STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

October 18, 2001

Michele G. Briggs
Manager of Real Estate
500 Enterprise Drive, 3rd Floor
Rocky Hill, CT 06067

RE: **EM-CING-032-010926** - SNET Mobility, LLC notice of intent to modify an existing telecommunications facility located at 400 Riley Mountain Road, Coventry, Connecticut.

Dear Ms. Briggs:

At a public meeting held on October 17, 2001, 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.

The proposed modifications are to be implemented as specified here and in your notice dated September 26, 2001. 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/RKE/laf

c: Honorable Joan A. Lewis, Chairman Town Council, Town of Coventry
John A. Elsesser, Town Manager, Town of Coventry
Eric M. Trott, Director of Planning & Development, Town of Coventry
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC
Sandy M. Carter, Verizon Wireless
Stephen J. Humes, Esq., VoiceStream Wireless Corporation

Town of Coventry

1712 Main Street • Coventry, CT 06238 • Fax (860) 742-8911

October 15, 2001

Joel M. Reinbold, Executive Director
CT Siting Council
10 Franklin Square
New Britain CT 06051

Re: EM—CING—032-010926—SNET—Coventry, Connecticut

Dear Mr. Reinbold:

The Coventry Planning and Zoning Commission is in receipt of your September 28TH letter regarding SNET Mobility, LLC proposal to modify the existing telecommunications facility at 400 Riley Mountain Road, Coventry, CT. A copy of the PZC minutes are enclosed.

The Commission has no comment on this proposal at the present time. The matter was discussed at the Commission's October 9TH meeting.

Sincerely,

Eric M. Trott
Director of Planning and Development

EMT/lpe

cc: PZC

/enc:

- Letter dated 9-28-01, to: Joan A. Lewis, from: State of Connecticut Siting Council, re: EM-CING-032-010926 - SNET Mobility, LLC notice of intent to modify an existing telecommunications facility located on Riley Mountain Road, Coventry, Connecticut.

The PZC had previously approved a cellular tower on Riley Mountain Road. The applicant is now proposing modifications to the approved tower for and additional user and additional structures. The decision to allow these modifications now falls under the Connecticut Siting Council. The Siting Council will accept commentary from the Town to consider while making their decision. The Commission had no issue with the proposed changes and requested Trott write the Siting Council asking them to stay within the boundaries of the PZC intent and consider abutting properties and constraints of the site.

DECISIONS - There were no decisions made on public hearings.

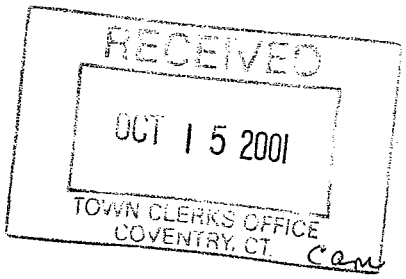
ADJOURNMENT -

MOTION: To adjourn.

By: Dolleris **Seconded:** Rappe **Time:** 10:59 p.m.
Motion carried with the following vote:
For: Unanimous **Against:** None **Abstain:** None

Respectfully submitted,

Debbie Markie,
PZC Clerk



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

October 5, 2001

Beau Thurnauer
Chief of Police
Coventry Police Department
1712 Main Street
Coventry, CT 06238

RE: **EM-CING-032-010926** - SNET Mobility, LLC notice of intent to modify an existing telecommunications facility located at 400 Riley Mountain Road, Coventry, Connecticut.

Dear Chief Thurnauer:

The Connecticut Siting Council is in receipt of your recent correspondence, dated October 2, 2001.

Thank you for your interest and concern in this very important matter. Your letter will be made part of the record.

Very truly yours,

Joel M. Rinebold
Executive Director

JMR/laf

L:siting\em\cing\coventry\pubformPolice.doc

Beau Thurnauer
Chief of Police

COVENTRY POLICE DEPARTMENT

October 2, 2001

Joel M Rinebold
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **EM-CING-032-010926**

Dear Mr. Rinebold:

This letter is an endorsement of a request by Cingular Wireless to place a telecommunications antenna at 400 Riley Mountain Rd. in Coventry.

In a time of rapidly changing communications resources, cell phone use is becoming as important to law enforcement as two-way radios. My officer's dependence on mobile phones increases daily and our rural rolling terrain sometimes makes it difficult to establish a clear path.

My cruisers are equipped exclusively with Cingular equipment. My only regret is that I do not have every cruiser and every officer equipped. Special pricing for public safety would certainly be a service to all communities. The placement of the proposed antenna happens to be in one of our weakest signal locations, one in which we frequently investigate serious motor vehicle accidents and thus have a crucial need for quality communications.

I highly encourage you to approve this request. Please contact me if you desire any further information.

Sincerely,

Beau Thurnauer
Chief of Police

Cc: Michele Briggs, SNET Mobility

1712 Main Street, Coventry, Connecticut 06238 • 860-742-7331 • FAX: 742-5770

EM-CING-032-010926

SNET Mobility, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7700
Fax: (860) 513-7190

Michele G. Briggs
Manager of Real Estate

September 26, 2001

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

Re: Request by SNET Mobility, LLC for an Order to Approve the Shared Use of an Existing Wireless Telecommunications Tower Facility Located at 400 Riley Mountain Road, Coventry, Connecticut.

Dear Chairman Gelston:

Pursuant to Connecticut General Statutes (C.G.S.) Section 16-50aa, SNET Mobility, LLC ("SNET") hereby requests an order from the Connecticut Siting Council ("Council") approving the proposed shared use by SNET of an existing multi-carrier wireless telecommunications tower facility located at 400 Riley Mountain Road, Coventry, Connecticut.

The facility is owned and operated by Sprint Spectrum, LP ("Sprint"), with offices at 535 E. Crescent Avenue, Ramsey, NJ 07466. Sprint leases the land from James L. Wallbeoff, Jr. and Concetta M. Wallbeoff of Herndon, VA.

Sprint and SNET have agreed to the proposed shared use of the existing 150 foot monopole tower pursuant to mutually acceptable terms and conditions. Sprint has authorized SNET to apply for all necessary permits, approvals and authorizations, which may be required for the proposed shared use of this facility. SNET is licensed by the Federal Communications Commission ("FCC") to provide cellular telephone service in the Hartford, CT Metropolitan Statistical Area, which includes the area to be served by SNET's proposed installation.

The facility is located on the south side of Riley Mountain Road (just north of US Highway 44) in Coventry, Connecticut, with tower coordinates of N 41° 47' 56.2" and W 72° 19' 55.9" (NAD83).

Enclosed with this request are a site location map, a proposed site plan, and the proposed tower profile. Engineering information concerning the structural carrying capacity of the tower is also provided.

The Riley Mountain Road property is zoned as RU-40, with the immediate site vicinity being heavily wooded. Coventry Planning & Zoning authorities approved the existing 150-foot monopole and equipment compound on August 28, 2000 as a six-carrier telecommunications facility. (See attached approval letter.) This approval predates the November 20, 2000 jurisdictional decision of U.S. District Court Judge Covello. According to Coventry's Building Official, no building permits have been taken out in addition to the original Sprint permit. The Council should therefore view the Riley Mountain Road facility as legal under the Covello decision.

The existing Riley Mountain Road facility consists of a 150 foot monopole within a 30' x 45' equipment compound. The compound is surrounded by an 8-foot high chain link fence topped with barbed wire. Sprint operates panel antennas at the top of the monopole and equipment cabinets on a 9' x 20' pad at the base of the tower. Sprint also has agreements with VoiceStream and Verizon for future co-location at the site.

As shown on the attached drawings and as further described below, SNET proposes to install up to twelve Decibel Products Model DB846H80 antennas, approximately 72 inches in height, on a triangular antenna platform with the center of radiation at 117 feet above ground level ("AGL"). It also proposes to install an 11 ½ ' x 20' equipment building on a concrete foundation. To accommodate SNET's equipment building and future construction by Verizon, the fenced compound will be enlarged on its north and east sides to measure 43 ½ ' x 65'. All work will be done within Sprint's existing 100' x 100' ground lease area.

