STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 4, 2000

Sandy M. Carter
Regulatory Manager
Verizon Wireless
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492

RE: **TS-VER-008-001113** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 93 Old Amity Road, Bethany, Connecticut.

Dear Ms. Carter:

At a public meeting held November 30, 2000, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. 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 may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated November 13, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/FOC

c: Honorable Craig A. Stahl, First Selectman, Town of Bethany
Jeremy McDavitt, Co-Location Manager, American Tower Corporation

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

November 16, 2000

Honorable Craig A. Stahl
First Selectman
Town of Bethany
Town Hall
40 Peck Road
Bethany, CT 06524-3338

RE: **TS-VER-008-001113** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 93 Old Amity Road, Bethany, Connecticut.

Dear Mr. Stahl:

The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for November 30, 2000, at 2:00 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

Joel M. Rinebold
Executive Director

JMR/laf

Enclosure: Notice of Tower Sharing

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Network Dept.

verizon wireless

Verizon Wireless
20 Alexander Drive
Wallingford, Connecticut 06492

November 13, 2000

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

HAND DELIVERED

Re: **Request by Cellco Partnership d/b/a Verizon Wireless for an Order to Approve the Shared Use of a Tower Facility located at 93 Old Amity Road, Bethany, Connecticut.**

Dear Chairman Gelston:

Pursuant to Connecticut General Statutes (C.G.S.) Sec. 16-50aa, Cellco Partnership d/b/a Verizon Wireless hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use by Verizon Wireless of an existing tower located at 93 Old Amity Road, Bethany, Connecticut. The property and tower are owned by American Tower Corporation which is located in Boston, Massachusetts. As shown on the attached drawing and as further described below, Verizon Wireless proposes to install antennas on the existing tower and to locate an equipment shelter at the base of the tower. Verizon Wireless requests that the Council finds that the proposed shared use of the tower facility satisfy the criteria stated in C.G.S. Sec. 16-50aa, and to issue an order approving the proposed shared use.

Background

Verizon Wireless is licensed by the Federal Communications Commission to provide cellular telephone service in the New Haven County New England County Metropolitan Area (NECMA), which includes the area to be served by the proposed Bethany installation.

The facility at 93 Old Amity Road in Bethany, consists of an approximately 338 foot AGL lattice tower built by AT&T and recently purchased by American Tower Corporation. The lattice tower can structurally support multiple carriers and there other carriers located on the tower. Due to its massive structural capability, Verizon Wireless has not submitted a structural report. Verizon Wireless and American Tower Corporation have agreed to the proposed-shared use of this tower pursuant to mutually acceptable terms and conditions. American Tower Corporation has authorized Verizon Wireless to apply for all necessary permits, approvals and authorizations which may be required for the proposed shared use of this facility.

Verizon Wireless proposes to install twelve (12) Swedcom Model ALP-9212 antennas, approximately 52 inches in height, on a platform with their center of radiation at approximately 180 feet above ground level ("AGL"). Verizon Wireless will also install one (1) GPS antenna on the tower. Equipment associated with these antennas, as well as a 40 KW diesel-fueled emergency stand-by generator, would be located in a new approximately 12-foot x 30-foot equipment building located at the base of the tower.

C.G.S. Sec. 16-50aa provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the Council shall issue an order approving such shared use" (C.G.S. Sec. 16-50aa(c)(1).)

Discussion

A. Technical Feasibility. The existing tower is structurally sound and capable of supporting the proposed Verizon Wireless antennas. The tower will not require any structural modification to support the proposed attachments. Verizon Wireless engineers have determined that the proposed antenna installations present minimal potential for interference to or from existing radio transmissions from this location. In addition, the applicant is unaware of any occasion where its operations have caused interference with AM, FM or television reception. The proposed shared use of this tower therefore is technically feasible.

