



Certificate of Design

Date: B 12/2/15

From: Bruce W. MacLeod, P.E.

These plans and / or specifications covering construction work on:

Wilson residence
88 Berkshire ~~Street~~ Road

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the **2009 International Building Code** and local amendments.

Signature: Bruce MacLeod

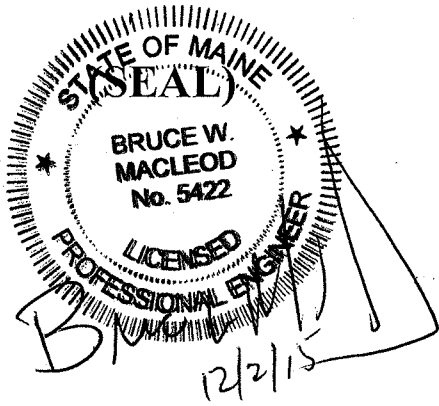
Title: Professional Engineer

Firm: MacLeod Structural Engineers

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Phone: 207-839-0980

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Certificate of Design Application

From Designer:

Bruce W. MacLeod, P.E.

Date:

12/2/15

Job Name:

Wilson Residence

Address of Construction:

88 Berkshire ~~Road~~ Road

2009 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year IRC 2009 where applicable Use Group Classification (s) R-3

Type of Construction I (wood frame)

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC _____

Is the Structure mixed use? NO If yes, separated or non separated or non separated (section 302.3) _____

Supervisory alarm System? NO Geotechnical/Soils report required? (See Section 1802.2) _____

Structural Design Calculations

_____ Submitted for all structural members (106.1 - 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
<u>1st Flr</u>	<u>40 psf LL</u>
<u>2nd Flr.</u>	<u>30 psf @ sleeping rooms</u>
_____	_____
_____	_____

Wind loads (1603.1.4, 1609)

_____ Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

_____ Building category and wind importance Factor, w_b (table 1604.5, 1609.5)

_____ Wind exposure category (1609.4)

_____ Internal pressure coefficient (ASCE 7)

_____ Component and cladding pressures (1609.1.1, 1609.6.2.2)

_____ Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

_____ Design option utilized (1614.1)

_____ Seismic use group ("Category")

_____ Spectral response coefficients, S_D s & S_{D1} (1615.1)

_____ Site class (1615.1.5)

_____ Live load reduction

_____ Roof live loads (1603.1.2, 1607.11)

Varies dep. on pitch Roof snow loads (1603.7.3, 1608.3)

60 psf Ground snow load, P_g (1608.2)

_____ If $P_g > 10$ psf, flat-roof snow load P_f

_____ If $P_g > 10$ psf, snow exposure factor, C_e

_____ If $P_g > 10$ psf, snow load importance factor, I_s

_____ Roof thermal factor, C_t (1608.4)

_____ Sloped roof snowload, P_s (1608.4)

_____ Seismic design category (1616.3)

_____ Basic seismic force resisting system (1617.6.2)

_____ Response modification coefficient, R , and deflection amplification factor C_d (1617.6.2)

_____ Analysis procedure (1616.6, 1617.5)

_____ Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

_____ Flood Hazard area (1612.3)

_____ Elevation of structure

Other loads

_____ Concentrated loads (1607.4)

_____ Partition loads (1607.5)

_____ Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)