



# Certificate of Design

114 Rosemont Lane Imler, PA 16655

16838 Certificate of Design.ME.doc

Revised 8/17/2009

This Certificate is to confirm that all components of the Steel Building System described below, to be supplied by Corle Building Systems, produced at its Facility at Imler, PA, have been or will be designed in accordance with the following standards, loads, and design criteria as specified in the order documents.

## Project/Building Description

**CBS Factory Order Number:** FO-16838  
**Purchaser/Customer Information:** Seacoast Crane & Building Co., Inc.  
 P.O. Box 540  
 Kittery, ME 03904  
**Project Name and Location:** Phoenix Property Management  
 Hutchins Drive  
 Portland, ME 04101

**Building Geometry:**  
*Width:* 65'-0"  
*Length:* 105'-0"  
*Eave Height:* 17'-3"  
*Roof Slope:* 3.00/12

## Design Standards

AISC: *Specification for Structural Steel for Buildings, Allowable Stress Design/9<sup>th</sup> Ed.*  
 AISI: *North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 Ed.*  
 AWS D1.1/D1.1M: *Structural Welding Code – Steel, 2006 Ed.*  
 MBMA: *Metal Building Systems Manual, 2006 Edition*

## Design Load Criteria

**Building Code:** Massachusetts Building Code, Eighth Edition  
**Dead Load:** 2.63 psf plus primary framing actual weight  
**Collateral Load:** 5 psf  
**Roof Live Load:** 20 psf  
**Frame Live Load:** 20 psf

<b>Snow Load Criteria:</b>	<i>Ground Snow Load, <math>p_g</math>:</i> 60 psf	<i>Thermal Factor, <math>C_t</math>:</i> 1.00
	<i>Snow Exposure Factor, <math>C_e</math>:</i> 1.00	<i>Flat Roof Snow Load, <math>p_f</math>:</i> 42 psf
	<i>Snow Importance Factor, <math>I_s</math>:</i> 1.00	

<b>Wind Load Criteria:</b>	<i>Basic Wind Speed:</i> 100 mph	<i>Occupancy Category:</i> II
	<i>Terrain Exposure:</i> B	<i>Internal Pressure Coefficients:</i> +0.18/-0.18
	<i>Wind Importance Factor, <math>I_w</math>:</i> 1.00	<i>Components and Cladding not by CBS:</i> +17.97 psf -24.02 psf

<b>Seismic Criteria:</b>	<i>Design Category:</i> D	<i><math>S_s</math>:</i> 0.410
	<i>Site Class:</i> E	<i><math>S_j</math>:</i> 0.100
	<i>Seismic Importance Factor, <math>I_e</math>:</i> 1.00	<i><math>S_{ds}</math>:</i> 0.402
	<i>Occupancy Category:</i> II	<i><math>S_{ai}</math>:</i> 0.160
	<i>Analysis Procedure:</i> Equivalent Lateral Force Procedure	
	<i>Basic Seismic Force Resisting Systems:</i> Frame: Ordinary Steel Moment Frames	
		FSW,BSW,LEW,REW: Ordinary Steel Concentrically Braced Frames
	<i>Response Modification Factors, <math>R</math>:</i> Frame = 3.25	FSW = 3.25    BSW = 3.25
	<i>Seismic Response Coefficients, <math>C_s</math>:</i> Frame = 0.134	FSW = 0.134    BSW = 0.134
	<i>Seismic Base Shear, <math>V</math>:</i> Longitudinal = 22.98 kips	Transverse = 24.38 kips

**Mezzanine Loads:** *Dead Load:* N/A    **Additional Loads:** N/A  
*Collateral Load:* N/A  
*Live Load:* N/A

## Certification by Engineer

I, T. James Eisenman, Jr., P.E., a licensed engineer in the State of Maine, certify that I have reviewed the design criteria for the steel building system described above and to the best of my knowledge all components have been designed to meet the applicable criteria as specified in the Order Documents.

\_\_\_\_\_  
 Signature

12/7/11  
 \_\_\_\_\_  
 Date

