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
Web Site: www.state.ct.us/csc/index.htm

May 22, 2002

Julie M. Donaldson, Esq.
Hurwitz & Sagarin LLC
147 North Broad Street
P.O. Box 112
Milford, CT 06460-0112

RE: **EM-SBA-115-020502** - SBA Properties, Inc. notice of intent to modify an existing telecommunications facility located at 178 New Haven Road, Prospect, Connecticut.

Dear Attorney Donaldson:

At a public meeting held on May 21, 2002, 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 tower be reinforced as specified by a Professional Engineer in the Structural Analysis prepared by Semaan Engineering Solutions and dated April 18, 2002.

The proposed modifications are to be implemented as specified here and in your notice dated May 2, 2002. 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. 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,

Mortimer A. Gelston
Chairman

MAG/DM/laf

c: Honorable Robert J. Chatfield, Mayor, Town of Prospect
William J. Donovan, Zoning Enforcement Officer, Town of Prospect
Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP
Sheila R. Becker, SBA, Inc.
Sandy M. Carter, Verizon Wireless
Michele G. Briggs, SNET Mobility LLC
Thomas F. Flynn III, Nextel Communications Inc.

I:\siting\em\at&t\prospect\dc052102.doc

EM-SBA-115-020502
178 New Haven Road
Prospect 05/09/02

HURWITZ & SAGARIN LLC

May 2, 2002

HAND DELIVERED

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification
SBA Telecommunications Facility
178 New Haven Road, Prospect, Connecticut

Dear Mr. Phelps:

On behalf of SBA Properties, Inc. ("SBA"), I am pleased to submit the above referenced exempt modification application. Enclosed are an original plus twenty-five (25) copies of the petition requesting a determination that SBA's co-location on the telecommunications facility located at 178 New Haven Road, Prospect, Connecticut, satisfies the requirements set forth in R.C.S.A. §16-50j-72(b)(2). A check in the amount of $500.00 to cover the filing fee for this petition is also enclosed.

The Mayor of Prospect has been sent notice of this petition by certified mail.

Sincerely,

JULIE M. DONALDSON
dsw/enc.

cc: Robert J. Chatfield, Mayor Town of Prospect
Harold Hewett, Bechtel (CT-913-008-629)
Mark Roberts, SBA
Christopher Fisher Esq., Cuddy & Feder & Worby

LAW OFFICES
147 North Broad Street, P.O. Box 112, Milford, Connecticut 06460-0112 Tel. 203-877-8000 • Fax 203-878-9800

HURWITZ & SAGARIN LLC

May 2, 2002

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification
SBA Telecommunications Facility
178 New Haven Road
Prospect, Connecticut

Dear Mr. Phelps:

SBA Towers, Inc. ("SBA") hereby requests acknowledgment that the proposed co-location of AT&T Wireless PCS, LLC d/b/a AT&T Wireless ("AT&T Wireless") on a telecommunications tower owned by SBA and located at 178 New Haven Road, Prospect, Connecticut ("New Haven Road Facility") constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this letter has been sent to Robert J. Chatfield, the Mayor of Prospect.

SBA and AT&T Wireless have agreed to the shared use of the New Haven Road Facility, as detailed below.

The New Haven Road Facility

The New Haven Road Facility consists of a 160 foot monopole within a site compound which is surrounded by a chain link fence. The facility currently supports the antenna arrays and related equipment of several carriers including Verizon which was approved by the Siting Council on July 15, 1999. (EM-BAM-115-990701)

AT&T Wireless' Facility

AT&T Wireless will install 6 panel antennas at an antenna center line height of approximately 112 feet. A structural integrity report, attached as Exhibit A, was generated by Semaan Engineering Solutions and confirms that the tower is structurally capable of supporting AT&T Wireless' proposed antennas, upon reinforcement of the tower in accordance with the recommendations in the structural report. AT&T Wireless

LAW OFFICES
147 North Broad Street, P.O. Box 112, Milford, Connecticut 06460-0112 Tel. 203-877-8000 • Fax 203-878-9800

will also install associated equipment cabinets on a concrete pad within the existing fenced compound.

AT&T Wireless' Facility Constitutes An Exempt Modification

For the following reasons, the proposed modifications to the New Haven Road Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. As evidenced by the attached Tower Elevation Drawing (Exhibit B), the proposed modification will not increase the height of the tower as AT&T Wireless' antennas will be installed at a center line height of approximately 112 feet.

2. As evidenced by the attached Site Plan Drawing (Exhibit B), the installation of AT&T Wireless' equipment within the existing fenced compound will not require an extension of the site boundaries.

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

4. As set forth in the Emissions Report prepared by C Squared Systems, LLC, attached as Exhibit C, the operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. The "worst-case" percentage for RF Power density for a point at the tower base is calculated to be 6.0% for AT&T Wireless' antennas. Based upon Maximum Power Densities previously submitted to the Council for Verizon, Nextel and Cingular, the calculated "worst case" cumulative RF power density at the site is only 24.09% of the applicable standard.

For the foregoing reasons, SBA respectfully submits that the proposed addition of AT&T Wireless' antenna and equipment at the New Haven Road Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2)

Very Truly Yours,

Julie M. Donaldson

cc: Robert J. Chatfield, Mayor Town of Prospect
Harold Hewett, Bechtel (CT-913-008-629)
Mark Roberts, SBA
Christopher Fisher Esq., Cuddy & Feder & Worby

1047 N. 204th Avenue
Elkhorn, NE 68022
Ph:402-289-1888
Fax:402-289-1861

SEMAAN ENGINEERING SOLUTIONS

157 ft Nudd Corporation Monopole Structural Analysis and Modification Package for the Proposed AT&T Loading

Prepared for:
SBA Network Services
121 Boone Ridge Drive
Johnson City, TN 37615

Site: CT00252S
178 New Haven Rd.
Prospect, CT

April 18, 2002

Mr. Robert Fair
SBA Network Services
121 Boone Ridge Drive
Johnson City, TN 37615

Re: Site Number CT00252S – 178 New Haven Rd. Prospect, CT.

Dear Mr. Fair:

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 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 157 ft Nudd Corporation Monopole.

Refer to Nudd Corporation drawing 98-6035-1 dated May 21, 1998 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 for 85 mph with 1/2" radial ice.** 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
157.0	9	SC 9014 Mounted On a 14' Low Profile Platform	(9) 1-5/8	SNET
142.0	9	DB844H90 Mounted On (3) 12' Cellular Boom	(9) 1-5/8	Nextel
134.0	12	Allgon 7129.12 A800-85-15I-O-D Mounted On a 14' Low Profile Platform	(12) 1-5/8	Verizon
112.0	**6**	**Allgon 7250.03 Mounted On a 14' Low Profile Platform**	**(6) 1-5/8**	**AT&T**

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 pole shaft usage is 99.2%, but the existing baseplate is severely overstressed. (3) C6x10.5 Grade 65 channels are required from elevations 15 ft to 50 ft and 65 ft to 110 ft. Also, (6) additional anchor bolts and stiffener plates will be required.
The maximum structure usage after modifications is: 83.5%.

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	N/A	3,368.25	N/A
Shear (kips)	N/A	34.74	N/A

After review, the structure base reactions resulting from this analysis do not exceed the foundation capacity.

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 85 mph with 1/2" radial ice. (3) C6x10.5 Grade 65 channels are required from elevations 15 ft to 50 ft and 65 ft to 110 ft. Also, (6) additional anchor bolts and stiffener plates will be required. Only after the modifications are made in accordance with the attached drawings will the structure meet these requirements.

Attachments:

1. Drawing Notes, Rev. 0 dated 04/18/02.
2. Drawing S-01, Rev. 0 dated 04/18/02.
3. Drawing S-02, Rev. 0 dated 04/18/02.
4. Drawing S-03, Rev. 0 dated 04/18/02.
5. Drawing S-04, Rev. 0 dated 04/18/02.
6. Drawing S-05, Rev. 0 dated 04/18/02.
7. Drawing S-06, Rev. 0 dated 04/18/02.
8. Drawing S-07, Rev. 0 dated 04/18/02.

4-18-02

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 04/18/02 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.

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. THE WELDER(S) SHOULD BE CERTIFIED FOR THE METHODS AND POSITIONS TO BE USED AND SHOULD HAVE EXPERIENCE WELDING GALVANIZED MATERIALS.
   C. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION.
   D. ALL EXISTING GALVANIZING IN WELD AREAS SHALL GROUND OFF PRIOR TO WELDING.
   E. ALL WELDS SHALL BE INSPECTED VISUALLY AND WITH DYE PENETRATE OR MAGNETIC PARTICLE 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.

ANCHOR BOLT INSTALLATION:

1. ANY NEW HOLES IN BASEPLATE SHALL BE DRILLED ONLY, NO TORCH CUTTING SHALL BE PERMITTED.
2. USE COMPRESSED AIR TO BLOW ANY REMAINING DEBRIS OUT OF THE NEWLY DRILLED HOLES.
3. THE NEW ANCHOR BOLTS SHALL BE INSTALLED PER THE MANUFACTURES INSTALLATION PROCEDURE.
4. THE NEW ANCHOR BOLTS SHALL BE PRETENSIONED WITH THE SHIMS IN PLACE TO 120 kips USING USING A TORQUE OF 3750 FT-LBS. LUBRICATE THREADS WITH
5. MOLY-KOTE G HIGH LUBE GREASE BEFORE APPLYING TORQUE. REMOVE PRETENSIONING AND SHIMS ONCE TEST LOAD HAS BEEN OBTAINED. SNUG TIGHT THE NUTS.
6. GROUT THE NEW ANCHOR BOLTS IN PLACE PER THE MANUFACTURES INSTRUCTIONS. WIL-BOND 200 OR ULTRA BOND 1100 BY US ANCHOR SHALL BE USED.
7. CONTRACTOR SHALL VERIFY THAT DRILLING CLEARANCE IS ADEQUATE PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IF A CLEARANCE PROBLEM EXISTS.

Semaan Engineering Solutions, Inc.

Phone # (402)289-1888 Fax # (402)289-1861
Address: 1047 N. 204th Avenue, Elkhorn, NE. 68022

PROJECT NUMBER: CT-002525

DRAWN	APPV.	DATE	REFERENCE DRAWING
KRC		04/17/02	

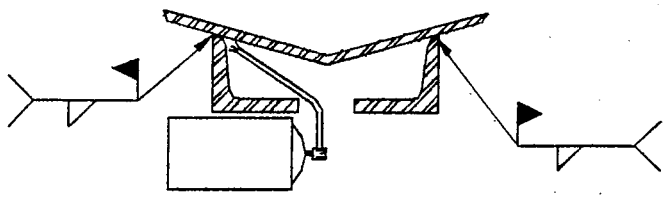
SITE LOCATION: PROSPECT, CT

REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

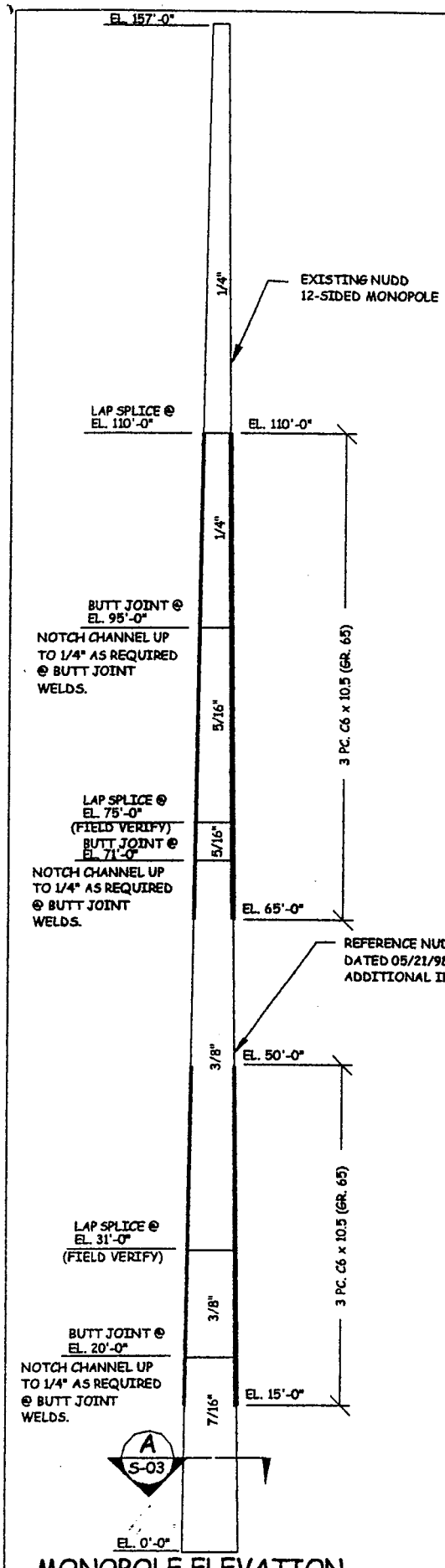
CLIENT: SBA

DESCRIPTION: NOTES

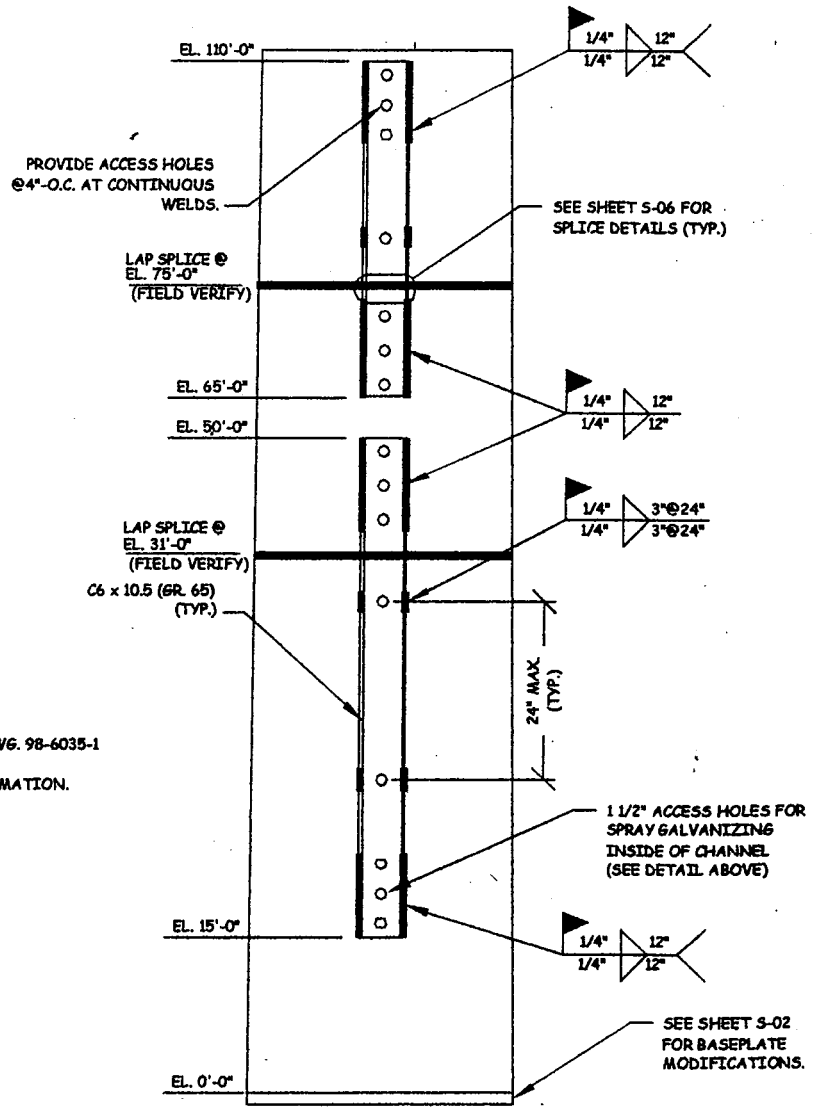
SHEET #: NOTES



GALVANIZING DETAIL
NOT TO SCALE



MONOPOLE ELEVATION
NOT TO SCALE



REINFORCING WELD DETAIL
NOT TO SCALE

Semaan Engineering Solutions, Inc.

