

Daniel F. Caruso Chairman

### 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@ct.gov

Internet: ct.gov/csc

June 27, 2008

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

RE: EM-CING-085-080521 - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 474 Main Street, Monroe, Connecticut.

Dear Mr. Levine:

The Connecticut Siting Council (Council) hereby acknowledges 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 May 21, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

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

Thank you for your attention and cooperation.

Executive Director

SDP/MP/cm

The Honorable Tom Buzi, First Selectman, Town of Monroe Daniel A. Tuba, Planning Administrator, Town of Monroe Crown Castle

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Affirmative Action / Equal Opportunity Employe.



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Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Internet: ct.gov/csc

May 22, 2008

The Honorable Tom Buzi First Selectman Town of Monroe Town Hall 7 Fan Hill Road Monroe, CT 06468-1800

RE: EM-CING-085-080521 – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 474 Main Street, Monroe, Connecticut.

Dear Mr. Buzi:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by June 5, 2008.

Thank you for your cooperation and consideration.

S.Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Daniel A. Tuba, Planning Administrator, Town of Monroe



#### EM-CING-085-080521

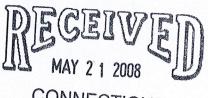




New Cingular Wireless PCS, LLC 500 Enterprise Drive Rocky Hill, Connecticut 06067-3900 Phone: (860) 513-7636

Fax: (860) 513-7190

Steven L. Levine Real Estate Consultant



CONNECTICUT SITING COUNCIL

ORIGINAL

#### HAND DELIVERED

May 21, 2008

Honorable Daniel F. Caruso, Chairman, and Members of the Connecticut Siting Council Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051

> Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 474 Main Street, Monroe (owner, Crown Castle)

Dear Chairman Caruso and Members of the Council:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("Cingular") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (GSM) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Cingular's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall

squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

- 1. The height of the overall structure will be unaffected. Modifications to the existing site include all or some of the following as necessary to bring the site into conformance with the plan:
  - Replacement of existing panel antennas with new antennas of similar size, shape, and weight, or, installation of additional antennas of similar size, shape, and weight.
  - Installation of small tower mount amplifiers ("TMA's") and/or diplexers to the platform on which the panel antennas are mounted to enhance signal reception.
  - Installation of additional or larger coaxial cables as required.
  - Installation of an additional equipment cabinet in existing shelters, or on existing or enlarged concrete pads.

None of these modifications will extend the height of the tower.

- 2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.
- 3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
- 4. Radio frequency power density may increase due to use of one GSM channel for UMTS transmissions. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

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

Please feel free to call me at (860) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Steven L. Levine

Real Estate Consultant

Attachments

## CINGULAR WIRELESS Equipment Modification

474 Main Street, Monroe

Site Number 5186

Former AT&T Cell Site Exempt Modification 11/01

Tower Owner/Manager:

Crown Castle

**Equipment configuration:** 

Monopole

Current and/or approved:

Three Allgon 7250 panel antennas @ 140 ft c.l.

Six runs 1 1/4 inch coax

**Planned Modifications:** 

Remove all three existing antennas

Install three Powerwave 7770 antennas @ 140 ft c.l.

Install six TMA's @ 140 ft

Remove one existing outdoor cabinet Install new 4 x 6 ft concrete pad

Install one outdoor equipment cabinet on new concrete pad

#### **Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 13.8 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 18.8 % of the standard.

#### **Existing**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							11.93
Cingular GSM *	140	1900 Band	8	126	0.0185	1.0000	1.85
e de la						87 (87)	18,8%

<sup>\*</sup> Per CSC records.