B. Legal Feasibility. Under C.G.S. Sec. 16-50aa, the Council has been authorized to issue an order approving the proposed-shared use of an existing communications tower facility such as the facility at 93 Old Amity Road. (C.G.S. Sec. 16-50aa(c)(1).) This authority complements the Council's prior-existing authority under C.G.S. Sec. 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. C.G.S. Sec. 16-50x(a) directs the Council to "give consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under the authority vested in the Council by C.G.S. Sec. 16-50aa, an order by the Council approving the shared use would permit the applicant to obtain a building permit for the proposed installations.

C. Environmental Feasibility. The proposed shared use would have a minimal environmental effect, for the following reasons:

1. The proposed installations would have an insignificant incremental visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing site. The addition of the proposed antennas would not increase the height of the tower, and would not extend the boundaries of the tower site, including the placement of the equipment building near the base of the existing tower.

2. The proposed installation would not increase the noise levels at the existing facility by six decibels or more. The only additional noise will occur during emergency use or periodic exercising of the generator.

3. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base to a level at or above the applicable standard. "Worst-case" exposure calculation for a point at the base of the tower in relation to the operation of Verizon Wireless's and other existing antenna arrays are as follows:

	Applicable ANSI Stnd	Calculated "Worst-Case"	Percentage of Stnd.
Verizon Wireless	0.583 mW/cm2	0.0211mW/cm2	3.61%

*As per filing by Nextel Communications to the Council approved on March 16, 1998, all other Carriers on tower totaled a power density calculated At base of tower to be less than 4%.

The "worst-case" exposure would be only 7.61 % of the ANSI standard, as calculated for mixed frequency sites. Power density levels from shared use of the tower facility would thus be well below applicable ANSI standards

4. The proposed installations would not require any water or sanitary facilities, or generate discharges to water bodies. Operation of the emergency back-up generator will result in limited air emissions; pursuant to R.C.S.A. Section 22a-174-3, the generator will require the issuance of a permit from the Department of Environmental Protection Bureau of Air Management. After construction is complete, the proposed installation would not generate any traffic other than periodic maintenance visits.

The proposed use of this facility would therefore have a minimal environmental effect, and is environmentally feasible.

D. Economic Feasibility. As previously mentioned, the tower owner and the applicant have entered into a mutual agreement to share the use of the existing tower on terms agreeable to the parties, and the proposed tower sharing is thus economically feasible.

E. Public Safety Concerns. As stated above, the existing tower is structurally capable of supporting the proposed Verizon Wireless antennas. The Applicant is not aware of any other public safety concerns relative to the proposed tower sharing of the existing tower. In fact, the provision of new or improved cellular phone service in the Bethany area, including 5 miles of Route 63 and 2.5 miles of Route 67 and the surrounding area, through shared use of the tower is expected to enhance the safety and welfare of area residents and travelers. The public safety benefits of wireless service are further illustrated by the decision of local authorities elsewhere in Connecticut to provide cellular phones to residents to improve local public safety and emergency communications. The proposed-shared use of this facility would likewise improve public safety in the Bethany area.

Conclusion

For the reasons discussed above, the proposed shared use of the existing telecommunications tower facility at 93 Old Amity Road satisfies the criteria stated in C.G.S. Sec. 16-50aa, and advances the General Assembly's and the Council's goal of preventing the proliferation of towers in Connecticut. The Applicant therefore requests that the Council issue an order approving the proposed shared use.

Thank you for your consideration of this matter.

Pursuant to Connecticut General Statutes Sec. 16-50v and Section 16-50v-1(a) of the Regulations of Connecticut State Agencies, Verizon Wireless has enclosed a check in the amount of $500.00 for the required filing fee.

Respectfully yours,

Sandy M. Carter

Sandy M. Carter
Manager – Regulatory
Verizon Wireless

Attachments
cc: Craig A. Stahl, First Selectman

Network Dept.

verizonwireless

Verizon Wireless
20 Alexander Drive
Wallingford, Connecticut 06492

November 13, 2000

Honorable Craig A. Stahl
First Selectman
Town Hall
40 Peck Road
Bethany, Connecticut 06524

Dear Mr. Stahl:

This letter is to inform you that Cellco Partnership d/b/a Verizon Wireless plans to install antennas and associated equipment at the existing tower facility located at 93 Old Amity Road, Bethany, Connecticut. I am enclosing a copy of Verizon Wireless's tower sharing application to the Connecticut Siting Council.