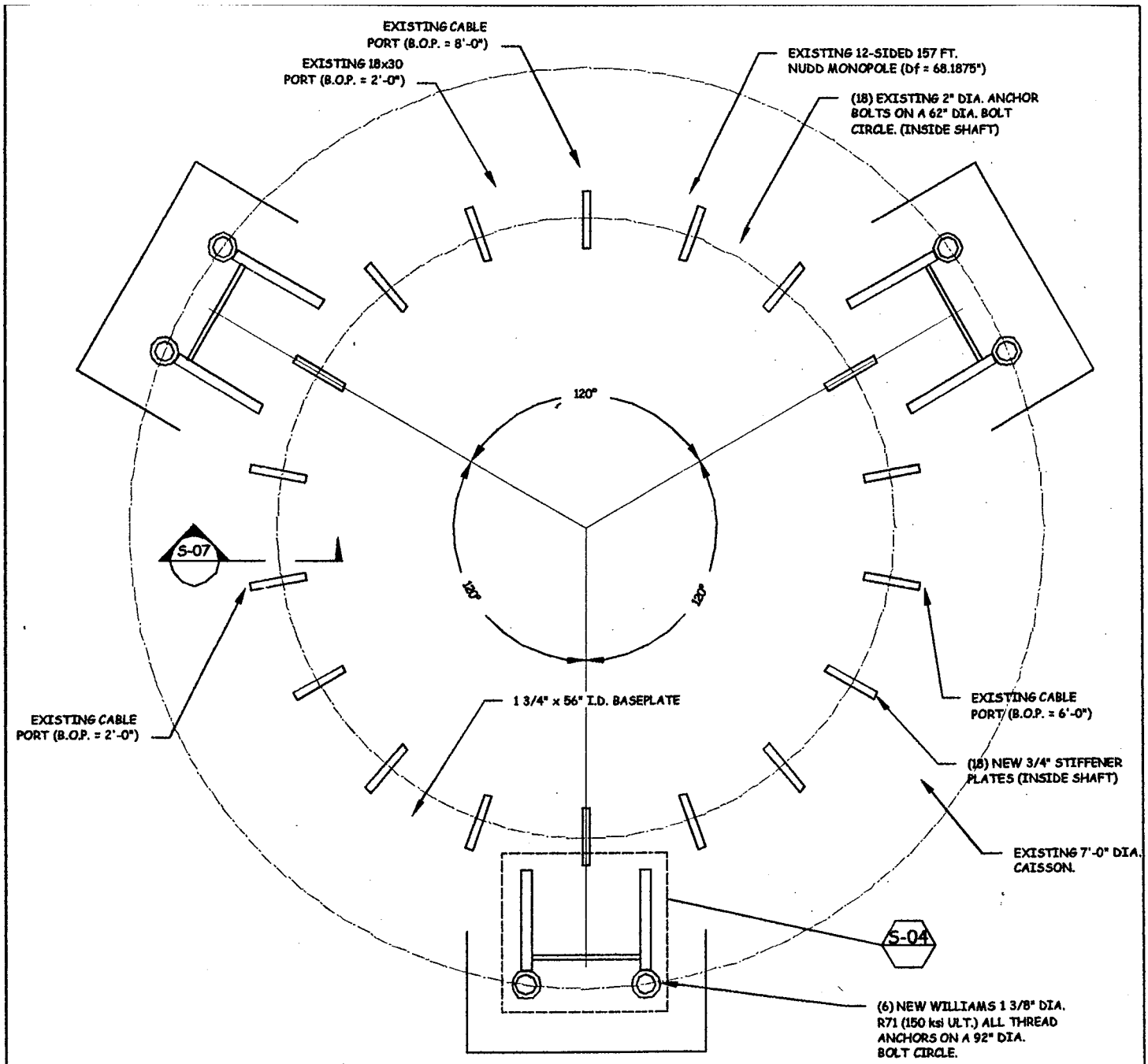
Phone # (402)289-1888 Fax # (402)289-1861
Address: 1047 N. 204th Avenue, Elkhorn, NE. 68022

DRAWN	APPRV.	DATE	REFFERENCE DRAWING
KRC		04/17/02	

PROJECT NUMBER: CT-002525
SITE LOCATION: PROSPECT, CT

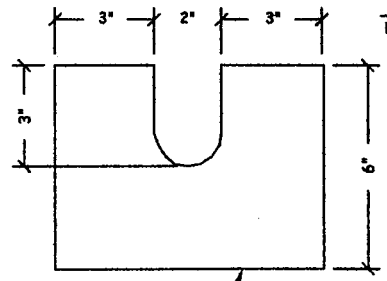
REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DESCRIPTION	SHEET #
SBA	MONOPOLE REINFORCEMENT ELEVATIONS	S-01



BASEPLATE PLAN

NOT TO SCALE



PROVIDE 1/8", 1/4", 1/2" AND (4) 1" SHIMS TO BE PLACED UNDER THE PIPE SLEEVE DURING THE PRELOAD TEST ON THE NEW ANCHOR BOLTS.

SHIM DETAIL

NOT TO SCALE

Semaan Engineering Solutions, Inc.

Phone # (402)289-1888 Fax # (402)289-1861
Address: 1047 N. 204th Avenue, Elkhorn, NE. 68022

PROJECT NUMBER: CT-002525

DRAWN	APPRV.	DATE	REFFERENCE DRAWING
KAC		04/17/02	S-01

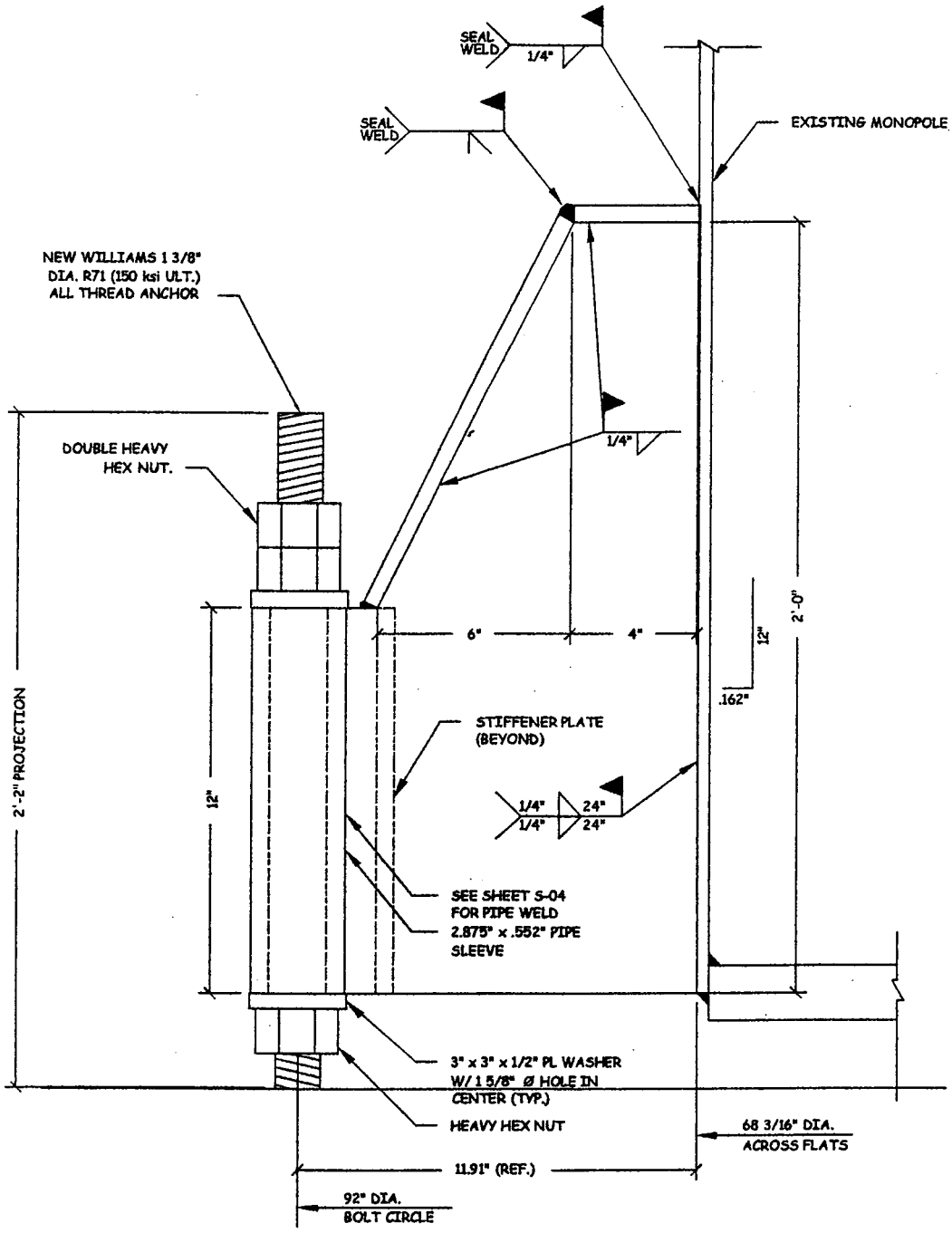
SITE LOCATION: PROSPECT, CT

REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

CLIENT: SBA

DESCRIPTION: BASEPLATE DETAILS

SHEET #: S-02



REINFORCEMENT DETAIL

NOT TO SCALE

Semaan Engineering Solutions, Inc.

Phone # (402)289-1888 Fax # (402)289-1861
Address: 1047 N. 204th Avenue, Elkhorn, NE. 68022

