



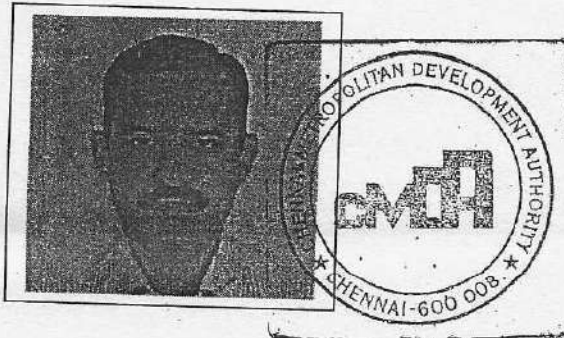
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
'ThalamuthuNatarajan Building', No.1, Gandhi Irwin Road,
Egmore, Chennai-600 008.

PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that the **Thiru. N. KANAGAVEL** has enrolled as **Registered Structural Engineer Grade-I (SE)** with Chennai Metropolitan Development Authority (CMDA) who has the qualification of **M.E.,(Structural Engg.)** and experience in the relevant field for **11 years**.

He has been given the Registration No.**SE/GR-I/2019/03/049** Renewed on **26.03.2024**. He shall be required to comply with the duties and responsibilities prescribed by the Government of Tamil Nadu in Part-V, "Registration of Professionals", Tamil Nadu Combined Development and Building Rules, 2019 approved vide G.O.(Ms) No.18 MAWS (MA1) Dept. dated 04.02.2019.

This Registration is valid upto **25.03.2029**.




(A. MEGANATHAN)
Superintendent

N. KANAGAVEL M.E., M.B.A., MIE., FIV
Chartered Engineer, Structural Consultant and Approved Valuer

CA- 12, Tarangini Complex
Ambattur Industrial Estate, Chennai – 600 058

Mobile : 94440 61295
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13.04.2026

STABILITY CERTIFICATE

1. The detailed engineering and structure design of the proposed building comprising of stilt + five floors residential building with 79 dwelling units “NEST UNIQUE” at Karanai Road, Ottiyambakkam, Tambaram, Chennai – 600 130, comprised in S.No: 276/7A1, has been done by me/us based on the report of geotechnical investigation (soil test) done by Nagadi Consultants (P) Ltd., Report No. G(C)10087 dated 10.01.2026 and considering the functional requirement of the building.
2. It is certified that among other factors, the proposed building has been designed to resist earthquake. I/We have checked various parameters and found that the proposed building would be safe.
3. I/We further certify that:
 - (i) The minimum grade of concrete is M30
 - (ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS 456:2000, design loads as per IS Codes No.IS 875-1987 and design of earthquake resistant structure as per IS Code No. IS 1893(part 1):2016
4. The building will be safe and sound when used for the purpose for which it is designed.

Stamp and Signature

Encl.: Structural Design Calculation


N. KANAGAVEL M.E., M.B.A., MIE., FIV
Registered Structural Engineer Grade-I
CMDA Reg.No. SE/GR-I/19/03/049
GCC Reg.No.RSE100022019
CA-12, Tarangini Complex,
Ambattur Industrial Estate
Mogappair West, Chennai-600 058

Design Specifications:

The proposed structure are to be designed for stilt + five floors and to be of framed structure to resist the seismic effect of zone III as per IS 1893 – 2016. The usage of the building is for residential purpose.

Geo Technical Report:

As per Nagadi Consultants (P) Ltd., geo technical report G(C) 10087 dated 10.01.2026, the foundation recommendations are:

(i) type of foundation	=	Isolated / combined
(ii) Depth of foundation	=	3.50 m
(iii) SBC @ 3.50 m depth	=	210kn/m ²

Floor Heights Considered:

Foundation depth	=	3.00m
Car parking level	=	0.60m
Stilt and typical floors height	=	3.00m

Analysis and Design:

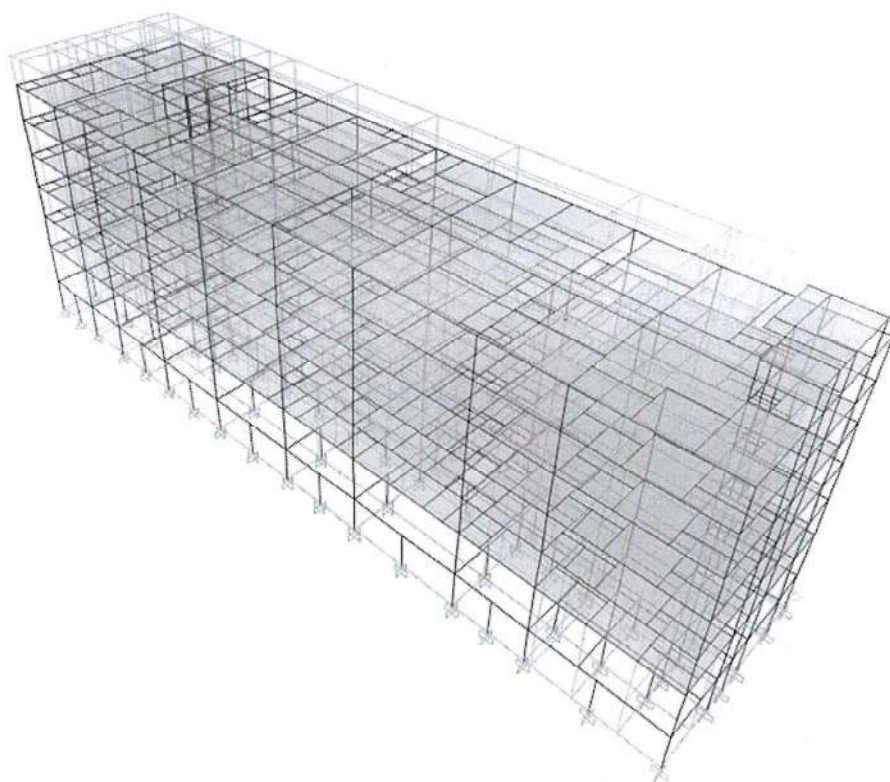
Analysis part is done using ETAB software and the designing part cross verified by manual calculations in accordance with IS 456 – 2000, IS 1893 - 2016 and SP – 16.

Materials:

The following recommendations of materials are to be used

- (i) Grade of concrete : M30 grade for all RCC members
- (ii) Grade of steel : Fe 550 for all diameter
- (iii) Potable quality of water to be used for all construction activities including curing.

ETABS[®]



Unique - stilt+5 floors

Model File: B- stilt+5 floors, Revision 0
01-Mar-26

1 Structure Data

This chapter provides model geometry information, including items such as story levels, point coordinates, and element connectivity.

1.1 Story Data

Table 1.1 - Story Definitions

Tower	Name	Height m	Master Story	Similar To	Splice Story	Color
T1	headroom	2.5	No	None	No	Cyan
T1	roof	3	No	story 1	No	Red
T1	story 5	3	No	story 1	No	Magenta
T1	story 4	3	No	story 1	No	Yellow
T1	story 3	3	No	story 1	No	Gray8Dark
T1	story 2	3	No	story 1	No	Blue
T1	story 1	3.8	Yes	None	No	Green
T1	plinth beam	3	No	None	No	Cyan

2 Properties

This chapter provides property information for materials, frame sections, shell sections, and links.

