

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

www.ct.gov/csc

November 7, 2005

Steven Levine
Real Estate Consultant
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-168-051025** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 186 Minortown Road, Woodbury, Connecticut.

Dear Mr. Levine:

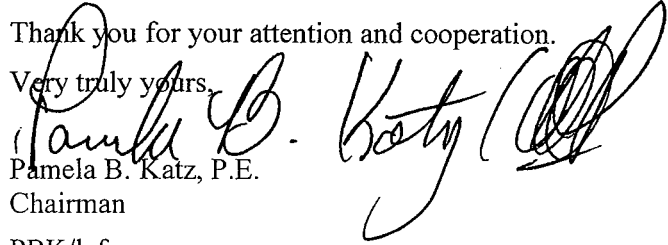
At a public meeting held on November 3, 2005, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the baseplate is reinforced with stiffeners per drawing Drawing S-01, Revision 0, of the structural analysis report dated September 15, 2005 and sealed by Robert Semaan, P.E. prior to the antenna installation and that a signed letter from a Professional Engineer is provided to the Council to certify that the reinforcement has been properly completed.

The proposed modifications are to be implemented as specified here and in your notice dated October 25, 2005, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,


Pamela B. Katz, P.E.

Chairman

PBK/laf

c: The Honorable Richard W. Crane, First Selectman, Town of Woodbury
Mark DeVoe, Town Planner, Town of Woodbury
Global Signal Acquisitions II LLC
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Kenneth C. Baldwin, Esq., Robinson & Cole LLP
Christopher B. Fisher, Esq., Cuddy and Feder LLP
AllTel Communications

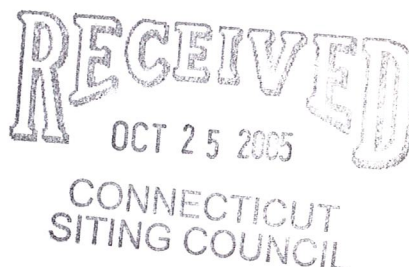


ORIGINAL



New Cingular Wireless PCS, LLC
500 Enterprise Drive Rocky Hill,
Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

October 25, 2005



Ms. Pam Katz, Chairman, and
Members of the Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Notice of Exempt Modification – Existing Global Signal Tower Facility at 186 Minortown Road, Woodbury, Connecticut

Dear Chairman Katz and Members of the Council:

New Cingular Wireless PCS, LLC (“Cingular”) intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower off Minortown Road in Woodbury, Connecticut. Please accept this letter as notification to the Council, 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 copy of this letter is being sent to the 1st Selectman of Woodbury.

Existing Facility

The Woodbury facility is located at 186 Minortown Road, which lies approximately ½ mile east of US Hwy 6, about 2 miles north east of the intersection of US Hwy 6 and CT Rte 47. Tower coordinates (NAD 83) are N 41° 34’ 05” and W 73° 10’ 47”.

The facility is controlled and operated by Global Signal Acquisitions II LLC (“Global”), 301 N. Cattlemen Road, Sarasota Florida 34222.

The New Milford facility was initially approved by the Council on June 19, 2003 in Docket 235 under an application by Sprint PCS, which has since leased the entire site to Global for management. AT&T Wireless co-located on the tower as an intervenor. As a condition of federal approvals for the merger between AT&T Wireless and Cingular, however, the AT&T installation has been divested, and the AT&T antennas and equipment at the site are now owned and operated by Alltel. Cingular, therefore, must now co-locate separately on this tower to maintain wireless coverage in the Woodbury area.

The tower facility consists of a 110-foot monopole within a 20 ft x 30 ft compound surrounded by a chain link fence. Sprint, Verizon, and AllTel currently operate wireless communications equipment at the facility.

Proposed Modifications

Cingular operates under licenses issued by the Federal Communications Commission ("FCC") to provide cellular and PCS mobile telephone service in Litchfield County, which includes the area to be served by Cingular's proposed installation.

Attached to this Notice are a site location map, a site plan, tower profile, and a structural analysis report that shows the tower will be structurally capable of supporting the proposed Cingular telecommunications equipment after completion of recommended modifications.

As shown on the attached drawings and as further described below, Cingular proposes to install up to six 55"-high Powerwave 7770.00-panel antennas, or their functional equivalents, at a centerline height of 80 feet above ground level. Cingular also proposes to place an 11½' x 20' prefabricated concrete equipment building in the existing compound at the base of the tower.

Statutory Considerations

The changes to the Woodbury tower facility do not constitute a modification as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility 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) because they will not result in any substantial adverse environmental effect.

1. The height of the overall structure will be unaffected.
2. The proposed changes will not affect the property boundaries. All new construction will take place on property leased by Global Signal and within the existing fence.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more.
4. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the tower in relation to the operation of the proposed antenna array is as follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density † (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Verizon *	110	1970	3	200	0.0178	1.0000	1.78
Sprint *	100	1962.5	11	250	0.0989	1.0000	9.89
Alltel *	90	878	1	282	0.0125	0.5853	2.14
Cingular	80	880 - 894	6	296	0.0998	0.5867	17.01
Cingular	80	1930 - 1935	3	427	0.0720	1.0000	7.20
Total							38.01%

* Power density parameters from Siting Council records.

† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the cumulative "worst-case" exposure would be approximately 38 % of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels resulting from Cingular's use of the tower facility would thus be within applicable standards.

For the foregoing reasons, Cingular respectfully submits that proposed changes at the Woodbury site constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call Mark Appleby at (860) 513-7536 or Christopher Fisher, Esq. at (914) 761-1300 with questions concerning this notice. Thank you for your consideration in this matter.

Respectfully yours,

Steven Levine
Real Estate Consultant

Enclosures

cc: Honorable Richard W. Crane, 1st Selectman, Town of Woodbury
Michele G. Briggs, Manager of Real Estate
Christopher B. Fisher, Esq.

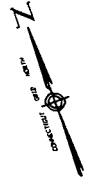
Minortown Road, Woodbury



© 2000 DeLorme, Street Atlas USA; © 2000 GDT, Inc., Rel. 04/2000

Mag 14.00
 Thu Oct 20 15:56 2005
 Scale 1:31,250 (at center)
 2000 Feet
 1000 Meters

- Local Road
- State Route
- Trail
- US Highway
- Small Town
- Summit
- Locale
- Cemetery
- County Boundary
- Population Center
- Water
- Woodland
- River/Canal



EXISTING VERIZON WIRELESS
12'-0" x 30'-0" EQUIPMENT
SHELTER WITH DIESEL
GENERATOR

EXISTING COMPOUND AREA

EXISTING ALTEL SERVICE
BACKBOARD

EXISTING ALTEL EQUIPMENT
CABINETS ON CONCRETE
PAD AND ICE BRIDGE

EXISTING TREE
(TYP.)

PROPOSED CINGULAR
WIRELESS ICE BRIDGE

PROPOSED CINGULAR
WIRELESS GPS MOUNTED
ON ICE BRIDGE POST.

PROPOSED CINGULAR
WIRELESS 11'-6" x 20'-0"
EQUIPMENT SHELTER.

EXISTING ACCESS GATE

EXISTING ACCESS DRIVE

EXISTING MULTI-METER CENTER

EXISTING TELCO ENCLOSURE

EXISTING BOLLARD
(TYP.)

EXISTING TREE
(TYP.)

EXISTING 110'-0"
MONOPOLE

EXISTING SPRINT PCS
EQUIPMENT PAD

EXISTING SPRINT
PCS PPC

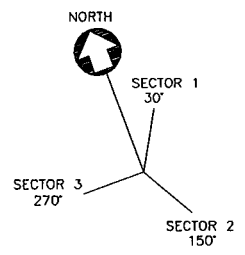
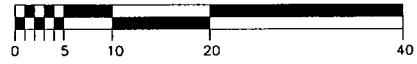
EXISTING CHAIN LINK
FENCE

SEDIMENTATION
CONTROL BARRIER-
REMOVE UPON
COMPLETION OF
CONSTRUCTION

PROPOSED CINGULAR
WIRELESS
UNDERGROUND
ELECTRICAL AND TELCO
ROUTING

EXISTING PAD MOUNTED
TRANSFORMER

1 **COMPOUND PLAN**
L-1 SCALE: 1" = 20'-0"



ANTENNA ORIENTATION KEY

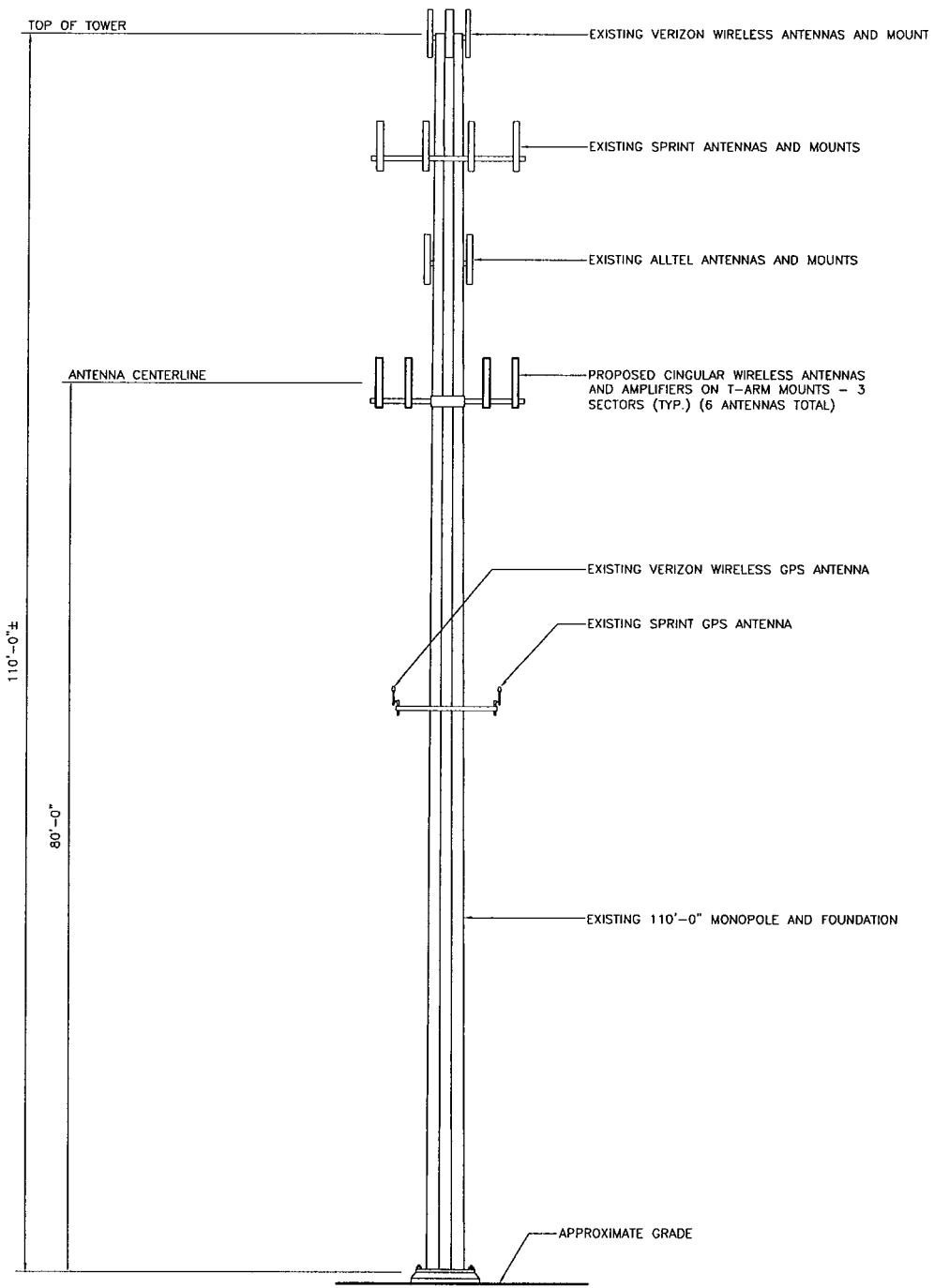
PROJECT NO.
36921780
Designed by:
Drawn by: WRB
Checked by:
Approved by:

URS CORPORATION
500 ENTERPRISE DRIVE
SUITE 3B
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

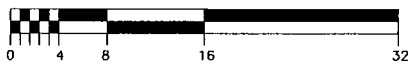
cingular
WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODBURY
186 MINORTOWN ROAD
WOODBURY, CONNECTICUT

REV.	DATE	DESCRIPTION
2	10-21-05	REVISED
1	09-14-05	FLUSH ANTENNA
Scale: AS NOTED		Date: 09-12-05
Job No. CW1 061		File No.

Dwg. No.
L-1
Dwg. 1 of 2



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



PROJECT NO.
36921780
Designed by:
Drawn by: WRB
Checked by:
Approved by:

URS CORPORATION
500 ENTERPRISE DRIVE
SUITE 3B
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

cingular
WIRELESS
WIRELESS COMMUNICATIONS FACILITY
WOODBURY
SITE ADDRESS: 186 MINORTOWN ROAD
WOODBURY, CONNECTICUT

△	10-21-05	REVISED
△	09-14-05	FLUSH ANTENNA
REV.	DATE:	DESCRIPTION
Scale: AS NOTED		Date: 09-12-05
Job No. CW1 061		File No.

Dwg. No.
L-2
Dwg. 2 of 2

KC

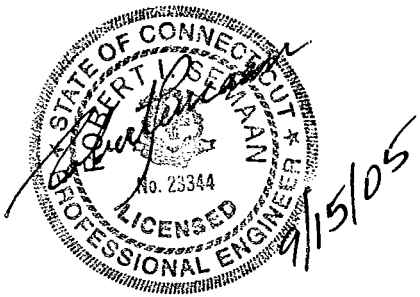
1079 N. 204th Avenue
Elkhorn, NE 68022
Ph: 402-289-1888
Fax: 402-289-1861

SEMAAN ENGINEERING SOLUTIONS

**110 ft EEI Monopole
Structural Analysis and
Baseplate Modification Package**

**Prepared for:
Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232**

**Site: 3017725 / CT54XC771
Cingular
Woodbury, CT**



September 15, 2005

Ms. Laura Rectenwal
Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232

Re: Site Number 3017725 / CT54XC771 –Woodbury, CT.