The application fully sets forth the Company's proposal. However, if you have any questions or require further information on our plans or the Siting Council's procedures, please contact me at (203) 294-8519 or Mr. Joel Rinebold, Executive Director of the Connecticut Siting Council at (860) 827-2935.

Sincerely,

Sandy M. Carter

Sandy M. Carter
Manager- Regulatory
Verizon Wireless

Enclosure

AMERICAN TOWER

October 16, 2000

Mr. Marc Gottesdiener
Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

RE: Bethany, CT

Dear Mr. Gottesdiener:

American Towers, Inc., a subsidiary of American Tower Corporation is the owner of the land and tower at the above-referenced location. This letter shall authorize Verizon, its employees, agents and consultants to apply for and prosecute all necessary permits and approvals and to appear at hearings on its own behalf before the Connecticut Siting Council.

If there are any questions in this regard, I may be contacted at (617) 585-7671.

Sincerely,

Martin Cohen

Martin Cohen
Regional Counsel - Northeast

dB DIRECTOR™ LOG PERIODIC ANTENNAS
9-13 dBd GAIN, 40 dB F/B RATIO, 806-960 MHz

Ideal for cellular and trunking/ESMR applications, these high quality log periodics are now available from Decibel in four new models with 80 or 90 degree horizontal apertures. They're compact, lightweight, and provide an **unmatched front-to-back ratio of 40 dB**.

- **Less Wind Loading** - They measure only 24 or 48 inches (610 or 1219 mm) tall, 8.5 inches deep (216 mm), and 6 inches wide (152 mm). They weigh only 5 or 10 pounds.
- **Downtilt** - Electrical downtilt is available on all 4-foot models, 6°, 8°, 11°, 13°, or for mechanical downtilt, order DB5083 bracket.
- **Null-Fill** - Four-foot models provide null-fill and upper lobe suppression.
- **Most Stringent IM Test** - Each antenna is tested for the absence of IM with 16 carriers at 500 watts of composite power.
- **Sturdy Construction** - Made in the U.S. of high-strength aluminum alloy backs, brass elements and UV resistant ABS plastic radomes. No rivets are used!
- **Lightning Resistant** - All metal parts are grounded.
- **Terminations and Mounts** - All models are available with N-Female or 7/16 DIN connectors. DB380 pipe mount is included.
- **Ordering Information** - See table for models to fit your requirements.

UPS Shippable

Models Available

Model*	DB842H80N-XY	DB844H80N-XY	DB842H90N-XY	DB844H90N-XY
Gain – dBd/dBi	10/12.1	13/15.1	9/11.1	12/14.1
F/B Ratio – dB	40	40	40	40
Horizontal beamwidth**	80°	80°	90°	90°
Vertical beamwidth**	30°	15°	30°	15°
Height – in. (mm)	24 (610)	48 (1219)	24 (610)	48 (1219)
Weight – lbs. (kg)	5 (2.3)	10 (4.6)	5 (2.3)	10 (4.6)
Shipping weight – lbs. (kg)	8 (3.6)	15 (6.8)	8 (3.6)	15 (6.8)

* For 7/16 DIN connectors substitute "E" for "N" in the model numbers. Example: DB842H80E-XY.