2.1 Materials

Table 2.1 - Material Properties - General

Material	Type	SymType	Grade	Color	Notes
HYSD500	Rebar	Uniaxial	HYSD Grade 500	Red	
HYSD550	Rebar	Uniaxial	HYSD Grade 550	Magenta	
M30	Concrete	Isotropic	M30	Cyan	

2.2 Frame Sections

Table 2.2 - Frame Section Property Definitions - Summary (Part 1 of 3)

Name	Material	Shape	Color	Area mm ²	J mm ⁴	I33 mm ⁴	I22 mm ⁴	As2 mm ²	As3 mm ²	S33Pos mm ³	S33Neg mm ³
B230x125	M30	Concrete Rectangular	Cyan	28750	98842792.8	37434895.8	126739583.3	23958.3	23958.3	598958.3	598958.3
B230x380	M30	Concrete Rectangular	Red	87400	960059669.1	1051713333.3	385288333.3	72833.3	72833.3	5535333.3	5535333.3
B230x450	M30	Concrete Rectangular	Magenta	103500	124072593.2.6	1746562500	456262500	86250	86250	7762500	7762500
B230x525	M30	Concrete Rectangular	16744448	120750	154336284.6	2773476562.5	532306250	100625	100625	10565625	10565625
B230x600	M30	Concrete Rectangular	Green	138000	184679134.0	4140000000	608350000	115000	115000	13800000	13800000
B230x675	M30	Concrete Rectangular	Red	155250	215056905.4.6	5894648437.5	684393750	129375	129375	17465625	17465625
B230x750	M30	Concrete Rectangular	Red	172500	245451702.7.4	8086937500	760437500	143750	143750	21562500	21562500
C230x300	M30	Concrete Rectangular	Gray8Dark	69000	645952940	517500000	304175000	57500	57500	3450000	3450000
C230x450	M30	Concrete Rectangular	Magenta	103500	124072593.2.6	1746562500	456262500	86250	86250	7762500	7762500
C230x525	M30	Concrete Rectangular	10317879	120750	154336284.6	2773476562.5	532306250	100625	100625	10565625	10565625
C230x600	M30	Concrete Rectangular	Cyan	138000	184679134.0	4140000000	608350000	115000	115000	13800000	13800000
C230x675	M30	Concrete Rectangular	Gray8Dark	155250	215056905.4.6	5894648437.5	684393750	129375	129375	17465625	17465625

Name	Material	Shape	Color	Area mm2	J mm4	I33 mm4	I22 mm4	As2 mm2	As3 mm2	S33Pos mm3	S33Neg mm3
C300x525	M30	Concrete Rectangular	16744448	157500	303911370 2.6	3617578125	118125000 0	131250	131250	13781250	13781250
C300x600	M30	Concrete Rectangular	Green	180000	370785937 5	5400000000	135000000 0	150000	150000	18000000	18000000
C300x675	M30	Concrete Rectangular	Magenta	202500	437953086 4.2	7688671875	151875000 0	168750	168750	22781250	22781250
C300x750	M30	Concrete Rectangular	16744576	225000	505262880 0	1054687500	168750000 0	187500	187500	28125000	28125000
C300x900	M30	Concrete Rectangular	Cyan	270000	640075000 0	1822500000	202500000 0	225000	225000	40500000	40500000
C380x750	M30	Concrete Rectangular	Red	285000	936326144 7.9	1335937500	342950000 0	237500	237500	35625000	35625000
D230x230	M30	Concrete Rectangular	Red	52900	394109408. 3	233200833. 3	233200833. 3	44083.3	44083.3	2027833.3	2027833.3

2.3 Shell Sections

Table 2.3 - Area Section Property Definitions - Summary

Name	Type	Element Type	Material	Total Thickness mm	Deck Material	Deck Depth mm
Slab1	Slab	Shell-Thin	M30	125		
Wall1	Wall	Shell-Thin	M30	230		
Wall2	Wall	Shell-Thin	M30	230		
Wall3	Wall	Shell-Thin	M30	230		
Wall4	Wall	Shell-Thin	M30	230		

3 Loads

This chapter provides loading information as applied to the model.

3.1 Load Patterns

Table 3.1 - Load Pattern Definitions

Name	Is Auto Load	Type	Self Weight Multiplier	Auto Load
Dead	No	Dead	1	
Floor finish	No	Super Dead	0	
Live	No	Reducible Live	0	
roof live	No	Reducible Live	0	
seismic - X	No	Seismic	0	IS 1893:2016
seismic - Y	No	Seismic	0	IS 1893:2016
sunken filling	No	Super Dead	0	
wall load	No	Super Dead	0	

3.2 Auto Seismic Loading

IS 1893:2016 Auto Seismic Load Calculation

This calculation presents the automatically generated lateral seismic loads for load pattern seismic - X according to IS 1893:2016, as calculated by ETABS.

Direction and Eccentricity

Direction = X

Structural Period

Period Calculation Method = User Specified

User Period

$$T = 0.43 \text{ sec}$$

Factors and Coefficients

Seismic Zone Factor, Z [IS Table 3]

$$Z = 0.16$$

$$R = 5$$

$$I = 1.2$$

Seismic Response

Spectral Acceleration Coefficient, $S_a \frac{S_a}{g} = 2.5$
/g [IS 6.4.2]

$$\frac{S_a}{g} = 2.5$$

Equivalent Lateral Forces

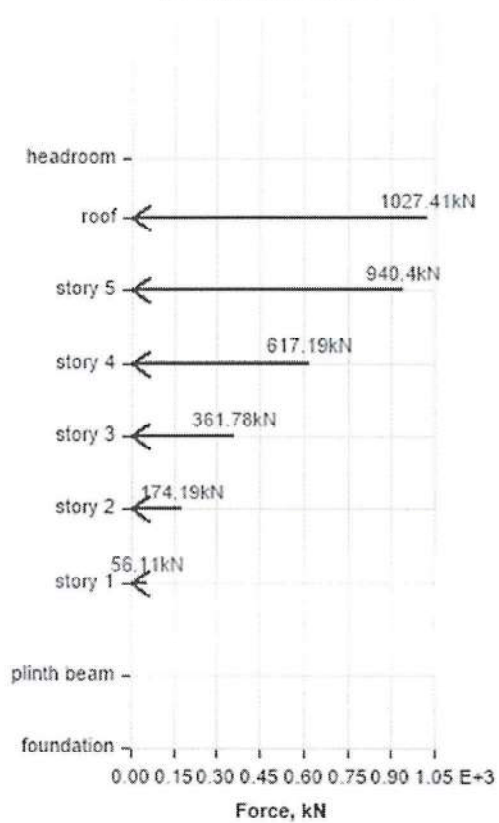
Seismic Coefficient, A_h [IS 6.4.2] $A_h = \frac{ZI \frac{S_a}{g}}{2R}$

Calculated Base Shear

Direction	Period Used (sec)	W (N)	V _b (kN)
X	0.43	66189087.66	3177076.21

Applied Story Forces

Lateral Load to Stories - X



Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
headroom	21.3	0	0
roof	18.8	1027.41	0
story 5	15.8	940.4	0
story 4	12.8	617.19	0
story 3	9.8	361.78	0
story 2	6.8	174.19	0
story 1	3.8	56.11	0
plinth beam	0	0	0
foundation	-3	0	0

IS 1893:2016 Auto Seismic Load Calculation

This calculation presents the automatically generated lateral seismic loads for load pattern seismic - Y according to IS 1893:2016, as calculated by ETABS.

