STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051
Phone: 827-7682

April 2, 1991

Captain Ronald P. Mikulka
Commanding Officer
Telecommunications Section
294 Colony Street
Meriden, CT 06450

RE: Department of Public Safety Division of State Police notice of intent to replace an existing telecommunications tower and associated equipment along I-84, Middlebury, Connecticut, as an exempt modification.

Dear Captain Mikulka:

At a meeting held on April 1, 1991, the Connecticut Siting Council acknowledged your notice of intent to replace an existing telecommunications tower and associated equipment located along I-84 in Middlebury, Connecticut, as an exempt modification pursuant to Section 16-50j-73 of the Regulations of State Agencies (RSA).

The proposed modifications are to be implemented as specified in your notice dated March 13, 1991, and addendums of March 18, 1991 and March 27, 1991. As proposed, the modifications are in compliance with the exception criteria specified in RSA 16-50j-72 as a replacement of an existing telecommunications tower with changes to the facility site that do not increase the tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary 6 decibels, and add radio frequency sending or receiving capability which increases the total radio frequency 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 Section 22a-162 of the Connecticut General Statutes.

The Council is pleased to note that the shared use of an existing tower serves the Council's long-term goal of protecting the public interest by avoiding proliferation of additional tower structures.

Please notify the Council upon completion of construction.

Very truly yours,

Gloria Dibble Pond

Gloria Dibble Pond
Chairperson

GDP/cp
5227E

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051
Phone: 827-7682

March 20, 1991

TO: Gloria Dibble Pond
Chairperson
Commissioner Peter G. Boucher
Commissioner Timothy R.E. Keeney
Harry E. Covey
Mortimer A. Gelston
Daniel P. Lynch, Jr.
Paulann H. Sheets
William H. Smith
Colin C. Tait

FROM: Stanley J. Modzelesky, Executive Assistant SJM/ew

Enclosed please find three Notices of Intent from the Connecticut Division of State Police for the towns of Middlebury, Haddam, and Bethany, dated March 13, 1991. These items will be on the April 1, 1991 agenda.

SJM/bd

Enclosure

cc: Brian Emerick
Mark Marcus

ORIGINAL

STATE OF CONNECTICUT

SITING COUNCIL

Notice of Intent to Erect an Exempt
Telecommunications Tower and Associated Equipment

Pursuant to Conn. Gen. Stat. 16-50g et seq. and Sec 16-50j-73 of the Regulations of the Connecticut Siting Council, the Connecticut Division of State Police hereby gives notice of its intent to erect an exempt telecommunications tower and associated equipment along I-84 Westbound in Middlebury, CT.

Previously, The Connecticut Siting Council, on October 3, 1989, acknowledged a Division of State Police notice of intent to erect exempt Telecommunication associated equipment along I-84 Westbound in Middlebury, CT. At that time the Division of State Police proposed to replace the existing equipment shelter with a new equipment shelter, build a fence around the site, and place a gravel cover within the enclosure. The Division of State Police also proposed to add 8 more antennas to the current tower.

Prior to the initiation of construction a structural analysis of the existing tower was performed. The results of the analysis determined that the current tower should be replaced. This Notice of Intent to erect an exempt Telecommunications Tower and Associated Equipment is a direct result of the Division's decision to replace the current tower in Middlebury, CT., based upon the recent analysis of the tower.

The site is currently occupied by an existing, active 160 foot lattice type telecommunications tower located along I-84 Westbound in Middlebury, CT. The Division of State Police proposes to replace the current 160 foot lattice type tower with a stronger 160 foot lattice type tower, add an equipment shelter, build a fence around the site, and place a gravel cover within the enclosure as generally depicted in the Site Plan Drawing 020-200 attached in Attachment A. Equipment on the existing tower includes 11 antennas: 4 whip type, 3 dish, 2 panel, 1 four dipole array, and 1 corner reflector. Users are the Division of State Police, the State Department of Transportation, the U.S. Bureau of Alcohol, Tobacco, and Firearms, and SNET Cellular. At present, the Division of State Police intends to add 8 more antennas: 6 whip type and 2 dish. The user will be the Division of State Police, as shown in the Site Elevation Drawing 020-510 attached in Attachment B. The near term projected maximum loading specifications are listed in Attachment C. This project is part of a Division of State Police state wide effort to upgrade its equipment and implement a modern Connecticut Telecommunications System (CTS) for Troopers and public safety, and to share tower space with other users.

The Division of State Police believes that this project is exempt from the need to obtain a Certificate of Environmental Compatibility and Public Need pursuant to Siting Council Reg. Sec. 16-50-j-72(b) for the following reasons.

1. Existing Tower Site

The proposed location is currently occupied by a one hundred sixty (160) foot lattice type tower actively utilized by the Division of State Police as a telecommunications facility.

2. Site Boundaries

As depicted on the attached site plan, the boundaries of the tower site will not be extended. No tree cutting or extensive grading will be conducted at the site for this project.

3. Tower Height

The existing 160 foot lattice type tower will be replaced by a stronger 160 foot lattice type tower. Upon erection of the new tower, the old tower will be removed.

4. Noise Levels

The proposed project will not increase noise levels at the existing facility by six decibels or more. Except during construction, the only noise associated with Division of State Police equipment will be from air conditioning and stand-by power generator, when in use.

5. Radiation Power Density

The radio frequency sending or receiving capability of the facility will not increase the total radio frequency electromagnetic radiation power density measured at the tower site boundary to or above the standard considered by the State Department of Environmental Protection (DEP).

Although the State DEP is in the process of promulgating standards, it is authorized to adopt the standards recommended by the American National Standards Institute (ANSI). The current ANSI Standard applicable to the proposed Division of State Police facility and the total radio frequency electromagnetic radiation power density calculated for the proposed tower site boundary are set forth in Attachment D.

CONCLUSION

For all the above stated reasons, the Division of State Police requests the Siting Council to rule that this notice is in compliance with the exception criteria for changes to an existing facility pursuant to Reg. Sec. 16-50j-72(b).

