	10	1	11	1	28	1	29	1	0		0	
15	Dead+Wind 180 deg+Ice+Temp	Yes			1	1	16	1	10	1	11	1	28	1	29	1	0		0	
16	Dead+Wind 225 deg+Ice+Temp	Yes			1	1	17	1	10	1	11	1	28	1	29	1	0		0	
17	Dead+Wind 270 deg+Ice+Temp	Yes			1	1	18	1	10	1	11	1	28	1	29	1	0		0	
18	Dead+Wind 315 deg+Ice+Temp	Yes			1	1	19	1	10	1	11	1	28	1	29	1	0		0	
19	Dead+Wind 0 deg - Service	Yes			1	1	20	1	28	1	29	1	0		0		0		0	
20	Dead+Wind 45 deg - Service	Yes			1	1	21	1	28	1	29	1	0		0		0		0	
21	Dead+Wind 90 deg - Service	Yes			1	1	22	1	28	1	29	1	0		0		0		0	
22	Dead+Wind 135 deg - Service	Yes			1	1	23	1	28	1	29	1	0		0		0		0	
23	Dead+Wind 180 deg - Service	Yes			1	1	24	1	28	1	29	1	0		0		0		0	
24	Dead+Wind 225 deg - Service	Yes			1	1	25	1	28	1	29	1	0		0		0		0	
25	Dead+Wind 270 deg - Service	Yes			1	1	26	1	28	1	29	1	0		0		0		0	
26	Dead+Wind 315 deg - Service	Yes			1	1	27	1	28	1	29	1	0		0		0		0	

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N441	max	41.32	7	465.852	7	31.704	2	0	1	.183	9	0	1
2		min	-34.326	3	-346.111	3	-35.915	6	0	1	-.142	5	0	1
3	N442	max	32.924	9	467.694	5	33.367	2	0	1	.15	7	0	1
4		min	-39.906	5	-342.538	9	-37.679	6	0	1	-.191	3	0	1
5	N443	max	31.402	7	464.709	3	37.683	2	0	1	.183	5	0	1
6		min	-38.142	3	-345.664	7	-33.364	6	0	1	-.14	9	0	1
7	N444	max	39.509	9	462.075	9	35.906	2	0	1	.132	3	0	1
8		min	-32.774	5	-348.567	5	-31.701	6	0	1	-.17	7	0	1
9	N842	max	NC		NC		NC		NC		LOCKED		NC	
10		min	NC		NC		NC		NC		LOCKED		NC	
11	N843	max	NC		NC		NC		NC		LOCKED		LOCKED	
12		min	NC		NC		NC		NC		LOCKED		LOCKED	
13	N841	max	NC		NC		NC		LOCKED		LOCKED		NC	
14		min	NC		NC		NC		LOCKED		LOCKED		NC	
15	N840	max	NC		NC		NC		NC		LOCKED		LOCKED	
16		min	NC		NC		NC		NC		LOCKED		LOCKED	
17	N847	max	NC		NC		NC		LOCKED		NC		NC	
18		min	NC		NC		NC		LOCKED		NC		NC	
19	Totals:	max	135.657	8	382.368	14	138.66	2						
20		min	-135.657	4	238.475	3	-138.66	6						