Dear Ms. Rectenwal:

We have completed the structural analysis for the existing monopole, located at the above referenced site. The purpose of this analysis is to determine that the existing monopole design is in conformance with the EIA/TIA-222-F standard and local building codes for the proposed antennae loads installation. Refer to the Review and Recommendations section at the end of this report for the analysis results.

Description of Structure:

The structure is a 110 ft EEI Monopole.

Refer to EEI job #11560 Rev. 1 dated February 18, 200 for a detailed description of the structure.

Method of analysis:

The tower was analyzed using Semaan Engineering Solutions' software suite for communication structures. The structural analysis is performed using the SAPS finite element engine. The method is 3D, non-linear, which accounts for the second order geometric effects due to the displacements. The analysis was performed in conformance with **EIA/TIA-222-F and local building codes for a basic wind speed of 80 mph and 1/2" radial ice with reduced wind speed (fastest mile)**. This is in conformance with the IBC 2003: Section 1609.1.1, Exception (5) and Section 3108.4. Wind is applied to the structure, accessories and antennas.

Structure loading:

Per the loading sheet supplied, the analysis was performed using the following loading: (Proposed loading in bold)

Elev. (ft)	Qty	Antennas and Mounts	Coax	Owner
110.0	2	DB932DG65T2E-M on flush mounts	(2) 1-5/8	Verizon
	1	DB932DG65E-M on a flush mount	(1) 1-5/8	
100.0	9	DB980F90 On a EEI 12' Low Profile platform	(9) 1-5/8	Sprint
90.0	6	Allgon 7250 On a EEI 12' Low Profile platform	(12) 1-1/4	AT&T
78.0	6	LGP TMAs On (3) T-Arms	-	Cingular
	6	Powerwave 7770 On the same (3) T-Arms	(12) 1-5/8	

**All new access holes shall be reinforced with welded rims that are compatible with the pole and to be sized and supplied by pole manufacturer.
All transmission lines are assumed running inside of pole shaft.**

Results of Analysis:

Refer to the attached Computer Summary sheets for detailed analysis results.

Structure:

The existing monopole is not structurally capable of supporting the existing and proposed antennas. The baseplate is overstressed and will require stiffeners. Refer to the attached drawing for additional information.

The maximum shaft usage is: 78.3%.

The maximum baseplate usage is: 107% (without stiffeners) 45.0% (with stiffeners).

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	864.50	746.11	86.3
Shear (kips)	11.53	9.86	85.6

The analysis reactions are less than the design reactions therefore no foundation modifications are required.

Review and Recommendations:

Based on the analysis results, the existing structure does not meet the requirements per the EIA/TIA-222-F standards for a basic wind speed of 80 mph and 1/2" radial ice with reduced wind speed. Only after the stiffeners have been installed and approved per the attached drawings will the monopole meet these requirements.

Attachment:

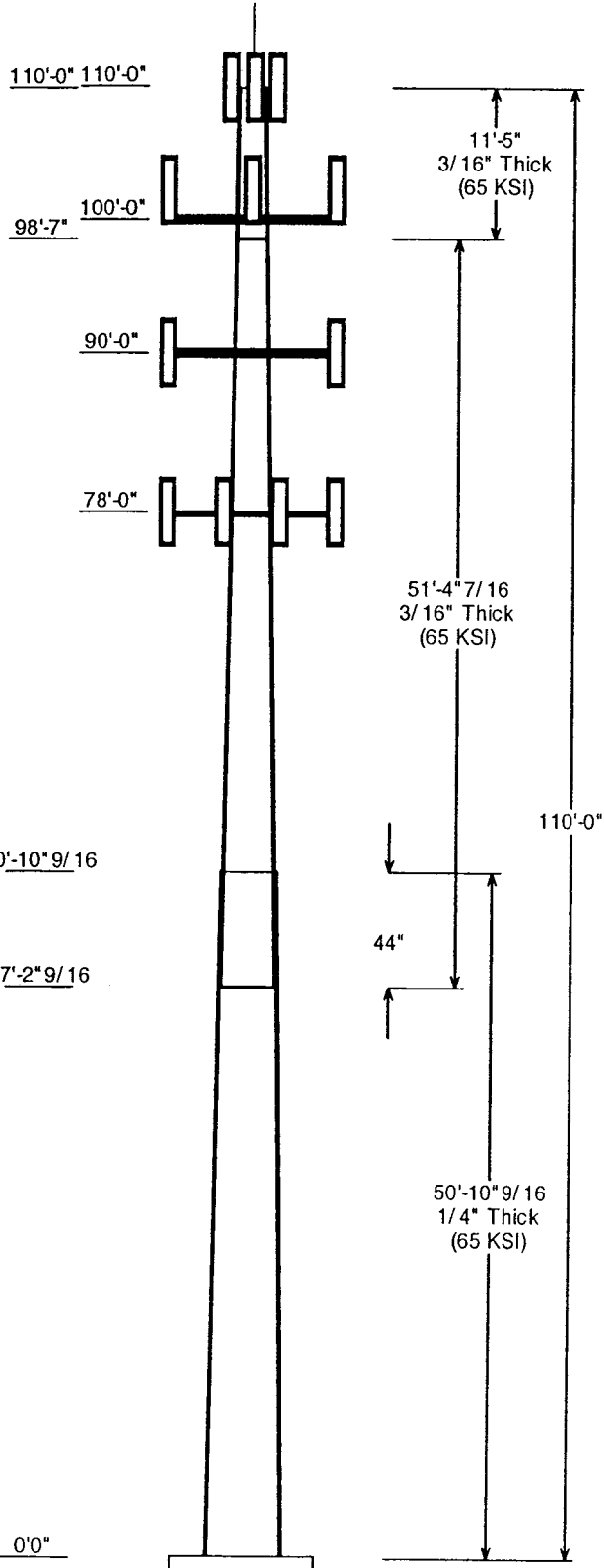
Drawing S-01, Revision 0, dated 09/15/2005.

SEMAAN ENGINEERING SOLUTIONS

1079 N.204th Avenue
 Elkhorn, NE 68022
 Phone: 402-289-1888
 Fax: 402-289-1861

Copyright Semaan Engineering Solutions, Inc

Job Information	
Pole :	CT54XC771
Description :	
Client :	Global Signal
Location :	3017725 - Woodbury, CT
Type :	18 Sides
Base Elev (ft):	1.50
Height :(ft)	110.00
Taper:	0.199320 (in/ft)



Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in) Type	Overlap		Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom		Length (in)	Taper (in/ft)	
1	50.880	24.10	34.25	0.250	0.000	0.199320	65
2	51.370	14.97	25.21	0.188 Slip Joint	44.000	0.199320	65
3	11.417	12.70	14.97	0.188 Butt Joint	0.000	0.199320	65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
110.000	113.000	1	5/8" Lightning Rod
110.000	110.000	1	DB932DG65E-M
110.000	110.000	2	DB932DG65T2E-M
110.000	110.000	3	Flush Mounts
100.000	100.000	1	EEl 12' Low Profile platform
100.000	101.500	9	DB980F90
90.000	90.000	6	Allgon 7250
90.000	90.000	1	EEl 12' Low Profile platform
78.000	78.000	6	Powerwave 7770
78.000	78.000	3	T-Arms
78.000	78.000	6	LGP TMAs

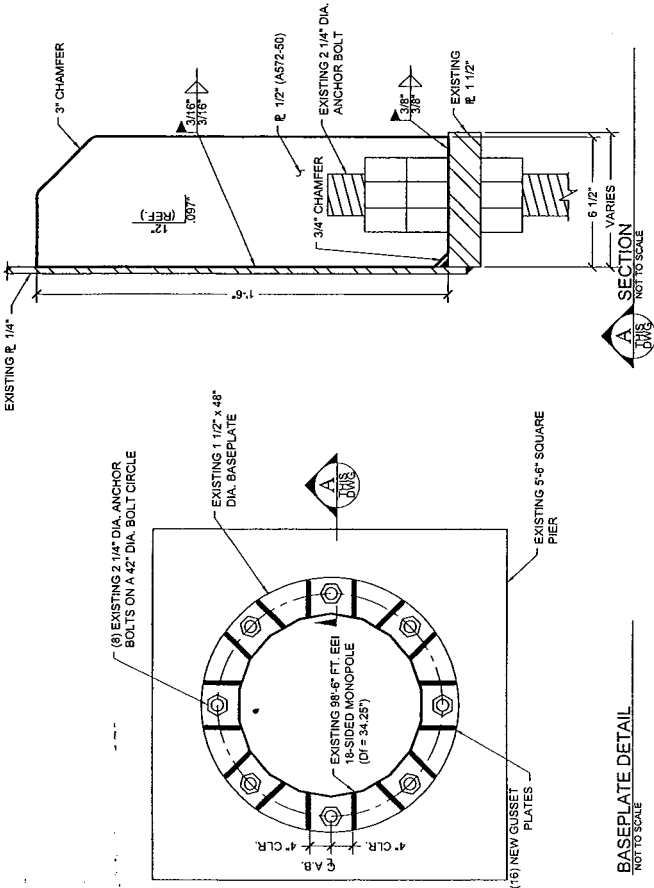
Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
80.00 mph Wind w/ No Ice	746.112	9.864	-10.287
69.28 mph Wind w/ 0.50 in Ice	652.239	8.341	-13.722

NOTES AND SPECIFICATIONS

- GENERAL:**
1. THE MODIFICATIONS OUTLINED IN THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE EMITA REV. F CODE.
 2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO AND EXISTING LOADS CONSIDERED. THIS DRAWING IS NOT VALID IF LOADS OTHER THAN THOSE CONSIDERED IN THE ANALYSIS ARE ADDED TO OR REMOVED FROM THE TOWER UNLESS APPROVED IN WRITING BY SES, INC.
 3. THE PROPOSED LOADS SHALL NOT BE ADDED TO THE STRUCTURE UNTIL ALL MODIFICATIONS ARE MADE AND WORK ON THE STRUCTURE IS COMPLETE.
 4. THE CONTRACTOR SHALL TAKE CARE IF THE WIND SPEED DOES NOT EXCEED 20 MPH.
 5. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION THE CONTRACTOR SHALL SUPERVISE AND DETECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
 6. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT SEMAN ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION AND WELDING TO THE GREATEST EXTENT POSSIBLE.
3. IF THE STRUCTURE WAS ORIGINALLY PAINTED, AFTER ZINC-RICH PAINT IS DRY, OVERCOAT WITH AN APPROPRIATE PAINT WITH THE SAME COLOR AS THE PALE.
4. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON DRAWINGS.
5. ALL WELDING SHALL BE DONE USING ER70X ELECTRODES.
6. ALL WELDING SHALL CONFORM TO AISC AND AWS D11 LATEST EDITION.
7. THE WELDER(S) SHOULD BE CERTIFIED FOR THE METHODS AND POSITIONS TO BE USED AND SHOULD HAVE EXPERIENCE WELDING GALVANIZED MATERIALS.
8. ALL WELDING SHALL BE DONE AS SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION.
9. ALL EXISTING GALVANIZING IN WELD AREAS SHALL GROUND OFF PRIOR TO WELDING.
10. ALL WELDS SHALL BE INSPECTED VISUALLY. 25 % OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100 % IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1.
11. INSPECTION SHALL BE PERFORMED BY A QUALIFIED WELD INSPECTOR.
12. BOLTS SHALL BE TIGHTENED TO A "SAUG TIGHT" CONDITION AS DEFINED BY AISC.



BASEPLATE DETAIL
NOT TO SCALE



Semaan Engineering Solutions, Inc.

Phone Number: 402/283-1888 Fax Number: 402/283-1881
Address: 1079 N. 204th Avenue, Elkhorn, Nebraska 68022

PROJECT NUMBER: 3017725/
C/BAKCT/1

DATE: 09/14/05 REFERENCE DRAWING: NONE CLIENT: WOODBURY, CT

0 09/14/05 ISSUE FOR CONSTRUCTION T.S.T.

REVISION DESCRIPTION DRAWING DESCRIPTION

GLOBAL SIGNAL BASEPLATE AND GUSSET DRAWINGS SHEET NUMBER: S-01



New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

October 25, 2005

Honorable Richard W. Crane
1st Selectman, Town of Woodbury
Town Hall 275 Main St. South
Woodbury, Connecticut 06798

**Re: Notice of Exempt Modification – Existing Global Signal Tower Facility at 186
Minortown Road, Woodbury, Connecticut**

Dear Mr. Crane:

New Cingular Wireless PCS, LLC (“Cingular”) intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at 478 Minortown Road in Woodbury, Connecticut.

The facility is controlled and operated by Global Signal Acquisitions II LLC (“Global”), 301 N. Cattlemen Road, Sarasota Florida 34222.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73. Please accept this letter as notification to the Town of Woodbury 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 attached letter fully sets forth the Cingular 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 or Mr. Derek Phelps, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

Steven Levine
Real Estate Consultant

Enclosure

KC

1079 N. 204th Avenue
Elkhorn, NE 68022
Ph: 402-289-1888
Fax: 402-289-1861

SEMAAN ENGINEERING SOLUTIONS

EM-CING-168-051025

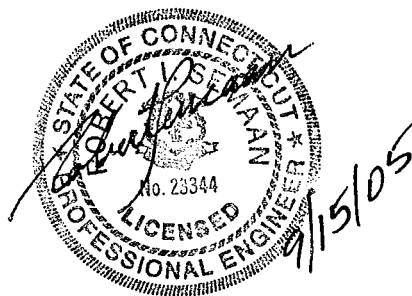
110 ft EEI Monopole Structural Analysis and Baseplate Modification Package

Prepared for:
Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232

RECEIVED
OCT 25 2005

CONNECTICUT
SITING COUNCIL

Site: 3017725 / CT54XC771
Cingular
Woodbury, CT



September 15, 2005

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Global Signal
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232

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The existing monopole is not structurally capable of supporting the existing and proposed antennas. The baseplate is overstressed and will require stiffeners. Refer to the attached drawing for additional information.