Dated at Meriden, CT, this 8th day of March, 1991.

by: Captain Ronald P. Mikulka

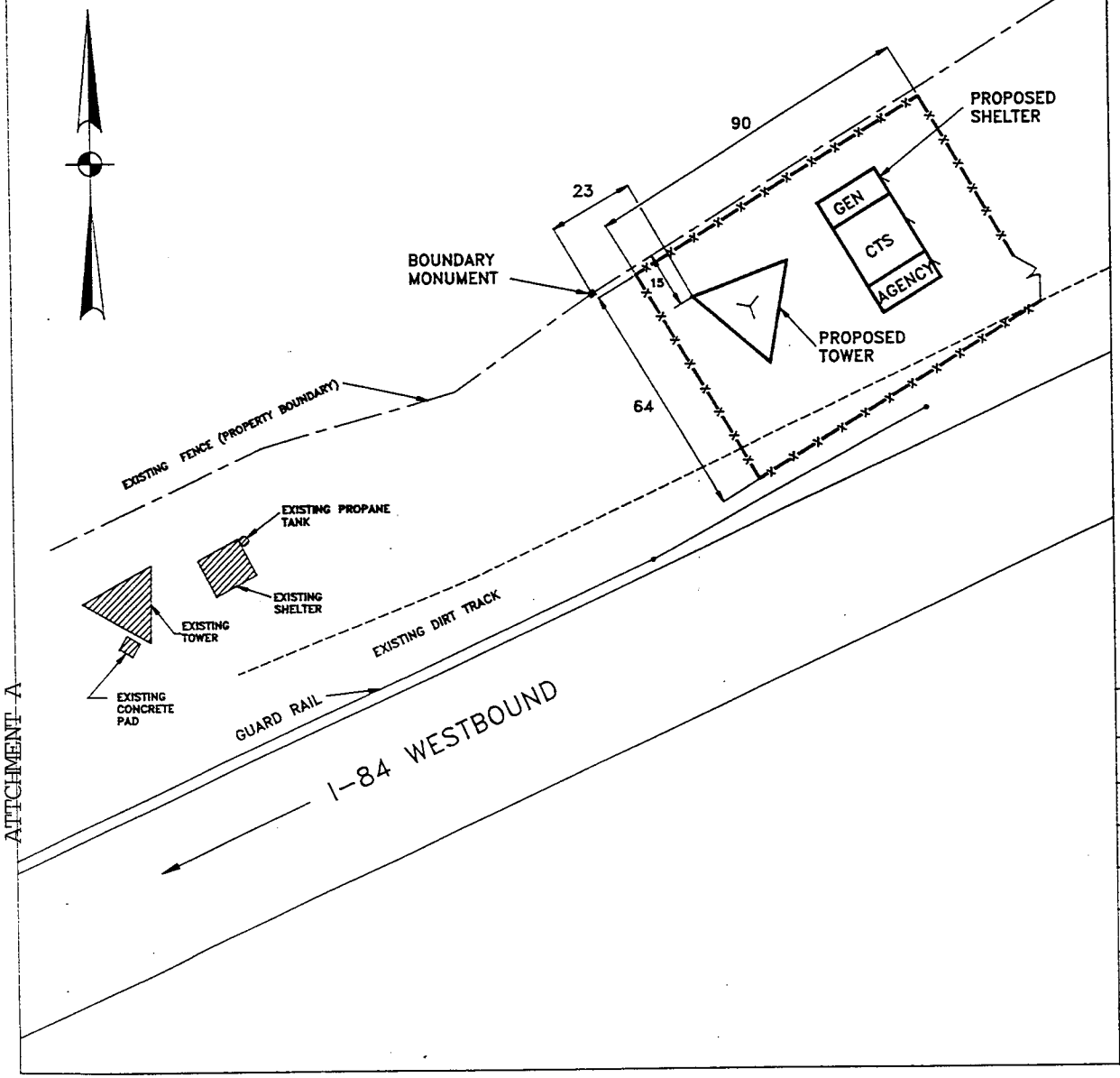
Captain Ronald P. Mikulka
Commanding Officer
Telecommunications Section
294 Colony Street
Meriden, CT 06450
tel. (203) 238-6570

CERTIFICATION

The undersigned hereby certifies that a copy of the foregoing Notice of Intent to Erect an Exempt Telecommunications Tower and Associated Equipment was mailed this 13TH day of March, 1991, to the below named chief elected official in Middlebury, CT, pursuant to Reg. Sec. 16-50j-73:

Honorable Edward B. St. John
First Selectman
Town of Middlebury
1212 Whittemore Road
Middlebury, CT 06762

Captain Ronald P. Mikulka
Commanding Officer
Telecommunications Section
294 Colony Street
Meriden, CT 06450
tel. (203) 238-6570



NOTES:

1. ALL DIMENSIONS ARE IN FEET.
2. ARROW INDICATES TRUE NORTH.

LEGEND

STRUCTURES TO BE DISMANTLED AND REMOVED FROM SITE

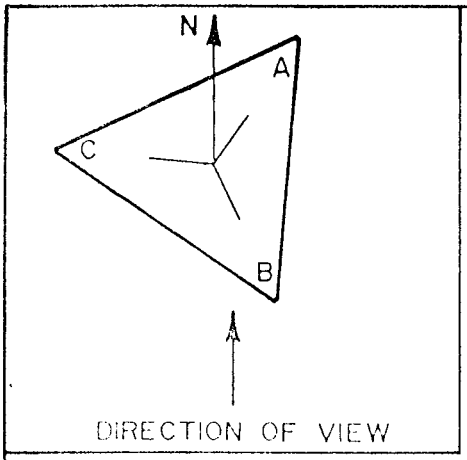
REV.	DESCRIPTION	DATE	APP.
4	REPLACED TOWER AND RELOCATED SITE 200 FEET TO THE END OF THE GUARD RAIL.	11/26/90	EHW

DRAWN WLF	9/26/88	T-CAS CORP.
DESIGNED DDS	9/30/88	SITE MIDDLEBURY
CHECKED EHW	9/30/88	TITLE SITE PLAN
PROJECT APPROVED RKM	10/07/88	
APPROVED FOR		SIZE B / PROJECT CTS / DRAWING NUMBER 020-200 / REV. 4
APPROVED FOR		SCALE (FEET) 0 10 20 30 40 50 60 / SHEET 1 of 1