Envelope AISC 13th(360-05): ASD Steel Code Checks

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1	M1274	2L3 1/2x4x5/16x3/8	.079	9.019	4	.002	9.019	y	2	16.359	96.79	10.674	3.569	1	H1-...
2	M1275	2L3 1/2x4x5/16x3/8	.080	9.019	6	.002	9.019	y	8	16.359	96.79	10.674	3.569	1	H1-...
3	M1276	2L3 1/2x4x5/16x3/8	.079	9.019	8	.002	9.019	y	2	16.359	96.79	10.674	3.569	1	H1-...
4	M1277	2L3 1/2x4x5/16x3/8	.080	9.019	6	.002	9.019	y	4	16.359	96.79	10.674	3.569	1	H1-...
5	M1278	2L3 1/2x4x5/16x3/8	.080	9.019	2	.002	9.019	y	4	16.359	96.79	10.674	3.569	1	H1-...
6	M1279	2L3 1/2x4x5/16x3/8	.080	9.019	8	.002	9.019	y	6	16.359	96.79	10.674	3.569	1	H1-...
7	M1280	2L3 1/2x4x5/16x3/8	.080	9.019	4	.002	9.019	y	6	16.359	96.79	10.674	3.569	1	H1-...
8	M1281	2L3 1/2x4x5/16x3/8	.080	9.019	2	.002	9.019	y	8	16.359	96.79	10.674	3.569	1	H1-...
9	M1282	2L3 1/2x4x5/16x3/8	.061	7.784	6	.001	7.784	y	6	21.962	96.79	10.674	3.569	1	H1-...
10	M1283	2L3 1/2x4x5/16x3/8	.061	7.784	2	.001	7.784	y	2	21.962	96.79	10.674	3.569	1	H1-...
11	M1284	2L3 1/2x4x5/16x3/8	.061	7.784	8	.001	7.784	y	8	21.962	96.79	10.674	3.569	1	H1-...
12	M1285	2L3 1/2x4x5/16x3/8	.061	7.784	4	.001	7.784	y	4	21.962	96.79	10.674	3.569	1	H1-...
13	M1286	2L3 1/2x4x5/16x3/8	.061	7.784	2	.001	7.784	y	2	21.962	96.79	10.674	3.569	1	H1-...
14	M1287	2L3 1/2x4x5/16x3/8	.061	7.784	6	.001	7.784	y	6	21.962	96.79	10.674	3.569	1	H1-...
15	M1288	2L3 1/2x4x5/16x3/8	.061	7.784	4	.001	7.784	y	4	21.962	96.79	10.674	3.569	1	H1-...
16	M1289	2L3 1/2x4x5/16x3/8	.061	7.784	8	.001	7.784	y	8	21.962	96.79	10.674	3.569	1	H1-...
17	M15	2L3x4x5/16x3/8	.529	9.149	4	.003	9.149	y	13	10.257	90.108	10.644	2.637	1	H1-...
18	M18	2L3x4x5/16x3/8	.536	9.149	8	.003	9.149	y	17	10.257	90.108	10.644	2.637	1	H1-...
19	M22	2L3x4x5/16x3/8	.516	9.149	2	.003	9.149	y	11	10.257	90.108	10.644	2.637	1	H1-...
20	M25	2L3x4x5/16x3/8	.506	9.149	6	.003	9.149	y	15	10.257	90.108	10.644	2.637	1	H1-...
21	M29	2L3x4x5/16x3/8	.512	9.149	8	.003	9.149	y	17	10.257	90.108	10.644	2.637	1	H1-...
22	M32	2L3x4x5/16x3/8	.506	9.149	4	.003	9.149	y	13	10.257	90.108	10.644	2.637	1	H1-...
23	M36	2L3x4x5/16x3/8	.487	9.149	6	.003	9.149	y	15	10.257	90.108	10.644	2.637	1	H1-...
24	M39	2L3x4x5/16x3/8	.496	9.149	2	.003	9.149	y	11	10.257	90.108	10.644	2.637	1	H1-...
25	M51	2L3x2 1/2x3/8x3/8	.339	15.0...	8	.003	22.569	y	12	41.212	82.778	5.511	2.91	1	H1-...
26	M59	2L3x2 1/2x3/8x3/8	.338	15.0...	4	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
27	M67	2L3x2 1/2x3/8x3/8	.344	15.0...	6	.003	22.569	y	18	41.212	82.778	5.511	2.91	1	H1-...
28	M75	2L3x2 1/2x3/8x3/8	.345	15.0...	2	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
29	M83	2L3x2 1/2x3/8x3/8	.330	15.0...	4	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
30	M91	2L3x2 1/2x3/8x3/8	.330	15.0...	8	.003	22.569	y	14	41.212	82.778	5.511	2.91	1	H1-...
31	M99	2L3x2 1/2x3/8x3/8	.325	15.0...	2	.003	22.569	y	14	41.212	82.778	5.511	2.91	1	H1-...
32	M107	2L3x2 1/2x3/8x3/8	.325	15.0...	6	.003	22.569	y	12	41.212	82.778	5.511	2.91	1	H1-...
33	M124	2L3x2 1/2x3/8x3/8	.485	7.523	8	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
34	M132	2L3x2 1/2x3/8x3/8	.485	7.523	4	.003	22.569	y	13	41.212	82.778	5.511	2.91	1	H1-...
35	M141	2L3x2 1/2x3/8x3/8	.483	7.523	6	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
36	M149	2L3x2 1/2x3/8x3/8	.483	7.523	2	.003	22.569	y	11	41.212	82.778	5.511	2.91	1	H1-...
37	M158	2L3x2 1/2x3/8x3/8	.456	7.523	4	.003	22.569	y	13	41.212	82.778	5.511	2.91	1	H1-...
38	M166	2L3x2 1/2x3/8x3/8	.456	7.523	8	.003	22.569	y	17	41.212	82.778	5.511	2.91	1	H1-...
39	M175	2L3x2 1/2x3/8x3/8	.456	7.523	2	.003	22.569	y	11	41.212	82.778	5.511	2.91	1	H1-...
40	M183	2L3x2 1/2x3/8x3/8	.457	7.523	6	.003	22.569	y	15	41.212	82.778	5.511	2.91	1	H1-...
41	M205	2L3x2-1/2x1/2x3/8	.477	7.523	8	.002	22.569	y	17	55.096	107.784	7.485	3.743	1	H1-...
42	M213	2L3x2-1/2x1/2x3/8	.477	7.523	4	.002	22.569	y	13	55.096	107.784	7.485	3.743	1	H1-...
43	M222	2L3x2-1/2x1/2x3/8	.485	7.523	6	.002	22.569	y	15	55.096	107.784	7.485	3.743	1	H1-...
44	M230	2L3x2-1/2x1/2x3/8	.485	7.523	2	.002	22.569	y	11	55.096	107.784	7.485	3.743	1	H1-...
45	M239	2L3x2-1/2x1/2x3/8	.450	4.075	4	.002	22.569	y	13	55.096	107.784	7.485	5.988	1	H1-...
46	M247	2L3x2-1/2x1/2x3/8	.449	7.523	8	.002	22.569	y	17	55.096	107.784	7.485	3.743	1	H1-...
47	M256	2L3x2-1/2x1/2x3/8	.453	7.523	2	.002	22.569	y	11	55.096	107.784	7.485	3.743	1	H1-...
48	M264	2L3x2-1/2x1/2x3/8	.454	4.075	6	.002	22.569	y	15	55.096	107.784	7.485	5.988	1	H1-...
49	M286	2L3x2-1/2x1/2x3/8	.593	7.523	8	.003	22.569	y	8	55.096	107.784	7.485	3.743	1	H1-...
50	M294	2L3x2-1/2x1/2x3/8	.594	4.388	4	.003	22.569	y	4	55.096	107.784	7.485	5.988	1	H1-...
51	M303	2L3x2-1/2x1/2x3/8	.605	7.523	6	.003	22.569	y	6	55.096	107.784	7.485	3.743	1	H1-...
52	M311	2L3x2-1/2x1/2x3/8	.605	7.523	2	.003	22.569	y	2	55.096	107.784	7.485	3.743	1	H1-...
53	M320	2L3x2-1/2x1/2x3/8	.560	4.388	4	.003	22.569	y	4	55.096	107.784	7.485	5.988	1	H1-...
54	M328	2L3x2-1/2x1/2x3/8	.558	4.075	8	.003	22.569	y	8	55.096	107.784	7.485	5.988	1	H1-...
55	M337	2L3x2-1/2x1/2x3/8	.567	7.523	2	.003	22.569	y	2	55.096	107.784	7.485	3.743	1	H1-...
56	M345	2L3x2-1/2x1/2x3/8	.568	4.075	6	.003	22.569	y	6	55.096	107.784	7.485	5.988	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
57	M367	2L4x3x3/8x3/8	.644	5.329	8	.003	22.569	y	7	60.338	107.138	7.672	8.384	1	H1-...
58	M375	2L4x3x3/8x3/8	.646	5.642	4	.003	22.569	y	5	60.338	107.138	7.672	8.384	1	H1-...
59	M384	2L4x3x3/8x3/8	.667	5.329	6	.003	22.569	y	6	60.338	107.138	7.672	8.384	1	H1-...
60	M392	2L4x3x3/8x3/8	.665	5.329	2	.003	22.569	y	2	60.338	107.138	7.672	8.384	1	H1-...
61	M401	2L4x3x3/8x3/8	.608	5.642	4	.003	22.569	y	4	60.338	107.138	7.672	8.384	1	H1-...
62	M409	2L4x3x3/8x3/8	.606	5.329	8	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
63	M418	2L4x3x3/8x3/8	.626	5.329	2	.003	22.569	y	2	60.338	107.138	7.672	8.384	1	H1-...
64	M426	2L4x3x3/8x3/8	.628	5.329	6	.003	22.569	y	6	60.338	107.138	7.672	8.384	1	H1-...
65	M448	2L4x3x3/8x3/8	.736	7.523	8	.003	22.569	y	7	60.338	107.138	7.672	5.24	1	H1-...
66	M456	2L4x3x3/8x3/8	.737	7.523	4	.003	22.569	y	5	60.338	107.138	7.672	5.24	1	H1-...
67	M465	2L4x3x3/8x3/8	.758	7.523	6	.003	22.569	y	5	60.338	107.138	7.672	5.24	1	H1-...
68	M473	2L4x3x3/8x3/8	.757	7.523	2	.003	22.569	y	3	60.338	107.138	7.672	5.24	1	H1-...
69	M482	2L4x3x3/8x3/8	.694	5.015	4	.003	22.569	y	4	60.338	107.138	7.672	8.384	1	H1-...
70	M490	2L4x3x3/8x3/8	.692	5.015	8	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
71	M499	2L4x3x3/8x3/8	.713	5.015	2	.003	22.569	y	9	60.338	107.138	7.672	8.384	1	H1-...
72	M507	2L4x3x3/8x3/8	.715	5.015	6	.003	22.569	y	6	60.338	107.138	7.672	8.384	1	H1-...
73	M529	2L4x3x1/2x3/8	.635	5.642	8	.003	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
74	M537	2L4x3x1/2x3/8	.636	5.956	4	.003	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
75	M546	2L4x3x1/2x3/8	.650	5.956	6	.003	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
76	M554	2L4x3x1/2x3/8	.649	5.956	2	.003	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
77	M563	2L4x3x1/2x3/8	.599	5.956	4	.003	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
78	M571	2L4x3x1/2x3/8	.597	5.642	8	.003	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
79	M580	2L4x3x1/2x3/8	.614	5.642	2	.003	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
80	M588	2L4x3x1/2x3/8	.616	5.956	6	.003	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
81	M610	2L4x3x1/2x3/8	.705	6.269	8	.004	22.569	y	7	82.457	140.12	10.402	10.86	1	H1-...
82	M618	2L4x3x1/2x3/8	.707	6.269	4	.031	20.062	y	3	82.457	140.12	10.402	10.86	1	H1-...
83	M627	2L4x3x1/2x3/8	.725	6.269	6	.004	22.569	y	5	82.457	140.12	10.402	10.86	1	H1-...
84	M635	2L4x3x1/2x3/8	.723	5.956	2	.032	15.046	y	5	82.457	140.12	10.402	10.86	1	H1-...
85	M644	2L4x3x1/2x3/8	.666	6.269	4	.004	22.569	y	3	82.457	140.12	10.402	10.86	1	H1-...
86	M652	2L4x3x1/2x3/8	.664	6.269	8	.029	20.062	y	7	82.457	140.12	10.402	10.86	1	H1-...
87	M661	2L4x3x1/2x3/8	.686	5.956	2	.004	22.569	y	9	82.457	140.12	10.402	10.86	1	H1-...
88	M669	2L4x3x1/2x3/8	.687	6.269	6	.032	15.046	y	9	82.457	140.12	10.402	10.86	1	H1-...
89	M691	2L4x4x1/2x3/8	.662	6.964	8	.002	0	y	7	100.149	161.677	17.309	11.327	1	H1-...
90	M701	2L4x4x1/2x3/8	.660	6.964	4	.004	6.964	y	2	100.149	161.677	17.309	11.327	1	H1-...
91	M712	2L4x4x1/2x3/8	.773	6.909	6	.004	13.817	y	5	100.862	161.677	17.309	11.327	1	H1-...
92	M722	2L4x4x1/2x3/8	.774	6.909	2	.005	0	y	3	100.862	161.677	17.309	11.327	1	H1-...
93	M733	2L4x4x1/2x3/8	.613	6.964	4	.003	13.929	y	3	100.149	161.677	17.309	11.327	1	H1-...
94	M743	2L4x4x1/2x3/8	.613	6.964	8	.008	0	y	9	100.149	161.677	17.309	11.327	1	H1-...
95	M754	2L4x4x1/2x3/8	.732	6.909	2	.003	13.817	y	9	100.862	161.677	17.309	11.327	1	H1-...
96	M764	2L4x4x1/2x3/8	.733	6.909	6	.006	0	y	7	100.862	161.677	17.309	11.327	1	H1-...
97	M1270	W12x26	.218	20.75	3	.011	0	y	4	126.627	164.91	14.677	34.995	1	H1-...
98	M1271	W12x26	.218	20.75	7	.011	0	y	6	126.627	164.91	14.677	34.995	1	H1-...
99	M1272	W12x26	.218	20.75	9	.011	0	y	8	126.627	164.91	14.677	34.995	1	H1-...
100	M1273	W12x26	.218	20.75	9	.011	0	y	2	126.627	164.91	14.677	34.995	1	H1-...
101	M123	2L3x2 1/2x1/4x3/8	.299	25.1...	8	.008	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
102	M140	2L3x2 1/2x1/4x3/8	.297	8.375	2	.008	8.375	y	15	31.268	56.695	3.608	2.019	1	H1-...
103	M157	2L3x2 1/2x1/4x3/8	.262	25.1...	4	.004	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
104	M174	2L3x2 1/2x1/4x3/8	.262	8.375	6	.004	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
105	M204	2L3x2 1/2x1/4x3/8	.441	25.1...	8	.008	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
106	M221	2L3x2 1/2x1/4x3/8	.445	8.375	2	.008	8.375	y	15	31.268	56.695	3.608	2.019	1	H1-...
107	M238	2L3x2 1/2x1/4x3/8	.417	16.75	8	.005	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
108	M255	2L3x2 1/2x1/4x3/8	.420	16.75	2	.005	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
109	M285	2L3x2 1/2x1/4x3/8	.541	27.9...	8	.008	25.125	y	14	31.268	56.695	3.608	3.23	1	H1-...
110	M302	2L3x2 1/2x1/4x3/8	.548	5.583	2	.008	8.375	y	15	31.268	56.695	3.608	3.23	1	H1-...
111	M319	2L3x2 1/2x1/4x3/8	.513	16.75	8	.005	25.125	y	16	31.268	56.695	3.608	2.019	1	H1-...
112	M336	2L3x2 1/2x1/4x3/8	.519	16.75	2	.005	25.125	y	14	31.268	56.695	3.608	2.019	1	H1-...
113	M366	2L3x2 1/2x5/16x3/8	.537	27.9...	8	.006	25.125	y	14	38.13	69.891	4.55	3.957	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
114	M383	2L3x2 1/2x5/16x3/8	.559	5.583	2	.006	8.375	y	15	38.13	69.891	4.55	3.957	1	H1-...
115	M400	2L3x2 1/2x5/16x3/8	.505	16.75	8	.004	25.125	y	16	38.13	69.891	4.55	2.473	1	H1-...
116	M417	2L3x2 1/2x5/16x3/8	.524	16.75	2	.004	25.125	y	14	38.13	69.891	4.55	2.473	1	H1-...
117	M447	2L3x2 1/2x3/8x3/8	.537	28.2...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
118	M464	2L3x2 1/2x3/8x3/8	.554	5.234	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
119	M481	2L3x2 1/2x3/8x3/8	.501	16.75	8	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
120	M498	2L3x2 1/2x3/8x3/8	.517	16.75	2	.004	25.125	y	14	44.67	82.778	5.511	2.91	1	H1-...
121	M528	2L3x2 1/2x3/8x3/8	.615	28.2...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
122	M545	2L3x2 1/2x3/8x3/8	.631	5.234	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
123	M562	2L3x2 1/2x3/8x3/8	.572	16.75	8	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
124	M579	2L3x2 1/2x3/8x3/8	.589	16.75	2	.004	25.125	y	14	44.67	82.778	5.511	2.91	1	H1-...
125	M609	2L3x2 1/2x3/8x3/8	.671	27.9...	8	.006	25.125	y	14	44.67	82.778	5.511	4.656	1	H1-...
126	M626	2L3x2 1/2x3/8x3/8	.686	5.583	2	.006	8.375	y	15	44.67	82.778	5.511	4.656	1	H1-...
127	M643	2L3x2 1/2x3/8x3/8	.626	16.75	8	.004	25.125	y	18	44.67	82.778	5.511	2.91	1	H1-...
128	M660	2L3x2 1/2x3/8x3/8	.648	16.75	2	.004	25.125	y	16	44.67	82.778	5.511	2.91	1	H1-...
129	M690	2L4x3x1/2x3/8	.376	16.75	7	.005	25.125	y	12	93.096	140.12	10.402	6.788	1	H1-...
130	M711	2L4x3x1/2x3/8	.359	16.75	3	.005	8.375	y	15	93.096	140.12	10.402	6.788	1	H1-...
131	M732	2L4x3x1/2x3/8	.362	16.75	9	.003	16.75	y	3	93.096	140.12	10.402	6.788	1	H1-...
132	M753	2L4x3x1/2x3/8	.350	16.75	9	.003	16.75	y	9	93.096	140.12	10.402	6.788	1	H1-...
133	M1221	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
134	M1222	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
135	M1223	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
136	M1224	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
137	M1225	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
138	M1226	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
139	M1169	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
140	M1170	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
141	M1171	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
142	M1172	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
143	M1173	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
144	M1174	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
145	M1117	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
146	M1118	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
147	M1119	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
148	M1120	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
149	M1121	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
150	M1122	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
151	M1065	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
152	M1066	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
153	M1067	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
154	M1068	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
155	M1069	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
156	M1070	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
157	M1013	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
158	M1014	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
159	M1015	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
160	M1016	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	5	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
161	M1017	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
162	M1018	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
163	M961	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	3	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
164	M962	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	3	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
165	M963	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	5	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
166	M964	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	5	.002	0	y	2	16.09	38.802	2.672	1.737	1	H1-...
167	M965	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
168	M966	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	7	.002	0	y	3	16.09	38.802	2.672	1.737	1	H1-...
169	M909	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	3	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
170	M910	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	3	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
171	M911	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	5	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
172	M912	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	5	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
173	M913	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	7	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
174	M914	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	7	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
175	M1258	W8x13	.007	0	16	.003	0	y	7	20.313	82.778	3.862	13.884	1.1...	H1-...
176	M1259	W8x13	.007	0	18	.003	11.844	y	9	20.313	82.778	3.862	13.884	1.1...	H1-...
177	M1260	W8x13	.007	0	12	.003	11.844	y	3	20.313	82.778	3.862	13.884	1.1...	H1-...
178	M1261	W8x13	.007	0	14	.003	0	y	5	20.313	82.778	3.862	13.884	1.1...	H1-...
179	M1206	2L2 1/2x2 1/2x3/16x3/8	.081	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
180	M1207	2L2 1/2x2 1/2x3/16x3/8	.084	0	9	.003	0	y	22	8.11	38.802	2.672	1.737	1	H1-...
181	M1208	2L2 1/2x2 1/2x3/16x3/8	.081	0	3	.003	0	y	24	8.11	38.802	2.672	1.737	1	H1-...
182	M1154	2L2 1/2x2 1/2x3/16x3/8	.081	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
183	M1155	2L2 1/2x2 1/2x3/16x3/8	.086	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
184	M1156	2L2 1/2x2 1/2x3/16x3/8	.081	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
185	M1102	2L2 1/2x2 1/2x3/16x3/8	.101	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
186	M1103	2L2 1/2x2 1/2x3/16x3/8	.108	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
187	M1104	2L2 1/2x2 1/2x3/16x3/8	.101	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
188	M1050	2L2 1/2x2 1/2x3/16x3/8	.104	0	7	.003	0	y	7	8.11	38.802	2.672	1.737	1	H1-...
189	M1051	2L2 1/2x2 1/2x3/16x3/8	.111	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
190	M1052	2L2 1/2x2 1/2x3/16x3/8	.105	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
191	M998	2L2 1/2x2 1/2x3/16x3/8	.106	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
192	M999	2L2 1/2x2 1/2x3/16x3/8	.112	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
193	M1000	2L2 1/2x2 1/2x3/16x3/8	.107	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
194	M946	2L2 1/2x2 1/2x3/16x3/8	.121	0	7	.003	0	y	6	8.11	38.802	2.672	1.737	1	H1-...
195	M947	2L2 1/2x2 1/2x3/16x3/8	.128	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
196	M948	2L2 1/2x2 1/2x3/16x3/8	.121	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
197	M894	2L2 1/2x2 1/2x3/16x3/8	.133	0	3	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
198	M895	2L2 1/2x2 1/2x3/16x3/8	.139	0	9	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
199	M896	2L2 1/2x2 1/2x3/16x3/8	.132	0	7	.003	0	y	1	8.11	38.802	2.672	1.737	1	H1-...
200	M845	C4x7.2	.048	2.094	7	.001	0	y	7	23.581	45.916	.969	4.717	1	H1-...
201	M846	C4x7.2	.048	2.094	7	.001	0	y	3	23.581	45.916	.969	4.717	1	H1-...
202	M847	C4x7.2	.048	2.094	5	.001	0	y	5	23.581	45.916	.969	4.717	1	H1-...
203	M848	C4x7.2	.049	2.094	5	.001	0	y	9	23.581	45.916	.969	4.717	1	H1-...
204	M849	C4x7.2	.048	2.094	3	.001	0	y	3	23.581	45.916	.969	4.717	1	H1-...
205	M850	C4x7.2	.048	2.094	3	.001	0	y	7	23.581	45.916	.969	4.717	1	H1-...
206	M851	C4x7.2	.051	2.688	9	.001	5.375	y	5	15.355	45.916	.969	4.521	1	H1-...
207	M852	C4x7.2	.051	2.688	9	.001	0	y	5	15.355	45.916	.969	4.521	1	H1-...
208	M859	C4x7.2	.048	2.094	3	.001	4.188	y	7	23.581	45.916	.969	4.717	1	H1-...
209	M860	C4x7.2	.049	2.094	5	.001	4.188	y	5	23.581	45.916	.969	4.717	1	H1-...
210	M861	C4x7.2	.048	2.094	5	.001	4.188	y	9	23.581	45.916	.969	4.717	1	H1-...
211	M862	C4x7.2	.048	2.094	3	.001	4.188	y	3	23.581	45.916	.969	4.717	1	H1-...
212	M863	C4x7.2	.048	2.094	7	.001	4.188	y	7	23.581	45.916	.969	4.717	1	H1-...
213	M864	C4x7.2	.048	2.094	7	.001	4.188	y	3	23.581	45.916	.969	4.717	1	H1-...
214	M865	C4x7.2	.036	2.121	9	.001	0	y	3	23.169	45.916	.969	4.708	1	H1-...
215	M1227	2L3x2 1/2x1/4x3/8	.058	4.243	5	.002	0	y	7	30.78	56.695	3.608	3.23	1	H1-...
216	M1228	2L3x2 1/2x1/4x3/8	.039	4.353	5	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
217	M1229	2L3x2 1/2x1/4x3/8	.039	4.353	5	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
218	M1175	2L3x2 1/2x1/4x3/8	.050	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
219	M1176	2L3x2 1/2x1/4x3/8	.050	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
220	M1177	2L3x2 1/2x1/4x3/8	.057	4.243	6	.002	0	y	7	30.78	56.695	3.608	3.23	1	H1-...
221	M1123	2L3x2 1/2x1/4x3/8	.064	4.243	6	.002	0	y	6	30.78	56.695	3.608	3.23	1	H1-...
222	M1124	2L3x2 1/2x1/4x3/8	.056	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
223	M1125	2L3x2 1/2x1/4x3/8	.056	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
224	M1071	2L3x2 1/2x1/4x3/8	.057	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
225	M1072	2L3x2 1/2x1/4x3/8	.057	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
226	M1073	2L3x2 1/2x1/4x3/8	.066	4.243	6	.002	0	y	7	30.78	56.695	3.608	3.23	1	H1-...
227	M1019	2L3x2 1/2x1/4x3/8	.066	4.243	6	.002	0	y	3	30.78	56.695	3.608	3.23	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
228	M1020	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
229	M1021	2L3x2 1/2x1/4x3/8	.058	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
230	M967	2L3x2 1/2x1/4x3/8	.071	4.243	6	.002	0	y	2	30.78	56.695	3.608	3.23	1	H1-...
231	M968	2L3x2 1/2x1/4x3/8	.063	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
232	M969	2L3x2 1/2x1/4x3/8	.063	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
233	M915	2L3x2 1/2x1/4x3/8	.076	4.243	6	.002	0	y	2	30.78	56.695	3.608	3.23	1	H1-...
234	M916	2L3x2 1/2x1/4x3/8	.066	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
235	M917	2L3x2 1/2x1/4x3/8	.066	4.353	9	.002	0	y	1	29.808	56.695	3.608	3.23	1	H1-...
236	M1254	W8x13	.063	8.375	2	.004	16.75	y	4	39.183	82.778	3.862	7.792	1	H1-...
237	M1255	W8x13	.063	8.375	4	.004	0	y	2	39.183	82.778	3.862	7.792	1	H1-...
238	M1256	W8x13	.063	8.375	6	.004	0	y	4	39.183	82.778	3.862	7.792	1	H1-...
239	M1257	W8x13	.063	8.375	8	.004	16.75	y	2	39.183	82.778	3.862	7.792	1	H1-...
240	M1202	2L2 1/2x2 1/2x3/16x3/8	.478	8.375	2	.006	0	y	4	4.055	38.802	2.672	1.737	1	H1-...
241	M1203	2L2 1/2x2 1/2x3/16x3/8	.479	8.375	8	.006	16.75	y	14	4.055	38.802	2.672	1.737	1	H1-...
242	M1204	2L2 1/2x2 1/2x3/16x3/8	.442	8.375	6	.006	16.75	y	4	4.055	38.802	2.672	1.737	1	H1-...
243	M1205	2L2 1/2x2 1/2x3/16x3/8	.442	8.375	4	.006	0	y	17	4.055	38.802	2.672	1.737	1	H1-...
244	M1150	2L2 1/2x2 1/2x3/16x3/8	.448	8.375	4	.006	0	y	3	4.055	38.802	2.672	1.737	1	H1-...
245	M1151	2L2 1/2x2 1/2x3/16x3/8	.450	8.375	6	.006	0	y	4	4.055	38.802	2.672	1.737	1	H1-...
246	M1152	2L2 1/2x2 1/2x3/16x3/8	.649	8.375	9	.006	0	y	18	4.055	38.802	2.672	1.737	1	H1-...
247	M1153	2L2 1/2x2 1/2x3/16x3/8	.654	8.375	9	.006	0	y	8	4.055	38.802	2.672	1.737	1	H1-...
248	M1098	2L2 1/2x2 1/2x3/16x3/8	.773	8.375	9	.006	0	y	2	4.055	38.802	2.672	1.737	1	H1-...
249	M1099	2L2 1/2x2 1/2x3/16x3/8	.499	8.375	4	.006	16.75	y	6	4.055	38.802	2.672	1.737	1	H1-...
250	M1100	2L2 1/2x2 1/2x3/16x3/8	.502	8.375	6	.006	0	y	4	4.055	38.802	2.672	1.737	1	H1-...
251	M1101	2L2 1/2x2 1/2x3/16x3/8	.766	8.375	9	.006	16.75	y	2	4.055	38.802	2.672	1.737	1	H1-...
252	M1046	2L2 1/2x2 1/2x3/16x3/8	.502	8.375	4	.006	0	y	2	4.055	38.802	2.672	1.737	1	H1-...
253	M1047	2L2 1/2x2 1/2x3/16x3/8	.512	8.375	6	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
254	M1048	2L2 1/2x2 1/2x3/16x3/8	.777	8.375	9	.006	0	y	8	4.055	38.802	2.672	1.737	1	H1-...
255	M1049	2L2 1/2x2 1/2x3/16x3/8	.803	8.375	9	.006	16.75	y	4	4.055	38.802	2.672	1.737	1	H1-...
256	M994	2L2 1/2x2 1/2x3/16x3/8	.807	8.375	9	.006	16.75	y	1	4.055	38.802	2.672	1.737	1	H1-...
257	M995	2L2 1/2x2 1/2x3/16x3/8	.505	8.375	4	.006	0	y	13	4.055	38.802	2.672	1.737	1	H1-...
258	M996	2L2 1/2x2 1/2x3/16x3/8	.514	8.375	6	.006	0	y	4	4.055	38.802	2.672	1.737	1	H1-...
259	M997	2L2 1/2x2 1/2x3/16x3/8	.785	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
260	M942	2L2 1/2x2 1/2x3/16x3/8	.543	8.375	4	.006	16.75	y	1	4.055	38.802	2.672	1.737	1	H1-...
261	M943	2L2 1/2x2 1/2x3/16x3/8	.552	8.375	6	.006	0	y	21	4.055	38.802	2.672	1.737	1	H1-...
262	M944	2L2 1/2x2 1/2x3/16x3/8	.878	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
263	M945	2L2 1/2x2 1/2x3/16x3/8	.900	8.375	9	.006	0	y	8	4.055	38.802	2.672	1.737	1	H1-...
264	M890	2L2 1/2x2 1/2x3/16x3/8	.939	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
265	M891	2L2 1/2x2 1/2x3/16x3/8	.582	8.375	6	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
266	M892	2L2 1/2x2 1/2x3/16x3/8	.571	8.375	4	.006	0	y	22	4.055	38.802	2.672	1.737	1	H1-...
267	M893	2L2 1/2x2 1/2x3/16x3/8	.966	8.375	9	.006	0	y	1	4.055	38.802	2.672	1.737	1	H1-...
268	M42	W10x30	.020	11.8...	5	.008	11.844	y	14	165.546	190.563	15.88	55.688	1	H1-...
269	M43	W10x30	.020	11.8...	3	.008	11.844	y	12	165.546	190.563	15.88	55.688	1	H1-...
270	M44	W10x30	.020	11.8...	9	.008	11.844	y	18	165.546	190.563	15.88	55.688	1	H1-...
271	M45	W10x30	.020	11.8...	7	.008	11.844	y	16	165.546	190.563	15.88	55.688	1	H1-...
272	M191	2L3x2 1/2x1/4x3/8	.208	11.8...	16	.008	11.844	y	15	17.486	56.695	3.608	2.019	1	H1-...
273	M192	2L3x2 1/2x1/4x3/8	.207	11.8...	17	.008	11.844	y	13	17.486	56.695	3.608	2.019	1	H1-...
274	M193	2L3x2 1/2x1/4x3/8	.206	11.8...	15	.008	11.844	y	11	17.486	56.695	3.608	2.019	1	H1-...
275	M194	2L3x2 1/2x1/4x3/8	.207	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
276	M272	2L3x2 1/2x1/4x3/8	.210	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
277	M273	2L3x2 1/2x1/4x3/8	.209	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
278	M274	2L3x2 1/2x1/4x3/8	.209	11.8...	15	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
279	M275	2L3x2 1/2x1/4x3/8	.210	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
280	M353	2L3x2 1/2x1/4x3/8	.213	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
281	M354	2L3x2 1/2x1/4x3/8	.212	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
282	M355	2L3x2 1/2x1/4x3/8	.211	11.8...	15	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
283	M356	2L3x2 1/2x1/4x3/8	.212	11.8...	11	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
284	M434	2L3x2 1/2x1/4x3/8	.205	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
285	M435	2L3x2 1/2x1/4x3/8	.203	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
286	M436	2L3x2 1/2x1/4x3/8	.202	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
287	M437	2L3x2 1/2x1/4x3/8	.204	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
288	M515	2L3x2 1/2x1/4x3/8	.204	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
289	M516	2L3x2 1/2x1/4x3/8	.202	11.8...	17	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
290	M517	2L3x2 1/2x1/4x3/8	.203	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
291	M518	2L3x2 1/2x1/4x3/8	.205	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
292	M596	2L3x2 1/2x1/4x3/8	.207	11.8...	11	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
293	M597	2L3x2 1/2x1/4x3/8	.206	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
294	M598	2L3x2 1/2x1/4x3/8	.204	11.8...	18	.008	11.844	y	12	17.486	56.695	3.608	2.019	1	H1-...
295	M599	2L3x2 1/2x1/4x3/8	.207	11.8...	18	.008	11.844	y	14	17.486	56.695	3.608	2.019	1	H1-...
296	M677	2L3x2 1/2x1/4x3/8	.201	11.8...	11	.009	11.844	y	13	17.486	56.695	3.608	2.019	1	H1-...
297	M678	2L3x2 1/2x1/4x3/8	.202	11.8...	18	.009	11.844	y	11	17.486	56.695	3.608	2.019	1	H1-...
298	M679	2L3x2 1/2x1/4x3/8	.197	11.8...	15	.009	11.844	y	17	17.486	56.695	3.608	2.019	1	H1-...
