

JULIE D. KOHLER

PLEASE REPLY TO: Bridgeport
WRITER'S DIRECT DIAL: (203) 337-4157
E-Mail Address: jkohler@cohenandwolf.com

August 29, 2013

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

**Re: Notice of Exempt Modification
SNET/T-Mobile co-location
Site ID CT1132B
11 West Peak Drive, Meriden**

Dear Attorney Bachman:

This office represents T-Mobile Northeast LLC ("T-Mobile") and has been retained to file exempt modification filings with the Connecticut Siting Council on its behalf.

In this case, SNET owns the existing lattice telecommunications tower and related facility at 11 West Peak Drive, Meriden Connecticut (coordinates 41 33' 39.5994" / -72 50' 38.3994"). T-Mobile intends to replace six antennas and related equipment at this existing telecommunications facility in Meriden ("Meriden Facility"). Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Mayor, Michael S. Rohde. SNET is also the property owner.

The existing Meriden Facility consists of a 125 foot tall lattice structure. T-Mobile plans to replace six antennas and remove 6 TMAs (tower mounted amplifiers) at a centerline of 127 feet. (See the plans revised to April 15, 2013 attached hereto as Exhibit A). T-Mobile will also install fiber cable and reuse existing coax cables. The existing Facility is structurally capable of supporting T-Mobile's proposed modifications, as indicated in the structural analysis dated August 6, 2013 and attached hereto as Exhibit B.

The planned modifications to the Meriden Facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modification will not increase the height of the tower. T-Mobile's replacement antennas will be installed at a centerline of 127 feet, merely replacing existing

August 28, 2013
Site ID CT11132B
Page 2

antennas located at the same 127 foot elevation. The enclosed tower drawing confirms that the proposed modification will not increase the height of the tower.

2 . The proposed modifications will not require an extension of the site boundaries. T-Mobile's equipment will be located entirely within the existing compound area.

3 . The proposed modification to the Facility will not increase the noise levels at the existing facility by six decibels or more.

4 . The operation of the replacement antennas will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Emissions Analysis Report prepared by EBI dated August 13, 2013 T-Mobile's operations would add 0.712% of the FCC Standard. Therefore, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas would be 10.442% of the FCC Standard as calculated for a mixed frequency site as evidenced by the engineering exhibit attached hereto as Exhibit C.

For the foregoing reasons, T-Mobile respectfully submits that the proposed replacement antennas and equipment at the Meriden Facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Julie D. Kohler, Esq.

cc: City of Meriden, Mayor Michael S. Rohde
SNET
Jamie Ford, HPC Wireless



T-MOBILE USA, INC.
12920 SE 38TH STREET
BELLEVUE, WA 98006
(425) 378-4000

2583055
4/17/2013
2000011160

Invoice Number	Inv. Date	Description	Deductions	Voucher	Amount Paid
CT11132B-1	4/17/2013	Exempt Mod Filing Fees	0.00	1100688013	625.00

DO NOT ACCEPT THIS CHECK UNLESS THE FACE FADES FROM BLACK TO RED WITH LOGO IN BACKGROUND. THE BACK OF THIS DOCUMENT HAS HEAT-SENSITIVE INK THAT CHANGES FROM ORANGE TO YELLOW.



T-MOBILE USA, INC.
12920 SE 38th Street
Bellevue, WA 98006
(425) 378-4000

The Bank of New York Mellon
Pittsburgh, PA
60-160/433

2583055
4/17/2013
VID 2000011160

PAY **\$625.00**
SIX TWO FIVE DOLLARS AND NO CENTS

***\$625.00**

Six Hundred Twenty Five Dollars Only**

To
The
Order
Of

CONNECTICUT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN, CT 06051

VOID AFTER 180 DAYS
THIS CHECK CLEARS THROUGH POSITIVE PAY

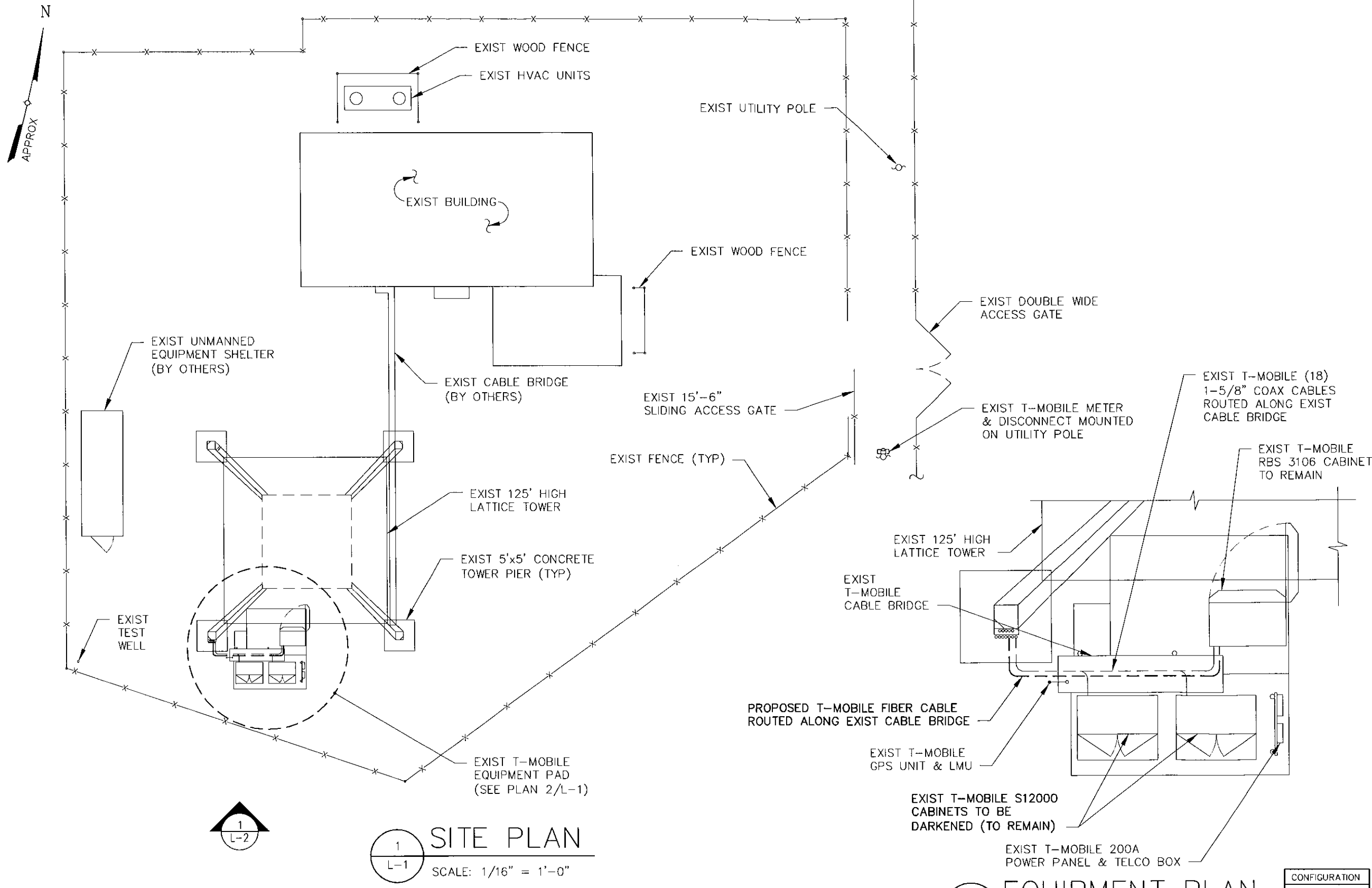
David Hunt

⑈0002583055⑈ ⑆043301601⑆ 013⑈8430⑈

THE ORIGINAL DOCUMENT HAS A REFLECTIVE WATERMARK ON THE BACK.

HOLD AT AN ANGLE TO VIEW, DO NOT CASH IF MISSING.

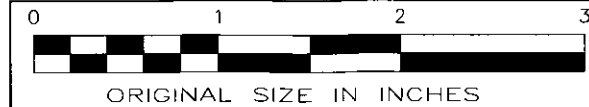
EXHIBIT A



1
L-1
SITE PLAN
SCALE: 1/16" = 1'-0"

2
L-1
EQUIPMENT PLAN
SCALE: 3/16" = 1'-0"

CONFIGURATION
2C



STRUCTURAL NOTE:
EXIST MOUNTS, PLATFORMS AND TOWER
STRUCTURE TO BE VERIFIED FOR STRUCTURAL
SUITABILITY OF PROPOSED INSTALLATION BY A
STATE LICENSED P.E.

TECTONIC

- PLANNING
- ENGINEERING
- SURVEYING
- CONSTRUCTION MANAGEMENT

TECTONIC Engineering & Surveying Consultants P.C.
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
Fax: (845) 567-8703

••T••Mobile••

NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC. PHONE: (973) 686-6500
4 SYLVAN DRIVE
PARSIPPANY, NJ 07054

APPROVALS

T-MOBILE _____
LANDLORD _____
RF _____
CONSTRUCTION _____

PROJECT NUMBER 6644.CT11132B DESIGNED BY TN

REV	DATE	REVISION	DRAWN BY
1	04/15/13	FOR COMMENT	SF

ISSUED BY _____ DATE _____

SITE INFORMATION

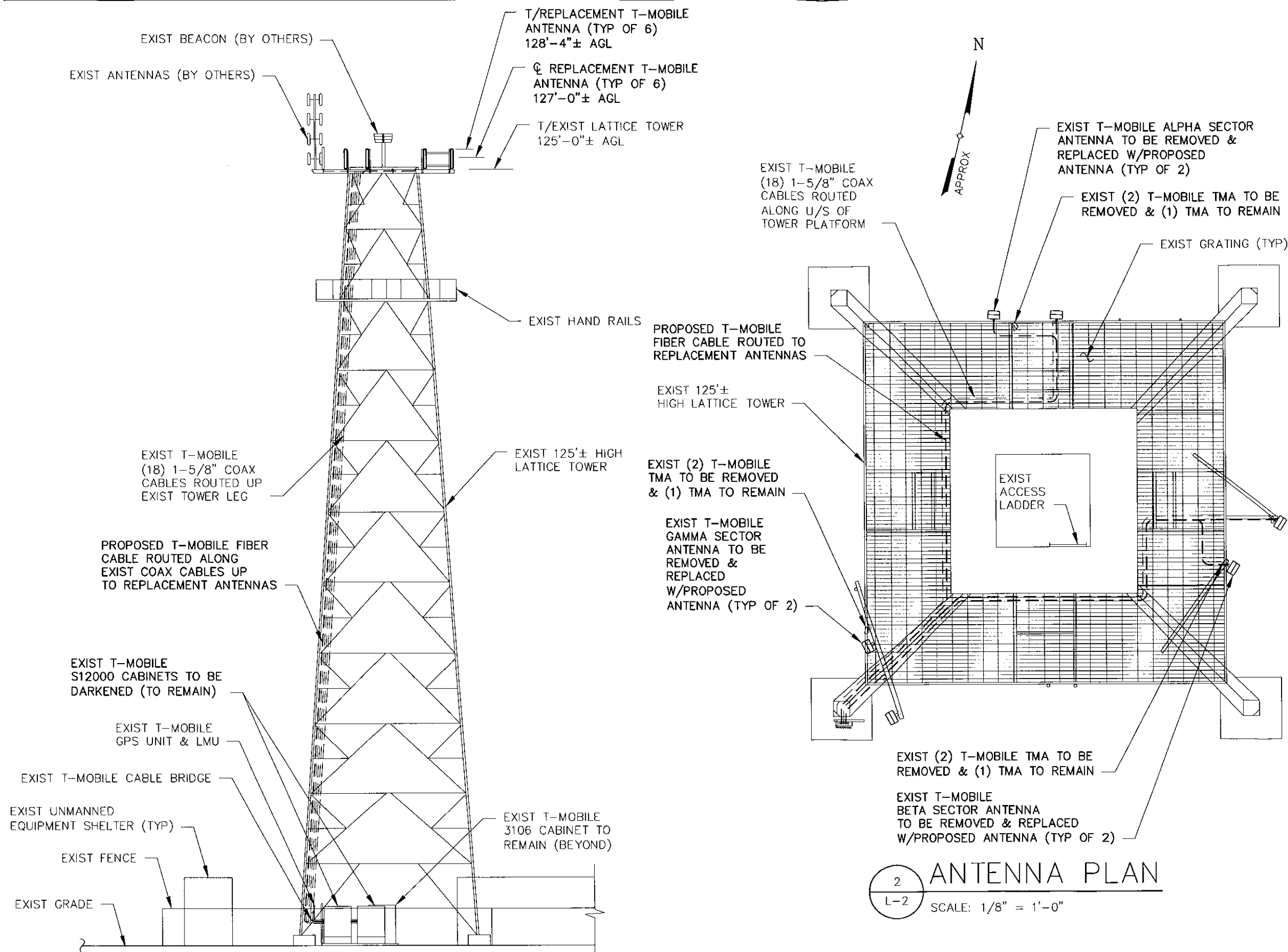
CT11132B
CT11132B_MERIDEN_]-691_
SNETLL
11 WEST PEAK DRIVE
MERIDEN, CT 06450

SHEET TITLE

SITE PLAN & EQUIPMENT PLAN

SHEET NUMBER

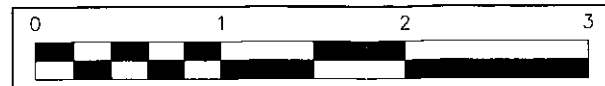
L-1



STRUCTURAL NOTE:
EXIST MOUNTS, PLATFORMS AND TOWER STRUCTURE TO BE VERIFIED FOR STRUCTURAL SUITABILITY OF PROPOSED INSTALLATION BY A STATE LICENSED P.E.

1
L-2
ELEVATION
SCALE: 1/16" = 1'-0"

2
L-2
ANTENNA PLAN
SCALE: 1/8" = 1'-0"



CONFIGURATION
2C

TECTONIC

- PLANNING
- SURVEYING
- ENGINEERING
- CONSTRUCTION MANAGEMENT

TECTONIC Engineering & Surveying Consultants P.C.

1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
Fax: (845) 567-8703

..T..Mobile..

NORTHEAST LLC.

T-MOBILE NORTHEAST, LLC. PHONE: (973) 686-6500
4 SYLVAN DRIVE
PARSIPPANY, NJ 07054

APPROVALS

T-MOBILE _____
LANDLORD _____
RF _____
CONSTRUCTION _____

PROJECT NUMBER 6644.CT11132B DESIGNED BY TN

REV	DATE	REVISION	DRAWN BY
1	04/15/13	FOR COMMENT	SF

ISSUED BY _____ DATE _____

SITE INFORMATION

CT11132B
CT11132B_MERIDEN_I-691_
SNETLL
11 WEST PEAK DRIVE
MERIDEN, CT 06450

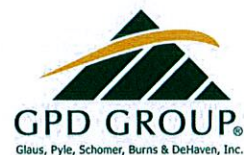
SHEET TITLE
ELEVATION & ANTENNA PLAN

SHEET NUMBER
L-2

EXHIBIT B



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



GPD GROUP®
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
Kevin Clements
520 South Main Street
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD #: 2013723.01.SNET013.01
August 6, 2013

STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:
Site USID: SNET013
Site FA: 10137480
Site Name: MERIDAN
AT&T Project: T-Mobile Modifications 4-12-13

ANALYSIS CRITERIA:
Codes: TIA/EIA-222-F, 2005 CTBC, & ASCE 7-05
85 mph with 0" ice
37 mph with 3/4" ice

SITE DATA:
11 West Peak Drive, Meriden, CT 06451, New Haven County
Latitude 41° 33' 40.219" N, Longitude 72° 50' 38.861" W
Market: NEW ENGLAND
125' Self Support Tower

Ms. Charlotte Malone,

GPD is pleased to submit this 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.