Direction and Eccentricity

Direction = Y

Structural Period

Period Calculation Method = User Specified

User Period

$$T = 0.21 \text{ sec}$$

Factors and Coefficients

Seismic Zone Factor, Z [IS Table 3]

$$Z = 0.16$$

$$R = 5$$

$$I = 1.2$$

Seismic Response

Spectral Acceleration Coefficient, $S_a \frac{S_a}{g} = 2.5$
/g [IS 6.4.2]

$$\frac{S_a}{g} = 2.5$$

Equivalent Lateral Forces

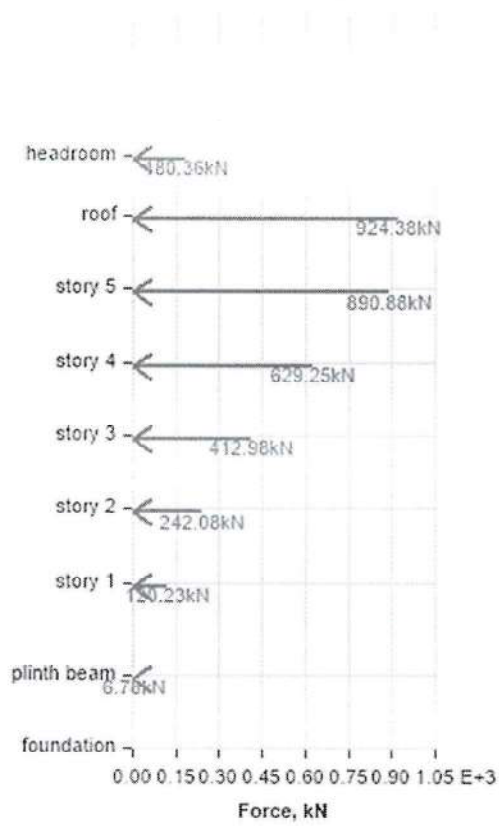
Seismic Coefficient, A_h [IS 6.4.2] $A_h = \frac{ZI \frac{S_a}{g}}{2R}$

Calculated Base Shear

Direction	Period Used (sec)	W (N)	V _b (kN)
Y	0.21	70977652.82	3406927.34

Applied Story Forces

Lateral Load to Stories - Y



Story	Elevation	X-Dir	Y-Dir
	m	kN	kN
headroom	21.3	0	180.36
roof	18.8	0	924.38
story 5	15.8	0	890.88
story 4	12.8	0	629.25
story 3	9.8	0	412.98
story 2	6.8	0	242.08
story 1	3.8	0	120.23
plinth beam	0	0	6.78
foundation	-3	0	0

3.3 Load Combinations

Table 3.4 - Load Combination Definitions

Name	Type	Is Auto	Load Name	SF	Notes
0.9DL-1.5RSX	Linear Add	No	Dead	0.9	
0.9DL-1.5RSX			Floor finish	0.9	
0.9DL-1.5RSX			sunken filling	0.9	
0.9DL-1.5RSX			wall load	0.9	
0.9DL-1.5RSX			RSX	-1.5	
0.9DL-1.5RSY	Linear Add	No	Dead	0.9	
0.9DL-1.5RSY			Floor finish	0.9	
0.9DL-1.5RSY			sunken filling	0.9	
0.9DL-1.5RSY			wall load	0.9	
0.9DL-1.5RSY			RXY	-1.5	
0.9DL+1.5RSX	Linear Add	No	Dead	0.9	
0.9DL+1.5RSX			Floor finish	0.9	
0.9DL+1.5RSX			sunken filling	0.9	
0.9DL+1.5RSX			wall load	0.9	
0.9DL+1.5RSX			RSX	1.5	
0.9DL+1.5RSY	Linear Add	No	Dead	0.9	
0.9DL+1.5RSY			Floor finish	0.9	
0.9DL+1.5RSY			sunken filling	0.9	
0.9DL+1.5RSY			wall load	0.9	
0.9DL+1.5RSY			RXY	1.5	
1.2(DL+LL+EQX)	Linear Add	No	Dead	1.2	
1.2(DL+LL+EQX)			Live	1.2	
1.2(DL+LL+EQX)			Floor finish	1.2	
1.2(DL+LL+EQX)			sunken filling	1.2	
1.2(DL+LL+EQX)			wall load	1.2	
1.2(DL+LL+EQX)			seismic - X	1.2	
1.2(DL+LL+EQX)			roof live	1.2	
1.2(DL+LL+EQY)	Linear Add	No	Dead	1.2	
1.2(DL+LL+EQY)			Live	1.2	
1.2(DL+LL+EQY)			Floor finish	1.2	
1.2(DL+LL+EQY)			sunken filling	1.2	
1.2(DL+LL+EQY)			wall load	1.2	
1.2(DL+LL+EQY)			seismic - Y	1.2	
1.2(DL+LL+EQY)			roof live	1.2	
1.2(DL+LL+RSX)	Linear Add	No	Dead	1.2	
1.2(DL+LL+RSX)			Live	1.2	
1.2(DL+LL+RSX)			Floor finish	1.2	
1.2(DL+LL+RSX)			sunken filling	1.2	
1.2(DL+LL+RSX)			wall load	1.2	
1.2(DL+LL+RSX)			RSX	1.2	
1.2(DL+LL+RSX)			roof live	1.2	
1.2(DL+LL+RSY)	Linear Add	No	Dead	1.2	
1.2(DL+LL+RSY)			Live	1.2	
1.2(DL+LL+RSY)			Floor finish	1.2	
1.2(DL+LL+RSY)			sunken filling	1.2	
1.2(DL+LL+RSY)			wall load	1.2	
1.2(DL+LL+RSY)			RXY	1.2	
1.2(DL+LL+RSY)			roof live	1.2	
1.2(DL+LL-EQX)	Linear Add	No	Dead	1.2	
1.2(DL+LL-EQX)			Live	1.2	
1.2(DL+LL-EQX)			Floor finish	1.2	
1.2(DL+LL-EQX)			sunken filling	1.2	
1.2(DL+LL-EQX)			wall load	1.2	
1.2(DL+LL-EQX)			seismic - X	-1.2	

Name	Type	Is Auto	Load Name	SF	Notes
1.2(DL+LL-EQX)			roof live	1.2	
1.2(DL+LL-EQY)	Linear Add	No	Dead	1.2	
1.2(DL+LL-EQY)			Live	1.2	
1.2(DL+LL-EQY)			Floor finish	1.2	
1.2(DL+LL-EQY)			sunken filling	1.2	
1.2(DL+LL-EQY)			wall load	1.2	
1.2(DL+LL-EQY)			seismic - Y	-1.2	
1.2(DL+LL-EQY)			roof live	1.2	
1.2(DL+LL-RSX)	Linear Add	No	Dead	1.2	
1.2(DL+LL-RSX)			Live	1.2	
1.2(DL+LL-RSX)			Floor finish	1.2	
1.2(DL+LL-RSX)			sunken filling	1.2	
1.2(DL+LL-RSX)			wall load	1.2	
1.2(DL+LL-RSX)			RSX	-1.2	
1.2(DL+LL-RSX)			roof live	1.2	
1.2(DL+LL-RSY)	Linear Add	No	Dead	1.2	
1.2(DL+LL-RSY)			Live	1.2	
1.2(DL+LL-RSY)			Floor finish	1.2	
1.2(DL+LL-RSY)			sunken filling	1.2	
1.2(DL+LL-RSY)			wall load	1.2	
1.2(DL+LL-RSY)			RXY	-1.2	
1.2(DL+LL-RSY)			roof live	1.2	
1.5(DL+EQX)	Linear Add	No	Dead	1.5	
1.5(DL+EQX)			Floor finish	1.5	
1.5(DL+EQX)			sunken filling	1.5	
1.5(DL+EQX)			wall load	1.5	
1.5(DL+EQX)			seismic - X	1.5	
1.5(DL+EQY)	Linear Add	No	Dead	1.5	
1.5(DL+EQY)			Floor finish	1.5	
1.5(DL+EQY)			sunken filling	1.5	
1.5(DL+EQY)			wall load	1.5	
1.5(DL+EQY)			seismic - Y	1.5	
1.5(DL+LL)	Linear Add	No	Dead	1.5	
1.5(DL+LL)			Live	1.5	
1.5(DL+LL)			Floor finish	1.5	
1.5(DL+LL)			sunken filling	1.5	
1.5(DL+LL)			wall load	1.5	
1.5(DL+LL)			roof live	1.5	
1.5(DL+RSX)	Linear Add	No	Dead	1.5	
1.5(DL+RSX)			Floor finish	1.5	
1.5(DL+RSX)			sunken filling	1.5	
1.5(DL+RSX)			wall load	1.5	
1.5(DL+RSX)			RSX	1.5	
1.5(DL+RSY)	Linear Add	No	Dead	1.5	
1.5(DL+RSY)			Floor finish	1.5	
1.5(DL+RSY)			sunken filling	1.5	
1.5(DL+RSY)			wall load	1.5	
1.5(DL+RSY)			RXY	1.5	
1.5(DL-EQX)	Linear Add	No	Dead	1.5	
1.5(DL-EQX)			Floor finish	1.5	
1.5(DL-EQX)			sunken filling	1.5	
1.5(DL-EQX)			wall load	1.5	
1.5(DL-EQX)			seismic - X	-1.5	
1.5(DL-EQY)	Linear Add	No	Dead	1.5	
1.5(DL-EQY)			Floor finish	1.5	
1.5(DL-EQY)			sunken filling	1.5	
1.5(DL-EQY)			wall load	1.5	