The maximum shaft usage is: 78.3%.

The maximum baseplate usage is: 107% (without stiffeners) 45.0% (with stiffeners).

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	864.50	746.11	86.3
Shear (kips)	11.53	9.86	85.6

The analysis reactions are less than the design reactions therefore no foundation modifications are required.

Review and Recommendations:

Based on the analysis results, the existing structure does not meet the requirements per the EIA/TIA-222-F standards for a basic wind speed of 80 mph and 1/2" radial ice with reduced wind speed. Only after the stiffeners have been installed and approved per the attached drawings will the monopole meet these requirements.

Attachment:

Drawing S-01, Revision 0, dated 09/15/2005.

ONS

SE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE EIA/TIA REV. F

RY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO

NG SOLUTIONS ANALYSIS FOR THIS SITE DATED 09/15/04 FOR THE PROPOSED THIS DRAWING IS NOT VALID IF LOADS OTHER THAN THOSE CONSIDERED IN MOVED FROM THE TOWER UNLESS APPROVED IN WRITING BY SES, INC. OR. ADDED TO THE STRUCTURE UNTIL ALL MODIFICATIONS ARE MADE AND

ILY TAKE PLACE IF THE WIND SPEED DOES NOT EXCEED 20 MPH. IE METHOD OF CONSTRUCTION THE CONTRACTOR SHALL SUPERVISE AND SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, TECHNIQUES,

L DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT SEMAAN E, EXIST. D:

1 TO THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, FOR THE COMPONENTS.

3 GALVANIZED IN ACCORDANCE WITH ASTM A123 AND AS FOLLOWS, UNLESS

D AFTER SHOP FABRICATION AND WELDING TO THE GREATEST EXTENT

ELDS IN THE GALVANIZED AREA SHALL BE COATED WITH A ZINC-RICH PAINT, WITH MANUFACTURER'S RECOMMENDATIONS.

7 PAINTED, AFTER ZINC-RICH PAINT IS DRY, OVERCOAT WITH AN APPROPRIATE IE POLE.

CTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON DRAWINGS. ED AS FOLLOWS:

3 E70XX ELECTRODES.

AISC AND AWS D1.1 LATEST EDITION.

ED FOR THE METHODS AND POSITIONS TO BE USED AND SHOULD HAVE MATERIALS.

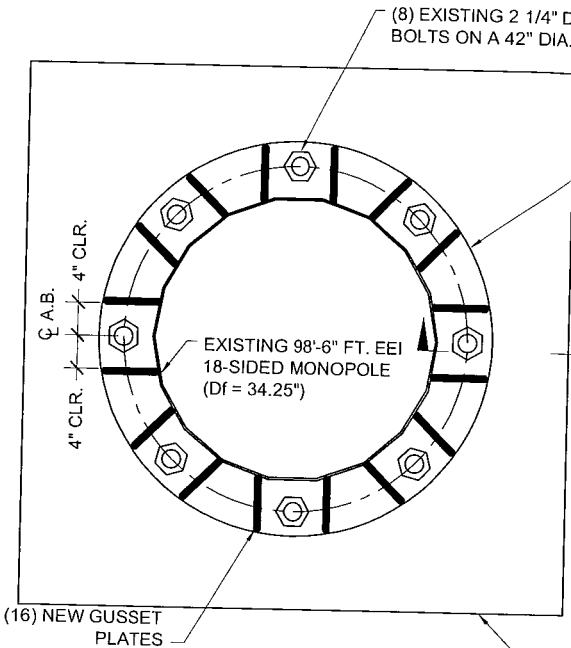
T SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC MANUAL OF ON.

3 AREAS SHALL GROUND OFF PRIOR TO WELDING.

SUALLY, 25 % OF WELDS SHALL BE INSPECTED WITH DYE PENETRATE OR (TABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS ARY.

EXISTIN BY A QUALIFIED WELD INSPECTOR.

PIER "TUG TIGHT" CONDITION AS DEFINED BY AISC.



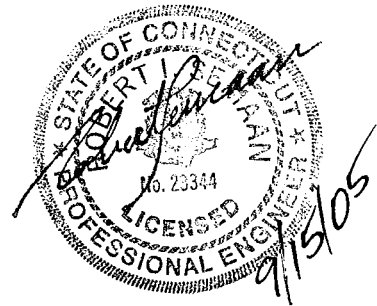
Q A.B.

4" CLR. 4" CLR.

EXISTING 98'-6" FT. EEI 18-SIDED MONOPOLE (Df = 34.25")

(16) NEW GUSSET PLATES

BASEPLATE DETAIL NOT TO SCALE



Seman Engineering Solutions, Inc.

Number: (402)289-1888 Fax Number: (402)289-1861 1079 N. 204th Avenue, Elkhorn Nebraska 68022

PROJECT NUMBER

3017725/
CT54XC771

DATE:

09/14/05

REFERENCE DRAWING

NONE

SITE LOCATION

WOODBURY, CT

05 ISSUE FOR CONSTRUCTION

TLT

REVISION DESCRIPTION

BY

CHK

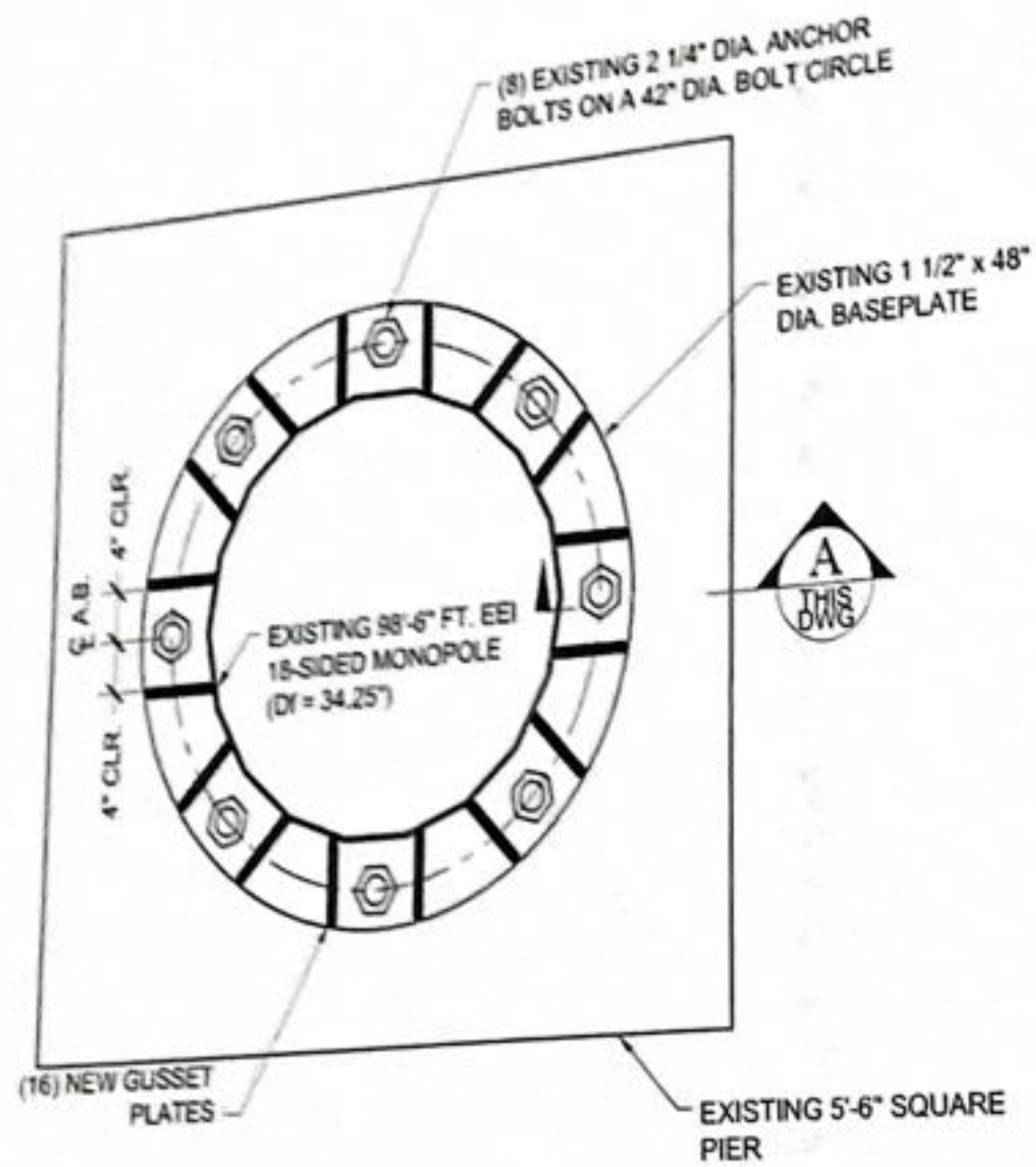
DRAWING DESCRIPTION

SHEET NUMBER

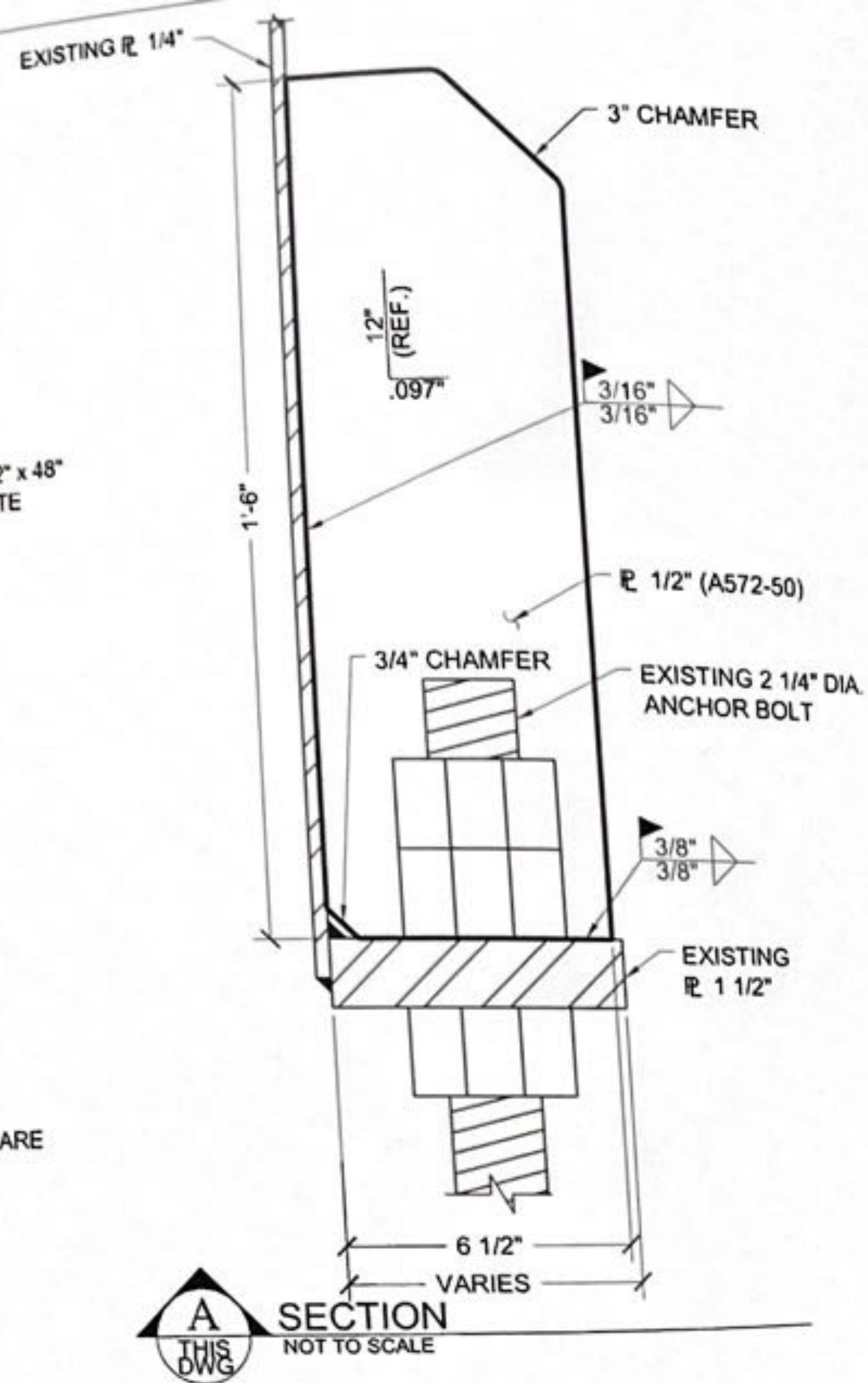
GNAL

BASEPLATE AND GUSSET DRAWINGS

S-01



BASEPLATE DETAIL
NOT TO SCALE



NOTES AND SPECIFICATIONS

GENERAL:

1. THE MODIFICATIONS OUTLINED IN THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE EIA/TIA REV. F CODE.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO FABRICATION.
3. REFERENCE THE SEMAAN ENGINEERING SOLUTIONS ANALYSIS FOR THIS SITE DATED 09/15/04 FOR THE PROPOSED AND EXISTING LOADS CONSIDERED. THIS DRAWING IS NOT VALID IF LOADS OTHER THAN THOSE CONSIDERED IN THE ANALYSIS ARE ADDED TO OR REMOVED FROM THE TOWER UNLESS APPROVED IN WRITING BY SES, INC.
4. THE PROPOSED LOADS SHALL NOT BE ADDED TO THE STRUCTURE UNTIL ALL MODIFICATIONS ARE MADE AND APPROVED BY THE WELDING INSPECTOR.
5. WORK ON THIS STRUCTURE SHALL ONLY TAKE PLACE IF THE WIND SPEED DOES NOT EXCEED 20 MPH.
6. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION THE CONTRACTOR SHALL SUPERVISE AND DETECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
7. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT SEMAAN ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 AND AS FOLLOWS, UNLESS OTHERWISE NOTED.
 - A. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION AND WELDING TO THE GREATEST EXTENT POSSIBLE.
 - B. ALL DINGS, SCRAPES, MARS AND WELDS IN THE GALVANIZED AREA SHALL BE COATED WITH A ZINC-RICH PAINT, APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - C. IF THE STRUCTURE WAS ORIGINALLY PAINTED, AFTER ZINC-RICH PAINT IS DRY, OVERCOAT WITH AN APPROPRIATE PAINT WITH THE SAME COLOR AS THE POLE.
3. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON DRAWINGS.
4. CONNECTIONS SHALL BE CONSTRUCTED AS FOLLOWS.
 - A. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES.
 - B. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
 - C. THE WELDER(S) SHOULD BE CERTIFIED FOR THE METHODS AND POSITIONS TO BE USED AND SHOULD HAVE EXPERIENCE WELDING GALVANIZED MATERIALS.
 - D. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION.
 - E. ALL WELDS SHALL BE INSPECTED VISUALLY. 25 % OF WELDS SHALL BE INSPECTED WITH DYE PENETRATE OR MAGNETIC PARTICLE (100 % IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1 REPAIR ALL WELDS AS NECESSARY.
 - F. INSPECTION SHALL BE PERFORMED BY A QUALIFIED WELD INSPECTOR.
5. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.