A copy of this letter is being sent to the Town Manager of the Town of Coventry.

Statutory Considerations

SNET requests the Council to find that the proposed shared use of the tower facility satisfies the criteria stated in C.G.S. §16-50aa, and to issue an order approving the proposed use.

C.G.S. §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 §16-50aa(c)(1))

The shared use of the tower satisfies the criteria in C.G.S §16-50aa as follows:

A. **Technical Feasibility.** The existing 6-carrier monopole is structurally sound and capable of supporting the proposed shared use of the SNET antennas at a centerline height of 117 feet AGL. (Please see the accompanying structural design drawing.) The tower was designed to hold up to six carriers as-built, with provisions for a possible extension at some future date to accommodate another four carriers. SNET's platform and antennas will be among the first four commercial installations to be mounted on the monopole. The proposed shared use of this tower is therefore technically feasible.

B. **Legal Feasibility.** Under C.G.S §16-50aa, the Council has been authorized to issue an order approving the proposed shared use of an existing tower facility such as the facility located at 400 Riley Mountain Road (C.G.S §16-50aa(c) (1)). This authority complements the Council's prior-existing authority under C.G.S §16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. C.G.S §16-50x(a) directs the Council to "give such consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on applications for the shared use of existing tower facilities. Under the authority vested in the Council by C.G.S §16-50aa, an order approving the shared use would permit the applicant to obtain a local building permit for the proposed installation.

C. **Environmental Feasibility.** The proposed shared use of this tower facility would not cause any significant change or alteration in the physical or environmental characteristics of the property:

1. The proposed modifications would not increase the total height of the Riley Mountain Road structure as approved by Coventry zoning authorities. SNET's equipment will be housed in a 12' x 20' equipment shelter located at the base of the tower. While the size of the fenced equipment compound will be enlarged, all work will take place on Sprint's existing lease area. Therefore, the overall dimensions of the facility will not increase.

2. The proposed installation would not increase noise levels at the existing facility by six decibels or more. After construction, the only additional noise will be from cooling mechanisms for SNET's equipment.

3. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the replacement tower in relation to the operation of the currently proposed antenna array is as follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density † (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Sprint	147	1962.5	11	384	0.0703	1.0000	7.0
VoiceStream	Future						
Verizon	Future						
SNET	117	880-894	19	100	0.0499	0.5867	8.5
Total							**15.5 %**

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

* Power density information provided by Sprint.

As the table demonstrates, the cumulative "worst-case" exposure would be 15.5 % of the ANSI/IEEE standard, as calculated for mixed frequency sites. Power density levels from SNET's use of the tower facility would thus be well below applicable ANSI/IEEE standards.

4. The proposed installation would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is completed (approximately four weeks), the proposed installation would not generate any vehicular traffic other than periodic maintenance visits. The proposed use of the facility would therefore have a minimal environmental effect, and is environmentally feasible.

D. **Economic Feasibility.** SNET has entered into an agreement with for shared use of the tower facility. The proposed facility sharing is therefore economically feasible.

E. **Public Safety Concerns.** As stated above, the existing tower is structurally capable of supporting SNET's proposed antennas, and radio frequency emissions fall well below State and Federal safety standards. SNET is not aware of any other public safety concerns relative to the proposed sharing of the tower. In fact, the provision of new or improved wireless coverage in the area is expected to enhance the safety and welfare of Coventry's residents. The proposed-shared use of this facility would also improve public safety for travelers along US Highway 44 in the town of Coventry.

Conclusion

For the reasons discussed above, the proposed shared use of the existing tower facility at 400 Riley Mountain Road in the town of Coventry satisfies the criteria stated in C.G.S. §16-50aa and advances the General Assembly's and the Council's goal of preventing the proliferation of communication towers in Connecticut. SNET therefore respectfully

requests that the Council issue an order approving the proposed shared use. Thank you for your attention to this matter.

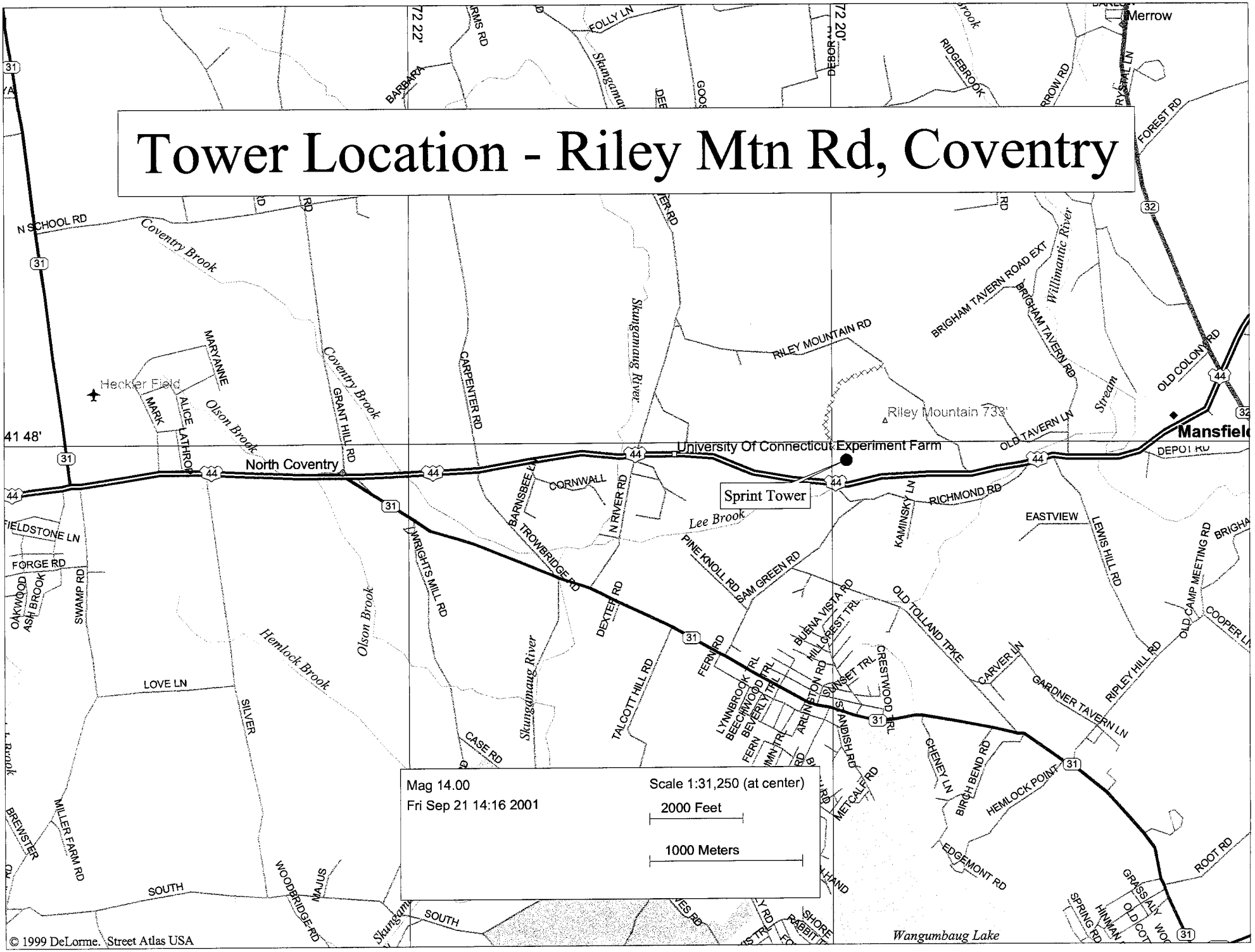
Sincerely,

Michele G. Briggs
Manager of Real Estate

Enclosures

cc: Honorable John A. Elsesser, Town Manager

Tower Location - Riley Mtn Rd, Coventry



Town of Coventry

1712 Main Street • Coventry, CT 06238 • Fax (860) 742-8911

CERTIFIED MAIL # 7099 3400 0007 2017 0083
September 6, 2000

Attorney Thomas J. Regan, Esq.
Brown, Rudnik, Freed, and Gesmer
185 Asylum Street
Hartford CT 06107

Dear Attorney Regan:

At its regular meeting on August 28, 2000, the Coventry Planning and Zoning Commission made the following decision:

> To approve application 00-18S of Sprint Spectrum, LP (DBA sprint PCS), to establish a telecommunications facility, 150' monopole, and associated ground equipment; property located on Riley Mountain Road (Assessor's Map 11, Block 29-A, Lots 2,3); RU-40 Zone.
>
> The following conditions apply:
>
> 1. The pole is to be expandable for possible future use.
> 2. The amount of carriers on the 150' pole is to be six rather than three.
> 3. The town of Coventry has access to public safety communication.