Name	Type	Is Auto	Load Name	SF	Notes
1.5(DL-EQY)			seismic - Y	-1.5	
1.5(DL-RSX)	Linear Add	No	Dead	1.5	
1.5(DL-RSX)			Floor finish	1.5	
1.5(DL-RSX)			sunken filling	1.5	
1.5(DL-RSX)			wall load	1.5	
1.5(DL-RSX)			RSX	-1.5	
1.5(DL-RSY)	Linear Add	No	Dead	1.5	
1.5(DL-RSY)			Floor finish	1.5	
1.5(DL-RSY)			sunken filling	1.5	
1.5(DL-RSY)			wall load	1.5	
1.5(DL-RSY)			RXY	-1.5	
09DL-1.5EQX	Linear Add	No	Dead	0.9	
09DL-1.5EQX			Floor finish	0.9	
09DL-1.5EQX			sunken filling	0.9	
09DL-1.5EQX			wall load	0.9	
09DL-1.5EQX			seismic - X	-1.5	
09DL-1.5EQY	Linear Add	No	Dead	0.9	
09DL-1.5EQY			Floor finish	0.9	
09DL-1.5EQY			sunken filling	0.9	
09DL-1.5EQY			wall load	0.9	
09DL-1.5EQY			seismic - Y	-1.5	
09DL+1.5EQX	Linear Add	No	Dead	0.9	
09DL+1.5EQX			Floor finish	0.9	
09DL+1.5EQX			sunken filling	0.9	
09DL+1.5EQX			wall load	0.9	
09DL+1.5EQX			seismic - X	1.5	
09DL+1.5EQY	Linear Add	No	Dead	0.9	
09DL+1.5EQY			Floor finish	0.9	
09DL+1.5EQY			sunken filling	0.9	
09DL+1.5EQY			wall load	0.9	
09DL+1.5EQY			seismic - Y	1.5	
(DL+LL)	Linear Add	No	Dead	1	
(DL+LL)			Live	1	
(DL+LL)			Floor finish	1	
(DL+LL)			sunken filling	1	
(DL+LL)			wall load	1	
(DL+LL)			roof live	1	
DL+0.8LL-0.8EQX	Linear Add	No	Dead	1	
DL+0.8LL-0.8EQX			Floor finish	1	
DL+0.8LL-0.8EQX			sunken filling	1	
DL+0.8LL-0.8EQX			wall load	1	
DL+0.8LL-0.8EQX			Live	0.8	
DL+0.8LL-0.8EQX			seismic - X	-0.8	
DL+0.8LL-0.8EQX			roof live	0.8	
DL+0.8LL-0.8EQY	Linear Add	No	Dead	1	
DL+0.8LL-0.8EQY			Floor finish	1	
DL+0.8LL-0.8EQY			sunken filling	1	
DL+0.8LL-0.8EQY			wall load	1	
DL+0.8LL-0.8EQY			Live	0.8	
DL+0.8LL-0.8EQY			seismic - Y	-0.8	
DL+0.8LL-0.8EQY			roof live	0.8	
DL+0.8LL-0.8RSX	Linear Add	No	Dead	1	
DL+0.8LL-0.8RSX			Floor finish	1	
DL+0.8LL-0.8RSX			sunken filling	1	
DL+0.8LL-0.8RSX			wall load	1	
DL+0.8LL-0.8RSX			Live	0.8	
DL+0.8LL-0.8RSX			RSX	-0.8	

Name	Type	Is Auto	Load Name	SF	Notes
DL+0.8LL-0.8RSX			roof live	0.8	
DL+0.8LL-0.8RSY	Linear Add	No	Dead	1	
DL+0.8LL-0.8RSY			Floor finish	1	
DL+0.8LL-0.8RSY			sunken filling	1	
DL+0.8LL-0.8RSY			wall load	1	
DL+0.8LL-0.8RSY			Live	0.8	
DL+0.8LL-0.8RSY			RXY	-0.8	
DL+0.8LL-0.8RSY			roof live	0.8	
DL+0.8LL+0.8EQX	Linear Add	No	Dead	1	
DL+0.8LL+0.8EQX			Floor finish	1	
DL+0.8LL+0.8EQX			sunken filling	1	
DL+0.8LL+0.8EQX			wall load	1	
DL+0.8LL+0.8EQX			Live	0.8	
DL+0.8LL+0.8EQX			sesmic - X	0.8	
DL+0.8LL+0.8EQX			roof live	0.8	
DL+0.8LL+0.8EQY	Linear Add	No	Dead	1	
DL+0.8LL+0.8EQY			Floor finish	1	
DL+0.8LL+0.8EQY			sunken filling	1	
DL+0.8LL+0.8EQY			wall load	1	
DL+0.8LL+0.8EQY			Live	0.8	
DL+0.8LL+0.8EQY			sesmic - Y	0.8	
DL+0.8LL+0.8EQY			roof live	0.8	
DL+0.8LL+0.8RSX	Linear Add	No	Dead	1	
DL+0.8LL+0.8RSX			Floor finish	1	
DL+0.8LL+0.8RSX			sunken filling	1	
DL+0.8LL+0.8RSX			wall load	1	
DL+0.8LL+0.8RSX			Live	0.8	
DL+0.8LL+0.8RSX			sesmic - Y	0.8	
DL+0.8LL+0.8RSX			roof live	0.8	
DL+0.8LL+0.8RSY	Linear Add	No	Dead	1	
DL+0.8LL+0.8RSY			Floor finish	1	
DL+0.8LL+0.8RSY			sunken filling	1	
DL+0.8LL+0.8RSY			wall load	1	
DL+0.8LL+0.8RSY			Live	0.8	
DL+0.8LL+0.8RSY			RXY	0.8	
DL+0.8LL+0.8RSY			roof live	0.8	
DL+EQX	Linear Add	No	Dead	1	
DL+EQX			Floor finish	1	
DL+EQX			sunken filling	1	
DL+EQX			wall load	1	
DL+EQX			sesmic - X	1	
DL+EQY	Linear Add	No	Dead	1	
DL+EQY			Floor finish	1	
DL+EQY			sunken filling	1	
DL+EQY			wall load	1	
DL+EQY			sesmic - Y	1	
DL+RSX	Linear Add	No	Dead	1	
DL+RSX			Floor finish	1	
DL+RSX			sunken filling	1	
DL+RSX			wall load	1	
DL+RSX			RSX	1	
DL+RSY	Linear Add	No	Dead	1	
DL+RSY			Floor finish	1	
DL+RSY			sunken filling	1	
DL+RSY			wall load	1	
DL+RSY			RXY	1	
DL-EQX	Linear Add	No	Dead	1	