ATTCHMENT A

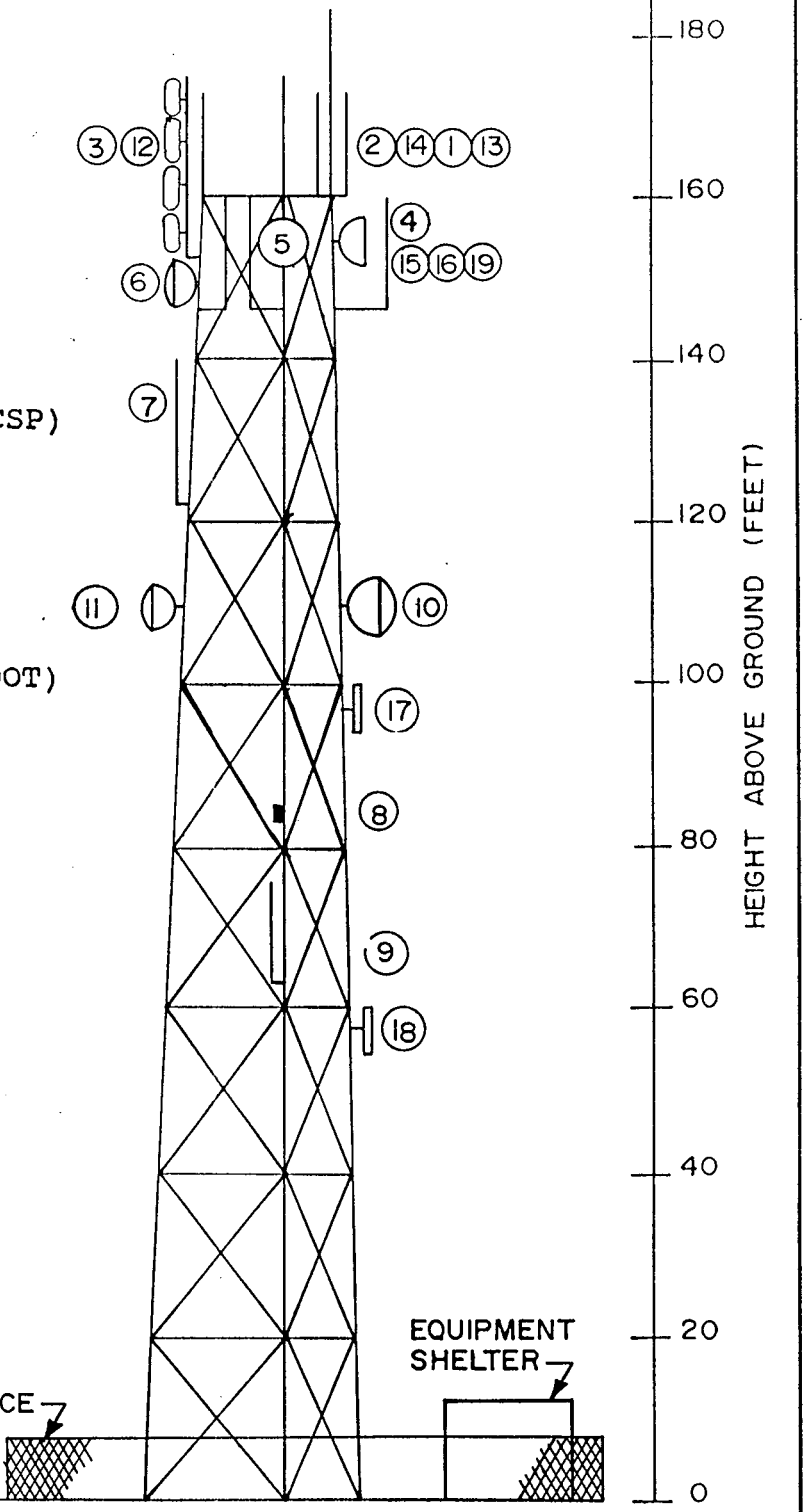
1991 Filing

ATTACHMENT B



LEGEND

(1) 22' WHIP (DOT)
(2) 15' WHIP ON PIPE MOUNT (CSP)
(3) 22' 4-DIPOLE ARRAY (ATF)
(4) (5) 6' DISH (DOT)
(6) 6' DISH W/RADOME (DOT)
(7) 18' WHIP ON PIPE MOUNT (DOT)
(8) 2' CORNER REFLECTOR (CSP)
(9) 13' WHIP (DOT)
(10) 8' DISH W/RADOME (CSP)
(11) 6' DISH W/RADOME (CSP)
(12) - (16) (19) 13' WHIP (CSP)
(17) (18) 6' PANEL (SNT)



TITLE SITE ELEVATION				SITE MIDDLEBURY				T-CAS CORP.	REV. 0
DESIGNED		DRAWN		CHECKED		REVISED		DRAWING NO.	
JCM JCM	2/07/90	WLF	2/15/90	EHW EHW	3-5-90			020-510	

ATTACHMENT C

RADIO/ANTENNA SYSTEMS DATA

SITE NAME: MIDDLEBURY PREPARED BY: T-CAS Corp
TOWER HEIGHT: 160 FEET ON DATE: 03-06-1990

No	OPERATING FREQUENCY (MHz)	TRANSMIT POWER (WATTS)	ANTENNA HEIGHT (FEET)	ANTENNA TYPE	ANTENNA VERTICAL SIZE (FT)	ANTENNA GAIN (dB)	ERP (W)
1	458.075	0	160	WHIP	22	10.0	0
2	42.040	330	160	WHIP ON PIPE MOUNT	15	0.0	330
3	166.000	250	153	FOUR DIPOLE ARRAY	22	6.0	995
4	2180.800	3	155	SOLID DISH	6	29.9	1777
5	2186.400	3	155	SOLID DISH	6	29.9	1786
6	2192.000	3	150	SOLID DISH W/RADOME	6	29.9	1795
7	47.000	100	122	WHIP ON PIPE MOUNT	18	0.0	100
8	460.300	10	85	CORNER REFLECTOR	2	8.5	71
9	453.125	25	63	WHIP	13	7.5	141
10	6700.000	1	110	SOLID DISH W/RADOME	8	42.1	9939
11	6700.000	1	110	SOLID DISH W/RADOME	6	39.6	5591
12	867.500	5 x 25	160	WHIP	13	9.0	1000
13	867.000	5 x 25	160	WHIP	13	9.0	1000
14	867.000	5 x 25	160	WHIP	13	9.0	1000
15	822.500	0	147	WHIP	13	9.0	0
16	822.500	0	147	WHIP	13	9.0	0
17	885.000	15	97	PANEL ANTENNA	6	16.0	597
18	840.000	15	57	PANEL ANTENNA	6	16.0	597
19	822.500	0	147	WHIP	13	9.0	0

