MD - 2018 IBC - STRUCTURAL LOAD LIMITATIONS

FLOOR LIVE LOAD:
A. DEAD LOAD = 12 PSF (AVERAGE).
B. UNIFORM LIVE LOAD = 100 PSF.
C. CONCENTRATED LOAD (ALTERNATE)= 2,000 LB, OVER 30"X30" AREA AT ANY LOCATION.
ROOF LIVE LOAD:
A. DEAD LOAD = 15 PSF (AVERAGE).
B. LIVE LOAD = 30 PSF.
ROOF SNOW LOAD:
A. GROUND SNOW LOAD: Pg = 30 PSF
B. FLAT-ROOF SNOW LOAD Pf = 30 PSF
C. SNOW EXPOSURE FACTOR Ce = 1.0
D. SNOW IMPORTANCE FACTOR Is = 1.0
E. SNOW THERMAL FACTOR Ct = 1.1
F. ROOF SLOPE FACTOR Cs = 1.0
G. SLOPED ROOF SNOW LOAD Ps = 20 PSF Ps = Pf x Cs
H. Pm = 20 PSF LOW-SLOPE SNOW LOAD Pm = Pg x Is
I. DESIGN IS BASED ON FULL OR PARTIALLY EXPOSED ROOF PER ASCE 7-16.
WIND LOAD: ASCE 7-16
A. BASIC WIND SPEED (3 SEC GUST) 130 MPH
B. ASD WIND SPEED (3 SEC GUST) 101 MPH
C. RISK CATEGORY II
D. WIND EXPOSURE CATEGORY C
E. INTERNAL PRESSURE COEFFICIENT GCpi= 0.18
F. COMPONENT & CLADDING BASIC DESIGN PRESSURES, ASD DESIGN PRESSURE FOR ROOF 0 TO7 DEGREES.
WALL ZONE 5: P = +/- 49.2 psf (Pasd = +/- 29.5 PSF)
WALL ZONE 4: P = +/- 39.9 psf (Pasd = +/- 24.0 PSF)
ROOF ZONE 3: P = - 105.4 psf (Pasd = - 63.2 PSF)
ROOF ZONE 2: P = - 77.3 psf (Pasd = - 46.4 PSF)
ROOF ZONE 1: P = - 58.6 psf (Pasd = - 35.1 PSF)
ROOF ZONE 1': P = - 33.6 psf (Pasd = - 20.2 PSF)
G. THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.
H. BUILDING DESIGN IS BASED ON "ENCLOSED" CLASSIFICATION.
I. BUILDING MEAN ROOF HEIGHT SHALL NOT EXCEED 15 FEET.
SEISMIC LOAD:
A. RISK CATEGORY : II
B. SEISMIC IMPORTANCE FACTOR Ie = 1.0
C. SITE CLASS D
D. SPECTRAL RESPONSE COEFFICIENTS:
E. Ss = < 0.173 S1 = < 0.046 Sds = < 0.184 Sd1 = < 0.073
SEISMIC DESIGN CATEGORY C
F. SEISMIC FORCE RESISTING SYSTEM A13
G. SIMPLIFIED SEISMIC ANALYSIS PROCEDURE HAS BEEN USED.
H. RESPONSE MODIFICATION FACTOR R = 6.5
I. SEISMIC RESPONSE COEFFICIENT Cs = N/A
J. DESIGN BASE SHEAR V = 4,854 LB
FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.
ROOF RAIN LOAD:
A. RAIN INTENSITY: i = 3.06 INCHES / HOUR.

NC/ VA - STRUCTURAL LOAD LIMITATIONS

FLOOR LIVE LOAD:
A. 100 PSF IN CORRIDOR, 50 PSF REMAINDER
B. 2000 LB CONCENTRATED LOAD OVER 30"X30" AREA AT ANY LOCATION
ROOF LIVE LOAD:
A. 30 PSF
ROOF SNOW LOAD:
A. Pg = 30 PSF GROUND SNOW LOAD
B. Pf = 30 PSF FLAT ROOF SNOW LOAD
C. Ce = 1.0 SNOW EXPOSURE FACTOR
D. Is = 1.0 SNOW IMPORTANCE FACTOR
E. Ct = 1.1 SNOW THERMAL FACTOR
F. Cs = 1.0 ROOF SLOPE FACTOR
G. Ps = 20 PSF SLOPED ROOF SNOW LOAD
H. Pm = 20 PSF LOW-SLOPE SNOW LOAD
I. DESIGN IS BASED ON FULL OR PARTIALLY EXPOSED ROOF PER ASCE 7-10.
WIND LOAD: ASCE 7-10
A. 130 MPH Vult ULTIMATE WIND SPEED
B. 100 MPH Vasd NOMINAL WIND SPEED
C. II RISK CATEGORY
D. C WIND EXPOSURE CATEGORY
E. GCpi= 0.18 INTERNAL PRESSURE COEFFICIENT
F. COMPONENT & CLADDING PRESSURES (ROOF <7 °)
WALL ZONE 5: Pult = +/- 49.2 psf (Pasd = +/- 29.5 PSF)
WALL ZONE 4: Pult = +/- 39.9 psf (Pasd = +/- 24.0 PSF)
ROOF ZONE 3: Pult = - 92.9 psf (Pasd = - 55.8 PSF)
ROOF ZONE 2: Pult = - 61.7 psf (Pasd = - 37.0 PSF)
ROOF ZONE 1: Pult = - 36.8 psf (Pasd = - 22.1 PSF)
G. THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.
H. BUILDING DESIGN IS BASED ON "ENCLOSED" CLASSIFICATION.
I. BUILDING MEAN ROOF HEIGHT SHALL NOT EXCEED 15 FEET.
SEISMIC LOAD:
A. II RISK CATEGORY
B. Ie = 1.0 SEISMIC IMPORTANCE FACTOR
C. D SITE CLASS
D. SPECTRAL RESPONSE COEFFICIENTS:
Ss = < 0.178 S1 = < 0.057 Sds = < 0.19 Sd1 = < 0.091
E. C SEISMIC DESIGN CATEGORY
F. A13 SEISMIC FORCE RESISTING SYSTEM
G. SIMPLIFIED SEISMIC ANALYSIS PROCEDURE HAS BEEN USED.
H. R = 6.5 RESPONSE MODIFICATION FACTOR
I. Cs = N/A SEISMIC RESPONSE COEFFICIENT
J. V = 5,013 LB DESIGN BASE SHEAR
FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.