PROJECT NUMBER: CT-002525

DRAWN	APPRV.	DATE	REFFERENCE DRAWING
KRC		04/17/02	S-02

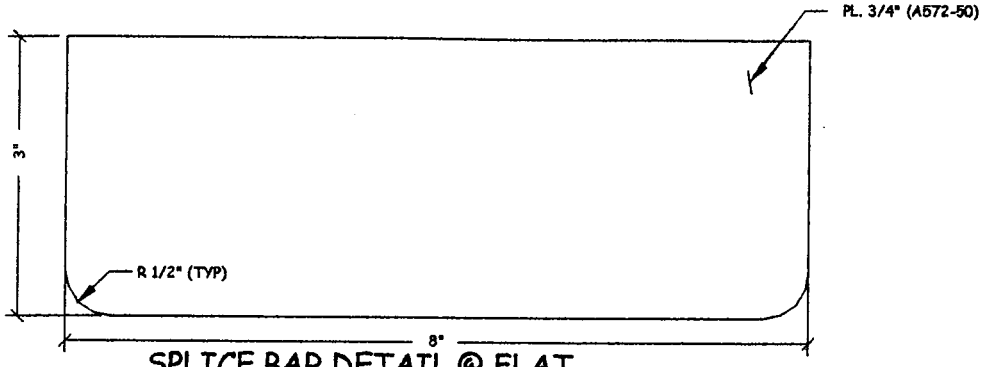
SITE LOCATION: PROSPECT, CT

REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

CLIENT: SBA

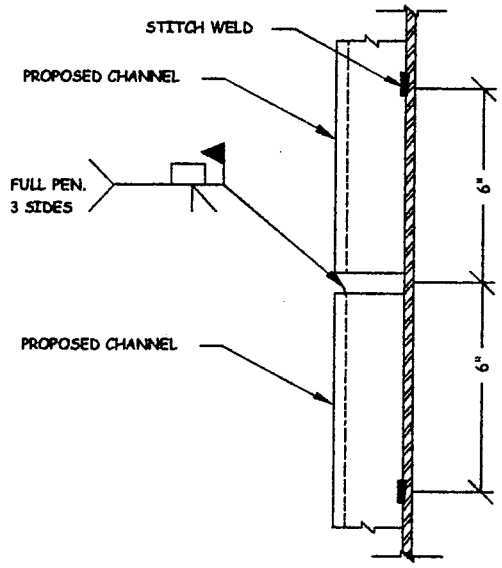
DESCRIPTION: SECTION DETAILS

SHEET #: S-05



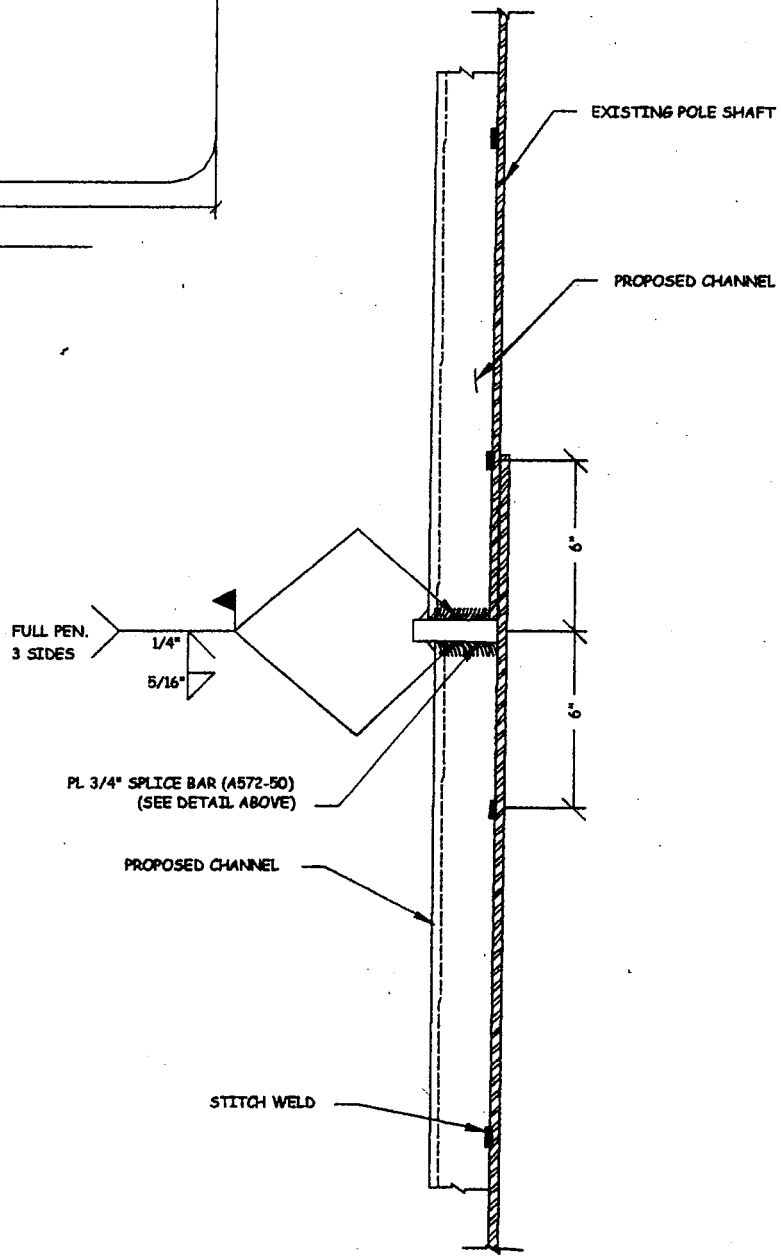
SPLICE BAR DETAIL @ FLAT

NOT TO SCALE



MID RUN SPLICE DETAIL

NOT TO SCALE



SLIP JOINT SPLICE DETAIL

NOT TO SCALE

Semaan Engineering Solutions, Inc.

Phone # (402)289-1888 Fax # (402)289-1661
Address: 1047 N. 204th Avenue, Elkhorn, NE 68022

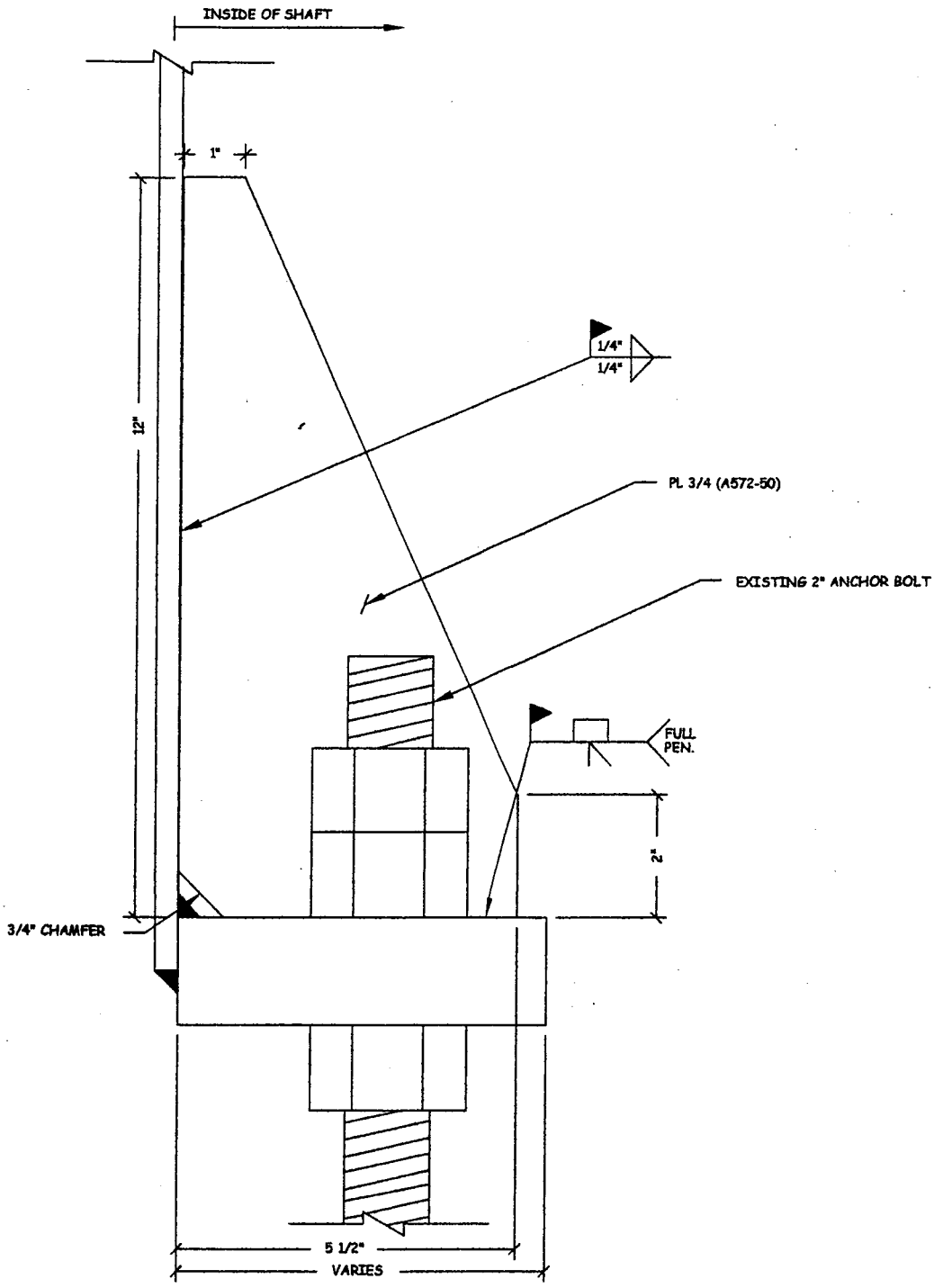
PROJECT NUMBER: CT-002525

DRAWN	APPRV.	DATE	REFFERENCE DRAWING
KRC		04/17/02	S-02

SITE LOCATION: PROSPECT, CT

REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DESCRIPTION	SHEET #
SBA	SECTION DETAILS	S-06



2 / S-02 DETAIL

NOT TO SCALE

Semaan Engineering Solutions, Inc.

Phone # (402)289-1888 Fax # (402)289-1861
Address: 1047 N. 204th Avenue, Elkhorn, NE. 68022

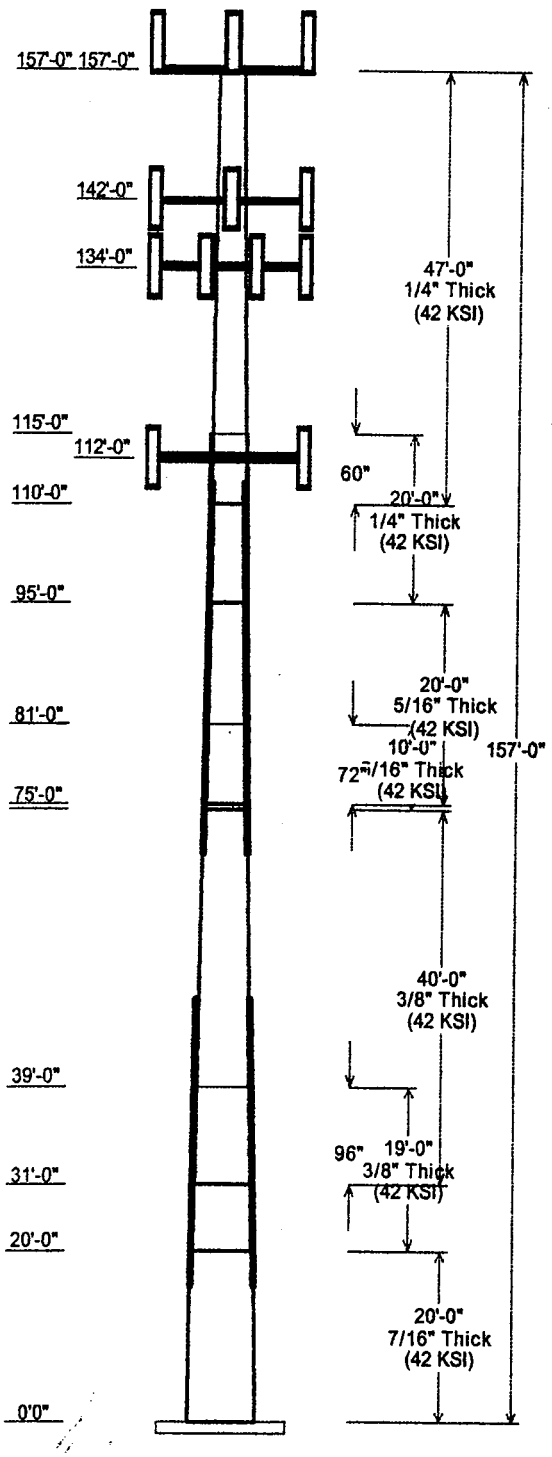
PROJECT NUMBER: CT-002525

DRAWN	APPRV.	DATE	REFFERENCE DRAWING
KRC		04/17/02	S-02

SITE LOCATION: PROSPECT, CT

REV	DATE	REV DESCRIPTION	BY	CHK
0	04/18/02	ISSUE FOR CONSTRUCTION	TLT	

CLIENT	DESCRIPTION	SHEET #
SBA	GUSSET WELDMENT DETAIL	S-07



Job Information

Pole :	CT00252S
Description :	
Client :	SBA Network Services
Location :	178 New Haven Rd, Prospect, CT
Type :	12 Sides Slip Joints
Height (ft)	157.000 Taper: 0.3232 (in/ft)

Sections Properties

Shaft Section	Section Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Steel Grade (ksi)
1	20.000	61.72	68.18	0.438		0.000	42
2	19.000	55.58	61.72	0.375	Butt Joint	0.000	42
3	40.000	45.98	58.91	0.375	Slip Joint	96.000	42
4	10.000	42.75	45.98	0.313	Butt Joint	0.000	42
5	20.000	38.85	45.31	0.313	Slip Joint	72.000	42
6	20.000	32.38	38.85	0.250	Butt Joint	0.000	42
7	47.000	19.31	34.50	0.250	Slip Joint	60.000	42

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Type	Qty	Description
157.000	159.800	Panel	9	SC 9014
157.000	158.400	Platform	1	14' Low Profile Platform
142.000	142.000	Straight	3	12' Cellular Boom
142.000	142.000	Panel	9	DB844H90
134.000	134.000	Platform	1	14' Low Profile Platform
134.000	134.000	Panel	12	Allgon 7129.12 A800-85-15i-O-D
112.000	112.000	Platform	1	14' Low Profile Platform
112.000	112.000	Panel	6	Allgon 7250.03

Linear Appurtenance

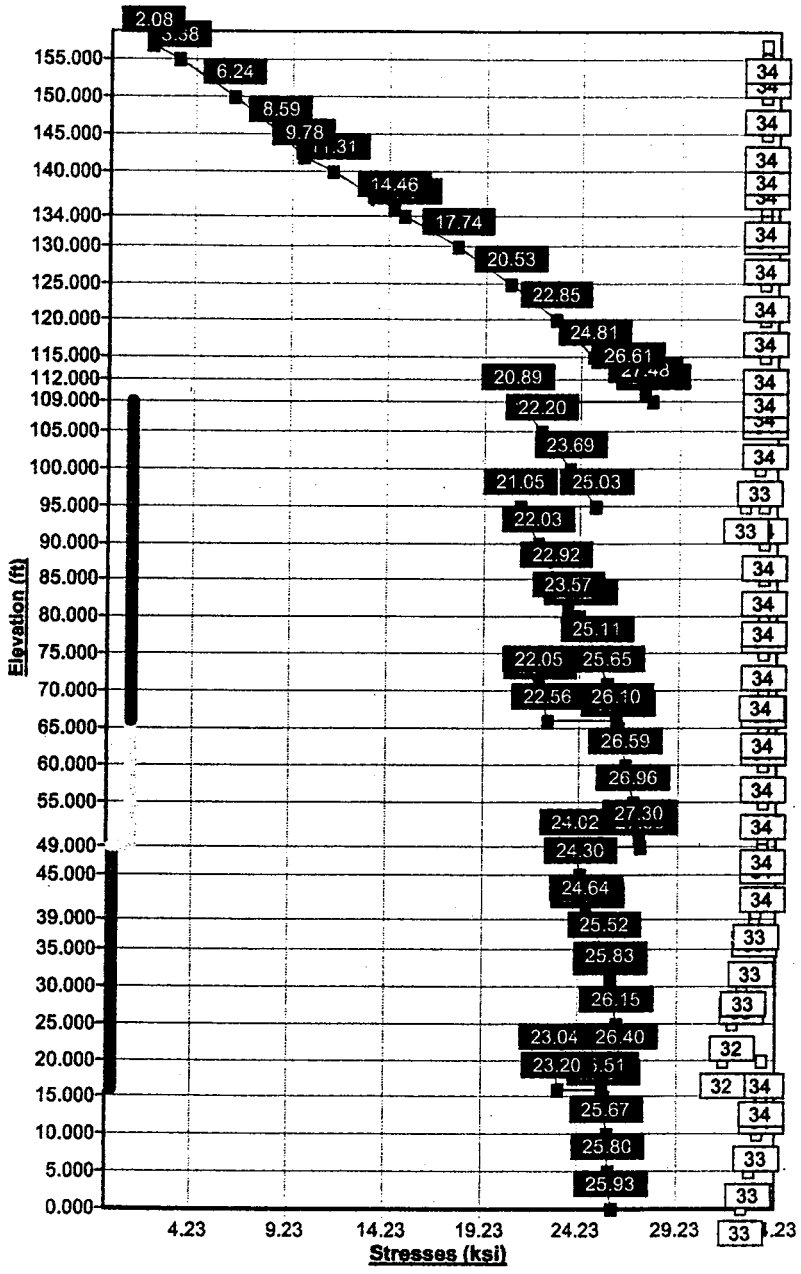
Elev (ft) From	To	Description	Exposed To Wind
70.000	110.0	C6x10.5	Yes
15.000	50.000	C6x10.5	Yes

