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EM-CING-058-081204

New Cingular Wireless PCS, LLC  
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Rocky Hill, Connecticut 06067-3900  
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Steven L. Levine  
Real Estate Consultant

HAND DELIVERED

ORIGINAL

RECEIVED  
DEC 4 - 2008

CONNECTICUT  
SITING COUNCIL

December 4, 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 tele-communications facility located at 1439 Voluntown Road, Griswold (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 ("AT&T") 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 AT&T'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 or, installation of additional antennas of a size required to accommodate UMTS.
- 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.
- Radome enlargement for flagpole and “stick” structures to accommodate larger antennas and additional associated equipment.

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 or more 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, New 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

**NEW CINGULAR WIRELESS  
Equipment Modification**

1439 Voluntown Road, Griswold  
Site Number 5717  
Former AT&T cell site  
Exempt Modification Approved 6/02

**Tower Owner/Manager:** Crown Castle

**Equipment Configuration:** Monopole

**Current and/or Approved:** Three Allgon 7250 panel antennas @ 167 ft AGL  
Six runs 1 ¼ inch coax cable  
Two existing concrete pads with outdoor equipment cabinets

**Planned Modifications:** Remove all existing antennas  
Install six Powerwave 7770 antennas (or equivalent) @ 167 ft  
Install six TMA's and six diplexers @ 167 ft  
Install six additional lines 1 ¼ inch coax  
Remove the smaller existing pad and cabinet  
Install a 5 x 6 ft concrete pad extension  
Install one new outdoor cabinet for UMTS

**Power Density:**

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 12.6 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 16.1 % of the standard.

**Existing**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							11.28
AT&T GSM *	167	1900 Band	4	250	0.0129	1.0000	1.29
<b>Total</b>							<b>12.6%</b>

\* Per CSC records

## Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							11.28
AT&T UMTS	167	880 - 894	1	500	0.0064	0.5867	1.10
AT&T GSM	167	1900 Band	2	427	0.0110	1.0000	1.10
AT&T GSM	167	880 - 894	4	296	0.0153	0.5867	2.60
<b>Total</b>							<b>16.1%</b>

\* Per CSC records

### Structural information:

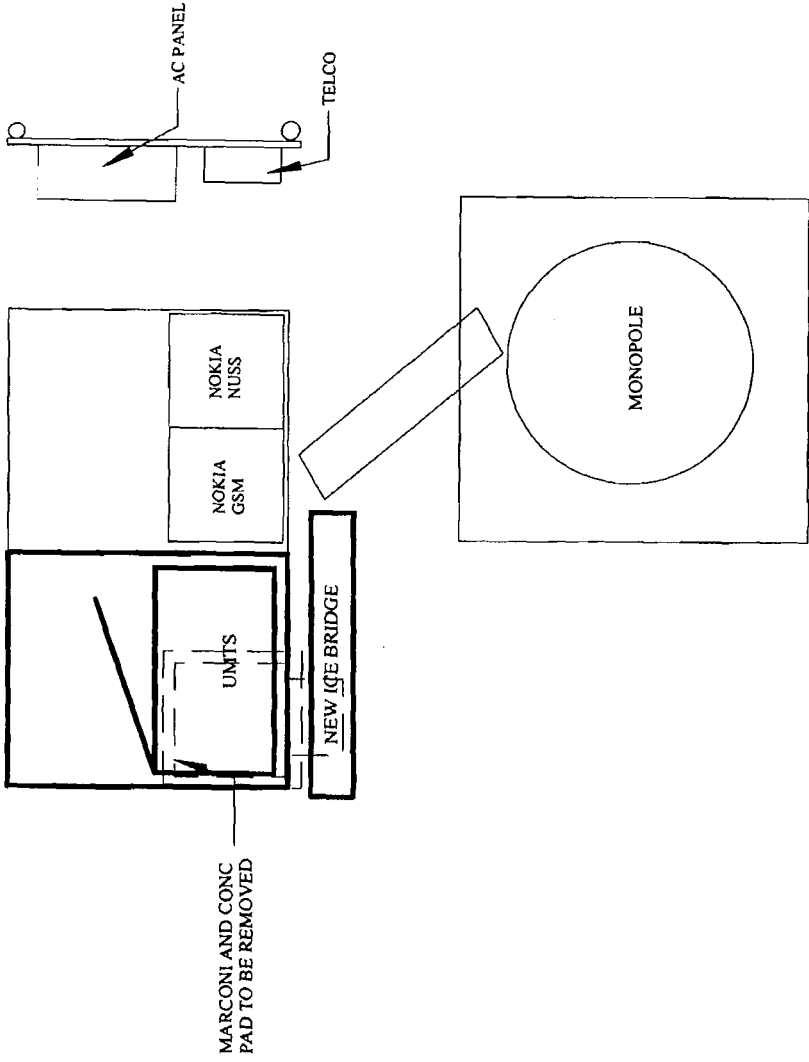
The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed equipment modifications. (Vertical Structures, 11/24/08)