CODE SUMMARY:

STATE	BUILDING	ELEC.	MECH.	PLUMB.	ACCESS.	ENERGY
MD	2018 IBC W/ MD AMEND. 2018 NFPA 101 LSC W/ MD AMEND.	2017 NEC W/ MD AMEND.	2018 IMC	2018 IPC W/ MD AMEND.	2012 M.A.C. 2010 ADA	2018 IECC W/ MD AMEND.
NC	NCBC 2018 2018 NCFC	2017 NC ELECTRIC CODE	2018 NCMC	2018 NCPC	NCBC 2012 CHPT.11 & ICC/ANSI A117.1-2009	2018 NC ENERGY CODE
VA	2015 VA UNIFORM STATEWIDE BLDG CODE, 2015 IBC, 2015 IFC	2014 NEC	2015 IMC W/ VA AMEND.	2015 IPC W/ VA AMEND.	ICC/ANSI A117.1-2009	2015 IECC

BUILDING DESIGN PARAMETERS

1. USE / OCCUPANCY: OFFICE / BUSINESS
2. CONSTRUCTION TYPE : VB
3. SPRINKLER SYSTEM: N/A
4. BUILDING AREA: 4,900 SQ FT
5. BUILDING HEIGHT: < 15 FEET
6. NUMBER OF STORIES: 1
7. NUMBER OF MODULES : 7
8. OCCUPANT LOAD (49) BASED ON [100] SQ FT PER OCCUPANT.-2015 IBC
9. OCCUPANT LOAD (33) BASED ON [150] SQ FT PER OCCUPANT . - 2018 IBC
10. EXTERIOR WALL FIRE RATING N/A
11. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY THE IBC TABLE 602 AND SECTION 705.3
12. ENERGY CODE COMPLIANCE: SEE ATTACHED ENERGY CALCULATIONS
13. MANUFACTURERS DATA PLATE, STATE LABELS AND THIRD PARTY LABELS ARE TO BE LOCATED ADJACENT TO ELECTRICAL PANEL.

NORTH CAROLINA NOTES:
1. THIS BUILDING HAS NOT BEEN DESIGNED FOR COASTAL HAZARD AREAS, OCEAN HAZARD OR REGULATORY FLOOD PLAIN AREAS.
2. THE CLIMATE ZONE IS 3 OR 4.
3. ALL OPAQUE EXTERIOR DOORS SHALL HAVE A U-VALUE OF 0.292 OR LESS.
4. ALL EXTERIOR GLAZING SHALL HAVE A U-VALUE OF 0.45 OR LESS AND A SHGC OF 0.24 OR LESS.

DRAWING INDEX

MARLYLAND PLAN NO.: TMS5886–A MD, TMS5886–B MD, TMS5886–C MD, TMS5886–D MD, TMS5886–E MD, TMS5886–F MD TMS5886–G MD
MARYLAND SERIAL NO.: 5886A, 5886B, 5886C, 5886D, 5886E, 5886F, 5886G

RECEIVED
FEB 03 2021
TOWN OF ELKTON
BUILDING & PLANNING

NORTH CAROLINA PROFESSIONAL SEAL 044698 ENGINEER JAMES ALLEN CHAPMAN 1-8-21

STATE OF MARYLAND JAMES ALLEN CHAPMAN No. 50207 PROFESSIONAL ENGINEER

COMMONWEALTH OF VIRGINIA JAMES ALLEN CHAPMAN Lic. No. 0402057598 1-8-21 PROFESSIONAL ENGINEER

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE N0. 50207, EXPIRATION DATE: 11-30-2022.

RADCO APPROVED
Jan 08, 2021
RESOURCES, APPLICATIONS, DESIGN & CONTROLS, INC.
EASTERN NATIONAL REGION
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RADCO
YOUR VISION · OUR MISSION
THIRD PARTY DESIGN APPROVAL & INSPECTION AGENCY

DESTINATION: ELKTOWN, MD

TITAN MODULAR
SYSTEMS, INC.
162 INDUSTRIAL DRIVE * ALMA, GA 31510
912-632-3344 (PH) * 912-632-3345 (FX)

DATE: 12-31-20	ENGINEERS: JAMES ALLEN CHAPMAN, P.E. AMERICUS, GA 31719
SCALE: N-T-S	
CODES: MD, NC, VA	
TMS-5886 A-G - 84'x60' - BUSINESS	
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