** 3 dB from maximum.

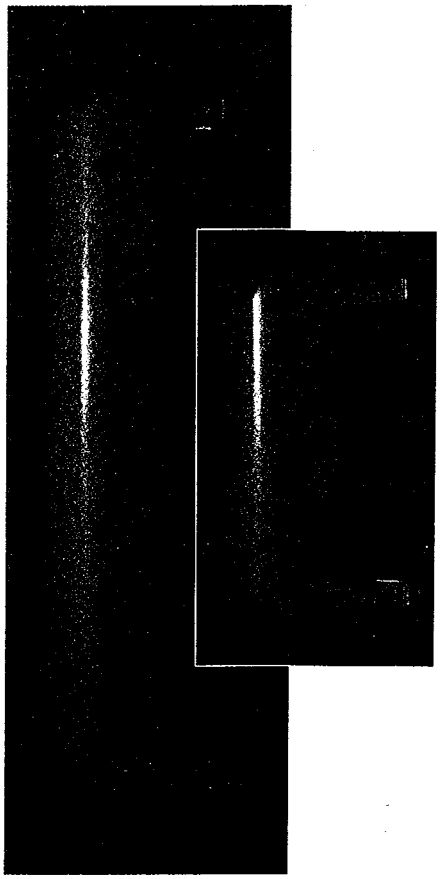
Side offset mounting bracket is included. For electrical downtilt of 6°, 8°, 11° or 13° add T6, T8, T11 or T13 before the "N" or "E" in any 4-foot model number. Example: DB844H80T6N-XY. Note: Electrical downtilt causes a gain loss of .05 dB, or , at the horizon, a reduction of 3, 6, 9 or 12 dB on downtilts of 6°, 8°, 11° or 13° respectively. For mechanical downtilt order DB5083 bracket.

Mechanical Data

Width – in. (mm)	6 (152)
Depth – in. (mm)	8.5 (216)
Height	See table above
Maximum wind speed – mph (km/h)	125 (200)
Wind area – ft² (m²)	
24" (610 mm) antenna	1 (.093)
48" (1219 mm) antenna	2 (.186)
Wind load (at 100 mph/161 km/h) – lbf (N) kp	
24" (610 mm) antenna	40 (178) 18
48" (1219 mm) antenna	80 (356) 36
Radome	Gray ABS
Backplate	Passivated aluminum
Radiators	Brass
Mounting hardware	Galvanized steel
Weight	See table above

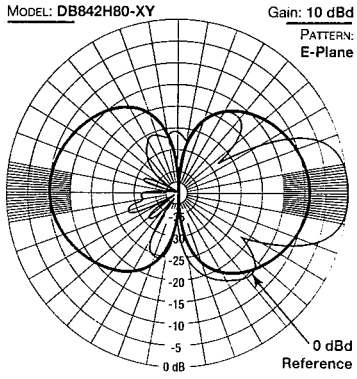
Electrical Data

Frequency Range - MHz	806-960
Gain - dBd	See table above
Front-to-back ratio - dB	>40
Beamwidths	See table above
VSWR	<1.5:1
Null-fill and secondary lobe suppression	On 48" (1219 mm) models only
Maximum power input - watts	500
Nominal impedance - ohms	50
Lightning protection	All metal parts grounded
Termination	N-Female or 7/16 DIN