I wish to remind you that you must file an 8-3d form with the Town Clerk's office in addition to final mylar(s) of the approved plan. Please see the attached information for further instruction. Also, it is requested that you place this approval letter on the final plans.

Sincerely,

Eric M. Trott
Director of Planning and Development

EMT/lpe

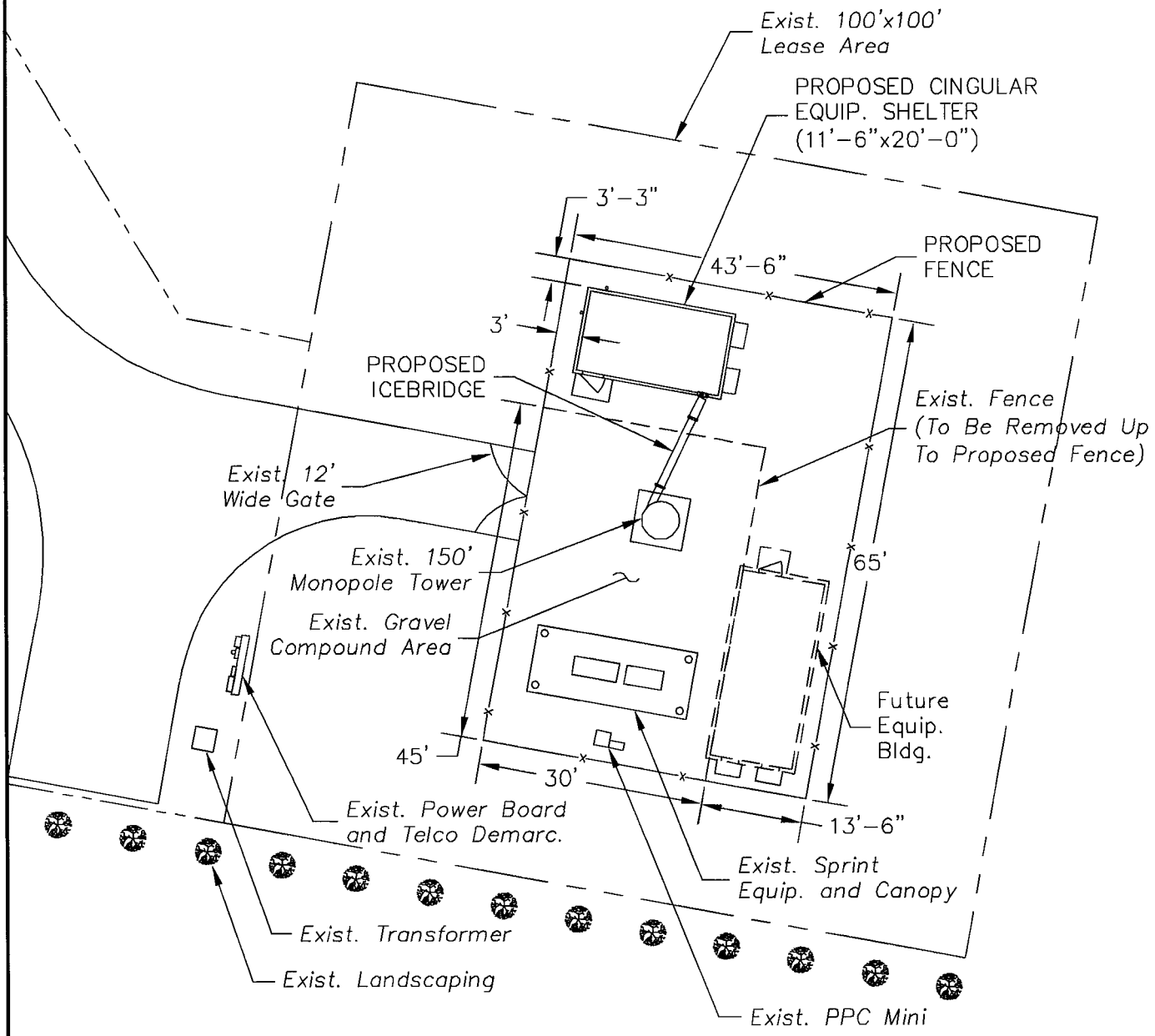
/enclosure

cc: Sprint Spectrum, L.P.
Goodkind & O'Dea, Inc.
James Wallbeoff, Jr.

POSTAL SERVICE

Please print your name

RAD. CENTER: _____FT. (AGL)



20 0 20

(SCALE IN FEET)

PARTIAL SITE PLAN

DESIGN EXHIBIT

NORTH

SITE NAME: COVENTRY NORTH

ADDRESS: RILEY MOUNTAIN ROAD
COVENTRY, CT 06238

DRAWN: AMC | CHECKED: GMP | SCALE: 1"=20'

MGI #: 15364
TASK #: 1208
DATE: 9/26/01

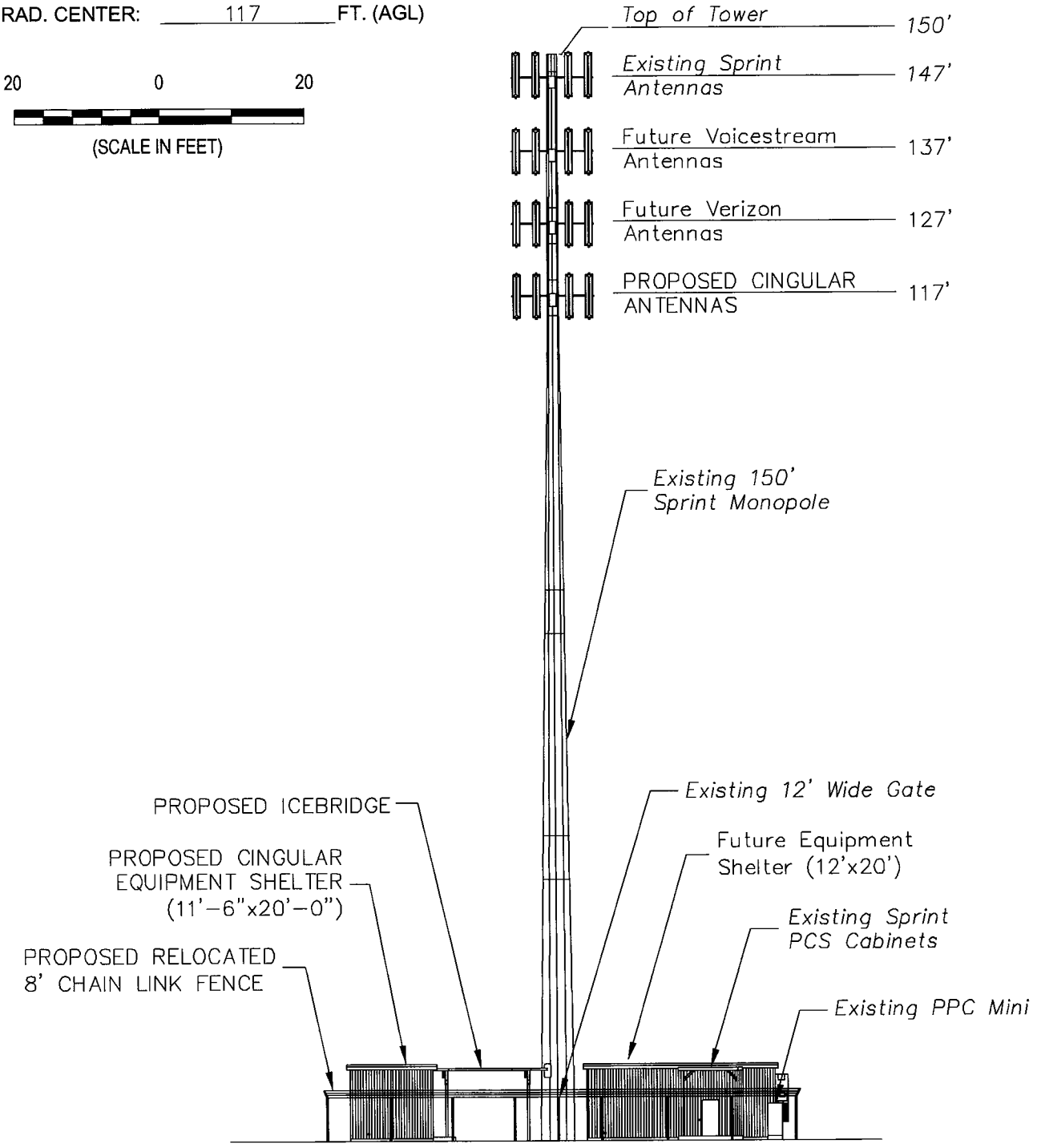
Maguire Group Inc.
Architects Engineers Planners
One Court Street
New Britain, Connecticut 06051