Semaan Engineering Solutions, Inc.			
Phone Number: (402)289-1888 Fax Number: (402)289-1861		Address: 1079 N. 204th Avenue, Elkhorn Nebraska 68022	
DRAWN BY	DATE	REFERENCE DRAWING	PROJECT NUMBER
KRC	09/14/05	NONE	3017725/ CT54XC771
REV #	DATE	REVISION DESCRIPTION	SITE LOCATION
0	09/15/05	ISSUE FOR CONSTRUCTION	WOODBURY, CT
CLIENT	DRAWING DESCRIPTION		BY
GLOBAL SIGNAL	BASEPLATE AND GUSSET DRAWINGS		CHK
SHEET NUMBER			S-01

SEMAAN ENGINEERING SOLUTIONS

1079 N.204th Avenue
 Elkhorn, NE 68022
 Phone: 402-289-1888
 Fax: 402-289-1861

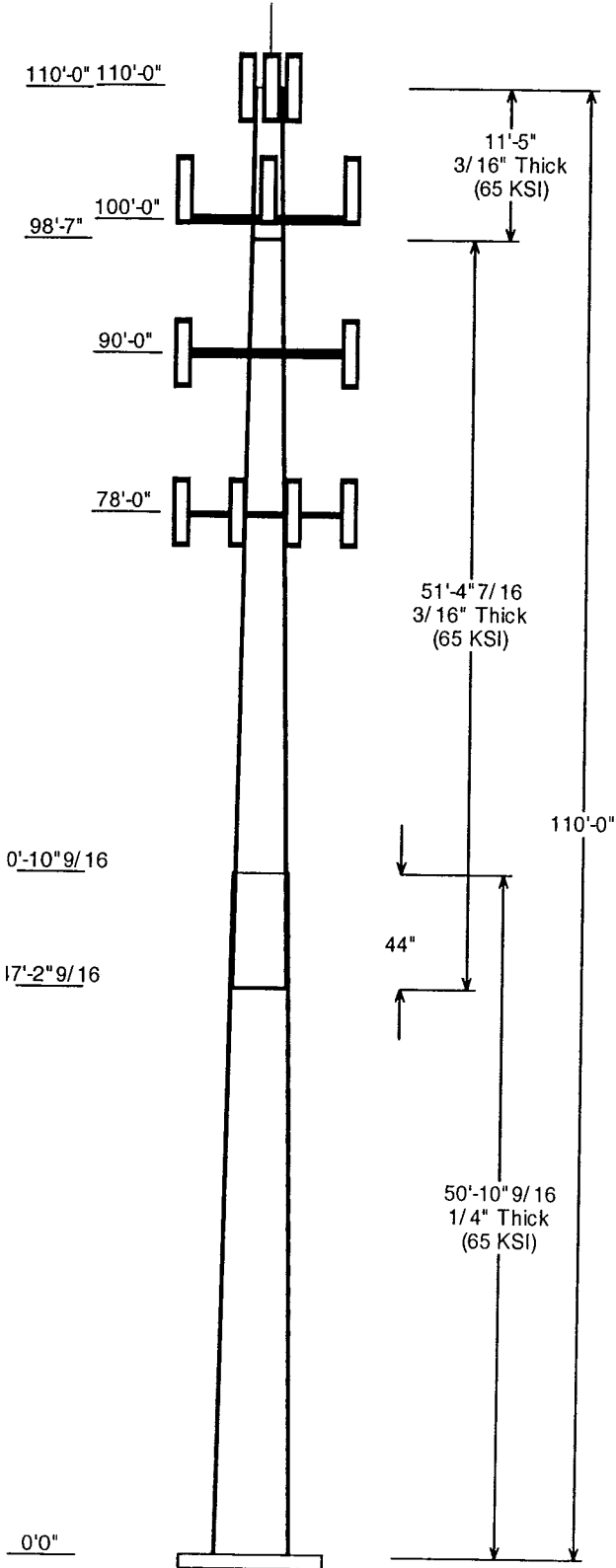
Copyright Semaan Engineering Solutions, Inc

Job Information	
Pole :	CT54XC771
Description :	
Client :	Global Signal
Location :	3017725 - Woodbury, CT
Type :	18 Sides
Base Elev (ft):	1.50
Height :(ft)	110.00
Taper:	0.199320 (in/ft)

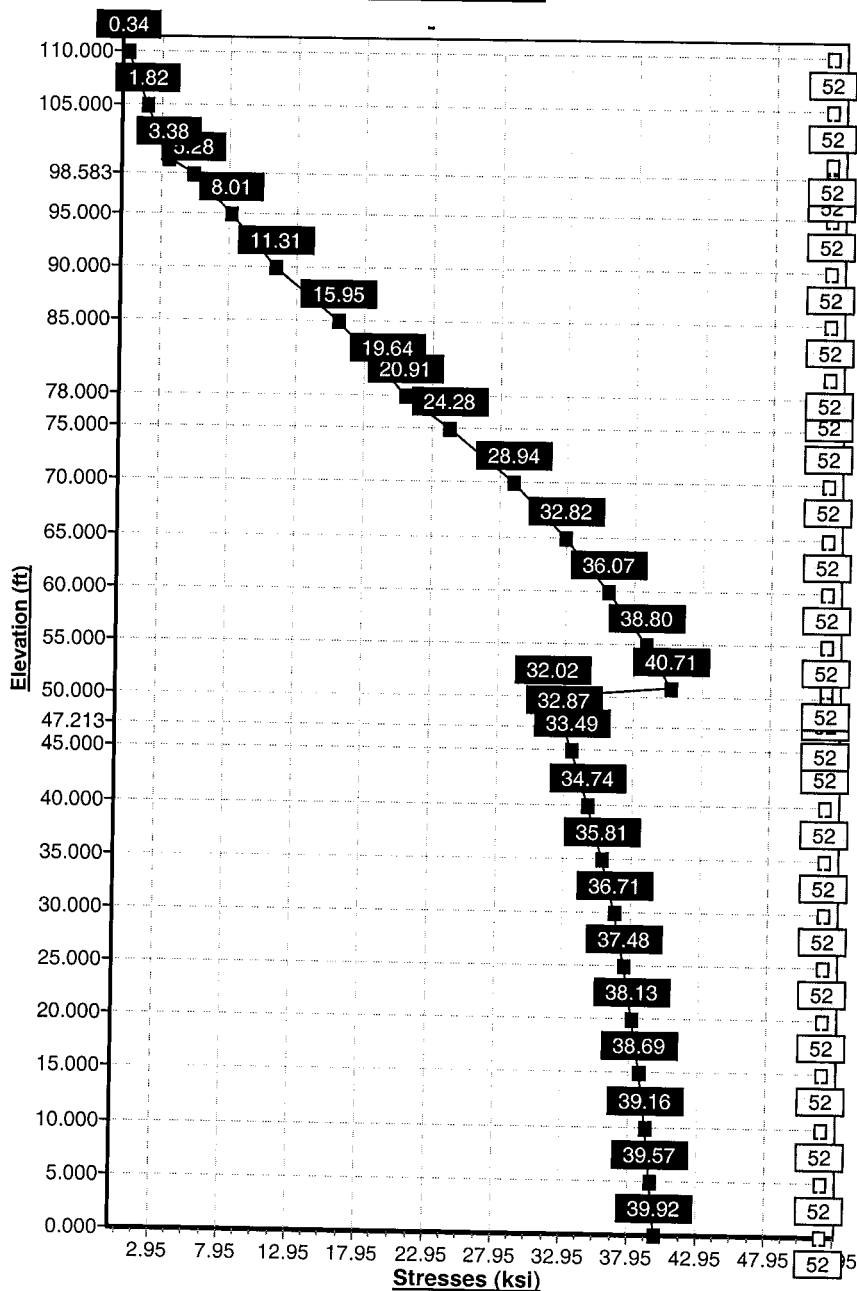
Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
		Across Top	Flats Bottom					
1	50.880	24.10	34.25	0.250		0.000	0.199320	65
2	51.370	14.97	25.21	0.188	Slip Joint	44.000	0.199320	65
3	11.417	12.70	14.97	0.188	Butt Joint	0.000	0.199320	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
110.000	113.000	1	5/8" Lightning Rod	
110.000	110.000	1	DB932DG65E-M	
110.000	110.000	2	DB932DG65T2E-M	
110.000	110.000	3	Flush Mounts	
100.000	100.000	1	EEL 12' Low Profile platform	
100.000	101.500	9	DB980F90	
90.000	90.000	6	Allgon 7250	
90.000	90.000	1	EEL 12' Low Profile platform	
78.000	78.000	6	Powerwave 7770	
78.000	78.000	3	T-Arms	
78.000	78.000	6	LGP TMAs	

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
80.00 mph Wind w/ No Ice	746.112	9.864	-10.287
69.28 mph Wind w/ 0.50 in Ice	652.239	8.341	-13.722

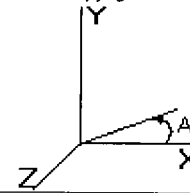


Load Case : No Ice



Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Shaft Section Properties

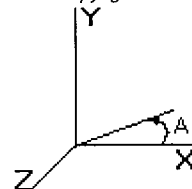
Sect Num	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper (in/ft)
1	50.880	0.2500	65		0.00	3,974	34.25	0.000	26.98	3940.2	22.75	137.0	24.10	50.88	18.93	1361.5	15.59	96.43	0.19932
2	51.370	0.1875	65	Slip Joint	44.00	2,071	25.21	47.21	14.89	1178.6	22.30	134.4	14.97	98.58	8.80	243.1	12.67	79.87	0.19932
3	11.417	0.1875	65	Butt Joint	0.00	316	14.97	98.58	8.80	243.1	12.67	79.87	12.70	110.0	7.45	147.3	10.53	67.73	0.19932
Shaft Weight						6,361													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice CaAa (sf)	CaAa Factor	Weight (lb)	Ice CaAa (sf)	CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
110.0	5/8" Lightning Rod	1	75.00	1.000	1.00	100.00	2.000	1.00	0.000	0.00	3.000
110.0	DB932DG65E-M	1	10.00	3.400	1.00	28.20	4.000	1.00	0.000	0.00	0.000
110.0	DB932DG65T2E-M	2	10.00	3.400	1.00	28.20	4.000	1.00	0.000	0.00	0.000
110.0	Flush Mounts	3	55.00	1.200	1.00	80.00	1.380	1.00	0.000	0.00	0.000
100.0	EEI 12' Low Profile platform	1	1200.00	15.000	1.00	1650.00	18.400	1.00	0.000	0.00	0.000
100.0	DB980F90	9	9.50	3.750	0.67	29.85	4.320	0.67	0.000	0.00	1.500
90.00	Allgon 7250	6	16.00	4.300	0.67	36.00	5.000	0.67	0.000	0.00	0.000
90.00	EEI 12' Low Profile platform	1	1200.00	15.000	1.00	1650.00	18.400	1.00	0.000	0.00	0.000
78.00	Powerwave 7770	6	35.00	5.880	1.00	67.63	6.530	1.00	0.000	0.00	0.000
78.00	T-Arms	3	258.00	10.670	0.67	336.00	14.200	0.67	0.000	0.00	0.000
78.00	LGP TMAs	6	19.00	1.260	0.73	26.13	1.500	0.73	0.000	0.00	0.000
Totals		39	3949.50			5779.81			Number of Loadings : 11		

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: No Ice 80 mph - No Ice 26 Iterations

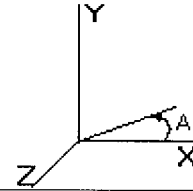
Gust Response Factor : 1.69 Effective Wind Speed : 80.00 (mph)
 Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation
 Wind Load Factor : 1.00