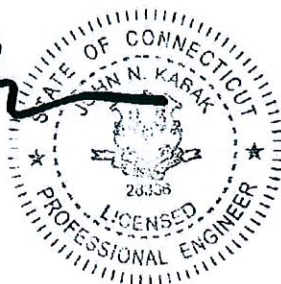
Analysis Results

Tower Stress Level with Proposed Equipment: 68.9% 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 T-Mobile to AT&T Towers. This report was commissioned by Ms. Charlotte Malone of AT&T Towers.

No foundation or geotechnical information was available or provided for this report. Therefore, the in place capacity of the foundation could not be verified. A more thorough and accurate assessment of foundation capacity will require a site specific geotechnical report and foundation information.

The proposed coax shall be stacked on top of the existing coax on tower face B in order for the results of this analysis to be valid. See Appendix C for more details.

TOWER SUMMARY AND RESULTS

Legs	31.4%	Pass
Leg Bolts	50.8%	Pass
Diagonals	68.6%	Pass
Horizontals	49.8%	Pass
Redundants	68.9%	Pass
Inner Bracing	27.1%	Pass
Member Bolts	38.6%	Pass
Anchor Rods	28.5%	Pass
Foundation	N/A	Not Verified

ANALYSIS METHOD

RISA-3D (Version 11.0.0) and tnxTower (Version 6.1.0.9), a commercially available software program, was 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.

DOCUMENTS PROVIDED

Preliminary Tower Summary	Not Provided	N/A
Site Lease Application	T-Mobile Application, dated 4/5/13	Siterra
Tower Design	Not Provided	N/A
Foundation Design	Not Provided	N/A
Geotechnical Report	Not Provided	N/A
Previous Structural Analysis	Not Provided	N/A
Tower Mapping	GPD Project #: 2013723.SNET013.01 Rev. 1, dated 8/6/13	GPD
Site Sketch	AT&T Site Sketch Issue 4, dated 10/12/10	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. If no data is available, the foundation system is not verified. In the case of absent foundation data, it is the tower owner's responsibility to insure that the foundation system is adequate to support the structure with its new reactions.
6. Foundations are properly designed and constructed.
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. All existing loading was obtained from the tower mapping by GPD (Project #: 2013723.SNET013.01 Rev. 1, dated 8/6/13), site photos, and the provided Site Lease Application, and is assumed to be accurate.
11. The proposed coax shall be stacked on top of the existing coax on tower face B in order for the results of this analysis to be valid. See Appendix C for more details.
12. Tower Face A is assumed to be at an azimuth of 257° based on the AT&T Site Sketch Issue 4, dated 10/12/10.

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 member sizes and antenna/coax loading. 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 Rigorous Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. 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.

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 feasibility 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 specified code recommended 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.

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

General Info	
Site Name	MERIDIAN
Site Number	SNET013
FA Number	10137480
Date of Analysis	8/6/2013
Company Performing Analysis	GPD

Tower Info	Description	Date
Tower Type (G, SST, MP)	SST	
Tower Height (top of steel AGL)	125'	
Tower Manufacturer	N/A	
Tower Model	N/A	
Tower Design	N/A	
Foundation Design	N/A	
Geotech Report	N/A	
Tower Mapping	GPD Project #: 2013723.01 SNET013.01 Rev. 1	8/6/2013
Previous Structural Analysis	N/A	
Foundation Mapping	N/A	

Analysis Results (% Maximum Usage)	
Existing/Reserved + Future + Proposed Condition	
Tower (%)	68.9%
Tower Base (%)	28.5%
Foundation (%)	N/A
Foundation Adequate?	Not Verified

Steel Yield Strength (ksi)	
Legs	36
Bracing Members	36
Member Bolts	A307
Anchor Rods	C1015

Note: Yield strengths assumed based on experience with similar towers.

Existing / Reserved Loading

Existing / Reserved Loading														
Antenna														
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	132	138	1	Beacon	Unknown	Flash Beacon		1	Unknown	13' Tower Extension	1	Unknown	7/8"	Face A
AT&T	127	135	1	Dipole	Unknown	20' 4-Bay Dipole		1	Unknown	27' Platform w/ Rails	1	Unknown	7/8"	Leg AD
T-Mobile	127	127	5	Panel	RFS	APX16PV-16PVL	110/230/350	1	Unknown	Frames	18	Unknown	1-5/8"	Face B
T-Mobile	127	127	12	RET	RFS	ACU-A20-N		4	Unknown	Mount Pipes				
T-Mobile	127	127	6	TMA	Aligon	LGP 13907				on the same mounts				
T-Mobile	127	127	3	TMA	Ericsson	KRY 112 144/1				on the same mounts				
T-Mobile	127	125	1	Panel	RFS	APX16PV-16PVL	110			on the same mounts				
AT & T	108	112.5	1	Dipole	Unknown	12' Dipole		1	Unknown	X Platform	1	Unknown	7/8"	Leg AD
Unknown	77							1	Unknown	Platform				
Unknown	64.5							1	Unknown	Platform				
Unknown	64.5							2	Unknown	Catwalks				
Unknown	27							1	Unknown	Platform				
Unknown	10							1	Unknown	Coax Platform				

Unknown	10	1	Unknown	Unknown	Unknown
Unknown	10	1	Unknown	Unknown	Unknown

Proposed Loading

Proposed Loading										
Antenna										
Antenna Owner	Mount Height (ft)	Antenna Cl. (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type
Mount										
T-Mobile	127	127	2	Panel	Ericsson	AI921 B24/B2P	110/350	1		on the existing mnts
T-Mobile	127	127	2	Panel	Ericsson	AI921 B24/B4P	110/350			on the existing mnts
T-Mobile	127	125	1	Panel	Ericsson	AI921 B24/B2P	230			on the existing mnts
T-Mobile	127		1	Panel	Ericsson	AI921 B24/B4P	230			on the existing mnts
Transmission Line								Quantity	Model	Size
								1	Hybrid	40 mm
										Face B

	Panel	ERICSSON	AT&T D2404P	zoo	on-time answering percentage
T-Mobile	127	1	125		

Future Loading

[illegible]

APPENDIX B

Software Output Files and Calculations

tnxTower GPD Group 520 South Main Street, Ste 2531 Akron, OH Phone: (330) 572-2100 FAX: (330) 572-2101	Job	SNET013 MERIDAN	Page 1 of 4
	Project	2013723.01.SNET013.01	Date 09:47:36 08/06/13
	Client	AT&T Towers	Designed by tclark

Tower Input Data

The main tower is a 4x free standing tower with an overall height of 125.00 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 12.83 ft at the top and 30.92 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 37 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 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
Climbing Ladder	D	Yes	Af (CfAe)	125.00 - 10.00	-12.0000	0.45	1	1	3.8400	3.8400	15.3600	4.81
Safety Line 3/8	D	Yes	Ar (CfAe)	125.00 - 10.00	-12.0000	0.45	1	1	0.3750	0.3750		0.22
Feedline Ladder (Af)	D	Yes	Af (CfAe)	125.00 - 10.00	-18.0000	0.42	1	1	3.0000	3.0000	12.0000	8.40
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	108.00 - 10.00	-18.0000	0.42	2	2	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	125.00 - 108.00	-18.0000	0.42	1	1	1.0900	1.0900		0.33
LDF5-50A (7/8 FOAM)	D	Yes	Ar (CfAe)	125.00 - 10.00	0.0000	0.45	1	1	1.0900	1.0900		0.33
Feedline Ladder (Af)	C	Yes	Af (CfAe)	125.00 - 10.00	0.0000	0.4	1	1	3.0000	3.0000	12.0000	8.40
LDF7-50A (1-5/8 FOAM)	C	Yes	Ar (CfAe)	125.00 - 10.00	0.0000	0.4	18	9	1.9800	1.9800		0.82
40 mm Hybrid Cable	C	Yes	Ar (CfAe)	125.00 - 10.00	6.5000	0.42	1	1	1.5500	0.0000		0.66
coax cage (40.5" semi-circle)	B	Yes	Af (CfAe)	35.00 - 10.00	0.0000	-0.35	1	1	18.0000	18.0000	72.0000	20.00
coax cage (40.5" semi-circle)	D	Yes	Af (CfAe)	35.00 - 10.00	0.0000	-0.35	1	1	18.0000	18.0000	72.0000	20.00

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 _A A _A ft ² /ft	Weight plf
Climbing Ladder	A	No	CaAa (Out Of Face)	125.00 - 108.00	0.0000	0.3	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
Climbing Ladder	B	No	CaAa (Out Of Face)	125.00 - 108.00	0.0000	0.3	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
Climbing Ladder	C	No	CaAa (Out Of Face)	125.00 - 108.00	0.0000	0.3	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

tnxTower GPD Group 520 South Main Street, Ste 2531 Akron, OH Phone: (330) 572-2100 FAX: (330) 572-2101	Job	SNET013 MERIDAN	Page	2 of 4
	Project	2013723.01.SNET013.01	Date	09:47:36 08/06/13
	Client	AT&T Towers	Designed by	tclark

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	C _A A _A ft ² /ft	Weight plf	
Climbing Ladder	D	No	CaAa (Out Of Face)	125.00 - 108.00	0.0000	0.3	1	4" Ice	2.37	29.50
								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

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft²	C _A A _A Side ft²	Weight lb
27' Platform	C	None		0.0000	127.00	No Ice	108.10	108.10	14952.00
W6 x 13' I-BEAM Mount	C	From Centroid-Leg	0.00 0.00 0.00	0.0000	132.00	1/2" Ice	117.20	117.20	18884.00
						1" Ice	126.30	126.30	22816.00
						2" Ice	144.50	144.50	30680.00
						4" Ice	180.90	180.90	46408.00
						No Ice	13.00	13.00	195.00
						1/2" Ice	14.14	14.14	262.31
						1" Ice	15.08	15.08	340.70
Flash Beacon	C	From Centroid-Leg	0.00 0.00 6.00	0.0000	132.00	2" Ice	16.97	16.97	531.52
						4" Ice	20.84	20.84	1054.70
						No Ice	3.00	3.00	100.00
						1/2" Ice	4.50	4.50	150.00
						1" Ice	6.00	6.00	200.00
						2" Ice	9.00	9.00	300.00
						4" Ice	15.00	15.00	500.00
20' Dipole	D	From Leg	10.00 0.00 8.00	0.0000	127.00	No Ice	4.00	4.00	40.00
						1/2" Ice	6.03	6.03	70.77
						1" Ice	8.07	8.07	114.12
						2" Ice	12.20	12.20	239.14
						4" Ice	20.59	20.59	646.79
						No Ice	16.28	10.62	474.30
						1/2" Ice	21.50	15.16	663.18
Sabre 10' T-Boom	C	From Leg	7.00 0.00 0.00	18.0000	127.00	1" Ice	26.72	19.70	852.06
						2" Ice	37.16	28.78	1229.82
						4" Ice	58.04	46.94	1985.34
						No Ice	0.08	0.14	1.04
						1/2" Ice	0.12	0.19	2.32
						1" Ice	0.17	0.25	4.41
						2" Ice	0.30	0.40	11.80
(4) ACU-A20-N	C	From Leg	7.00 0.00 0.00	18.0000	127.00	4" Ice	0.67	0.80	44.85
						No Ice	0.08	0.14	1.04
						1/2" Ice	0.12	0.19	2.32
						1" Ice	0.17	0.25	4.41
						2" Ice	0.30	0.40	11.80
						4" Ice	0.67	0.80	44.85
						No Ice	0.08	0.14	1.04
(4) ACU-A20-N	B	From Leg	7.00 0.00 0.00	-12.0000	127.00	1/2" Ice	0.12	0.19	2.32
						1" Ice	0.17	0.25	4.41
						2" Ice	0.30	0.40	11.80
						4" Ice	0.67	0.80	44.85
						No Ice	6.61	5.50	109.25
						1/2" Ice	7.08	6.22	164.21
						AIR 21 B2AB4P w/ Mount Pipe	A	From Face	7.00 -2.00

tnxTower GPD Group 520 South Main Street, Ste 2531 Akron, OH Phone: (330) 572-2100 FAX: (330) 572-2101	Job	SNET013 MERIDAN	Page	3 of 4
	Project	2013723.01.SNET013.01	Date	09:47:36 08/06/13
	Client	AT&T Towers	Designed by	tclark

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
			0.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
AIR 21 B2AB4P w/ Mount Pipe	C	From Leg	8.50	18.0000	127.00	No Ice 6.61	5.50	109.25
			-2.00			1/2" Ice 7.08	6.22	164.21
			0.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
AIR 21 B2AB4P w/ Mount Pipe	B	From Leg	8.50	-12.0000	127.00	No Ice 6.61	5.50	109.25
			-2.00			1/2" Ice 7.08	6.22	164.21
			-2.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
AIR 21 B4AB2P w/ Mount Pipe	A	From Face	7.00	3.0000	127.00	No Ice 6.61	5.50	109.25
			2.00			1/2" Ice 7.08	6.22	164.21
			0.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
AIR 21 B4AB2P w/ Mount Pipe	C	From Leg	8.50	18.0000	127.00	No Ice 6.61	5.50	109.25
			2.00			1/2" Ice 7.08	6.22	164.21
			0.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
AIR 21 B4AB2P w/ Mount Pipe	B	From Leg	8.50	-12.0000	127.00	No Ice 6.61	5.50	109.25
			2.00			1/2" Ice 7.08	6.22	164.21
			-2.00			1" Ice 7.55	6.95	225.76
						2" Ice 8.53	8.48	371.54
						4" Ice 10.60	11.81	780.97
KRY 112 144/I	A	From Face	7.00	3.0000	127.00	No Ice 0.41	0.19	11.00
			0.00			1/2" Ice 0.50	0.26	14.10
			0.00			1" Ice 0.60	0.33	18.41
						2" Ice 0.82	0.51	31.48
						4" Ice 1.36	0.97	80.82
LGP 13907	C	From Leg	8.50	18.0000	127.00	No Ice 1.17	0.47	9.90
			0.00			1/2" Ice 1.31	0.57	17.52
			0.00			1" Ice 1.47	0.69	27.01
						2" Ice 1.81	0.95	52.42
						4" Ice 2.58	1.57	134.34
LGP 13907	B	From Leg	8.50	-12.0000	127.00	No Ice 1.17	0.47	9.90
			0.00			1/2" Ice 1.31	0.57	17.52
			0.00			1" Ice 1.47	0.69	27.01
						2" Ice 1.81	0.95	52.42
						4" Ice 2.58	1.57	134.34
X Platform	C	None		0.0000	108.00	No Ice 72.00	72.00	1550.00
						1/2" Ice 90.00	90.00	1937.50
						1" Ice 108.00	108.00	2325.00
						2" Ice 144.00	144.00	3100.00
						4" Ice 216.00	216.00	4650.00
12' Dipole	A	From Leg	4.50	0.0000	108.00	No Ice 2.40	2.40	25.00
			0.00			1/2" Ice 3.63	3.63	43.56
			4.50			1" Ice 4.87	4.87	69.80
						2" Ice 7.35	7.35	145.95
						4" Ice 10.37	10.37	397.22
Platform	D	From Face	0.00	0.0000	77.00	No Ice 10.75	5.61	350.00
			0.00			1/2" Ice 13.44	7.01	437.50
			0.00			1" Ice 16.13	8.42	525.00
						2" Ice 21.51	11.22	700.00

tnxTower GPD Group 520 South Main Street, Ste 2531 Akron, OH Phone: (330) 572-2100 FAX: (330) 572-2101	Job	SNET013 MERIDAN	Page	4 of 4
	Project	2013723.01.SNET013.01	Date	09:47:36 08/06/13
	Client	AT&T Towers	Designed by	tclark