NOTES: 1. TRANSMIT POWER ENTRIES SHOWN AS `5 x 25´ SHOULD BE INTERPRETED AS `5 TRANSMITTERS, EACH HAVING A POWER OF 25 WATTS´.
ENTRIES OF `0´ MEAN `RECEIVE ONLY´- i.e. NO TRANSMITTER.
ALL OTHER ENTRIES REFER TO ONE TRANSMITTER WITH THE POWER SHOWN.

2. ERP (EFFECTIVE RADIATED POWER) IS THE PRODUCT OF ALL TRANSMITTER POWERS AND THE NUMERICAL VALUE OF THE GAIN (ANTILOG OF dB) RELATIVE TO A DIPOLE ANTENNA.

ATTACHMENT D

POWER DENSITY ANALYSIS

AT THE TOWER BASE, FOR EACH RADIO/ANTENNA SYSTEM

SITE NAME: MIDDLEBURY
TOWER HEIGHT: 160 FEET

PREPARED BY: T-CAS Corp
ON DATE: 03-06-1990

No	OPERATING FREQUENCY (MHz)	EIRP (WATTS)	DISTANCE TO BASE OF TOWER (FEET)	LIMIT OF SAFE EXPOSURE (MW/SQ-CM)	AT THE BASE OF THE TOWER: POWER DENSITY (MW/SQ-CM)	AT THE BASE OF THE TOWER: PERCENT OF SAFE LIMIT
1	458.075	0	171	1.527	0.0000000	0.0000
2	42.040	541	168	1.000	0.0006608	0.0661
3	166.000	1633	164	1.000	0.0020791	0.2079
4	2180.800	2915	155	5.000	0.0000139	0.0003
5	2186.400	2930	155	5.000	0.0000139	0.0003
6	2192.000	2945	150	5.000	0.0000149	0.0003
7	47.000	164	131	1.000	0.0003274	0.0327
8	460.300	116	85	1.534	0.0005505	0.0359
9	453.125	231	70	1.510	0.0016353	0.1083
10	6700.000	16305	110	5.000	0.0004666	0.0093
11	6700.000	9172	110	5.000	0.0004666	0.0093
12	867.500	1641	167	2.892	0.0020267	0.0701
13	867.000	1641	167	2.890	0.0020267	0.0701
14	867.000	1641	167	2.890	0.0020267	0.0701
15	822.500	0	154	2.742	0.0000000	0.0000
16	822.500	0	154	2.742	0.0000000	0.0000
17	885.000	980	97	2.950	0.0035659	0.1209
18	840.000	980	57	2.800	0.0103266	0.3688
19	822.500	0	154	2.742	0.0000000	0.0000

TOTAL PERCENT OF SAFE LIMIT FOR ALL 19 RADIO SYSTEMS = 1.1705

NOTES:
1. THE 'LIMITS OF SAFE EXPOSURE' ARE CALCULATED IN ACCORDANCE WITH THE SAFETY LEVELS DEFINED IN ANSI STANDARD C95.1-1982, WHICH WAS ADOPTED BY THE CONNECTICUT LEGISLATURE INTO THE CONNECTICUT GENERAL STATUTES, SECTION 22a-162, IN 1984.
2. POWER DENSITIES ARE CALCULATED IN ACCORDANCE WITH THE METHODS DEFINED IN FCC DOCUMENT 'OST BULLETIN NO. 65', OCTOBER 1985.
3. EIRP (EFFECTIVE ISOTROPICALLY RADIATED POWER) REFERENCES THE RADIATED POWER TO A POINT SOURCE, WHICH YIELDS POWERS 1.6406 TIMES HIGHER THAN ERP (SEE TABLE IN SECTION 13-F).