Shaft Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Wind Force Z (lb)	Weight (lb)
0.00		1.00	16.38	27.68	228.33	0.650	0.00	0.000	0.000	0.00	0.00	0.0
5.00		1.00	16.38	27.68	221.69	0.650	5.00	14.063	9.141	253.11	0.00	452.3
10.00		1.00	16.38	27.68	215.05	0.650	5.00	13.648	8.871	245.63	0.00	438.8
15.00		1.00	16.38	27.68	208.40	0.650	5.00	13.233	8.601	238.16	0.00	425.4
20.00		1.00	16.38	27.68	201.76	0.650	5.00	12.817	8.331	230.69	0.00	411.9
25.00		1.00	16.38	27.68	195.11	0.650	5.00	12.402	8.061	223.21	0.00	398.5
30.00		1.00	16.38	27.68	188.47	0.650	5.00	11.987	7.792	215.74	0.00	385.0
35.00		1.02	16.86	28.49	184.46	0.650	5.00	11.572	7.522	214.35	0.00	371.5
40.00		1.06	17.49	29.56	181.01	0.650	5.00	11.156	7.252	214.38	0.00	358.1
45.00		1.10	18.07	30.53	177.00	0.650	5.00	10.741	6.982	213.22	0.00	344.6
47.21	Bot - Section 2	1.11	18.31	30.94	175.07	0.650	2.21	4.622	3.004	92.98	0.00	148.3
50.00		1.13	18.60	31.44	172.52	0.650	2.79	5.791	3.764	118.36	0.00	322.6
50.88	Top - Section 1	1.14	18.69	31.59	171.69	0.650	0.88	1.802	1.171	37.01	0.00	100.3
55.00		1.16	19.10	32.28	170.35	0.650	4.12	8.265	5.372	173.46	0.00	199.3
60.00		1.19	19.57	33.07	165.16	0.650	5.00	9.652	6.274	207.52	0.00	232.6
65.00		1.22	20.01	33.82	159.67	0.650	5.00	9.236	6.004	203.08	0.00	222.5
70.00		1.24	20.43	34.53	153.91	0.650	5.00	8.821	5.734	198.01	0.00	212.5
75.00		1.27	20.83	35.20	147.91	0.650	5.00	8.406	5.464	192.37	0.00	202.4
78.00	Appertunance(s)	1.28	21.06	35.59	144.21	0.650	3.00	4.844	3.149	112.09	0.00	116.6
80.00		1.29	21.21	35.85	141.70	0.650	2.00	3.146	2.045	73.32	0.00	75.7
85.00		1.31	21.57	36.46	135.28	0.650	5.00	7.575	4.924	179.56	0.00	182.2
90.00	Appertunance(s)	1.33	21.92	37.05	128.69	0.650	5.00	7.160	4.654	172.46	0.00	172.1
95.00		1.35	22.26	37.62	121.93	0.650	5.00	6.745	4.384	164.95	0.00	162.0
98.58	Top - Section 2	1.37	22.49	38.01	116.98	0.650	3.58	4.578	2.976	113.14	0.00	109.9
100.00	Appertunance(s)	1.37	22.58	38.17	115.01	0.650	1.42	1.751	1.138	43.45	0.00	42.0
105.00		1.39	22.89	38.69	107.95	0.650	5.00	5.914	3.844	148.77	0.00	141.8
110.00	Appertunance(s)	1.41	23.20	39.20	100.75	0.650	5.00	5.499	3.574	140.15	0.00	131.7
Totals:							110.00			4,419.15	0.00	6,360.6

Pole : CT54XC771
Location: 3017725 - Woodbury, CT
Height : 110.0 (ft)
Shape : 18 Sides
Base Dia : 34.25 (in)
Taper : 0.199320 (in/ft)

Global Signal
Base Elev : 1.500 (ft)
Top Dia : 12.70 (in)



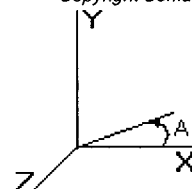
Load Case: No Ice 80 mph - No Ice 26 Iterations
Gust Response Factor : 1.69 **Effective Wind Speed :** 80.00 (mph)
Dead Load Factor : 1.00 **Note :** Pole Base Elevation is Added for Kz Calculation
Wind Load Factor : 1.00

Discrete Appurtenance Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Total CaAa (sf)	CaAa Factor	Horiz Ecc (ft)	Vert Ecc (ft)	X Angle (deg)	Wind Force X (lb)	Wind Force Z (lb)	Mom X (lb-ft)	Mom Y (lb-ft)	Mom Z (lb-ft)	Weight (lb)
78.00	Powerwave 7770	6	21.06	35.59	35.280	1.000	0.000	0.0	0.0	1255.85	0.00	0.00	0.00	0.00	210.0
78.00	T-Arms	3	21.06	35.59	21.351	0.667	0.000	0.0	0.0	760.01	0.00	0.00	0.00	0.00	774.0
78.00	LGP TMAs	6	21.06	35.59	5.519	0.730	0.000	0.0	0.0	196.45	0.00	0.00	0.00	0.00	114.0
90.00	Allgon 7250	6	21.92	37.05	17.209	0.667	0.000	0.0	0.0	637.67	0.00	0.00	0.00	0.00	96.0
90.00	EEl 12' Low Profile	1	21.92	37.05	15.000	1.000	0.000	0.0	0.0	555.83	0.00	0.00	0.00	0.00	1200.0
100.00	EEl 12' Low Profile	1	22.58	38.17	15.000	1.000	0.000	0.0	0.0	572.55	0.00	0.00	0.00	0.00	1200.0
100.00	DB980F90	9	22.68	38.33	22.511	0.667	0.000	1.5	0.0	862.86	0.00	0.00	0.00	1294.29	85.5
110.00	5/8" Lightning Rod	1	23.37	39.50	1.000	1.000	0.000	3.0	0.0	39.51	0.00	0.00	0.00	118.52	75.0
110.00	DB932DG65E-M	1	23.20	39.20	3.400	1.000	0.000	0.0	0.0	133.31	0.00	0.00	0.00	0.00	10.0
110.00	DB932DG65T2E-M	2	23.20	39.20	6.800	1.000	0.000	0.0	0.0	266.62	0.00	0.00	0.00	0.00	20.0
110.00	Flush Mounts	3	23.20	39.20	3.600	1.000	0.000	0.0	0.0	141.15	0.00	0.00	0.00	0.00	165.0
										5,421.80	0.00				3,949.5

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: No Ice 80 mph - No Ice 26 Iterations

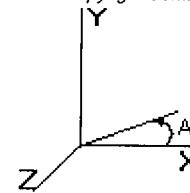
Gust Response Factor : 1.69 Effective Wind Speed : 80.00 (mph)
 Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation
 Wind Load Factor : 1.00

Applied Forces Summary

Seg Elev (ft)	X Coord (ft)	Z Coord (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Lateral FZ (lb)	Moment MX (lb-ft)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	253.11	452.27	0.00	0.00	0.00	0.00
10.00	0.00	0.00	245.63	438.82	0.00	0.00	0.00	0.00
15.00	0.00	0.00	238.16	425.37	0.00	0.00	0.00	0.00
20.00	0.00	0.00	230.69	411.91	0.00	0.00	0.00	0.00
25.00	0.00	0.00	223.21	398.46	0.00	0.00	0.00	0.00
30.00	0.00	0.00	215.74	385.00	0.00	0.00	0.00	0.00
35.00	0.00	0.00	214.35	371.55	0.00	0.00	0.00	0.00
40.00	0.00	0.00	214.38	358.10	0.00	0.00	0.00	0.00
45.00	0.00	0.00	213.22	344.64	0.00	0.00	0.00	0.00
47.21	0.00	0.00	92.98	148.27	0.00	0.00	0.00	0.00
50.00	0.00	0.00	118.36	322.58	0.00	0.00	0.00	0.00
50.88	0.00	0.00	37.01	100.35	0.00	0.00	0.00	0.00
55.00	0.00	0.00	173.46	199.28	0.00	0.00	0.00	0.00
60.00	0.00	0.00	207.52	232.64	0.00	0.00	0.00	0.00
65.00	0.00	0.00	203.08	222.55	0.00	0.00	0.00	0.00
70.00	0.00	0.00	198.01	212.46	0.00	0.00	0.00	0.00
75.00	0.00	0.00	192.37	202.37	0.00	0.00	0.00	0.00
78.00	0.00	0.00	2,324.39	1,214.58	0.00	0.00	0.00	0.00
80.00	0.00	0.00	73.32	75.70	0.00	0.00	0.00	0.00
85.00	0.00	0.00	179.56	182.19	0.00	0.00	0.00	0.00
90.00	0.00	0.00	1,365.96	1,468.10	0.00	0.00	0.00	0.00
95.00	0.00	0.00	164.95	162.00	0.00	0.00	0.00	0.00
98.58	0.00	0.00	113.14	109.89	0.00	0.00	0.00	0.00
100.00	0.00	0.00	1,478.86	1,327.52	0.00	0.00	0.00	1,294.29
105.00	0.00	0.00	148.77	141.82	0.00	0.00	0.00	0.00
110.00	0.00	0.00	720.74	401.73	0.00	0.00	0.00	118.52
Totals:			9,840.96	10,310.13	0.00	0.00	0.00	1,412.81

Pole : CT54XC771
Location : 3017725 - Woodbury, CT
Height : 110.0 (ft)
Shape : 18 Sides
Base Dia : 34.25 (in)
Taper : 0.199320 (in/ft)

Global Signal
Base Elev : 1.500 (ft)
Top Dia : 12.70 (in)



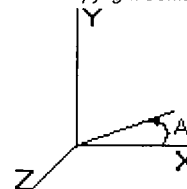
Load Case: No Ice 80 mph - No Ice 26 Iterations
Gust Response Factor : 1.69 **Effective Wind Speed :** 80.00 (mph)
Dead Load Factor : 1.00 **Note :** Pole Base Elevation is Added for Kz Calculation
Wind Load Factor : 1.00

Calculated Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	9.864	10.287	0.000	0.000	0.000	746.112	0.000	0.000	0.000	0.000
5.00	9.655	9.791	0.000	0.000	0.000	696.791	-0.139	0.000	0.139	-0.260
10.00	9.450	9.310	0.000	0.000	0.000	648.514	-0.554	0.000	0.554	-0.526
15.00	9.250	8.844	0.000	0.000	0.000	601.263	-1.250	0.000	1.250	-0.796
20.00	9.053	8.392	0.000	0.000	0.000	555.016	-2.232	0.000	2.232	-1.072
25.00	8.860	7.955	0.000	0.000	0.000	509.752	-3.503	0.000	3.503	-1.351
30.00	8.672	7.532	0.000	0.000	0.000	465.450	-5.070	0.000	5.070	-1.634
35.00	8.482	7.125	0.000	0.000	0.000	422.089	-6.935	0.000	6.935	-1.920
40.00	8.289	6.733	0.000	0.000	0.000	379.678	-9.101	0.000	9.101	-2.209
45.00	8.085	6.369	0.000	0.000	0.000	338.232	-11.568	0.000	11.568	-2.497
47.21	8.002	6.204	0.000	0.000	0.000	320.337	-12.757	0.000	12.757	-2.629
50.00	7.879	5.872	0.000	0.000	0.000	298.039	-14.341	0.000	14.341	-2.794
50.88	7.852	5.754	0.000	0.000	0.000	291.105	-14.861	0.000	14.861	-2.847
55.00	7.697	5.524	0.000	0.000	0.000	258.754	-17.422	0.000	17.422	-3.083
60.00	7.509	5.259	0.000	0.000	0.000	220.267	-20.839	0.000	20.839	-3.434
65.00	7.321	5.008	0.000	0.000	0.000	182.724	-24.616	0.000	24.616	-3.769
70.00	7.133	4.772	0.000	0.000	0.000	146.122	-28.733	0.000	28.733	-4.083
75.00	6.944	4.559	0.000	0.000	0.000	110.455	-33.162	0.000	33.162	-4.366
78.00	4.540	3.518	0.000	0.000	0.000	89.624	-35.953	0.000	35.953	-4.519
80.00	4.470	3.437	0.000	0.000	0.000	80.544	-37.865	0.000	37.865	-4.615
85.00	4.287	3.256	0.000	0.000	0.000	58.194	-42.808	0.000	42.808	-4.822
90.00	2.805	1.903	0.000	0.000	0.000	36.761	-47.948	0.000	47.948	-4.990
95.00	2.629	1.752	0.000	0.000	0.000	22.736	-53.238	0.000	53.238	-5.115
98.58	2.508	1.651	0.000	0.000	0.000	13.314	-57.099	0.000	57.099	-5.181
100.00	0.915	0.462	0.000	0.000	0.000	8.467	-58.638	0.000	58.638	-5.200
105.00	0.754	0.334	0.000	0.000	0.000	3.891	-64.098	0.000	64.098	-5.238
110.00	0.721	0.000	0.000	0.000	0.000	0.119	-69.587	0.000	69.587	-5.254

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: No Ice 80 mph - No Ice 26 Iterations

Gust Response Factor : 1.69 Effective Wind Speed : 80.00 (mph)

Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation

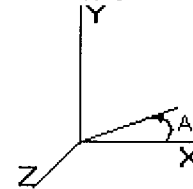
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)		
0.00	0.381	0.737	0.000	0.000	0.000	39.513	39.915	52.0	0.768
5.00	0.374	0.743	0.000	0.000	0.000	39.172	39.567	52.0	0.761
10.00	0.367	0.750	0.000	0.000	0.000	38.773	39.161	52.0	0.753
15.00	0.359	0.758	0.000	0.000	0.000	38.305	38.687	52.0	0.744
20.00	0.352	0.766	0.000	0.000	0.000	37.756	38.132	52.0	0.734
25.00	0.345	0.776	0.000	0.000	0.000	37.110	37.480	52.0	0.721
30.00	0.339	0.786	0.000	0.000	0.000	36.349	36.713	52.0	0.706
35.00	0.332	0.797	0.000	0.000	0.000	35.451	35.810	52.0	0.689
40.00	0.326	0.809	0.000	0.000	0.000	34.390	34.744	52.0	0.668
45.00	0.321	0.820	0.000	0.000	0.000	33.136	33.487	52.0	0.644
47.21	0.318	0.827	0.000	0.000	0.000	32.525	32.874	52.0	0.632
50.00	0.308	0.833	0.000	0.000	0.000	31.683	32.024	52.0	0.616
50.88	0.398	1.095	0.000	0.000	0.000	40.269	40.711	52.0	0.783
55.00	0.395	1.110	0.000	0.000	0.000	38.352	38.795	52.0	0.746
60.00	0.393	1.131	0.000	0.000	0.000	35.619	36.066	52.0	0.694
65.00	0.392	1.154	0.000	0.000	0.000	32.366	32.819	52.0	0.631
70.00	0.391	1.179	0.000	0.000	0.000	28.474	28.938	52.0	0.557
75.00	0.393	1.207	0.000	0.000	0.000	23.793	24.276	52.0	0.467
78.00	0.313	0.814	0.000	0.000	0.000	20.553	20.914	52.0	0.402
80.00	0.312	0.819	0.000	0.000	0.000	19.280	19.644	52.0	0.378
85.00	0.313	0.830	0.000	0.000	0.000	15.571	15.949	52.0	0.307
90.00	0.194	0.576	0.000	0.000	0.000	11.067	11.305	52.0	0.218
95.00	0.190	0.574	0.000	0.000	0.000	7.759	8.011	52.0	0.154
98.58	0.188	0.574	0.000	0.000	0.000	4.996	5.278	52.0	0.102
98.58	0.188	0.574	0.000	0.000	0.000	4.996	5.278	52.0	0.102
100.00	0.054	0.214	0.000	0.000	0.000	3.303	3.377	52.0	0.065
105.00	0.042	0.189	0.000	0.000	0.000	1.752	1.823	52.0	0.035
110.00	0.000	0.195	0.000	0.000	0.000	0.062	0.344	52.0	0.007

