PROJECT TITLE :

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

* MASS GENERATION DATA FOR LATERAL ANALYSIS OF BUILDING [UNIT: tonf, m]

STORY NAME	TRANSLATIONAL MASS (X-DIR)	TRANSLATIONAL MASS (Y-DIR)	ROTATIONAL MASS	CENTER OF MASS (X-COORD)	CENTER OF MASS (Y-COORD)
Roof	0.0	0.0	0.0	0.0	0.0
1F	0.0	0.0	0.0	0.0	0.0
TOTAL :	0.0	0.0			

* ADDITIONAL MASSES FOR THE CALCULATION OF EQUIVALENT SEISMIC FORCE

Note. The following masses are between two adjacent stories or on the nodes released from floor rigid diaphragm by *Diaphragm Disconnect command. The masses are proportionally distributed to upper/lower stories according to their vertical locations. For dynamic analysis, however, floor masses and masses on vertical elements remain at their original locations.

STORY NAME	TRANSLATIONAL MASS (X-DIR)	TRANSLATIONAL MASS (Y-DIR)
Roof	1.71226813	1.71226813
1F	0.20856969	0.20856969
TOTAL :	1.92083782	1.92083782

* EQUIVALENT SEISMIC LOAD IN ACCORDANCE WITH NSR-10 [UNIT: tonf, m]

Site Class	: E
Effective Peak Acceleration(Aa)	: 0.10000
Effective Peak Velocity (Av)	: 0.15000
Site Coefficient at Short Periods (Fa)	: 2.50000
Site Coefficient at 1 s Period (Fv)	: 3.35000
Importance Factor (I)	: 1.00
Period Coefficient for Upper Limit (Cu)	: 1.2000
Fundamental Period Associated with X-dir. (Tx)	: 0.2326
Fundamental Period Associated with Y-dir. (Ty)	: 0.2326
Basic Ductility Factor for X-dir. (Rx0)	: 1.00000
Basic Ductility Factor for Y-dir. (Ry0)	: 1.00000
Reduction Factor of Irregularity for X-dir. (Phix)	: 1.00000
Reduction Factor of Irregularity for Y-dir. (Phiy)	: 1.00000
Ductility Factor for X-dir. (Rx)	: 1.00000
Ductility Factor for X-dir. (Rx)	: 1.00000
Total Effective Weight For X-dir. Seismic Loads (Wx)	: 16.790501
Total Effective Weight For Y-dir. Seismic Loads (Wy)	: 16.790501
Scale Factor For X-directional Seismic Loads	: 1.00
Scale Factor For Y-directional Seismic Loads	: 1.00
Accidental Eccentricity For X-direction (Ex)	: Positive
Accidental Eccentricity For Y-direction (Ey)	: Positive
Torsional Amplification for Accidental Eccentricity	: Do not Consider
Torsional Amplification for Inherent Eccentricity	: Do not Consider
Total Base Shear Of Model For X-direction	: 10.494063
Total Base Shear Of Model For Y-direction	: 10.494063
Summation Of Wi*Hi^k Of Model For X-direction	: 72.727086
Summation Of Wi*Hi^k Of Model For Y-direction	: 72.727086

ECCENTRICITY RELATED DATA

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

PROJECT TITLE :

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

STORY NAME	ACCIDENTAL ECCENT.	INHERENT ECCENT.	ACCIDENTAL AMP.FACTOR	INHERENT AMP.FACTOR	ACCIDENTAL ECCENT.	INHERENT ECCENT.	ACCIDENTAL AMP.FACTOR	INHERENT AMP.FACTOR
Roof	-0.71	0.0	1.0	0.0	0.0	0.0	1.0	0.0
G.L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The accidental amplification factors are automatically set to 1.0 when torsional amplification effect to accidental eccentricity is not considered.
The inherent amplification factors are automatically set to 0 when torsional amplification effect to inherent eccentricity is not considered.
The inherent amplification factors are all set to 'the input value - 1.0'.(This is to exclude the true inherent torsion)

** Story Force , Seismic Force x Scale Factor + Added Force

S E I S M I C 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	STORY WEIGHT	STORY LEVEL	SEISMIC FORCE	ADDED FORCE	STORY FORCE	STORY SHEAR	OVERTURN. MOMENT	ACCIDENT. TORSION	INHERENT TORSION	TOTAL TORSION
Roof	16.7905	4.33144	10.49406	0.0	10.49406	0.0	0.0	7.450785	0.0	7.450785
G.L.	--	0.0	--	--	--	10.49406	45.45443	---	---	---

S E I S M I C 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	STORY WEIGHT	STORY LEVEL	SEISMIC FORCE	ADDED FORCE	STORY FORCE	STORY SHEAR	OVERTURN. MOMENT	ACCIDENT. TORSION	INHERENT TORSION	TOTAL TORSION
Roof	16.7905	4.33144	10.49406	0.0	10.49406	0.0	0.0	0.0	0.0	0.0
G.L.	--	0.0	--	--	--	10.49406	45.45443	---	---	---

COMMENTS ABOUT TORSION

If torsional amplification effects are considered :

Accidental Torsion , Story Force * Accidental Eccentricity * Amp. Factor for Accidental Eccentricity
Inherent Torsion , Story Force * Inherent Eccentricity * Amp. Factor for Inherent Eccentricity

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If torsional amplification effects are not considered :

Accidental Torsion , Story Force * Accidental Eccentricity
Inherent Torsion , 0

The inherent torsion above is the additional torsion due to torsional amplification effect.
The true inherent torsion is considered automatically in analysis stage when the seismic force is applied to the structure.