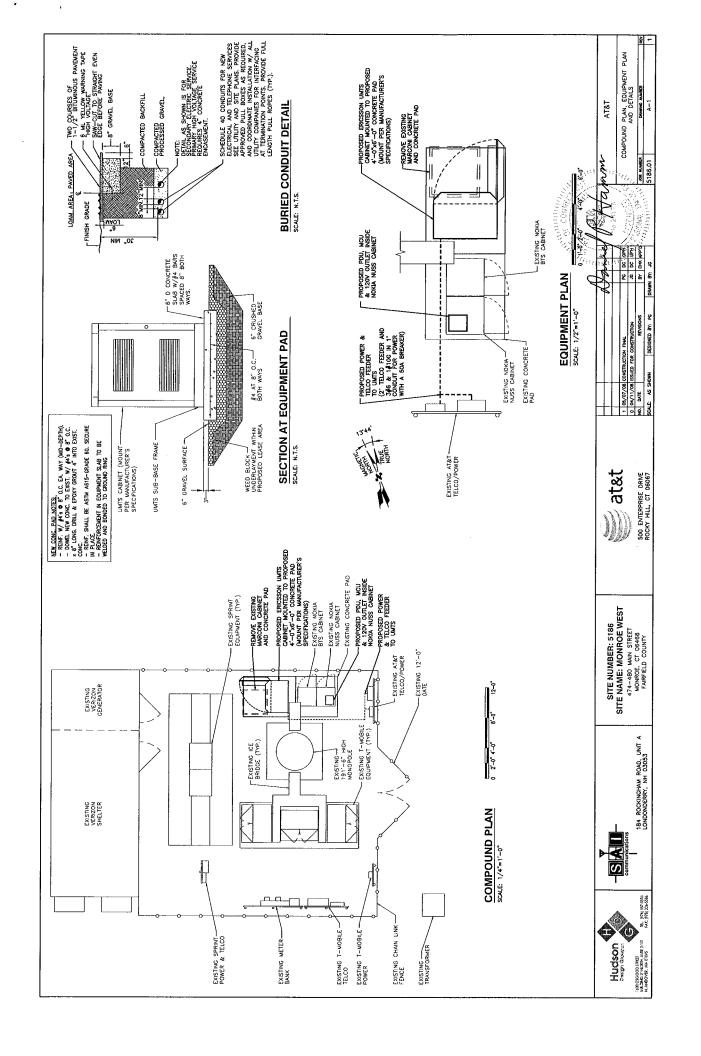
#### **Proposed**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *					100		11.93
Cingular GSM	140	880 - 894	4	296	0.0217	0.5867	3.70
Cingular GSM	140	1900 Band	2	427	0.0157	1.0000	1.57
Cingular UMTS	140	880 - 894	1	500	0.0092	0.5867	1.56
rais indicas							188%

<sup>\*</sup> Per CSC records.

#### **Structural information:**

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (B&T Engineering., dated 5/15/08)







New Cingular Wireless PCS, LLC

500 Enterprise Drive

Rocky Hill, Connecticut 06067-3900

Phone: (860) 513-7636 Fax: (860) 513-7190

Steven L. Levine Real Estate Consultant

May 21, 2008

Honorable Andrew J. Nunn Selectman, Town of Monroe Town Hall, 7 Fan Hill Rd. Monroe, Connecticut 06468

Re: Telecommunications Facility – 474 Main Street, Monroe

Dear Mr. Nunn:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("Cingular") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Cingular's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine

Real Estate Consultant

Enclosure



May 15, 2008

Ms. Tara Brewer Crown Castle USA, Inc. 9105 Monroe Road, Suite 150 Charlotte, NC 28270 (704) 321-3812

B&T Engineering, Inc. 1717 S. Boulder, Suite 300 Tulsa, OK 74119 (918) 587-4630 ctuttle@btengineering.com

Subject:

Structural Analysis Report

Carrier Designation:

AT&T Co-Locate
Carrier Site Number:
Carrier Site Name:

5186

Monroe-Main Street

Crown Castle Designation:

**Crown Castle BU Number:** 

876355

Crown Castle Site Name:

Upper Stepney-TLC

Crown Castle JDE Job Number:

105875

Engineering Firm Designation:

**B&T Engineering Project Number:** 

78088

Site Data:

474-480 Main Street, Monroe, CT, Fairfield County Latitude 41°-19'-31.99", Longitude -73°-15'-57.05"

191.5 Foot - Monopole Tower

Dear Ms. Brewer,

B&T Engineering is pleased to submit this "Structural Analysis Report" to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 287341, in accordance with Application 64047, Revision 0.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC1: Existing + Reserved + Proposed Equipment
Note: See Table 1 and Table 2 for the proposed and existing/reserved loading.

**Sufficient Capacity** 

The analysis has been performed in accordance with the TIA/EIA-222-F standard and the State Building Code, 2005 CT Supplement, based upon a fastest mile wind speed of 85 mph.

