22 NOV 2010

Hansen Architectural Systems
5500 SE Alexander ST
Hillsboro, OR 97123

SUBJ: CLEARVUE RAILING
ALUMINUM RAILING
PICKET, CABLE AND GLASS INFILL SYSTEMS
SERIES 100, 200, 300, 350 AND 400 SERIES SYSTEMS

The ClearVue Railing System (CVR) utilizes aluminum extrusions with various infills to construct building guards and rails for decks, balconies, stairs, fences and similar locations. The system is intended for interior and exterior weather exposed applications and is suitable for use in all natural environments. The CVR may be used for residential, commercial and industrial applications. The CVR is an engineered system designed for the following criteria:

The design loading conditions are:

On Top Rail:

Concentrated load = 200 lbs any direction, any location
Uniform load = 50 plf, any perpendicular to rail

On In-fill Panels:

Concentrated load = 50# on one sf.
Distributed load = 25 psf on area of in-fill, including spaces
Wind load = 28.5 psf typical installation (higher wind loads may be allowed based on post spacing and anchorage method)

Refer to IBC Section 1607.7.1 for loading.

All infills in the Hansen standard plans– 1/4" tempered glass, extruded aluminum pickets, custom cast aluminum panels and stainless steel cables are designed to meet all applicable code requirements and above stated loads.

The CVR system will meet or exceed all requirements of the 1997 Uniform Building Code, 2000, 2003, 2006 and 2009 International Building Codes, and state building codes based on these versions of the IBC including but not limited to California, Florida, Oregon, Washington and New York.

All aluminum components are design in accordace with the 2005 Aluminum Design Manual. No stress increases are applicable to aluminum components for guard loads.

Wood components and anchorage to wood are designed in accordance with the National Design Specification for Wood Construction. Suggested attachments to wood framed

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decks are shown in my design report and details dated 09/03/2010. Wood attachments are designed based on a load duration factor C_D of 1.33 for guard live loads.

The detailed engineering for the guardrail components and the standard connections between the components are in my report dated 24 August 2010.

The guard rail components are to be assembled and installed in accordance with the Hansen Architectural standard details.

Typical Installations:

Surface mounted with base plates:
Residential Applications:
Rail Height 36" above finish floor.
Standard Post spacing 6' on center maximum.
Bottom rail intermediate post required over 5'.
All top rails

Commercial and Industrial Applications:
Rail Height 42" above finish floor.
Standard Post spacing 5' on center maximum.
All top rails

Core pocket /embedded posts or stainless steel stanchion mounted:
Residential Applications:
Rail Height 36" above finish floor.
Standard Post spacing 6' on center maximum, series 100
8' on center Series 200, 300, 350 and 400.
Bottom rail intermediate post required over 5'.

Commercial and Industrial Applications:
Rail Height 42" above finish floor.
Standard Post spacing 6' on center maximum, series 100
6' on center Series 200, 300, 350 and 400.

Referenced Reports:
Guard Rail Post To Base Plate Screw Connection Strength 11/22/2010
ClearVue Railing Aluminum Railing Picket, Cable And Glass Infill Systems Series 100, 200, 300, 350 And 400 Series Systems 11/22/2010
Guard Posts Mounted To Wood Decks Residential Installations 42" Guard Height 11/22/2010

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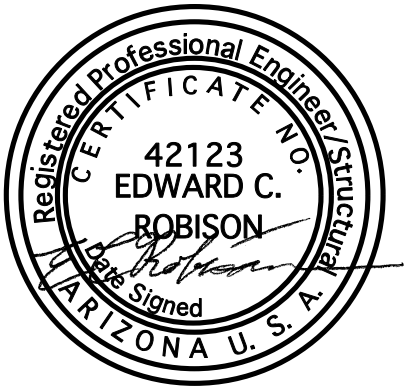
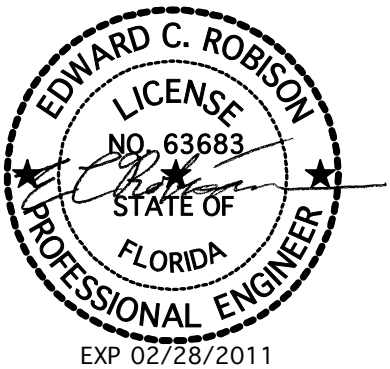


EXP 03/21/2011

EXP 12/31/2011



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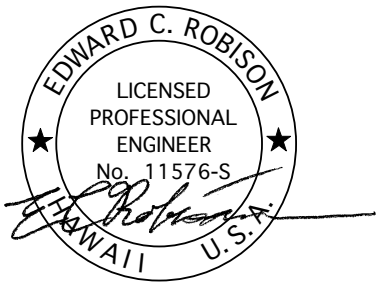

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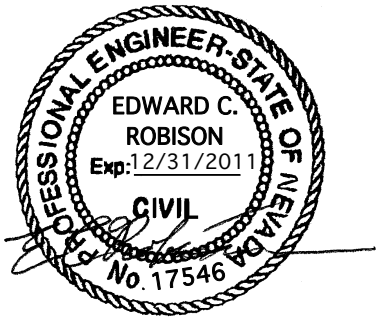

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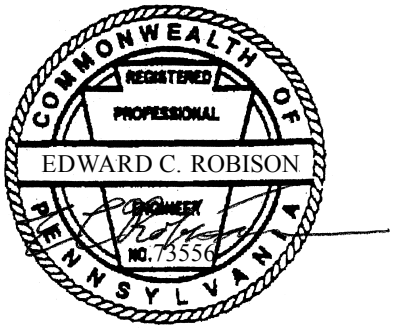

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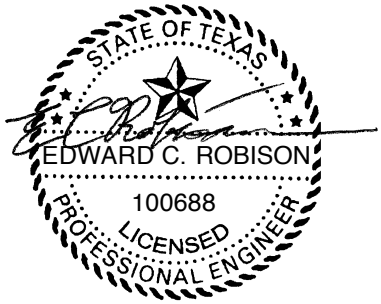

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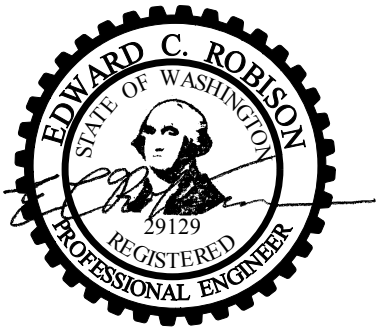

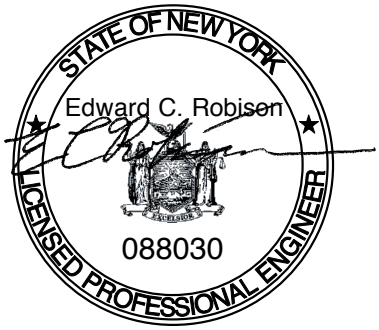

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