Load Cases / Deflections

Load Case	Attach Elev (ft)	Translation (in)	Rotation (deg)
No Ice	No Ice Wind Speed = 85.00 mph w/ No Ice		
	157.000	54.40	-3.406
	142.000	43.92	-3.232
	134.000	38.63	-3.066
	112.000	25.91	-2.412
Ice	Ice Wind Speed = 73.61 mph w/ Ice 0.50 in Thick		
	157.000	44.74	-2.812
	142.000	36.09	-2.668
	134.000	31.73	-2.530
	112.000	21.24	-1.985

Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	3,368.254	34.736	-36.407
Ice	2,737.055	27.698	-42.796


Elevation (ft)
155.000
150.000
145.000
140.000
134.000
130.000
125.000
120.000
115.000
112.000
109.000
105.000
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35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
2.08
6.24
8.59
9.78
14.46
17.74
20.53
22.85
24.81
26.61
20.89
22.20
23.69
21.05
25.03
22.03
22.92
23.57
25.11
22.05
25.65
22.56
26.10
26.59
26.96
24.02
27.30
24.30
24.64
25.52
25.83
26.15
23.04
26.40
23.20
25.67
25.80
25.93
4.23
9.23
14.23
19.23
24.23
29.23
Stresses (ksi)

Pole : CT00252S
Location: 178 New Haven Rd, Prospect, CT
Height : 157.0 (ft)
Shape : 12 Sides
Base Dia : 68.18 (in)
Taper : 0.323 (in/ft)

SBA Network Services

Base Elev : 0.000 (ft)

Top Dia : 19.31 (in)

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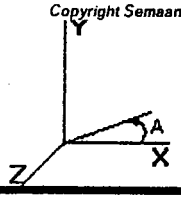


Shaft Section Properties

Sect Num	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1	20.000	0.4375	42		0.00	6,186	68.18	0.000	95.44	55917.5	39.62	155.8	61.72	20.00	86.34	41389.0	35.66	141.08	0.323
2	19.000	0.3750	42	Butt Joint	0.00	4,550	61.72	20.00	74.08	35584.9	41.96	164.5	55.58	39.00	66.66	25931.7	37.57	148.22	0.323
3	40.000	0.3750	42	Slip Joint	96.00	8,559	58.91	31.00	70.69	30922.4	39.95	157.1	45.98	71.00	55.08	14625.6	30.72	122.63	0.323
4	10.000	0.3125	42	Butt Joint	0.00	1,509	45.98	71.00	45.96	12238.2	37.29	147.1	42.75	81.00	42.71	9819.4	34.52	136.81	0.323
5	20.000	0.3125	42	Slip Joint	72.00	2,861	45.31	75.00	45.29	11709.0	36.71	145.0	38.85	95.00	38.78	7353.4	31.17	124.33	0.323
6	20.000	0.2500	42	Butt Joint	0.00	1,938	38.85	95.00	31.08	5911.3	39.50	155.4	32.38	115.0	25.87	3411.1	32.57	129.56	0.323
7	47.000	0.2500	42	Slip Joint	60.00	3,432	34.50	110.0	27.58	4130.2	34.84	138.0	19.31	157.0	15.35	711.8	18.56	77.25	0.323
				Shaft Weight		29,034													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
157.0	SC 9014	9	36.00	7.560	1.00	80.00	8.330	1.00	0.000	0.00	2.800
157.0	14' Low Profile Platform	1	1311.00	20.000	1.00	1640.00	22.000	1.00	0.000	0.00	1.400
142.0	12' Cellular Boom	3	170.00	13.000	1.00	220.00	15.000	1.00	0.000	0.00	0.000
142.0	DB844H90	9	10.00	3.960	1.00	35.00	4.520	1.00	0.000	0.00	0.000
134.0	14' Low Profile Platform	1	1311.00	20.000	1.00	1640.00	22.000	1.00	0.000	0.00	0.000
134.0	Allgon 7129.12 A800-85-15I-O-	12	4.40	1.800	1.00	21.70	2.070	1.00	0.000	0.00	0.000
112.0	14' Low Profile Platform	1	1311.00	20.000	1.00	1640.00	22.000	1.00	0.000	0.00	0.000
112.0	Allgon 7250.03	6	16.00	4.300	0.67	36.00	5.000	0.67	0.000	0.00	0.000
	Totals	42	5005.80			7091.40			Number of Loadings :		8

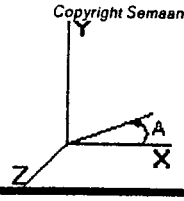
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
15.00	50.00	C6x10.5	0.00	0.33	0.00	0.42	Y
70.00	110.00	C6x10.5	0.00	0.33	0.00	0.42	Y
		Total Weight	weight		weight		

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Hole Dia (in)	Linear Weight (lb/ft)	Thick (in)	Weight (lb)	Len (ft)
16.00	49.00	3	CH C6 x 10.5	65	0.00	1.50	10.50	0.31	1039.50	99.00
66.00	109.0	3	CH C6 x 10.5	65	0.00	1.50	10.50	0.31	1354.50	129.00
									2394.00	

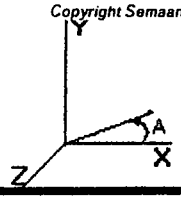
Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



Segment Properties (Max Len : 5 ft)

Seg Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing Area (in^2)	Ix (in^4)	Weight (lb)
0.00		0.4375	68.188	95.443	55,917.5	39.62	155.86	42	33	0.0			
5.00		0.4375	66.571	93.166	52,010.4	38.63	152.16	42	33	1,604.5			
10.00		0.4375	64.955	90.889	48,289.6	37.64	148.47	42	33	1,565.7			
15.00		0.4375	63.339	88.612	44,750.6	36.65	144.77	42	34	1,527.0			
16.00	Reinf Bottom	0.4375	63.016	88.157	44,064.3	36.45	144.04	42	34	300.8			
20.00	Top - Section 1	0.4375	61.723	86.335	41,389.0	35.66	141.08	42	34	1,187.5	7.857	4,226	126.0
20.00	Top - Section 1	0.3750	61.723	74.077	35,584.9	41.96	164.59	42	32		7.857	4,226	126.0
25.00		0.3750	60.106	72.126	32,845.9	40.80	160.28	42	32	1,243.7	7.857	4,013	157.5
30.00		0.3750	58.490	70.174	30,251.1	39.65	155.97	42	33	1,210.5	7.857	3,807	157.5
31.00	Bot - Section 3	0.3750	58.167	69.784	29,749.1	39.42	155.11	42	33	238.1	7.857	3,766	31.5
35.00		0.3750	56.874	68.222	27,796.7	38.49	151.66	42	33	1,890.7	7.857	3,698	126.0
39.00	Top - Section 2	0.3750	56.331	67.567	27,003.0	38.11	150.22	42	33	1,848.2	7.857	3,539	126.0
40.00		0.3750	56.008	67.176	26,537.7	37.88	149.35	42	33	229.3	7.857	3,500	31.5
45.00		0.3750	54.391	65.225	24,291.4	36.72	145.04	42	34	1,126.3	7.857	3,307	157.5
49.00	Reinf. Top	0.3750	53.098	63.664	22,588.4	35.80	141.60	42	34	877.2	7.857	3,157	126.0
50.00		0.3750	52.775	63.273	22,175.5	35.57	140.73	42	34	216.0			
55.00		0.3750	51.159	61.322	20,186.2	34.41	136.42	42	34	1,059.9			
60.00		0.3750	49.543	59.370	18,319.6	33.26	132.11	42	34	1,026.7			
65.00		0.3750	47.927	57.419	16,571.7	32.10	127.80	42	34	993.5			
66.00	Reinf Bottom	0.3750	47.603	57.028	16,236.1	31.87	126.94	42	34	194.7			
70.00		0.3750	46.310	55.467	14,938.7	30.95	123.49	42	34	765.6	7.857	2,426	126.0
71.00	Top - Section 3	0.3750	45.987	55.077	14,625.6	30.72	122.63	42	34	188.1	7.857	2,393	31.5
71.00	Top - Section 3	0.3125	45.987	45.960	12,238.2	37.29	147.16	42	34		7.857	2,393	31.5
75.00	Bot - Section 5	0.3125	44.694	44.659	11,228.0	36.18	143.02	42	34	616.7	7.857	2,266	126.0
80.00		0.3125	43.078	43.033	10,045.5	34.79	137.85	42	34	1,502.7	7.857	2,171	157.5
81.00	Top - Section 4	0.3125	43.380	43.336	10,259.6	35.05	138.81	42	34	293.9	7.857	2,140	31.5
85.00		0.3125	42.087	42.035	9,363.0	33.94	134.68	42	34	581.0	7.857	2,020	126.0
90.00		0.3125	40.470	40.409	8,317.8	32.56	129.51	42	34	701.3	7.857	1,874	157.5
95.00	Top - Section 5	0.3125	38.854	38.783	7,353.4	31.17	124.33	42	34	673.7	7.857	1,734	157.5
95.00	Top - Section 5	0.2500	38.854	31.076	5,911.3	39.50	155.42	42	33		7.857	1,734	157.5
100.00		0.2500	37.238	29.775	5,199.5	37.77	148.95	42	33	517.7	7.857	1,600	157.5
105.00		0.2500	35.622	28.474	4,547.3	36.04	142.49	42	34	495.5	7.857	1,471	157.5
109.00	Reinf. Top	0.2500	34.329	27.433	4,066.6	34.65	137.32	42	34	380.5	7.857	1,372	126.0
110.00	Bot - Section 7	0.2500	34.006	27.173	3,952.0	34.30	136.02	42	34	92.9			
112.00		0.2500	33.359	26.653	3,729.3	33.61	133.44	42	34	369.1			
115.00	Top - Section 6	0.2500	32.889	26.275	3,572.8	33.11	131.56	42	34	540.3			
120.00		0.2500	31.273	24.974	3,067.9	31.37	125.09	42	34	436.0			
125.00		0.2500	29.657	23.673	2,612.9	29.64	118.63	42	34	413.8			
130.00		0.2500	28.041	22.371	2,205.4	27.91	112.16	42	34	391.7			
134.00		0.2500	26.748	21.331	1,911.6	26.52	106.99	42	34	297.4			
135.00		0.2500	26.424	21.070	1,842.5	26.18	105.70	42	34	72.1			
140.00		0.2500	24.808	19.769	1,521.8	24.45	99.23	42	34	347.4			
142.00		0.2500	24.162	19.249	1,404.8	23.75	96.65	42	34	132.8			
145.00		0.2500	23.192	18.468	1,240.7	22.71	92.77	42	34	192.5			
150.00		0.2500	21.576	17.167	996.5	20.98	86.30	42	34	303.1			
155.00		0.2500	19.960	15.866	786.7	19.25	79.84	42	34	281.0			
157.00		0.2500	19.313	15.346	711.8	18.56	77.25	42	34	106.2			
										29,033.5			2,709.0

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



Load Case: No Ice — 85 mph - No Ice — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 85.00 (mph)
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Forces

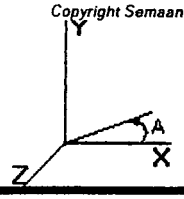
Seg Top Elev (ft)	Description	Kz	αz (psf)	αzGh (psf)	C (mph-ft)	Cf	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Wind Force Z (lb)	Weight (lb)
0.00		1.00	18.49	31.25	482.99	1.030	0.00	0.000	0.000	0.00	0.00	0.0
5.00		1.00	18.49	31.25	471.55	1.030	5.00	28.075	28.917	903.89	0.00	1,604.5
10.00		1.00	18.49	31.25	460.10	1.030	5.00	27.401	28.223	882.21	0.00	1,565.7
15.00		1.00	18.49	31.25	448.65	1.030	5.00	26.728	27.530	860.53	0.00	1,527.0
16.00	Reinf Bottom	1.00	18.49	31.25	446.36	1.030	1.00	5.265	5.423	169.50	0.00	300.8
20.00	Top - Section 1	1.00	18.49	31.25	437.20	1.030	4.00	20.790	21.413	669.34	0.00	1,313.5
25.00		1.00	18.49	31.25	425.75	1.030	5.00	25.381	26.142	817.17	0.00	1,401.2
30.00		1.00	18.49	31.25	414.31	1.030	5.00	24.708	25.449	795.49	0.00	1,368.0
31.00	Bot - Section 3	1.00	18.49	31.25	412.02	1.030	1.00	4.861	5.007	156.50	0.00	269.6
35.00		1.01	18.81	31.78	406.26	1.030	4.00	19.423	20.006	635.96	0.00	2,016.7
39.00	Top - Section 2	1.04	19.40	32.78	403.21	1.030	4.00	18.992	19.562	641.38	0.00	1,974.2
40.00		1.05	19.54	33.02	407.77	1.030	1.00	4.681	4.821	159.22	0.00	260.8
45.00		1.09	20.21	34.15	402.73	1.030	5.00	23.000	23.690	809.12	0.00	1,283.8
49.00	Reinf. Top	1.12	20.70	34.99	397.97	1.030	4.00	17.915	18.452	645.76	0.00	1,003.2
50.00		1.12	20.82	35.19	396.69	1.030	1.00	4.411	4.544	159.93	0.00	216.0
55.00		1.15	21.40	36.17	389.81	1.030	5.00	21.653	22.303	806.69	0.00	1,059.9
60.00		1.18	21.94	37.08	382.22	1.030	5.00	20.980	21.609	801.27	0.00	1,026.7
65.00		1.21	22.44	37.93	374.00	1.030	5.00	20.306	20.915	793.49	0.00	993.5
66.00	Reinf Bottom	1.21	22.54	38.10	372.29	1.030	1.00	3.980	4.100	156.22	0.00	194.7
70.00		1.24	22.92	38.75	365.23	1.030	4.00	15.652	16.122	624.73	0.00	891.6
71.00	Top - Section 3	1.24	23.02	38.90	363.42	1.030	1.00	3.846	3.961	154.12	0.00	219.6
75.00	Bot - Section 5	1.26	23.38	39.52	355.98	1.030	4.00	15.114	15.567	615.23	0.00	742.7
80.00		1.28	23.82	40.25	346.28	1.030	5.00	18.546	19.103	769.02	0.00	1,660.2
81.00	Top - Section 4	1.29	23.90	40.40	344.30	1.030	1.00	3.628	3.737	150.99	0.00	325.4
85.00		1.31	24.23	40.96	341.26	1.030	4.00	14.244	14.672	600.96	0.00	707.0
90.00		1.33	24.63	41.63	330.84	1.030	5.00	17.199	17.715	737.58	0.00	858.8
95.00	Top - Section 5	1.35	25.02	42.28	320.09	1.030	5.00	16.526	17.022	719.73	0.00	831.2
100.00		1.37	25.38	42.90	309.04	1.030	5.00	15.853	16.328	700.60	0.00	675.2
105.00		1.39	25.74	43.51	297.69	1.030	5.00	15.179	15.634	680.25	0.00	653.0
109.00	Reinf. Top	1.40	26.02	43.97	288.42	1.030	4.00	11.658	12.008	528.08	0.00	506.5
110.00	Bot - Section 7	1.41	26.09	44.09	286.08	1.030	1.00	2.847	2.933	129.31	0.00	92.9
112.00	Appertunance(s)	1.41	26.22	44.31	281.36	1.030	2.00	5.697	5.868	260.06	0.00	369.1
115.00	Top - Section 6	1.42	26.42	44.65	274.22	1.030	3.00	8.344	8.594	383.76	0.00	540.3
120.00		1.44	26.74	45.20	266.38	1.030	5.00	13.367	13.768	622.35	0.00	436.0
125.00		1.46	27.06	45.73	254.09	1.030	5.00	12.694	13.075	597.93	0.00	413.8
130.00		1.48	27.36	46.24	241.59	1.030	5.00	12.020	12.381	572.59	0.00	391.7
134.00	Appertunance(s)	1.49	27.60	46.65	231.45	1.030	4.00	9.131	9.405	438.75	0.00	297.4
135.00		1.49	27.66	46.74	228.90	1.030	1.00	2.216	2.282	106.68	0.00	72.1
140.00		1.51	27.95	47.23	216.02	1.030	5.00	10.673	10.994	519.31	0.00	347.4
142.00	Appertunance(s)	1.51	28.06	47.42	210.82	1.030	2.00	4.081	4.203	199.36	0.00	132.8
145.00		1.52	28.23	47.71	202.96	1.030	3.00	5.919	6.097	290.90	0.00	192.5
150.00		1.54	28.50	48.17	189.73	1.030	5.00	9.327	9.606	462.81	0.00	303.1
155.00		1.55	28.77	48.63	176.34	1.030	5.00	8.653	8.913	433.44	0.00	281.0
157.00	Appertunance(s)	1.56	28.88	48.80	170.95	1.030	2.00	3.273	3.371	164.53	0.00	106.2
					Totals:		157.00			22,326.72	0.00	31,427.5