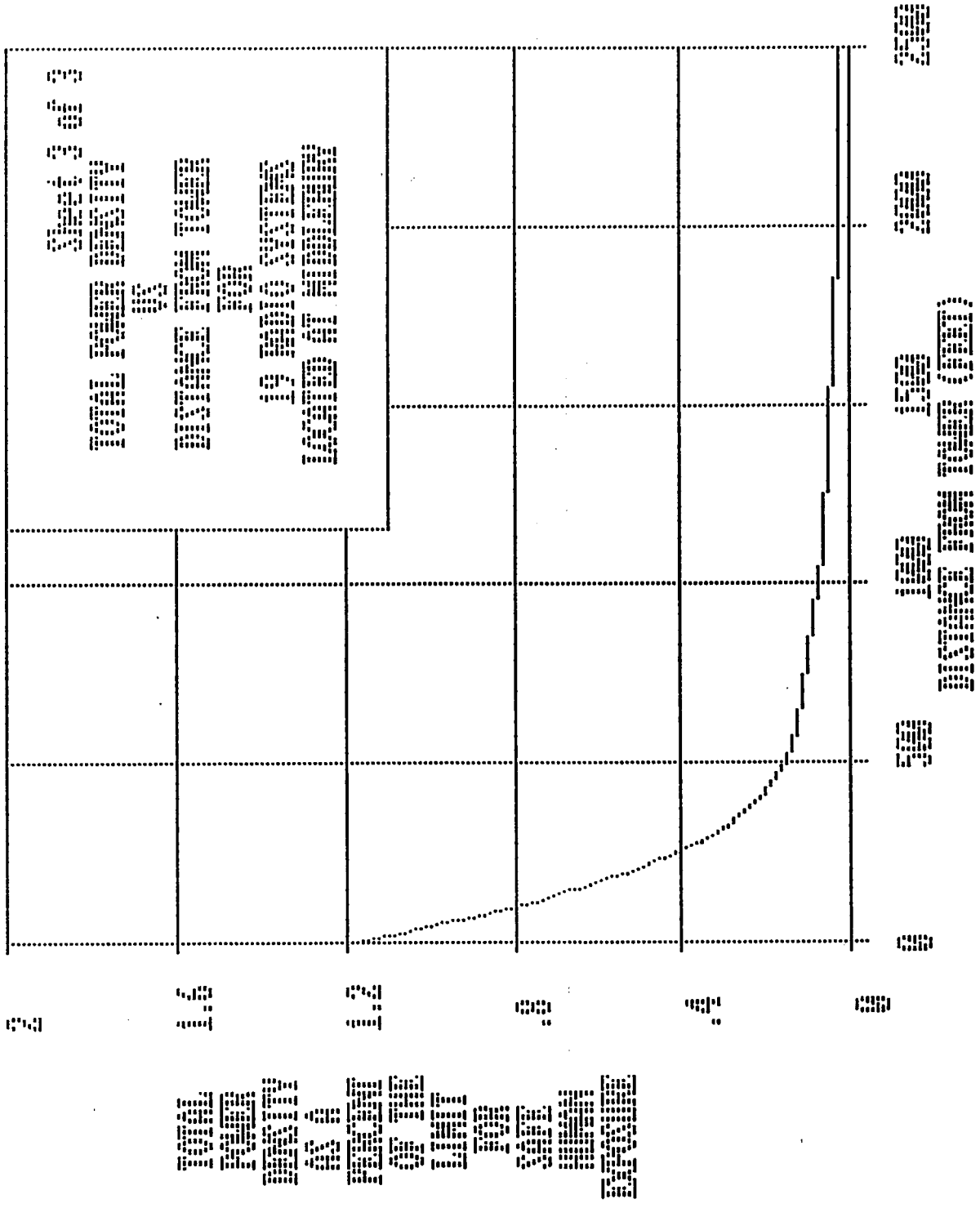
POWER DENSITY ANALYSIS

POWER DENSITY (% OF SAFE LIMIT) vs DISTANCE FROM THE TOWER BASE

SITE NAME:	MIDDLEBURY	PREPARED BY:	T-CAS Corp
TOWER HEIGHT:	160 FEET	ON DATE:	03-06-1990

DISTANCE (FEET)	POWER DENSITY (% OF SAFE LIMIT)
0	1.1705
100	0.7903
200	0.5130
300	0.3167
400	0.2134
500	0.1508
600	0.1307
700	0.1139
800	0.0984
900	0.0849
1000	0.0734
1100	0.0655
1200	0.0601
1300	0.0552
1400	0.0506
1500	0.0465
1600	0.0428
1700	0.0394
1800	0.0363
1900	0.0337
2000	0.0313
2100	0.0291
2200	0.0272
2300	0.0254
2400	0.0238
2500	0.0223

ATTACHMENT D



18 MARCH 1991
T-CAS CORP

SUPPLEMENTAL DATA
FOR
NOTICE OF INTENT TO ERECT AN EXEMPT
TELECOMMUNICATIONS TOWER AND ASSOCIATED EQUIPMENT

CTS SITE IN MIDDLEBURY, CT

1. Tower Base leg-to-leg dimensions.

   Existing: 21 Feet

   Proposed: 27 - 30 Feet (the exact dimension shall be determined by the successful bidder designing and supplying the tower.)

2. New Tower Location

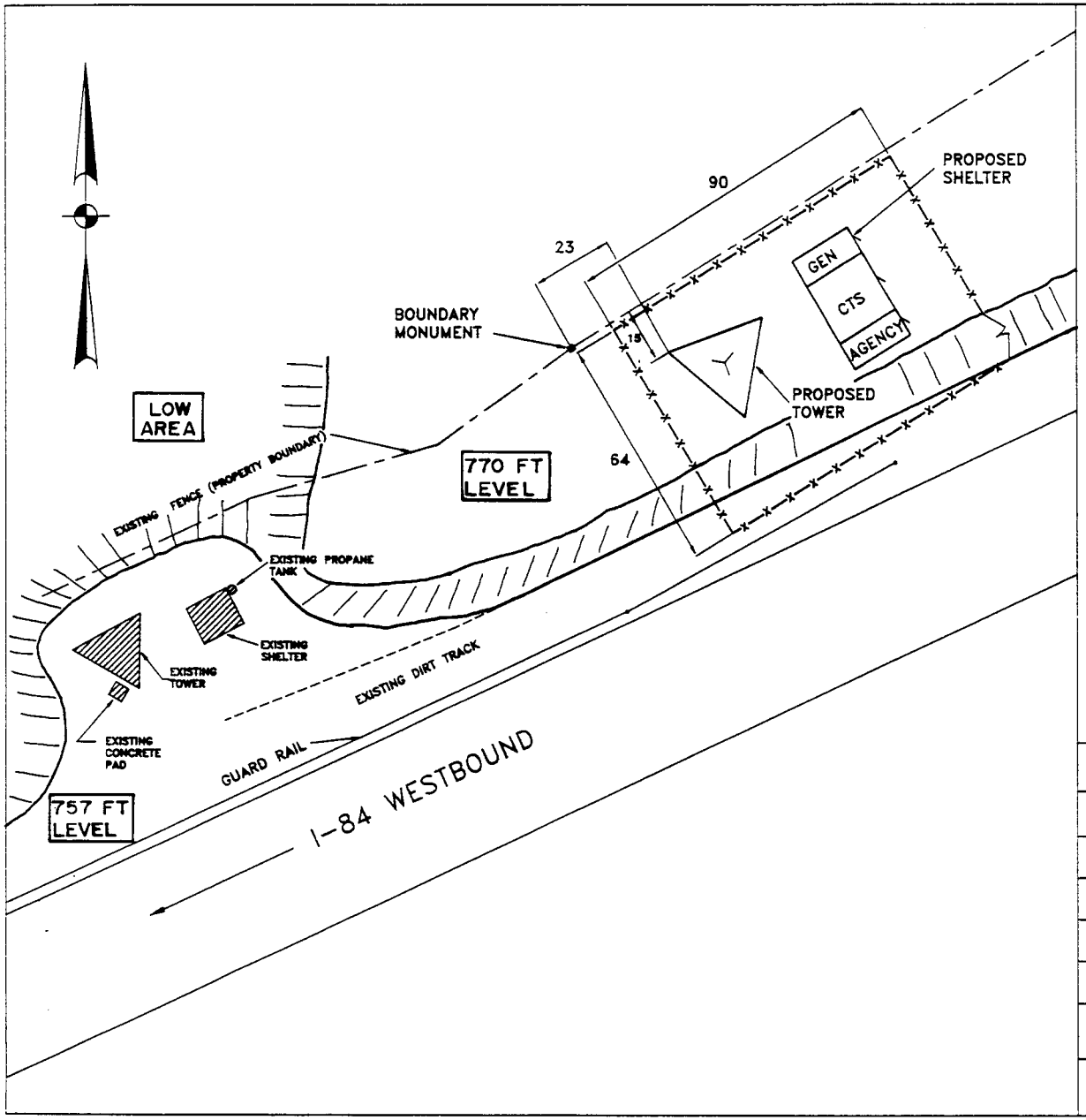
   The proposed tower will be located 185 feet northeast of the existing tower. Both tower locations are approximately 50 feet north of the northern edge of I-84. Other abutting properties are open fields.

