PROJECT TITLE :

MIDAS	Company		Client	
	Author	Ing. Osvaldo Guzman Avila	File Name	P046-2024-MOD-004.wpf

WIND LOADS BASED ON NSR-10 [UNIT: tonf, m]

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Design Wind Loads                                  : F    = p * Area
Design Wind Pressure                               : p    = qz*G*Cp1 - qh*G*Cp2
Velocity Pressure at Design Height z [N/m^2]         : qz   = 0.613*Kz*Kzt*Kd*V^2*I
Velocity Pressure at Mean Roof Height [N/m^2]        : qh   = 0.613*Kh*Kht*Kd*V^2*I
Calculated Value of qh for X-dir [N/m^2]             : qh   = 341.46
Calculated Value of qh for Y-dir [N/m^2]             : qh   = 341.46

Basic Wind Speed [km/h]                            : V    = 100.00
Directional Factor for X-dir Wind Loads            : Kdx  = 0.85
Directional Factor for Y-dir Wind Loads            : Kdy  = 0.85
Importance Factor                                  : I    = 1.00
Exposure Category                                  : C
Mean Roof Height                                   : H    = 4.33
Gradient Height [m]                                : Zg   = 274.32
Force Coefficient                                  : Alpha= 9.50
Kz at Mean Roof Height (Kh)                        : Kh   = 0.85

Structural Rigidity                                : Rigid Structure

Gust effect Factor for X-dir Wind Loads            : Gx   = 0.88
Gust effect Factor for Y-dir Wind Loads            : Gy   = 0.91

Topographic Effects for X-dir Wind Loads           : Not Included
Topographic Effects for Y-dir Wind Loads           : Not Included
Accidental Eccentricity for X-direction            : Wx   = None
Accidental Eccentricity for Y-direction            : Wy   = None
Scale Factor for X-directional Wind Loads          : SFx  = 1.00
Scale Factor for Y-directional Wind Loads          : SFy  = 1.00
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Wind force of the specific story is calculated as the sum of the forces
of the following two parts.
1. Part I : Lower half part of the specific story
2. Part II : Upper half part of the just below story of the specific story

The reference height for the calculation of the wind pressure related factors are,
therefore, considered separately for the above mentioned two parts as follows.

Reference height for the wind pressure related factors(except topographic related factors)
1. Part I : top level of the specific story
2. Part II : top level of the just below story of the specific story

Reference height for the topographic related factors :
1. Part I : bottom level of the specific story
2. Part II : bottom level of the just below story of the specific story

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** External Pressure Coefficients at Windward and Leeward Walls (Cp1, Cp2)

STORY NAME	Cp1 (Windward)	Cp2(X-DIR) (Leeward)	Cp2(Y-DIR) (Leeward)
Roof	0.800	-0.500	0.000
1F	0.800	-0.500	-0.200

** Velocity Exposure Coefficients at Design Height (Kz)
** Topographic Factors at Windward and Leeward Walls (Kzt)
** Velocity Pressure at Design Height (qz) [Current Unit]

STORY NAME	Kz	Kzt(X-DIR) (Windward)	Kzt(Y-DIR) (Windward)	Kzt(X-DIR) (Leeward)	Kzt(Y-DIR) (Leeward)	qz(X-DIR)	qz(Y-DIR)
Roof	0.849	1.000	1.000	1.000	1.000	0.035	0.035
1F	0.849	1.000	1.000	1.000	1.000	0.035	0.035

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W I N D L O A D G E N E R A T I O N D A T A X - D I R E C T I O N

STORY NAME	PRESSURE	ELEV.	LOADED HEIGHT	LOADED BREADTH	WIND FORCE	ADDED FORCE	STORY FORCE	STORY SHEAR	OVERTURN`G MOMENT
Roof	0.040789	4.33144	2.16572	14.2	1.2544038	0.0	1.2544038	0.0	0.0
G.L.	0.040789	0.0	2.16572	14.2	0.0	0.0	--	1.2544038	5.4333775

W I N D L O A D G E N E R A T I O N D A T A Y - D I R E C T I O N

STORY NAME	PRESSURE	ELEV.	LOADED HEIGHT	LOADED BREADTH	WIND FORCE	ADDED FORCE	STORY FORCE	STORY SHEAR	OVERTURN`G MOMENT
Roof	0.040789	4.33144	2.16572	0.0	0.0453434	0.0	0.0453434	0.0	0.0
G.L.	0.040789	0.0	2.16572	0.51329	0.0	0.0	--	0.0453434	0.1964022

W I N D L O A D G E N E R A T I O N D A T A RZ - D I R E C T I O N

STORY NAME	TORSIONAL PRESSURE	ELEV.	LOADED HEIGHT	LOADED BREADTH	WIND TORSION	ADDED TORSION	STORY TORSION	ACCUMULATED TORSION
Roof	0.0	4.33144	2.16572	14.2	0.0	0.0	0.0	0.0
G.L.	0.0	0.0	2.16572	14.2	0.0	0.0	--	0.0

ECCENTRICITY RELATED DATA

STORY NAME	STORY FORCE(X)	STORY FORCE(Y)	ACCIDENTAL ECCENT.(X)	ACCIDENTAL ECCENT.(Y)	ACCIDENTAL TORSION(X)	ACCIDENTAL TORSION(Y)
Roof	1.2544038	0.0453434	0.0	0.0	0.0	0.0
G.L.	--	--	0.0	0.0	--	--