Pole : CT00252S
Location: 178 New Haven Rd, Prospect, CT
Height : 157.0 (ft)
Shape : 12 Sides
Base Dia : 68.18 (in)
Taper : 0.323 (in/ft)

SBA Network Services

Base Elev : 0.000 (ft)

Top Dia : 19.31 (in)



Load Case: No Ice — 85 mph - No Ice — 21 Iterations

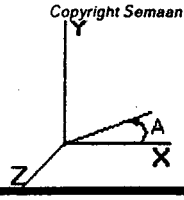
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Effective Wind Speed : 85.00 (mph)

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)
112.00	14' Low Profile	1	26.22	44.31	20.000	1.000	0.000	0.0	0.0	886.39	0.00	0.00	0.00	0.00	1311.0
112.00	Allgon 7250.03	6	26.22	44.31	17.209	0.667	0.000	0.0	0.0	762.68	0.00	0.00	0.00	0.00	98.0
134.00	14' Low Profile	1	27.60	46.65	20.000	1.000	0.000	0.0	0.0	932.99	0.00	0.00	0.00	0.00	1311.0
134.00	Allgon 7129.12 A800-85-	12	27.60	46.65	21.600	1.000	0.000	0.0	0.0	1007.63	0.00	0.00	0.00	0.00	52.8
142.00	12' Cellular Boom	3	28.06	47.42	39.000	1.000	0.000	0.0	0.0	1849.73	0.00	0.00	0.00	0.00	510.0
142.00	DB844H90	9	28.06	47.42	35.640	1.000	0.000	0.0	0.0	1690.37	0.00	0.00	0.00	0.00	90.0
157.00	SC 9014	9	29.02	49.05	68.040	1.000	0.000	2.8	0.0	3337.81	0.00	0.00	0.00	9345.86	324.0
157.00	14' Low Profile	1	28.95	48.93	20.000	1.000	0.000	1.4	0.0	978.67	0.00	0.00	0.00	1370.13	1311.0
										11,446.2	0.00				5,005.8

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



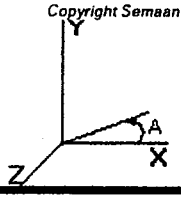
Load Case: No Ice — 85 mph - No Ice — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 85.00 (mph)
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Linear Appurtenance Forces

Seg Elev (ft)	Description	Exposed To Wind	Applied Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	Wind Force X (lb)	Wind Force Z (lb)	Weight (lb)
16.00	C6x10.5	Yes	1.00	0.00	0.33	18.496	10.41	0.00	0.00
20.00	C6x10.5	Yes	4.00	0.00	0.33	18.496	41.64	0.00	0.00
25.00	C6x10.5	Yes	5.00	0.00	0.33	18.496	52.04	0.00	0.00
30.00	C6x10.5	Yes	5.00	0.00	0.33	18.496	52.04	0.00	0.00
31.00	C6x10.5	Yes	1.00	0.00	0.33	18.496	10.41	0.00	0.00
35.00	C6x10.5	Yes	4.00	0.00	0.33	18.810	42.34	0.00	0.00
39.00	C6x10.5	Yes	4.00	0.00	0.33	19.400	43.67	0.00	0.00
40.00	C6x10.5	Yes	1.00	0.00	0.33	19.541	11.00	0.00	0.00
45.00	C6x10.5	Yes	5.00	0.00	0.33	20.210	56.87	0.00	0.00
49.00	C6x10.5	Yes	4.00	0.00	0.33	20.708	46.61	0.00	0.00
50.00	C6x10.5	Yes	1.00	0.00	0.33	20.827	11.72	0.00	0.00
71.00	C6x10.5	Yes	1.00	0.00	0.33	23.022	12.96	0.00	0.00
75.00	C6x10.5	Yes	4.00	0.00	0.33	23.386	52.64	0.00	0.00
80.00	C6x10.5	Yes	5.00	0.00	0.33	23.821	67.03	0.00	0.00
81.00	C6x10.5	Yes	1.00	0.00	0.33	23.906	13.45	0.00	0.00
85.00	C6x10.5	Yes	4.00	0.00	0.33	24.237	54.56	0.00	0.00
90.00	C6x10.5	Yes	5.00	0.00	0.33	24.636	69.32	0.00	0.00
95.00	C6x10.5	Yes	5.00	0.00	0.33	25.020	70.40	0.00	0.00
100.0	C6x10.5	Yes	5.00	0.00	0.33	25.389	71.44	0.00	0.00
105.0	C6x10.5	Yes	5.00	0.00	0.33	25.745	72.44	0.00	0.00
109.0	C6x10.5	Yes	4.00	0.00	0.33	26.022	58.58	0.00	0.00
110.0	C6x10.5	Yes	1.00	0.00	0.33	26.090	14.68	0.00	0.00
						Totals:	936.27	0.00	0.0

Pole : CT00252S — SBA Network Services
Location: 178 New Haven Rd, Prospect, CT
Height : 157.0 (ft) — Base Elev : 0.000 (ft)
Shape : 12 Sides
Base Dia : 68.18 (in) — Top Dia : 19.31 (in)
Taper : 0.323 (in/ft)



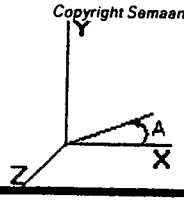
Load Case: No Ice — 85 mph - No Ice — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 85.00 (mph)
Dead Load Factor : 1.00
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	34.736	36.407	0.000	0.000	0.000	3,368.254	0.000	0.000	0.000	0.000
5.00	33.882	34.753	0.000	0.000	0.000	3,194.576	-0.046	0.000	0.046	-0.083
10.00	33.046	33.140	0.000	0.000	0.000	3,025.168	-0.179	0.000	0.179	-0.169
15.00	32.208	31.587	0.000	0.000	0.000	2,859.940	-0.403	0.000	0.403	-0.255
16.00	32.052	31.262	0.000	0.000	0.000	2,827.732	-0.459	0.000	0.459	-0.273
20.00	31.374	29.910	0.000	0.000	0.000	2,699.527	-0.719	0.000	0.719	-0.345
25.00	30.539	28.468	0.000	0.000	0.000	2,542.660	-1.125	0.000	1.125	-0.426
30.00	29.707	27.077	0.000	0.000	0.000	2,389.966	-1.623	0.000	1.623	-0.522
31.00	29.561	26.784	0.000	0.000	0.000	2,360.259	-1.735	0.000	1.735	-0.541
35.00	28.896	24.734	0.000	0.000	0.000	2,242.017	-2.223	0.000	2.223	-0.620
39.00	28.208	22.744	0.000	0.000	0.000	2,126.434	-2.777	0.000	2.777	-0.698
40.00	28.058	22.457	0.000	0.000	0.000	2,098.226	-2.926	0.000	2.926	-0.719
45.00	27.207	21.143	0.000	0.000	0.000	1,957.940	-3.731	0.000	3.731	-0.815
49.00	26.517	20.128	0.000	0.000	0.000	1,849.115	-4.448	0.000	4.448	-0.893
50.00	26.365	19.884	0.000	0.000	0.000	1,822.599	-4.638	0.000	4.638	-0.914
55.00	25.578	18.787	0.000	0.000	0.000	1,690.776	-5.656	0.000	5.656	-1.026
60.00	24.793	17.726	0.000	0.000	0.000	1,562.889	-6.793	0.000	6.793	-1.141
65.00	23.999	16.720	0.000	0.000	0.000	1,438.926	-8.052	0.000	8.052	-1.258
66.00	23.856	16.503	0.000	0.000	0.000	1,414.928	-8.318	0.000	8.318	-1.282
70.00	23.227	15.603	0.000	0.000	0.000	1,319.504	-9.434	0.000	9.434	-1.378
71.00	23.069	15.366	0.000	0.000	0.000	1,296.278	-9.725	0.000	9.725	-1.399
75.00	22.408	14.600	0.000	0.000	0.000	1,204.004	-10.934	0.000	10.934	-1.483
80.00	21.544	12.936	0.000	0.000	0.000	1,091.963	-12.553	0.000	12.553	-1.604
81.00	21.384	12.592	0.000	0.000	0.000	1,070.419	-12.892	0.000	12.892	-1.629
85.00	20.731	11.866	0.000	0.000	0.000	984.882	-14.300	0.000	14.300	-1.727
90.00	19.920	10.992	0.000	0.000	0.000	881.230	-16.172	0.000	16.172	-1.844
95.00	19.123	10.149	0.000	0.000	0.000	781.631	-18.167	0.000	18.167	-1.960
100.00	18.348	9.461	0.000	0.000	0.000	686.017	-20.282	0.000	20.282	-2.074
105.00	17.590	8.800	0.000	0.000	0.000	594.276	-22.528	0.000	22.528	-2.208
109.00	16.993	8.298	0.000	0.000	0.000	523.916	-24.424	0.000	24.424	-2.314
110.00	16.853	8.197	0.000	0.000	0.000	506.922	-24.912	0.000	24.912	-2.341
112.00	14.882	6.479	0.000	0.000	0.000	473.217	-25.909	0.000	25.909	-2.412
115.00	14.489	5.921	0.000	0.000	0.000	428.573	-27.458	0.000	27.458	-2.515
120.00	13.862	5.476	0.000	0.000	0.000	356.129	-30.181	0.000	30.181	-2.678
125.00	13.258	5.058	0.000	0.000	0.000	286.817	-33.068	0.000	33.068	-2.827
130.00	12.676	4.670	0.000	0.000	0.000	220.527	-36.105	0.000	36.105	-2.966
134.00	10.216	3.126	0.000	0.000	0.000	169.822	-38.634	0.000	38.634	-3.066
135.00	10.109	3.048	0.000	0.000	0.000	159.606	-39.279	0.000	39.279	-3.091
140.00	9.575	2.718	0.000	0.000	0.000	109.061	-42.574	0.000	42.574	-3.194
142.00	5.802	2.192	0.000	0.000	0.000	89.911	-43.920	0.000	43.920	-3.232
145.00	5.503	2.010	0.000	0.000	0.000	72.506	-45.966	0.000	45.966	-3.281
150.00	5.025	1.729	0.000	0.000	0.000	44.993	-49.439	0.000	49.439	-3.348
155.00	4.576	1.472	0.000	0.000	0.000	19.869	-52.972	0.000	52.972	-3.395
157.00	4.481	0.000	0.000	0.000	0.000	10.716	-54.396	0.000	54.396	-3.406