Name	Type	Is Auto	Load Name	SF	Notes
DL-EQX			Floor finish	1	
DL-EQX			sunken filling	1	
DL-EQX			wall load	1	
DL-EQX			seismic - X	-1	
DL-EQY	Linear Add	No	Dead	1	
DL-EQY			Floor finish	1	
DL-EQY			sunken filling	1	
DL-EQY			wall load	1	
DL-EQY			seismic - Y	-1	
DL-RSX	Linear Add	No	Dead	1	
DL-RSX			Floor finish	1	
DL-RSX			sunken filling	1	
DL-RSX			wall load	1	
DL-RSX			RSX	-1	
DL-RSY	Linear Add	No	Dead	1	
DL-RSY			Floor finish	1	
DL-RSY			sunken filling	1	
DL-RSY			wall load	1	
DL-RSY			RXY	-1	
seismic weight	Linear Add	No	Dead	1	
seismic weight			Live	0.25	
seismic weight			Floor finish	1	
seismic weight			wall load	1	
seismic weight			sunken filling	1	
ultimate envelope	Envelope	No	1.2(DL+LL+EQX)	1	
ultimate envelope			1.2(DL+LL-EQX)	1	
ultimate envelope			1.2(DL+LL+RSX)	1	
ultimate envelope			1.2(DL+LL-RSX)	1	
ultimate envelope			1.2(DL+LL+EQY)	1	
ultimate envelope			1.2(DL+LL-EQY)	1	
ultimate envelope			1.2(DL+LL+RSY)	1	
ultimate envelope			1.2(DL+LL-RSY)	1	
ultimate envelope			1.5(DL+EQX)	1	
ultimate envelope			1.5(DL+EQY)	1	
ultimate envelope			1.5(DL+RSX)	1	
ultimate envelope			1.5(DL+RSY)	1	
ultimate envelope			1.5(DL-EQX)	1	
ultimate envelope			1.5(DL-EQY)	1	
ultimate envelope			1.5(DL-RSX)	1	
ultimate envelope			1.5(DL-RSY)	1	
ultimate envelope			1.5(DL+LL)	1	
ultimate envelope			0.9DL+1.5EQX	1	
ultimate envelope			0.9DL-1.5EQX	1	
ultimate envelope			0.9DL+1.5RSX	1	
ultimate envelope			0.9DL-1.5RSX	1	
ultimate envelope			0.9DL+1.5EQY	1	
ultimate envelope			0.9DL-1.5EQY	1	
ultimate envelope			0.9DL+1.5RSY	1	
ultimate envelope			0.9DL-1.5RSY	1	

4 Analysis Results

This chapter provides analysis results.

4.1 Story Results

Table 4.1 - Story Drifts

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
headroom	Dead	LinStatic		Y	0.000294	41	305.96	259.77	21.3
headroom	Live	LinStatic		Y	6.8E-05	41	305.96	259.77	21.3
headroom	Floor finish	LinStatic		X	2.2E-05	21	305.96	305.49	21.3
headroom	Floor finish	LinStatic		Y	0.000151	41	305.96	259.77	21.3
headroom	sunken filling	LinStatic		X	1E-05	42	305.96	256.91	21.3
headroom	sunken filling	LinStatic		Y	2.7E-05	41	305.96	259.77	21.3
headroom	wall load	LinStatic		X	5.3E-05	46	302.11	256.91	21.3
headroom	wall load	LinStatic		Y	0.000182	41	305.96	259.77	21.3
headroom	seismic - X	LinStatic		X	0.000518	16	298.46	302.63	21.3
headroom	seismic - X	LinStatic		Y	0.000145	21	305.96	305.49	21.3
headroom	seismic - Y	LinStatic		Y	0.001132	41	305.96	259.77	21.3
headroom	RSX	LinRespSpec	Max	X	0.000525	16	298.46	302.63	21.3
headroom	RSX	LinRespSpec	Max	Y	0.000134	41	305.96	259.77	21.3
headroom	RXY	LinRespSpec	Max	Y	0.000917	41	305.96	259.77	21.3
headroom	roof live	LinStatic		X	5.1E-05	44	298.46	256.91	21.3
headroom	roof live	LinStatic		Y	0.000103	42	305.96	256.91	21.3
headroom	(DL+LL)	Combination		X	0.000155	46	302.11	256.91	21.3
headroom	(DL+LL)	Combination		Y	0.000824	41	305.96	259.77	21.3
headroom	09DL+1.5EQX	Combination		X	0.00078	16	298.46	302.63	21.3
headroom	09DL+1.5EQX	Combination		Y	0.000606	42	305.96	256.91	21.3
headroom	09DL-1.5EQX	Combination		X	0.00078	11	298.46	305.49	21.3
headroom	09DL-1.5EQX	Combination		Y	0.000571	41	305.96	259.77	21.3
headroom	0.9DL+1.5RSX	Combination	Max	X	0.000789	16	298.46	302.63	21.3
headroom	0.9DL+1.5RSX	Combination	Max	Y	0.000789	41	305.96	259.77	21.3
headroom	0.9DL+1.5RSX	Combination	Min	X	0.000814	11	298.46	305.49	21.3
headroom	0.9DL+1.5RSX	Combination	Min	Y	0.000404	37	302.11	259.77	21.3
headroom	0.9DL-1.5RSX	Combination	Max	X	0.000789	16	298.46	302.63	21.3
headroom	0.9DL-1.5RSX	Combination	Max	Y	0.000789	41	305.96	259.77	21.3
headroom	0.9DL-1.5RSX	Combination	Min	X	0.000814	11	298.46	305.49	21.3
headroom	0.9DL-1.5RSX	Combination	Min	Y	0.000404	37	302.11	259.77	21.3
headroom	09DL-1.5EQY	Combination		Y	0.001287	21	305.96	305.49	21.3
headroom	09DL+1.5EQY	Combination		Y	0.002287	41	305.96	259.77	21.3
headroom	0.9DL+1.5RSY	Combination	Max	Y	0.001963	41	305.96	259.77	21.3
headroom	0.9DL+1.5RSY	Combination	Min	Y	0.000967	21	305.96	305.49	21.3
headroom	0.9DL-1.5RSY	Combination	Max	Y	0.001963	41	305.96	259.77	21.3
headroom	0.9DL-1.5RSY	Combination	Min	Y	0.000967	21	305.96	305.49	21.3
headroom	1.2(DL+LL+EQX)	Combination		X	0.000645	16	298.46	302.63	21.3
headroom	1.2(DL+LL+EQX)	Combination		Y	0.001003	41	305.96	259.77	21.3
headroom	1.2(DL+LL-EQX)	Combination		X	0.000642	21	305.96	305.49	21.3
headroom	1.2(DL+LL-EQX)	Combination		Y	0.000975	41	305.96	259.77	21.3
headroom	1.2(DL+LL+RSX)	Combination	Max	X	0.000701	44	298.46	256.91	21.3
headroom	1.2(DL+LL+RSX)	Combination	Max	Y	0.00115	41	305.96	259.77	21.3
headroom	1.2(DL+LL+RSX)	Combination	Min	X	0.000671	21	305.96	305.49	21.3
headroom	1.2(DL+LL+RSX)	Combination	Min	Y	0.000828	41	305.96	259.77	21.3
headroom	1.2(DL+LL-RSX)	Combination	Max	X	0.000701	44	298.46	256.91	21.3
headroom	1.2(DL+LL-RSX)	Combination	Max	Y	0.00115	41	305.96	259.77	21.3
headroom	1.2(DL+LL-RSX)	Combination	Min	X	0.000671	21	305.96	305.49	21.3
headroom	1.2(DL+LL-RSX)	Combination	Min	Y	0.000828	41	305.96	259.77	21.3