299	M680	2L3x2 1/2x1/4x3/8	.204	11.8...	9	.009	11.844	y	15	17.486	56.695	3.608	2.019	1	H1-...
300	M1209	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	6	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
301	M1210	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
302	M1211	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
303	M1212	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	4	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
304	M1213	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
305	M1214	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
306	M1215	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
307	M1216	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
308	M1217	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
309	M1218	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
310	M1219	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
311	M1220	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
312	M1157	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
313	M1158	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
314	M1159	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
315	M1160	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
316	M1161	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
317	M1162	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
318	M1163	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
319	M1164	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
320	M1165	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
321	M1166	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
322	M1167	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	9	24.773	38.802	2.672	1.737	1	H1-...
323	M1168	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
324	M1105	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	8	16.09	38.802	2.672	1.737	1	H1-...
325	M1106	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	6	16.09	38.802	2.672	1.737	1	H1-...
326	M1107	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	4	16.09	38.802	2.672	1.737	1	H1-...
327	M1108	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
328	M1109	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
329	M1110	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
330	M1111	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
331	M1112	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
332	M1113	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
333	M1114	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
334	M1115	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
335	M1116	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	3	24.773	38.802	2.672	1.737	1	H1-...
336	M1053	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
337	M1054	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
338	M1055	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
339	M1056	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
340	M1057	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
341	M1058	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
342	M1059	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
343	M1060	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
344	M1061	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
345	M1062	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
346	M1063	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
347	M1064	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
348	M1001	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
349	M1002	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
350	M1003	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
351	M1004	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
352	M1005	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
353	M1006	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
354	M1007	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
355	M1008	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
356	M1009	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
357	M1010	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
358	M1011	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
359	M1012	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
360	M949	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	3	16.09	38.802	2.672	1.737	1	H1-...
361	M950	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	5	16.09	38.802	2.672	1.737	1	H1-...
362	M951	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	7	16.09	38.802	2.672	1.737	1	H1-...
363	M952	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	9	.002	8.375	y	2	16.09	38.802	2.672	1.737	1	H1-...
364	M953	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
365	M954	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
366	M955	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	5	24.773	38.802	2.672	1.737	1	H1-...
367	M956	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
368	M957	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	7	24.773	38.802	2.672	1.737	1	H1-...
369	M958	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	4	24.773	38.802	2.672	1.737	1	H1-...
370	M959	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	2	24.773	38.802	2.672	1.737	1	H1-...
371	M960	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	6	24.773	38.802	2.672	1.737	1	H1-...
372	M897	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	9	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
373	M898	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	8	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
374	M899	2L2 1/2x2 1/2x3/16x3/8	.031	4.188	2	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
375	M900	2L2 1/2x2 1/2x3/16x3/8	.032	4.188	9	.002	8.375	y	1	16.09	38.802	2.672	1.737	1	H1-...
376	M901	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
377	M902	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
378	M903	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
379	M904	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	3	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
380	M905	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
381	M906	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	9	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
382	M907	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	5	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
383	M908	2L2 1/2x2 1/2x3/16x3/8	.016	2.961	7	.001	0	y	1	24.773	38.802	2.672	1.737	1	H1-...
384	M1266	2L2 1/2x2 1/2x1/4x3/8	.325	6.86	16	.001	6.86	y	7	7.819	51.305	3.58	1.419	1	H1-...
385	M1267	2L2 1/2x2 1/2x1/4x3/8	.325	6.86	14	.001	6.86	y	5	7.819	51.305	3.58	1.419	1	H1-...
386	M1268	2L2 1/2x2 1/2x1/4x3/8	.326	6.86	12	.001	6.86	y	3	7.819	51.305	3.58	1.419	1	H1-...
387	M1269	2L2 1/2x2 1/2x1/4x3/8	.327	6.86	18	.001	6.86	y	9	7.819	51.305	3.58	1.419	1	H1-...
388	M1	L6x6x1/2	.232	1.143	17	.063	13.72	y	3	44.396	123.952	3.534	16.267	1	H2-1
389	M2	L6x6x1/2	.238	1.143	13	.065	13.72	z	9	44.396	123.952	3.534	16.267	1	H2-1
390	M3	L6x6x1/2	.222	1.143	13	.064	13.72	y	7	44.396	123.952	3.534	16.267	1	H2-1
391	M4	L6x6x1/2	.216	1.143	17	.063	13.72	z	5	44.396	123.952	3.534	16.267	1	H2-1
392	M47	W6x20	.127	0	5	.024	12.5	y	3	111.036	126.539	12.072	26.946	1	H1-...
393	M48	W6x20	.130	0	7	.023	12.5	y	9	111.036	126.539	12.072	26.946	1	H1-...
394	M49	W6x20	.116	0	9	.023	12.5	y	7	111.036	126.539	12.072	26.946	1	H1-...
395	M50	W6x20	.122	0	3	.023	12.5	y	5	111.036	126.539	12.072	26.946	1	H1-...
396	M119	W6x20	.326	0	16	.035	25	y	3	111.036	126.539	12.072	26.946	1	H1-...
397	M120	W6x20	.353	0	14	.033	25	y	9	111.036	126.539	12.072	26.946	1	H1-...
398	M121	W6x20	.316	0	12	.035	25	y	7	111.036	126.539	12.072	26.946	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
399	M122	W6x20	.308	22.3...	9	.032	25	y	5	111.036	126.539	12.072	26.946	1	H1-...
400	M200	W6x25	.468	0	7	.030	6.25	y	7	139.341	158.228	15.377	33.952	1	H1-...
401	M201	W6x25	.481	0	5	.032	6.25	y	5	139.341	158.228	15.377	33.952	1	H1-...
402	M202	W6x25	.469	0	3	.030	6.25	y	3	139.341	158.228	15.377	33.952	1	H1-...
403	M203	W6x25	.452	0	9	.029	6.25	y	9	139.341	158.228	15.377	33.952	1	H1-...
404	M281	W8x31	.547	6.25	7	.049	6.25	y	7	182.982	196.814	25.329	54.611	1	H1-...
405	M282	W8x31	.564	0	5	.051	6.25	y	5	182.982	196.814	25.329	54.611	1	H1-...
406	M283	W8x31	.558	0	3	.049	6.25	y	3	182.982	196.814	25.329	54.611	1	H1-...
407	M284	W8x31	.542	0	9	.048	6.25	y	9	182.982	196.814	25.329	54.611	1	H1-...
408	M362	W8x40	.621	0	7	.047	6.25	y	7	235.032	252.216	33.234	71.497	1	H1-...
409	M363	W8x40	.629	0	5	.049	6.25	y	5	235.032	252.216	33.234	71.497	1	H1-...
410	M364	W8x40	.626	0	3	.047	6.25	y	3	235.032	252.216	33.234	71.497	1	H1-...
411	M365	W8x40	.609	0	9	.046	6.25	y	9	235.032	252.216	33.234	71.497	1	H1-...
412	M443	W10x54	.601	6.25	7	.045	6.25	y	7	325.473	340.599	56.228	119.641	1	H1-...
413	M444	W10x54	.605	6.25	5	.047	6.25	y	5	325.473	340.599	56.228	119.641	1	H1-...
414	M445	W10x54	.603	6.25	3	.045	6.25	y	3	325.473	340.599	56.228	119.641	1	H1-...
415	M446	W10x54	.592	6.25	9	.044	6.25	y	9	325.473	340.599	56.228	119.641	1	H1-...
416	M524	W10x60	.718	0	7	.065	6.25	y	7	364.7	381.557	62.874	134.012	1	H1-...
417	M525	W10x60	.725	0	5	.067	6.25	y	5	364.7	381.557	62.874	134.012	1	H1-...
418	M526	W10x60	.720	0	3	.065	6.25	y	3	364.7	381.557	62.874	134.012	1	H1-...
419	M527	W10x60	.708	0	9	.064	6.25	y	9	364.7	381.557	62.874	134.012	1	H1-...
420	M605	W10x68	.825	0	7	.067	6.25	y	7	410.526	428.982	72.036	153.234	1	H1-...
421	M606	W10x68	.838	0	5	.069	6.25	y	5	410.526	428.982	72.036	153.234	1	H1-...
422	M607	W10x68	.834	0	3	.068	6.25	y	3	410.526	428.982	72.036	153.234	1	H1-...
423	M608	W10x68	.821	0	9	.067	6.25	y	9	410.526	428.982	72.036	153.234	1	H1-...
424	M686	W12x79	.929	6.258	7	.070	6.258	y	7	484.425	500.12	97.545	213.772	1	H1-...
425	M687	W12x79	.931	6.258	5	.070	12.515	y	4	484.425	500.12	97.545	213.772	1	H1-...
426	M688	W12x79	.921	6.258	3	.069	6.258	y	3	484.425	500.12	97.545	213.772	1	H1-...
427	M689	W12x79	.917	6.258	9	.069	6.258	y	9	484.425	500.12	97.545	213.772	1	H1-...
428	M882	2L2 1/2x2 1/2x3/16x3/8	.087	0	15	.003	12.14	y	3	7.72	38.802	2.672	1.086	1	H1-...
429	M883	2L2 1/2x2 1/2x3/16x3/8	.087	12.14	17	.003	0	y	3	7.72	38.802	2.672	1.086	1	H1-...
430	M884	2L2 1/2x2 1/2x3/16x3/8	.087	0	18	.003	12.14	y	5	7.72	38.802	2.672	1.086	1	H1-...
431	M885	2L2 1/2x2 1/2x3/16x3/8	.088	12.14	17	.003	0	y	5	7.72	38.802	2.672	1.086	1	H1-...
432	M886	2L2 1/2x2 1/2x3/16x3/8	.088	12.14	9	.003	12.14	y	7	7.72	38.802	2.672	1.086	1	H1-...
433	M887	2L2 1/2x2 1/2x3/16x3/8	.087	12.14	11	.003	0	y	7	7.72	38.802	2.672	1.086	1	H1-...
434	M888	2L2 1/2x2 1/2x3/16x3/8	.087	0	15	.003	0	y	14	7.72	38.802	2.672	1.086	1	H1-...
435	M889	2L2 1/2x2 1/2x3/16x3/8	.088	12.14	13	.003	12.14	y	16	7.72	38.802	2.672	1.086	1	H1-...
436	M791	L2.5x2.5x8	.644	0	5	.026	0	y	3	11.821	48.719	1.241	2.85	1	H2-1
437	M792	L2.5x2.5x8	.845	6.738	5	.026	0	z	3	12.021	48.719	1.241	2.853	1	H2-1
438	M793	L2.5x2.5x8	.648	6.795	3	.024	0	z	5	11.821	48.719	1.241	2.85	1	H2-1
439	M794	L2.5x2.5x8	.855	6.738	3	.026	6.738	y	5	12.021	48.719	1.241	2.853	1	H2-1
440	M795	L2.5x2.5x8	.841	0	9	.025	0	y	7	12.021	48.719	1.241	2.853	1	H2-1
441	M796	L2.5x2.5x8	.651	0	9	.024	0	z	7	11.821	48.719	1.241	2.85	1	H2-1
442	M797	L2.5x2.5x8	.658	6.795	7	.024	0	z	9	11.821	48.719	1.241	2.85	1	H2-1
443	M798	L2.5x2.5x8	.837	6.738	7	.026	6.738	y	9	12.021	48.719	1.241	2.853	1	H2-1
444	M56	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	13	.005	0	y	17	11.087	38.802	2.672	1.737	1	H1-...
445	M64	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	17	.005	10.45	y	15	11.087	38.802	2.672	1.737	1	H1-...
446	M72	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	11	.005	0	y	12	11.087	38.802	2.672	1.737	1	H1-...
447	M80	2L2 1/2x2 1/2x3/16x3/8	.096	5.225	15	.005	10.45	y	11	11.087	38.802	2.672	1.737	1	H1-...
448	M88	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	17	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
449	M96	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	13	.005	0	y	14	11.087	38.802	2.672	1.737	1	H1-...
450	M104	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	15	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
451	M112	2L2 1/2x2 1/2x3/16x3/8	.095	5.225	11	.005	10.45	y	11	11.087	38.802	2.672	1.737	1	H1-...
452	M129	2L2 1/2x2 1/2x3/16x3/8	.088	5.225	13	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
453	M137	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	17	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
454	M146	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	11	.005	10.45	y	11	11.087	38.802	2.672	1.737	1	H1-...
455	M154	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	15	.005	0	y	16	11.087	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
456	M163	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	18	.005	0	y	17	11.087	38.802	2.672	1.737	1	H1-...
457	M171	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	0	y	13	11.087	38.802	2.672	1.737	1	H1-...
458	M180	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	10.45	y	11	11.087	38.802	2.672	1.737	1	H1-...
459	M188	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	18	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
460	M210	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	12	.005	10.45	y	12	11.109	38.802	2.672	1.737	1	H1-...
461	M218	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	16	.005	0	y	11	11.109	38.802	2.672	1.737	1	H1-...
462	M227	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	11	.005	0	y	14	11.109	38.802	2.672	1.737	1	H1-...
463	M235	2L2 1/2x2 1/2x3/16x3/8	.088	5.225	15	.005	10.45	y	14	11.109	38.802	2.672	1.737	1	H1-...
464	M244	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	18	.005	10.45	y	17	11.109	38.802	2.672	1.737	1	H1-...
465	M252	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	10.45	y	14	11.109	38.802	2.672	1.737	1	H1-...
466	M261	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	10.45	y	16	11.109	38.802	2.672	1.737	1	H1-...
467	M269	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	11	.005	0	y	12	11.109	38.802	2.672	1.737	1	H1-...
468	M291	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	12	.005	10.45	y	13	11.309	38.802	2.672	1.737	1	H1-...
469	M299	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	18	.005	10.45	y	16	11.309	38.802	2.672	1.737	1	H1-...
470	M308	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	18	.005	0	y	18	11.309	38.802	2.672	1.737	1	H1-...
471	M316	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	16	.005	10.45	y	13	11.309	38.802	2.672	1.737	1	H1-...
472	M325	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	16	.005	0	y	17	11.309	38.802	2.672	1.737	1	H1-...
473	M333	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	10.45	y	13	11.309	38.802	2.672	1.737	1	H1-...
474	M342	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	0	y	15	11.309	38.802	2.672	1.737	1	H1-...
475	M350	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	11	.005	10.45	y	18	11.309	38.802	2.672	1.737	1	H1-...
476	M372	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	12	.005	0	y	13	11.332	38.802	2.672	1.737	1	H1-...
477	M380	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	18	.005	10.45	y	14	11.332	38.802	2.672	1.737	1	H1-...
478	M389	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	18	.005	0	y	18	11.332	38.802	2.672	1.737	1	H1-...
479	M397	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	16	.005	0	y	15	11.332	38.802	2.672	1.737	1	H1-...
480	M406	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	16	.005	10.45	y	13	11.332	38.802	2.672	1.737	1	H1-...
481	M414	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	0	y	13	11.332	38.802	2.672	1.737	1	H1-...
482	M423	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	14	.005	10.45	y	15	11.332	38.802	2.672	1.737	1	H1-...
483	M431	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	12	.005	0	y	12	11.332	38.802	2.672	1.737	1	H1-...
484	M453	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	11	.005	0	y	12	11.538	38.802	2.672	1.737	1	H1-...
485	M461	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	11	.005	10.45	y	14	11.538	38.802	2.672	1.737	1	H1-...
486	M470	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	17	.005	10.45	y	15	11.538	38.802	2.672	1.737	1	H1-...
487	M478	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	17	.005	10.45	y	18	11.538	38.802	2.672	1.737	1	H1-...
488	M487	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	15	.005	0	y	14	11.538	38.802	2.672	1.737	1	H1-...
489	M495	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	15	.005	10.45	y	13	11.538	38.802	2.672	1.737	1	H1-...
490	M504	2L2 1/2x2 1/2x3/16x3/8	.087	5.225	13	.005	10.45	y	14	11.538	38.802	2.672	1.737	1	H1-...
491	M512	2L2 1/2x2 1/2x3/16x3/8	.086	5.225	13	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
492	M534	2L2 1/2x2 1/2x3/16x3/8	.081	5.225	12	.004	0	y	13	11.562	38.802	2.672	1.737	1	H1-...
493	M542	2L2 1/2x2 1/2x3/16x3/8	.081	5.116	14	.004	0	y	13	11.562	38.802	2.672	1.737	1	H1-...
494	M551	2L2 1/2x2 1/2x3/16x3/8	.081	5.225	18	.004	10.45	y	14	11.562	38.802	2.672	1.737	1	H1-...
495	M559	2L2 1/2x2 1/2x3/16x3/8	.082	5.225	16	.004	0	y	16	11.562	38.802	2.672	1.737	1	H1-...
496	M568	2L2 1/2x2 1/2x3/16x3/8	.081	5.225	16	.004	10.45	y	18	11.562	38.802	2.672	1.737	1	H1-...
497	M576	2L2 1/2x2 1/2x3/16x3/8	.082	5.225	14	.004	0	y	10	11.562	38.802	2.672	1.737	1	H1-...
498	M585	2L2 1/2x2 1/2x3/16x3/8	.082	5.225	14	.004	0	y	14	11.562	38.802	2.672	1.737	1	H1-...
499	M593	2L2 1/2x2 1/2x3/16x3/8	.081	5.225	12	.004	10.45	y	11	11.562	38.802	2.672	1.737	1	H1-...
500	M615	2L2 1/2x2 1/2x3/16x3/8	.094	5.116	6	.004	10.45	y	15	11.585	38.802	2.672	1.737	1	H1-...
501	M623	2L2 1/2x2 1/2x3/16x3/8	.094	5.116	6	.004	10.45	y	18	11.585	38.802	2.672	1.737	1	H1-...
502	M632	2L2 1/2x2 1/2x3/16x3/8	.082	5.225	18	.004	10.45	y	15	11.585	38.802	2.672	1.737	1	H1-...
503	M640	2L2 1/2x2 1/2x3/16x3/8	.083	5.225	16	.004	10.45	y	16	11.585	38.802	2.672	1.737	1	H1-...
504	M649	2L2 1/2x2 1/2x3/16x3/8	.094	5.116	2	.004	0	y	14	11.585	38.802	2.672	1.737	1	H1-...
505	M657	2L2 1/2x2 1/2x3/16x3/8	.093	5.116	2	.004	0	y	12	11.585	38.802	2.672	1.737	1	H1-...
506	M666	2L2 1/2x2 1/2x3/16x3/8	.083	5.225	14	.004	10.45	y	14	11.585	38.802	2.672	1.737	1	H1-...
507	M674	2L2 1/2x2 1/2x3/16x3/8	.082	5.225	12	.004	0	y	11	11.585	38.802	2.672	1.737	1	H1-...
508	M696	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	12	.004	0	y	13	16.516	51.305	3.58	2.271	1	H1-...
509	M706	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	18	.004	0	y	16	16.516	51.305	3.58	2.271	1	H1-...
510	M717	2L2 1/2x2 1/2x1/4x3/8	.073	5.171	18	.004	10.343	y	12	16.127	51.305	3.58	2.271	1	H1-...
511	M727	2L2 1/2x2 1/2x1/4x3/8	.074	5.171	16	.004	10.343	y	13	16.127	51.305	3.58	2.271	1	H1-...
512	M738	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	16	.004	10.23	y	11	16.516	51.305	3.58	2.271	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
513	M748	2L2 1/2x2 1/2x1/4x3/8	.072	5.115	14	.004	10.23	y	18	16.516	51.305	3.58	2.271	1	H1-...
514	M759	2L2 1/2x2 1/2x1/4x3/8	.074	5.171	14	.004	10.343	y	15	16.127	51.305	3.58	2.271	1	H1-...
515	M769	2L2 1/2x2 1/2x1/4x3/8	.073	5.171	12	.004	10.343	y	10	16.127	51.305	3.58	2.271	1	H1-...
516	M57	2L2 1/2x2 1/2x3/16x3/8	.116	5.116	14	.005	10.45	y	16	11.087	38.802	2.672	1.737	1	H1-...
517	M58	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	17	.002	0	y	16	20.143	38.802	2.672	1.737	1	H1-...
518	M65	2L2 1/2x2 1/2x3/16x3/8	.117	5.116	16	.005	0	y	14	11.087	38.802	2.672	1.737	1	H1-...
519	M66	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	13	.002	7.523	y	14	20.143	38.802	2.672	1.737	1	H1-...
520	M73	2L2 1/2x2 1/2x3/16x3/8	.116	5.116	12	.005	10.45	y	16	11.087	38.802	2.672	1.737	1	H1-...
521	M74	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	15	.002	7.523	y	12	20.143	38.802	2.672	1.737	1	H1-...
522	M81	2L2 1/2x2 1/2x3/16x3/8	.117	5.116	14	.005	10.45	y	14	11.087	38.802	2.672	1.737	1	H1-...
523	M82	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	11	.002	7.523	y	15	20.143	38.802	2.672	1.737	1	H1-...
524	M89	2L2 1/2x2 1/2x3/16x3/8	.117	5.116	18	.005	10.45	y	14	11.087	38.802	2.672	1.737	1	H1-...
525	M90	2L2 1/2x2 1/2x3/16x3/8	.040	3.683	13	.002	7.523	y	18	20.143	38.802	2.672	1.737	1	H1-...
526	M97	2L2 1/2x2 1/2x3/16x3/8	.116	5.116	12	.005	0	y	16	11.087	38.802	2.672	1.737	1	H1-...
527	M98	2L2 1/2x2 1/2x3/16x3/8	.040	3.683	17	.002	0	y	16	20.143	38.802	2.672	1.737	1	H1-...
528	M105	2L2 1/2x2 1/2x3/16x3/8	.115	5.116	17	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
529	M106	2L2 1/2x2 1/2x3/16x3/8	.040	3.683	11	.002	0	y	14	20.143	38.802	2.672	1.737	1	H1-...
530	M113	2L2 1/2x2 1/2x3/16x3/8	.115	5.116	17	.005	0	y	14	11.087	38.802	2.672	1.737	1	H1-...
531	M114	2L2 1/2x2 1/2x3/16x3/8	.040	3.683	15	.002	7.523	y	10	20.143	38.802	2.672	1.737	1	H1-...
532	M130	2L2 1/2x2 1/2x3/16x3/8	.106	5.116	13	.005	10.45	y	17	11.087	38.802	2.672	1.737	1	H1-...
533	M131	2L2 1/2x2 1/2x3/16x3/8	.034	3.683	17	.002	7.523	y	12	20.143	38.802	2.672	1.737	1	H1-...
534	M138	2L2 1/2x2 1/2x3/16x3/8	.108	5.116	17	.005	10.45	y	14	11.087	38.802	2.672	1.737	1	H1-...
535	M139	2L2 1/2x2 1/2x3/16x3/8	.035	3.683	13	.002	7.523	y	15	20.143	38.802	2.672	1.737	1	H1-...
536	M147	2L2 1/2x2 1/2x3/16x3/8	.107	5.116	11	.005	0	y	16	11.087	38.802	2.672	1.737	1	H1-...
537	M148	2L2 1/2x2 1/2x3/16x3/8	.035	3.683	15	.002	0	y	18	20.143	38.802	2.672	1.737	1	H1-...
538	M155	2L2 1/2x2 1/2x3/16x3/8	.106	5.116	15	.005	10.45	y	15	11.087	38.802	2.672	1.737	1	H1-...
539	M156	2L2 1/2x2 1/2x3/16x3/8	.034	3.683	11	.002	7.523	y	14	20.143	38.802	2.672	1.737	1	H1-...
540	M164	2L2 1/2x2 1/2x3/16x3/8	.104	5.116	17	.005	10.45	y	18	11.087	38.802	2.672	1.737	1	H1-...
541	M165	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	13	.002	0	y	17	20.143	38.802	2.672	1.737	1	H1-...
542	M172	2L2 1/2x2 1/2x3/16x3/8	.105	5.116	13	.005	0	y	13	11.087	38.802	2.672	1.737	1	H1-...
543	M173	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	17	.002	0	y	11	20.143	38.802	2.672	1.737	1	H1-...
544	M181	2L2 1/2x2 1/2x3/16x3/8	.105	5.116	14	.005	0	y	18	11.087	38.802	2.672	1.737	1	H1-...
545	M182	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	11	.002	0	y	15	20.143	38.802	2.672	1.737	1	H1-...
546	M189	2L2 1/2x2 1/2x3/16x3/8	.105	5.116	18	.005	0	y	15	11.087	38.802	2.672	1.737	1	H1-...
547	M190	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	14	.002	0	y	16	20.143	38.802	2.672	1.737	1	H1-...
548	M211	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	12	.005	10.45	y	11	11.109	38.802	2.672	1.737	1	H1-...
549	M212	2L2 1/2x2 1/2x3/16x3/8	.034	3.683	16	.002	7.523	y	16	20.179	38.802	2.672	1.737	1	H1-...
550	M219	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	17	.005	0	y	13	11.109	38.802	2.672	1.737	1	H1-...
551	M220	2L2 1/2x2 1/2x3/16x3/8	.035	3.683	13	.002	7.523	y	15	20.179	38.802	2.672	1.737	1	H1-...
552	M228	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	11	.005	10.45	y	14	11.109	38.802	2.672	1.737	1	H1-...
553	M229	2L2 1/2x2 1/2x3/16x3/8	.035	3.683	15	.002	0	y	10	20.179	38.802	2.672	1.737	1	H1-...
554	M236	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	16	.005	0	y	18	11.109	38.802	2.672	1.737	1	H1-...
555	M237	2L2 1/2x2 1/2x3/16x3/8	.034	3.683	12	.002	7.523	y	16	20.179	38.802	2.672	1.737	1	H1-...
556	M245	2L2 1/2x2 1/2x3/16x3/8	.098	5.116	17	.005	0	y	18	11.109	38.802	2.672	1.737	1	H1-...
557	M246	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	13	.002	7.523	y	12	20.179	38.802	2.672	1.737	1	H1-...
558	M253	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	14	.005	10.45	y	16	11.109	38.802	2.672	1.737	1	H1-...
559	M254	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	18	.002	0	y	10	20.179	38.802	2.672	1.737	1	H1-...
560	M262	2L2 1/2x2 1/2x3/16x3/8	.100	5.116	14	.005	10.45	y	15	11.109	38.802	2.672	1.737	1	H1-...
561	M263	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	18	.002	7.523	y	18	20.179	38.802	2.672	1.737	1	H1-...
562	M270	2L2 1/2x2 1/2x3/16x3/8	.098	5.116	11	.005	10.45	y	14	11.109	38.802	2.672	1.737	1	H1-...
563	M271	2L2 1/2x2 1/2x3/16x3/8	.033	3.683	15	.002	0	y	14	20.179	38.802	2.672	1.737	1	H1-...
564	M292	2L2 1/2x2 1/2x3/16x3/8	.096	5.116	12	.005	10.45	y	17	11.309	38.802	2.672	1.737	1	H1-...
565	M293	2L2 1/2x2 1/2x3/16x3/8	.037	3.683	16	.002	7.523	y	12	20.501	38.802	2.672	1.737	1	H1-...
566	M300	2L2 1/2x2 1/2x3/16x3/8	.096	5.116	18	.005	0	y	10	11.309	38.802	2.672	1.737	1	H1-...
567	M301	2L2 1/2x2 1/2x3/16x3/8	.038	3.683	14	.002	7.523	y	11	20.501	38.802	2.672	1.737	1	H1-...
568	M309	2L2 1/2x2 1/2x3/16x3/8	.096	5.116	18	.005	0	y	16	11.309	38.802	2.672	1.737	1	H1-...
569	M310	2L2 1/2x2 1/2x3/16x3/8	.038	3.683	14	.002	0	y	11	20.501	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
570	M317	2L2 1/2x2 1/2x3/16x3/8	.097	5.116	16	.005	0	y	16	11.309	38.802	2.672	1.737	1	H1-...
571	M318	2L2 1/2x2 1/2x3/16x3/8	.037	3.683	12	.002	7.523	y	15	20.501	38.802	2.672	1.737	1	H1-...
572	M326	2L2 1/2x2 1/2x3/16x3/8	.095	5.116	16	.005	0	y	13	11.309	38.802	2.672	1.737	1	H1-...
573	M327	2L2 1/2x2 1/2x3/16x3/8	.036	3.683	12	.002	7.523	y	15	20.501	38.802	2.672	1.737	1	H1-...
574	M334	2L2 1/2x2 1/2x3/16x3/8	.097	5.116	14	.005	10.45	y	10	11.309	38.802	2.672	1.737	1	H1-...
575	M335	2L2 1/2x2 1/2x3/16x3/8	.036	3.683	18	.002	7.523	y	14	20.501	38.802	2.672	1.737	1	H1-...
576	M343	2L2 1/2x2 1/2x3/16x3/8	.097	5.116	14	.005	10.45	y	18	11.309	38.802	2.672	1.737	1	H1-...
577	M344	2L2 1/2x2 1/2x3/16x3/8	.036	3.683	18	.002	0	y	16	20.501	38.802	2.672	1.737	1	H1-...
578	M351	2L2 1/2x2 1/2x3/16x3/8	.095	5.116	12	.005	0	y	13	11.309	38.802	2.672	1.737	1	H1-...
579	M352	2L2 1/2x2 1/2x3/16x3/8	.036	3.683	16	.002	0	y	11	20.501	38.802	2.672	1.737	1	H1-...
580	M373	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	12	.005	0	y	16	11.332	38.802	2.672	1.737	1	H1-...
581	M374	2L2 1/2x2 1/2x3/16x3/8	.039	3.683	16	.002	7.523	y	12	20.537	38.802	2.672	1.737	1	H1-...
582	M381	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	18	.005	10.45	y	14	11.332	38.802	2.672	1.737	1	H1-...
583	M382	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	14	.002	7.523	y	14	20.537	38.802	2.672	1.737	1	H1-...
584	M390	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	18	.005	10.45	y	16	11.332	38.802	2.672	1.737	1	H1-...
585	M391	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	14	.002	0	y	12	20.537	38.802	2.672	1.737	1	H1-...