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



Load Case: No Ice — 85 mph - No Ice — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 85.00 (mph)
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses: Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)	Stress Ratio
0.00	0.381	0.739	0.000	0.000	0.000	25.513	25.927	32.6	0.796
5.00	0.373	0.739	0.000	0.000	0.000	25.399	25.804	33.0	0.782
10.00	0.365	0.739	0.000	0.000	0.000	25.276	25.673	33.4	0.769
15.00	0.356	0.739	0.000	0.000	0.000	25.144	25.533	33.6	0.760
16.00	0.355	0.739	0.000	0.000	0.000	25.119	25.506	33.6	0.759
20.00	0.318	0.738	0.000	0.000	0.000	22.690	23.043	33.6	0.686
20.00	0.365	0.861	0.000	0.000	0.000	25.998	26.405	31.6	0.835
25.00	0.356	0.860	0.000	0.000	0.000	25.755	26.154	32.1	0.815
30.00	0.347	0.860	0.000	0.000	0.000	25.495	25.885	32.6	0.795
31.00	0.345	0.861	0.000	0.000	0.000	25.445	25.833	32.7	0.791
35.00	0.325	0.861	0.000	0.000	0.000	25.149	25.517	33.0	0.772
39.00	0.302	0.848	0.000	0.000	0.000	24.361	24.707	33.2	0.744
40.00	0.299	0.849	0.000	0.000	0.000	24.302	24.645	33.3	0.740
45.00	0.289	0.848	0.000	0.000	0.000	23.969	24.302	33.6	0.723
49.00	0.281	0.846	0.000	0.000	0.000	23.689	24.015	33.6	0.715
50.00	0.314	0.847	0.000	0.000	0.000	26.944	27.297	33.6	0.812
55.00	0.306	0.847	0.000	0.000	0.000	26.617	26.963	33.6	0.803
60.00	0.299	0.848	0.000	0.000	0.000	26.254	26.594	33.6	0.792
65.00	0.291	0.849	0.000	0.000	0.000	25.850	26.182	33.6	0.779
66.00	0.289	0.850	0.000	0.000	0.000	25.769	26.100	33.6	0.777
70.00	0.246	0.851	0.000	0.000	0.000	21.859	22.154	33.6	0.659
71.00	0.244	0.851	0.000	0.000	0.000	21.757	22.050	33.6	0.656
71.00	0.286	1.020	0.000	0.000	0.000	25.307	25.653	33.5	0.765
75.00	0.278	1.020	0.000	0.000	0.000	24.771	25.111	33.6	0.747
80.00	0.254	1.017	0.000	0.000	0.000	23.918	24.236	33.6	0.721
81.00	0.246	1.003	0.000	0.000	0.000	23.261	23.571	33.6	0.702
85.00	0.238	1.002	0.000	0.000	0.000	22.619	22.923	33.6	0.682
90.00	0.228	1.002	0.000	0.000	0.000	21.735	22.031	33.6	0.656
95.00	0.218	1.002	0.000	0.000	0.000	20.757	21.047	33.6	0.626
95.00	0.261	1.250	0.000	0.000	0.000	24.672	25.027	32.6	0.767
100.00	0.251	1.252	0.000	0.000	0.000	23.336	23.687	33.3	0.711
105.00	0.242	1.255	0.000	0.000	0.000	21.848	22.197	33.6	0.661
109.00	0.235	1.259	0.000	0.000	0.000	20.541	20.890	33.6	0.622
110.00	0.302	1.260	0.000	0.000	0.000	27.095	27.483	33.6	0.818
112.00	0.243	1.134	0.000	0.000	0.000	26.294	26.610	33.6	0.792
115.00	0.225	1.120	0.000	0.000	0.000	24.507	24.808	33.6	0.738
120.00	0.219	1.128	0.000	0.000	0.000	22.550	22.853	33.6	0.680
125.00	0.214	1.138	0.000	0.000	0.000	20.221	20.530	33.6	0.611
130.00	0.209	1.151	0.000	0.000	0.000	17.417	17.738	33.6	0.528
134.00	0.147	0.973	0.000	0.000	0.000	14.760	15.001	33.6	0.447
135.00	0.145	0.975	0.000	0.000	0.000	14.218	14.462	33.6	0.430
140.00	0.137	0.984	0.000	0.000	0.000	11.043	11.310	33.6	0.337
142.00	0.114	0.612	0.000	0.000	0.000	9.606	9.777	33.6	0.291
145.00	0.109	0.605	0.000	0.000	0.000	8.419	8.592	33.6	0.256
150.00	0.101	0.595	0.000	0.000	0.000	6.051	6.237	33.6	0.186
155.00	0.093	0.586	0.000	0.000	0.000	3.131	3.380	33.6	0.101
157.00	0.000	0.593	0.000	0.000	0.000	1.806	2.078	33.6	0.062

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		

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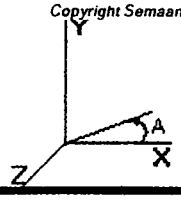


Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 73.61 (mph)

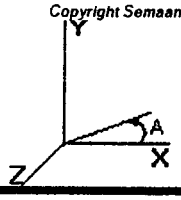
Dead Load Factor : 1.00

Wind Load Factor : 1.00

Shaft Forces

Seg Top Elev (ft)	Description	Kz	σz (psf)	σzGh (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	13.87	23.44	418.27	1.030	0.00	0.000	0.000	0.00	0.00	0.0
5.00		1.00	13.87	23.44	408.36	1.030	5.00	28.491	29.346	687.94	0.00	1,814.5
10.00		1.00	13.87	23.44	398.44	1.030	5.00	27.818	28.653	671.68	0.00	1,770.7
15.00		1.00	13.87	23.44	388.53	1.030	5.00	27.145	27.959	655.42	0.00	1,726.9
16.00	Reinf Bottom	1.00	13.87	23.44	386.55	1.030	1.00	5.348	5.509	129.13	0.00	340.5
20.00	Top - Section 1	1.00	13.87	23.44	378.62	1.030	4.00	21.123	21.757	510.03	0.00	1,469.3
25.00		1.00	13.87	23.44	368.70	1.030	5.00	25.798	26.572	622.90	0.00	1,591.0
30.00		1.00	13.87	23.44	358.79	1.030	5.00	25.124	25.878	606.64	0.00	1,552.7
31.00	Bot - Section 3	1.00	13.87	23.44	356.81	1.030	1.00	4.944	5.092	119.38	0.00	306.4
35.00		1.01	14.10	23.84	351.82	1.030	4.00	19.757	20.350	485.13	0.00	2,162.3
39.00	Top - Section 2	1.04	14.54	24.58	349.18	1.030	4.00	19.326	19.906	489.44	0.00	2,116.6
40.00		1.05	14.65	24.76	353.13	1.030	1.00	4.764	4.907	121.53	0.00	296.1
45.00		1.09	15.15	25.61	348.76	1.030	5.00	23.416	24.119	617.79	0.00	1,455.7
49.00	Reinf. Top	1.12	15.53	26.24	344.64	1.030	4.00	18.248	18.796	493.30	0.00	1,137.4
50.00		1.12	15.62	26.39	343.53	1.030	1.00	4.495	4.630	122.21	0.00	249.3
55.00		1.15	16.05	27.12	337.57	1.030	5.00	22.070	22.732	616.62	0.00	1,221.6
60.00		1.18	16.45	27.80	331.00	1.030	5.00	21.396	22.038	612.85	0.00	1,183.4
65.00		1.21	16.83	28.45	323.88	1.030	5.00	20.723	21.344	607.29	0.00	1,145.1
66.00	Reinf Bottom	1.21	16.90	28.57	322.40	1.030	1.00	4.064	4.186	119.61	0.00	224.8
70.00		1.24	17.19	29.06	316.29	1.030	4.00	15.986	16.465	478.49	0.00	1,008.8
71.00	Top - Section 3	1.24	17.26	29.17	314.72	1.030	1.00	3.929	4.047	118.09	0.00	248.7
75.00	Bot - Section 5	1.26	17.53	29.63	308.28	1.030	4.00	15.447	15.910	471.57	0.00	855.9
80.00		1.28	17.86	30.19	299.88	1.030	5.00	18.963	19.532	589.69	0.00	1,798.6
81.00	Top - Section 4	1.29	17.92	30.29	298.16	1.030	1.00	3.712	3.823	115.83	0.00	352.9
85.00		1.31	18.17	30.71	295.53	1.030	4.00	14.578	15.015	461.24	0.00	813.7
90.00		1.33	18.47	31.22	286.51	1.030	5.00	17.616	18.145	566.55	0.00	987.1
95.00	Top - Section 5	1.35	18.76	31.71	277.20	1.030	5.00	16.943	17.451	553.38	0.00	954.4
100.00		1.37	19.04	32.17	267.62	1.030	5.00	16.269	16.757	539.23	0.00	793.3
105.00		1.39	19.30	32.63	257.80	1.030	5.00	15.596	16.064	524.16	0.00	766.1
109.00	Reinf. Top	1.40	19.51	32.98	249.77	1.030	4.00	11.992	12.352	407.36	0.00	593.7
110.00	Bot - Section 7	1.41	19.56	33.06	247.74	1.030	1.00	2.931	3.019	99.81	0.00	114.5
112.00	Appertunance(s)	1.41	19.66	33.23	243.66	1.030	2.00	5.864	6.040	200.74	0.00	412.1
115.00	Top - Section 6	1.42	19.81	33.49	237.47	1.030	3.00	8.594	8.851	296.43	0.00	603.0
120.00		1.44	20.05	33.89	230.69	1.030	5.00	13.784	14.197	481.28	0.00	535.4
125.00		1.46	20.29	34.29	220.04	1.030	5.00	13.110	13.504	463.14	0.00	508.2
130.00		1.48	20.52	34.68	209.22	1.030	5.00	12.437	12.810	444.30	0.00	481.0
134.00	Appertunance(s)	1.49	20.70	34.98	200.44	1.030	4.00	9.465	9.749	341.06	0.00	365.7
135.00		1.49	20.74	35.05	198.23	1.030	1.00	2.299	2.368	83.01	0.00	89.0
140.00		1.51	20.96	35.42	187.07	1.030	5.00	11.090	11.423	404.66	0.00	426.7
142.00	Appertunance(s)	1.51	21.04	35.56	182.57	1.030	2.00	4.247	4.375	155.61	0.00	163.7
145.00		1.52	21.17	35.78	175.76	1.030	3.00	6.169	6.354	227.37	0.00	237.0
150.00		1.54	21.37	36.13	164.31	1.030	5.00	9.743	10.036	362.59	0.00	372.3
155.00		1.55	21.58	36.47	152.71	1.030	5.00	9.070	9.342	340.71	0.00	345.1
157.00	Appertunance(s)	1.56	21.66	36.60	148.04	1.030	2.00	3.439	3.543	129.67	0.00	131.0
					Totals:		157.00			17,144.87	0.00	35,722.0

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



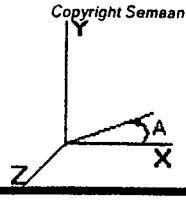
Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Effective Wind Speed : 73.61 (mph)

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)
112.00	14' Low Profile	1	19.66	33.23	22.000	1.000	0.000	0.0	0.0	731.23	0.00	0.00	0.00	0.00	1640.0
112.00	Allgon 7250.03	6	19.66	33.23	20.010	0.667	0.000	0.0	0.0	665.08	0.00	0.00	0.00	0.00	216.0
134.00	14' Low Profile	1	20.70	34.98	22.000	1.000	0.000	0.0	0.0	769.67	0.00	0.00	0.00	0.00	1640.0
134.00	Allgon 7129.12 A800-85-	12	20.70	34.98	24.840	1.000	0.000	0.0	0.0	869.03	0.00	0.00	0.00	0.00	260.4
142.00	12' Cellular Boom	3	21.04	35.56	45.000	1.000	0.000	0.0	0.0	1600.63	0.00	0.00	0.00	0.00	660.0
142.00	DB844H90	9	21.04	35.56	40.680	1.000	0.000	0.0	0.0	1446.97	0.00	0.00	0.00	0.00	315.0
157.00	SC 9014	9	21.76	36.79	74.970	1.000	0.000	2.8	0.0	2758.16	0.00	0.00	0.00	7722.84	720.0
157.00	14' Low Profile	1	21.71	36.69	22.000	1.000	0.000	1.4	0.0	807.35	0.00	0.00	0.00	1130.29	1640.0
										9,648.11	0.00				7,091.4



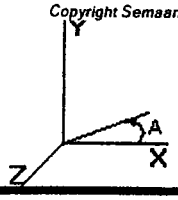
Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Effective Wind Speed : 73.61 (mph)

Linear Appurtenance Forces

Seg Elev (ft)	Description	Exposed To Wind	Applied Length (ft)	Weight (lb/ft)	CaAa (sf/ft)	qz (psf)	Wind Force X (lb)	Wind Force Z (lb)	Weight (lb)
16.00	C6x10.5	Yes	1.00	0.00	0.42	13.871	9.78	0.00	0.00
20.00	C6x10.5	Yes	4.00	0.00	0.42	13.871	39.10	0.00	0.00
25.00	C6x10.5	Yes	5.00	0.00	0.42	13.871	48.88	0.00	0.00
30.00	C6x10.5	Yes	5.00	0.00	0.42	13.871	48.88	0.00	0.00
31.00	C6x10.5	Yes	1.00	0.00	0.42	13.871	9.78	0.00	0.00
35.00	C6x10.5	Yes	4.00	0.00	0.42	14.106	39.76	0.00	0.00
39.00	C6x10.5	Yes	4.00	0.00	0.42	14.549	41.01	0.00	0.00
40.00	C6x10.5	Yes	1.00	0.00	0.42	14.655	10.33	0.00	0.00
45.00	C6x10.5	Yes	5.00	0.00	0.42	15.156	53.41	0.00	0.00
49.00	C6x10.5	Yes	4.00	0.00	0.42	15.530	43.78	0.00	0.00
50.00	C6x10.5	Yes	1.00	0.00	0.42	15.620	11.01	0.00	0.00
71.00	C6x10.5	Yes	1.00	0.00	0.42	17.266	12.17	0.00	0.00
75.00	C6x10.5	Yes	4.00	0.00	0.42	17.538	49.44	0.00	0.00
80.00	C6x10.5	Yes	5.00	0.00	0.42	17.865	62.95	0.00	0.00
81.00	C6x10.5	Yes	1.00	0.00	0.42	17.928	12.63	0.00	0.00
85.00	C6x10.5	Yes	4.00	0.00	0.42	18.177	51.24	0.00	0.00
90.00	C6x10.5	Yes	5.00	0.00	0.42	18.476	65.10	0.00	0.00
95.00	C6x10.5	Yes	5.00	0.00	0.42	18.764	66.12	0.00	0.00
100.0	C6x10.5	Yes	5.00	0.00	0.42	19.041	67.09	0.00	0.00
105.0	C6x10.5	Yes	5.00	0.00	0.42	19.308	68.03	0.00	0.00
109.0	C6x10.5	Yes	4.00	0.00	0.42	19.515	55.01	0.00	0.00
110.0	C6x10.5	Yes	1.00	0.00	0.42	19.566	13.79	0.00	0.00
						Totals:	879.28	0.00	0.0



Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

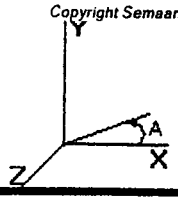
Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Effective Wind Speed : 73.61 (mph)