cingular WIRELESS

RAD. CENTER: 117 FT. (AGL)

20 0 20

(SCALE IN FEET)



WEST ELEVATION VIEW

DESIGN EXHIBIT

NORTH

SITE NAME: COVENTRY NORTH

ADDRESS: RILEY MOUNTAIN ROAD
COVENTRY, CT 06238

DRAWN: AMC | CHECKED: GMP | SCALE: 1"=20'

MGI #: 15364
TASK #: 1208
DATE: 9/26/01

Maguire Group Inc.
Architects Engineers Planners
One Court Street
New Britain, Connecticut 06051

cingular WIRELESS

ENGINEERED ENDEAVORS INCORPORATED

Customer SPRINT PCS | B.S.FAYMAN | 09/22/00 (Date)

Structure 150' MONOPOLE GROWABLE TO 194' | Checked | 7831 (Job/Quote No.)

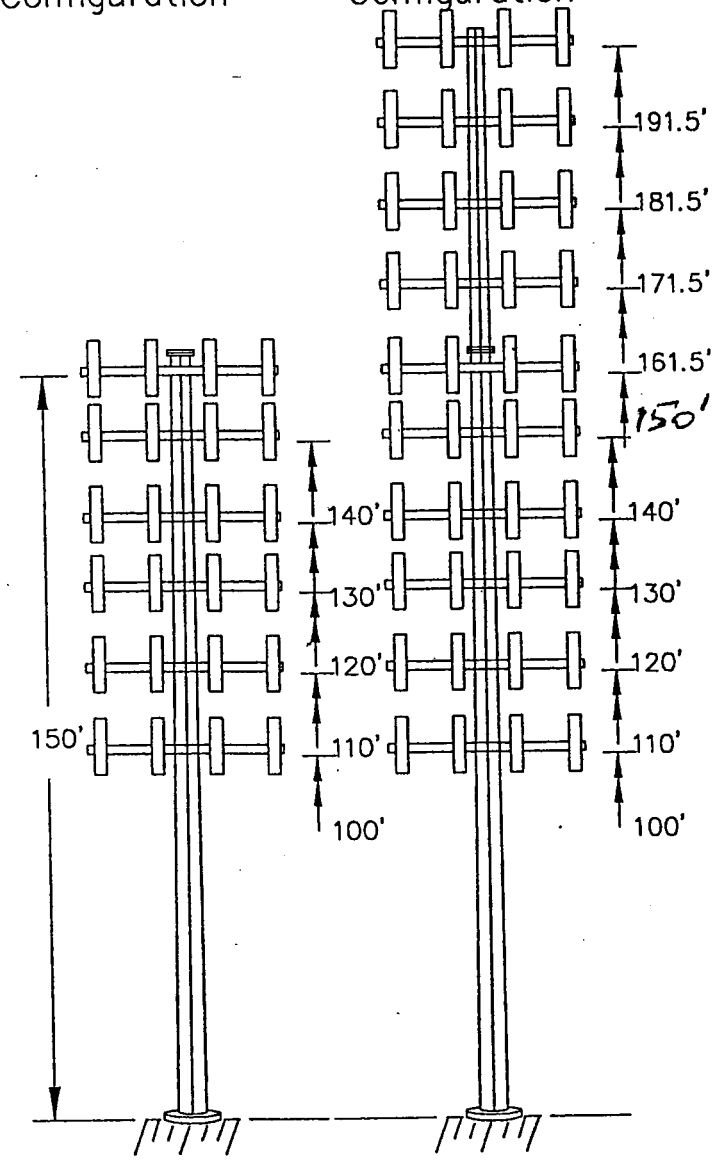
Site Location – Tolland Co., CT

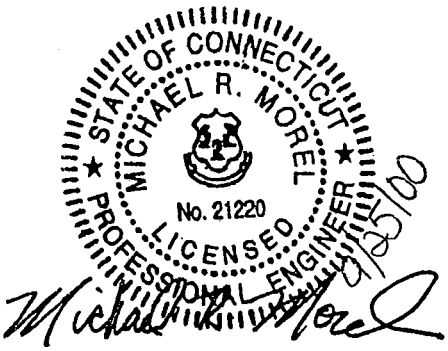
Site Name – CT33XC551

Revision 1

Initial Configuration

Final Configuration





DESIGN LOADING:

(12) DAPA 48000 ON A LOW PROF. PLATFORMS @ 100', 110', 120', 130', 140', 150', 161.5', 171.5', 181.5', 191.5'

DESIGN NOTES:

DESIGN IN ACCORDANCE WITH TIA/EIA 222F,
DESIGN WIND SPEED – 90 MPH

ALLOW. ROTATION – 3.0 DEG @ 150' AT 50 MPH

DESIGNED IN ACCORDANCE WITH SPRINT SPECS

NOTE: IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY THAT THE WIND LOADS AND DESIGN CRITERIA SPECIFIED MEET THE REQUIREMENTS OF ALL LOCAL BUILDING CODES

ENGINEERED ENDEAVORS, INC.

7610 Jenther Drive * Mentor, Ohio 44060
Tel: (440) 918-1101 * Fax: (440) 918-1108

Sprint PCS
Structure & Foundation
Design Calculations
150' & Carrier Monopole Design
Site: N. Coventry/Wallbeoff/CT33X
EEI Job #: 7831-E01

ENGINEERED ENDEAVORS INCORPORATED

Customer SPRINT PCS | B.S.FAYMAN | 09/22/00 (Date)

Structure 150' MONOPOLE GROWABLE TO 194' | Checked | 7831 (Job/Quote No.)