3. Strength of the Proposed Tower vs. the Existing Tower

   A rigorous computer analysis of the existing tower, carrying the proposed additional antennas and meeting the State Police load requirements for EIA Standard 222-D, revealed that several steel members would be overstressed and that the foundation design was inadequate. To support the proposed load, the proposed tower must be stronger than the existing tower in the following ways.

   A. Members must be made from heavier gauge steel and the base width must be wider.

   B. The foundation must be made stronger (heavier, or deeper, or wider, or a combination of these; or, if rock ledge is encountered, rock anchors can be employed).



NOTES:

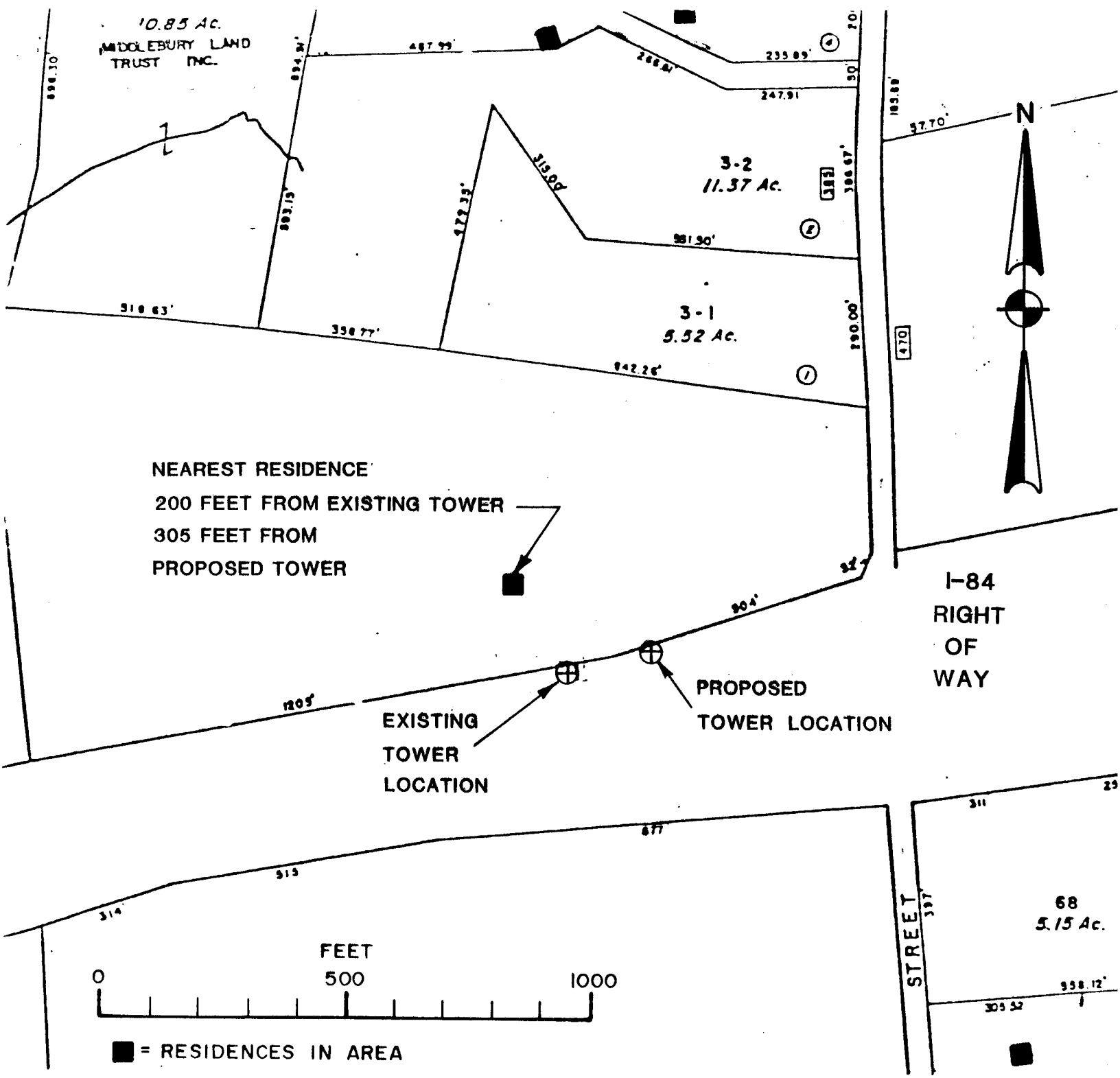
1. ALL DIMENSIONS ARE IN FEET.
2. ARROW INDICATES TRUE NORTH.