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	687.94	1,814.45	0.00	0.00	0.00	0.00
10.00	0.00	0.00	671.68	1,770.66	0.00	0.00	0.00	0.00
15.00	0.00	0.00	655.42	1,726.86	0.00	0.00	0.00	0.00
16.00	0.00	0.00	138.91	340.52	0.00	0.00	0.00	0.00
20.00	0.00	0.00	549.13	1,469.35	0.00	0.00	0.00	0.00
25.00	0.00	0.00	671.78	1,590.97	0.00	0.00	0.00	0.00
30.00	0.00	0.00	655.52	1,552.71	0.00	0.00	0.00	0.00
31.00	0.00	0.00	129.15	306.35	0.00	0.00	0.00	0.00
35.00	0.00	0.00	524.89	2,162.31	0.00	0.00	0.00	0.00
39.00	0.00	0.00	530.46	2,116.57	0.00	0.00	0.00	0.00
40.00	0.00	0.00	131.86	296.13	0.00	0.00	0.00	0.00
45.00	0.00	0.00	671.20	1,455.67	0.00	0.00	0.00	0.00
49.00	0.00	0.00	537.08	1,137.39	0.00	0.00	0.00	0.00
50.00	0.00	0.00	133.22	249.33	0.00	0.00	0.00	0.00
55.00	0.00	0.00	616.62	1,221.64	0.00	0.00	0.00	0.00
60.00	0.00	0.00	612.85	1,183.38	0.00	0.00	0.00	0.00
65.00	0.00	0.00	607.29	1,145.12	0.00	0.00	0.00	0.00
66.00	0.00	0.00	119.61	224.84	0.00	0.00	0.00	0.00
70.00	0.00	0.00	478.49	1,008.83	0.00	0.00	0.00	0.00
71.00	0.00	0.00	130.25	248.68	0.00	0.00	0.00	0.00
75.00	0.00	0.00	521.01	855.90	0.00	0.00	0.00	0.00
80.00	0.00	0.00	652.63	1,798.56	0.00	0.00	0.00	0.00
81.00	0.00	0.00	128.47	352.87	0.00	0.00	0.00	0.00
85.00	0.00	0.00	512.48	813.66	0.00	0.00	0.00	0.00
90.00	0.00	0.00	631.65	987.11	0.00	0.00	0.00	0.00
95.00	0.00	0.00	619.49	954.38	0.00	0.00	0.00	0.00
100.00	0.00	0.00	606.32	793.30	0.00	0.00	0.00	0.00
105.00	0.00	0.00	592.20	766.11	0.00	0.00	0.00	0.00
109.00	0.00	0.00	462.37	593.71	0.00	0.00	0.00	0.00
110.00	0.00	0.00	113.60	114.51	0.00	0.00	0.00	0.00
112.00	0.00	0.00	1,597.05	2,268.08	0.00	0.00	0.00	0.00
115.00	0.00	0.00	296.43	603.02	0.00	0.00	0.00	0.00
120.00	0.00	0.00	481.28	535.43	0.00	0.00	0.00	0.00
125.00	0.00	0.00	463.14	508.24	0.00	0.00	0.00	0.00
130.00	0.00	0.00	444.30	481.04	0.00	0.00	0.00	0.00
134.00	0.00	0.00	1,979.76	2,266.06	0.00	0.00	0.00	0.00
135.00	0.00	0.00	83.01	89.00	0.00	0.00	0.00	0.00
140.00	0.00	0.00	404.66	426.65	0.00	0.00	0.00	0.00
142.00	0.00	0.00	3,203.21	1,138.65	0.00	0.00	0.00	0.00
145.00	0.00	0.00	227.37	237.02	0.00	0.00	0.00	0.00
150.00	0.00	0.00	362.59	372.26	0.00	0.00	0.00	0.00
155.00	0.00	0.00	340.71	345.06	0.00	0.00	0.00	0.00
157.00	0.00	0.00	3,695.18	2,491.02	0.00	0.00	0.00	8,853.13
		Totals:	27,672.25	42,813.39	0.00	0.00	0.00	8,853.13

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



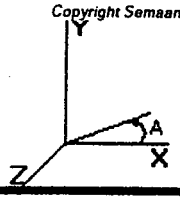
Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 73.61 (mph)
Dead Load Factor : 1.00
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	27.698	42.796	0.000	0.000	0.000	2,737.055	0.000	0.000	0.000	0.000
5.00	27.058	40.950	0.000	0.000	0.000	2,598.568	-0.037	0.000	0.037	-0.068
10.00	26.431	39.148	0.000	0.000	0.000	2,463.281	-0.146	0.000	0.146	-0.137
15.00	25.798	37.404	0.000	0.000	0.000	2,331.129	-0.328	0.000	0.328	-0.208
16.00	25.681	37.048	0.000	0.000	0.000	2,305.332	-0.373	0.000	0.373	-0.222
20.00	25.165	35.554	0.000	0.000	0.000	2,202.608	-0.585	0.000	0.585	-0.281
25.00	24.527	33.935	0.000	0.000	0.000	2,076.787	-0.916	0.000	0.916	-0.347
30.00	23.887	32.368	0.000	0.000	0.000	1,954.154	-1.322	0.000	1.322	-0.425
31.00	23.778	32.046	0.000	0.000	0.000	1,930.267	-1.413	0.000	1.413	-0.441
35.00	23.269	29.862	0.000	0.000	0.000	1,835.155	-1.811	0.000	1.811	-0.505
39.00	22.738	27.734	0.000	0.000	0.000	1,742.080	-2.263	0.000	2.263	-0.570
40.00	22.627	27.420	0.000	0.000	0.000	1,719.342	-2.384	0.000	2.384	-0.587
45.00	21.972	25.945	0.000	0.000	0.000	1,606.210	-3.041	0.000	3.041	-0.665
49.00	21.438	24.799	0.000	0.000	0.000	1,518.324	-3.627	0.000	3.627	-0.730
50.00	21.326	24.531	0.000	0.000	0.000	1,496.886	-3.782	0.000	3.782	-0.746
55.00	20.730	23.284	0.000	0.000	0.000	1,390.260	-4.614	0.000	4.614	-0.839
60.00	20.136	22.077	0.000	0.000	0.000	1,286.611	-5.544	0.000	5.544	-0.933
65.00	19.530	20.923	0.000	0.000	0.000	1,185.934	-6.574	0.000	6.574	-1.029
66.00	19.424	20.683	0.000	0.000	0.000	1,166.405	-6.792	0.000	6.792	-1.050
70.00	18.943	19.668	0.000	0.000	0.000	1,088.709	-7.706	0.000	7.706	-1.129
71.00	18.823	19.407	0.000	0.000	0.000	1,069.766	-7.944	0.000	7.944	-1.146
75.00	18.312	18.535	0.000	0.000	0.000	994.476	-8.935	0.000	8.935	-1.215
80.00	17.637	16.733	0.000	0.000	0.000	902.918	-10.262	0.000	10.262	-1.315
81.00	17.515	16.368	0.000	0.000	0.000	885.282	-10.540	0.000	10.540	-1.336
85.00	17.007	15.540	0.000	0.000	0.000	815.222	-11.695	0.000	11.695	-1.417
90.00	16.375	14.542	0.000	0.000	0.000	730.187	-13.232	0.000	13.232	-1.514
95.00	15.753	13.579	0.000	0.000	0.000	648.312	-14.870	0.000	14.870	-1.610
100.00	15.147	12.776	0.000	0.000	0.000	569.551	-16.608	0.000	16.608	-1.705
105.00	14.552	12.003	0.000	0.000	0.000	493.818	-18.455	0.000	18.455	-1.816
109.00	14.081	11.411	0.000	0.000	0.000	435.611	-20.016	0.000	20.016	-1.904
110.00	13.972	11.291	0.000	0.000	0.000	421.529	-20.417	0.000	20.417	-1.927
112.00	12.310	9.063	0.000	0.000	0.000	393.585	-21.238	0.000	21.238	-1.985
115.00	12.009	8.447	0.000	0.000	0.000	356.656	-22.513	0.000	22.513	-2.071
120.00	11.526	7.904	0.000	0.000	0.000	296.611	-24.757	0.000	24.757	-2.207
125.00	11.059	7.391	0.000	0.000	0.000	238.982	-27.137	0.000	27.137	-2.332
130.00	10.607	6.911	0.000	0.000	0.000	183.689	-29.643	0.000	29.643	-2.447
134.00	8.534	4.726	0.000	0.000	0.000	141.262	-31.730	0.000	31.730	-2.530
135.00	8.452	4.632	0.000	0.000	0.000	132.728	-32.262	0.000	32.262	-2.551
140.00	8.033	4.217	0.000	0.000	0.000	90.468	-34.982	0.000	34.982	-2.637
142.00	4.782	3.224	0.000	0.000	0.000	74.403	-36.094	0.000	36.094	-2.668
145.00	4.547	2.994	0.000	0.000	0.000	60.056	-37.783	0.000	37.783	-2.709
150.00	4.169	2.636	0.000	0.000	0.000	37.323	-40.651	0.000	40.651	-2.764
155.00	3.813	2.307	0.000	0.000	0.000	16.479	-43.569	0.000	43.569	-2.803
157.00	3.695	0.000	0.000	0.000	0.000	8.853	-44.745	0.000	44.745	-2.812

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



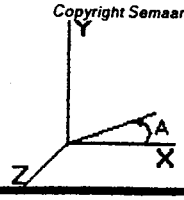
Load Case: Ice — 85 mph - With Ice - Ice Thickness = 0.5 in — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 73.61 (mph)
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)	Stress Ratio
0.00	0.448	0.590	0.000	0.000	0.000	20.732	21.205	32.6	0.651
5.00	0.440	0.590	0.000	0.000	0.000	20.660	21.125	33.0	0.640
10.00	0.431	0.591	0.000	0.000	0.000	20.582	21.037	33.4	0.630
15.00	0.422	0.592	0.000	0.000	0.000	20.495	20.942	33.6	0.623
16.00	0.420	0.592	0.000	0.000	0.000	20.479	20.924	33.6	0.623
20.00	0.377	0.592	0.000	0.000	0.000	18.513	18.918	33.6	0.563
20.00	0.434	0.690	0.000	0.000	0.000	21.212	21.679	31.6	0.685
25.00	0.424	0.691	0.000	0.000	0.000	21.036	21.494	32.1	0.670
30.00	0.415	0.692	0.000	0.000	0.000	20.846	21.295	32.6	0.654
31.00	0.413	0.692	0.000	0.000	0.000	20.809	21.256	32.7	0.651
35.00	0.393	0.693	0.000	0.000	0.000	20.585	21.012	33.0	0.636
39.00	0.368	0.684	0.000	0.000	0.000	19.958	20.360	33.2	0.613
40.00	0.365	0.684	0.000	0.000	0.000	19.913	20.313	33.3	0.610
45.00	0.355	0.684	0.000	0.000	0.000	19.663	20.053	33.6	0.597
49.00	0.347	0.684	0.000	0.000	0.000	19.451	19.834	33.6	0.590
50.00	0.388	0.685	0.000	0.000	0.000	22.129	22.547	33.6	0.671
55.00	0.380	0.687	0.000	0.000	0.000	21.886	22.298	33.6	0.664
60.00	0.372	0.689	0.000	0.000	0.000	21.613	22.017	33.6	0.655
65.00	0.364	0.691	0.000	0.000	0.000	21.305	21.702	33.6	0.646
66.00	0.363	0.692	0.000	0.000	0.000	21.243	21.639	33.6	0.644
70.00	0.311	0.694	0.000	0.000	0.000	18.035	18.385	33.6	0.547
71.00	0.308	0.694	0.000	0.000	0.000	17.955	18.303	33.6	0.545
71.00	0.361	0.832	0.000	0.000	0.000	20.885	21.294	33.5	0.635
75.00	0.353	0.833	0.000	0.000	0.000	20.460	20.863	33.6	0.621
80.00	0.329	0.833	0.000	0.000	0.000	19.777	20.158	33.6	0.600
81.00	0.320	0.821	0.000	0.000	0.000	19.238	19.609	33.6	0.584
85.00	0.311	0.822	0.000	0.000	0.000	18.723	19.087	33.6	0.568
90.00	0.301	0.823	0.000	0.000	0.000	18.009	18.366	33.6	0.547
95.00	0.291	0.825	0.000	0.000	0.000	17.217	17.566	33.6	0.523
95.00	0.349	1.030	0.000	0.000	0.000	20.464	20.889	32.6	0.640
100.00	0.339	1.034	0.000	0.000	0.000	19.374	19.795	33.3	0.594
105.00	0.330	1.038	0.000	0.000	0.000	18.154	18.572	33.6	0.553
109.00	0.323	1.043	0.000	0.000	0.000	17.079	17.495	33.6	0.521
110.00	0.416	1.045	0.000	0.000	0.000	22.530	23.017	33.6	0.685
112.00	0.340	0.938	0.000	0.000	0.000	21.869	22.269	33.6	0.663
115.00	0.321	0.929	0.000	0.000	0.000	20.394	20.778	33.6	0.618
120.00	0.316	0.938	0.000	0.000	0.000	18.781	19.167	33.6	0.570
125.00	0.312	0.949	0.000	0.000	0.000	16.849	17.240	33.6	0.513
130.00	0.309	0.963	0.000	0.000	0.000	14.508	14.910	33.6	0.444
134.00	0.222	0.813	0.000	0.000	0.000	12.278	12.578	33.6	0.374
135.00	0.220	0.815	0.000	0.000	0.000	11.824	12.126	33.6	0.361
140.00	0.213	0.826	0.000	0.000	0.000	9.161	9.482	33.6	0.282
142.00	0.168	0.505	0.000	0.000	0.000	7.949	8.163	33.6	0.243
145.00	0.162	0.500	0.000	0.000	0.000	6.973	7.188	33.6	0.214
150.00	0.154	0.493	0.000	0.000	0.000	5.019	5.243	33.6	0.156
155.00	0.145	0.488	0.000	0.000	0.000	2.597	2.870	33.6	0.085
157.00	0.000	0.489	0.000	0.000	0.000	1.492	1.716	33.6	0.051

Pole :	CT00252S	SBA Network Services	
Location:	178 New Haven Rd, Prospect, CT		
Height :	157.0 (ft)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Base Dia :	68.18 (in)	Top Dia : 19.31 (in)	
Taper :	0.323 (in/ft)		



Load Case: No Ice — 85 mph - No Ice — 21 Iterations

Gust Response Factor : 1.69 — Effective Wind Speed : 85.00 (mph)
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Analysis Summary

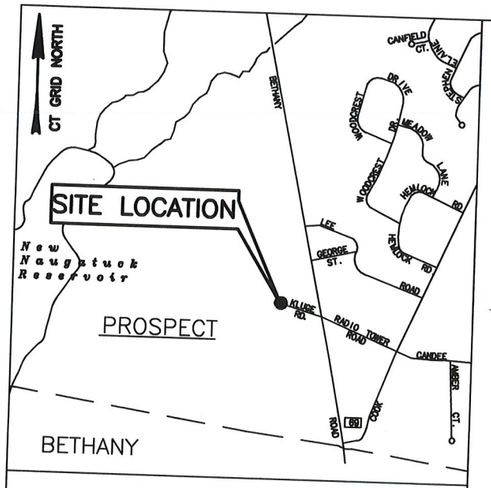
	Reactions						Max Stresses			
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
No Ice	34.736	0.000	36.407	0.000	0.000	3,368.254	26.405	31.6	20.000	0.835
Ice	27.698	0.000	42.796	0.000	0.000	2,737.055	23.328	33.6	109.00	0.694