All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

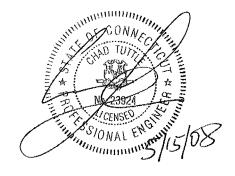
We at B&T Engineering appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA, Inc. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Terry Carter, E.I. Project Engineer

Chad E. Tuttle, P.E. President

ENG-FRM-10034 Rev - (3/22/06)



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- Table 4 Documents Provided
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- 4.1) Recommendations

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**RISA Tower Output** 

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Additional Calculations

#### 1) INTRODUCTION

The subject tower is a 191.5 foot tapered monopole manufactured in 2000 by Engineered Endeavors Inc.

#### 2) ANALYSIS CRITERIA

Specific Code:

- TIA/EIA-222-F 85 mph fastest mile wind speed
- State Building Code, 2005 CT Supplement 105 mph 3-second gust wind speed

The controlling wind loads for this analysis were derived from TIA/EIA-222-F. Therefore, the tower was analyzed for a fastest mile wind speed of 85 mph with no ice and 74 mph with a ½" of radial ice.

Table 1 - Proposed Antenna and Cable Information

Center Line Elev. (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model		Number of Feed Lines	
140	3 6	Powerwave	7770.00 LGP21401 TMA	Existing	Existing	

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elev. (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number of Feed Lines	Feed Line Size (in)
194	12 6	EMS Wireless 	RR90-17-02DP TMA	(3) T-Arms	24	1 5/8
160	6 (r) 6 (r)	Antel	LPA-80080/4CF LPA-185080/8CFx2	(3) Sectored Frames (r)	12 (r)	1 5/8
152 <sup>#</sup>	6 9 (MLA)	Decibel 	DB980H65E-M MLA Antenna (6'x1'x6" Panel)	LP Platform	6 9 (MLA)	1 5/8 1 5/8
140** <sup>##</sup>	3 (remove) 3 (r)-remove	Allgon	7250.03 7250.02	(3) Flush Mounts	6 6 (SLA) 6 (r)-remove	1 1/4 1 5/8 <b>1 5/8</b>
80	2 (r)	Andrew	PC1N0F-0190B-002M	(2) Standoff	2 (r)	7/8
52	1	Kathrein	OG-860/1920/GPS-A	(1) Standoff	1	1/2

<sup>(</sup>r) - Reserved.

<sup>\*</sup>Refer to Cable Routing Drawing in Appendix B for Feedline Placement.

<sup>\*</sup>Structural Analysis performed using MLA loading and not with existing loading.

<sup>\*\*</sup> Designated antennas & feed lines to be removed

<sup>\*\*</sup>Structural analysis performed using proposed/existing antennas & SLA feed lines.

Table 3 - Design Antenna and Cable Information

Center Line Elev. (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount	Number of Feed Lines	
191.5	12	DAPA	48000	LP Platform		
181.5	12	DAPA	48000	LP Platform	<b>1</b>	
171.5	12	DAPA	48000	LP Platform		
161.5	12	DAPA	48000	LP Platform		
150	12	DAPA	48000	LP Platform	<u></u>	
140	12	DAPA	48000	LP Platform	<b>-</b> -	
50	1		GPS Antenna		<u></u>	

#### 3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
Tower Manufacturing Drawings	Engineered Endeavors Inc.	Crown Doc ID# 1440569	Crown OTG
Foundation Drawings	Engineered Endeavors Inc.	Crown Doc ID# 1631625	Crown OTG
Geotech Report	Dr.Clearence Welti, P.E., P.C.	Crown Doc ID# 1531885	Crown OTG
Antenna Configuration	Crown CAD Package	Date:05/08/2008	Crown OTG

#### 3.1) Analysis Method

RISA Tower (version 5.1.2.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the TIA/EIA-222-F or the local building code requirements. Selected output from the analysis is included in Appendix A.

#### 3.2) Assumptions

- 1. This structural analysis does not include a grouted base plate.
- 2. Tower and structures were built in accordance with the manufacturer's specifications.
- 3. The tower and structures have been maintained in accordance with manufacturer's specifications.
- 4. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and B&T Engineering, Inc. should be allowed to review any new information to determine its effect on the structural integrity of the tower.