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight lb
Catwalk	A	From Face	0.00 0.00 0.00	0.0000	64.50	4" Ice	32.27	16.83	1050.00
						No Ice	30.73	3.38	515.63
						1/2" Ice	38.41	4.22	644.53
						1" Ice	46.10	5.06	773.44
						2" Ice	61.47	6.75	1031.25
Catwalk	D	From Face	0.00 0.00 0.00	0.0000	64.50	4" Ice	92.20	10.13	1546.88
						No Ice	30.73	3.38	515.63
						1/2" Ice	38.41	4.22	644.53
						1" Ice	46.10	5.06	773.44
						2" Ice	61.47	6.75	1031.25
Platform	D	From Leg	0.00 0.00 0.00	0.0000	64.50	4" Ice	92.20	10.13	1546.88
						No Ice	16.46	8.08	687.50
						1/2" Ice	20.57	10.10	859.38
						1" Ice	24.69	12.12	1031.25
						2" Ice	32.92	16.16	1375.00
Platform	D	From Face	0.00 0.00 0.00	0.0000	27.00	4" Ice	49.38	24.25	2062.50
						No Ice	18.47	5.61	550.00
						1/2" Ice	23.09	7.01	687.50
						1" Ice	27.71	8.42	825.00
						2" Ice	36.94	11.22	1100.00
Coax Platform	B	None		0.0000	10.00	4" Ice	55.41	16.83	1650.00
						No Ice	67.50	76.50	2000.00
						1/2" Ice	84.38	95.63	2750.00
						1" Ice	101.25	114.75	3500.00
						2" Ice	135.00	153.00	5000.00
						4" Ice	202.50	229.50	8000.00

Company : GPD Group
Designer : tclark
Job Number : 2013723.01.SNET013.01

SNET013 MERIDAN

Aug 6, 2013
9:49 AM
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Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (1E5 F)	Density[k/ft ³]	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 Rules	A [in ²]	Iy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	TWR LEG T1	L6x6x1/2	Column	Single Angle	A36	Typical	5.75	19.9	19.9	.501
2	TWR DIAG T1	L3x3 1/2x1/4	Column	Single Angle	A36	Typical	1.56	1.91	1.3	.036
3	TWR RED VERT T1	L2.5x2.5x3	Column	Single Angle	A36	Typical	.901	.535	.535	.011
4	TWR HSTEP T1	L2 1/2x2x1/4	Beam	Single Angle	A36	Typical	1.06	.372	.654	.023
5	TWR LEG T2	L6x6x1/2	Column	Single Angle	A36	Typical	5.75	19.9	19.9	.501
6	TWR HORZ T2	2L3 1/2x3x5/16x3/8	Beam	None	A36	Typical	3.87	6.995	4.66	.126
7	TWR DIAG T2	L3x3 1/2x1/4	Column	Single Angle	A36	Typical	1.56	1.91	1.3	.036
8	TWR RED VERT T2	L2.5x2.5x3	Column	Single Angle	A36	Typical	.901	.535	.535	.011
9	TWR HSTEP T2	C6x10.5	Beam	Channel	A36	Typical	3.07	.86	15.1	.128
10	TWR INNER SUPP T2	L2.5x2.5x3	Beam	Channel	A36	Typical	.901	.535	.535	.011
11	TWR LEG T3	L6x6x5/8	Column	Single Angle	A36	Typical	7.11	24.2	24.2	.954
12	TWR HORZ T3	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
13	TWR INNER SUPP T3	2L2x2 1/2x3/16x3/8	Beam	None	A36	Typical	1.62	2.48	.58	.019
14	TWR INNER SQ T3	L3x2.5x4	Beam	None	A36	Typical	1.32	.734	1.16	.03
15	TWR INNER CORNER T3	L2.5x2.5x4	Beam	None	A36	Typical	1.19	.692	.692	.026
16	TWR RED VERT T3	L2.5x2.5x3	Beam	None	A36	Typical	.901	.535	.535	.011
17	TWR DIAG T3	L3x4x3/8	Column	Single Angle	A36	Typical	2.48	3.96	1.92	.123
18	TWR HSTEP T3	L3x2 1/2x1/4	Beam	Single Angle	A36	Typical	1.31	.74	1.17	.03
19	TWR HORZ T4	L6x6x5/8	Column	Single Angle	A36	Typical	7.11	24.2	24.2	.954
20	TWR DIAG T4	2L3x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.63	3.373	2.35	.055
21	TWR HSTEP T4	L3x4x3/8	Column	Single Angle	A36	Typical	2.48	3.96	1.92	.123
22	TWR HSTEP T4	L3x2 1/2x1/4	Beam	Single Angle	A36	Typical	1.31	.74	1.17	.03
23	TWR RED VERT T4	L2.5x2.5x3	Beam	Single Angle	A36	Typical	.901	.535	.535	.011
24	TWR INNER SUPP T4	L2.5x2.5x3	Beam	Single Angle	A36	Typical	.901	.535	.535	.011
25	TWR LEG T5	L6x6x3/4	Column	Single Angle	A36	Typical	8.44	28.2	28.2	1.61
26	TWR HORZ T5	2L2 1/2x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.38	3.347	1.41	.049
27	TWR DIAG T5	2L2 1/2x2 1/2x1/4x3/8	Column	None	A36	Typical	2.38	3.347	1.41	.049
28	TWR RED HORZ T5	L2 1/2x2x3/16	Beam	Single Angle	A36	Typical	.809	.291	.509	.01
29	TWR RED DIAG T5	L2 1/2x2x3/16	Column	Single Angle	A36	Typical	.809	.291	.509	.01
30	TWR INNER SUPP T5	2L2x2 1/2x3/16x3/8	Beam	None	A36	Typical	1.62	2.48	.58	.019
31	TWR INNER SQ T5	1L2x2.5x3x3	Beam	None	A36	Typical	1.64	2.48	.583	.021
32	TWR INNER CORNER T5	L2.5x2.5x4	Beam	None	A36	Typical	1.19	.692	.692	.026
33	TWR LEG T6	L6x6x3/4	Column	Single Angle	A36	Typical	8.44	28.2	28.2	1.61
34	TWR HORZ T6	2L2 1/2x2 1/2x1/4x3/8	Beam	None	A36	Typical	2.38	3.347	1.41	.049

Company : GPD Group
 Designer : tclark
 Job Number : 2013723.01.SNET013.01

SNET013 MERIDAN

Aug 6, 2013
 9:49 AM
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Hot Rolled Steel Section Sets (Continued)

Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
35	TWR DIAG T6	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
36	TWR RED HORZ T6	L2 1/2x2x3/16	Single Angle	A36	Typical	.809	.291	.509	.01
37	TWR RED DIAG T6	L2 1/2x2x3/16	Single Angle	A36	Typical	.809	.291	.509	.01
38	TWR INNER SUPP T6	2L2x2 1/2x3/16x3/8	None	A36	Typical	1.62	2.48	.58	.019
39	TWR INNER SQ T6	LL2x2.5x3x3	None	A36	Typical	1.64	2.48	.583	.021
40	TWR INNER CORNER T6	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026
41	TWR LEG T7	L6x6x7/8	Single Angle	A36	Typical	9.73	31.9	31.9	2.51
42	TWR HORZ T7	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
43	TWR DIAG T7	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
44	TWR RED HORZ T7	L2x2x3/16	Single Angle	A36	Typical	.715	.272	.272	.009
45	TWR RED DIAG T7	L2 1/2x2 1/2x3/16	Single Angle	A36	Typical	.902	.547	.547	.011
46	TWR INNER SUPP T7	2L2 1/2x2 1/2x3/16x3/8	None	A36	Typical	1.8	2.499	1.09	.021
47	TWR INNER SQ T7	LL2x2.5x3x3	None	A36	Typical	1.64	2.48	.583	.021
48	TWR INNER CORNER T7	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026
49	TWR LEG T8	L6x6x7/8	Single Angle	A36	Typical	9.73	31.9	31.9	2.51
50	TWR HORZ T8	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
51	TWR DIAG T8	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
52	TWR RED HORZ T8	L2x2x3/16	Single Angle	A36	Typical	.715	.272	.272	.009
53	TWR RED DIAG T8	L2 1/2x2 1/2x3/16	Single Angle	A36	Typical	.902	.547	.547	.011
54	TWR INNER SUPP T8	2L2 1/2x2 1/2x3/16x3/8	None	A36	Typical	1.8	2.499	1.09	.021
55	TWR INNER SQ T8	LL2x2.5x3x3	None	A36	Typical	1.64	2.48	.583	.021
56	TWR INNER CORNER T8	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026
57	TWR LEG T9	L8x8x7/8	Single Angle	A36	Typical	13.2	79.6	79.6	3.46
58	TWR HORZ T9	2L3x2 1/2x5/16x3/8	None	A36	Typical	3.242	4.255	2.845	.106
59	TWR DIAG T9	2L3x3 1/2x3/8x5/8	None	A36	Typical	4.594	14.361	3.693	.215
60	TWR RED HORZ T9	L2.5x2x3	None	A36	Typical	.818	.292	.511	.01
61	TWR RED HORZ 2 T9	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
62	TWR RED DIAG T9	L2.5x2.5x3	None	A36	Typical	.901	.535	.535	.011
63	TWR RED DIAG 2 T9	2L2 1/2x2x1/4x3/8	None	A36	Typical	2.13	1.858	1.31	.044
64	TWR RED KICKER T9	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026
65	TWR RED SUBHOR T9	2L2 1/2x3x1/4x3/8	None	A36	Typical	2.63	5.508	1.49	.055
66	TWR RED VERT T9	L3x3x4	None	A36	Typical	1.44	1.23	1.23	.031
67	TWR RED HIP T9	Remove	Single Angle	A36	Typical	1.938	3.039	3.039	.04
68	TWR RED HIP 2 T9	L3 1/2x3 1/2x3/8	Single Angle	A36	Typical	2.48	2.87	2.87	.123
69	TWR RED HIP/DIA T9	LL2.5x2.5x4x3	Single Angle	A36	Typical	2.38	3.31	1.38	.052
70	TWR INNER SUPP T9	2L2 1/2x2 1/2x1/4x3/8	None	A36	Typical	2.38	3.347	1.41	.049
71	TWR INNER SQ T9	LL2x2.5x3x3	None	A36	Typical	1.64	2.48	.583	.021
72	TWR INNER GIRT T9	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026
73	TWR INNER CORNER T9	L2.5x2.5x4	None	A36	Typical	1.19	.692	.692	.026

Company : GPD Group
 Designer : tclark
 Job Number : 2013723.01.SNET013.01

SNET013 MERIDAN

Aug 6, 2013
 9:49 AM
 Checked By: _____

General Section Sets

Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1 TWR HTOP_GIRT_T1	PL20x5/16 w/ (2) L3 1/2x6x3/8	Beam	A36_Gen	13.13	41.892	800.01	1.039

Basic Load Cases

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(Plat...
1 Dead	None		-1		52	92	36		
2 No Ice Wind 0 deg	None				52	230	108		
3 No Ice Wind 45 deg	None				104	252	144		
4 No Ice Wind 90 deg	None				52	236	108		
5 No Ice Wind 135 deg	None				104	248	144		
6 No Ice Wind 180 deg	None				52	230	108		
7 No Ice Wind 225 deg	None				104	252	144		
8 No Ice Wind 270 deg	None				52	236	108		
9 No Ice Wind 315 deg	None				104	248	144		
10 Ice	None				52	92	328		
11 Temperature Drop	None						292		
12 Ice Wind 0 deg	None				52	224	108		
13 Ice Wind 45 deg	None				104	242	144		
14 Ice Wind 90 deg	None				52	228	108		
15 Ice Wind 135 deg	None				104	238	144		
16 Ice Wind 180 deg	None				52	224	108		
17 Ice Wind 225 deg	None				104	242	144		
18 Ice Wind 270 deg	None				52	228	108		
19 Ice Wind 315 deg	None				104	238	144		
20 Service Wind 0 deg	None				52	228	108		
21 Service Wind 45 deg	None				104	248	144		
22 Service Wind 90 deg	None				52	228	108		
23 Service Wind 135 deg	None				104	244	144		
24 Service Wind 180 deg	None				52	228	108		
25 Service Wind 225 deg	None				104	248	144		
26 Service Wind 270 deg	None				52	228	108		
27 Service Wind 315 deg	None				104	244	144		

Load Combinations

Description	Solve	PDelta	SRSS	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor
1 Dead Only	Yes			1	1	28	1	29	1	0	0
2 Dead+Wind 0 deg - No Ice	Yes			1	1	2	1	28	1	29	1
3 Dead+Wind 45 deg - No Ice	Yes			1	1	3	1	28	1	29	1

Load Combinations (Continued)

	Description	Solve	PDelta	SRSS	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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
11	Dead+Wind 0 deg+Ice+Temp	Yes			1	1	12	1	10	1	11	1	28	1	29	1
12	Dead+Wind 45 deg+Ice+Temp	Yes			1	1	13	1	10	1	11	1	28	1	29	1
13	Dead+Wind 90 deg+Ice+Temp	Yes			1	1	14	1	10	1	11	1	28	1	29	1
14	Dead+Wind 135 deg+Ice+Temp	Yes			1	1	15	1	10	1	11	1	28	1	29	1
15	Dead+Wind 180 deg+Ice+Temp	Yes			1	1	16	1	10	1	11	1	28	1	29	1
16	Dead+Wind 225 deg+Ice+Temp	Yes			1	1	17	1	10	1	11	1	28	1	29	1
17	Dead+Wind 270 deg+Ice+Temp	Yes			1	1	18	1	10	1	11	1	28	1	29	1
18	Dead+Wind 315 deg+Ice+Temp	Yes			1	1	19	1	10	1	11	1	28	1	29	1
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	max	7	102.909	7	10.667	3	0	1	0	4	0	1
2	min	3	-62.315	3	-15.219	7	0	1	0	8	0	1
3	max	9	103.285	5	10.962	9	0	1	0	2	0	1
4	min	5	-62.217	9	-15.617	5	0	1	0	6	0	1
5	max	7	100.964	3	16.38	3	0	1	0	8	0	1
6	min	3	-64.431	7	-11.741	7	0	1	0	4	0	1
7	max	9	100.808	5	16.004	9	0	1	0	6	0	1
8	min	5	-64.694	9	-11.403	5	0	1	0	2	0	1
9	max	8	124.064	16	47.242	2						
10	min	4	77.098	6	-47.242	6						