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



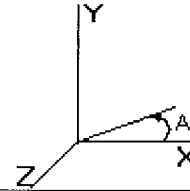
Load Case: Ice	80 mph - With Ice - Ice Thickness = 0.5 in	26 Iterations
Gust Response Factor : 1.69	Effective Wind Speed : 69.28 (mph)	
Dead Load Factor : 1.00	Note : Pole Base Elevation is Added for Kz Calculation	
Wind Load Factor : 1.00		

Shaft Forces

Seg Top Elev (ft)	Description	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Wind Force Z (lb)	Weight (lb)
0.00		1.00	12.28	20.76	197.74	0.650	0.00	0.000	0.000	0.00	0.00	0.0
5.00		1.00	12.28	20.76	191.98	0.650	5.00	14.480	9.412	195.44	0.00	556.4
10.00		1.00	12.28	20.76	186.23	0.650	5.00	14.065	9.142	189.84	0.00	539.9
15.00		1.00	12.28	20.76	180.48	0.650	5.00	13.649	8.872	184.23	0.00	523.4
20.00		1.00	12.28	20.76	174.72	0.650	5.00	13.234	8.602	178.63	0.00	506.8
25.00		1.00	12.28	20.76	168.97	0.650	5.00	12.819	8.332	173.02	0.00	490.3
30.00		1.00	12.28	20.76	163.21	0.650	5.00	12.404	8.062	167.42	0.00	473.8
35.00		1.02	12.64	21.37	159.74	0.650	5.00	11.988	7.792	166.54	0.00	457.3
40.00		1.06	13.11	22.17	156.76	0.650	5.00	11.573	7.523	166.78	0.00	440.7
45.00		1.10	13.55	22.90	153.28	0.650	5.00	11.158	7.253	166.11	0.00	424.2
47.21	Bot - Section 2	1.11	13.73	23.21	151.61	0.650	2.21	4.807	3.124	72.51	0.00	182.9
50.00		1.13	13.95	23.58	149.40	0.650	2.79	6.023	3.915	92.32	0.00	365.8
50.88	Top - Section 1	1.14	14.02	23.69	148.68	0.650	0.88	1.875	1.219	28.88	0.00	113.9
55.00		1.16	14.32	24.21	147.52	0.650	4.12	8.608	5.595	135.49	0.00	260.7
60.00		1.19	14.67	24.80	143.03	0.650	5.00	10.068	6.544	162.35	0.00	304.1
65.00		1.22	15.01	25.36	138.27	0.650	5.00	9.653	6.275	159.17	0.00	291.0
70.00		1.24	15.32	25.89	133.29	0.650	5.00	9.238	6.005	155.51	0.00	277.8
75.00		1.27	15.62	26.40	128.09	0.650	5.00	8.823	5.735	151.42	0.00	264.6
78.00	Appertunance(s)	1.28	15.79	26.69	124.89	0.650	3.00	5.094	3.311	88.40	0.00	152.8
80.00		1.29	15.90	26.88	122.71	0.650	2.00	3.313	2.154	57.90	0.00	99.4
85.00		1.31	16.18	27.34	117.16	0.650	5.00	7.992	5.195	142.07	0.00	238.3
90.00	Appertunance(s)	1.33	16.44	27.79	111.44	0.650	5.00	7.577	4.925	136.86	0.00	225.1
95.00		1.35	16.69	28.21	105.59	0.650	5.00	7.162	4.655	131.35	0.00	212.0
98.58	Top - Section 2	1.37	16.87	28.51	101.31	0.650	3.58	4.877	3.170	90.38	0.00	144.1
100.00	Appertunance(s)	1.37	16.93	28.62	99.60	0.650	1.42	1.869	1.215	34.78	0.00	55.3
105.00		1.39	17.17	29.02	93.48	0.650	5.00	6.331	4.115	119.43	0.00	185.6
110.00	Appertunance(s)	1.41	17.39	29.40	87.25	0.650	5.00	5.916	3.845	113.07	0.00	172.5
Totals:							110.00			3,459.92	0.00	7,958.7

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: Ice 80 mph - With Ice - Ice Thickness = 0.5 in 26 Iterations

Gust Response Factor : 1.69 Effective Wind Speed : 69.28 (mph)

Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation

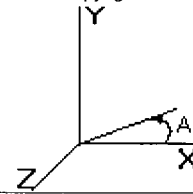
Wind Load Factor : 1.00

Discrete Appurtenance Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Total CaAa (sf)	CaAa Factor	Horiz Ecc (ft)	Vert Ecc (ft)	X Angle (deg)	Wind Force X (lb)	Wind Force Z (lb)	Mom X (lb-ft)	Mom Y (lb-ft)	Mom Z (lb-ft)	Weight (lb)
78.00	Powerwave 7770	6	15.79	26.69	39.180	1.000	0.000	0.0	0.0	1045.94	0.00	0.00	0.00	0.00	405.8
78.00	T-Arms	3	15.79	26.69	28.414	0.667	0.000	0.0	0.0	758.54	0.00	0.00	0.00	0.00	1008.0
78.00	LGP TMAs	6	15.79	26.69	6.570	0.730	0.000	0.0	0.0	175.39	0.00	0.00	0.00	0.00	156.8
90.00	Allgon 7250	6	16.44	27.79	20.010	0.667	0.000	0.0	0.0	556.08	0.00	0.00	0.00	0.00	216.0
90.00	EEl 12' Low Profile	1	16.44	27.79	18.400	1.000	0.000	0.0	0.0	511.33	0.00	0.00	0.00	0.00	1650.0
100.00	EEl 12' Low Profile	1	16.93	28.62	18.400	1.000	0.000	0.0	0.0	526.71	0.00	0.00	0.00	0.00	1650.0
100.00	DB980F90	9	17.00	28.74	25.933	0.667	0.000	1.5	0.0	745.47	0.00	0.00	0.00	1118.20	268.6
110.00	5/8" Lightning Rod	1	17.53	29.62	2.000	1.000	0.000	3.0	0.0	59.26	0.00	0.00	0.00	177.77	100.0
110.00	DB932DG65E-M	1	17.39	29.40	4.000	1.000	0.000	0.0	0.0	117.62	0.00	0.00	0.00	0.00	28.2
110.00	DB932DG65T2E-M	2	17.39	29.40	8.000	1.000	0.000	0.0	0.0	235.24	0.00	0.00	0.00	0.00	56.4
110.00	Flush Mounts	3	17.39	29.40	4.140	1.000	0.000	0.0	0.0	121.74	0.00	0.00	0.00	0.00	240.0
										4,853.30	0.00				5,779.8

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
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Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: Ice 80 mph - With Ice - Ice Thickness = 0.5 in 26 Iterations

Gust Response Factor : 1.69 Effective Wind Speed : 69.28 (mph)

Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation

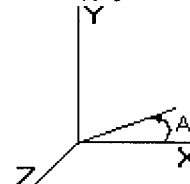
Wind Load Factor : 1.00

Applied Forces Summary

Seg Elev (ft)	X Coord (ft)	Z Coord (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Lateral FZ (lb)	Moment MX (lb-ft)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	195.44	556.43	0.00	0.00	0.00	0.00
10.00	0.00	0.00	189.84	539.90	0.00	0.00	0.00	0.00
15.00	0.00	0.00	184.23	523.37	0.00	0.00	0.00	0.00
20.00	0.00	0.00	178.63	506.84	0.00	0.00	0.00	0.00
25.00	0.00	0.00	173.02	490.31	0.00	0.00	0.00	0.00
30.00	0.00	0.00	167.42	473.78	0.00	0.00	0.00	0.00
35.00	0.00	0.00	166.54	457.25	0.00	0.00	0.00	0.00
40.00	0.00	0.00	166.78	440.72	0.00	0.00	0.00	0.00
45.00	0.00	0.00	166.11	424.19	0.00	0.00	0.00	0.00
47.21	0.00	0.00	72.51	182.88	0.00	0.00	0.00	0.00
50.00	0.00	0.00	92.32	365.85	0.00	0.00	0.00	0.00
50.88	0.00	0.00	28.88	113.92	0.00	0.00	0.00	0.00
55.00	0.00	0.00	135.49	260.71	0.00	0.00	0.00	0.00
60.00	0.00	0.00	162.35	304.12	0.00	0.00	0.00	0.00
65.00	0.00	0.00	159.17	290.96	0.00	0.00	0.00	0.00
70.00	0.00	0.00	155.51	277.79	0.00	0.00	0.00	0.00
75.00	0.00	0.00	151.42	264.62	0.00	0.00	0.00	0.00
78.00	0.00	0.00	2,068.27	1,723.38	0.00	0.00	0.00	0.00
80.00	0.00	0.00	57.90	99.37	0.00	0.00	0.00	0.00
85.00	0.00	0.00	142.07	238.29	0.00	0.00	0.00	0.00
90.00	0.00	0.00	1,204.27	2,091.13	0.00	0.00	0.00	0.00
95.00	0.00	0.00	131.35	211.96	0.00	0.00	0.00	0.00
98.58	0.00	0.00	90.38	144.12	0.00	0.00	0.00	0.00
100.00	0.00	0.00	1,306.96	1,973.95	0.00	0.00	0.00	1,118.20
105.00	0.00	0.00	119.43	185.63	0.00	0.00	0.00	0.00
110.00	0.00	0.00	646.92	597.06	0.00	0.00	0.00	177.77
Totals:			8,313.22	13,738.54	0.00	0.00	0.00	1,295.98

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: Ice 80 mph - With Ice - Ice Thickness = 0.5 in 26 Iterations

Gust Response Factor : 1.69 Effective Wind Speed : 69.28 (mph)

Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation

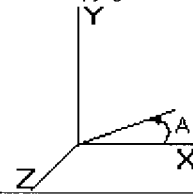
Wind Load Factor : 1.00

Calculated Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	8.341	13.722	0.000	0.000	0.000	652.239	0.000	0.000	0.000	0.000
5.00	8.197	13.133	0.000	0.000	0.000	610.537	-0.122	0.000	0.122	-0.228
10.00	8.056	12.561	0.000	0.000	0.000	569.552	-0.485	0.000	0.485	-0.461
15.00	7.916	12.006	0.000	0.000	0.000	529.275	-1.095	0.000	1.095	-0.699
20.00	7.780	11.469	0.000	0.000	0.000	489.693	-1.957	0.000	1.957	-0.941
25.00	7.645	10.949	0.000	0.000	0.000	450.796	-3.074	0.000	3.074	-1.188
30.00	7.513	10.446	0.000	0.000	0.000	412.571	-4.453	0.000	4.453	-1.439
35.00	7.379	9.961	0.000	0.000	0.000	375.006	-6.095	0.000	6.095	-1.693
40.00	7.240	9.493	0.000	0.000	0.000	338.114	-8.006	0.000	8.006	-1.949
45.00	7.088	9.052	0.000	0.000	0.000	301.912	-10.185	0.000	10.185	-2.206
47.21	7.029	8.856	0.000	0.000	0.000	286.223	-11.236	0.000	11.236	-2.324
50.00	6.936	8.483	0.000	0.000	0.000	266.635	-12.636	0.000	12.636	-2.471
50.88	6.921	8.355	0.000	0.000	0.000	260.532	-13.096	0.000	13.096	-2.519
55.00	6.812	8.069	0.000	0.000	0.000	232.016	-15.363	0.000	15.363	-2.731
60.00	6.676	7.737	0.000	0.000	0.000	197.958	-18.392	0.000	18.392	-3.045
65.00	6.539	7.422	0.000	0.000	0.000	164.578	-21.744	0.000	21.744	-3.347
70.00	6.400	7.125	0.000	0.000	0.000	131.885	-25.403	0.000	25.403	-3.630
75.00	6.255	6.849	0.000	0.000	0.000	99.884	-29.343	0.000	29.343	-3.885
78.00	4.083	5.265	0.000	0.000	0.000	81.119	-31.828	0.000	31.828	-4.024
80.00	4.031	5.160	0.000	0.000	0.000	72.953	-33.531	0.000	33.531	-4.110
85.00	3.886	4.921	0.000	0.000	0.000	52.799	-37.937	0.000	37.937	-4.298
90.00	2.533	2.922	0.000	0.000	0.000	33.367	-42.521	0.000	42.521	-4.451
95.00	2.389	2.718	0.000	0.000	0.000	20.704	-47.242	0.000	47.242	-4.565
98.58	2.289	2.580	0.000	0.000	0.000	12.143	-50.689	0.000	50.689	-4.624
100.00	0.827	0.718	0.000	0.000	0.000	7.782	-52.063	0.000	52.063	-4.642
105.00	0.693	0.542	0.000	0.000	0.000	3.645	-56.940	0.000	56.940	-4.677
110.00	0.647	0.000	0.000	0.000	0.000	0.178	-61.842	0.000	61.842	-4.692

Pole : CT54XC771
 Location: 3017725 - Woodbury, CT
 Height : 110.0 (ft)
 Shape : 18 Sides
 Base Dia : 34.25 (in)
 Taper : 0.199320 (in/ft)

