



December 20, 2023

Dynamic Towers, Inc.  
Attn: Mr. Kevin Aycock  
7209 Reserve Creek Dr.  
Port St. Lucie, FL 34986

GEN3 Engineering, Inc.  
27139 Sea Breeze Way  
Wesley Chapel, FL 33544  
COA #: 35409

**RE: Paradise Car Wash Cell Site Tower Design  
10870 SW Tradition Pkwy, Port St. Lucie, FL 34952 (St. Lucie County)**

Mr. Aycock,

For the Dynamic Towers, Inc. Paradise Car Wash Cell Site, a 150' monopole constructed of galvanized steel with the following elevations:

T/ Tower Steel	150'-0" AGL
(1) Stealth Radome	140'-0" Centerline AGL
(1) Stealth Radome	120'-0" Centerline AGL

The monopole shall be designed to support a total of four cellular carriers. The tower shall be designed per the following criteria:

DESIGN CRITERIA:					
<b>Applicable Codes:</b>	Florida Building Code – 2023 (8 <sup>th</sup> Edition)	ASCE-7-22	TIA-222-H		
<b>Wind Speed:</b>	Vult = 155 mph (3 Second Gust)				
<b>Exposure Category:</b>	C	<b>Risk Category:</b>	II	<b>Radial Ice Thickness:</b>	0.0"
<b>Tornado:</b>	NA*	<b>Topographic Category:</b>	I	<b>Seismic Response:</b>	S <sub>s</sub> = 0.061 S <sub>1</sub> = 0.027

*\*Tornado Wind speeds are not applicable to Risk Category II structures*

The tower shall be designed by a licensed Florida State Professional Engineer meeting the aforementioned criteria.

The tower shall be designed/ constructed such that in the unlikely event of a tower failure the tower shall collapse upon itself with a resultant tower fall zone radius which will be entirely on the leased tower parcel.



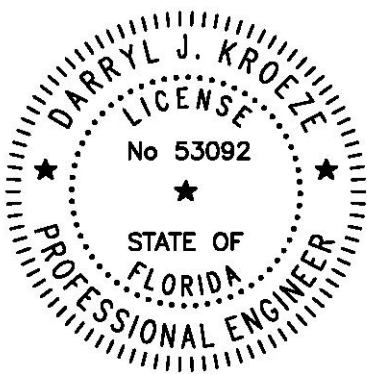
We appreciate the opportunity to continue Professional Services to you. Please do not hesitate to contact me with any questions or comments.

Sincerely,  
**GEN3 Engineering, Inc.**



Darryl J, Kroeze, P.E.  
Florida Registration Number: 53092

Attachments: ASCE 07-22 Hazard Print Out



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY DARRYL J. KROEZE, P.E., FL LICENSE NUMBER 53092 USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