LEGEND

STRUCTURES TO BE DISMANTLED AND REMOVED FROM SITE

REV.	DESCRIPTION	DATE	APP.
4	REPLACED TOWER AND RELOCATED SITE 200 FEET TO THE END OF THE GUARD RAIL.	11/26/90	EHW

DRAWN WLF	9/26/88	T-CAS CORP.
DESIGNED DDS	9/30/88	SITE MIDDLEBURY
CHECKED EHW	9/30/88	TITLE SITE PLAN
PROJECT APPROVED RKM	10/07/88	
APPROVED FOR		SIZE B / PROJECT CTS / DRAWING NUMBER 020-200 / REV. 4
APPROVED FOR		SCALE (FEET) 0 10 20 30 40 50 80 / SHEET 1 of 1



CTS SITE #20

"MIDDLEBURY"

T-CAS CORP
27 MARCH 91

March 18, 1991

MEMORANDUM

TO: Robert Erling

FROM: Eugene H. Weiblen EW

SUBJECT: Siting Council Exemptions for State Police Sites Middlebury, Bethany (Troop I), and Haddam (Goose Hill)

In response to our phonecon last week I have prepared the attached supplemental data, in 21 copies, for the subject exemptions .

att: Supplemental Data for Middlebury, 18 March 1991
Supplemental Data for Troop I, 18 March 1991
Goose Hill Guying Schedules (Drawing), 18 March 1991
Goose Hill Elevation, Sheet 2 of 2 (Drawing 038-510), 03 July 1990

cc: Capt. Mikulka
Pete Seaha
George Davis
Jim Marshall
Site Files 20, 26, 38 (a)
Siting Council Exemptions File

18 MARCH 1991
T-CAS CORP

SUPPLEMENTAL DATA
FOR
NOTICE OF INTENT TO ERECT AN EXEMPT
TELECOMMUNICATIONS TOWER AND ASSOCIATED EQUIPMENT

CTS SITE IN MIDDLEBURY, CT

1. Tower Base leg-to-leg dimensions.

   Existing: 21 Feet

   Proposed: 27 - 30 Feet (the exact dimension shall be determined by the successful bidder designing and supplying the tower.)

2. New Tower Location

   The proposed tower will be located 185 feet northeast of the existing tower. Both tower locations are approximately 50 feet north of the northern edge of I-84. Other abutting properties are open fields.

3. Strength of the Proposed Tower vs. the Existing Tower

   A rigorous computer analysis of the existing tower, carrying the proposed additional antennas and meeting the State Police load requirements for EIA Standard 222-D, revealed that several steel members would be overstressed and that the foundation design was inadequate. To support the proposed load, the proposed tower must be stronger than the existing tower in the following ways.

   A. Members must be made from heavier gauge steel and the base width must be wider.

   B. The foundation must be made stronger (heavier, or deeper, or wider, or a combination of these; or, if rock ledge is encountered, rock anchors can be employed).

18 MARCH 1991
T-CAS CORP

SUPPLEMENTAL DATA
FOR
NOTICE OF INTENT TO ERECT AN EXEMPT
TELECOMMUNICATIONS TOWER AND ASSOCIATED EQUIPMENT

CTS SITE TROOP I, IN BETHANY, CT

1. Tower Base leg-to-leg dimensions.

   Existing: 23 Feet

   Proposed: 27 - 30 Feet (the exact dimension shall be determined by the successful bidder designing and supplying the tower.)

2. New Tower Location

   The proposed tower will be located 55 feet southeast of the existing tower. Both tower locations are on a knoll behind Troop I. The abutting properties are open fields.

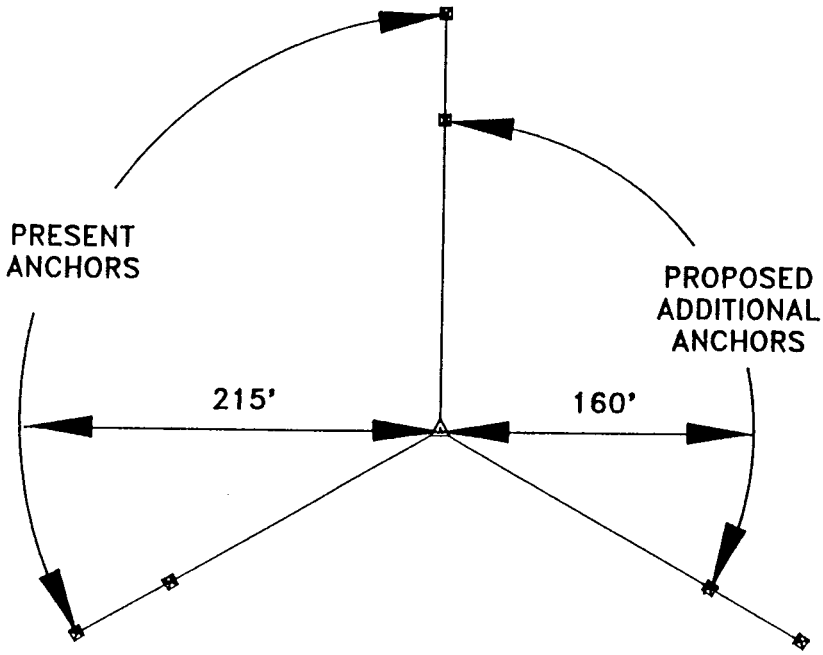
3. Strength of the Proposed Tower vs. the Existing Tower

   A rigorous computer analysis of the existing tower, carrying the proposed additional antennas and meeting the State Police load requirements for EIA Standard 222-D, revealed that several steel members would be overstressed and that the foundation design was inadequate. To support the proposed load, the proposed tower must be stronger than the existing tower in the following ways.

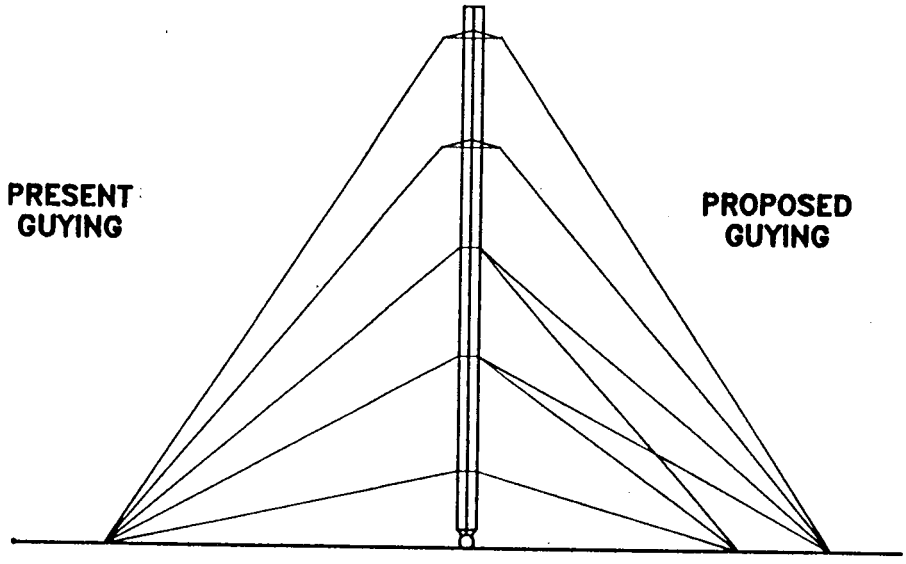
   A. Members must be made from heavier gauge steel and the base width must be wider.