586	M398	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	17	.005	0	y	18	11.332	38.802	2.672	1.737	1	H1-...
587	M399	2L2 1/2x2 1/2x3/16x3/8	.039	3.683	13	.002	7.523	y	11	20.537	38.802	2.672	1.737	1	H1-...
588	M407	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	16	.005	10.45	y	14	11.332	38.802	2.672	1.737	1	H1-...
589	M408	2L2 1/2x2 1/2x3/16x3/8	.039	3.683	12	.002	7.523	y	18	20.537	38.802	2.672	1.737	1	H1-...
590	M415	2L2 1/2x2 1/2x3/16x3/8	.094	5.116	14	.005	10.45	y	17	11.332	38.802	2.672	1.737	1	H1-...
591	M416	2L2 1/2x2 1/2x3/16x3/8	.038	3.683	18	.002	0	y	13	20.537	38.802	2.672	1.737	1	H1-...
592	M424	2L2 1/2x2 1/2x3/16x3/8	.094	5.116	13	.005	0	y	15	11.332	38.802	2.672	1.737	1	H1-...
593	M425	2L2 1/2x2 1/2x3/16x3/8	.038	3.683	17	.002	0	y	16	20.537	38.802	2.672	1.737	1	H1-...
594	M432	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	12	.005	10.45	y	15	11.332	38.802	2.672	1.737	1	H1-...
595	M433	2L2 1/2x2 1/2x3/16x3/8	.039	3.683	16	.002	7.523	y	18	20.537	38.802	2.672	1.737	1	H1-...
596	M454	2L2 1/2x2 1/2x3/16x3/8	.088	5.116	11	.005	10.45	y	15	11.538	38.802	2.672	1.737	1	H1-...
597	M455	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	15	.002	7.523	y	18	20.86	38.802	2.672	1.737	1	H1-...
598	M462	2L2 1/2x2 1/2x3/16x3/8	.088	5.116	11	.005	0	y	14	11.538	38.802	2.672	1.737	1	H1-...
599	M463	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	15	.002	0	y	11	20.86	38.802	2.672	1.737	1	H1-...
600	M471	2L2 1/2x2 1/2x3/16x3/8	.088	5.116	17	.005	0	y	14	11.538	38.802	2.672	1.737	1	H1-...
601	M472	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	13	.002	7.523	y	12	20.86	38.802	2.672	1.737	1	H1-...
602	M479	2L2 1/2x2 1/2x3/16x3/8	.089	5.116	17	.005	10.45	y	14	11.538	38.802	2.672	1.737	1	H1-...
603	M480	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	13	.002	0	y	13	20.86	38.802	2.672	1.737	1	H1-...
604	M488	2L2 1/2x2 1/2x3/16x3/8	.089	5.116	15	.005	10.45	y	12	11.538	38.802	2.672	1.737	1	H1-...
605	M489	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	11	.002	0	y	16	20.86	38.802	2.672	1.737	1	H1-...
606	M496	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	15	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
607	M497	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	11	.002	0	y	12	20.86	38.802	2.672	1.737	1	H1-...
608	M505	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	13	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
609	M506	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	17	.002	0	y	12	20.86	38.802	2.672	1.737	1	H1-...
610	M513	2L2 1/2x2 1/2x3/16x3/8	.088	5.116	13	.005	10.45	y	11	11.538	38.802	2.672	1.737	1	H1-...
611	M514	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	17	.002	7.523	y	12	20.86	38.802	2.672	1.737	1	H1-...
612	M535	2L2 1/2x2 1/2x3/16x3/8	.081	5.116	11	.004	10.45	y	17	11.562	38.802	2.672	1.737	1	H1-...
613	M536	2L2 1/2x2 1/2x3/16x3/8	.043	3.683	15	.002	7.523	y	14	20.896	38.802	2.672	1.737	1	H1-...
614	M543	2L2 1/2x2 1/2x3/16x3/8	.081	5.116	11	.004	0	y	14	11.562	38.802	2.672	1.737	1	H1-...
615	M544	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	15	.002	0	y	16	20.896	38.802	2.672	1.737	1	H1-...
616	M552	2L2 1/2x2 1/2x3/16x3/8	.081	5.116	17	.004	0	y	14	11.562	38.802	2.672	1.737	1	H1-...
617	M553	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	13	.002	7.523	y	13	20.896	38.802	2.672	1.737	1	H1-...
618	M560	2L2 1/2x2 1/2x3/16x3/8	.083	5.116	17	.004	10.45	y	12	11.562	38.802	2.672	1.737	1	H1-...
619	M561	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	13	.002	0	y	14	20.896	38.802	2.672	1.737	1	H1-...
620	M569	2L2 1/2x2 1/2x3/16x3/8	.083	5.116	15	.004	0	y	13	11.562	38.802	2.672	1.737	1	H1-...
621	M570	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	11	.002	0	y	16	20.896	38.802	2.672	1.737	1	H1-...
622	M577	2L2 1/2x2 1/2x3/16x3/8	.085	5.116	15	.004	0	y	17	11.562	38.802	2.672	1.737	1	H1-...
623	M578	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	11	.002	7.523	y	12	20.896	38.802	2.672	1.737	1	H1-...
624	M586	2L2 1/2x2 1/2x3/16x3/8	.085	5.116	13	.004	0	y	17	11.562	38.802	2.672	1.737	1	H1-...
625	M587	2L2 1/2x2 1/2x3/16x3/8	.041	3.683	17	.002	0	y	16	20.896	38.802	2.672	1.737	1	H1-...
626	M594	2L2 1/2x2 1/2x3/16x3/8	.082	5.116	13	.004	0	y	15	11.562	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
627	M595	2L2 1/2x2 1/2x3/16x3/8	.042	3.683	17	.002	0	y	11	20.896	38.802	2.672	1.737	1	H1-...
628	M616	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	2	.004	10.45	y	15	11.585	38.802	2.672	1.737	1	H1-...
629	M617	2L2 1/2x2 1/2x3/16x3/8	.046	3.683	15	.002	7.523	y	18	20.932	38.802	2.672	1.737	1	H1-...
630	M624	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	2	.004	0	y	16	11.585	38.802	2.672	1.737	1	H1-...
631	M625	2L2 1/2x2 1/2x3/16x3/8	.048	3.683	15	.002	7.523	y	15	20.932	38.802	2.672	1.737	1	H1-...
632	M633	2L2 1/2x2 1/2x3/16x3/8	.086	5.116	9	.004	0	y	15	11.585	38.802	2.672	1.737	1	H1-...
633	M634	2L2 1/2x2 1/2x3/16x3/8	.046	3.683	14	.002	7.523	y	14	20.932	38.802	2.672	1.737	1	H1-...
634	M641	2L2 1/2x2 1/2x3/16x3/8	.087	5.116	7	.004	10.45	y	13	11.585	38.802	2.672	1.737	1	H1-...
635	M642	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	12	.002	0	y	11	20.932	38.802	2.672	1.737	1	H1-...
636	M650	2L2 1/2x2 1/2x3/16x3/8	.091	5.116	6	.004	10.45	y	14	11.585	38.802	2.672	1.737	1	H1-...
637	M651	2L2 1/2x2 1/2x3/16x3/8	.045	3.683	11	.002	0	y	11	20.932	38.802	2.672	1.737	1	H1-...
638	M658	2L2 1/2x2 1/2x3/16x3/8	.092	5.116	6	.004	10.45	y	11	11.585	38.802	2.672	1.737	1	H1-...
639	M659	2L2 1/2x2 1/2x3/16x3/8	.045	3.683	11	.002	7.523	y	18	20.932	38.802	2.672	1.737	1	H1-...
640	M667	2L2 1/2x2 1/2x3/16x3/8	.087	5.116	5	.004	0	y	11	11.585	38.802	2.672	1.737	1	H1-...
641	M668	2L2 1/2x2 1/2x3/16x3/8	.043	3.683	18	.002	7.523	y	17	20.932	38.802	2.672	1.737	1	H1-...
642	M675	2L2 1/2x2 1/2x3/16x3/8	.086	5.116	3	.004	10.45	y	16	11.585	38.802	2.672	1.737	1	H1-...
643	M676	2L2 1/2x2 1/2x3/16x3/8	.044	3.683	16	.002	0	y	18	20.932	38.802	2.672	1.737	1	H1-...
644	M698	2L2 1/2x2 1/2x1/4x3/8	.121	6.278	12	.005	12.556	y	14	10.4	51.305	3.58	2.271	1	H1-...
645	M708	2L2 1/2x2 1/2x1/4x3/8	.120	6.278	18	.005	12.556	y	16	10.4	51.305	3.58	2.271	1	H1-...
646	M719	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	18	.005	12.679	y	11	10.188	51.305	3.58	2.271	1	H1-...
647	M729	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	16	.005	12.679	y	15	10.188	51.305	3.58	2.271	1	H1-...
648	M740	2L2 1/2x2 1/2x1/4x3/8	.120	6.278	16	.005	0	y	17	10.4	51.305	3.58	2.271	1	H1-...
649	M750	2L2 1/2x2 1/2x1/4x3/8	.121	6.278	14	.005	0	y	11	10.4	51.305	3.58	2.271	1	H1-...
650	M761	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	14	.005	12.679	y	12	9.782	51.305	3.58	2.271	1	H1-...
651	M771	2L2 1/2x2 1/2x1/4x3/8	.122	6.339	12	.005	0	y	14	10.188	51.305	3.58	2.271	1	H1-...
652	M699	2L2 1/2x2 1/2x1/4x3/8	.090	5.337	11	.004	10.675	y	18	14.732	51.305	3.58	2.271	1	H1-...
653	M700	2L2 1/2x2 1/2x1/4x3/8	.050	4.014	15	.002	0	y	15	24.888	51.305	3.58	2.271	1	H1-...
654	M709	2L2 1/2x2 1/2x1/4x3/8	.091	5.337	11	.004	10.675	y	15	14.732	51.305	3.58	2.271	1	H1-...
655	M710	2L2 1/2x2 1/2x1/4x3/8	.051	4.014	15	.002	0	y	16	24.888	51.305	3.58	2.271	1	H1-...
656	M720	2L2 1/2x2 1/2x1/4x3/8	.090	5.283	18	.004	0	y	13	15.062	51.305	3.58	2.271	1	H1-...
657	M721	2L2 1/2x2 1/2x1/4x3/8	.049	4.06	14	.002	0	y	11	24.439	51.305	3.58	2.271	1	H1-...
658	M730	2L2 1/2x2 1/2x1/4x3/8	.090	5.283	16	.004	0	y	12	15.062	51.305	3.58	2.271	1	H1-...
659	M731	2L2 1/2x2 1/2x1/4x3/8	.048	4.06	12	.002	0	y	16	24.439	51.305	3.58	2.271	1	H1-...
660	M741	2L2 1/2x2 1/2x1/4x3/8	.091	5.337	15	.004	0	y	13	14.732	51.305	3.58	2.271	1	H1-...
661	M742	2L2 1/2x2 1/2x1/4x3/8	.049	4.014	11	.002	8.199	y	18	24.888	51.305	3.58	2.271	1	H1-...
662	M751	2L2 1/2x2 1/2x1/4x3/8	.092	5.337	15	.004	10.675	y	10	14.732	51.305	3.58	2.271	1	H1-...
663	M752	2L2 1/2x2 1/2x1/4x3/8	.049	4.014	11	.002	8.199	y	18	24.888	51.305	3.58	2.271	1	H1-...
664	M762	2L2 1/2x2 1/2x1/4x3/8	.091	5.283	14	.004	0	y	10	15.062	51.305	3.58	2.271	1	H1-...
665	M763	2L2 1/2x2 1/2x1/4x3/8	.047	4.06	18	.002	0	y	16	24.439	51.305	3.58	2.271	1	H1-...
666	M772	2L2 1/2x2 1/2x1/4x3/8	.089	5.283	12	.004	0	y	12	15.062	51.305	3.58	2.271	1	H1-...
667	M773	2L2 1/2x2 1/2x1/4x3/8	.048	4.06	16	.002	0	y	17	24.439	51.305	3.58	2.271	1	H1-...
668	M17	L2 1/2x2 1/2x3/16	.294	9.149	4	.004	0	z	18	2.953	19.444	.233	.871	1	H2-1
669	M20	L2 1/2x2 1/2x3/16	.297	9.149	8	.004	9.149	z	14	2.953	19.444	.233	.871	1	H2-1
670	M24	L2 1/2x2 1/2x3/16	.228	9.149	2	.004	9.149	z	13	2.953	19.444	.233	.871	1	H2-1
671	M27	L2 1/2x2 1/2x3/16	.219	9.149	6	.004	9.149	z	10	2.953	19.444	.233	.871	1	H2-1
672	M31	L2 1/2x2 1/2x3/16	.271	9.149	8	.004	9.149	z	14	2.953	19.444	.233	.871	1	H2-1
673	M34	L2 1/2x2 1/2x3/16	.269	9.149	4	.004	9.149	z	18	2.953	19.444	.233	.871	1	H2-1
674	M38	L2 1/2x2 1/2x3/16	.209	9.149	6	.004	0	z	18	2.953	19.444	.233	.871	1	H2-1
675	M41	L2 1/2x2 1/2x3/16	.217	9.149	2	.004	0	z	12	2.953	19.444	.233	.871	1	H2-1
676	M54	L3x3x3/16	.015	0	13	.003	7.523	y	15	8.108	23.497	.339	1.395	1	H2-1
677	M62	L3x3x3/16	.017	0	17	.003	0	y	16	8.108	23.497	.339	1.395	1	H2-1
678	M70	L3x3x3/16	.017	0	11	.003	0	y	15	8.108	23.497	.339	1.395	1	H2-1
679	M78	L3x3x3/16	.015	0	15	.003	7.523	y	13	8.108	23.497	.339	1.395	1	H2-1
680	M86	L3x3x3/16	.019	0	8	.003	7.523	y	14	8.108	23.497	.339	1.395	1	H2-1
681	M94	L3x3x3/16	.018	0	4	.003	7.523	y	18	8.108	23.497	.339	1.395	1	H2-1
682	M102	L3x3x3/16	.016	0	6	.003	7.523	y	13	8.108	23.497	.339	1.395	1	H2-1
683	M110	L3x3x3/16	.017	0	12	.003	7.523	y	15	8.108	23.497	.339	1.395	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
684	M127	L3x3x3/16	.054	0	7	.003	7.523	y	12	8.108	23.497	.339	1.395	1	H2-1
685	M135	L3x3x3/16	.054	0	4	.003	7.523	y	18	8.108	23.497	.339	1.395	1	H2-1
686	M144	L3x3x3/16	.061	0	6	.003	0	y	18	8.108	23.497	.339	1.395	1	H2-1
687	M152	L3x3x3/16	.058	0	3	.003	0	y	10	8.108	23.497	.339	1.395	1	H2-1
688	M161	L3x3x3/16	.042	0	13	.003	0	y	13	8.108	23.497	.339	1.395	1	H2-1
689	M169	L3x3x3/16	.048	0	9	.003	7.523	y	13	8.108	23.497	.339	1.395	1	H2-1
690	M178	L3x3x3/16	.051	0	9	.003	7.523	y	12	8.108	23.497	.339	1.395	1	H2-1
691	M186	L3x3x3/16	.047	0	6	.003	7.523	y	15	8.108	23.497	.339	1.395	1	H2-1
692	M208	L3x3x3/16	.099	0	7	.003	7.523	y	12	8.131	23.497	.339	1.396	1	H2-1
693	M216	L3x3x3/16	.095	0	5	.003	7.523	y	13	8.131	23.497	.339	1.396	1	H2-1
694	M225	L3x3x3/16	.108	0	5	.003	0	y	18	8.131	23.497	.339	1.396	1	H2-1
695	M233	L3x3x3/16	.104	0	3	.003	7.523	y	16	8.131	23.497	.339	1.396	1	H2-1
696	M242	L3x3x3/16	.086	0	3	.003	7.523	y	13	8.131	23.497	.339	1.396	1	H2-1
697	M250	L3x3x3/16	.093	0	9	.003	0	y	11	8.131	23.497	.339	1.396	1	H2-1
698	M259	L3x3x3/16	.089	0	9	.003	7.523	y	15	8.131	23.497	.339	1.396	1	H2-1
699	M267	L3x3x3/16	.091	0	7	.003	7.523	y	16	8.131	23.497	.339	1.396	1	H2-1
700	M289	L3x3x3/16	.164	0	7	.003	7.523	y	15	8.438	23.497	.339	1.406	1	H2-1
701	M297	L3x3x3/16	.170	0	5	.003	7.523	y	18	8.438	23.497	.339	1.406	1	H2-1
702	M306	L3x3x3/16	.182	0	5	.003	0	y	18	8.438	23.497	.339	1.406	1	H2-1
703	M314	L3x3x3/16	.176	0	3	.003	0	y	12	8.438	23.497	.339	1.406	1	H2-1
704	M323	L3x3x3/16	.162	0	3	.003	0	y	17	8.438	23.497	.339	1.406	1	H2-1
705	M331	L3x3x3/16	.158	0	9	.003	7.523	y	17	8.438	23.497	.339	1.406	1	H2-1
706	M340	L3x3x3/16	.170	0	9	.003	7.523	y	16	8.438	23.497	.339	1.406	1	H2-1
707	M348	L3x3x3/16	.174	0	7	.003	7.523	y	17	8.438	23.497	.339	1.406	1	H2-1
708	M370	L3x3x3/16	.221	0	6	.003	7.523	y	14	8.46	23.497	.339	1.407	1	H2-1
709	M378	L3x3x3/16	.230	0	6	.003	7.523	y	13	8.46	23.497	.339	1.407	1	H2-1
710	M387	L3x3x3/16	.230	0	4	.003	0	y	15	8.46	23.497	.339	1.407	1	H2-1
711	M395	L3x3x3/16	.223	0	4	.003	7.523	y	12	8.46	23.497	.339	1.407	1	H2-1
712	M404	L3x3x3/16	.224	0	2	.003	7.523	y	15	8.46	23.497	.339	1.407	1	H2-1
713	M412	L3x3x3/16	.216	0	2	.003	7.523	y	17	8.46	23.497	.339	1.407	1	H2-1
714	M421	L3x3x3/16	.217	0	8	.003	7.523	y	16	8.46	23.497	.339	1.407	1	H2-1
715	M429	L3x3x3/16	.222	0	8	.003	7.523	y	13	8.46	23.497	.339	1.407	1	H2-1
716	M451	L3x3x3/16	.290	0	6	.003	0	y	10	8.781	23.497	.339	1.418	1	H2-1
717	M459	L3x3x3/16	.306	0	6	.003	7.523	y	14	8.781	23.497	.339	1.418	1	H2-1
718	M468	L3x3x3/16	.303	0	4	.003	0	y	12	8.781	23.497	.339	1.418	1	H2-1
719	M476	L3x3x3/16	.289	0	4	.003	7.523	y	13	8.781	23.497	.339	1.418	1	H2-1
720	M485	L3x3x3/16	.299	0	2	.003	0	y	11	8.781	23.497	.339	1.418	1	H2-1
721	M493	L3x3x3/16	.284	0	2	.003	0	y	13	8.781	23.497	.339	1.418	1	H2-1
722	M502	L3x3x3/16	.282	0	8	.003	7.523	y	17	8.781	23.497	.339	1.418	1	H2-1
723	M510	L3x3x3/16	.295	0	8	.003	7.523	y	13	8.781	23.497	.339	1.418	1	H2-1
724	M532	L3x3x3/16	.394	0	7	.003	7.523	y	16	8.805	23.497	.339	1.418	1	H2-1
725	M540	L3x3x3/16	.408	0	5	.003	7.523	y	11	8.805	23.497	.339	1.418	1	H2-1
726	M549	L3x3x3/16	.403	0	5	.003	0	y	11	8.805	23.497	.339	1.418	1	H2-1
727	M557	L3x3x3/16	.390	0	3	.003	7.523	y	12	8.805	23.497	.339	1.418	1	H2-1
728	M566	L3x3x3/16	.402	0	3	.003	0	y	16	8.805	23.497	.339	1.418	1	H2-1
729	M574	L3x3x3/16	.393	0	9	.003	7.523	y	11	8.805	23.497	.339	1.418	1	H2-1
730	M583	L3x3x3/16	.389	0	9	.003	0	y	16	8.805	23.497	.339	1.418	1	H2-1
731	M591	L3x3x3/16	.398	0	7	.003	7.523	y	15	8.805	23.497	.339	1.418	1	H2-1
732	M613	L3x3x3/16	.514	0	6	.003	7.523	y	16	8.851	23.497	.339	1.42	1	H2-1
733	M621	L3x3x3/16	.531	0	6	.003	7.523	y	17	8.851	23.497	.339	1.42	1	H2-1
734	M630	L3x3x3/16	.438	0	5	.003	0	y	11	8.851	23.497	.339	1.42	1	H2-1
735	M638	L3x3x3/16	.429	0	3	.003	7.523	y	14	8.851	23.497	.339	1.42	1	H2-1
736	M647	L3x3x3/16	.521	0	2	.003	7.523	y	15	8.851	23.497	.339	1.42	1	H2-1
737	M655	L3x3x3/16	.506	0	2	.003	7.523	y	11	8.851	23.497	.339	1.42	1	H2-1
738	M664	L3x3x3/16	.427	0	9	.003	7.523	y	16	8.851	23.497	.339	1.42	1	H2-1
739	M672	L3x3x3/16	.435	0	7	.003	7.523	y	18	8.851	23.497	.339	1.42	1	H2-1
740	M694	L3x3x3/16	.137	0	7	.004	8.199	y	14	8.691	23.497	.339	1.415	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
741	M704	L3x3x3/16	.139	0	5	.004	0	y	17	8.691	23.497	.339	1.415	1	H2-1
742	M715	L3x3x3/16	.065	0	6	.004	8.293	y	13	8.476	23.497	.339	1.407	1	H2-1
743	M725	L3x3x3/16	.073	0	3	.004	8.293	y	14	8.476	23.497	.339	1.407	1	H2-1
744	M736	L3x3x3/16	.136	0	3	.004	8.199	y	17	8.691	23.497	.339	1.415	1	H2-1
745	M746	L3x3x3/16	.135	0	9	.004	0	y	17	8.691	23.497	.339	1.415	1	H2-1
746	M757	L3x3x3/16	.073	0	9	.004	0	y	17	8.476	23.497	.339	1.407	1	H2-1
747	M767	L3x3x3/16	.066	0	7	.004	0	y	14	8.476	23.497	.339	1.407	1	H2-1
748	M807	LL3x3x3x3	.043	6.674	3	.002	0	y	14	10.222	46.994	3.688	2.496	1	H1-...
749	M808	LL3x3x3x3	.039	7.196	7	.002	13.817	y	16	10.388	46.994	3.688	2.496	1	H1-...
750	M809	LL3x3x3x3	.038	6.621	5	.002	0	y	9	10.388	46.994	3.688	2.496	1	H1-...
751	M810	LL3x3x3x3	.042	7.255	9	.002	0	y	16	10.222	46.994	3.688	2.496	1	H1-...
752	M811	LL3x3x3x3	.042	6.674	7	.002	13.929	y	14	10.222	46.994	3.688	2.496	1	H1-...
753	M812	LL3x3x3x3	.038	7.196	3	.002	13.817	y	13	10.388	46.994	3.688	2.496	1	H1-...
754	M813	LL3x3x3x3	.038	6.621	9	.002	0	y	18	10.388	46.994	3.688	2.496	1	H1-...
755	M814	LL3x3x3x3	.042	7.255	5	.002	13.929	y	14	10.222	46.994	3.688	2.496	1	H1-...
756	M1246	2L2 1/2x2 1/2x3/16x3/8	.098	5.944	16	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
757	M1247	2L2 1/2x2 1/2x3/16x3/8	.098	6.196	16	.002	0	y	3	7.72	38.802	2.672	1.737	1	H1-...
758	M1248	2L2 1/2x2 1/2x3/16x3/8	.098	5.944	14	.002	12.14	y	6	7.72	38.802	2.672	1.737	1	H1-...
759	M1249	2L2 1/2x2 1/2x3/16x3/8	.098	6.196	14	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
760	M1250	2L2 1/2x2 1/2x3/16x3/8	.098	5.944	12	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
761	M1251	2L2 1/2x2 1/2x3/16x3/8	.098	6.196	12	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
762	M1252	2L2 1/2x2 1/2x3/16x3/8	.098	5.944	18	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
763	M1253	2L2 1/2x2 1/2x3/16x3/8	.098	6.196	18	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
764	M1194	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	6	7.72	38.802	2.672	1.737	1	H1-...
765	M1195	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	16	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
766	M1196	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	14	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
767	M1197	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	14	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
768	M1198	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	0	y	25	7.72	38.802	2.672	1.737	1	H1-...
769	M1199	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	12	.002	12.14	y	11	7.72	38.802	2.672	1.737	1	H1-...
770	M1200	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
771	M1201	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	12.14	y	8	7.72	38.802	2.672	1.737	1	H1-...
772	M1142	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	6	7.72	38.802	2.672	1.737	1	H1-...
773	M1143	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	16	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
774	M1144	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
775	M1145	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	12.14	y	5	7.72	38.802	2.672	1.737	1	H1-...
776	M1146	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
777	M1147	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	12	.002	12.14	y	23	7.72	38.802	2.672	1.737	1	H1-...
778	M1148	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	14	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
779	M1149	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	14	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
780	M1090	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
781	M1091	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	16	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...
782	M1092	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	14	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
783	M1093	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	14	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
784	M1094	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	12.14	y	8	7.72	38.802	2.672	1.737	1	H1-...
785	M1095	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	0	y	6	7.72	38.802	2.672	1.737	1	H1-...
786	M1096	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...
787	M1097	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	12	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
788	M1038	2L2 1/2x2 1/2x3/16x3/8	.075	5.944	14	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
789	M1039	2L2 1/2x2 1/2x3/16x3/8	.075	6.196	14	.002	0	y	8	7.72	38.802	2.672	1.737	1	H1-...
790	M1040	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...
791	M1041	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	12	.002	12.14	y	6	7.72	38.802	2.672	1.737	1	H1-...
792	M1042	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
793	M1043	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	12.14	y	3	7.72	38.802	2.672	1.737	1	H1-...
794	M1044	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
795	M1045	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	16	.002	0	y	4	7.72	38.802	2.672	1.737	1	H1-...
796	M986	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	7	7.72	38.802	2.672	1.737	1	H1-...
797	M987	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	16	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
798	M988	2L2 1/2x2 1/2x3/16x3/8	.075	5.944	14	.002	12.14	y	2	7.72	38.802	2.672	1.737	1	H1-...
799	M989	2L2 1/2x2 1/2x3/16x3/8	.075	6.196	14	.002	0	y	14	7.72	38.802	2.672	1.737	1	H1-...
800	M990	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	12.14	y	3	7.72	38.802	2.672	1.737	1	H1-...
801	M991	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	12	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
802	M992	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	12.14	y	9	7.72	38.802	2.672	1.737	1	H1-...
803	M993	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
804	M934	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	16	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
805	M935	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	15	.002	0	y	9	7.72	38.802	2.672	1.737	1	H1-...
806	M936	2L2 1/2x2 1/2x3/16x3/8	.075	5.944	13	.002	12.14	y	15	7.72	38.802	2.672	1.737	1	H1-...
807	M937	2L2 1/2x2 1/2x3/16x3/8	.075	6.196	15	.002	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
808	M938	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	12	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
809	M939	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	13	.002	0	y	5	7.72	38.802	2.672	1.737	1	H1-...
810	M940	2L2 1/2x2 1/2x3/16x3/8	.076	5.944	18	.002	0	y	2	7.72	38.802	2.672	1.737	1	H1-...
811	M941	2L2 1/2x2 1/2x3/16x3/8	.076	6.196	18	.002	12.14	y	4	7.72	38.802	2.672	1.737	1	H1-...
812	M815	LL3x3x3x3	.097	7.621	13	.002	0	y	3	8.184	46.994	3.688	2.496	1	H1-...
813	M816	LL3x3x3x3	.089	7.843	16	.002	15.366	y	7	8.399	46.994	3.688	2.496	1	H1-...
814	M817	LL3x3x3x3	.092	7.523	15	.002	0	y	6	8.399	46.994	3.688	2.496	1	H1-...
815	M818	LL3x3x3x3	.100	7.946	17	.002	0	y	18	8.184	46.994	3.688	2.496	1	H1-...
816	M819	LL3x3x3x3	.100	7.621	17	.002	15.567	y	15	8.184	46.994	3.688	2.496	1	H1-...
817	M820	LL3x3x3x3	.092	7.843	11	.002	15.366	y	11	8.399	46.994	3.688	2.496	1	H1-...
818	M821	LL3x3x3x3	.092	7.523	11	.002	15.366	y	15	8.399	46.994	3.688	2.496	1	H1-...
819	M822	LL3x3x3x3	.100	7.946	13	.002	0	y	15	8.184	46.994	3.688	2.496	1	H1-...
820	M1238	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	5	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
821	M1239	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
822	M1240	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	7	.001	10.031	y	7	11.307	38.802	2.672	1.737	1	H1-...
823	M1241	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	4	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
824	M1242	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	4	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
825	M1243	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	2	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
826	M1244	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	2	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
827	M1245	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	7	.001	0	y	8	11.307	38.802	2.672	1.737	1	H1-...
828	M1186	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	7	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
829	M1187	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	3	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
830	M1188	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	5	.001	10.031	y	8	11.307	38.802	2.672	1.737	1	H1-...
831	M1189	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
832	M1190	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	5	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
833	M1191	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	10.031	y	16	11.307	38.802	2.672	1.737	1	H1-...
834	M1192	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	7	.001	10.031	y	18	11.307	38.802	2.672	1.737	1	H1-...
835	M1193	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	3	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
836	M1134	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	7	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
837	M1135	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	3	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
838	M1136	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	5	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
839	M1137	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
840	M1138	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	7	.001	10.031	y	18	11.307	38.802	2.672	1.737	1	H1-...
841	M1139	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	3	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
842	M1140	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	5	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
843	M1141	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	0	y	2	11.307	38.802	2.672	1.737	1	H1-...
844	M1082	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
845	M1083	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	9	.001	10.031	y	4	11.307	38.802	2.672	1.737	1	H1-...
846	M1084	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	7	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
847	M1085	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	3	.001	10.031	y	7	11.307	38.802	2.672	1.737	1	H1-...
848	M1086	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
849	M1087	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	9	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
850	M1088	2L2 1/2x2 1/2x3/16x3/8	.028	4.911	3	.001	0	y	5	11.307	38.802	2.672	1.737	1	H1-...
851	M1089	2L2 1/2x2 1/2x3/16x3/8	.028	5.12	7	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
852	M1030	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	10.031	y	14	11.307	38.802	2.672	1.737	1	H1-...
853	M1031	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	9	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
854	M1032	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	7	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
855	M1033	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	3	.001	10.031	y	14	11.307	38.802	2.672	1.737	1	H1-...
856	M1034	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	0	y	4	11.307	38.802	2.672	1.737	1	H1-...
857	M1035	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	9	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
858	M1036	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	3	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
859	M1037	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	7	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
860	M978	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
861	M979	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	9	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
862	M980	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	7	.001	10.031	y	16	11.307	38.802	2.672	1.737	1	H1-...
863	M981	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	3	.001	0	y	7	11.307	38.802	2.672	1.737	1	H1-...
864	M982	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	7	.001	0	y	8	11.307	38.802	2.672	1.737	1	H1-...
865	M983	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	3	.001	10.031	y	11	11.307	38.802	2.672	1.737	1	H1-...