Global Signal
 Base Elev : 1.500 (ft)
 Top Dia : 12.70 (in)



Load Case: Ice 80 mph - With Ice - Ice Thickness = 0.5 in 26 Iterations

Gust Response Factor : 1.69 Effective Wind Speed : 69.28 (mph)

Dead Load Factor : 1.00 Note : Pole Base Elevation is Added for Kz Calculation

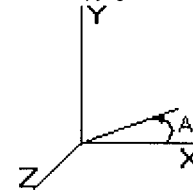
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses							Combined (ksi)	Allowable Stress (Fb) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)				
0.00	0.509	0.623	0.000	0.000	0.000	34.542	35.067	52.0	0.675	
5.00	0.501	0.631	0.000	0.000	0.000	34.323	34.842	52.0	0.670	
10.00	0.495	0.639	0.000	0.000	0.000	34.052	34.564	52.0	0.665	
15.00	0.488	0.648	0.000	0.000	0.000	33.719	34.225	52.0	0.658	
20.00	0.482	0.658	0.000	0.000	0.000	33.312	33.813	52.0	0.651	
25.00	0.476	0.669	0.000	0.000	0.000	32.818	33.314	52.0	0.641	
30.00	0.470	0.681	0.000	0.000	0.000	32.220	32.711	52.0	0.629	
35.00	0.465	0.694	0.000	0.000	0.000	31.496	31.983	52.0	0.615	
40.00	0.460	0.707	0.000	0.000	0.000	30.625	31.109	52.0	0.599	
45.00	0.456	0.719	0.000	0.000	0.000	29.578	30.060	52.0	0.578	
47.21	0.454	0.726	0.000	0.000	0.000	29.061	29.542	52.0	0.568	
50.00	0.445	0.733	0.000	0.000	0.000	28.345	28.818	52.0	0.554	
50.88	0.578	0.965	0.000	0.000	0.000	36.040	36.656	52.0	0.705	
55.00	0.578	0.983	0.000	0.000	0.000	34.389	35.008	52.0	0.674	
60.00	0.578	1.006	0.000	0.000	0.000	32.012	32.637	52.0	0.628	
65.00	0.581	1.031	0.000	0.000	0.000	29.152	29.786	52.0	0.573	
70.00	0.584	1.058	0.000	0.000	0.000	25.700	26.348	52.0	0.507	
75.00	0.591	1.087	0.000	0.000	0.000	21.515	22.186	52.0	0.427	
78.00	0.468	0.732	0.000	0.000	0.000	18.603	19.113	52.0	0.368	
80.00	0.469	0.738	0.000	0.000	0.000	17.463	17.977	52.0	0.346	
85.00	0.473	0.752	0.000	0.000	0.000	14.128	14.658	52.0	0.282	
90.00	0.298	0.520	0.000	0.000	0.000	10.046	10.382	52.0	0.200	
95.00	0.295	0.522	0.000	0.000	0.000	7.066	7.415	52.0	0.143	
98.58	0.293	0.524	0.000	0.000	0.000	4.557	4.934	52.0	0.095	
98.58	0.293	0.524	0.000	0.000	0.000	4.557	4.934	52.0	0.095	
100.00	0.083	0.193	0.000	0.000	0.000	3.036	3.137	52.0	0.060	
105.00	0.067	0.174	0.000	0.000	0.000	1.641	1.735	52.0	0.033	
110.00	0.000	0.175	0.000	0.000	0.000	0.093	0.317	52.0	0.006	

Pole : CT54XC771
Location: 3017725 - Woodbury, CT
Height : 110.0 (ft)
Shape : 18 Sides
Base Dia : 34.25 (in)
Taper : 0.199320 (in/ft)

Global Signal
Base Elev : 1.500 (ft)
Top Dia : 12.70 (in)



Load Case: No Ice 80 mph - No Ice 26 Iterations
Gust Response Factor : 1.69 **Effective Wind Speed :** 80.00 (mph)
Dead Load Factor : 1.00 **Note :** Pole Base Elevation is Added for Kz Calculation
Wind Load Factor : 1.00

Analysis Summary

Load Case	Reactions						Combined Stress (ksi)	Max Stresses		
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)		Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	9.864	0.000	10.287	0.000	0.000	746.112	40.711	52.0	50.880	0.783
Ice	8.341	0.000	13.722	0.000	0.000	652.239	36.656	52.0	50.880	0.705



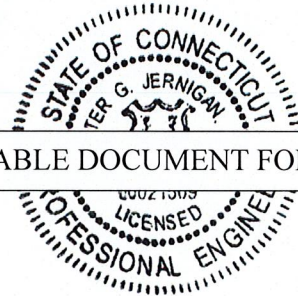
POST MODIFICATION INSPECTION REPORT

SITE NAME: WOODBURY NORTH
GLOBAL SIGNAL SITE # 3017725

RECEIVED
JAN 05 2006
CONNECTICUT
SITING COUNCIL



Performed By:



PORTABLE DOCUMENT FORMAT

Adam Hayes, E.I.
Staff Engineer

Pete Jernigan, P.E.
President

Prepared for:



Meeting needs. Exceeding expectations.



1.0 ASSIGNMENT

Subject – Post modification inspection of modification on an existing monopole tower.

Location – 186 Minortown Road, New Milford, CT
Latitude: N41° 34' 4.79"± Longitude: W073° 10' 46.85"±

Structure – 110-ft Monopole tower

Purpose – The objective of the inspection was to determine if the new modifications met the standards and specifications provided by Global Signal Services LLC (Global Signal).

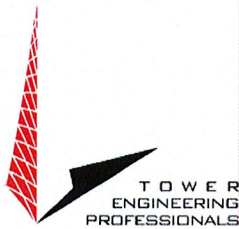
2.0 SCOPE OF SERVICES

- 1) Perform post modification inspection
- 2) Prepare a report of observations and recommendations

3.0 PARTICIPATING PERSONNEL

Carrier Representatives: Mr. JR Carroll
Global Signal Services
301 North Cattlemen Road, Suite 300
Sarasota, FL 34232
(941) 308 5225

Consulting Engineers: Mr. Pete Jernigan, P.E.
Mr. F. Geoffrey Bost, P.E.
Mr. Adam Hayes, E.I.
Tower Engineering Professionals, Inc. (TEP)
3703 Junction Blvd.
Raleigh, NC 27603-5263
(919) 661-6351



4.0 BACKGROUND INFORMATION

Global Signal requested that TEP conduct a post modification inspection of the tower. The inspection was to determine if Global Signal installed the tower according to the following specifications:

- 1) Request for Quote from Global Signal dated 10/25/2005
- 2) Structural Analysis prepared by Semaan Engineering Solutions dated 09/15/2004




5.0 INVESTIGATION

Post Modification Inspection – Adam Hayes, E.I. performed the inspection. The purpose of this inspection was to verify the installation of (16) gusset plates at the tower base. The inspection was conducted by visual inspection. This inspection was completed on December 6, 2005.

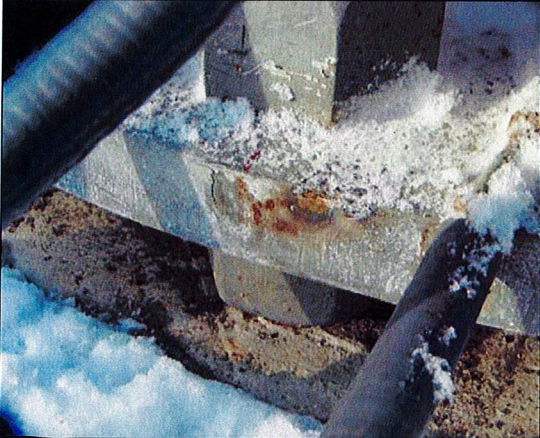
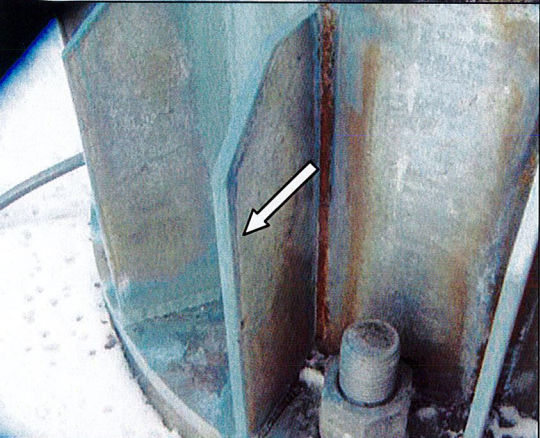
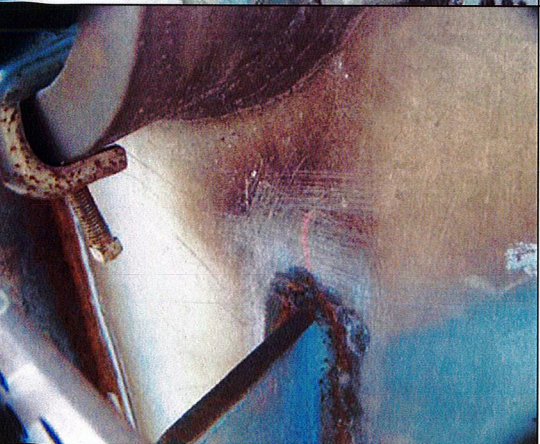
6.0 RESULTS

1. Corrosion was on weld seams
2. Corrosion was on plate edges
3. Weld sizes were inconsistent
4. Corrosion was on tower base plate
5. Actual gusset plate sizes provided
6. Surface scratching was observed on tower
7. Porosity was on weld seam
8. Corrosion inside tower from welding
9. Antenna loading was different than specified in structural analysis from Seeman Engineering Solutions (Not PCI item)



Photograph	Observations and Recommendations
	<p><u>Item 1</u></p> <p>Observation: Corrosion was on weld seams on gusset plates and on surrounding tower areas in the following locations at the tower base: Flats 1, 5, 6, 7, 11, 12, 15, 17.</p> <p>Recommendation: Areas of surface corrosion should be thoroughly cleaned and covered with two brush coats of ZRC cold galvanizing compound or approved equivalent.</p>
	<p><u>Item 2</u></p> <p>Observation: Corrosion was on gusset plate edges in the following locations at the tower base: Flats 5, 6, 11, 12, 15, 17.</p> <p>Recommendation: Areas of surface corrosion should be thoroughly cleaned and covered with two brush coats of ZRC cold galvanizing compound or approved equivalent.</p>
	<p><u>Item 3</u></p> <p>Observation: Weld sizes were smaller in the following locations at the tower base: Flats 1, 5, 6, 11, 12, 15, 17.</p> <p>Recommendation: Consult tower manufacturer or engineer of record for approval of existing condition.</p>



Photograph	Observations and Recommendations
	<p><u>Item 4</u></p> <p>Observation: Corrosion was on edges of tower base at the following locations: Flat 6, 15-18.</p> <p>Recommendation: Areas of surface corrosion should be thoroughly cleaned and covered with two brush coats of ZRC cold galvanizing compound or approved equivalent.</p>
	<p><u>Item 5</u></p> <p>Observation: Proposed gusset plate dimensions were not provided. Actual gusset plate size measurements at tower base were measured by TEP. Size measurements shown on sheet A-1.</p> <p>Recommendation: Consult tower manufacturer or engineer of record for approval of existing condition.</p>
	<p><u>Item 6</u></p> <p>Observation: Surface scratching was observed on tower at the base on flat 11.</p> <p>Recommendation: Areas of damaged galvanizing should be thoroughly cleaned and covered with two brush coats of ZRC cold galvanizing compound or approved equivalent.</p>




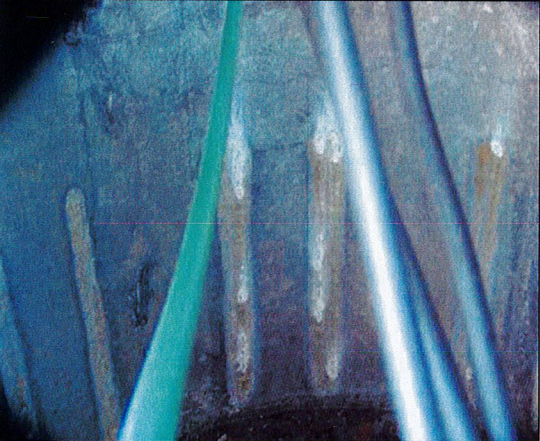

Photograph	Observations and Recommendations
	<p><u>Item 7</u></p> <p>Observation: Porosity on weld on flat 11 exceeded limits set forth by the American Welding Society, AWS D1.1 specifies that porosity not exceed 3/8-in per 1-in of weld material.</p> <p>Recommendation: Repair weld.</p>
	<p><u>Item 8</u></p> <p>Observation: Areas of damaged galvanizing were observed inside the tower from heat from welds. Also burn through areas were observed from excessive weld heat, these areas create structural weakness in the pole.</p> <p>Recommendation: Areas of surface corrosion should be thoroughly cleaned and covered with two brush coats of ZRC cold galvanizing compound or approved equivalent. For burn through areas consult engineer of record for approval of existing condition.</p>
	<p><u>Item 9 (Not PCI item)</u></p> <p>Observation: Antenna loading was different than specified in structural analysis from Semaan Engineering Solutions.</p> <p>Recommendation: Consult engineer of record for approval of existing condition. See sheet L1 for details.</p>