   B. The foundation must be made stronger (heavier, or deeper, or wider, or a combination of these; or, if rock ledge is encountered, rock anchors can be employed).

18 MAR 91
T-CAS CORP.

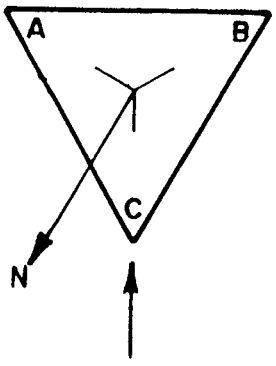


TOP (PLAN) VIEW



SIDE (ELEVATION) VIEW

GOOSE HILL, HADDAM SITE
GUYING SCHEDULES



DIRECTION OF VIEW

LEGEND

(1) 14′ YAGI (NEU)

(2) (3) (5) (6) 23′ WHIP (NEU)

(4) 22′ WHIP (NEU)

(8) 12′ WHIP (VSC)

(11) 32′ 2-DIPOLE ARRAY (CSP)

(12) 8′ 4-DIPOLE ARRAY (VSC)

(16) 6′ DISH W/RADOME (DOT)

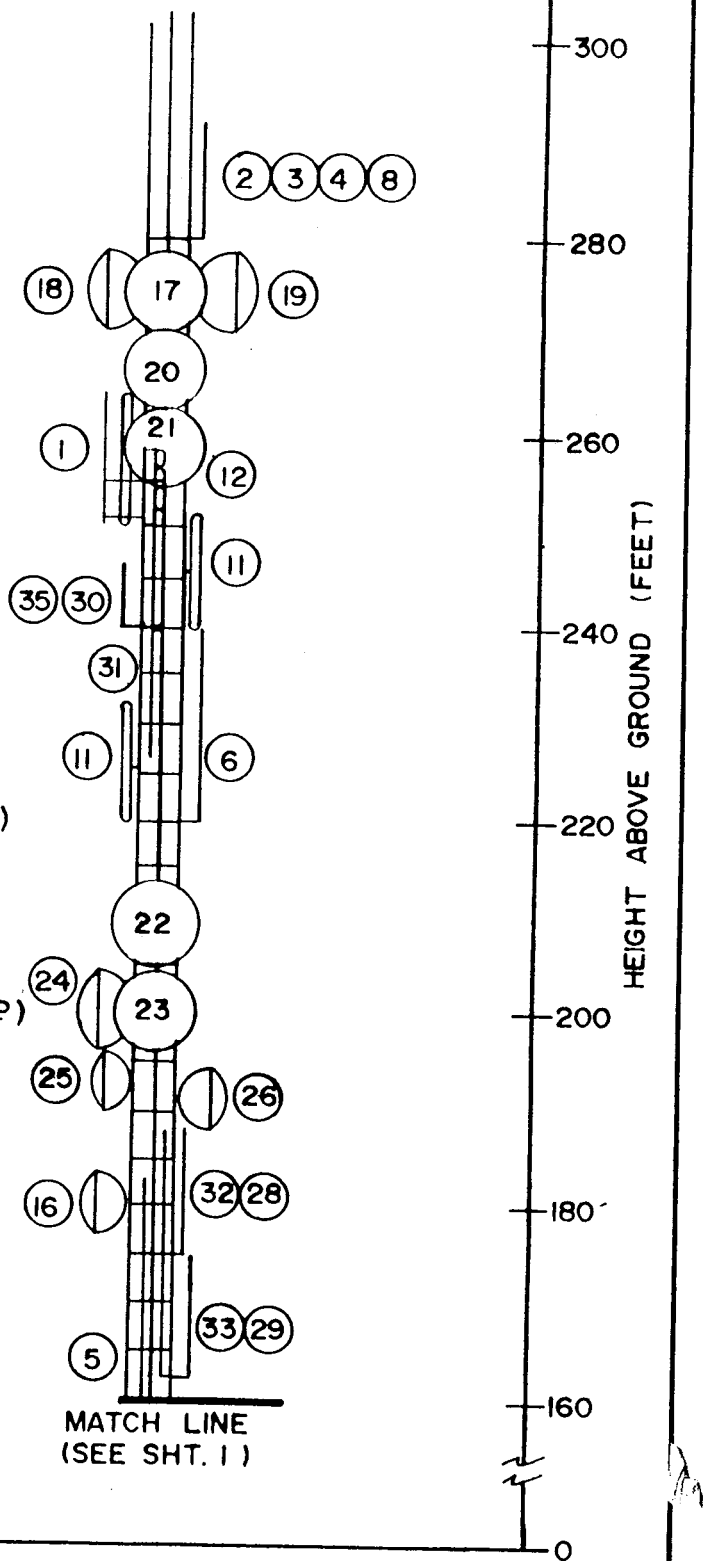
(17) - (24) 8′ DISH W/RADOME (NEU)

(25) (26) 6′ DISH W/RADOME (CSP)

(28) (29) (32) (33) 13′ WHIP (CSP)

(30) (31) 14′ WHIP W/REFLECTOR (CSP)

(35) 6′ WHIP ON PIPE MOUNT (DOE)



TITLE	SITE							
SITE ELEVATION	GOOSE HILL						T-CAS CORP.	REV. 1
DESIGNED		DRAWN		CHECKED		REVISED		DRAWING NO.
JCM JCM	3/30/90	WLF	3/19/90	EHW	3-30-90	CM	7/3/90	SHT. 2 of 2 038-510