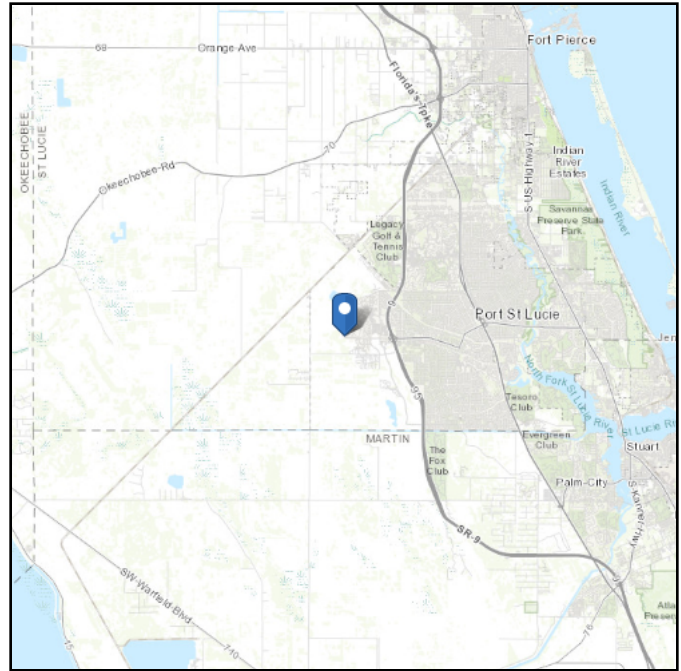
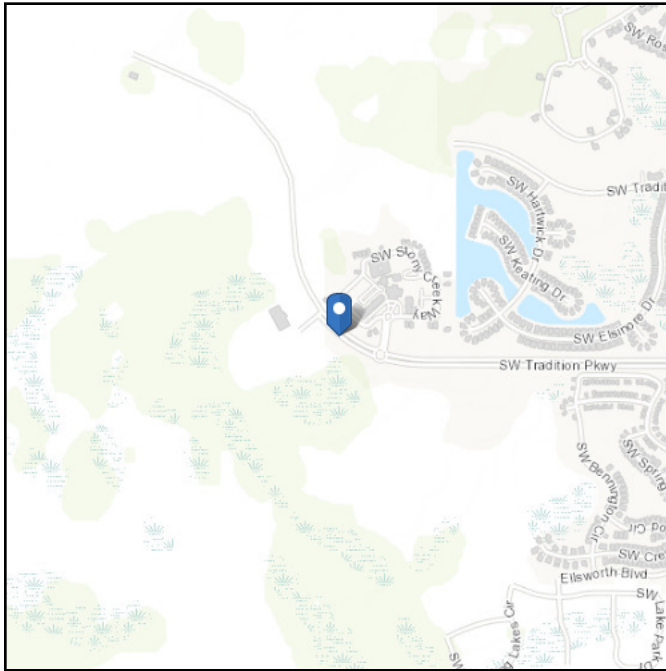
Wednesday, December 20, 2023

# ASCE 7 Hazards Report

**Address:**  
10870 SW Tradition Pkwy  
Port Saint Lucie, Florida  
34987

**Standard:** ASCE/SEI 7-22  
**Risk Category:** II  
**Soil Class:** Default

**Latitude:** 27.265401  
**Longitude:** -80.456897  
**Elevation:** 34.40547600255 ft (NAVD 88)



## Wind

### Results:

Wind Speed	155 Vmph
10-year MRI	79 Vmph
25-year MRI	106 Vmph
50-year MRI	118 Vmph
100-year MRI	129 Vmph
300-year MRI	144 Vmph
700-year MRI	155 Vmph
1,700-year MRI	166 Vmph
3,000-year MRI	175 Vmph
10,000-year MRI	185 Vmph
100,000-year MRI	207 Vmph
1,000,000-year MRI	224 Vmph

Data Source: ASCE/SEI 7-22, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Wed Dec 20 2023



Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-22 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years). Values for 10-year MRI, 25-year MRI, 50-year MRI and 100-year MRI are Service Level wind speeds, all other wind speeds are Ultimate wind speeds.