Site Location – Tolland Co., CT

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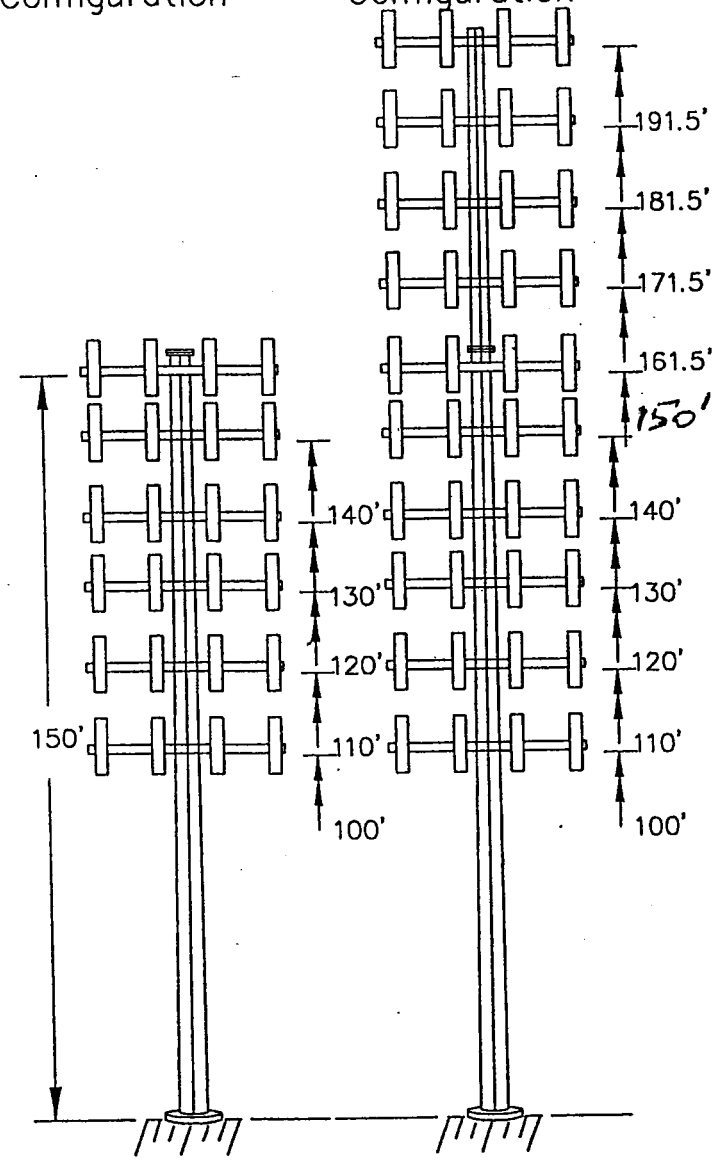
Initial Configuration

Final Configuration



STATE OF CONNECTICUT ★ MICHAEL R. MOREL ★ No. 21220 LICENSED PROFESSIONAL ENGINEER

9/25/00

DESIGN LOADING:

(12) DAPA 48000 ON A LOW PROF. PLATFORMS @ 100', 110', 120', 130', 140', 150', 161.5', 171.5', 181.5', 191.5'

DESIGN NOTES:

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ENGINEERED ENDEAVORS, INC.

7610 Jenther Drive * Mentor, Ohio 44060
Tel: (440) 918-1101 * Fax: (440) 918-1108

Engineered Endeavors Inc.

7610 Jenther Drive
Mentor, Ohio 44060
Tel (440) 918-1101 Fax (440) 918-1108

Communications Structure Nonlinear Analysis and Design Program

09:11:09 09-22-2000
Revision 1.2 - 4/22/98
Engineer: BSF

Customer **SPRINT PCS**
Job Name **7831 REV.I**
Structure **150' (GROWABLE) MONOPOLE**
Location **TOLLAND CO., CT**
Site **CT33XC51**

OD BOT	OD TOP	NUM. SIDES	THICK INCH	TAPER IN/FT	LENGTH FT	JOINT INCH	JOINT TYPE	YIELD KSI	WEIGHT LBS	JOINT HEIGHT
33.03	21.00	18	0.2500	0.293	41.00	0.00	FLANGE	65.0	2927.	152.00
37.31	33.03	18	0.3125	0.293	14.58	62.00	SLIP	65.0	1695.	140.00
50.15	35.04	18	0.3750	0.293	51.50	82.00	SLIP	65.0	8699.	94.50
62.86	47.27	18	0.4375	0.293	53.13	101.00	SLIP	65.0	13546.	49.00
75.00	59.39	18	0.5000	0.293	53.21	0.00	BASEPL	65.0	18930.	0.00
			TOTAL TUBE WEIGHT						45797.	POUNDS
			POLE SHAFT LENGTH						152.00	FEET

E = 29600.0 KSI
UNIT WGT = 0.283 LBS/CU IN
AISC constants are used for stress reductions.
TUBE SECTIONS HAVE 18 SIDES AND ARE TREATED AS ROUND
Internal bend radius = 3 X T
Tube diameters are measured flat to flat.
Tube diameters are increased by 1.020 for wind across points.
Drag coefficients are increase by 1.300 for steps on the pole.
AISC Tube Shape Coefficient of 1.000 is applied.
REVISED DATA FILE NAME 7831-150

APPURTENANCES

DESCRIPTION	NUM.	ELEV.	Kz	AREA	WGT	Ca	AREA	WGT	Ca	FACTOR
				< WITHOUT ICE >			< WITH ICE >			
48000	12	192.	1.653	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	182.	1.628	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	172.	1.601	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	162.	1.574	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	150.	1.541	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	140.	1.511	3.20	18.	1.4000	3.65	41.	1.4000	0.85
LOW PROFILE PLATFORM	1	192.	1.653	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	182.	1.628	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	172.	1.601	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	162.	1.574	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	150.	1.541	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	140.	1.511	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
48000	12	130.	1.480	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	120.	1.446	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	110.	1.411	3.20	18.	1.4000	3.65	41.	1.4000	0.85
48000	12	100.	1.373	3.20	18.	1.4000	3.65	41.	1.4000	0.85
LOW PROFILE PLATFORM	1	130.	1.480	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	120.	1.446	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	110.	1.411	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00
LOW PROFILE PLATFORM	1	100.	1.373	11.25	1500.	2.0000	14.10	2250.	2.0000	1.00

LOAD CASE 1

OPERATIONAL LOADING

DEAD LOAD FACTOR 1.00 WIND PSF REDUCTION 1.00 RADIAL ICE 0.00 IN.

WIND VELOCITY 50 BOTTOM 6.45 PSF TOP 10.68 PSF
MAX BASE ROTATION 0.00 DEG

APPLIED APPURTENANCE FORCES

	ELEVATION FT	WEIGHT KIPS	WIND KIPS
48000	191.50	0.220	0.817
48000	181.50	0.220	0.804
48000	171.50	0.220	0.791
48000	161.50	0.220	0.778
48000	150.00	0.220	0.762
48000	140.00	0.220	0.747
LOW PROFILE PLATFORM	191.50	1.500	0.402
LOW PROFILE PLATFORM	181.50	1.500	0.396
LOW PROFILE PLATFORM	171.50	1.500	0.390
LOW PROFILE PLATFORM	161.50	1.500	0.383
LOW PROFILE PLATFORM	150.00	1.500	0.375
LOW PROFILE PLATFORM	140.00	1.500	0.368
48000	130.00	0.220	0.731
3000	120.00	0.220	0.715
48000	110.00	0.220	0.697
48000	100.00	0.220	0.678
LOW PROFILE PLATFORM	130.00	1.500	0.360
LOW PROFILE PLATFORM	120.00	1.500	0.352
LOW PROFILE PLATFORM	110.00	1.500	0.343
LOW PROFILE PLATFORM	100.00	1.500	0.334