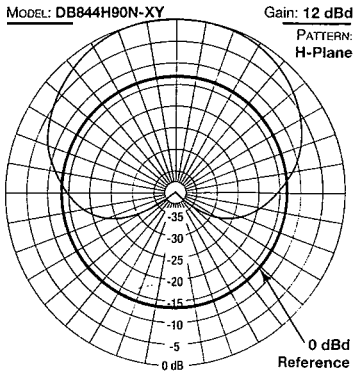


4-Foot and 2-Foot dB DIRECTORS

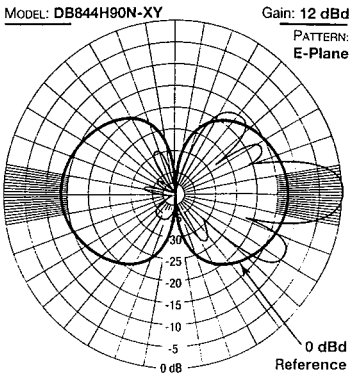
Typical DB842H80-XY Vertical Pattern



Typical DB842H90N-XY, DB844H90N-XY Horizontal Pattern



Typical DB844H90N-XY Vertical Pattern



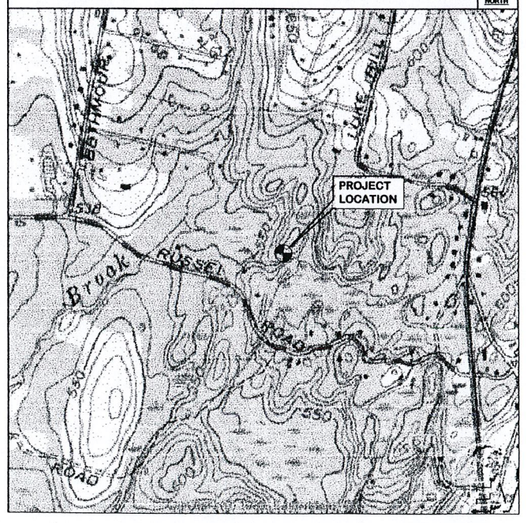
Cellco Partnership

d.b.a. verizon wireless

WIRELESS COMMUNICATIONS FACILITY

BETHANY
93 OLD AMITY ROAD
BETHANY, CONNECTICUT

VICINITY MAP — NOT TO SCALE



SHEET INDEX

SHT. NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	00
SC-1	SITE PLAN	00
SC-2	TOWER ELEVATION	00

REVISIONS		
00	09/28/00	CT SITING COUNCIL

Cellco Partnership
d.b.a. verizon wireless

Natcomm, LLC - Engineering Consultants
Natcomm, LLC
83-2 North Branford Road
Branford, Connecticut 06405
Tel. (203) 488-0580
Fax (203) 488-8587
Consulting Engineers - Project Management
Civil - Structural - Mechanical - Electrical