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
headroom	1.2(DL+LL+EQY)	Combination		Y	0.002348	41	305.96	259.77	21.3
headroom	1.2(DL+LL-EQY)	Combination		Y	0.000954	21	305.96	305.49	21.3
headroom	1.2(DL+LL+RSY)	Combination	Max	Y	0.002089	41	305.96	259.77	21.3
headroom	1.2(DL+LL+RSY)	Combination	Min	Y	0.000717	18	302.11	302.63	21.3
headroom	1.2(DL+LL-RSY)	Combination	Max	Y	0.002089	41	305.96	259.77	21.3
headroom	1.2(DL+LL-RSY)	Combination	Min	Y	0.000717	18	302.11	302.63	21.3
headroom	1.5(DL+EQX)	Combination		X	0.000782	16	298.46	302.63	21.3
headroom	1.5(DL+EQX)	Combination		Y	0.000998	41	305.96	259.77	21.3
headroom	1.5(DL+EQY)	Combination		Y	0.002679	41	305.96	259.77	21.3
headroom	1.5(DL+RSX)	Combination	Max	X	0.000791	16	298.46	302.63	21.3
headroom	1.5(DL+RSX)	Combination	Max	Y	0.001182	41	305.96	259.77	21.3
headroom	1.5(DL+RSX)	Combination	Min	X	0.000839	11	298.46	305.49	21.3
headroom	1.5(DL+RSX)	Combination	Min	Y	0.00078	41	305.96	259.77	21.3
headroom	1.5(DL+RSY)	Combination	Max	Y	0.002356	41	305.96	259.77	21.3
headroom	1.5(DL+RSY)	Combination	Min	Y	0.000965	18	302.11	302.63	21.3
headroom	1.5(DL-EQX)	Combination		X	0.000805	11	298.46	305.49	21.3
headroom	1.5(DL-EQX)	Combination		Y	0.000964	41	305.96	259.77	21.3
headroom	1.5(DL-EQY)	Combination		Y	0.001268	21	305.96	305.49	21.3
headroom	1.5(DL-RSX)	Combination	Max	X	0.000791	16	298.46	302.63	21.3
headroom	1.5(DL-RSX)	Combination	Max	Y	0.001182	41	305.96	259.77	21.3
headroom	1.5(DL-RSX)	Combination	Min	X	0.000839	11	298.46	305.49	21.3
headroom	1.5(DL-RSX)	Combination	Min	Y	0.00078	41	305.96	259.77	21.3
headroom	1.5(DL-RSY)	Combination	Max	Y	0.002356	41	305.96	259.77	21.3
headroom	1.5(DL-RSY)	Combination	Min	Y	0.000965	18	302.11	302.63	21.3
headroom	DL+0.8LL+0.8EQX	Combination		X	0.000431	45	300.29	256.91	21.3
headroom	DL+0.8LL+0.8EQX	Combination		Y	0.000799	41	305.96	259.77	21.3
headroom	DL+0.8LL+0.8EQY	Combination		Y	0.001696	41	305.96	259.77	21.3
headroom	DL+0.8LL+0.8RSX	Combination		Y	0.001696	41	305.96	259.77	21.3
headroom	DL+0.8LL-0.8EQX	Combination		X	0.000438	21	305.96	305.49	21.3
headroom	DL+0.8LL-0.8EQX	Combination		Y	0.000781	41	305.96	259.77	21.3
headroom	DL+0.8LL-0.8EQY	Combination		Y	0.000645	18	302.11	302.63	21.3
headroom	DL+0.8LL-0.8RSX	Combination	Max	X	0.000487	45	300.29	256.91	21.3
headroom	DL+0.8LL-0.8RSX	Combination	Max	Y	0.000897	41	305.96	259.77	21.3
headroom	DL+0.8LL-0.8RSX	Combination	Min	X	0.000458	21	305.96	305.49	21.3
headroom	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000683	41	305.96	259.77	21.3
headroom	DL+0.8LL+0.8RSY	Combination	Max	Y	0.001523	41	305.96	259.77	21.3
headroom	DL+0.8LL+0.8RSY	Combination	Min	Y	0.000488	18	302.11	302.63	21.3
headroom	DL+0.8LL-0.8RSY	Combination	Max	Y	0.001523	41	305.96	259.77	21.3
headroom	DL+0.8LL-0.8RSY	Combination	Min	Y	0.000488	18	302.11	302.63	21.3
headroom	DL+EQX	Combination		X	0.000521	16	298.46	302.63	21.3
headroom	DL+EQX	Combination		Y	0.000665	41	305.96	259.77	21.3
headroom	DL+EQY	Combination		Y	0.001786	41	305.96	259.77	21.3
headroom	DL+RSX	Combination	Max	X	0.000527	16	298.46	302.63	21.3
headroom	DL+RSX	Combination	Max	Y	0.000788	41	305.96	259.77	21.3
headroom	DL+RSX	Combination	Min	X	0.000559	11	298.46	305.49	21.3
headroom	DL+RSX	Combination	Min	Y	0.00052	41	305.96	259.77	21.3
headroom	DL+RSY	Combination	Max	Y	0.00157	41	305.96	259.77	21.3
headroom	DL+RSY	Combination	Min	Y	0.000643	18	302.11	302.63	21.3
headroom	DL-EQX	Combination		X	0.000536	11	298.46	305.49	21.3
headroom	DL-EQX	Combination		Y	0.000643	41	305.96	259.77	21.3
headroom	DL-EQY	Combination		Y	0.000845	21	305.96	305.49	21.3
headroom	DL-RSX	Combination	Max	X	0.000527	16	298.46	302.63	21.3
headroom	DL-RSX	Combination	Max	Y	0.000788	41	305.96	259.77	21.3
headroom	DL-RSX	Combination	Min	X	0.000559	11	298.46	305.49	21.3
headroom	DL-RSX	Combination	Min	Y	0.00052	41	305.96	259.77	21.3