Company : GPD Group
Designer : tclark
Job Number : 2013723.01.SNET013.01

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Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks

Member		Shape	Code Check		Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
1	M9	L3x3 1/2x1/4	.389	5.23	8	.005	9.879	z	17	9.132	33.629	.862	2.31	1	H2-1	
2	M10	L3x3 1/2x1/4	.391	9.879	4	.005	9.879	z	12	9.132	33.629	.862	2.863	1	H2-1	
3	M11	L3x3 1/2x1/4	.393	5.23	6	.005	9.879	z	16	9.132	33.629	.862	2.31	1	H2-1	
4	M12	L3x3 1/2x1/4	.406	9.879	2	.005	9.879	z	17	9.132	33.629	.862	2.863	1	H2-1	
5	M13	L3x3 1/2x1/4	.339	5.424	4	.005	9.879	z	15	9.132	33.629	.862	2.31	1	H2-1	
6	M14	L3x3 1/2x1/4	.352	9.879	8	.005	9.879	z	16	9.132	33.629	.862	2.863	1	H2-1	
7	M15	L3x3 1/2x1/4	.344	5.424	2	.005	9.879	z	15	9.132	33.629	.862	2.31	1	H2-1	
8	M16	L3x3 1/2x1/4	.344	9.879	6	.005	9.879	z	14	9.132	33.629	.862	2.863	1	H2-1	
9	M29	L3x3 1/2x1/4	.665	4.784	8	.006	10.4	z	17	7.927	33.629	.862	2.19	1	H2-1	
10	M30	L3x3 1/2x1/4	.679	10.4	4	.005	10.4	z	12	7.927	33.629	.862	2.718	1	H2-1	
11	M31	L3x3 1/2x1/4	.664	4.784	6	.006	10.4	z	16	7.927	33.629	.862	2.19	1	H2-1	
12	M32	L3x3 1/2x1/4	.689	10.4	2	.005	10.4	z	18	7.927	33.629	.862	2.718	1	H2-1	
13	M33	L3x3 1/2x1/4	.605	4.992	4	.006	10.4	z	14	7.927	33.629	.862	2.19	1	H2-1	
14	M34	L3x3 1/2x1/4	.628	10.4	8	.005	10.4	z	16	7.927	33.629	.862	2.718	1	H2-1	
15	M35	L3x3 1/2x1/4	.617	4.992	2	.006	10.4	z	12	7.927	33.629	.862	2.19	1	H2-1	
16	M36	L3x3 1/2x1/4	.623	10.4	6	.005	10.4	z	14	7.927	33.629	.862	2.718	1	H2-1	
17	M53	L3x4x3/8	.534	11.149	8	.006	11.149	z	11	11.895	53.461	1.528	4.45	1	H2-1	
18	M54	L3x4x3/8	.514	11.149	4	.005	11.149	z	18	11.895	53.461	1.528	4.45	1	H2-1	
19	M55	L3x4x3/8	.529	11.149	6	.006	11.149	z	17	11.895	53.461	1.528	4.45	1	H2-1	
20	M56	L3x4x3/8	.518	11.149	2	.005	11.149	z	16	11.895	53.461	1.528	4.45	1	H2-1	
21	M57	L3x4x3/8	.485	11.149	4	.006	11.149	z	16	11.895	53.461	1.528	4.45	1	H2-1	
22	M58	L3x4x3/8	.475	11.149	8	.005	11.149	z	14	11.895	53.461	1.528	4.45	1	H2-1	
23	M59	L3x4x3/8	.497	11.149	2	.006	11.149	z	14	11.895	53.461	1.528	4.45	1	H2-1	
24	M60	L3x4x3/8	.473	11.149	6	.005	11.149	z	12	11.895	53.461	1.528	4.45	1	H2-1	
25	M73	L3x4x3/8	.734	12.164	7	.006	11.925	z	14	10.435	53.461	1.528	4.304	1	H2-1	
26	M74	L3x4x3/8	.686	12.164	5	.006	11.925	z	17	10.435	53.461	1.528	4.304	1	H2-1	
27	M75	L3x4x3/8	.692	12.164	5	.006	11.925	z	12	10.435	53.461	1.528	4.304	1	H2-1	
28	M76	L3x4x3/8	.715	12.164	3	.006	11.925	z	15	10.435	53.461	1.528	4.304	1	H2-1	
29	M77	L3x4x3/8	.648	12.164	3	.006	11.925	z	18	10.435	53.461	1.528	4.304	1	H2-1	
30	M78	L3x4x3/8	.670	12.164	9	.006	11.925	z	13	10.435	53.461	1.528	4.304	1	H2-1	
31	M79	L3x4x3/8	.702	12.164	9	.006	11.925	z	16	10.435	53.461	1.528	4.304	1	H2-1	
32	M80	L3x4x3/8	.630	12.164	7	.006	11.925	z	11	10.435	53.461	1.528	4.304	1	H2-1	
33	M90	2L2 1/2x2 1/2x1/4x3/8	.675	8.317	8	.003	8.317	y	18	13.249	51.305	3.58	1.419	1	H1-1a	
34	M93	2L2 1/2x2 1/2x1/4x3/8	.674	8.317	4	.003	8.317	y	12	13.249	51.305	3.58	1.419	1	H1-1a	
35	M97	2L2 1/2x2 1/2x1/4x3/8	.659	8.317	6	.003	8.317	y	16	13.249	51.305	3.58	1.419	1	H1-1a	
36	M100	2L2 1/2x2 1/2x1/4x3/8	.673	8.317	3	.003	8.317	y	18	13.249	51.305	3.58	1.419	1	H1-1a	
37	M104	2L2 1/2x2 1/2x1/4x3/8	.591	8.317	4	.003	8.317	y	14	13.249	51.305	3.58	1.419	1	H1-1a	
38	M107	2L2 1/2x2 1/2x1/4x3/8	.602	8.317	9	.003	8.317	y	16	13.249	51.305	3.58	1.419	1	H1-1a	
39	M111	2L2 1/2x2 1/2x1/4x3/8	.636	8.317	9	.003	8.317	y	12	13.249	51.305	3.58	1.419	1	H1-1a	
40	M114	2L2 1/2x2 1/2x1/4x3/8	.609	8.317	6	.003	8.317	y	14	13.249	51.305	3.58	1.419	1	H1-1a	

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Designer : tclark
Job Number : 2013723.01.SNET013.01

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9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member		Shape	Code Check		Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mny/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
41	M126	2L2 1/2x2 1/2x1/4x3/8	.736	8.621	8	.003	8.621	Y	18	12.282	51.305	3.58	1.419	1	H1-1a	
42	M129	2L2 1/2x2 1/2x1/4x3/8	.736	8.621	4	.003	8.621	Y	12	12.282	51.305	3.58	1.419	1	H1-1a	
43	M133	2L2 1/2x2 1/2x1/4x3/8	.709	8.621	6	.003	8.621	Y	16	12.282	51.305	3.58	1.419	1	H1-1a	
44	M136	2L2 1/2x2 1/2x1/4x3/8	.725	8.621	2	.003	8.621	Y	18	12.282	51.305	3.58	1.419	1	H1-1a	
45	M140	2L2 1/2x2 1/2x1/4x3/8	.642	8.621	4	.003	8.621	Y	14	12.282	51.305	3.58	1.419	1	H1-1a	
46	M143	2L2 1/2x2 1/2x1/4x3/8	.643	8.621	8	.003	8.621	Y	16	12.282	51.305	3.58	1.419	1	H1-1a	
47	M147	2L2 1/2x2 1/2x1/4x3/8	.683	8.621	2	.003	8.621	Y	12	12.282	51.305	3.58	1.419	1	H1-1a	
48	M150	2L2 1/2x2 1/2x1/4x3/8	.665	8.621	6	.003	8.621	Y	14	12.282	51.305	3.58	1.419	1	H1-1a	
49	M162	2L2 1/2x2 1/2x1/4x3/8	.824	8.938	8	.003	8.938	Y	18	11.377	51.305	3.58	1.419	1	H1-1a	
50	M165	2L2 1/2x2 1/2x1/4x3/8	.824	8.938	4	.003	8.938	Y	12	11.377	51.305	3.58	1.419	1	H1-1a	
51	M169	2L2 1/2x2 1/2x1/4x3/8	.793	8.938	6	.003	8.938	Y	16	11.377	51.305	3.58	1.419	1	H1-1a	
52	M172	2L2 1/2x2 1/2x1/4x3/8	.810	8.938	2	.003	8.938	Y	18	11.377	51.305	3.58	1.419	1	H1-1a	
53	M176	2L2 1/2x2 1/2x1/4x3/8	.717	8.938	4	.003	8.938	Y	14	11.377	51.305	3.58	1.419	1	H1-1a	
54	M179	2L2 1/2x2 1/2x1/4x3/8	.719	8.938	8	.003	8.938	Y	16	11.377	51.305	3.58	1.419	1	H1-1a	
55	M183	2L2 1/2x2 1/2x1/4x3/8	.761	8.938	2	.003	8.938	Y	12	11.377	51.305	3.58	1.419	1	H1-1a	
56	M186	2L2 1/2x2 1/2x1/4x3/8	.742	8.938	6	.003	8.938	Y	14	11.377	51.305	3.58	1.419	1	H1-1a	
57	M198	2L2 1/2x2 1/2x1/4x3/8	.914	9.265	8	.004	9.265	Y	18	10.557	51.305	3.58	1.419	1	H1-1a	
58	M201	2L2 1/2x2 1/2x1/4x3/8	.913	9.265	4	.004	9.265	Y	12	10.557	51.305	3.58	1.419	1	H1-1a	
59	M205	2L2 1/2x2 1/2x1/4x3/8	.879	9.265	6	.004	9.265	Y	16	10.557	51.305	3.58	1.419	1	H1-1a	
60	M208	2L2 1/2x2 1/2x1/4x3/8	.898	9.265	2	.004	9.265	Y	18	10.557	51.305	3.58	1.419	1	H1-1a	
61	M212	2L2 1/2x2 1/2x1/4x3/8	.794	9.265	4	.004	9.265	Y	14	10.557	51.305	3.58	1.419	1	H1-1a	
62	M215	2L2 1/2x2 1/2x1/4x3/8	.796	9.265	8	.004	9.265	Y	16	10.557	51.305	3.58	1.419	1	H1-1a	
63	M219	2L2 1/2x2 1/2x1/4x3/8	.843	9.265	2	.004	9.265	Y	12	10.557	51.305	3.58	1.419	1	H1-1a	
64	M222	2L2 1/2x2 1/2x1/4x3/8	.822	9.265	6	.004	9.265	Y	14	10.557	51.305	3.58	1.419	1	H1-1a	
65	M234	2L3x3 1/2x3/8x5/8	.502	9.816	8	.002	19.633	Y	16	35.553	99.027	10.827	3.057	1	H1-1a	
66	M239	2L3x3 1/2x3/8x5/8	.502	9.816	4	.002	19.633	Y	14	35.553	99.027	10.827	3.057	1	H1-1a	
67	M246	2L3x3 1/2x3/8x5/8	.485	9.816	6	.002	19.633	Y	14	35.553	99.027	10.827	3.057	1	H1-1a	
68	M251	2L3x3 1/2x3/8x5/8	.506	19.633	3	.002	19.633	Y	12	35.553	99.027	10.827	3.057	1	H1-1a	
69	M260	2L3x3 1/2x3/8x5/8	.439	9.816	4	.002	19.633	Y	12	35.553	99.027	10.827	3.057	1	H1-1a	
70	M265	2L3x3 1/2x3/8x5/8	.451	19.633	9	.002	19.633	Y	18	35.553	99.027	10.827	3.057	1	H1-1a	
71	M274	2L3x3 1/2x3/8x5/8	.485	19.633	9	.002	19.633	Y	18	35.553	99.027	10.827	3.057	1	H1-1a	
72	M279	2L3x3 1/2x3/8x5/8	.457	9.816	6	.002	19.633	Y	16	35.553	99.027	10.827	3.057	1	H1-1a	
73	M25	2L3 1/2x3x5/16x3/8	.050	9.761	11	.003	7.321	Y	11	34.558	83.425	6.308	5.483	1	H1-1b	
74	M26	2L3 1/2x3x5/16x3/8	.050	4.881	17	.003	7.321	Y	17	34.558	83.425	6.308	5.483	1	H1-1b	
75	M27	2L3 1/2x3x5/16x3/8	.052	9.761	15	.003	7.321	Y	15	34.558	83.425	6.308	5.483	1	H1-1b	
76	M28	2L3 1/2x3x5/16x3/8	.052	4.881	13	.003	7.321	Y	13	34.558	83.425	6.308	5.483	1	H1-1b	
77	M45	2L3x2 1/2x1/4x3/8	.099	4.113	11	.005	8.225	Y	11	33.381	56.695	3.608	3.23	1	H1-1b	
78	M46	2L3x2 1/2x1/4x3/8	.062	8.225	17	.004	8.225	Y	14	33.381	56.695	3.608	2.019	1	H1-1b	
79	M47	2L3x2 1/2x1/4x3/8	.065	8.225	15	.004	8.225	Y	12	33.381	56.695	3.608	2.019	1	H1-1b	
80	M48	2L3x2 1/2x1/4x3/8	.101	12.338	13	.005	8.225	Y	13	33.381	56.695	3.608	3.23	1	H1-1b	
81	M69	2L3x2 1/2x1/4x3/8	.105	9.129	2	.005	9.129	Y	11	10.874	56.695	3.608	2.019	1	H1-1b	