BETHANY
VERIZON WIRELESS

93 OLD AMITY ROAD
BETHANY, CONNECTICUT

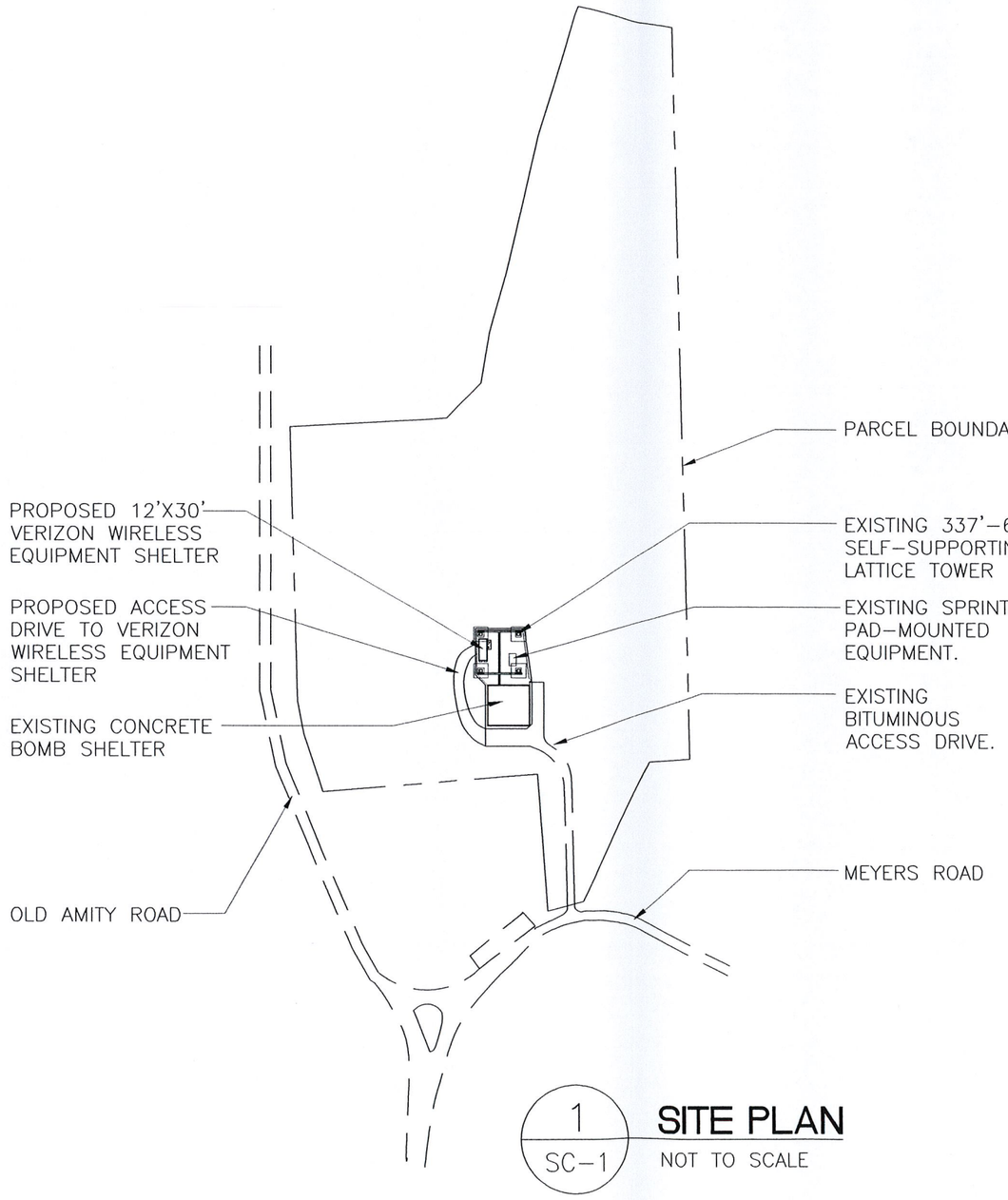
PROJECT NO:	172A
DRAWN BY:	CTW
CHECKED BY:	CFC
SCALE:	AS NOTED
DATE:	05/19/00

TITLE SHEET

T-1

DWG. 1 OF 3

T-01.dwg 9-28-00 10:39:47 am EST



1 / SC-1 **SITE PLAN**

NOT TO SCALE

REVISIONS		
00	09/28/00	CT SITING COUNCIL

Cellco Partnership
d.b.a. verizon wireless

Natcomm, LLC - Engineering Consultants

Natcomm, L.L.C.
83-2 North Branford Road
Branford, Connecticut 06405

Tel. (203) 488-0580
Fax (203) 488-8587

Consulting Engineers; Project Management
Civil - Structural - Mechanical - Electrical