LOAD CASE 1

OPERATIONAL LOADING

TUBE PROPERTIES			MEMBER FORCES			STRESSES			STRESS	TOTAL	
ELEV FT	DIAM IN	WALL IN	SHEAR K	BENDING K-FT	AXIAL K	AXIAL KSI	BEND. KSI	ALLOW KSI	RATIOS	DEFL IN	TILT DEG
193.00	21.00	0.2500	0.00	0.01	0.04	0.00	0.00	60.06	0.00	37.8	1.77
191.50	21.44	0.2500	1.40	0.02	2.11	0.13	0.00	59.83	0.00	37.2	1.77
181.50	24.37	0.2500	2.88	13.97	4.48	0.24	1.48	58.49	0.02	33.5	1.76
171.50	27.31	0.2500	2.88	42.79	4.48	0.21	3.61	57.45	0.06	29.9	1.71
161.50	30.24	0.2500	4.37	86.46	6.93	0.29	5.92	56.60	0.10	26.4	1.63
152.00	33.03	0.2500	5.84	141.88	9.44	0.37	8.13	59.12	0.14	23.2	1.53
TYPE OF JOINT: BUTT WELD/FLANGE											
152.00	33.03	0.3125	6.01	141.86	9.95	0.31	6.54	57.74	0.11	23.2	1.53
150.00	33.62	0.3125	6.01	153.86	9.95	0.30	6.85	57.58	0.12	22.6	1.51
140.00	36.55	0.3125	7.35	227.33	12.36	0.35	8.54	60.89	0.15	19.5	1.41
TYPE OF JOINT: SLIP JOINT											
140.00	35.80	0.3750	8.82	227.33	16.14	0.39	7.46	58.70	0.12	19.5	1.41
130.00	38.73	0.3750	8.82	315.54	16.14	0.36	8.82	57.95	0.15	16.7	1.31
120.00	41.67	0.3750	10.27	418.22	19.41	0.40	10.08	57.30	0.17	14.0	1.20
110.00	44.60	0.3750	11.69	535.09	22.79	0.44	11.24	56.74	0.19	11.6	1.09
100.00	47.54	0.3750	13.09	665.92	26.30	0.47	12.30	56.24	0.21	9.5	0.97
94.50	49.15	0.3750	14.38	744.96	29.47	0.51	12.86	59.23	0.23	8.4	0.90
TYPE OF JOINT: SLIP JOINT											
94.50	48.27	0.4375	14.70	744.98	32.97	0.50	11.47	57.36	0.19	8.4	0.90
82.00	51.94	0.4375	14.70	928.66	32.97	0.47	12.33	56.75	0.21	6.2	0.77
71.00	55.17	0.4375	15.08	1094.52	35.81	0.48	12.86	56.28	0.22	4.5	0.65
60.00	58.40	0.4375	15.44	1264.40	38.64	0.49	13.24	55.87	0.23	3.2	0.53
49.00	61.62	0.4375	15.80	1438.15	41.64	0.50	13.51	58.28	0.24	2.1	0.42
TYPE OF JOINT: SLIP JOINT											
49.00	60.62	0.5000	16.19	1438.16	48.01	0.51	12.26	56.59	0.21	2.1	0.42
36.00	64.44	0.5000	16.19	1648.68	48.01	0.48	12.42	56.12	0.22	1.1	0.30
24.00	67.96	0.5000	16.57	1847.48	52.30	0.49	12.50	55.74	0.22	0.5	0.19
12.00	71.48	0.5000	16.92	2050.57	56.65	0.51	12.52	55.40	0.22	0.1	0.09
0.00	75.00	0.5000	17.53	2258.08	63.57	0.54	12.52	57.50	0.23	0.0	0.00

REACTION COMPONENTS (KIPS AND FT-KIPS)

TRANSVERSE SHEAR	VERTICAL FORCE	WIND SHEAR	MOMENT ABOUT TRANSVERSE	MOMENT ABOUT VERTICAL	MOMENT ABOUT WIND AXIS
0.000	63.567	-17.529	2258.081	0.000	0.000

LOAD CASE 2

BASIC LOADING

DEAD LOAD FACTOR 1.00 WIND PSF REDUCTION 1.00 RADIAL ICE 0.00 IN.

WIND VELOCITY 90 BOTTOM 20.91 PSF TOP 34.60 PSF
MAX BASE ROTATION 0.00 DEG

APPLIED APPURTENANCE FORCES

	ELEVATION FT	WEIGHT KIPS	WIND KIPS
48000	191.50	0.220	2.647
48000	181.50	0.220	2.606
48000	171.50	0.220	2.564
48000	161.50	0.220	2.521
48000	150.00	0.220	2.468
48000	140.00	0.220	2.420
LOW PROFILE PLATFORM	191.50	1.500	1.303
LOW PROFILE PLATFORM	181.50	1.500	1.283
LOW PROFILE PLATFORM	171.50	1.500	1.263
LOW PROFILE PLATFORM	161.50	1.500	1.241
LOW PROFILE PLATFORM	150.00	1.500	1.215
LOW PROFILE PLATFORM	140.00	1.500	1.192
48000	130.00	0.220	2.369
8000	120.00	0.220	2.316
48000	110.00	0.220	2.259
48000	100.00	0.220	2.198
LOW PROFILE PLATFORM	130.00	1.500	1.167
LOW PROFILE PLATFORM	120.00	1.500	1.140
LOW PROFILE PLATFORM	110.00	1.500	1.112
LOW PROFILE PLATFORM	100.00	1.500	1.082

LOAD CASE 2

BASIC LOADING

TUBE ELEV FT	PROPERTIES DIAM IN	WALL IN	MEMBER FORCES SHEAR K	BENDING K-FT	AXIAL K	STRESSES AXIAL KSI	BEND. KSI	ALLOW KSI	STRESS RATIOS	TOTAL DEFL IN	TILT DEG
193.00	21.00	0.2500	0.34	0.29	0.06	0.00	0.04	60.06	0.01	122.0	5.75
191.50	21.44	0.2500	4.63	0.02	1.66	0.10	0.00	59.83	0.01	120.2	5.75
181.50	24.37	0.2500	9.41	46.06	3.58	0.19	4.89	58.49	0.08	108.3	5.70
171.50	27.31	0.2500	14.20	139.75	5.62	0.26	11.77	57.45	0.20	96.6	5.54
161.50	30.24	0.2500	18.95	281.14	7.77	0.33	19.26	56.60	0.33	85.3	5.29
152.00	33.03	0.2500	18.95	460.43	7.77	0.30	26.39	59.12	0.45	75.2	4.98
			TYPE OF JOINT: BUTT WELD/FLANGE								
152.00	33.03	0.3125	19.33	460.54	8.30	0.26	21.24	57.74	0.35	75.2	4.98
150.00	33.62	0.3125	19.33	499.07	8.30	0.25	22.20	57.58	0.36	73.1	4.92
140.00	36.55	0.3125	23.97	737.99	10.41	0.29	27.71	60.89	0.46	63.2	4.59
			TYPE OF JOINT: SLIP JOINT								
140.00	35.80	0.3750	28.75	737.97	13.95	0.33	24.21	58.70	0.38	63.2	4.59
130.00	38.73	0.3750	28.75	1024.63	13.95	0.31	28.65	57.95	0.46	54.0	4.26
120.00	41.67	0.3750	33.42	1358.00	17.06	0.35	32.74	57.30	0.54	45.5	3.91
110.00	44.60	0.3750	38.03	1737.47	20.36	0.39	36.50	56.74	0.61	37.7	3.54
100.00	47.54	0.3750	42.55	2162.20	23.85	0.43	39.92	56.24	0.68	30.7	3.15
94.50	49.15	0.3750	46.75	2418.95	27.02	0.47	41.75	59.23	0.71	27.2	2.94
			TYPE OF JOINT: SLIP JOINT								
94.50	48.27	0.4375	47.81	2418.96	30.73	0.47	37.25	57.36	0.61	27.2	2.94
82.00	51.94	0.4375	47.81	3015.89	30.73	0.43	40.04	56.75	0.67	20.1	2.49
71.00	55.17	0.4375	49.08	3555.26	33.86	0.45	41.78	56.28	0.71	14.8	2.11
60.00	58.40	0.4375	50.25	4107.75	36.98	0.46	43.02	55.87	0.74	10.3	1.73
49.00	61.62	0.4375	51.44	4673.35	41.65	0.50	43.90	58.28	0.76	6.8	1.36
			TYPE OF JOINT: SLIP JOINT								
49.00	60.62	0.5000	52.72	4673.35	48.02	0.51	39.83	56.59	0.67	6.8	1.36
36.00	64.44	0.5000	52.72	5358.50	48.02	0.48	40.37	56.12	0.69	3.6	0.97
24.00	67.96	0.5000	53.93	6005.55	52.30	0.49	40.62	55.74	0.70	1.6	0.63
12.00	71.48	0.5000	55.08	6666.48	56.65	0.51	40.72	55.40	0.71	0.4	0.31
0.00	75.00	0.5000	57.04	7341.76	63.57	0.54	40.69	57.50	0.72	0.0	0.00

REACTION COMPONENTS (KIPS AND FT-KIPS)

TRANSVERSE SHEAR	VERTICAL FORCE	WIND SHEAR	MOMENT ABOUT TRANSVERSE	MOMENT ABOUT VERTICAL	MOMENT ABOUT WIND AXIS
0.000	63.568	-57.041	7341.761	0.000	0.000