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9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Locfitl	LC	Shear Check	Locfitl	Dir	LC	Pnc/om [kl]	Pnt/om [kl]	Mnw/om [kl-ft]	Mnzz/om [kl-ft]	Cb	Eqn	
82	M70	2L3x2 1/2x1/4x3/8	.105	9.129	8	.005	9.129	Y	17	10.874	56.695	3.608	2.019	1	H1-1b
83	M71	2L3x2 1/2x1/4x3/8	.117	9.129	15	.005	9.129	Y	15	10.874	56.695	3.608	2.019	1	H1-1b
84	M72	2L3x2 1/2x1/4x3/8	.114	9.129	13	.005	9.129	Y	13	10.874	56.695	3.608	2.019	1	H1-1b
85	M89	2L2 1/2x2 1/2x1/4x3/8	.345	10.033	8	.006	10.033	Y	18	17.845	51.305	3.58	1.419	1	H1-1a
86	M96	2L2 1/2x2 1/2x1/4x3/8	.334	10.033	2	.006	10.033	Y	12	17.845	51.305	3.58	1.419	1	H1-1a
87	M103	2L2 1/2x2 1/2x1/4x3/8	.300	10.033	8	.006	10.033	Y	11	17.845	51.305	3.58	1.419	1	H1-1a
88	M110	2L2 1/2x2 1/2x1/4x3/8	.316	10.033	6	.006	10.033	Y	12	17.845	51.305	3.58	1.419	1	H1-1a
89	M125	2L2 1/2x2 1/2x1/4x3/8	.430	11.165	8	.007	10.938	Y	18	15.224	51.305	3.58	1.419	1	H1-1a
90	M132	2L2 1/2x2 1/2x1/4x3/8	.419	10.938	2	.006	10.938	Y	13	15.224	51.305	3.58	1.419	1	H1-1a
91	M139	2L2 1/2x2 1/2x1/4x3/8	.375	10.938	4	.006	10.938	Y	11	15.224	51.305	3.58	1.419	1	H1-1a
92	M146	2L2 1/2x2 1/2x1/4x3/8	.393	10.71	6	.007	10.938	Y	12	15.224	51.305	3.58	1.419	1	H1-1a
93	M161	2L2 1/2x2 1/2x1/4x3/8	.555	11.842	8	.007	11.842	Y	18	13.474	51.305	3.58	1.419	1	H1-1a
94	M168	2L2 1/2x2 1/2x1/4x3/8	.533	11.842	2	.007	11.842	Y	13	13.474	51.305	3.58	1.419	1	H1-1a
95	M175	2L2 1/2x2 1/2x1/4x3/8	.478	11.842	8	.007	11.842	Y	11	13.474	51.305	3.58	1.419	1	H1-1a
96	M182	2L2 1/2x2 1/2x1/4x3/8	.505	11.842	6	.007	11.842	Y	13	13.474	51.305	3.58	1.419	1	H1-1a
97	M197	2L2 1/2x2 1/2x1/4x3/8	.664	12.746	8	.008	12.746	Y	11	11.805	51.305	3.58	1.419	1	H1-1a
98	M204	2L2 1/2x2 1/2x1/4x3/8	.638	12.746	2	.007	12.746	Y	13	11.805	51.305	3.58	1.419	1	H1-1a
99	M211	2L2 1/2x2 1/2x1/4x3/8	.571	12.746	8	.007	12.746	Y	11	11.805	51.305	3.58	1.419	1	H1-1a
100	M218	2L2 1/2x2 1/2x1/4x3/8	.604	12.746	6	.008	12.746	Y	14	11.805	51.305	3.58	1.419	1	H1-1a
101	M233	2L3x2 1/2x5/16x3/8	.336	3.981	3	.005	6.825	Y	16	23.046	69.891	4.55	3.957	1	H1-1a
102	M245	2L3x2 1/2x5/16x3/8	.337	13.65	7	.005	20.475	Y	12	23.046	69.891	4.55	2.473	1	H1-1a
103	M259	2L3x2 1/2x5/16x3/8	.305	13.65	5	.005	20.475	Y	18	23.046	69.891	4.55	2.473	1	H1-1a
104	M273	2L3x2 1/2x5/16x3/8	.317	13.65	5	.005	20.475	Y	16	23.046	69.891	4.55	2.473	1	H1-1a
105	M17	L2 1/2x2x1/4	.030	13.678	8	.005	6.839	Y	18	4.917	22.85	.23	1.09	1	H2-1
106	M18	L2 1/2x2x1/4	.029	0	3	.005	6.839	Y	16	4.917	22.85	.23	1.09	1	H2-1
107	M19	L2 1/2x2x1/4	.020	13.678	5	.005	6.839	Y	15	4.917	22.85	.23	1.09	1	H2-1
108	M20	L2 1/2x2x1/4	.024	13.678	9	.005	6.839	Y	12	4.917	22.85	.23	1.09	1	H2-1
109	M37	C6x10.5	.043	7.747	17	.004	7.747	Y	11	15.98	66.18	1.616	8.682	1	H1-1b
110	M38	C6x10.5	.043	7.747	11	.004	7.747	Y	17	15.98	66.18	1.616	8.682	1	H1-1b
111	M39	C6x10.5	.043	7.747	13	.004	7.747	Y	15	15.98	66.18	1.616	8.682	1	H1-1b
112	M40	C6x10.5	.043	7.747	11	.004	7.747	Y	13	15.98	66.18	1.616	8.682	1	H1-1b
113	M61	L3x2 1/2x1/4	.032	10.997	18	.006	8.654	Y	14	5.704	28.24	.357	1.508	1	H2-1
114	M62	L3x2 1/2x1/4	.031	10.997	16	.006	8.654	Y	12	5.704	28.24	.357	1.508	1	H2-1
115	M63	L3x2 1/2x1/4	.026	10.997	13	.006	8.654	Y	18	5.704	28.24	.357	1.508	1	H2-1
116	M64	L3x2 1/2x1/4	.029	10.997	11	.006	8.654	Y	16	5.704	28.24	.357	1.508	1	H2-1
117	M81	L3x2 1/2x1/4	.038	0	3	.006	9.56	Y	15	4.624	28.24	.357	1.467	1	H2-1
118	M82	L3x2 1/2x1/4	.039	19.12	7	.006	9.56	Y	12	4.624	28.24	.357	1.467	1	H2-1
119	M83	L3x2 1/2x1/4	.025	19.12	5	.006	9.56	Y	11	4.624	28.24	.357	1.467	1	H2-1
120	M84	L3x2 1/2x1/4	.034	0	5	.006	9.56	Y	17	4.624	28.24	.357	1.467	1	H2-1
121	M391	L2.5x2.5x4	.015	0	5	.001	0	Y	1	8.531	25.653	.741	1.482	1.136	H2-1
122	M392	L2.5x2.5x4	.016	0	3	.001	0	Y	1	8.531	25.653	.741	1.482	1.136	H2-1

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Designer : tclark
Job Number : 2013723.01.SNET013.01

Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyw/om [k-ft]	Mnzz/om [k-ft]	Cb	Egn
123	M393	L2.5x2.5x4	.014	9	.001	0	Y	1	8.531	25.653	.741	1.482	1.136	H2-1
124	M394	L2.5x2.5x4	.019	7	.001	4.113	Y	10	14.773	25.653	.741	1.59	1.136	H2-1
125	M395	L2.5x2.5x4	.019	7	.001	4.113	Y	7	14.773	25.653	.741	1.59	1.136	H2-1
126	M396	L2.5x2.5x4	.053	7	.001	2.908	Y	1	8.531	25.653	.741	1.482	1.136	H2-1
127	M377	L2.5x2.5x4	.040	5	.002	0	Y	1	5.733	25.653	.741	1.411	1.136	H2-1
128	M378	L2.5x2.5x4	.043	3	.002	7.095	Y	1	5.733	25.653	.741	1.411	1.136	H2-1
129	M379	L2.5x2.5x4	.041	9	.002	7.095	Y	3	5.733	25.653	.741	1.411	1.136	H2-1
130	M380	L2.5x2.5x4	.073	3	.001	2.754	Y	3	9.511	25.653	.741	1.5	1.136	H2-1
131	M381	L2.5x2.5x4	.073	3	.001	2.754	Y	9	9.511	25.653	.741	1.5	1.136	H2-1
132	M382	L2.5x2.5x4	.046	7	.001	1.939	Y	10	15.707	25.653	.741	1.606	1.136	H2-1
133	M367	L2.5x2.5x4	.057	5	.002	0	Y	1	4.825	25.653	.741	1.378	1.136	H2-1
134	M368	L2.5x2.5x4	.061	3	.002	0	Y	1	4.825	25.653	.741	1.378	1.136	H2-1
135	M369	L2.5x2.5x4	.057	9	.002	0	Y	1	4.825	25.653	.741	1.378	1.136	H2-1
136	M370	L2.5x2.5x4	.084	3	.001	2.882	Y	11	8.684	25.653	.741	1.485	1.136	H2-1
137	M371	L2.5x2.5x4	.084	3	.001	2.882	Y	11	8.684	25.653	.741	1.485	1.136	H2-1
138	M372	L2.5x2.5x4	.095	7	.001	2.578	Y	14	10.775	25.653	.741	1.521	1.136	H2-1
139	M357	L2.5x2.5x4	.105	3	.002	3.121	Y	6	7.409	25.653	.741	1.457	1.136	H2-1
140	M358	L2.5x2.5x4	.106	3	.002	3.121	Y	6	7.409	25.653	.741	1.457	1.136	H2-1
141	M359	L2.5x2.5x4	.097	8	.001	2.791	Y	1	9.261	25.653	.741	1.496	1.136	H2-1
142	M360	L2.5x2.5x4	.047	5	.002	0	Y	4	4.116	25.653	.741	1.346	1.136	H2-1
143	M361	L2.5x2.5x4	.052	3	.002	0	Y	2	4.116	25.653	.741	1.346	1.136	H2-1
144	M362	L2.5x2.5x4	.048	9	.002	0	Y	2	4.116	25.653	.741	1.346	1.136	H2-1
145	M347	L2.5x2.5x4	.050	5	.002	9.013	Y	1	3.553	25.653	.741	1.316	1.136	H2-1
146	M348	L2.5x2.5x4	.056	3	.002	9.013	Y	1	3.553	25.653	.741	1.316	1.136	H2-1
147	M349	L2.5x2.5x4	.051	9	.002	9.013	Y	1	3.553	25.653	.741	1.316	1.136	H2-1
148	M350	L2.5x2.5x4	.128	3	.002	3.359	Y	3	6.395	25.653	.741	1.431	1.136	H2-1
149	M351	L2.5x2.5x4	.127	3	.002	3.359	Y	11	6.395	25.653	.741	1.431	1.136	H2-1
150	M352	L2.5x2.5x4	.119	8	.002	3.004	Y	1	7.993	25.653	.741	1.471	1.136	H2-1
151	M337	L2.5x2.5x4	.085	5	.002	9.652	Y	1	3.098	25.653	.741	1.286	1.136	H2-1
152	M338	L2.5x2.5x4	.091	3	.002	9.652	Y	1	3.098	25.653	.741	1.286	1.136	H2-1
153	M339	L2.5x2.5x4	.085	9	.002	9.652	Y	1	3.098	25.653	.741	1.286	1.136	H2-1
154	M340	L2.5x2.5x4	.148	3	.002	3.597	Y	8	5.576	25.653	.741	1.406	1.136	H2-1
155	M341	L2.5x2.5x4	.213	7	.002	3.217	Y	1	6.97	25.653	.741	1.447	1.136	H2-1
156	M342	L2.5x2.5x4	.149	3	.002	3.597	Y	6	5.576	25.653	.741	1.406	1.136	H2-1
157	M333	L2.5x2.5x4	.035	17	.002	3.413	Y	7	6.195	25.653	.741	1.425	1.136	H2-1
158	M334	L2.5x2.5x4	.035	11	.002	3.413	Y	2	6.195	25.653	.741	1.425	1.136	H2-1
159	M335	L2.5x2.5x4	.035	15	.002	3.413	Y	5	6.195	25.653	.741	1.425	1.136	H2-1
160	M336	L2.5x2.5x4	.035	13	.002	3.413	Y	1	6.195	25.653	.741	1.425	1.136	H2-1
161	M387	L3x2.5x4	.056	4.113	.002	8.225	Y	8	5.507	28.455	.831	1.429	1	H2-1
162	M388	L3x2.5x4	.059	4.113	.002	8.225	Y	5	5.507	28.455	.831	1.429	1	H2-1
163	M389	L3x2.5x4	.059	4.113	.002	8.225	Y	4	5.507	28.455	.831	1.429	1	H2-1

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Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc(ft)	LC	Shear Check	Loc(ft)	Dir	LC	Pnc/om [kl]	Pnt/om [kl]	Mnw/om [k-ft]	Mnzz/om [k-ft]	Cb	Egn	
164	M390	L3x2.5x4	.056	4.113	9	.002	8.225	Y	2	5.507	28.455	.831	1.429	1	H2-1
165	M373	L12x2.5x3x3	.081	5.017	3	.002	0	Z	7	6.045	35.353	2.652	1.123	1	H1-1b
166	M374	L12x2.5x3x3	.050	5.017	8	.002	0	Z	6	6.045	35.353	2.652	1.123	1	H1-1b
167	M375	L12x2.5x3x3	.050	5.017	6	.002	0	Z	4	6.045	35.353	2.652	1.123	1	H1-1b
168	M376	L12x2.5x3x3	.079	5.017	3	.002	0	Z	2	6.045	35.353	2.652	1.123	1	H1-1b
169	M363	L12x2.5x3x3	.097	5.469	3	.003	10.938	Z	1	5.086	35.353	2.652	1.123	1	H1-1b
170	M364	L12x2.5x3x3	.070	5.469	8	.003	10.938	Z	1	5.086	35.353	2.652	1.123	1	H1-1b
171	M365	L12x2.5x3x3	.070	5.469	6	.003	10.938	Z	1	5.086	35.353	2.652	1.123	1	H1-1b
172	M366	L12x2.5x3x3	.096	5.469	3	.003	10.938	Z	6	5.086	35.353	2.652	1.123	1	H1-1b
173	M353	L12x2.5x3x3	.122	5.921	3	.003	11.842	Z	1	4.339	35.353	2.652	1.123	1	H1-1b
174	M354	L12x2.5x3x3	.075	5.921	8	.003	11.842	Z	1	4.339	35.353	2.652	1.123	1	H1-1b
175	M355	L12x2.5x3x3	.075	5.921	6	.003	11.842	Z	1	4.339	35.353	2.652	1.123	1	H1-1b
176	M356	L12x2.5x3x3	.119	5.921	3	.003	11.842	Z	1	4.339	35.353	2.652	1.123	1	H1-1b
177	M343	L12x2.5x3x3	.090	6.373	8	.003	0	Z	1	3.746	35.353	2.652	1.123	1	H1-1b
178	M344	L12x2.5x3x3	.089	6.373	6	.003	0	Z	1	3.746	35.353	2.652	1.123	1	H1-1b
179	M345	L12x2.5x3x3	.238	6.373	3	.003	0	Z	1	3.746	35.353	2.652	1.123	1	H1-1b
180	M346	L12x2.5x3x3	.245	6.373	3	.003	0	Z	1	3.746	35.353	2.652	1.123	1	H1-1a
181	M329	L12x2.5x3x3	.112	6.825	12	.004	0	Z	17	11.463	35.353	2.652	.702	1	H1-1b
182	M330	L12x2.5x3x3	.111	6.825	14	.004	0	Z	10	11.463	35.353	2.652	.702	1	H1-1b
183	M331	L12x2.5x3x3	.111	6.825	18	.004	0	Z	16	11.463	35.353	2.652	.702	1	H1-1b
184	M332	L12x2.5x3x3	.112	6.825	12	.004	0	Z	10	11.463	35.353	2.652	.702	1	H1-1b
185	M397	L2.5x2.5x3	.044	3.451	12	.002	0	Y	1	4.587	19.423	.581	.959	1	H2-1
186	M398	L2.5x2.5x3	.044	3.451	18	.002	0	Y	1	4.587	19.423	.581	.959	1	H2-1
187	M399	L2.5x2.5x3	.044	3.451	16	.002	0	Y	1	4.587	19.423	.581	.959	1	H2-1
188	M400	L2.5x2.5x3	.044	3.451	14	.002	0	Y	1	4.587	19.423	.581	.959	1	H2-1
189	M49	2L2x2 1/2x3/16x3/8	.158	5.816	12	.008	11.632	Z	12	14.631	34.922	2.652	1.121	1	H1-1b
190	M50	2L2x2 1/2x3/16x3/8	.130	5.816	12	.008	0	Z	18	14.631	34.922	2.652	.701	1	H1-1b
191	M51	2L2x2 1/2x3/16x3/8	.158	5.816	12	.008	0	Z	12	14.631	34.922	2.652	1.121	1	H1-1b
192	M52	2L2x2 1/2x3/16x3/8	.136	5.816	12	.008	11.632	Z	18	14.631	34.922	2.652	.701	1	H1-1b
193	M383	L2.5x2.5x3	.035	3.228	18	.002	6.455	Y	2	5.244	19.423	.581	.983	1	H2-1
194	M384	L2.5x2.5x3	.035	3.228	16	.002	6.455	Y	9	5.244	19.423	.581	.983	1	H2-1
195	M385	L2.5x2.5x3	.035	3.228	14	.002	6.455	Y	7	5.244	19.423	.581	.983	1	H2-1
196	M386	L2.5x2.5x3	.035	3.228	12	.002	6.455	Y	9	5.244	19.423	.581	.983	1	H2-1
197	M117	2L2x2 1/2x3/16x3/8	.235	7.095	12	.010	0	Z	12	10.792	34.922	2.652	1.121	1	H1-1b
198	M118	2L2x2 1/2x3/16x3/8	.217	7.095	12	.010	0	Z	18	10.792	34.922	2.652	.701	1	H1-1b
199	M119	2L2x2 1/2x3/16x3/8	.235	7.095	12	.010	0	Z	12	10.792	34.922	2.652	1.121	1	H1-1b
200	M120	2L2x2 1/2x3/16x3/8	.227	7.095	12	.010	0	Z	18	10.792	34.922	2.652	.701	1	H1-1b
201	M153	2L2x2 1/2x3/16x3/8	.266	7.734	12	.011	15.468	Z	12	9.285	34.922	2.652	1.121	1	H1-1b
202	M154	2L2x2 1/2x3/16x3/8	.247	7.734	12	.010	0	Z	14	9.285	34.922	2.652	.701	1	H1-1b
203	M155	2L2x2 1/2x3/16x3/8	.266	7.734	12	.011	15.468	Z	12	9.285	34.922	2.652	1.121	1	H1-1b
204	M156	2L2x2 1/2x3/16x3/8	.257	7.734	12	.011	15.468	Z	14	9.285	34.922	2.652	.701	1	H1-1b