SITENUMBER:  
5717  
SITE NAME  
Griswold East

TITLE:	EQUIPMENT PLAN
MISC. INFO:	
DWG. BY:	SGB
DATE:	07/07/08
SCALE:	N.T.S.
SHEET:	1 OF 1

**APPROVED**  
By Paul Kunis at 4:28 pm, Jul 10, 2008





**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

December 4, 2008

Honorable Philip E. Anthony, Jr.  
1<sup>st</sup> Selectman, Town of Griswold  
Town Hall 28 Main Street  
Griswold, CT 06351

Re: Telecommunications Facility – 1439 Voluntown Road, Griswold

Dear Mr. Anthony:

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 (“AT&T”) 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 AT&T’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 AT&T’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



November 24, 2008

Steve Tuttle  
Crown Castle USA  
349 West Commercial Street, Suite 2630  
East Rochester, NY 14445  
(585) 899-3445

Vertical Structures, Inc.  
309 Spangler Drive, Suite E  
Richmond, KY 40475  
(859) 624-8360  
caselyne@verticalstructures.com

**Subject:** Structural Analysis Report

*Carrier Designation* AT&T Mobility Change-Out  
Carrier Site Number: 5717  
Carrier Site Name: Griswold-Voluntown Road

*Crown Castle Designation* Crown Castle BU Number: 876367  
Crown Castle Site Name: Wappingers Falls/Bob's Antiq  
Crown Castle JDE Job Number: 111861

*Engineering Firm Designation* Vertical Structures Project Number: 2008-004-151

*Site Data* 1439 Voluntown Road, Griswold, CT, New London County  
Latitude 41°-34'-33.99", Longitude -71°-53'-16.96"  
180' EEI Monopole Tower

Dear Mr. Tuttle,

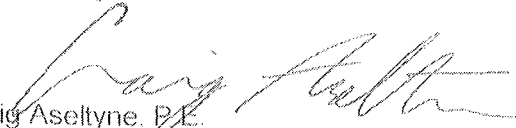
Vertical Structures is pleased to submit this structural analysis report to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural Statement of Work and the terms of Crown Castle Purchase Order Number 311368, and Application Number 70506, Revision 2. The purpose of the analysis is to determine the suitability of the tower for the following load case:

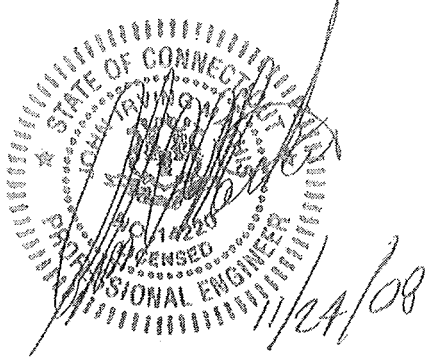
Load Case 1 (LC1): Proposed Equipment (Table 1) + Existing/Reserved Equipment (Table 2)

Based on our analysis we have determined the tower superstructure and foundation are sufficient for LC1. This analysis has been performed in accordance with the TIA/EIA-222-F standard and local code requirements based upon an 85 MPH basic "fastest mile" wind speed, equivalent to a 100 MPH basic "3-second gust" wind speed per 2006 IBC Equation 16-34.

Vertical Structures appreciates the opportunity of providing our continuing professional services to you and Crown Castle USA. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

  
Craig Aselyne, P.E.  
Project Engineer



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## 1.) INTRODUCTION

The 180' tall monopole tower was designed and manufactured by EEI for Sprint PCS in 1999, with the option to be extended 10' to 190'. The existing structure consists of four (4) 18-sided polygonal tubes joined via slip joint connections and is founded on a 27' square by 6' thick mat bearing 6'-6" below grade.

## 2.) ANALYSIS CRITERIA

The Wappingers Falls/Bob's Antiq monopole tower was analyzed in accordance with the current EIA-222-F publication, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." The proposed, existing and reserved antennas, cables and mounts considered in this analysis are listed in Tables 1 and 2. Applied forces in this study were derived from an 85 MPH basic "fastest mile" wind speed with no ice and a reduced 74 MPH basic "fastest mile" wind speed with a 1/2" of radial ice accumulation. The tower was originally designed for a 90 MPH basic "fastest mile" wind speed with no ice and a reduced 78 MPH basic "fastest mile" wind speed with a 1/2" of radial ice accumulation. The original design loads are listed in Table 3. All cables are assumed to be routed in accordance with the drawing in Appendix B.