PHOTO LOG

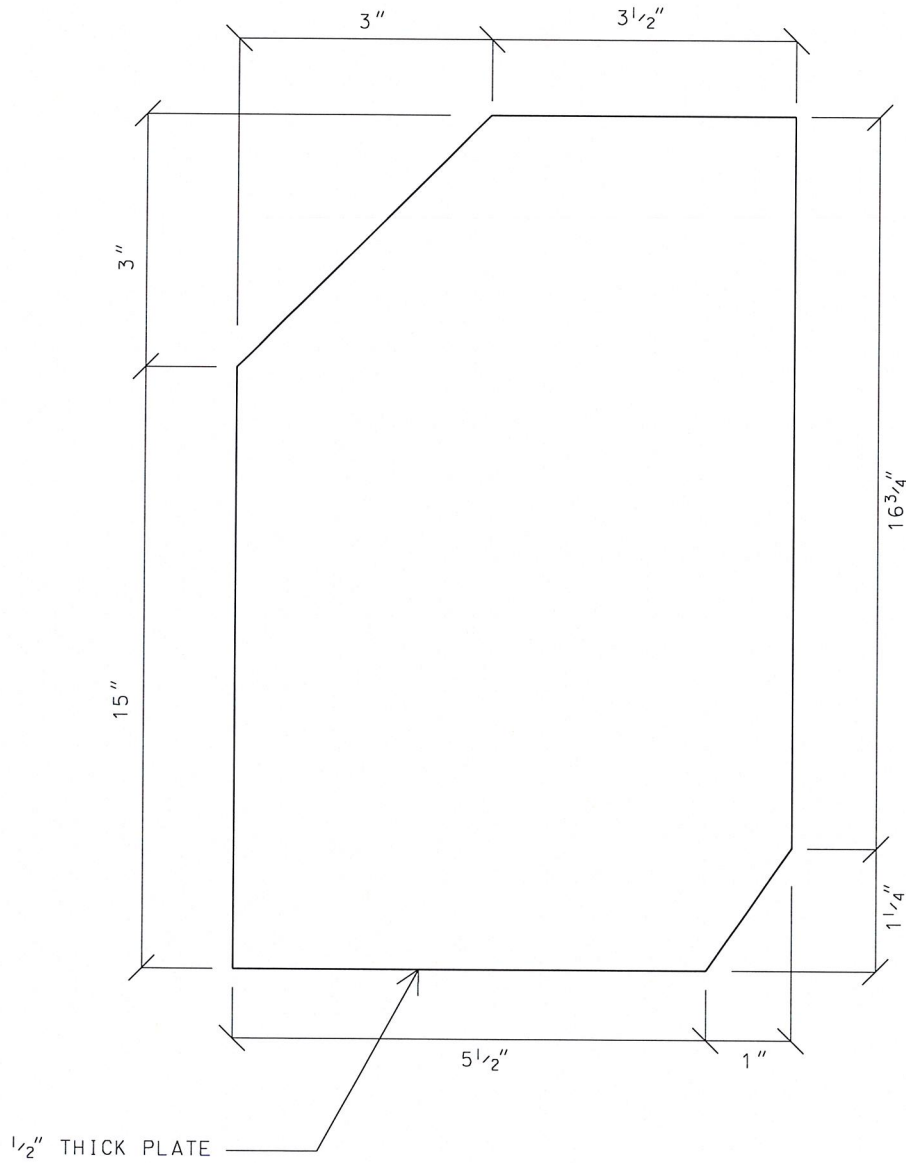
Photo #	Description of Photograph
1	Signage
2	Tower section elevation
3	Tower section elevation
4	Tower section elevation
5	Tower section elevation
6	Tower elevation
7	Tower elevation
8	Tower elevation
9	New gusset plates
10	New gusset plates
11	New gusset plates
12	Flat 1, surface corrosion on weld seam and small weld
13	Flat 1, surface corrosion on weld seam and small weld
14	Flat 1, surface corrosion on weld seam and small weld
15	Flat 5, surface corrosion on weld seam and tower leg
16	Flat 5, surface corrosion on plate edges
17	Flat 5, small weld at tower base
18	Flat 5, small weld at tower base
19	Flat 11, surface corrosion on weld seam
20	Flat 11, surface corrosion on weld seam
21	Flat 11, spackling on weld seam
22	Flat 12, surface corrosion on weld seam
23	Flat 12, surface corrosion on gusset plate edge
24	Flat 15, surface corrosion on weld seam
25	Flat 17, surface corrosion on weld seam
26	Flat 17, surface corrosion on weld seam
27	Tower base plate surface corrosion
28	Tower base plate surface corrosion
29	Tower base plate surface corrosion
30	Flat 11, surface scratching
31	Meter
32	Meter
33	Surface corrosion on hand hole rim
34	Surface corrosion on grounding wire
35	Surface corrosion inside tower base



PHOTO LOG

Photo #	Description of Photograph
36	Surface corrosion inside tower base
37	Surface corrosion inside tower base
38	Surface corrosion inside tower base
39	Surface corrosion on step peg lug
40	Surface corrosion on step pegs
41	Surface corrosion on step pegs
42	Surface corrosion on step peg lug
43	Light surface corrosion near safety cable guide
44	Surface corrosion on tower mounting bolt threads
45	Surface corrosion on tower mounting bolt threads
46	Surface corrosion on tower
47	Surface corrosion on tower
48	Light surface corrosion on antenna 1 mounting hardware
49	Chipped galvanizing
50	Surface corrosion on tower
51	Surface corrosion on antennas 2-4 mounting hardware
52	Surface corrosion on antennas 2-4 mounting hardware
53	Surface corrosion on antennas 5-10 mounting hardware
54	No safety cable on top 10-ft of tower, surface corrosion on tower
55	No safety cable on top 10-ft of tower
56	Tower elevation down
57	Tower elevation down
58	Tower elevation down
59	Tower elevation up
60	Tower elevation up
61	Misfire
62	Tower base
63	Tower base
64	Tower base
65	Exposed grounding, antenna 11-13 provider
66	Exposed grounding antenna 11-13 provider

GUSSET PLATE DETAIL



COAX CONFIGURATION

N. T. S.

PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 3703 JUNCTION BOULEVARD
 RALEIGH, NC 27603-5263
 919.661.6351

PREPARED FOR:

global signal

301 NORTH CATTLEMEN ROAD
 SARASOTA, FL 34232
 (941) 308-5225

PROJECT INFORMATION:

WOODBURY NORTH
SITE #: 3017725



186 MINORTOWN ROAD
 WOODBURY, CT 06783


REVISION: 0


TEP JOB #: 05A1056


SHEET NUMBER:


A-1

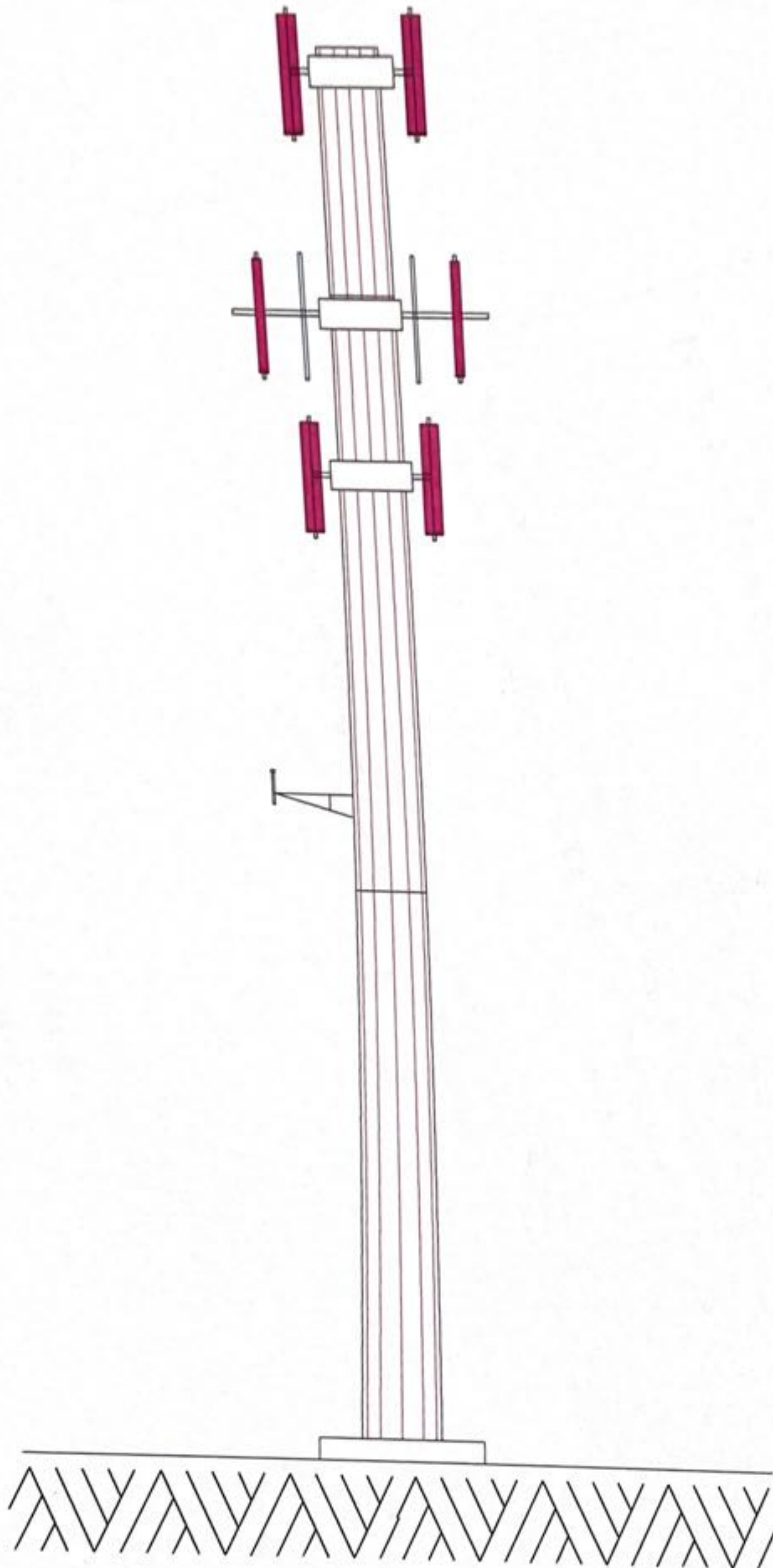
 110' - 0" ±
 T/ TOWER
 109' - 6" ±
 Q ANT 11-13

 98' - 6" ±
 Q ANT 5-10

 89' - 3" ±
 Q ANT 2-4

 50' - 3" ±
 Q ANT 1

 0' - 0" (REFERENCE)
 T/ CONCRETE



TOWER ELEVATION

SCALE: N. T. S.

PREPARED BY:


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SITE #: 3017725

186 MINORTOWN ROAD
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REVISION: 0

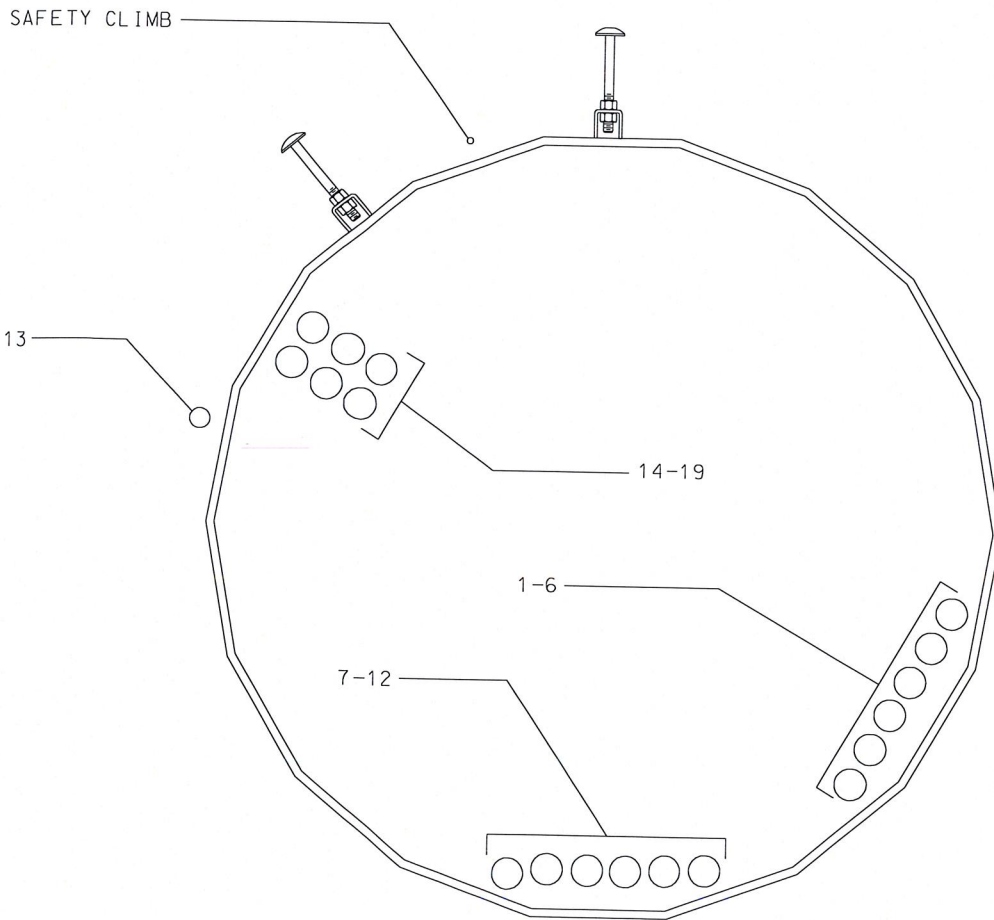
TEP JOB #: 05A1056

SHEET NUMBER:

L-1

COAX CHART

LINE	SIZE	HEIGHT	ANTENNA
1-6	1 ⁵ / ₈	5' -99'	5-10
7-12	1 ¹ / ₄	5' -89'	2-4
13	5/8"	5' -50'	1
14-19	1 ⁵ / ₈	5' -109'	11-13



COAX CONFIGURATION

N. T. S.

PREPARED BY:

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 919.661.6351

PREPARED FOR:

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301 NORTH CATTLEMEN ROAD
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PROJECT INFORMATION:

WOODBURY NORTH
SITE #: 3017725

186 MINORTOWN ROAD
 WOODBURY, CT 06783

REVISION: 0

TEP JOB #: 05A1056

SHEET NUMBER:

L-2