866	M984	2L2 1/2x2 1/2x3/16x3/8	.029	4.911	5	.001	0	y	8	11.307	38.802	2.672	1.737	1	H1-...
867	M985	2L2 1/2x2 1/2x3/16x3/8	.029	5.12	9	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
868	M926	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	5	.001	0	y	17	11.307	38.802	2.672	1.737	1	H1-...
869	M927	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	9	.001	0	y	17	11.307	38.802	2.672	1.737	1	H1-...
870	M928	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	7	.001	10.031	y	5	11.307	38.802	2.672	1.737	1	H1-...
871	M929	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	3	.001	0	y	3	11.307	38.802	2.672	1.737	1	H1-...
872	M930	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	5	.001	0	y	14	11.307	38.802	2.672	1.737	1	H1-...
873	M931	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	9	.001	10.031	y	2	11.307	38.802	2.672	1.737	1	H1-...
874	M932	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	3	.001	0	y	9	11.307	38.802	2.672	1.737	1	H1-...
875	M933	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	7	.001	0	y	18	11.307	38.802	2.672	1.737	1	H1-...
876	M874	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	5	.001	0	y	15	11.307	38.802	2.672	1.737	1	H1-...
877	M875	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	9	.001	10.031	y	10	11.307	38.802	2.672	1.737	1	H1-...
878	M876	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	7	.001	10.031	y	9	11.307	38.802	2.672	1.737	1	H1-...
879	M877	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	3	.001	10.031	y	10	11.307	38.802	2.672	1.737	1	H1-...
880	M878	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	5	.001	10.031	y	3	11.307	38.802	2.672	1.737	1	H1-...
881	M879	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	9	.001	0	y	6	11.307	38.802	2.672	1.737	1	H1-...
882	M880	2L2 1/2x2 1/2x3/16x3/8	.030	4.911	7	.001	10.031	y	11	11.307	38.802	2.672	1.737	1	H1-...
883	M881	2L2 1/2x2 1/2x3/16x3/8	.030	5.12	3	.001	10.031	y	6	11.307	38.802	2.672	1.737	1	H1-...
884	M799	LL4x4x8x3	.018	3.948	3	.002	0	y	9	117.137	161.677	17.228	11.212	1	H1-...
885	M800	LL4x4x8x3	.018	3.948	5	.002	0	y	3	117.137	161.677	17.228	11.212	1	H1-...
886	M801	LL4x4x8x3	.018	3.948	9	.002	7.896	y	7	117.137	161.677	17.228	11.212	1	H1-...
887	M806	LL4x4x8x3	.018	3.948	7	.002	0	y	5	117.137	161.677	17.228	11.212	1	H1-...
888	M1234	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	7	.002	7.896	z	7	4.562	38.802	2.672	1.086	1	H1-...
889	M1235	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	5	.002	7.896	z	5	4.562	38.802	2.672	1.086	1	H1-...
890	M1236	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	3	.002	7.896	z	3	4.562	38.802	2.672	1.086	1	H1-...
891	M1237	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	9	.002	0	z	9	4.562	38.802	2.672	1.086	1	H1-...
892	M1182	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	7	.002	7.896	z	7	4.562	38.802	2.672	1.086	1	H1-...
893	M1183	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	5	.002	7.896	z	5	4.562	38.802	2.672	1.086	1	H1-...
894	M1184	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	9	.002	0	z	9	4.562	38.802	2.672	1.086	1	H1-...
895	M1185	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	3	.002	7.896	z	3	4.562	38.802	2.672	1.086	1	H1-...
896	M1130	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	7	.002	7.896	z	7	4.562	38.802	2.672	1.086	1	H1-...
897	M1131	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	9	.002	0	z	9	4.562	38.802	2.672	1.086	1	H1-...
898	M1132	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	5	.002	0	z	5	4.562	38.802	2.672	1.086	1	H1-...
899	M1133	2L2 1/2x2 1/2x3/16x3/8	.102	7.896	3	.002	7.896	z	3	4.562	38.802	2.672	1.086	1	H1-...
900	M1078	2L2 1/2x2 1/2x3/16x3/8	.106	7.896	7	.002	0	z	7	4.562	38.802	2.672	1.086	1	H1-...
901	M1079	2L2 1/2x2 1/2x3/16x3/8	.106	7.896	5	.002	7.896	z	5	4.562	38.802	2.672	1.086	1	H1-...
902	M1080	2L2 1/2x2 1/2x3/16x3/8	.106	7.896	3	.002	0	z	3	4.562	38.802	2.672	1.086	1	H1-...
903	M1081	2L2 1/2x2 1/2x3/16x3/8	.106	7.896	9	.002	7.896	z	9	4.562	38.802	2.672	1.086	1	H1-...
904	M1026	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
905	M1027	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
906	M1028	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
907	M1029	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
908	M974	2L2 1/2x2 1/2x3/16x3/8	.115	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
909	M975	2L2 1/2x2 1/2x3/16x3/8	.115	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
910	M976	2L2 1/2x2 1/2x3/16x3/8	.115	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
911	M977	2L2 1/2x2 1/2x3/16x3/8	.115	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
912	M922	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
913	M923	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
914	M924	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
915	M925	2L2 1/2x2 1/2x3/16x3/8	.111	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
916	M870	2L2 1/2x2 1/2x3/16x3/8	.114	7.896	5	.002	7.896	y	5	4.562	38.802	2.672	1.086	1	H1-...
917	M871	2L2 1/2x2 1/2x3/16x3/8	.114	7.896	7	.002	7.896	y	7	4.562	38.802	2.672	1.086	1	H1-...
918	M872	2L2 1/2x2 1/2x3/16x3/8	.114	7.896	3	.002	7.896	y	3	4.562	38.802	2.672	1.086	1	H1-...
919	M873	2L2 1/2x2 1/2x3/16x3/8	.114	7.896	9	.002	7.896	y	9	4.562	38.802	2.672	1.086	1	H1-...
920	M802	LL3x3x3x3	.123	7.896	3	.003	7.896	y	3	7.952	46.994	3.688	1.56	1	H1-...
921	M803	LL3x3x3x3	.123	7.896	5	.003	7.896	y	5	7.952	46.994	3.688	1.56	1	H1-...
922	M804	LL3x3x3x3	.123	7.896	9	.003	7.896	y	9	7.952	46.994	3.688	1.56	1	H1-...
923	M805	LL3x3x3x3	.123	7.896	7	.003	7.896	y	7	7.952	46.994	3.688	1.56	1	H1-...
924	M1230	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
925	M1231	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
926	M1232	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
927	M1233	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
928	M1178	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
929	M1179	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
930	M1180	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
931	M1181	2L2 1/2x2 1/2x3/16x3/8	.028	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
932	M1126	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
933	M1127	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
934	M1128	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
935	M1129	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
936	M1074	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
937	M1075	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
938	M1076	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
939	M1077	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
940	M1022	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
941	M1023	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
942	M1024	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
943	M1025	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
944	M970	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
945	M971	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
946	M972	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
947	M973	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
948	M918	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
949	M919	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
950	M920	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
951	M921	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
952	M866	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	7	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
953	M867	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	9	.002	7.896	y	3	17.709	38.802	2.672	1.737	1	H1-...
954	M868	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	3	.002	7.896	y	9	17.709	38.802	2.672	1.737	1	H1-...
955	M869	2L2 1/2x2 1/2x3/16x3/8	.029	3.948	5	.002	7.896	y	7	17.709	38.802	2.672	1.737	1	H1-...
956	M783	L2.5x2.5x3	.401	1.396	3	.001	0	y	9	14.868	19.423	.581	1.221	1	H2-1
957	M784	L2.5x2.5x3	.287	1.396	3	.001	0	y	9	14.868	19.423	.581	1.221	1	H2-1
958	M785	L2.5x2.5x3	.394	1.396	9	.001	2.792	y	9	14.868	19.423	.581	1.221	1	H2-1
959	M786	L2.5x2.5x3	.288	1.396	9	.001	0	y	3	14.868	19.423	.581	1.221	1	H2-1
960	M787	L2.5x2.5x3	.291	1.396	7	.001	0	y	7	14.868	19.423	.581	1.221	1	H2-1
961	M788	L2.5x2.5x3	.392	1.396	7	.001	2.792	y	7	14.868	19.423	.581	1.221	1	H2-1
962	M789	L2.5x2.5x3	.289	1.396	5	.001	2.792	y	7	14.868	19.423	.581	1.221	1	H2-1
963	M790	L2.5x2.5x3	.399	1.396	5	.001	0	y	3	14.868	19.423	.581	1.221	1	H2-1
964	M1262	2L2 1/2x2 1/2x3/16x3/8	.086	6.375	2	.003	0	y	3	6.999	38.802	2.672	1.737	1	H1-...
965	M1263	2L2 1/2x2 1/2x3/16x3/8	.077	6.375	17	.003	12.75	y	2	6.999	38.802	2.672	1.737	1	H1-...
966	M1264	2L2 1/2x2 1/2x3/16x3/8	.089	6.375	6	.003	12.75	y	3	6.999	38.802	2.672	1.737	1	H1-...
967	M1265	2L2 1/2x2 1/2x3/16x3/8	.078	6.375	13	.003	0	y	2	6.999	38.802	2.672	1.737	1	H1-...
968	M53	2L2 1/2x2 1/2x3/16x3/8	.081	4.188	13	.005	0	y	12	16.945	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
969	M61	2L2 1/2x2 1/2x3/16x3/8	.081	4.188	17	.005	0	y	12	16.945	38.802	2.672	1.737	1	H1-...
970	M69	2L2 1/2x2 1/2x3/16x3/8	.082	4.188	11	.005	0	y	11	16.945	38.802	2.672	1.737	1	H1-...
971	M77	2L2 1/2x2 1/2x3/16x3/8	.082	4.188	15	.005	0	y	11	16.945	38.802	2.672	1.737	1	H1-...
972	M85	2L2 1/2x2 1/2x3/16x3/8	.081	4.188	17	.005	0	y	17	16.945	38.802	2.672	1.737	1	H1-...
973	M93	2L2 1/2x2 1/2x3/16x3/8	.081	4.188	13	.005	0	y	17	16.945	38.802	2.672	1.737	1	H1-...
974	M101	2L2 1/2x2 1/2x3/16x3/8	.080	4.188	15	.005	0	y	14	16.945	38.802	2.672	1.737	1	H1-...
975	M109	2L2 1/2x2 1/2x3/16x3/8	.080	4.188	11	.005	0	y	14	16.945	38.802	2.672	1.737	1	H1-...
976	M126	2L2 1/2x2 1/2x3/16x3/8	.073	4.188	13	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
977	M134	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	17	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
978	M143	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	11	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
979	M151	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	15	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
980	M160	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	18	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
981	M168	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	14	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
982	M177	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	14	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
983	M185	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	18	.005	0	y	10	16.945	38.802	2.672	1.737	1	H1-...
984	M207	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	12	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
985	M215	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	16	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
986	M224	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	11	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
987	M232	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	15	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
988	M241	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	18	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
989	M249	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	14	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
990	M258	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	14	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
991	M266	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	11	.005	0	y	10	16.978	38.802	2.672	1.737	1	H1-...
992	M288	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	12	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
993	M296	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	18	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
994	M305	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	18	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
995	M313	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	16	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
996	M322	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	16	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
997	M330	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	14	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
998	M339	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	14	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
999	M347	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	11	.005	0	y	10	17.216	38.802	2.672	1.737	1	H1-...
1000	M369	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	12	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1001	M377	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	18	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1002	M386	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	18	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1003	M394	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	16	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1004	M403	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	16	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1005	M411	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	14	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1006	M420	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	13	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1007	M428	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	12	.005	0	y	10	17.25	38.802	2.672	1.737	1	H1-...
1008	M450	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	11	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1009	M458	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1010	M467	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1011	M475	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	17	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1012	M484	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1013	M492	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	15	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1014	M501	2L2 1/2x2 1/2x3/16x3/8	.071	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1015	M509	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	13	.005	0	y	10	17.524	38.802	2.672	1.737	1	H1-...
1016	M531	2L2 1/2x2 1/2x3/16x3/8	.066	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1017	M539	2L2 1/2x2 1/2x3/16x3/8	.066	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1018	M548	2L2 1/2x2 1/2x3/16x3/8	.066	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1019	M556	2L2 1/2x2 1/2x3/16x3/8	.067	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1020	M565	2L2 1/2x2 1/2x3/16x3/8	.066	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1021	M573	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1022	M582	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	14	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1023	M590	2L2 1/2x2 1/2x3/16x3/8	.066	4.188	16	.004	8.375	y	10	17.524	38.802	2.672	1.737	1	H1-...
1024	M612	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1025	M620	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1026	M629	2L2 1/2x2 1/2x3/16x3/8	.067	4.188	18	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1027	M637	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	16	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1028	M646	2L2 1/2x2 1/2x3/16x3/8	.069	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1029	M654	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	15	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1030	M663	2L2 1/2x2 1/2x3/16x3/8	.070	4.188	14	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1031	M671	2L2 1/2x2 1/2x3/16x3/8	.068	4.188	12	.004	8.375	y	10	17.558	38.802	2.672	1.737	1	H1-...
1032	M693	2L2 1/2x2 1/2x3/16x3/8	.075	4.187	12	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1033	M703	2L2 1/2x2 1/2x3/16x3/8	.074	4.187	18	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1034	M714	2L2 1/2x2 1/2x3/16x3/8	.072	4.188	18	.004	0	y	10	17.851	38.802	2.672	1.737	1	H1-...
1035	M724	2L2 1/2x2 1/2x3/16x3/8	.073	4.187	16	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1036	M735	2L2 1/2x2 1/2x3/16x3/8	.074	4.187	16	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1037	M745	2L2 1/2x2 1/2x3/16x3/8	.075	4.187	14	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1038	M756	2L2 1/2x2 1/2x3/16x3/8	.073	4.187	14	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1039	M766	2L2 1/2x2 1/2x3/16x3/8	.072	4.187	12	.004	8.375	y	10	17.851	38.802	2.672	1.737	1	H1-...
1040	M1290	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	4	.003	10.375	y	2	10.57	38.802	2.672	1.737	1	H1-...
1041	M1291	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	4	.003	0	y	5	10.57	38.802	2.672	1.737	1	H1-...
1042	M1292	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	6	.003	10.375	y	8	10.57	38.802	2.672	1.737	1	H1-...
1043	M1293	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	6	.003	0	y	3	10.57	38.802	2.672	1.737	1	H1-...
1044	M1294	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	8	.003	10.375	y	2	10.57	38.802	2.672	1.737	1	H1-...
1045	M1295	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	8	.003	0	y	5	10.57	38.802	2.672	1.737	1	H1-...
1046	M1296	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	2	.003	10.375	y	3	10.57	38.802	2.672	1.737	1	H1-...
1047	M1297	2L2 1/2x2 1/2x3/16x3/8	.051	5.188	2	.003	0	y	8	10.57	38.802	2.672	1.737	1	H1-...
1048	M55	2L2 1/2x2 1/2x3/16x3/8	.169	6.281	17	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1049	M63	2L2 1/2x2 1/2x3/16x3/8	.169	6.281	13	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1050	M71	2L2 1/2x2 1/2x3/16x3/8	.169	6.281	15	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1051	M79	2L2 1/2x2 1/2x3/16x3/8	.169	6.281	11	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1052	M87	2L2 1/2x2 1/2x3/16x3/8	.168	6.281	13	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1053	M95	2L2 1/2x2 1/2x3/16x3/8	.168	6.281	17	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1054	M103	2L2 1/2x2 1/2x3/16x3/8	.168	6.281	11	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1055	M111	2L2 1/2x2 1/2x3/16x3/8	.168	6.281	15	.007	12.563	y	10	7.52	38.802	2.672	1.737	1	H1-...
1056	M128	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	17	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1057	M136	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1058	M145	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1059	M153	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	11	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1060	M162	2L2 1/2x2 1/2x3/16x3/8	.154	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1061	M170	2L2 1/2x2 1/2x3/16x3/8	.154	6.281	17	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1062	M179	2L2 1/2x2 1/2x3/16x3/8	.154	6.281	11	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1063	M187	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	14	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1064	M209	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	16	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1065	M217	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1066	M226	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1067	M234	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	12	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1068	M243	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	13	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1069	M251	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	18	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1070	M260	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	18	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1071	M268	2L2 1/2x2 1/2x3/16x3/8	.155	6.281	15	.007	0	y	10	7.52	38.802	2.672	1.737	1	H1-...
1072	M290	2L2 1/2x2 1/2x3/16x3/8	.157	6.281	16	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1073	M298	2L2 1/2x2 1/2x3/16x3/8	.157	6.281	14	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1074	M307	2L2 1/2x2 1/2x3/16x3/8	.157	6.281	14	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1075	M315	2L2 1/2x2 1/2x3/16x3/8	.157	6.281	12	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1076	M324	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	12	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1077	M332	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	18	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1078	M341	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	18	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1079	M349	2L2 1/2x2 1/2x3/16x3/8	.156	6.281	16	.007	0	y	10	7.607	38.802	2.672	1.737	1	H1-...
1080	M371	2L2 1/2x2 1/2x3/16x3/8	.159	6.281	16	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1081	M379	2L2 1/2x2 1/2x3/16x3/8	.159	6.281	14	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1082	M388	2L2 1/2x2 1/2x3/16x3/8	.159	6.281	14	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1083	M396	2L2 1/2x2 1/2x3/16x3/8	.158	6.281	12	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1084	M405	2L2 1/2x2 1/2x3/16x3/8	.158	6.281	12	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1085	M413	2L2 1/2x2 1/2x3/16x3/8	.158	6.281	18	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1086	M422	2L2 1/2x2 1/2x3/16x3/8	.158	6.281	18	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1087	M430	2L2 1/2x2 1/2x3/16x3/8	.158	6.281	16	.007	0	y	10	7.619	38.802	2.672	1.737	1	H1-...
1088	M452	2L2 1/2x2 1/2x3/16x3/8	.160	6.281	15	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1089	M460	2L2 1/2x2 1/2x3/16x3/8	.161	6.281	15	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1090	M469	2L2 1/2x2 1/2x3/16x3/8	.161	6.281	13	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1091	M477	2L2 1/2x2 1/2x3/16x3/8	.160	6.281	13	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1092	M486	2L2 1/2x2 1/2x3/16x3/8	.160	6.281	11	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1093	M494	2L2 1/2x2 1/2x3/16x3/8	.159	6.281	11	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1094	M503	2L2 1/2x2 1/2x3/16x3/8	.160	6.281	17	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1095	M511	2L2 1/2x2 1/2x3/16x3/8	.160	6.281	17	.007	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1096	M533	2L2 1/2x2 1/2x3/16x3/8	.151	6.281	15	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1097	M541	2L2 1/2x2 1/2x3/16x3/8	.152	6.281	15	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1098	M550	2L2 1/2x2 1/2x3/16x3/8	.151	6.281	13	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1099	M558	2L2 1/2x2 1/2x3/16x3/8	.150	6.281	13	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1100	M567	2L2 1/2x2 1/2x3/16x3/8	.150	6.281	11	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1101	M575	2L2 1/2x2 1/2x3/16x3/8	.150	6.281	11	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1102	M584	2L2 1/2x2 1/2x3/16x3/8	.150	6.281	17	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1103	M592	2L2 1/2x2 1/2x3/16x3/8	.150	6.281	17	.006	0	y	10	7.72	38.802	2.672	1.737	1	H1-...
1104	M614	2L2 1/2x2 1/2x3/16x3/8	.153	6.281	16	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1105	M622	2L2 1/2x2 1/2x3/16x3/8	.154	6.281	14	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1106	M631	2L2 1/2x2 1/2x3/16x3/8	.153	6.281	14	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1107	M639	2L2 1/2x2 1/2x3/16x3/8	.152	6.281	12	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1108	M648	2L2 1/2x2 1/2x3/16x3/8	.152	6.281	11	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1109	M656	2L2 1/2x2 1/2x3/16x3/8	.152	6.281	11	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1110	M665	2L2 1/2x2 1/2x3/16x3/8	.151	6.281	18	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1111	M673	2L2 1/2x2 1/2x3/16x3/8	.152	6.281	16	.006	0	y	10	7.733	38.802	2.672	1.737	1	H1-...
1112	M695	2L2 1/2x2 1/2x1/4x3/8	.134	5.583	12	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1113	M705	2L2 1/2x2 1/2x1/4x3/8	.133	5.583	18	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1114	M716	2L2 1/2x2 1/2x1/4x3/8	.127	5.583	18	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1115	M726	2L2 1/2x2 1/2x1/4x3/8	.129	5.583	16	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1116	M737	2L2 1/2x2 1/2x1/4x3/8	.134	5.583	16	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1117	M747	2L2 1/2x2 1/2x1/4x3/8	.135	5.583	14	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1118	M758	2L2 1/2x2 1/2x1/4x3/8	.129	5.583	14	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1119	M768	2L2 1/2x2 1/2x1/4x3/8	.128	5.583	12	.005	11.167	y	10	12.983	51.305	3.58	2.271	1	H1-...
1120	M1298	L2 1/2x2 1/2x3/16	.001	0	4	.001	0	y	6	11.212	19.444	.233	1.13	1	H2-1
1121	M1299	L2 1/2x2 1/2x3/16	.001	0	2	.001	4.188	y	8	11.212	19.444	.233	1.13	1	H2-1
1122	M1300	L2 1/2x2 1/2x3/16	.001	0	2	.001	0	y	4	11.212	19.444	.233	1.13	1	H2-1
1123	M1301	L2 1/2x2 1/2x3/16	.001	0	8	.001	4.188	y	6	11.212	19.444	.233	1.13	1	H2-1
1124	M1302	L2 1/2x2 1/2x3/16	.001	0	4	.001	4.188	y	6	11.212	19.444	.233	1.13	1	H2-1
1125	M1303	L2 1/2x2 1/2x3/16	.001	0	6	.001	0	y	4	11.212	19.444	.233	1.13	1	H2-1
1126	M1304	L2 1/2x2 1/2x3/16	.001	0	6	.001	4.188	y	8	11.212	19.444	.233	1.13	1	H2-1
1127	M1305	L2 1/2x2 1/2x3/16	.001	0	8	.001	0	y	6	11.212	19.444	.233	1.13	1	H2-1
1128	M1306	L2 1/2x2 1/2x3/16	.005	0	6	.002	8.375	y	3	3.289	19.444	.233	.893	1	H2-1
1129	M1307	L2 1/2x2 1/2x3/16	.005	0	4	.002	0	y	2	3.289	19.444	.233	.893	1	H2-1
1130	M1308	L2 1/2x2 1/2x3/16	.005	0	2	.002	8.375	y	4	3.289	19.444	.233	.893	1	H2-1
1131	M1309	L2 1/2x2 1/2x3/16	.005	0	8	.002	8.375	y	2	3.289	19.444	.233	.893	1	H2-1
1132	M697	2L3x3x1/4x3/8	.135	6.979	15	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1133	M707	2L3x3x1/4x3/8	.135	6.979	15	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1134	M718	2L3x3x1/4x3/8	.134	6.979	14	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1135	M728	2L3x3x1/4x3/8	.133	6.979	12	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1136	M739	2L3x3x1/4x3/8	.134	6.979	11	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1137	M749	2L3x3x1/4x3/8	.134	6.979	11	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1138	M760	2L3x3x1/4x3/8	.133	6.979	18	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...
1139	M770	2L3x3x1/4x3/8	.133	6.979	16	.006	0	y	10	14.393	62.084	4.991	3.315	1	H1-...