**Table 1 – Proposed Antenna and Cable Information**

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
167	6	Powerwave Technologies	7770.00		13' L.P. Platform	6	1 5/8
	6		LGP 17201 TMA				
	6		LGP 21901 Diplexer				

**Table 2 – Existing and Reserved Antenna and Cable Information**

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
177	6	Decibel	DB980H90E-M	EEI	10'-8" L.P. Platform	6	1 5/8
	9*	EMS Wireless	FV65-14-00NA2			9*	1 5/8
167	3**	Allgon	7250.03		(3**) Pipe Mounts	6	1 5/8
155	6	Antel	LPA-80080/4CF		13' L.P. Platform	12	1 5/8
	6	Antel	LPA-185080/8CFx2				
	6	Andrew	ETM190G-12UB TMA				
60	1		GPS		(1) 2' Sidearm	1	1/2

\*Indicates MLA loading. MLA loading controls and is used in this analysis.

\*\*Indicates equipment to be removed.

**Table 3 – Design Antenna and Cable Information**

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
187.5	12	Decibel	DB980H90-EM	EEI	L.P. Platform		
177.5	12	Decibel	DB980H90-EM	EEI	L.P. Platform		
167.5	12	Decibel	DB980H90-EM	EEI	L.P. Platform		
157.5	12	Decibel	DB980H90-EM	EEI	L.P. Platform		
147.5	12	Decibel	DB980H90-EM	EEI	L.P. Platform		

### 3.) ANALYSIS PROCEDURE

**Table 4 – Documents Provided**

Document	Remarks	Reference	Source
Online Application	AT&T Mobility Change-Out Revision #2	70506	CCI iSite
Tower Drawings	EEI Drawing No. GS51862	1999079	CCI iSite
Foundation Drawing	EEI Project No. 6024	1613910	CCI iSite
Geotechnical Report	Criscuolo Shepard Associates Project No. 99089-1	1613525	CCI iSite

#### 3.1) Analysis Methods

RISA Tower (Version 5.3), 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 ANSI/TIA/EIA-222-F or the local building code requirements. Selected output from the analysis is included in Appendix A.

#### 3.2) Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and any referenced drawings.
4. When applicable, transmission cables are considered to be structural components for calculating wind loads, as allowed by TIA/EIA-222-F.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and Vertical Structures 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)**

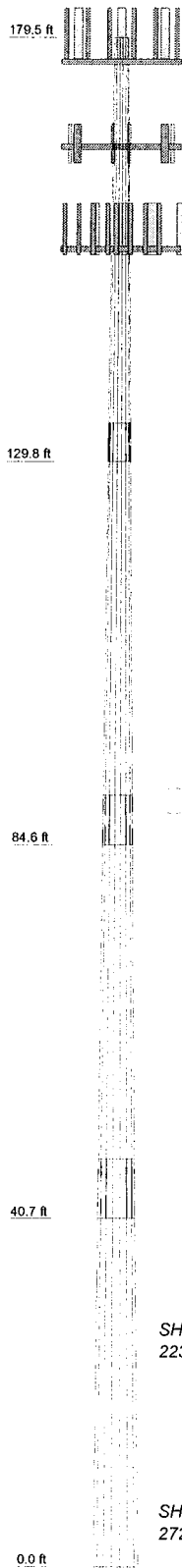
<b>Section Capacity Table</b>									
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	SF*P <sub>allow</sub> lb	% Capacity	Pass	Fail
L1	179.5 - 129.76	Pole	TP31.8522x19.5x0.3125	1	-9625.75	1568940.93	51.0	Pass	
L2	129.76 - 84.6094	Pole	TP42.2609x30.1142x0.375	2	-17791.60	2504213.69	60.8	Pass	
L3	84.6094 - 40.737	Pole	TP52.2288x40.0954x0.4375	3	-29376.80	3614855.91	58.7	Pass	
L4	40.737 - 0	Pole	TP61.25x49.6364x0.5	4	-46867.40	5012079.79	54.6	Pass	
							Summary		
							Pole (L2)	60.8	Pass
							<b>RATING =</b>	<b>60.8</b>	<b>Pass</b>

Notes	Component	% Capacity	Pass/Fail
<b>Additional Component Analysis Summary:</b>			
1	Anchor Bolts (Tension)	57.8	Pass
1	Base Plate (Bending)	71.6	Pass
	Foundation (Compared to Design Loads)	72.5	Pass
<b>Structure Rating =</b>		<b>72.5</b>	<b>Pass</b>

1) Indicates calculations supporting % capacity are included in Appendix C.

