Letter of Certification

Contact:
Name: MAR Building Solutions
Address: 1305 Jefferson Street

City, State: Lees Summit, Missouri 64081
Country: United States

Project: LSMO Water Utilites
Builder PO #:
Jobsite: 1200 Hamblen Road

City, State: Lees Summit, Missouri 64002
County, Country: Jackson, United States

This is to certify that the above referenced project has been designed in accordance with the applicable portions of the Building Code specified below. All loading and building design criteria shown below have been specified by contract and applied in accordance with the building code.

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Alternate 3 (Existing)	21/6/0	62/0/0	1333	2110	1334	18/7/0	17/8/8	0.4884:12		
Alternate 3 ADDITION	21/6/0	40/6/0	871	1860	871	18/7/0	17/8/8	0.4884:12		
Total For All Shapes			2204	3970	2206					

Loads and Codes - Shape: Alternate 3
Shape Alternate 3 is set as an existing shape.

Loads and Codes - Shape: Alternate 3 ADDITION
City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: 2018 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 7.00 inches per hour
f'c: 3000.00 psi Concrete

Dead and Collateral Loads
Collateral Gravity: 10.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: 2.46 psf
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Not Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used
Primaries Wind Exposure: C - Kz: 0.879
Parts Wind Exposure Factor: 0.879
Wind Enclosure: Partially Enclosed
Solidity Ratio: 20.0%
Frame Width Factor: Kb: 1.5850
Shielding Factor: Ks: 0.6690
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 0.9636

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 1024.0 ft
Primary Zone Strip Width: 2a: 6/0/0
Parts / Portions Zone Strip Width:
Walls, a: 3/0/0
Roof(s), 0.6h: 10/7/8
Velocity Pressure: qz: 24.38, (C&C) 24.38 psf

Snow Load
Ground Snow Load: pg: 20.00 psf

Flat Roof Snow: pf: 16.80 psf
Design Snow (Sloped): ps: 16.80 psf
Rain Surcharge: 0.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70
Obstructed or Not Slippery

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 7.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.1120
Seismic Design Category:: A
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 18/1/12

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2846
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0100 x W

Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.1758
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0100 x W

Building design loads and governing building code is provided by the Builder and is not validated by Butler Manufacturing, a division of BlueScope Buildings North America, Inc. The Builder is responsible for contacting the local Building Official or project Design Professional to obtain all code and loading information for this specific building site.

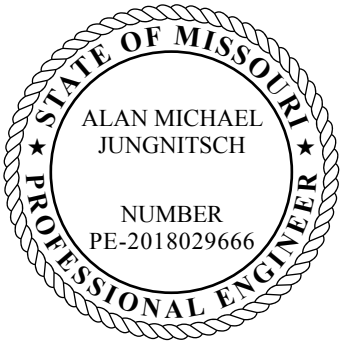
The design of this building is in accordance with Butler Manufacturing, a division of BlueScope Buildings North America, Inc. design practices which have been established based upon pertinent procedures and recommendations of the Standards listed in the Building Code or later editions.

This certification DOES NOT apply to the design of the foundation or other on-site structures or components not supplied by Butler Manufacturing, a division of BlueScope Buildings North America, Inc., nor does it apply to unauthorized modifications to building components. Furthermore, it is understood that certification is based upon the premise that all components will be erected or constructed in strict compliance with pertinent documents for this project. Butler Manufacturing, a division of BlueScope Buildings North America, Inc. DOES NOT provide general review of erection during or after building construction unless specifically agreed to in the contract documents.

The undersigned engineer in responsible charge certifies that this building has been designed in accordance with the contract documents as indicated in this letter.

This document has been electronically signed and sealed by Alan Jungnitsch, PE using my Digital Signature with PE seal affixed. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copy
2024.05.01 15:54:57-05'00'

_____ Date: _____ Engineer's Seal:
Engineer in responsible charge



05/01/2024