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1140	M16	L2 1/2x2 1/2x3/16	.364	0	5	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1141	M19	L2 1/2x2 1/2x3/16	.380	0	7	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1142	M23	L2 1/2x2 1/2x3/16	.273	0	2	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1143	M26	L2 1/2x2 1/2x3/16	.263	0	6	.008	0	y	11	3.49	19.444	.233	.905	1	H2-1
1144	M30	L2 1/2x2 1/2x3/16	.348	0	9	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1145	M33	L2 1/2x2 1/2x3/16	.331	0	3	.008	0	y	15	3.49	19.444	.233	.905	1	H2-1
1146	M37	L2 1/2x2 1/2x3/16	.247	0	6	.008	0	y	15	3.49	19.444	.233	.905	1	H2-1
1147	M40	L2 1/2x2 1/2x3/16	.258	0	2	.008	0	y	10	3.49	19.444	.233	.905	1	H2-1
1148	M52	L3x3x3/16	.012	0	13	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1149	M60	L3x3x3/16	.012	0	17	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1150	M68	L3x3x3/16	.013	0	11	.003	4.188	y	15	15.86	23.497	.339	1.673	1	H2-1
1151	M76	L3x3x3/16	.012	0	15	.003	0	y	11	15.86	23.497	.339	1.673	1	H2-1
1152	M84	L3x3x3/16	.012	0	17	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1153	M92	L3x3x3/16	.012	0	13	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1154	M100	L3x3x3/16	.011	0	15	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1155	M108	L3x3x3/16	.012	0	12	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1156	M125	L3x3x3/16	.025	0	16	.003	0	y	13	15.86	23.497	.339	1.673	1	H2-1
1157	M133	L3x3x3/16	.026	0	13	.003	0	y	14	15.86	23.497	.339	1.673	1	H2-1
1158	M142	L3x3x3/16	.027	0	6	.003	0	y	18	15.86	23.497	.339	1.673	1	H2-1
1159	M150	L3x3x3/16	.026	0	3	.003	4.188	y	14	15.86	23.497	.339	1.673	1	H2-1
1160	M159	L3x3x3/16	.022	0	13	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1161	M167	L3x3x3/16	.022	0	9	.003	4.188	y	12	15.86	23.497	.339	1.673	1	H2-1
1162	M176	L3x3x3/16	.023	0	9	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1163	M184	L3x3x3/16	.023	0	15	.003	0	y	15	15.86	23.497	.339	1.673	1	H2-1
1164	M206	L3x3x3/16	.042	0	7	.003	0	y	13	15.884	23.497	.339	1.675	1	H2-1
1165	M214	L3x3x3/16	.040	0	5	.003	0	y	13	15.884	23.497	.339	1.675	1	H2-1
1166	M223	L3x3x3/16	.045	0	5	.003	0	y	18	15.884	23.497	.339	1.675	1	H2-1
1167	M231	L3x3x3/16	.043	0	3	.003	4.188	y	15	15.884	23.497	.339	1.675	1	H2-1
1168	M240	L3x3x3/16	.037	0	3	.003	4.188	y	13	15.884	23.497	.339	1.675	1	H2-1
1169	M248	L3x3x3/16	.040	0	9	.003	4.188	y	12	15.884	23.497	.339	1.675	1	H2-1
1170	M257	L3x3x3/16	.038	0	9	.003	0	y	15	15.884	23.497	.339	1.675	1	H2-1
1171	M265	L3x3x3/16	.038	0	7	.003	0	y	15	15.884	23.497	.339	1.675	1	H2-1
1172	M287	L3x3x3/16	.069	0	7	.003	0	y	13	16.053	23.497	.339	1.682	1	H2-1
1173	M295	L3x3x3/16	.071	0	5	.003	0	y	13	16.053	23.497	.339	1.682	1	H2-1
1174	M304	L3x3x3/16	.076	0	5	.003	0	y	11	16.053	23.497	.339	1.682	1	H2-1
1175	M312	L3x3x3/16	.074	0	3	.003	0	y	11	16.053	23.497	.339	1.682	1	H2-1
1176	M321	L3x3x3/16	.068	0	3	.003	0	y	16	16.053	23.497	.339	1.682	1	H2-1
1177	M329	L3x3x3/16	.066	0	9	.003	4.188	y	13	16.053	23.497	.339	1.682	1	H2-1
1178	M338	L3x3x3/16	.071	0	9	.003	0	y	15	16.053	23.497	.339	1.682	1	H2-1
1179	M346	L3x3x3/16	.073	0	7	.003	0	y	15	16.053	23.497	.339	1.682	1	H2-1
1180	M368	L3x3x3/16	.091	0	6	.003	0	y	13	16.077	23.497	.339	1.683	1	H2-1
1181	M376	L3x3x3/16	.094	0	6	.003	0	y	13	16.077	23.497	.339	1.683	1	H2-1
1182	M385	L3x3x3/16	.094	0	4	.003	0	y	18	16.077	23.497	.339	1.683	1	H2-1
1183	M393	L3x3x3/16	.092	0	4	.003	0	y	11	16.077	23.497	.339	1.683	1	H2-1
1184	M402	L3x3x3/16	.092	0	2	.003	0	y	17	16.077	23.497	.339	1.683	1	H2-1
1185	M410	L3x3x3/16	.089	0	2	.003	0	y	17	16.077	23.497	.339	1.683	1	H2-1
1186	M419	L3x3x3/16	.089	0	8	.003	0	y	15	16.077	23.497	.339	1.683	1	H2-1
1187	M427	L3x3x3/16	.091	0	8	.003	0	y	15	16.077	23.497	.339	1.683	1	H2-1
1188	M449	L3x3x3/16	.123	0	6	.003	0	y	12	16.245	23.497	.339	1.69	1	H2-1
1189	M457	L3x3x3/16	.130	0	6	.003	0	y	12	16.245	23.497	.339	1.69	1	H2-1
1190	M466	L3x3x3/16	.129	0	4	.003	4.188	y	15	16.245	23.497	.339	1.69	1	H2-1
1191	M474	L3x3x3/16	.123	0	4	.003	0	y	11	16.245	23.497	.339	1.69	1	H2-1
1192	M483	L3x3x3/16	.127	0	2	.003	4.188	y	13	16.245	23.497	.339	1.69	1	H2-1
1193	M491	L3x3x3/16	.121	0	2	.003	4.188	y	12	16.245	23.497	.339	1.69	1	H2-1
1194	M500	L3x3x3/16	.120	0	8	.003	4.188	y	11	16.245	23.497	.339	1.69	1	H2-1
1195	M508	L3x3x3/16	.125	0	8	.003	4.188	y	11	16.245	23.497	.339	1.69	1	H2-1
1196	M530	L3x3x3/16	.166	0	7	.003	0	y	13	16.269	23.497	.339	1.691	1	H2-1

Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

	Member	Shape	Code C...	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	Pnc/o...	Pnt/om ...	Mnyy/om [k-ft]	Mnzz/o...	Cb	Eqn
1197	M538	L3x3x3/16	.172	0	5	.003	0	y	12	16.269	23.497	.339	1.691	1	H2-1
1198	M547	L3x3x3/16	.170	0	5	.003	0	y	11	16.269	23.497	.339	1.691	1	H2-1
1199	M555	L3x3x3/16	.165	0	3	.003	0	y	11	16.269	23.497	.339	1.691	1	H2-1
1200	M564	L3x3x3/16	.170	0	3	.003	4.188	y	13	16.269	23.497	.339	1.691	1	H2-1
1201	M572	L3x3x3/16	.166	0	9	.003	4.188	y	12	16.269	23.497	.339	1.691	1	H2-1
1202	M581	L3x3x3/16	.164	0	9	.003	4.188	y	11	16.269	23.497	.339	1.691	1	H2-1
1203	M589	L3x3x3/16	.168	0	7	.003	4.188	y	11	16.269	23.497	.339	1.691	1	H2-1
1204	M611	L3x3x3/16	.218	0	6	.003	4.188	y	17	16.293	23.497	.339	1.692	1	H2-1
1205	M619	L3x3x3/16	.226	0	6	.003	0	y	12	16.293	23.497	.339	1.692	1	H2-1
1206	M628	L3x3x3/16	.184	0	5	.003	4.188	y	14	16.293	23.497	.339	1.692	1	H2-1
1207	M636	L3x3x3/16	.181	0	3	.003	0	y	11	16.293	23.497	.339	1.692	1	H2-1
1208	M645	L3x3x3/16	.221	0	2	.003	4.188	y	12	16.293	23.497	.339	1.692	1	H2-1
1209	M653	L3x3x3/16	.215	0	2	.003	4.188	y	12	16.293	23.497	.339	1.692	1	H2-1
1210	M662	L3x3x3/16	.180	0	9	.003	4.188	y	11	16.293	23.497	.339	1.692	1	H2-1
1211	M670	L3x3x3/16	.183	0	7	.003	4.188	y	11	16.293	23.497	.339	1.692	1	H2-1
1212	M692	L3x3x3/16	.091	0	3	.004	5.583	y	11	13.008	23.497	.339	1.563	1	H2-1
1213	M702	L3x3x3/16	.091	0	9	.004	5.583	y	15	13.008	23.497	.339	1.563	1	H2-1
1214	M713	L3x3x3/16	.050	0	9	.004	0	y	13	13.008	23.497	.339	1.563	1	H2-1
1215	M723	L3x3x3/16	.055	0	7	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1216	M734	L3x3x3/16	.091	0	7	.004	5.583	y	13	13.008	23.497	.339	1.563	1	H2-1
1217	M744	L3x3x3/16	.090	0	5	.004	5.583	y	16	13.008	23.497	.339	1.563	1	H2-1
1218	M755	L3x3x3/16	.056	0	5	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1219	M765	L3x3x3/16	.051	0	3	.004	5.583	y	10	13.008	23.497	.339	1.563	1	H2-1
1220	M5	2L3x4x5/16x3/8	.258	12.75	13	.008	12.75	y	15	21.978	90.108	10.644	2.637	1	H1-...
1221	M6	2L3x4x5/16x3/8	.260	12.75	12	.008	12.75	y	13	21.978	90.108	10.644	2.637	1	H1-...
1222	M7	2L3x4x5/16x3/8	.261	12.75	17	.008	12.75	y	11	21.978	90.108	10.644	2.637	1	H1-...
1223	M8	2L3x4x5/16x3/8	.260	12.75	18	.008	12.75	y	17	21.978	90.108	10.644	2.637	1	H1-...