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
headroom	DL-RSY	Combination	Max	Y	0.00157	41	305.96	259.77	21.3
headroom	DL-RSY	Combination	Min	Y	0.000643	18	302.11	302.63	21.3
headroom	1.5(DL+LL)	Combination		X	0.000233	46	302.11	256.91	21.3
headroom	1.5(DL+LL)	Combination		Y	0.001236	41	305.96	259.77	21.3
headroom	ultimate envelope	Combination	Max	X	0.000791	16	298.46	302.63	21.3
headroom	ultimate envelope	Combination	Max	Y	0.002679	41	305.96	259.77	21.3
headroom	ultimate envelope	Combination	Min	X	0.000839	11	298.46	305.49	21.3
headroom	ultimate envelope	Combination	Min	Y	0.001287	21	305.96	305.49	21.3
headroom	seismic weight	Combination		Y	0.000671	41	305.96	259.77	21.3
roof	Dead	LinStatic		X	4.6E-05	7	308.55	310.14	18.8
roof	Dead	LinStatic		Y	6.1E-05	1	305.54	319.01	18.8
roof	Live	LinStatic		X	6E-06	96	302.11	295.81	18.8
roof	Live	LinStatic		Y	8E-06	4	308.55	317.49	18.8
roof	Floor finish	LinStatic		X	2.9E-05	7	308.55	310.14	18.8
roof	Floor finish	LinStatic		Y	3.3E-05	1	305.54	319.01	18.8
roof	sunken filling	LinStatic		X	8E-06	43	308.55	256.91	18.8
roof	sunken filling	LinStatic		Y	1E-05	42	305.96	256.91	18.8
roof	wall load	LinStatic		X	2.2E-05	32	293.54	272.07	18.8
roof	wall load	LinStatic		Y	2.3E-05	43	308.55	256.91	18.8
roof	sesmic - X	LinStatic		X	0.000906	3	293.54	319.01	18.8
roof	sesmic - Y	LinStatic		Y	0.000984	19	300.29	314.14	18.8
roof	RSX	LinRespSpec	Max	X	0.00087	3	293.54	319.01	18.8
roof	RSX	LinRespSpec	Max	Y	0.00013	43	308.55	256.91	18.8
roof	RXY	LinRespSpec	Max	Y	0.000779	19	300.29	314.14	18.8
roof	roof live	LinStatic		X	3.2E-05	41	305.96	259.77	18.8
roof	roof live	LinStatic		Y	2.2E-05	1	305.54	319.01	18.8
roof	(DL+LL)	Combination		X	0.000102	48	293.54	266.4	18.8
roof	(DL+LL)	Combination		Y	0.00013	1	305.54	319.01	18.8
roof	09DL+1.5EQX	Combination		X	0.001363	3	293.54	319.01	18.8
roof	09DL+1.5EQX	Combination		X	0.001407	7	308.55	310.14	18.8
roof	0.9DL+1.5RSX	Combination	Max	X	0.00131	3	293.54	319.01	18.8
roof	0.9DL+1.5RSX	Combination	Max	Y	0.000267	43	308.55	256.91	18.8
roof	0.9DL+1.5RSX	Combination	Min	X	0.001319	4	308.55	317.49	18.8
roof	0.9DL+1.5RSX	Combination	Min	Y	0.000225	4	308.55	317.49	18.8
roof	0.9DL+1.5RSX	Combination	Max	X	0.00131	3	293.54	319.01	18.8
roof	0.9DL+1.5RSX	Combination	Max	Y	0.000267	43	308.55	256.91	18.8
roof	0.9DL+1.5RSX	Combination	Min	X	0.001319	4	308.55	317.49	18.8
roof	0.9DL+1.5RSX	Combination	Min	Y	0.000225	4	308.55	317.49	18.8
roof	09DL+1.5EQY	Combination		Y	0.001535	1	305.54	319.01	18.8
roof	09DL+1.5EQY	Combination		Y	0.001512	42	305.96	256.91	18.8
roof	0.9DL+1.5RSY	Combination	Max	Y	0.001194	42	305.96	256.91	18.8
roof	0.9DL+1.5RSY	Combination	Min	Y	0.001228	1	305.54	319.01	18.8
roof	0.9DL+1.5RSY	Combination	Max	Y	0.001194	42	305.96	256.91	18.8
roof	0.9DL+1.5RSY	Combination	Min	Y	0.001228	1	305.54	319.01	18.8
roof	1.2(DL+LL+EQX)	Combination		X	0.001095	3	293.54	319.01	18.8
roof	1.2(DL+LL+EQX)	Combination		X	0.001181	7	308.55	310.14	18.8
roof	1.2(DL+LL+RSX)	Combination	Max	X	0.001052	3	293.54	319.01	18.8
roof	1.2(DL+LL+RSX)	Combination	Max	Y	0.000274	43	308.55	256.91	18.8
roof	1.2(DL+LL+RSX)	Combination	Min	X	0.001081	4	308.55	317.49	18.8
roof	1.2(DL+LL+RSX)	Combination	Min	Y	0.000242	4	308.55	317.49	18.8
roof	1.2(DL+LL+RSX)	Combination	Max	X	0.001052	3	293.54	319.01	18.8
roof	1.2(DL+LL+RSX)	Combination	Max	Y	0.000274	43	308.55	256.91	18.8
roof	1.2(DL+LL+RSX)	Combination	Min	X	0.001081	4	308.55	317.49	18.8
roof	1.2(DL+LL+RSX)	Combination	Min	Y	0.000242	4	308.55	317.49	18.8
roof	1.2(DL+LL+EQY)	Combination		Y	0.001252	43	308.55	256.91	18.8

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
roof	1.2(DL+LL-EQY)	Combination		Y	0.001309	1	305.54	319.01	18.8
roof	1.2(DL+LL-RSY)	Combination	Max	Y	0.001004	43	308.55	256.91	18.8
roof	1.2(DL+LL-RSY)	Combination	Min	Y	0.001064	1	305.54	319.01	18.8
roof	1.2(DL+LL-RSX)	Combination	Max	Y	0.001004	43	308.55	256.91	18.8
roof	1.2(DL+LL-RSX)	Combination	Min	Y	0.001064	1	305.54	319.01	18.8
roof	1.5(DL+EQX)	Combination		X	0.001366	3	293.54	319.01	18.8
roof	1.5(DL+EQY)	Combination		Y	0.001546	42	305.96	256.91	18.8
roof	1.5(DL+RSX)	Combination	Max	X	0.001313	3	293.54	319.01	18.8
roof	1.5(DL+RSX)	Combination	Max	Y	0.000315	43	308.55	256.91	18.8
roof	1.5(DL+RSX)	Combination	Min	X	0.001343	4	308.55	317.49	18.8
roof	1.5(DL+RSX)	Combination	Min	Y	0.000273	4	308.55	317.49	18.8
roof	1.5(DL+RSY)	Combination	Max	Y	0.001228	43	308.55	256.91	18.8
roof	1.5(DL+RSY)	Combination	Min	Y	0.00129	1	305.54	319.01	18.8
roof	1.5(DL-EQX)	Combination		X	0.001454	7	308.55	310.14	18.8
roof	1.5(DL-EQY)	Combination		Y	0.001597	1	305.54	319.01	18.8
roof	1.5(DL-RSX)	Combination	Max	X	0.001313	3	293.54	319.01	18.8
roof	1.5(DL-RSX)	Combination	Max	Y	0.000315	43	308.55	256.91	18.8
roof	1.5(DL-RSX)	Combination	Min	X	0.001343	4	308.55	317.49	18.8
roof	1.5(DL-RSX)	Combination	Min	Y	0.000273	4	308.55	317.49	18.8
roof	1.5(DL-RSY)	Combination	Max	Y	0.001228	43	308.55	256.91	18.8
roof	1.5(DL-RSY)	Combination	Min	Y	0.00129	1	305.54	319.01	18.8
roof	DL+0.8LL+0.8EQX	Combination		X	0.000731	3	293.54	319.01	18.8
roof	DL+0.8LL+0.8EQY	Combination		Y	0.000851	43	308.55	256.91	18.8
roof	DL+0.8LL+0.8RSX	Combination		Y	0.000851	43	308.55	256.91	18.8
roof	DL+0.8LL-0.8EQX	Combination		X	0.000803	7	308.55	310.14	18.8
roof	DL+0.8LL-0.8EQY	Combination		Y	0.000894	1	305.54	319.01	18.8
roof	DL+0.8LL-0.8RSX	Combination	Max	X	0.000703	3	293.54	319.01	18.8
roof	DL+0.8LL-0.8RSX	Combination	Max	Y	0.000199	43	308.55	256.91	18.8
roof	DL+0.8LL-0.8RSX	Combination	Min	X	0.00073	7	308.55	310.14	18.8
roof	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000177	4	308.55	317.49	18.8
roof	DL+0.8LL+0.8RSY	Combination	Max	Y	0.000686	43	308.55	256.91	18.8
roof	DL+0.8LL+0.8RSY	Combination	Min	Y	0.00073	1	305.54	319.01	18.8
roof	DL+0.8LL-0.8RSY	Combination	Max	Y	0.000686	43	308.55	256.91	18.8
roof	DL+0.8LL-0.8RSY	Combination	Min	Y	0.00073	1	305.54	319.01	18.8
roof	DL+EQX	Combination		X	0.000911	3	293.54	319.01	18.8
roof	DL+EQY	Combination		Y	0.001031	42	305.96	256.91	18.8
roof	DL+RSX	Combination	Max	X	0.000875	3	293.54	319.01	18.8
roof	DL+RSX	Combination	Max	Y	0.00021	43	308.55	256.91	18.8
roof	DL+RSX	Combination	Min	X	0.000895	4	308.55	317.49	18.8
roof	DL+RSX	Combination	Min	Y	0.000182	4	308.55	317.49	18.8
roof	DL+RSY	Combination	Max	Y	0.000819	43	308.55	256.91	18.8
roof	DL+RSY	Combination	Min	Y	0.00086	1	305.54	319.01	18.8
roof	DL-EQX	Combination		X	0.000969	7	308.55	310.14	18.8
roof	DL-EQY	Combination		Y	0.001065	1	305.54	319.01	18.8
roof	DL-RSX	Combination	Max	X	0.000875	3	293.54	319.01	18.8
roof	DL-RSX	Combination	Max	Y	0.00021	43	308.55	256.91	18.8
roof	DL-RSX	Combination	Min	X	0.000895	4	308.55	317.49	18.8
roof	DL-RSX	Combination	Min	Y	0.000182	4	308.55	317.49	18.8
roof	DL-RSY	Combination	Max	Y	0.000819	43	308.55	256.91	18.8
roof	DL-RSY	Combination	Min	Y	0.00086	1	305.54	319.01	18.8
roof	1.5(DL+LL)	Combination		X	0.000153	48	293.54	266.4	18.8
roof	1.5(DL+LL)	Combination		Y	0.000195	1	305.54	319.01	18.8
roof	ultimate envelope	Combination	Max	X	0.001366	3	293.54	319.01	18.8
roof	ultimate envelope	Combination	Max	Y	0.001546	42	305.96	256.91	18.8
roof	ultimate envelope	Combination	Min	X	0.001454	7	308.55	310.14	18.8