## APPENDIX A

Section	1	2	3	4
Length (ft)	49.74	49.63	49.66	47.77
Number of Sides	18	18	18	18
Thickness (in)	0.3125	0.3750	0.4375	0.5000
Lap Splice (ft)		4.48	5.78	7.03
Top Dia (in)	19.5000	30.1142	40.0954	49.6364
Bot Dia (in)	31.8522	42.2609	52.2288	61.2500
Grade			A572-65	
Weight (lb)	4258.0	7199.1	10728.6	14172.3



### DESIGNED APPURTENANCE LOADING

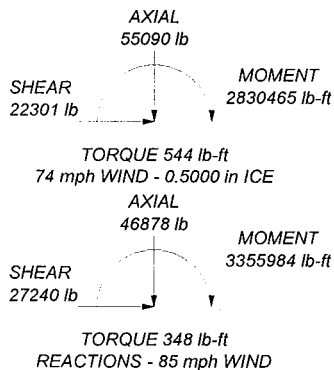
TYPE	ELEVATION	TYPE	ELEVATION
EEI 10'-8" Low-Profile Platform	177	(2) LGP 21901 Diplexer (VSI) (ATT Mobility)	167
EEI Monopole Platform Ladder (VSI)	177	(2) LGP 21901 Diplexer (VSI) (ATT Mobility)	167
(3) FV65-14-00NA2 w/Mount Pipe	177	(2) LGP 21901 Diplexer (VSI) (ATT Mobility)	167
(3) FV65-14-00NA2 w/Mount Pipe	177	(2) LGP 21901 Diplexer (VSI) (ATT Mobility)	167
(3) FV65-14-00NA2 w/Mount Pipe	177	(2) LGP 21901 Diplexer (VSI) (ATT Mobility)	167
7'x2" Antenna Mount Pipe	177	Prod 13' Low Profile Platform (VSI)	155
7'x2" Antenna Mount Pipe	177	(2) LPA-80080/4CF w/ Mount Pipe (VSI)	155
7'x2" Antenna Mount Pipe	177	(2) LPA-80080/4CF w/ Mount Pipe (VSI)	155
Prod 13' Low Profile Platform (VSI) (ATT Mobility)	167	(2) LPA-80080/4CF w/ Mount Pipe (VSI)	155
(2) 7770.00 w/ mount pipe (ATT Mobility)	167	(2) LPA-80080/4CF w/ Mount Pipe (VSI)	155
(2) 7770.00 w/ mount pipe (ATT Mobility)	167	(2) LPA-185080/8CFx2 w/Mount Pipe	155
(2) 7770.00 w/ mount pipe (ATT Mobility)	167	(2) LPA-185080/8CFx2 w/Mount Pipe	155
(2) 7770.00 w/ mount pipe (ATT Mobility)	167	(2) LPA-185080/8CFx2 w/Mount Pipe	155
(2) LGP 17201 TMA (VSI) (ATT Mobility)	167	(2) ETM190G-12UB TMA (VSI)	155
(2) LGP 17201 TMA (VSI) (ATT Mobility)	167	(2) ETM190G-12UB TMA (VSI)	155
(2) LGP 17201 TMA (VSI) (ATT Mobility)	167	(2) ETM190G-12UB TMA (VSI)	155
(2) LGP 17201 TMA (VSI) (ATT Mobility)	167	2' Sidearm (4" Tube) (VSI)	60
(2) LGP 17201 TMA (VSI) (ATT Mobility)	167	Generic GPS (VSI)	60

### MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

### TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 60.8%



<b>Vertical Structures, Inc.</b> 309 Spangler Drive, Suite E Richmond, KY 40475 Phone: (859) 624-8360 FAX: (859) 624-8369	<b>Job:</b> Wappingers Falls/Bob's Antiq, CT BU#87636
	<b>Project:</b> Vertical Structures Job No. 2008-004-151
	<b>Client:</b> Crown Castle <b>Drawn by:</b> Asef <b>App'd:</b>
	<b>Code:</b> TIA/EIA-222-F <b>Date:</b> 11/24/08 <b>Scale:</b> NTS
<b>Path:</b>	<b>Dwg No.:</b> E-1