SUMMARY TABLE

ELEV	STRESS RATIO	AXIAL	BENDING	LOADING
193.00	0.01	0.06	0.3	2 BASIC LOADING
191.50	0.01	1.66	0.0	2 BASIC LOADING
181.50	0.08	3.58	46.1	2 BASIC LOADING
171.50	0.20	5.62	139.8	2 BASIC LOADING
161.50	0.33	7.77	281.1	2 BASIC LOADING
152.00	0.45	7.77	460.4	2 BASIC LOADING
150.00	0.36	8.30	499.1	2 BASIC LOADING
140.00	0.46	10.41	738.0	2 BASIC LOADING
130.00	0.46	13.95	1024.6	2 BASIC LOADING
120.00	0.54	17.06	1358.0	2 BASIC LOADING
110.00	0.61	20.36	1737.5	2 BASIC LOADING
100.00	0.68	23.85	2162.2	2 BASIC LOADING
94.50	0.71	27.02	2419.0	2 BASIC LOADING
82.00	0.67	30.73	3015.9	2 BASIC LOADING
71.00	0.71	33.86	3555.3	2 BASIC LOADING
60.00	0.74	36.98	4107.8	2 BASIC LOADING
49.00	0.76	41.65	4673.4	2 BASIC LOADING
36.00	0.69	48.02	5358.5	2 BASIC LOADING
24.00	0.70	52.30	6005.6	2 BASIC LOADING
12.00	0.71	56.65	6666.5	2 BASIC LOADING
0.00	0.72	63.57	7341.8	2 BASIC LOADING

MAXIMUM SUPPORT MOMENT K-FT	7341.76
CORRESPONDING AXIAL FORCE KIPS	63.57
CORRESPONDING SHEAR FORCE KIPS	57.04

BASE PLATE AT ELEVATION 0.00 FEET

TUBE DIAMETER	75.00	INCHES
DESIGN MOMENT	7341.8	KIP FT
DESIGN MOMENT IS	0.	DEGREES FROM THE WIND DIRECTION
BOLTS ARE ON THE	KNUCKLES	OF THE TUBE
APPLIED AXIAL FORCE	63.6	KIPS
APPLIED SHEAR	57.04	KIPS

BOLT DATA

BOLT TYPE	A615 GR75	
BOLTS ARE EVENLY SPACED		
DIAMETER	2.250	INCHES
EFFECTIVE AREA	3.250	SQ IN
TOTAL LENGTH	9.5	FEET
MINIMUM EMBEDMENT	7.8	FEET
NUMBER OF BOLTS	28	
BOLT CIRCLE DIAMETER	85.00	INCHES
ALLOWABLE STRESS	60.0	KSI
APPLIED AXIAL STRESS	46.3	KSI
MAX BOLT FORCE	150.3	KIPS
BOLT WEIGHT	3750.6	POUNDS

PLATE DATA

DIAMETER OF PLATE	91.00	INCHES
MATERIAL	A871 GR60	
PROVIDED THICKNESS	2.250	INCHES
REQUIRED THICKNESS	2.116	INCHES
BOLT HOLE DIAMETER	2.625	INCHES
CENTER HOLE SIZE	65.00	INCHES
NET WEIGHT	1931.9	POUNDS
RAW STOCK WEIGHT	5272.9	POUNDS
SURFACE AREA	42.14	SQ FT
ALLOWABLE STRESS	59.99	KSI
MAX APPLIED STRESS	53.05	KSI
CONCRETE STRENGTH	3000.	PSI

Base Plate - use 91.00 inch ROUND x 2.250 inch A871 GR60 with (28) 2.250 diameter x 9.50 foot caged A615 GR75 bolts on a 85.00 inch bolt circle

FLANGE AT ELEVATION 152.00 FEET

TUBE DIAMETER	33.03	INCHES
DESIGN MOMENT	460.4	KIP FT
DESIGN MOMENT IS	0.	DEGREES FROM THE WIND DIRECTION
BOLTS ARE ON THE	KNUCKLES	OF THE TUBE
APPLIED AXIAL FORCE	7.8	KIPS
APPLIED SHEAR	18.95	KIPS

BOLT DATA

BOLT TYPE	A325	
BOLTS ARE EVENLY SPACED		
DIAMETER	1.000	INCHES
EFFECTIVE AREA	0.785	SQ IN
TOTAL LENGTH	5.0	INCHES
NUMBER OF BOLTS	24	
BOLT CIRCLE DIAMETER	37.00	INCHES
ALLOWABLE STRESS	58.7	KSI
APPLIED AXIAL STRESS	32.1	KSI
MAX BOLT FORCE	25.2	KIPS

PLATE DATA

DIAMETER OF PLATE	40.00	INCHES
MATERIAL	A871 GR60	
PROVIDED THICKNESS	1.500	INCHES
REQUIRED THICKNESS	0.743	INCHES
BOLT HOLE DIAMETER	1.250	INCHES
CENTER HOLE SIZE	28.03	INCHES
NET WEIGHT	259.0	POUNDS
RAW STOCK WEIGHT	679.2	POUNDS
SURFACE AREA	8.47	SQ FT
ALLOWABLE STRESS	59.99	KSI
MAX APPLIED STRESS	14.72	KSI
CONCRETE STRENGTH	0.	PSI

Flange - use 40.00 inch ROUND x 1.500 inch A871 GR60
with (24) 1.000 diameter x 5.00 inch A325 bolts
on a 37.00 inch bolt circle

Sprint

Tower Loading Form

Site Reference Information:

Cascade #: CT33XC551

☐ % of Structural Capacity

Site Address: RILEY MOUNTIAIN ROAD, COVENTRY,CT

Lease Area 100X100

Structure Height: 150

Compound Size: 30x45

Tower Manufacturer: Engineering Endeavors

Structure Type: Monopole

Tower Contact #: 440-918-1101

File #: 7831

Original Design Load for Structure: ☐ 1 Carrier ☐ 2 Carrier ☐ 3 Carrier ☐ 4 Carrier ☒ 6 Carrier

Prepared By: Ray Santhouse Date: 7/26/01

Sprint Antenna Information:

ACL	# of Ant.	Frequency	Model #	Type	Orientation	Mounting Type	# of Cables	Cable Size
147	9	* 1871-1963	db980h90	Panel	0,130,270	Platform	9	1-5/8"
	*	*		*		*	*	*
	*	*		*		*	*	*

Co-location Information:

Id	Carrier	ACL	# of Ant.	Frequency	TX Output	Model #	Antenna Type	Orientation	Mounting Type	# of Cables	Cable Size	Cable Loc.	Exis
1	Voicestream	137	6	* 1930-1945	12 Watts	rr90-17-02dp	Panel	0,180,300	Platform	12	1-5/8"	Ins	☐
2	Verizon	127	12	* 835-894	16 Watts	db844h80	Panel	30,150,270,	Platform	12	1-5/8"	Ins	☐
3	SNET	117	12	* 850-896	8 Watts	db846-h80-sx	Panel	23,143,263	Platform	12	7/8"	Ins	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐
*	*		*	*	*		*		*	*	*	*	☐

Contact Information:

Co Id	Contact Person	Phone Number	E-Mail Address
1	Mark Finley	203-435-1111	mark.finley@voicestream.com
2	Chuck Webberly	617-489-7211	
3	Hollis Redding	860-513-7559	hollis.m.redding@cingular.com

Comments: **This site is expandable upto a 195'/10 carrier.**

ENGINEERED
ENDEAVORS
INCORPORATED

FOUNDATION DESIGN

150-ft Monopole
Cellular Site CT33XC551
North Coventry, CT
EEI Project: 7831 Rev.I

Prepared for:
Sprint PCS

September 25, 2000

7610 Jenther Drive, Mentor, OH 44060
Phone(440)918-1101 * Fax(440)918-1108
www.engend.com

FOUNDATION DESIGN CALCULATIONS
FOR
SPREAD FOOTING FOUNDATION

ENGINEERED ENDEAVORS INC.
*7610 Jentner Drive * Mentor, Ohio 44060*
*Tel:(216)918-1101 * Fax:(216)918-1108*