Project #: 2014723.01.TAG0053.04 Rev. 1

Bolt Checks

Date: 8/15/2014

Section #	Elevation	Component Type	Bolt Grade	Bolt Size (in)	# of Bolts	Maximum Load (k)	Maximum Load per Bolt (k)	Allowable Load per Bolt (k)	Ratio	Allowable Ratio	% Capacity
T1		Leg	A307	0.75	12	10.879	1.813	4.418	0.41	1.333	30.8%
		Leg Outer	A307	0.75	3	2.519	0.84	8.836	0.095	1.333	7.1%
		Top Girt	A307	0.75	2	0.589	0.294	8.836	0.033	1.333	2.5%
		Diagonal	A307	0.75	2	4.989	2.494	8.836	0.282	1.333	21.2%
		Diagonal Outer	A307	0.75	3	1.516	0.505	8.836	0.057	1.333	4.3%
		Redundant Horizontal	A307	0.75	2	1.326	0.663	4.418	0.15	1.333	11.3%
		Horizontal Outer	A307	0.75	2	1.373	0.686	8.836	0.078	1.333	5.8%
		Inner Supp	A307	0.75	2	2.58	1.29	8.836	0.146	1.333	10.9%
T2	237.5	Leg	A307	0.75	16	16.979	2.122	8.836	0.24	1.333	18.0%
		Horizontal	A307	0.75	4	2.793	0.698	8.836	0.079	1.333	5.9%
		Diagonal	A307	0.75	4	13.462	3.366	8.836	0.381	1.333	28.6%
T3	212.5	Leg	A307	0.75	16	32.462	4.058	8.836	0.459	1.333	34.4%
		Horizontal	A307	0.75	3	10.669	3.556	8.836	0.402	1.333	30.2%
		Diagonal	A307	0.75	4	19.339	4.835	8.836	0.547	1.333	41.0%
		Inner Square	A307	0.75	2	2.65	1.325	8.836	0.15	1.333	11.2%
		Inner Corner	A307	0.75	2	3.244	1.622	8.836	0.184	1.333	13.8%
T4	187.5	Leg	A307	0.75	22	56.98	5.18	8.836	0.586	1.333	44.0%
		Horizontal	A307	0.75	3	13.269	4.423	8.836	0.501	1.333	37.5%
		Diagonal	A307	0.75	5	26.04	5.208	8.836	0.589	1.333	44.2%
		Inner Square	A307	0.75	2	2.778	1.389	8.836	0.157	1.333	11.8%
		Inner Corner	A307	0.75	2	3.354	1.677	8.836	0.19	1.333	14.2%
T5	162.5	Leg	A307	1	22	89.949	8.177	15.708	0.521	1.333	39.0%
		Horizontal	A307	0.75	3	16.524	5.508	8.836	0.623	1.333	46.8%
		Diagonal	A307	0.75	5	32.621	6.524	8.836	0.738	1.333	55.4%
		Redundant Horizontal	A307	0.75	2	1.788	0.894	4.418	0.202	1.333	15.2%
		Redundant Diagonal	A307	0.75	2	1.538	0.769	4.418	0.174	1.333	13.1%
		Inner Square	A307	0.75	2	3.466	1.733	8.836	0.196	1.333	14.7%
		Inner Corner	A307	0.75	2	4.177	2.088	8.836	0.236	1.333	17.7%
		Inner Ladder	A307	0.75	2	2.428	1.214	8.836	0.137	1.333	10.3%
T6	137.5	Leg	A307	1	24	131.078	10.923	15.708	0.695	1.333	52.2%
		Horizontal	A307	0.75	3	20.323	6.774	8.836	0.767	1.333	57.5%
		Diagonal	A307	0.75	4	39.32	9.83	8.836	1.113	1.333	83.4%
		Redundant Horizontal	A307	0.75	2	2.219	1.11	4.418	0.251	1.333	18.8%
		Redundant Diagonal	A307	0.75	2	1.95	0.975	4.418	0.221	1.333	16.6%
		Inner Square	A307	0.75	2	3.608	1.804	8.836	0.204	1.333	15.3%
		Inner Corner	A307	0.75	2	4.291	2.146	8.836	0.243	1.333	18.2%
		Inner Ladder	A307	0.75	2	2.517	1.258	8.836	0.142	1.333	10.7%
T7	112.5	Leg	A307	1	24	180.739	15.062	15.708	0.959	1.333	71.9%
		Horizontal	A307	0.75	4	23.505	5.876	8.836	0.665	1.333	49.9%
		Diagonal	A307	0.75	4	44.889	11.222	8.836	1.27	1.333	95.3%
		Redundant Horizontal	A307	0.75	2	3.054	1.527	4.418	0.346	1.333	25.9%
		Redundant Diagonal	A307	0.75	2	2.687	1.344	4.418	0.304	1.333	22.8%
		Inner Square	A307	0.75	2	3.635	1.818	8.836	0.206	1.333	15.4%
		Inner Corner	A307	0.75	2	4.343	2.172	8.836	0.246	1.333	18.4%
		Inner Ladder	A307	0.75	2	2.538	1.269	8.836	0.144	1.333	10.8%
T8	87.5	Leg	A307	1	24	238.152	19.846	15.708	1.263	1.333	94.8%
		Horizontal	A307	0.75	4	26.782	6.696	8.836	0.758	1.333	56.8%
		Diagonal	A307	0.75	5	52.212	10.442	8.836	1.182	1.333	88.6%
		Redundant Horizontal	A307	0.75	2	4.039	2.019	4.418	0.457	1.333	34.3%
		Redundant Diagonal	A307	0.75	2	3.589	1.794	4.418	0.406	1.333	30.5%
		Inner Square	A307	0.75	2	4.136	2.068	8.836	0.234	1.333	17.6%
		Inner Corner	A307	0.75	2	4.948	2.474	8.836	0.28	1.333	21.0%
		Inner Ladder	A307	0.75	2	2.952	1.476	8.836	0.167	1.333	12.5%
T9	62.5	Leg	A307	1	32	303.882	18.993	15.708	1.209	1.333	90.7%
		Horizontal	A307	0.75	4	29.287	7.322	8.836	0.829	1.333	62.1%
		Diagonal	A307	0.75	5	58.186	11.637	8.836	1.317	1.333	98.8%
		Redundant Horizontal	A307	0.75	2	5.299	2.65	4.418	0.6	1.333	45.0%
		Redundant Diagonal	A307	0.75	2	4.7	2.35	4.418	0.532	1.333	39.9%
		Inner Supp	A307	0.75	2	2.477	1.238	8.836	0.14	1.333	10.5%
		Inner Square	A307	0.75	2	4.52	2.26	8.836	0.256	1.333	19.2%
		Inner Corner	A307	0.75	2	5.412	2.706	8.836	0.306	1.333	23.0%
		Inner Ladder	A307	0.75	2	3.239	1.62	8.836	0.183	1.333	13.7%
T10	37.5	Leg	A307	1	40	377.681	18.884	15.708	1.202	1.333	90.2%
		Horizontal	A307	0.75	4	29.991	7.498	8.836	0.849	1.333	63.6%
		Diagonal	A307	0.75	8	74.586	9.323	8.836	1.055	1.333	79.1%
		Redundant Horizontal	A307	0.75	2	1.406	0.703	4.418	0.159	1.333	11.9%
		Redundant Diagonal	A307	0.75	2	1.337	0.668	4.418	0.151	1.333	11.3%
		Redundant Diagonal 0	A325N	0.75	2	9.401	4.7	9.278	0.507	1.333	38.0%
		Redundant Horizontal 0	A307	0.75	2	7.676	3.838	4.418	0.869	1.333	65.2%
		Inner Supp	A307	0.75	2	3.046	1.523	8.836	0.172	1.333	12.9%
		Inner Square	A307	0.75	2	3.382	1.691	8.836	0.191	1.333	14.4%

Project #: 2014723.01.TAG0053.04 Rev. 1

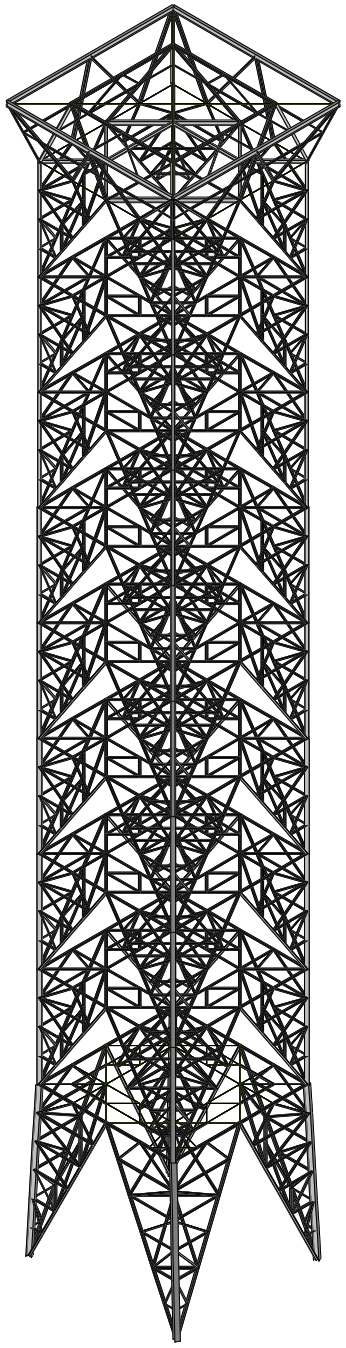
Bolt Checks

Date: 8/15/2014

Section #	Elevation	Component Type	Bolt Grade	Bolt Size (in)	# of Bolts	Maximum Load (k)	Maximum Load per Bolt (k)	Allowable Load per Bolt (k)	Ratio	Allowable Ratio	% Capacity
		Inner Corner	A307	0.75	2	5.973	2.986	8.836	0.338	1.333	25.4%
		Inner Ladder	A307	0.75	2	3.433	1.716	8.836	0.194	1.333	14.6%
		Inner Triangle	A307	0.75	2	2.439	1.22	8.836	0.138	1.333	10.4%
		Inner Girt	A307	0.75	2	2.808	1.404	8.836	0.159	1.333	11.9%
		Anchor Rods	C1015	2.25	12	377.681	31.473	73.478	0.428	1.333	32.1%
										Maximum Capacity	98.8%

APPENDIX C

Tower Elevation Drawing



GPD Group	TAG0053 CHESHIRE	SK - 1
tclark		Aug 15, 2014 at 7:49 AM
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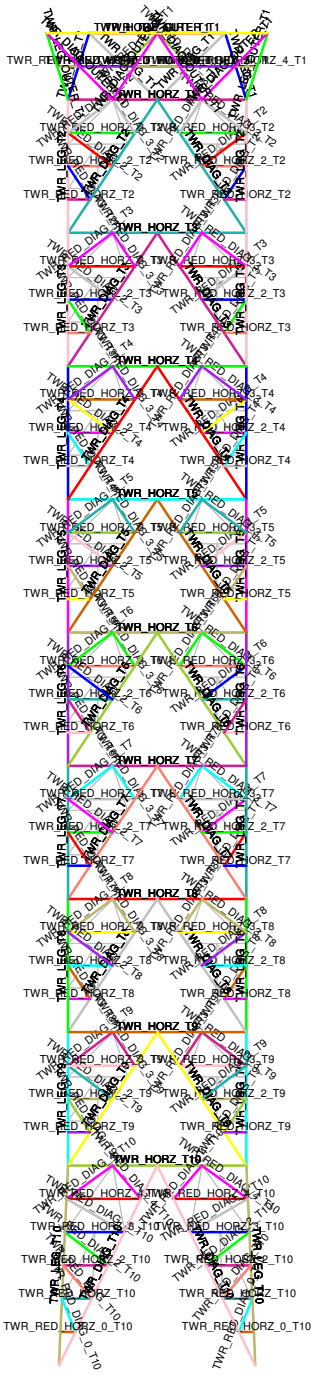

Section Sets

- TWR_LEG_T1
- TWR_LEG_OUTER_T1
- TWR_TOP_GIRT_T1
- TWR_DIAG_T1
- TWR_DIAG_OUTER_T1
- TWR_RED_HORZ_T1
- TWR_RED_HORZ_2_T1
- TWR_HORZ_OUTER_T1
- TWR_RED_HORZ_3_T1
- TWR_RED_HORZ_4_T1
- TWR_RED_DIAG_T1
- TWR_LEG_T2
- TWR_DIAG_T2
- TWR_RED_HORZ_T2
- TWR_RED_HORZ_2_T2
- TWR_RED_DIAG_T2
- TWR_RED_HORZ_3_T2
- TWR_RED_DIAG_2_T2
- TWR_RED_DIAG_3_T2
- TWR_RED_HIP_T2
- TWR_RED_HIP_2_T2
- TWR_RED_HIPDIA_T2
- TWR_RED_HIPDIA_2_T2
- TWR_INNER_SUPP_T2
- TWR_INNER_SQ_T2
- TWR_INNER_CORNER_T2
- TWR_LEG_T3
- TWR_HORZ_T3
- TWR_DIAG_T3
- TWR_RED_HORZ_T3
- TWR_RED_HORZ_2_T3
- TWR_RED_DIAG_T3
- TWR_RED_HORZ_3_T3
- TWR_RED_DIAG_2_T3
- TWR_RED_DIAG_3_T3
- TWR_RED_HIP_T3
- TWR_RED_HIP_2_T3
- TWR_RED_HIPDIA_T3
- TWR_RED_HIPDIA_2_T3
- TWR_INNER_SUPP_T3
- TWR_INNER_SQ_T3
- TWR_INNER_CORNER_T3
- TWR_INNER_TRI_T3
- TWR_INNER_BRACE_T3
- TWR_INNER_LADDER_T3
- TWR_LEG_T4
- TWR_HORZ_T4
- TWR_DIAG_T4
- TWR_RED_HORZ_T4
- TWR_RED_HORZ_2_T4
- TWR_RED_DIAG_T4
- TWR_RED_HORZ_3_T4
- TWR_RED_DIAG_2_T4
- TWR_RED_DIAG_3_T4
- TWR_RED_HIP_T4
- TWR_RED_HIP_2_T4
- TWR_RED_HIPDIA_T4
- TWR_RED_HIPDIA_2_T4
- TWR_INNER_SUPP_T4
- TWR_INNER_SQ_T4
- TWR_INNER_CORNER_T4
- TWR_INNER_TRI_T4
- TWR_INNER_BRACE_T4
- TWR_INNER_LADDER_T4
- TWR_LEG_T5
- TWR_HORZ_T5
- TWR_DIAG_T5
- TWR_RED_HORZ_T5
- TWR_RED_HORZ_2_T5
- TWR_RED_DIAG_T5
- TWR_RED_HORZ_3_T5
- TWR_RED_DIAG_2_T5
- TWR_RED_DIAG_3_T5
- TWR_RED_HIP_T5
- TWR_RED_HIP_2_T5
- TWR_RED_HIPDIA_T5
- TWR_RED_HIPDIA_2_T5
- TWR_INNER_SUPP_T5
- TWR_INNER_SQ_T5
- TWR_INNER_CORNER_T5
- TWR_INNER_TRI_T5
- TWR_INNER_BRACE_T5
- TWR_INNER_LADDER_T5
- TWR_LEG_T6
- TWR_HORZ_T6
- TWR_DIAG_T6
- TWR_RED_HORZ_T6
- TWR_RED_HORZ_2_T6
- TWR_RED_DIAG_T6
- TWR_RED_HORZ_3_T6
- TWR_RED_DIAG_2_T6
- TWR_RED_DIAG_3_T6
- TWR_RED_HIP_T6
- TWR_RED_HIP_2_T6
- TWR_RED_HIPDIA_T6
- TWR_RED_HIPDIA_2_T6
- TWR_INNER_SUPP_T6
- TWR_INNER_SQ_T6
- TWR_INNER_CORNER_T6
- TWR_INNER_TRI_T6
- TWR_INNER_BRACE_T6
- TWR_INNER_LADDER_T6
- TWR_LEG_T7
- TWR_HORZ_T7
- TWR_DIAG_T7
- TWR_RED_HORZ_T7
- TWR_RED_HORZ_2_T7
- TWR_RED_DIAG_T7
- TWR_RED_HORZ_3_T7
- TWR_RED_DIAG_2_T7
- TWR_RED_DIAG_3_T7
- TWR_RED_HIP_T7
- TWR_RED_HIP_2_T7
- TWR_RED_HIPDIA_T7
- TWR_RED_HIPDIA_2_T7
- TWR_INNER_SUPP_T7
- TWR_INNER_SQ_T7
- TWR_INNER_CORNER_T7
- TWR_INNER_TRI_T7
- TWR_INNER_BRACE_T7
- TWR_INNER_LADDER_T7
- TWR_LEG_T8
- TWR_HORZ_T8
- TWR_DIAG_T8
- TWR_RED_HORZ_T8
- TWR_RED_HORZ_2_T8
- TWR_RED_DIAG_T8
- TWR_RED_HORZ_3_T8
- TWR_RED_DIAG_2_T8
- TWR_RED_DIAG_3_T8
- TWR_RED_HIP_T8
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- TWR_RED_HIPDIA_T8
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- TWR_INNER_SUPP_T8
- TWR_INNER_SQ_T8
- TWR_INNER_CORNER_T8
- TWR_INNER_TRI_T8
- TWR_INNER_BRACE_T8
- TWR_INNER_LADDER_T8
- TWR_LEG_T9
- TWR_HORZ_T9
- TWR_DIAG_T9
- TWR_RED_HORZ_T9
- TWR_RED_HORZ_2_T9
- TWR_RED_DIAG_T9
- TWR_RED_HORZ_3_T9
- TWR_RED_DIAG_2_T9
- TWR_RED_DIAG_3_T9
- TWR_RED_HIP_T9

More...

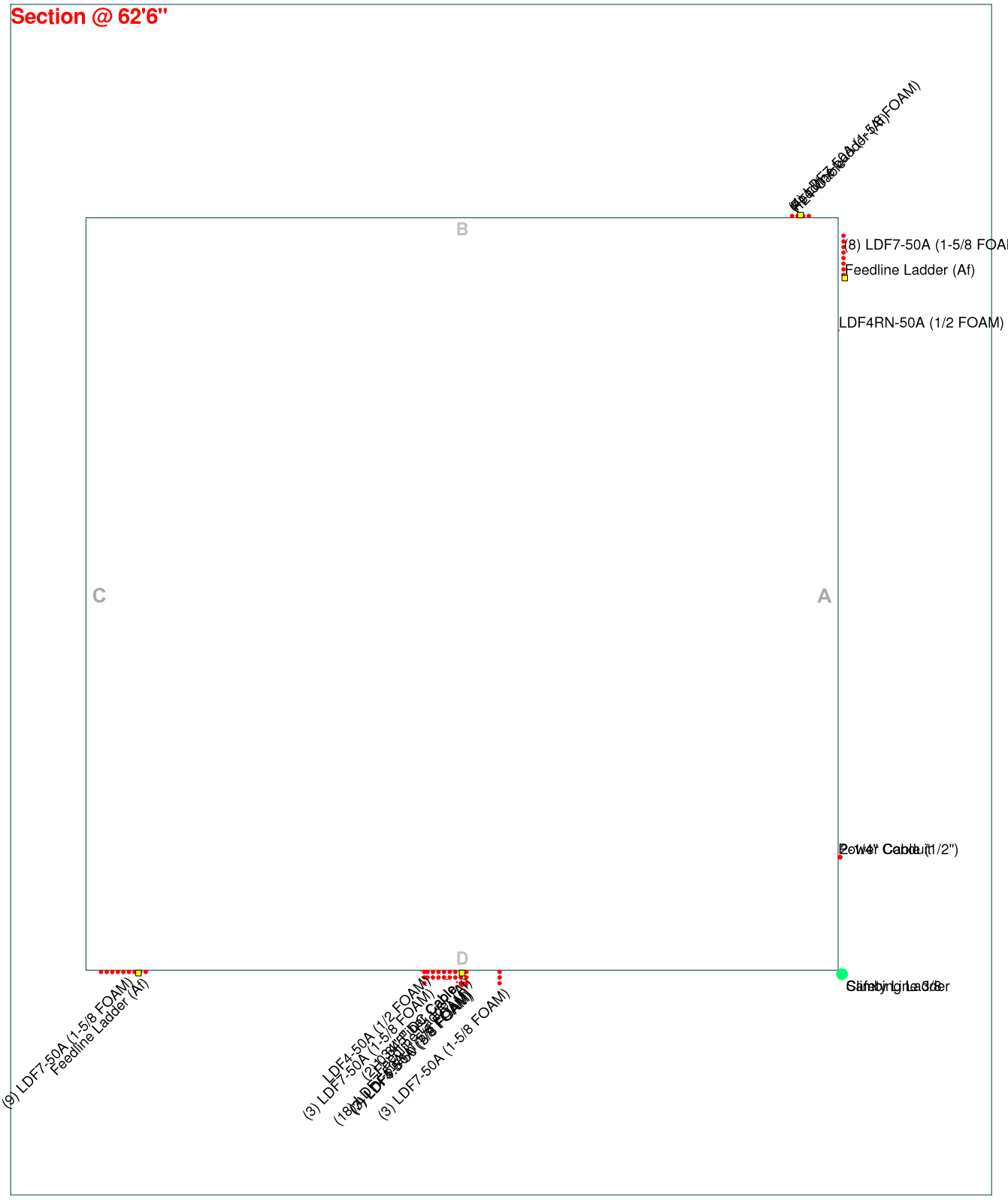
Envelope Only Solution

GPD Group	TAG0053 CHESHIRE	SK - 2
tclark		Aug 15, 2014 at 7:52 AM
2013723.01.TAG0053.04 ...		TAG0053 - Rev 1.rt3

Feed Line Plan
62'6"

Round Flat App In Face App Out Face

Section @ 62'6"



GPD Group
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Akron, OH
Phone: (330) 572-2100
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Job: **TAG0053 CHESHIRE**			
Project: ***2013723.01.TAG0053.04***			
Client: AT&T Towers	Drawn by: tclark	App'd:	
Code: TIA/EIA-222-F	Date: 08/05/14	Scale: NTS	
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