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Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
205	M189	2L2 1/2x2 1/2x3/16x3/8	.320	8.373	12	.012	0	12	8.676	38.802	2.672	1.737	1	H1-1b
206	M190	2L2 1/2x2 1/2x3/16x3/8	.298	8.373	12	.012	0	18	8.676	38.802	2.672	1.086	1	H1-1b
207	M191	2L2 1/2x2 1/2x3/16x3/8	.320	8.373	12	.012	0	12	8.676	38.802	2.672	1.737	1	H1-1b
208	M192	2L2 1/2x2 1/2x3/16x3/8	.311	8.373	12	.012	0	18	8.676	38.802	2.672	1.086	1	H1-1b
209	M225	2L2 1/2x2 1/2x3/16x3/8	.361	9.013	12	.013	18.025	12	7.669	38.802	2.672	1.737	1	H1-1b
210	M226	2L2 1/2x2 1/2x3/16x3/8	.341	9.013	12	.013	18.025	18	7.669	38.802	2.672	1.086	1	H1-1b
211	M227	2L2 1/2x2 1/2x3/16x3/8	.361	9.013	12	.013	0	12	7.669	38.802	2.672	1.737	1	H1-1b
212	M228	2L2 1/2x2 1/2x3/16x3/8	.356	9.013	12	.013	0	18	7.669	38.802	2.672	1.086	1	H1-1b
213	M289	2L2 1/2x2 1/2x1/4x3/8	.118	9.652	13	.006	9.652	12	15.798	51.305	3.58	2.271	1	H1-1b
214	M290	2L2 1/2x2 1/2x1/4x3/8	.080	9.652	12	.006	9.652	11	15.798	51.305	3.58	1.419	1	H1-1b
215	M291	2L2 1/2x2 1/2x1/4x3/8	.118	9.652	11	.006	9.652	12	15.798	51.305	3.58	2.271	1	H1-1b
216	M292	2L2 1/2x2 1/2x1/4x3/8	.078	9.652	16	.006	9.652	18	15.798	51.305	3.58	1.419	1	H1-1b
217	M1	L6x6x1/2	.095	4.843	16	.003	0	4	97.104	123.952	3.534	19.154	1	H2-1
218	M2	L6x6x1/2	.106	5.236	14	.003	0	8	97.104	123.952	3.534	19.154	1	H2-1
219	M3	L6x6x1/2	.096	4.45	12	.002	0	6	97.104	123.952	3.534	19.154	1	H2-1
220	M4	L6x6x1/2	.084	12.565	18	.002	0	6	97.104	123.952	3.534	19.154	1	H2-1
221	M21	L6x6x1/2	.150	2.356	7	.013	6.675	2	97.444	123.952	3.534	19.178	1	H2-1
222	M22	L6x6x1/2	.156	2.225	5	.013	6.675	8	97.444	123.952	3.534	19.178	1	H2-1
223	M23	L6x6x1/2	.149	2.356	3	.013	6.675	8	97.444	123.952	3.534	19.178	1	H2-1
224	M24	L6x6x1/2	.145	2.356	9	.013	6.675	6	97.444	123.952	3.534	19.178	1	H2-1
225	M41	L6x6x5/8	.196	4.188	7	.002	0	4	120.823	153.269	4.412	24.21	1	H2-1
226	M42	L6x6x5/8	.203	4.188	5	.002	0	7	120.823	153.269	4.412	24.21	1	H2-1
227	M43	L6x6x5/8	.196	4.319	3	.002	6.544	3	120.823	153.269	4.412	24.21	1	H2-1
228	M44	L6x6x5/8	.192	4.319	9	.002	6.544	9	120.823	153.269	4.412	24.21	1	H2-1
229	M65	L6x6x5/8	.261	4.319	7	.003	0	9	121.091	153.269	4.412	24.227	1	H2-1
230	M66	L6x6x5/8	.265	4.319	5	.004	0	3	121.091	153.269	4.412	24.227	1	H2-1
231	M67	L6x6x5/8	.257	4.45	3	.003	0	6	121.091	153.269	4.412	24.227	1	H2-1
232	M68	L6x6x5/8	.254	4.45	9	.002	0	6	121.091	153.269	4.412	24.227	1	H2-1
233	M85	L6x6x3/4	.254	4.45	7	.009	0	4	146.217	181.94	5.199	28.483	1	H2-1
234	M86	L6x6x3/4	.260	4.45	5	.008	0	3	146.217	181.94	5.199	28.483	1	H2-1
235	M87	L6x6x3/4	.247	10.602	3	.006	0	6	146.217	181.94	5.199	28.483	1	H2-1
236	M88	L6x6x3/4	.246	10.471	9	.007	0	6	146.217	181.94	5.199	28.483	1	H2-1
237	M121	L6x6x3/4	.345	3.403	7	.006	12.565	9	146.217	181.94	5.199	28.483	1	H2-1
238	M122	L6x6x3/4	.346	3.403	5	.006	12.565	3	146.217	181.94	5.199	28.483	1	H2-1
239	M123	L6x6x3/4	.331	3.534	3	.005	0	9	146.217	181.94	5.199	28.483	1	H2-1
240	M124	L6x6x3/4	.332	10.733	9	.005	12.565	7	146.217	181.94	5.199	28.483	1	H2-1
241	M157	L6x6x7/8	.357	9.424	7	.005	0	9	168.565	209.749	6.07	32.062	1	H2-1
242	M158	L6x6x7/8	.359	3.01	5	.005	0	3	168.565	209.749	6.07	32.062	1	H2-1
243	M159	L6x6x7/8	.347	3.141	3	.004	0	9	168.565	209.749	6.07	32.062	1	H2-1
244	M160	L6x6x7/8	.348	9.424	9	.004	0	3	168.565	209.749	6.07	32.062	1	H2-1
245	M193	L6x6x7/8	.418	9.293	7	.007	0	9	168.565	209.749	6.07	32.062	1	H2-1

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Job Number : 2013723.01.SNET013.01

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Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member	Shape	Code Check	Locfitl	LC	Shear Check	Locfitl	Dir	LC	Pnc/om [kl]	Pnt/om [kl]	Mnw/om [k-ft]	Mnzz/om [k-ft]	Cb	Eon	
246	M194	L6x6x7/8	.419	9.293	5	.008	0	Y	3	168.565	209.749	6.07	32.062	1	H2-1
247	M195	L6x6x7/8	.408	9.293	3	.006	0	Z	5	168.565	209.749	6.07	32.062	1	H2-1
248	M196	L6x6x7/8	.408	9.293	9	.006	0	Y	7	168.565	209.749	6.07	32.062	1	H2-1
249	M229	L8x8x7/8	.331	0	7	.007	12.565	Z	17	229.316	284.551	10.904	60.335	1	H2-1
250	M230	L8x8x7/8	.333	0	5	.007	12.565	Y	13	229.316	284.551	10.904	60.335	1	H2-1
251	M231	L8x8x7/8	.322	7.33	3	.007	12.565	Y	11	229.316	284.551	10.904	60.335	1	H2-1
252	M232	L8x8x7/8	.321	0	9	.007	12.565	Z	11	229.316	284.551	10.904	60.335	1	H2-1
253	M238	2L2 1/2x2x1/4x3/8	.577	5.71	6	.003	11.917	Y	16	10.215	45.916	2.441	2.195	1	H1-1a
254	M243	2L2 1/2x2x1/4x3/8	.578	5.71	6	.003	0	Y	12	10.215	45.916	2.441	2.195	1	H1-1a
255	M250	2L2 1/2x2x1/4x3/8	.568	5.71	4	.003	11.917	Y	15	10.215	45.916	2.441	2.195	1	H1-1a
256	M255	2L2 1/2x2x1/4x3/8	.570	5.71	4	.003	0	Y	10	10.215	45.916	2.441	2.195	1	H1-1a
257	M264	2L2 1/2x2x1/4x3/8	.559	5.71	2	.003	11.917	Y	18	10.215	45.916	2.441	2.195	1	H1-1a
258	M269	2L2 1/2x2x1/4x3/8	.561	5.71	2	.003	11.917	Y	11	10.215	45.916	2.441	2.195	1	H1-1a
259	M278	2L2 1/2x2x1/4x3/8	.562	5.71	8	.003	11.917	Y	13	10.215	45.916	2.441	2.195	1	H1-1a
260	M283	2L2 1/2x2x1/4x3/8	.559	5.71	8	.003	11.917	Y	17	10.215	45.916	2.441	2.195	1	H1-1a
261	M92	L2 1/2x2x3/16	.035	0	6	.002	7.753	Z	10	2.866	17.44	.176	.726	1	H2-1
262	M95	L2 1/2x2x3/16	.041	0	6	.002	0	Z	13	2.866	17.44	.176	.726	1	H2-1
263	M99	L2 1/2x2x3/16	.033	0	4	.002	7.753	Z	12	2.866	17.44	.176	.726	1	H2-1
264	M102	L2 1/2x2x3/16	.050	0	4	.002	0	Z	18	2.866	17.44	.176	.726	1	H2-1
265	M106	L2 1/2x2x3/16	.049	0	2	.002	7.753	Z	13	2.866	17.44	.176	.726	1	H2-1
266	M109	L2 1/2x2x3/16	.034	0	2	.002	0	Z	12	2.866	17.44	.176	.726	1	H2-1
267	M113	L2 1/2x2x3/16	.041	0	8	.002	0	Z	13	2.866	17.44	.176	.726	1	H2-1
268	M116	L2 1/2x2x3/16	.034	0	8	.002	0	Z	11	2.866	17.44	.176	.726	1	H2-1
269	M128	L2 1/2x2x3/16	.100	0	5	.003	0	Z	18	2.645	17.44	.176	.713	1	H2-1
270	M131	L2 1/2x2x3/16	.099	0	7	.003	0	Z	18	2.645	17.44	.176	.713	1	H2-1
271	M135	L2 1/2x2x3/16	.100	0	3	.003	8.027	Z	16	2.645	17.44	.176	.713	1	H2-1
272	M138	L2 1/2x2x3/16	.091	0	5	.003	8.027	Z	16	2.645	17.44	.176	.713	1	H2-1
273	M142	L2 1/2x2x3/16	.091	0	9	.003	8.027	Z	16	2.645	17.44	.176	.713	1	H2-1
274	M145	L2 1/2x2x3/16	.094	0	3	.003	0	Z	10	2.645	17.44	.176	.713	1	H2-1
275	M149	L2 1/2x2x3/16	.094	0	7	.003	0	Z	17	2.645	17.44	.176	.713	1	H2-1
276	M152	L2 1/2x2x3/16	.100	0	9	.003	8.027	Z	11	2.645	17.44	.176	.713	1	H2-1
277	M164	L2 1/2x2 1/2x3/16	.069	0	5	.003	8.317	Z	10	3.659	19.444	.233	.914	1	H2-1
278	M167	L2 1/2x2 1/2x3/16	.071	0	7	.003	8.317	Z	18	3.659	19.444	.233	.914	1	H2-1
279	M171	L2 1/2x2 1/2x3/16	.071	0	3	.003	8.317	Z	11	3.659	19.444	.233	.914	1	H2-1
280	M174	L2 1/2x2 1/2x3/16	.065	0	5	.003	0	Z	13	3.659	19.444	.233	.914	1	H2-1
281	M178	L2 1/2x2 1/2x3/16	.066	0	9	.003	0	Z	12	3.659	19.444	.233	.914	1	H2-1
282	M181	L2 1/2x2 1/2x3/16	.065	0	3	.003	8.317	Z	17	3.659	19.444	.233	.914	1	H2-1
283	M185	L2 1/2x2 1/2x3/16	.064	0	7	.003	8.317	Z	17	3.659	19.444	.233	.914	1	H2-1
284	M188	L2 1/2x2 1/2x3/16	.069	0	9	.003	0	Z	10	3.659	19.444	.233	.914	1	H2-1
285	M200	L2 1/2x2 1/2x3/16	.084	0	5	.003	8.621	Z	11	3.381	19.444	.233	.899	1	H2-1
286	M203	L2 1/2x2 1/2x3/16	.088	0	7	.003	0	Z	13	3.381	19.444	.233	.899	1	H2-1

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Job Number : 2013723.01.SNET013.01

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Aug 6, 2013
9:49 AM
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Envelope AISC 13th(360-05): ASD Steel Code Checks (Continued)