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Description	Stitch Weld Len (in)	Stitch Weld Spacing (in)	Stitch Weld Size (in)	Stitch Weld Fu (ksi)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Lower Terminal Weld Len (in)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Len (in)	Max Stresses fy (ksi)	Fb (ksi)	Ratio
16.0	49.0	(3) CHN-C6 x 10.5	1.50	24.00	0.188	70	1,849.11	87.2	25,745.7	12.0	2,827.73	103.0	48,464.2	12.0	27.5	47.7	57.6
66.0	109.	(3) CHN-C6 x 10.5	1.50	24.00	0.188	70	523.92	57.2	5,438.9	12.0	1,414.93	78.4	18,794.0	12.0	27.1	47.7	56.8

SBA

913-008-629 / PROSPECT
178 NEW HAVEN ROAD
PROSPECT, CONNECTICUT 06712



LEGEND

DATUM IS MEAN SEA LEVEL

- EXISTING HIGHWAY LINE/PROPERTY LINE
- PROPOSED LEASE AREA
- BUILDING SETBACKS
- WETLAND BOUNDARY
- TREE, HEDGE, EDGE OF WOODS
- 130 EXISTING CONTOUR
- X 132 EXISTING SPOT ELEVATION @ X
- BARBED WIRE, FARM AND CHAIN LINK FENCE
- EXISTING UTILITY POLE AND OVERHEAD UTILITIES
- PROPOSED UTILITY POLE AND OVERHEAD UTILITIES
- CHD BOUNDARY MONUMENT

PROJECT SUMMARY

APPLICANT / LESSEE
AT&T WIRELESS PCS, LLC.
12 OMEGA DRIVE
STAMFORD, CT 06907
CONTACT: DOYLE WOLFE
(203) 379-0243

PROPERTY OWNER
VICTOR J. & ROSEMARY S. VISOCKIS
177 NEW HAVEN ROAD
PROSPECT, CT 06712

APPLICANT / LESSOR
SBA TOWERS, INC.
80 EASTERN BOULEVARD
GLASTONBURY, CT 06033

CONTACTS:
LAW OFFICES OF
WENDELL G. DAVIS, LLC
WENDELL DAVIS, ESQ.
(860) 549-5402

HURWITZ & SAGARIN PC
JULIE DONALDSON, ESQ.
(203) 877-8000

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF AT&T ANTENNAS AND ASSOCIATED EQUIPMENT AS PART OF AN EXISTING WIRELESS COMMUNICATIONS SYSTEM LICENSED BY THE FEDERAL COMMUNICATIONS COMMISSION (FCC).

THE SYSTEM WILL BOTH TRANSMIT AND RECEIVE RADIO SIGNALS AT THE FREQUENCIES DESIGNATED BY THE FCC.

POWER AND TELCO UTILITIES NECESSARY FOR THIS FACILITY ARE EXISTING. NO WATER OR SEWER SERVICES ARE NEEDED.

THE PROPOSED USE DOES NOT REQUIRE FULL-TIME OR PART-TIME EMPLOYEES AT THE SITE.

ELECTRIC UTILITY: CONNECTICUT LIGHT & POWER
"CALL BEFORE YOU DIG" 800-922-4455

TELEPHONE UTILITY: SOUTHERN NEW ENGLAND TELEPHONE (SNET)

STATE OF CONNECTICUT * FRANCIS D. KOBYLENSKY * #10421 REGISTERED PROFESSIONAL ENGINEER

DRAWING INDEX	
DRAWING	TITLE
T1	COVER SHEET
Z1	LAYOUT PLAN AND ELEVATION

Goodkind & O'Dea, Inc.
A Dewberry Company
59 Elm Street, Suite 101
New Haven, CT 06510
p. (203) 776-2277
f. (203) 776-2288
Engineers
Planners
Surveyors

PROSPECT
178 NEW HAVEN ROAD
PROSPECT, CONNECTICUT 06712

SBA TOWERS, INC.
80 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
(860) 659-9101
MARK ROBERTS

ONE TOWN CENTER RD, 3RD FL.
BOCA RATON, FL. 33486
(561) 995-7670

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	05/18/02	ISSUE FOR SITING COUNCIL	FJD	JSG	FDK
0	05/14/02	PRELIMINARY ISSUE FOR SITING COUNCIL	MJS	JSG	FDK

SCALE AS NOTED | DESIGNED JSG | DRAWN MJS

SITE NUMBER 913-008-629
PROSPECT
COVER SHEET

DRAWING NUMBER CT-629T1 | REV 0

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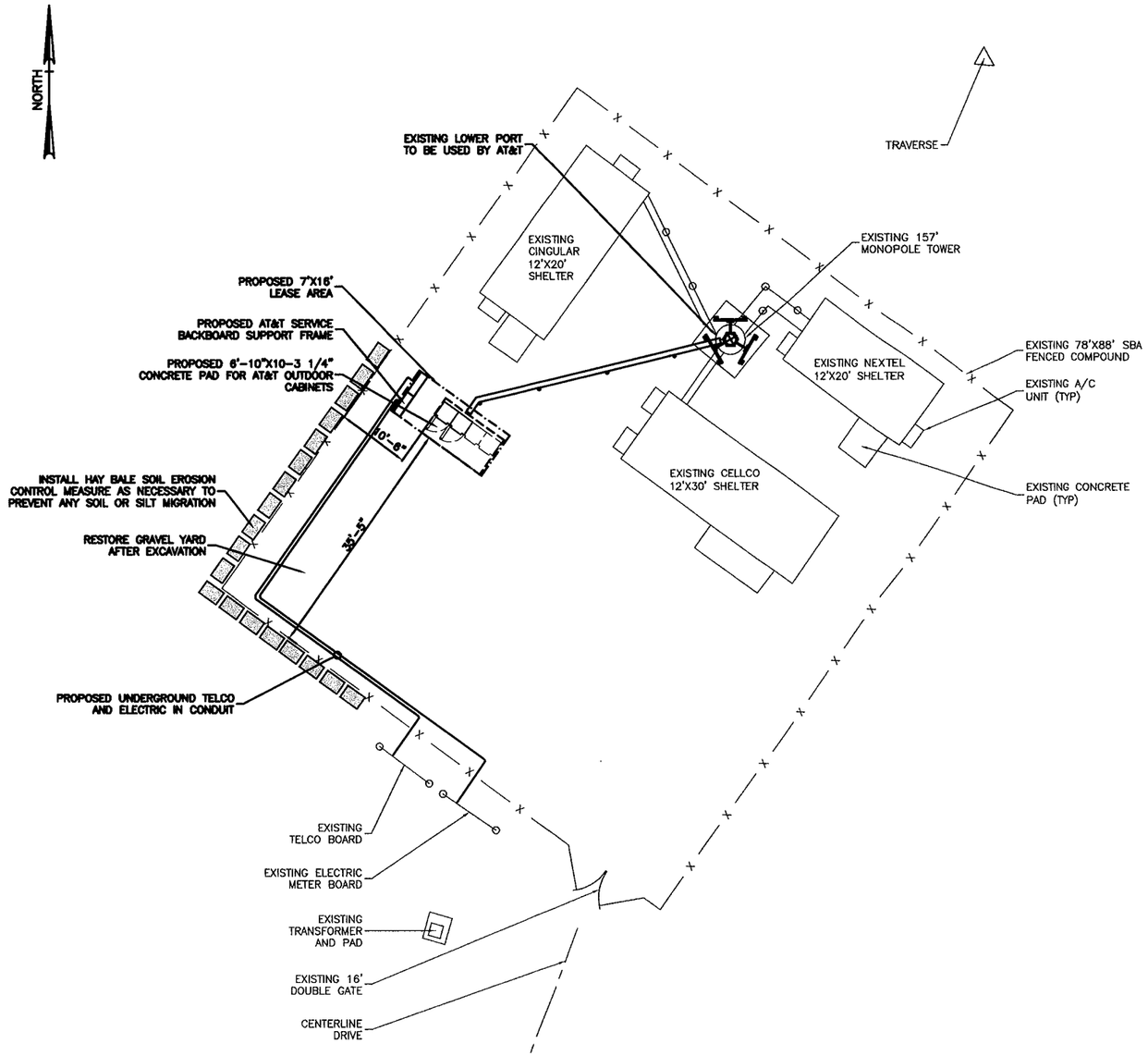
Mon, Apr 29 2002 - 2:26:33pm
By: MJS
Plot: MCHRISTOPHE
Layer State:
Xref: BORD.dwg



EQUIPMENT LAYOUT PLAN

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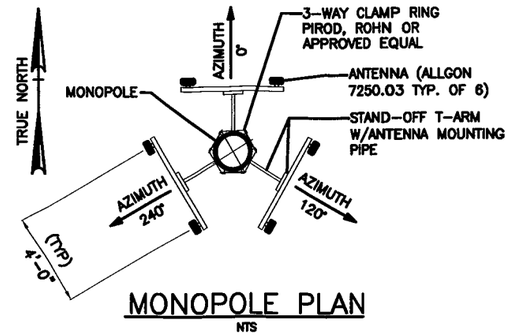
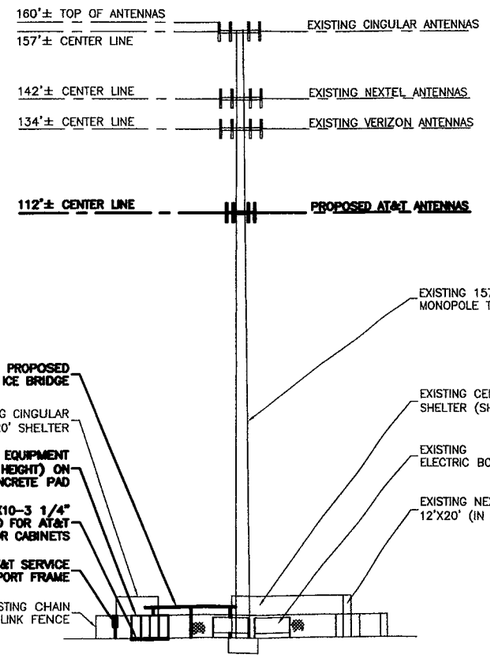
SCALE: 1"=20'



MONOPOLE PLAN

NTS



SOUTH ELEVATION

40 0 40 80 120

SCALE: 1"=40'

Goodkind & O'Dea, Inc.
A Dewberry Company
59 Elm Street, Suite 101
New Haven, CT 06510
p. (203) 776-2277
f. (203) 776-2288
Engineers
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PROSPECT
178 NEW HAVEN ROAD
PROSPECT, CONNECTICUT 06712

SBA TOWERS, INC.
80 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT
(860) 659-9101
MARK ROBERTS
ONE TOWN CENTER RD, 3RD FL.
BOCA RATON, FL. 33486
(561) 995-7670

NO.	DATE	REVISIONS	BY	CHK	APP'D
3	04/18/22	ISSUE FOR SITING COUNCIL	FJD	JSG	FDK
2	04/14/22	PRELIMINARY ISSUE FOR SITING COUNCIL	MJS	JSG	FDK

SCALE: AS NOTED | DESIGNED: JSG | DRAWN: MJS

SITE NUMBER 913-008-629
PROSPECT
LAYOUT PLAN AND ELEVATION

DRAWING NUMBER: CT-629Z1 | REV: 0

C Squared Systems, LLC
13 Forest Drive
East Kingston, NH 03827
Phone 603-758-1013
E-mail:
scott.pollister@csquaredsystems.com

Calculated Radio Frequency Emissions

Site Number 913-008-629

178 New Haven Road, Prospect, CT

SBA Network Services, Inc

TABLE OF CONTENTS

1. Introduction

The purpose of this report is to investigate compliance with applicable federal, state and local EMF regulations for the proposed 160-foot wireless telecommunications facility at 178 New Haven Road in Prospect, CT.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

The results will be listed as a percentage of current Maximum Permissible Exposure (% MPE) limits as listed in the FCC OET Bulletin 65 Edition 97-01. Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ emitted is called the power density. The general population exposure limit for the cellular band is 580 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. 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.

2. Site Data

Carrier	Freq (MHz)	# of Channels per Sector	# of Sectors	Height of Antenna	Power per Channel (Watts ERP)
AT&T	1900	16	3	112'	250
Verizon	800	24	3	134'	100
Nextel	800	9	3	142'	100
Cingular	800	24	3	157'	100

3. RF Exposure Prediction Methods

The FCC has established the following equation to estimate the power density in the far-field region.

$$\text{Power Density} = \left(\frac{4 \times EIRP}{4 \times \pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal distance from antenna

V = Vertical distance from bottom of antenna

Maximum Off beam loss is limited to 10 dB to insure a conservative results

4. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The attachments labeled Table 1 and Figure 1 are excerpts from OET Bulletin 65 and define the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

5. Calculation Results

The calculated results indicate that radio frequency emissions expected from this installation are significantly less than the regulatory emission limits for public exposure. Specific maximum power densities and their percentage of the limits are listed below for each individual carrier.

Previously Submitted Maximum Power Densities

Carrier	Max % Limits	Height	Submitted For	Report Date	Date Submitted
Nextel	6.22	142'	Verizon Wireless	6/30/99	7/1/99
Cingular	5.15	157'	Verizon Wireless	6/30/99	7/1/99
Verizon	6.72	132'	Verizon Wireless	6/30/99	7/1/99
***Updated Verizon Results**	**6.52**	**134'**			

*Original submittal calculated at 132-feet, updated results reflect revised antenna configuration of 134-feet

New Additional Carrier Maximum Power Densities

Carrier	Calculated Maximum Power Density ($\mu W/cm^2$)	MPE Limit ($\mu W/cm^2$)	Max % Limits
AT&T	60	1000	6.0

Cumulative Percent of Maximum Permissible Exposure

	Max % Limits
Cumulative	23.89

6. Conclusion

All of the calculations in this report were computed for the 160-foot wireless facility in Prospect, CT. As can be seen from the above tables and attachments, the expected aggregate radio frequency emissions from the proposed installation are extremely low and well below the regulatory emission limits for general public exposure, even under very conservative assumptions. The highest aggregate percent Maximum Permissible Exposure is 23.89% the FCC limits for general public as outlined in FCC OET Bulletin 65 Edition 97-01.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations were computed in accordance with and using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

Scott Pollister
C Squared Systems

4/30/2002
Date

References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission
Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to
Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board
10.

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

NOTE 1: ***Occupational/controlled*** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: ***General population/uncontrolled*** exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*