#### 4) ANALYSIS RESULTS

Table 5 - Tower Component Stresses vs. Capacity - LC1

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P <sub>allow</sub> K	% Capacity	Pass Fail
LI	191.507 - 173.507	Pole	TP19.73x15x0.188	1	-1.781	580.231	28.4	Pass
L2	173.507 - 130.837	Pole	TP30.46x18.567x0.313	2	-10.059	1496.359	52.0	Pass
L3	130.837 - 86.13	Pole	TP41.47x28.707x0.438	3	-19.903	2854.113	53.5	Pass
L4	86.13 - 42.5	Pole	TP51.95x39.098x0.5	4	-34.410	4094.496	52.4	Pass
L5	42.5 - 0	Pole	TP62x49.128x0.5	5	-44.636	4546.076	54.9	Pass
							Summary	
						Pole (L5)	54.9	Pass
					t dide to the contract to the	RATING =	54.9	Pass
ndivid	ual Compone	nts:						
Notes: Component Elevation % Capacity								−ail
1		Base Plate	Base		81.6		Pass	
1		Anchor Rods	Base		48.6		Pass	
1 Base Foundation		Base		50.4		Pas	Pass	

\*Notes:

2) Capacities up to 105% are considered acceptable based on analysis procedures used.

#### 4.1) Recommendations

N/A

<sup>1)</sup> See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity listed.

# APPENDIX A RISA TOWER OUTPUT

#### 191.5 ft Lightning Rod 15.000 19.730 18.000 0.188 80 9.0 (4) RR90-17-02DP (E) (4) RR90-17-02DP (E) (4) RR90-17-02DP (E) (2) TMA (E) 173.5 ft (2) TMA (E) (2) TMA (E) (3) T-Arms (E) (2) LPA-185080/8CFx2 (R) (2) LPA-185080/8CFx2 (R) (2) LPA-185080/8CFx2 (R) (2) LPA-80080/4CF (R) 45.670 (2) LPA-80080/4CF (R) 0.313 18.567 30.460 8 3.7 (2) LPA-80080/4CF (R) (3) Sectored Frames (R) (3) MLA Antenna (6'x1' Panel) (E) 152 (3) MLA Antenna (6'x1' Panel) (E) 152 GRADE 4.333 130.8 ft A572-65 65 ksi 1. Tower is located in Fairfield County, Connecticut. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard. Tower is also designed for a 74 mph basic wind with 0.75 in ice. 49.040 4. Deflections are based upon a 60 mph wind. 28.707 41.470 0.438 18 8.0 5. TOWER RATING: 54.9% 86.1 ft 49.380 51.950 12.0 18 7.000 42.5 ft AXIAL 65 K MOMENT SHEAR 3039 kip-ft 24 K 49.500 0.500 TORQUE 2 kip-ft 74 mph WIND - 0.750 in ICE AXIAL 54 K MOMENT 3445 kip-ft SHEAR 28 K 0.0 ft 39.1 TORQUE 2 kip-ft REACTIONS - 85 mph WIND Thickness (in) Lap Splice (ft) Top Dia (in) Bot Dia (in) Weight (K) Length (ff) Grade

# **B&T** Engineering <sup>bi</sup> 78088 - Upper Stepney, CT (BU# 876355) Project: 191.5' EEI Monopole / App ID: 64047; Rev: 0 1717 S. Boulder, Suite 300 Client: Crown Castle USA, Inc. Code: TIA/EIA-222-F Code: TIA/EIA-222-F Code: Crown Castle USA, Inc. Date: 05/15/08 Code: Date: 05/15/08 Tulsa, OK 74119

Code: TIA/EIA-222-F

Phone: (918)-587-4630

FAX: (918)-295-0265

**DESIGNED APPURTENANCE LOADING** 

(3) MLA Antenna (6'x1' Panel) (E) 152

Low Profile Platform (E)

7770.00 (P)

7770.00 (P)

7770.00 (P)

(2) LGP21401 (P)

(2) LGP21401 (P)

(2) LGP21401 (P)

Flush Mount (E)

Flush Mount (E)

Flush Mount (E)

6' Standoff (R)

6' Standoff (R)

6' Standoff (E)

GRADE

**MATERIAL STRENGTH** 

**TOWER DESIGN NOTES** 

PC1N0F-0190B-002M (R)

PC1N0F-0190B-002M (R)

OG-860/1920/GPS-A (E)

ELEVATION

150

140

140

140

140

140

140

140

140

140

80

80

80

80

50

Fy

52 - 50

Fu

Scale: NTS

Dwg No. E-1

ELEVATION

196.5

191.5

191.5

191.5

191.5

191.5

191.5

191.5

160

160

160

160

160

160

160

Fy