Member		Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
287	M207	L2 1/2x2 1/2x3/16	.085	0	3	.003	8.621	z	10	3.381	19.444	.233	.899	1	H2-1
288	M210	L2 1/2x2 1/2x3/16	.078	0	5	.003	8.621	z	14	3.381	19.444	.233	.899	1	H2-1
289	M214	L2 1/2x2 1/2x3/16	.082	0	9	.003	8.621	z	18	3.381	19.444	.233	.899	1	H2-1
290	M217	L2 1/2x2 1/2x3/16	.079	0	3	.003	0	z	14	3.381	19.444	.233	.899	1	H2-1
291	M221	L2 1/2x2 1/2x3/16	.075	0	7	.003	8.621	z	10	3.381	19.444	.233	.899	1	H2-1
292	M224	L2 1/2x2 1/2x3/16	.082	0	9	.003	0	z	10	3.381	19.444	.233	.899	1	H2-1
293	M237	L2.5x2.5x3	.508	4.62	7	.002	4.62	z	16	2.762	19.423	.581	1.115	1	H2-1
294	M242	L2.5x2.5x3	.505	4.62	5	.003	4.62	y	14	2.762	19.423	.581	1.115	1	H2-1
295	M249	L2.5x2.5x3	.485	4.62	5	.002	4.62	y	14	2.762	19.423	.581	1.115	1	H2-1
296	M254	L2.5x2.5x3	.511	4.62	3	.003	4.62	z	12	2.762	19.423	.581	1.115	1	H2-1
297	M263	L2.5x2.5x3	.466	4.62	3	.002	4.62	z	12	2.762	19.423	.581	1.115	1	H2-1
298	M268	L2.5x2.5x3	.484	4.62	9	.003	4.62	y	18	2.762	19.423	.581	1.115	1	H2-1
299	M277	L2.5x2.5x3	.493	4.62	9	.002	4.62	z	18	2.762	19.423	.581	1.115	1	H2-1
300	M282	L2.5x2.5x3	.479	4.62	7	.003	4.62	y	16	2.762	19.423	.581	1.115	1	H2-1
301	M321	LL2.5x2.5x4x3	.051	5.526	14	.002	11.288	y	10	11.305	51.305	3.54	2.217	1	H1-1b
302	M322	LL2.5x2.5x4x3	.051	5.761	18	.002	0	y	18	11.305	51.305	3.54	2.217	1	H1-1b
303	M323	LL2.5x2.5x4x3	.051	5.526	16	.002	0	y	11	11.305	51.305	3.54	2.217	1	H1-1b
304	M324	LL2.5x2.5x4x3	.051	5.761	12	.002	11.288	y	11	11.305	51.305	3.54	2.217	1	H1-1b
305	M325	LL2.5x2.5x4x3	.051	5.526	16	.002	0	y	11	11.305	51.305	3.54	2.217	1	H1-1b
306	M326	LL2.5x2.5x4x3	.051	5.761	12	.002	11.288	y	16	11.305	51.305	3.54	2.217	1	H1-1b
307	M327	LL2.5x2.5x4x3	.051	5.526	14	.002	11.288	y	11	11.305	51.305	3.54	2.217	1	H1-1b
308	M328	LL2.5x2.5x4x3	.051	5.761	18	.002	11.288	y	10	11.305	51.305	3.54	2.217	1	H1-1b
309	M258	L3 1/2x3 1/2x3/8	.003	0	12	.005	12.869	z	10	7.377	53.461	.894	3.775	1	H2-1
310	M272	L3 1/2x3 1/2x3/8	.003	0	16	.005	12.869	z	10	7.377	53.461	.894	3.775	1	H2-1
311	M286	L3 1/2x3 1/2x3/8	.003	0	12	.005	12.869	z	10	7.377	53.461	.894	3.775	1	H2-1
312	M288	L3 1/2x3 1/2x3/8	.003	0	16	.005	12.869	z	10	7.377	53.461	.894	3.775	1	H2-1
313	M236	2L2 1/2x2 1/2x1/4x3/8	.077	4.55	13	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
314	M241	2L2 1/2x2 1/2x1/4x3/8	.077	4.55	17	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
315	M248	2L2 1/2x2 1/2x1/4x3/8	.077	4.55	11	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
316	M253	2L2 1/2x2 1/2x1/4x3/8	.077	4.55	15	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
317	M262	2L2 1/2x2 1/2x1/4x3/8	.076	4.55	17	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
318	M267	2L2 1/2x2 1/2x1/4x3/8	.076	4.55	13	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
319	M276	2L2 1/2x2 1/2x1/4x3/8	.076	4.55	15	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
320	M281	2L2 1/2x2 1/2x1/4x3/8	.076	4.55	11	.004	9.1	y	10	19.135	51.305	3.58	2.271	1	H1-1b
321	M91	L2 1/2x2x3/16	.030	0	3	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
322	M94	L2 1/2x2x3/16	.028	0	9	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
323	M98	L2 1/2x2x3/16	.024	0	8	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
324	M101	L2 1/2x2x3/16	.030	0	8	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
325	M105	L2 1/2x2x3/16	.029	0	6	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
326	M108	L2 1/2x2x3/16	.025	0	6	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1
327	M112	L2 1/2x2x3/16	.029	0	4	.003	0	z	10	6.764	17.44	.176	.85	1	H2-1

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Aug 6, 2013
9:49 AM
Checked By: _____

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

Member	Shape	Code Check	Loc(ft)	LC	Shear Check	Loc(ft)	Dir	LC	Pnc/om [kl]	Pnt/om [kl]	Mnw/om [k-ft]	Mnzz/om [k-ft]	Cb	Eon
328	M115	L2 1/2x2x3/16	.029	0	4	.003	0	10	6.764	17.44	.176	.85	1	H2-1
329	M127	L2 1/2x2x3/16	.057	0	9	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
330	M130	L2 1/2x2x3/16	.059	0	3	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
331	M134	L2 1/2x2x3/16	.059	0	7	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
332	M137	L2 1/2x2x3/16	.058	0	9	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
333	M141	L2 1/2x2x3/16	.057	0	5	.003	5.469	15	5.65	17.44	.176	.826	1	H2-1
334	M144	L2 1/2x2x3/16	.057	0	7	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
335	M148	L2 1/2x2x3/16	.057	0	3	.003	5.469	14	5.65	17.44	.176	.826	1	H2-1
336	M151	L2 1/2x2x3/16	.057	0	5	.003	5.469	10	5.65	17.44	.176	.826	1	H2-1
337	M163	L2x2x3/16	.098	0	9	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
338	M166	L2x2x3/16	.101	0	3	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
339	M170	L2x2x3/16	.100	0	7	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
340	M173	L2x2x3/16	.097	0	9	.004	5.921	11	3.604	15.413	.148	.649	1	H2-1
341	M177	L2x2x3/16	.096	0	5	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
342	M180	L2x2x3/16	.094	0	7	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
343	M184	L2x2x3/16	.094	0	3	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
344	M187	L2x2x3/16	.097	0	5	.004	5.921	10	3.604	15.413	.148	.649	1	H2-1
345	M199	L2x2x3/16	.146	0	9	.004	0	10	3.093	15.413	.148	.633	1	H2-1
346	M202	L2x2x3/16	.152	0	3	.004	0	10	3.093	15.413	.148	.633	1	H2-1
347	M206	L2x2x3/16	.147	0	7	.004	0	10	3.093	15.413	.148	.633	1	H2-1
348	M209	L2x2x3/16	.137	0	9	.004	0	10	3.093	15.413	.148	.633	1	H2-1
349	M213	L2x2x3/16	.140	0	5	.004	0	10	3.093	15.413	.148	.633	1	H2-1
350	M216	L2x2x3/16	.135	0	7	.004	0	10	3.093	15.413	.148	.633	1	H2-1
351	M220	L2x2x3/16	.131	0	3	.004	0	10	3.093	15.413	.148	.633	1	H2-1
352	M223	L2x2x3/16	.140	0	5	.004	0	10	3.093	15.413	.148	.633	1	H2-1
353	M235	L2.5x2x3	.116	2.275	3	.003	0	10	4.994	17.634	.415	.805	1	H2-1
354	M240	L2.5x2x3	.115	2.275	9	.003	0	11	4.994	17.634	.415	.805	1	H2-1
355	M247	L2.5x2x3	.113	2.275	2	.003	0	10	4.994	17.634	.415	.805	1	H2-1
356	M252	L2.5x2x3	.115	2.275	7	.003	0	10	4.994	17.634	.415	.805	1	H2-1
357	M261	L2.5x2x3	.111	2.275	7	.003	0	11	4.994	17.634	.415	.805	1	H2-1
358	M266	L2.5x2x3	.112	2.275	5	.003	0	10	4.994	17.634	.415	.805	1	H2-1
359	M275	L2.5x2x3	.114	2.275	5	.003	0	15	4.994	17.634	.415	.805	1	H2-1
360	M280	L2.5x2x3	.111	2.275	3	.003	0	10	4.994	17.634	.415	.805	1	H2-1
361	M293	L2.5x2.5x4	.050	1.138	14	.001	0	9	21.666	25.653	.741	1.688	1	H2-1
362	M294	L2.5x2.5x4	.049	1.138	14	.001	2.275	12	21.666	25.653	.741	1.688	1	H2-1
363	M295	L2.5x2.5x4	.050	1.138	16	.001	0	7	21.666	25.653	.741	1.688	1	H2-1
364	M296	L2.5x2.5x4	.048	1.138	16	.001	0	3	21.666	25.653	.741	1.688	1	H2-1
365	M297	L2.5x2.5x4	.048	1.138	18	.001	0	9	21.666	25.653	.741	1.688	1	H2-1
366	M298	L2.5x2.5x4	.047	1.138	18	.001	0	5	21.666	25.653	.741	1.688	1	H2-1
367	M299	L2.5x2.5x4	.047	1.138	12	.001	0	3	21.666	25.653	.741	1.688	1	H2-1
368	M300	L2.5x2.5x4	.049	1.138	12	.001	0	7	21.666	25.653	.741	1.688	1	H2-1

Company : GPD Group
Designer : tclark
Job Number : 2013723.01.SNET013.01

Aug 6, 2013
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SNET013 MERIDIAN

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

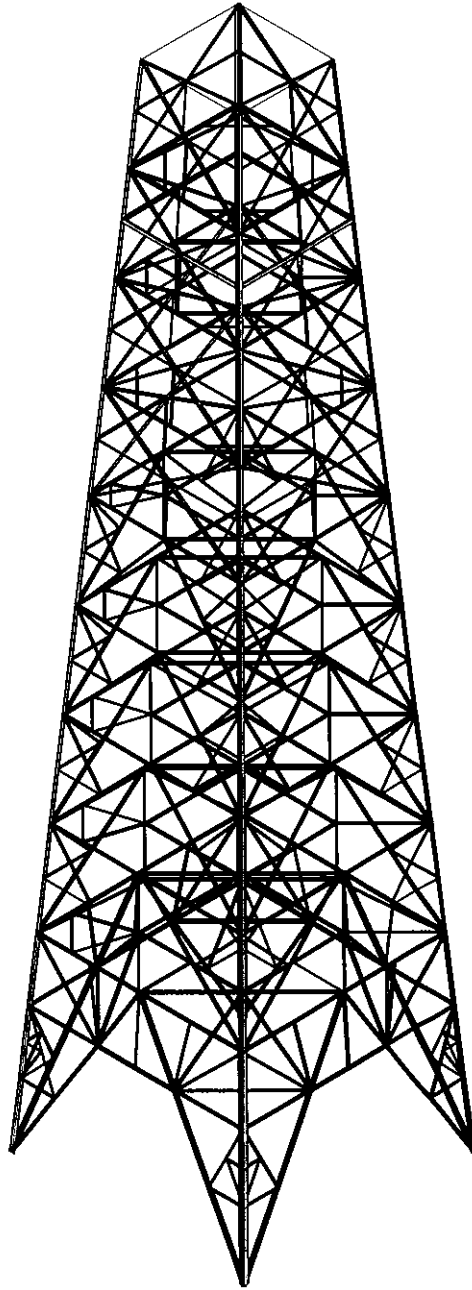
Member		Shape	Code Check		Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	Pnc/om [k]	Pnt/om [k]	Mnyy/om [k-ft]	Mnzz/om [k-ft]	Cb	Eqn
369	M301	L2.5x2.5x4	.120	2.556	12	.001	0	0	Y	12	11.689	25.653	.741	1.496	1	H2-1
370	M302	L2.5x2.5x4	.115	2.352	12	.001	0	0	Y	11	11.689	25.653	.741	1.496	1	H2-1
371	M303	L2.5x2.5x4	.120	2.556	14	.001	4.908	4.908	Y	14	11.689	25.653	.741	1.496	1	H2-1
372	M304	L2.5x2.5x4	.122	2.352	14	.001	0	0	Y	16	11.689	25.653	.741	1.496	1	H2-1
373	M305	L2.5x2.5x4	.122	2.556	16	.001	4.908	4.908	Y	17	11.689	25.653	.741	1.496	1	H2-1
374	M306	L2.5x2.5x4	.117	2.352	16	.001	0	0	Y	14	11.689	25.653	.741	1.496	1	H2-1
375	M307	L2.5x2.5x4	.117	2.556	18	.001	4.908	4.908	Y	10	11.689	25.653	.741	1.496	1	H2-1
376	M308	L2.5x2.5x4	.115	2.352	18	.001	4.908	4.908	Y	11	11.689	25.653	.741	1.496	1	H2-1
377	M244	2L2 1/2x3x1/4x3/8	.220	5.153	6	.003	0	0	Y	11	33.505	56.695	4.967	2.327	1	H1-1a
378	M256	2L2 1/2x3x1/4x3/8	.216	5.153	4	.003	0	0	Y	17	33.505	56.695	4.967	2.327	1	H1-1a
379	M270	2L2 1/2x3x1/4x3/8	.116	5.153	2	.003	0	0	Y	15	33.505	56.695	4.967	2.327	1	H1-1b
380	M284	2L2 1/2x3x1/4x3/8	.117	5.153	8	.003	0	0	Y	13	33.505	56.695	4.967	2.327	1	H1-1b
381	M413	L2.5x2.5x3	.012	3.687	17	.000	6.679	6.679	Y	10	4.898	19.423	.581	.971	1	H2-1
382	M414	L2.5x2.5x3	.012	3.687	15	.000	0	0	Y	15	4.898	19.423	.581	.971	1	H2-1
383	M415	L2.5x2.5x3	.012	3.687	11	.000	0	0	Y	12	4.898	19.423	.581	.971	1	H2-1
384	M416	L2.5x2.5x3	.012	3.687	13	.000	0	0	Y	10	4.898	19.423	.581	.971	1	H2-1
385	M409	L2.5x2.5x3	.021	3.661	13	.000	6.631	6.631	Y	14	4.969	19.423	.581	.973	1	H2-1
386	M410	L2.5x2.5x3	.021	3.661	11	.000	0	0	Y	10	4.969	19.423	.581	.973	1	H2-1
387	M411	L2.5x2.5x3	.020	3.661	15	.000	6.631	6.631	Y	10	4.969	19.423	.581	.973	1	H2-1
388	M412	L2.5x2.5x3	.020	3.661	17	.000	6.631	6.631	Y	14	4.969	19.423	.581	.973	1	H2-1
389	M405	L2.5x2.5x3	.012	3.64	17	.000	6.593	6.593	Y	11	5.027	19.423	.581	.975	1	H2-1
390	M406	L2.5x2.5x3	.012	3.64	15	.000	0	0	Y	13	5.027	19.423	.581	.975	1	H2-1
391	M407	L2.5x2.5x3	.012	3.64	13	.000	6.593	6.593	Y	11	5.027	19.423	.581	.975	1	H2-1
392	M408	L2.5x2.5x3	.012	3.64	11	.000	0	0	Y	14	5.027	19.423	.581	.975	1	H2-1
393	M401	L2.5x2.5x3	.919	1.846	15	.000	6.562	6.562	Y	15	5.074	19.423	.581	.977	1	H2-1
394	M402	L2.5x2.5x3	.864	4.716	17	.000	6.562	6.562	Y	12	5.074	19.423	.581	.977	1	H2-1
395	M403	L2.5x2.5x3	.851	4.716	11	.000	0	0	Y	13	5.074	19.423	.581	.977	1	H2-1
396	M404	L2.5x2.5x3	.904	4.716	13	.000	6.562	6.562	Y	11	5.074	19.423	.581	.977	1	H2-1
397	M309	L3x3x4	.042	3.639	18	.000	0	0	Y	15	7.085	31.042	1.123	1.884	1	H2-1
398	M310	L3x3x4	.042	3.639	12	.000	8.521	8.521	Y	14	7.085	31.042	1.123	1.884	1	H2-1
399	M311	L3x3x4	.043	3.639	18	.000	0	0	Y	15	7.085	31.042	1.123	1.884	1	H2-1
400	M312	L3x3x4	.046	3.639	16	.000	0	0	Y	15	7.085	31.042	1.123	1.884	1	H2-1
401	M313	L3x3x4	.046	3.639	16	.000	0	0	Y	12	7.085	31.042	1.123	1.884	1	H2-1
402	M314	L3x3x4	.043	3.639	14	.000	0	0	Y	10	7.085	31.042	1.123	1.884	1	H2-1
403	M315	L3x3x4	.042	3.639	14	.000	8.521	8.521	Y	18	7.085	31.042	1.123	1.884	1	H2-1
404	M316	L3x3x4	.043	3.639	12	.000	8.521	8.521	Y	15	7.085	31.042	1.123	1.884	1	H2-1
405	M317	L3x3x4	.006	3.742	4	.000	0	0	Y	10	7.369	31.042	1.123	1.897	1	H2-1
406	M318	L3x3x4	.006	3.742	2	.000	0	0	Y	11	7.369	31.042	1.123	1.897	1	H2-1
407	M319	L3x3x4	.006	3.742	6	.000	8.355	8.355	Y	12	7.369	31.042	1.123	1.897	1	H2-1
408	M320	L3x3x4	.006	3.742	8	.000	0	0	Y	17	7.369	31.042	1.123	1.897	1	H2-1