STATE OF CONNECTICUT — MARIO CENTORE — No. 18694 — REGISTERED PROFESSIONAL ENGINEER — PROFESSIONAL ENGINEER

BETHANY
VERIZON WIRELESS

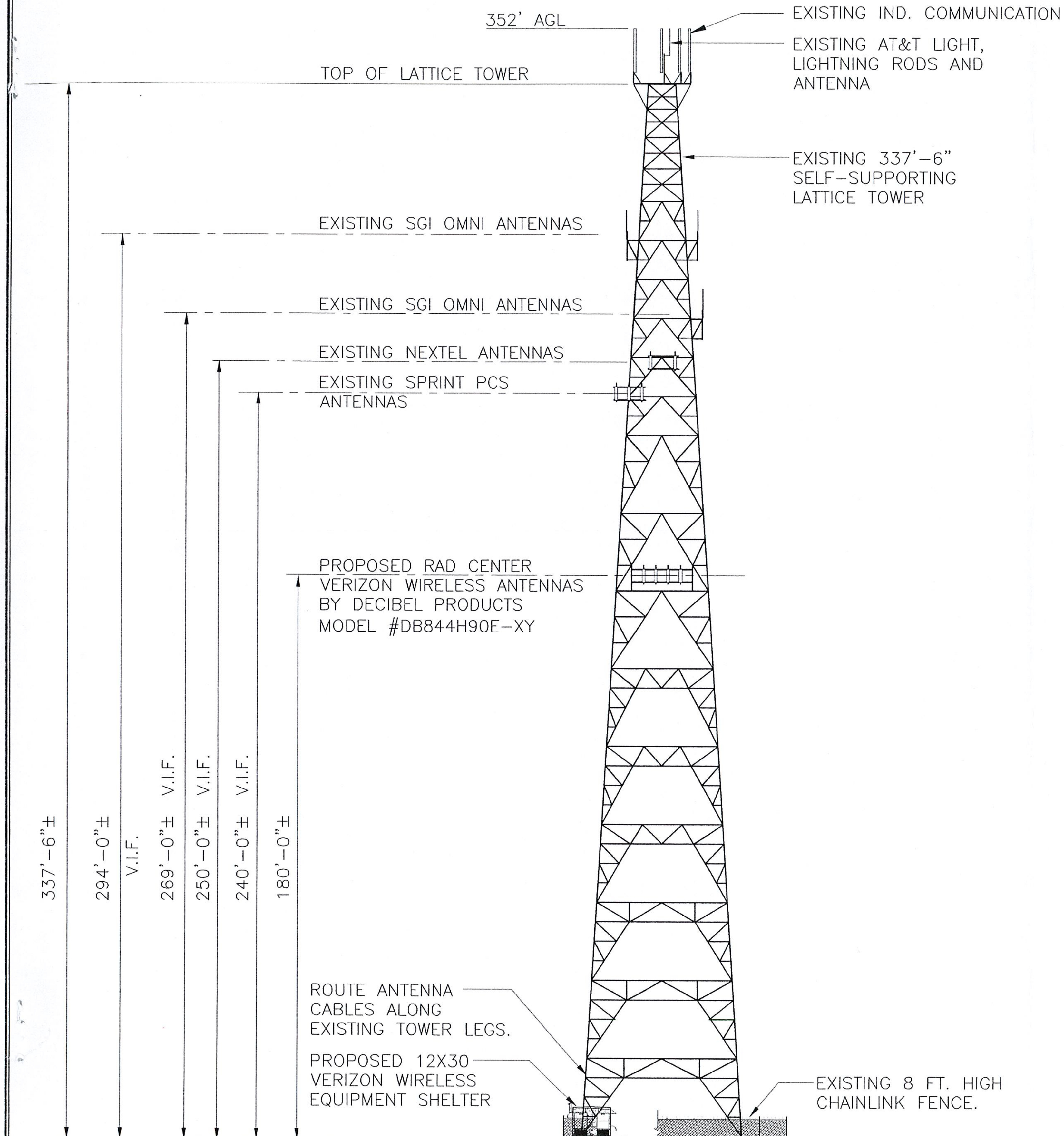
93 OLD AMITY ROAD
BETHANY, CONNECTICUT

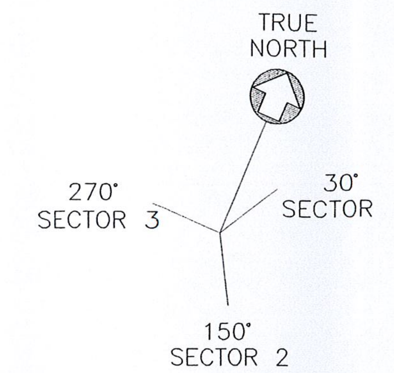
PROJECT NO:	172A
DRAWN BY:	CTW
CHECKED BY:	JJP
SCALE:	AS NOTED
DATE:	05/19/00

SITE PLAN

SC-1

DWG. 2 OF 3





ANTENNA ORIENTATION KEY

NOTE: COORDINATES FOR LATTICE TOWER ARE THE FOLLOWING:

LATITUDE: 41°-24'-17"

LONGITUDE: 73°-00'-00"

AS FILED BY THE CT STATE SITING COUNCIL DATED 03/16/98.

1 / SC-2 **TOWER ELEVATION**

NOT TO SCALE

REVISIONS		
00	09/28/00	CT SITING COUNCIL

Cellco Partnership d.b.a. verizon wireless

Natcomm, L.L.C.
63-2 North Branford Road
Branford, Connecticut 06405
Tel. (203) 488-0580
Fax (203) 488-8587

BETHANY VERIZON WIRELESS

93 OLD AMITY ROAD
BETHANY, CONNECTICUT

PROJECT NO:	172A
DRAWN BY:	CTW
CHECKED BY:	JJP
SCALE:	NONE
DATE:	05/19/00

TOWER ELEVATION

SC-2

DWG. 3 OF 3