25-Sep-00
02:14 PM

CUSTOMER	SPRINT PCS
STRUCTURE	150' MONOPOLE
EEI PROJECT	7831 REV.I
LOCATION	N. COVENTRY, CT
SITE NAME	CT33XC551

SERVICE LOADS AT BASE OF THE MONOPOLE

	Design Loading
Moment, kip-ft	7341.8
Shear, kips	57.1
Axial Load, kips	63.6

Anchor Bolts	Quantity	28.0
	Length, ft	6.0
	Circle Dia., in	85.0
	Projection, in	12.0

Foundation Parameters		
Pedestal Min. Width, in		103.00
Pedestal Projection, in		12.0
Found. Min Height, ft		5.5
	Height, ft	Width, ft
Footing	3.00	29.00
Pedestal	6.00	9.00

Soil Unit Wt., pcf	100.00
Concrete Unit Wt., pcf	150.00
Angle of friction	0.00

Foundation Weight, kips	451.35
Concrete, cub.yd.	111.44
Soil Weight, kips	380.00
Total Vertical Load, kips	894.95
Kern of Eccentricity, ft	4.83
Actual Eccentricity, ft	8.78
Overturning Moment, kip-ft	7855.70
Resisting Moment, kip-ft	12976.78
Allowable Gross Soil Pressure, ksf	0.0
Allowable Net Soil Pressure, ksf	8.0
Gross Soil Pressure, (Service Load), ksf	

H=	5.00
B=	29.00

	(gross)	(net)
max q=	3.60	2.61
min q=	0.00	

Safety Factor	Sf=	1.65

ULTIMATE STRENGTH I .GN OF FOOTING

CONCRETE, psi	3000
STEEL, KSI	60

SHEAR IN FOOTING

1. CASE I -DEAD LOAD, TWO-WAY SHEAR — U= 1.4*D

Ultimate Vertical Load, kips	1252.93	
Ultimate Pressure, ksf	1.49	
Ultimate shear V, kips	**1055.90**	
Design shear Vn, kips	**3083.90**	O.K.

2. CASE II - WIND LOAD, ONE-WAY SHEAR — U=0.9*D+1.3*W

Ultimate Moment, kip-ft		10212.41	
Ultimate Vertical Load, kips		805.46	
Eccentricity, ft		12.68	
Ultimate Pressure, ksf	qult=	10.17	
Dist. from edge to critical sect., ft		7.50	
Pressure distance ft	c=	5.46	
Pressure @ critical section, ksf		0.00	
Ultimate Shear, kips		**805.46**	
Design Shear, kips		**972.10**	O.K.

FLEXURE STRENGTH DESIGN

Ultimate Moment, kip-ft		Case I	2160.22		
		Case II	6587.86	q1=	0.00
Coefficient of Resistance		Rn=	280.5		
Reinforcement Ratio		r=	0.00496		
Min. Reinforcement Ratio		r min	0.00180		
Min. Steel Area, sq.in.		A1	51.83		
Type of Bars		#	9		
		Ab,in^2=	1.00		
BOTTOM	Min. Number of Bars		51.83		
	Actual Number of Bars		54.00		
	Actual Steel Area, sq.in.		54.00		
	Steel Ratio Actual	ra=	0.00517		
	Revised Coef. of Resist	Rn=	310.30		
	Design Moment, kip-ft		7288.89		
	Horizontal Spacing, in	shor=	6.45		
TOP	Min. Steel Area, sq.in		18.79		
	Min. Number of Bars		18.79		
	Actual Number of Bars		25.00		
	Top Steel Area, sq.in		25.00		
	Horizontal Spacing, in	shor=	14.25		

PEDESTAL DES .N

Pedestal Width, in		108	Ultim. Momen	9989.7	
Concrete, ksi		3			
Reinforcement, ksi		60			
Actual Rebars , #8	Q-ty	62	Area, sq.in	0.79	
Design Rebars	Q-ty	12	Area, sq.in	4.08	
Minimum reinforcement ratio		0.0033	Rebar space, i	5.02	
Actual reinforcement ratio		0.0042			
Concrete cover , in		4			
Rebar layout radius, in		49.50			

Bending about the major axis

No.	Angle, deg	Coord., in	Edge Dist., in	No.	Angle, deg	Coord., in	dge Dist., in
1	0	49.50	4.50	7	180	-49.50	103.50
2	30	42.87	11.13	8	210	-42.87	96.87
3	60	24.75	29.25	9	240	-24.75	78.75
4	90	0.00	54.00	10	270	0.00	54.00
5	120	-24.75	78.75	11	300	24.75	29.25
6	150	-42.87	96.87	12	330	42.87	11.13

Location of neutral axis c=, 9.28
Compression zone, a= 7.89

	No.	e	Force *kips*
	1	0.0015	172.50
eu= 0.003			

Tension zone	No.	e	Force *kips*
	2	0.0006	70.86
	3	0.0065	244.90
ey= 0.00207	4	0.0145	244.90
	5	0.0225	244.90
	6	0.0283	244.90
	7	0.0305	244.90
	8	0.0283	244.90
	9	0.0225	244.90
	10	0.0145	244.90
	11	0.0065	244.90
	12	0.0006	70.86

Concrete, kips 2172.36

Total compression 2344.86

Total tension, kips 2345.82

Moment due to compression

Rebars	Force *kips*	Mom. Arm. *in*	Moment *k-ft*
1	172.50	49.50	711.57
2	0.00	42.87	0.00
12	0.00	42.87	0.00
Concrete	2172.36	50.06	9061.62

Total in compression 9773.19

Moment due to tension

Rebars	Force *kips*	Mom. Arm *in*	Moment *k-ft*
2	70.86	42.87	-253.13
3	244.90	24.75	-505.11
4	244.90	0.00	0.00
5	244.90	-24.75	505.11
6	244.90	-42.87	874.87
7	244.90	-49.50	1010.21
8	244.90	-42.87	874.87
9	244.90	-24.75	505.11
10	244.90	0.00	0.00
11	244.90	24.75	-505.11
12	70.86	42.87	-253.13
Total in tension			2253.69

Design moment about the major axis, kip 10824.19

Bending about the diagonal

No.	Angle, deg phi	Coord., in cl	Edge Dist., in di
1	0	49.50	26.87
2	30	42.87	33.50
3	60	24.75	51.62
4	90	0.00	76.37
5	120	-24.75	101.12
6	150	-42.87	119.24

No.	Angle, deg phi	Coord., in cl	dge Dist., in di
7	180	-49.50	125.87
8	210	-42.87	119.24
9	240	-24.75	101.12
10	270	0.00	76.37
11	300	24.75	51.62
12	330	42.87	33.50

Location of neutral axis c=, 33.35

Compression zone, a= 28.35

		No.	e	Force *kips*
		1	0.000583131	58.62
eu=	0.003	2		
		12		

Tension zone		No.	e	Force *kips*
		2	0.0000	1.59
		3	0.0016	194.51
ey=	0.00207	4	0.0039	244.90
		5	0.0061	244.90
		6	0.0077	244.90
		7	0.0083	244.90
		8	0.0077	244.90
		9	0.0061	244.90
		10	0.0039	244.90
		11	0.0016	194.51
		12	0.0000	1.59

Concrete, kips 2049.13

Total compression 2107.75

Total tension, kips 2106.50

Moment due to compression

Rebars	Force *kips*	Mom. Arm. *in*	Moment *k-ft*
1	58.62	49.50	241.79
2	0.00	42.87	0.00
12	0.00	42.87	0.00
Concrete	2049.13	66.92	11427.04

Total in compressio 11668.83

Moment due to tension

Rebars	Force *kips*	Mom. Arm *in*	Moment *k-ft*
3	194.51	24.75	-401.18
4	244.90	24.75	-505.11
5	244.90	0.00	0.00
6	244.90	-24.75	505.11
7	244.90	-49.50	1010.21
8	244.90	-42.87	874.87
9	244.90	-24.75	505.11
10	244.90	0.00	0.00
11	194.51	24.75	-401.18

Total in tension 1587.84

Design Moment, kip-ft 11931.00

Pedestal Design Moment, kip-ft 10824.19