Job #:		2013723.01.SNET013.01				Bolt Checks			Date:			8/6/2013	
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	125	Diagonal	A307	0.75	5	3.4	0.680	4.42	0.154	1.333	11.5%		
		Secondary Horizontal	A307	0.75	2	0.1	0.050	4.42	0.011	1.333	0.8%		
T2	112.5	Leg	A307	0.75	16	15.4	1.925	8.84	0.218	1.333	16.3%		
		Diagonal	A307	0.75	4	5.1	1.275	4.42	0.289	1.333	21.6%		
		Horizontal	A307	0.75	3	1.2	0.400	8.84	0.045	1.333	3.4%		
		Secondary Horizontal	A307	0.75	3	0.6	0.200	4.42	0.045	1.333	3.4%		
T3	100	Diagonal	A307	0.75	5	5.5	1.100	4.42	0.249	1.333	18.7%		
		Horizontal	A307	0.75	3	1.6	0.533	8.84	0.060	1.333	4.5%		
		Secondary Horizontal	A307	0.75	2	0.2	0.100	4.42	0.023	1.333	1.7%		
T4	87.5	Leg	A307	0.75	16	32.7	4.088	8.84	0.463	1.333	34.7%		
		Diagonal	A307	0.75	4	6.8	1.700	4.42	0.385	1.333	28.9%		
		Horizontal	A307	0.75	2	3.5	1.750	8.84	0.198	1.333	14.9%		
		Secondary Horizontal	A307	0.75	2	0.2	0.100	4.42	0.023	1.333	1.7%		
T5	75	Diagonal	A307	0.75	2	8.5	4.250	8.84	0.481	1.333	36.1%		
		Horizontal	A307	0.75	3	5.0	1.667	8.84	0.189	1.333	14.1%		
T6	62.5	Leg	A307	0.75	20	50.9	5.090	8.84	0.576	1.333	43.2%		
		Diagonal	A307	0.75	2	8.6	4.300	8.84	0.487	1.333	36.5%		
		Horizontal	A307	0.75	2	6.1	3.050	8.84	0.345	1.333	25.9%		

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
T7	50	Diagonal	A307	0.75	2	8.9	4.450	8.84	0.504	1.333	37.8%
		Horizontal	A307	0.75	2	6.2	3.100	8.84	0.351	1.333	26.3%
T8	37.5	Leg	A307	0.75	24	71.8	5.983	8.84	0.677	1.333	50.8%
		Diagonal	A307	0.75	2	9.1	4.550	8.84	0.515	1.333	38.6%
		Horizontal	A307	0.75	2	6.6	3.300	8.84	0.373	1.333	28.0%
T9	25	Leg	A307	0.75	28	76.3	5.450	8.84	0.617	1.333	46.3%
		Diagonal	A307	0.75	4	17.4	4.350	8.84	0.492	1.333	36.9%
		Horizontal	A307	0.75	3	9.7	3.233	8.84	0.366	1.333	27.4%
		Anchor Rod	C1015	2	4	76.3	19.075	50.27	0.379	1.333	28.5%
										Maximum % Capacity	50.8%

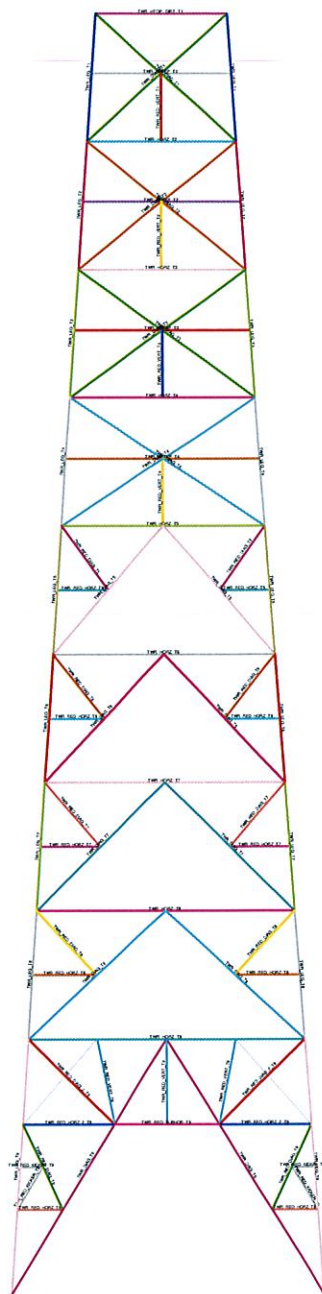
APPENDIX C

Tower Elevation Drawings



GPD Group	SNET013 MERIDAN	SK - 1
tclark		Aug 6, 2013 at 9:50 AM
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X



- Section Sets
- TWR_LEG_11
 - TWR_DIAG_11
 - TWR_RED_VERT_11
 - TWR_HSTEP_11
 - TWR_LEG_12
 - TWR_HORIZ_12
 - TWR_DIAG_12
 - TWR_RED_VERT_12
 - TWR_HSTEP_12
 - TWR_INNER_SUPP_12
 - TWR_LEG_13
 - TWR_HORIZ_13
 - TWR_INNER_SUPP_13
 - TWR_INNER_90_13
 - TWR_INNER_CORNER_13
 - TWR_DIAG_13
 - TWR_HSTEP_13
 - TWR_LEG_14
 - TWR_HORIZ_14
 - TWR_DIAG_14
 - TWR_HSTEP_14
 - TWR_RED_VERT_14
 - TWR_INNER_SUPP_14
 - TWR_LEG_15
 - TWR_HORIZ_15
 - TWR_DIAG_15
 - TWR_RED_VERT_15
 - TWR_INNER_SUPP_15
 - TWR_INNER_90_15
 - TWR_INNER_CORNER_15
 - TWR_LEG_16
 - TWR_HORIZ_16
 - TWR_DIAG_16
 - TWR_RED_VERT_16
 - TWR_INNER_SUPP_16
 - TWR_INNER_90_16
 - TWR_INNER_CORNER_16
 - TWR_LEG_17
 - TWR_HORIZ_17
 - TWR_DIAG_17
 - TWR_RED_VERT_17
 - TWR_INNER_SUPP_17
 - TWR_INNER_90_17
 - TWR_INNER_CORNER_17
 - TWR_LEG_18
 - TWR_HORIZ_18
 - TWR_DIAG_18
 - TWR_RED_VERT_18
 - TWR_INNER_SUPP_18
 - TWR_INNER_90_18
 - TWR_INNER_CORNER_18
 - TWR_LEG_19
 - TWR_HORIZ_19
 - TWR_DIAG_19
 - TWR_RED_VERT_19
 - TWR_INNER_SUPP_19
 - TWR_INNER_90_19
 - TWR_INNER_CORNER_19
 - TWR_HORIZ_19

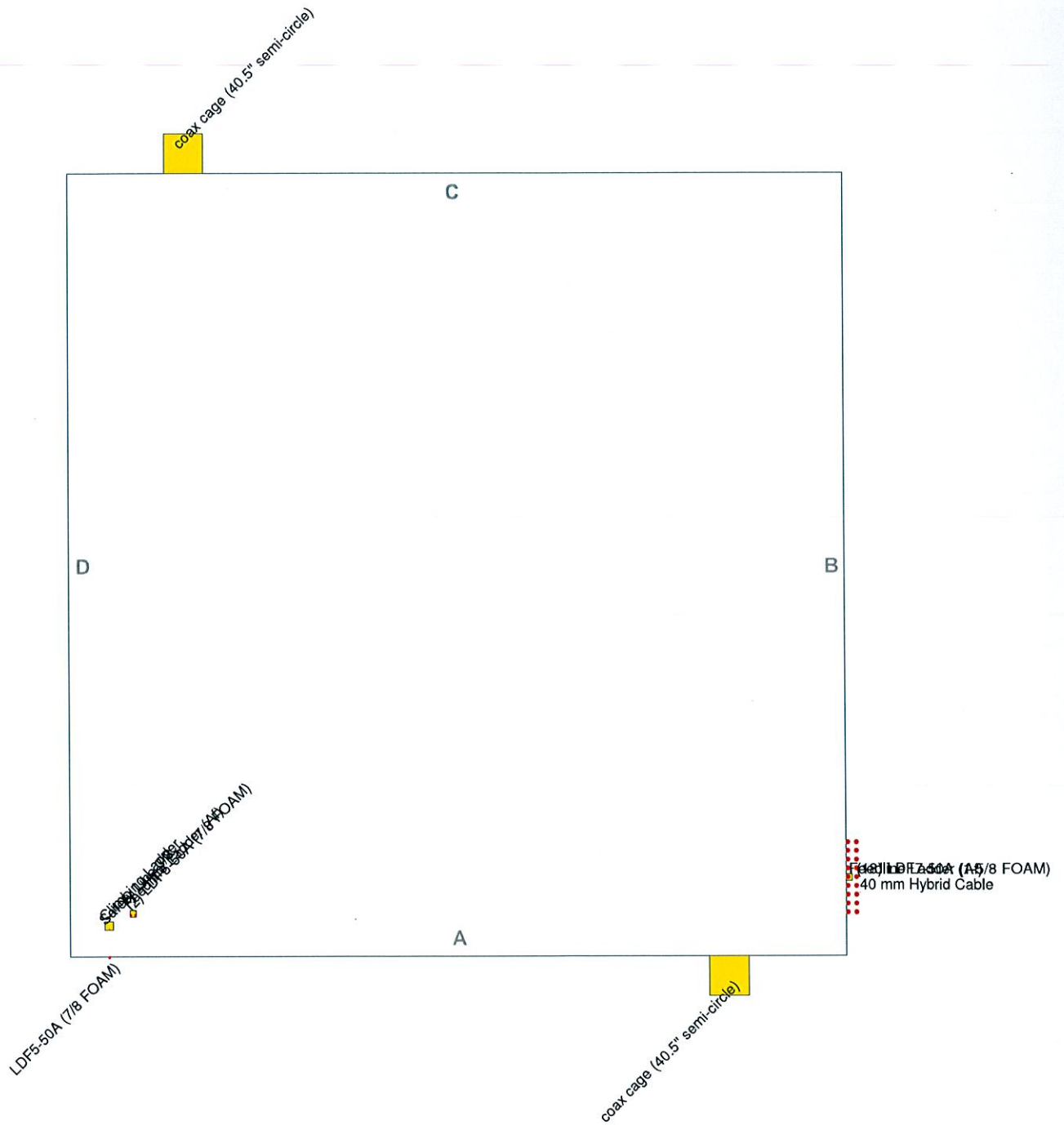
GPD Group
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SNET013 MERIDAN

SK - 2
Aug 6, 2013 at 9:50 AM
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Feedline Plan

Round Flat App In Face App Out Face



GPD Group 520 South Main Street, Ste 2531 Akron, OH Phone: (330) 572-2100 FAX: (330) 572-2101		Job: SNET013 MERIDAN Project: 2013723.01.SNET013.01		
GPD GROUP GPD Group	Client: AT&T Towers Code: TIA/EIA-222-F Path:	Drawn by: tclark Date: 08/05/13	App'd: Scale: NTS	Dwg No. E-7

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EXHIBIT C



EBI Consulting

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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11132B

Meriden I-691 - SNETLL
11 West Peak Drive
Meriden, CT 06450

August 13, 2013

EBI Project Number: 62139485



August 13, 2013

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Re: Emissions Values for Site: **CT11132B - Meriden I-691 - SNETLL**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at 11 West Peak Drive, Meriden, CT, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the cellular band is $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS band is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 11 West Peak Drive, Meriden, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, the actual antenna pattern gain value in the direction of the sample area was used. For this report the sample point is a 6 foot person standing at the base of the tower

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (1935.000 MHz—to 1945.000 MHz / 1980.000 MHz—to 1985.000 MHz) were considered for each sector of the proposed installation.
- 2) 2 UMTS channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 3) 2 LTE channels (2110.000 MHz to 2120.000 MHz / 2140.000 MHz to 2145.000 MHz) were considered for each sector of the proposed installation
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
- 6) The antenna used in this modeling is the Ericsson AIR21 for LTE, UMTS and GSM. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.6 dBd gain value at its main lobe. Actual antenna gain values were used for all calculations as per the manufacturers specifications



EBI Consulting

environmental | engineering | due diligence

- 7) The antenna mounting height centerline of the proposed antennas is **127 feet** above ground level (AGL)
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT111328 - Meriden I-691 - SNETLL
Site Address	11 West Peak Drive, Meriden, CT 06450
Site Type	Self Support Tower

Sector 1

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	127	121	None	0	0	48.326044	1.186633	0.118666%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	127	121	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
Sector total Power Density Value: 0.237%																	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	127	121	None	0	0	48.326044	1.186633	0.118666%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	127	121	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
Sector total Power Density Value: 0.237%																	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Status	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBi)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	Ericsson	AIR21 B4A/B2P	Active	AWS - 2100 MHz	LTE	60	2	120	-3.95	127	121	None	0	0	48.326044	1.186633	0.118666%
1b	Ericsson	AIR21 B4A/B2P	Not Used	-	-	30	2	60	-3.95	127	121	None	0	0	0	0	0.00000%
2a	Ericsson	AIR21 B2A / B4P	Active	PCS - 1950 MHz	GSM / UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
28	Ericsson	AIR21 B2A / B4P	Passive	AWS - 2100 MHz	UMTS	30	2	60	-3.95	127	121	1-5/8"	0	0	24.163022	0.593317	0.059333%
Sector total Power Density Value: 0.237%																	

Site Composite MPE %	
Carrier	MPE %
T-Mobile	0.712%
PageNET	5.410%
SNET - TMRS	3.130%
XM	1.190%
Arrow Bus	Arrow Bus
Total Site MPE %	10.442%

Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the T-Mobile facility are **0.712% (0.237% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **10.442%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were within the allowable 100% threshold standard per the federal government.



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