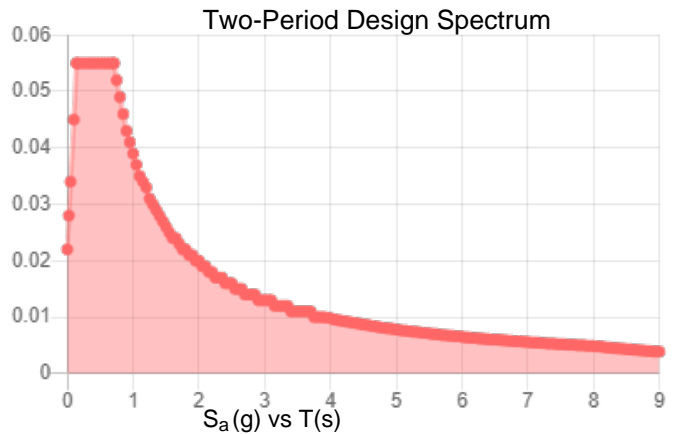
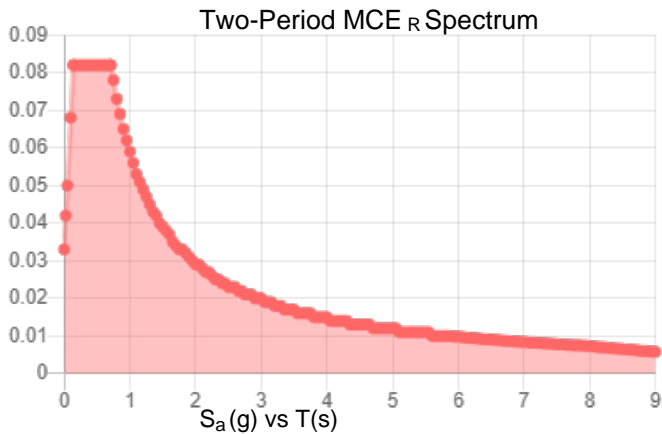
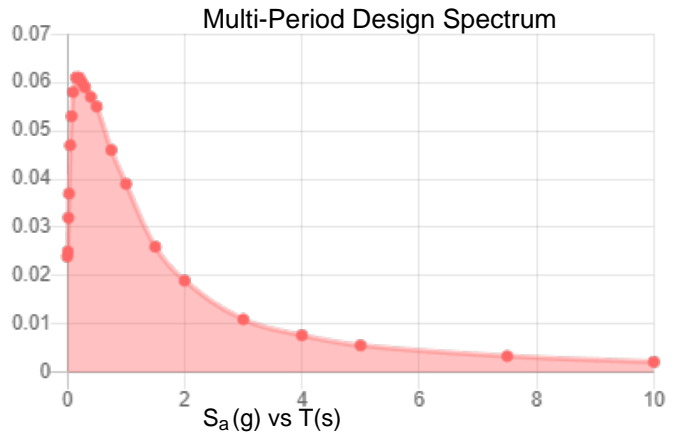
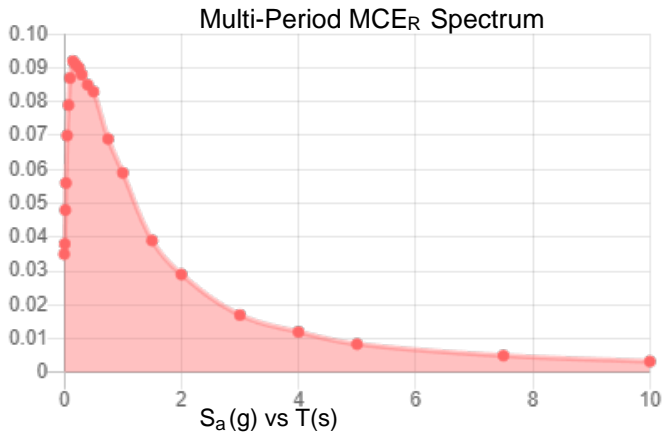
Site is in a hurricane-prone region as defined in ASCE/SEI 7-22 Section 26.2. Glazed openings shall be protected against wind-borne debris as specified in Section 26.12.3.

**Site Soil Class:** Default

**Results:**

PGA <sub>M</sub> :	0.031	T <sub>L</sub> :	8
S <sub>MS</sub> :	0.082	S <sub>s</sub> :	0.061
S <sub>M1</sub> :	0.059	S <sub>1</sub> :	0.027
S <sub>DS</sub> :	0.055	V <sub>S30</sub> :	260
S <sub>D1</sub> :	0.039		

**Seismic Design Category: A**



MCE<sub>R</sub> Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.



**Data Accessed:** Wed Dec 20 2023

**Date Source:**

**USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.**

## Tornado

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Results:

Not Applicable to Risk Category 2

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