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
roof	ultimate envelope	Combination	Min	Y	0.001597	1	305.54	319.01	18.8
roof	seismic weight	Combination		X	7.8E-05	7	308.55	310.14	18.8
roof	seismic weight	Combination		Y	0.000105	1	305.54	319.01	18.8
story 5	Dead	LinStatic		X	3.2E-05	3	293.54	319.01	15.8
story 5	Dead	LinStatic		Y	1.8E-05	6	293.54	313.3	15.8
story 5	Live	LinStatic		X	1.2E-05	7	308.55	310.14	15.8
story 5	Live	LinStatic		Y	1.1E-05	1	305.54	319.01	15.8
story 5	Floor finish	LinStatic		X	1.7E-05	3	293.54	319.01	15.8
story 5	Floor finish	LinStatic		Y	9E-06	19	300.29	314.14	15.8
story 5	sunken filling	LinStatic		X	1E-05	41	305.96	259.77	15.8
story 5	sunken filling	LinStatic		Y	1.1E-05	43	308.55	256.91	15.8
story 5	wall load	LinStatic		X	2.1E-05	3	293.54	319.01	15.8
story 5	wall load	LinStatic		Y	1.1E-05	3	293.54	319.01	15.8
story 5	seismic - X	LinStatic		X	0.001456	2	300.29	319.01	15.8
story 5	seismic - Y	LinStatic		Y	0.001531	29	293.54	281.07	15.8
story 5	RSX	LinRespSpec	Max	X	0.001439	2	300.29	319.01	15.8
story 5	RSX	LinRespSpec	Max	Y	0.000197	43	308.55	256.91	15.8
story 5	RXY	LinRespSpec	Max	Y	0.001251	29	293.54	281.07	15.8
story 5	roof live	LinStatic		X	2.2E-05	43	308.55	256.91	15.8
story 5	(DL+LL)	Combination		Y	4.1E-05	6	293.54	313.3	15.8
story 5	0.9DL+1.5EQX	Combination		X	0.002128	2	300.29	319.01	15.8
story 5	0.9DL-1.5EQX	Combination		X	0.00224	3	293.54	319.01	15.8
story 5	0.9DL+1.5RSX	Combination	Max	X	0.002103	2	300.29	319.01	15.8
story 5	0.9DL+1.5RSX	Combination	Max	Y	0.000301	50	308.55	266.4	15.8
story 5	0.9DL+1.5RSX	Combination	Min	X	0.002215	3	293.54	319.01	15.8
story 5	0.9DL+1.5RSX	Combination	Min	Y	0.00032	6	293.54	313.3	15.8
story 5	0.9DL-1.5RSX	Combination	Max	X	0.002103	2	300.29	319.01	15.8
story 5	0.9DL-1.5RSX	Combination	Max	Y	0.000301	50	308.55	266.4	15.8
story 5	0.9DL-1.5RSX	Combination	Min	X	0.002215	3	293.54	319.01	15.8
story 5	0.9DL-1.5RSX	Combination	Min	Y	0.00032	6	293.54	313.3	15.8
story 5	0.9DL-1.5EQY	Combination		Y	0.002315	26	293.54	288	15.8
story 5	0.9DL+1.5EQY	Combination		Y	0.00229	50	308.55	266.4	15.8
story 5	0.9DL+1.5RSY	Combination	Max	Y	0.00186	29	293.54	281.07	15.8
story 5	0.9DL+1.5RSY	Combination	Min	Y	0.001896	23	293.54	295.81	15.8
story 5	0.9DL-1.5RSY	Combination	Max	Y	0.00186	29	293.54	281.07	15.8
story 5	0.9DL-1.5RSY	Combination	Min	Y	0.001896	23	293.54	295.81	15.8
story 5	1.2(DL+LL+EQX)	Combination		X	0.001664	2	300.29	319.01	15.8
story 5	1.2(DL+LL+EQX)	Combination		X	0.001834	3	293.54	319.01	15.8
story 5	1.2(DL+LL+RSX)	Combination	Max	X	0.001643	2	300.29	319.01	15.8
story 5	1.2(DL+LL+RSX)	Combination	Min	X	0.001813	3	293.54	319.01	15.8
story 5	1.2(DL+LL+RSX)	Combination	Min	Y	0.000282	6	293.54	313.3	15.8
story 5	1.2(DL+LL-RSX)	Combination	Max	X	0.001643	2	300.29	319.01	15.8
story 5	1.2(DL+LL-RSX)	Combination	Min	X	0.001813	3	293.54	319.01	15.8
story 5	1.2(DL+LL-RSX)	Combination	Min	Y	0.000282	6	293.54	313.3	15.8
story 5	1.2(DL+LL+EQY)	Combination		Y	0.001836	50	308.55	266.4	15.8
story 5	1.2(DL+LL+EQY)	Combination		Y	0.001874	23	293.54	295.81	15.8
story 5	1.2(DL+LL+RSY)	Combination	Max	Y	0.001485	50	308.55	266.4	15.8
story 5	1.2(DL+LL+RSY)	Combination	Min	Y	0.00154	6	293.54	313.3	15.8
story 5	1.2(DL+LL+RSY)	Combination	Max	Y	0.001485	50	308.55	266.4	15.8
story 5	1.2(DL+LL+RSY)	Combination	Min	Y	0.00154	6	293.54	313.3	15.8
story 5	1.5(DL+EQX)	Combination		X	0.002091	2	300.29	319.01	15.8
story 5	1.5(DL+EQY)	Combination		Y	0.002294	50	308.55	266.4	15.8
story 5	1.5(DL+RSX)	Combination	Max	X	0.002066	2	300.29	319.01	15.8
story 5	1.5(DL+RSX)	Combination	Max	Y	0.000305	50	308.55	266.4	15.8
story 5	1.5(DL+RSX)	Combination	Min	X	0.002254	3	293.54	319.01	15.8

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
story 5	1.5(DL+RSX)	Combination	Min	Y	0.000339	6	293.54	313.3	15.8
story 5	1.5(DL+RSY)	Combination	Max	Y	0.001855	42	305.96	256.91	15.8
story 5	1.5(DL+RSY)	Combination	Min	Y	0.001911	6	293.54	313.3	15.8
story 5	1.5(DL-EQX)	Combination		X	0.00228	3	293.54	319.01	15.8
story 5	1.5(DL-EQY)	Combination		Y	0.002329	23	293.54	295.81	15.8
story 5	1.5(DL-RSX)	Combination	Max	X	0.002066	2	300.29	319.01	15.8
story 5	1.5(DL-RSX)	Combination	Max	Y	0.000305	50	308.55	266.4	15.8
story 5	1.5(DL-RSX)	Combination	Min	X	0.002254	3	293.54	319.01	15.8
story 5	1.5(DL-RSX)	Combination	Min	Y	0.000339	6	293.54	313.3	15.8
story 5	1.5(DL-RSY)	Combination	Max	Y	0.001855	42	305.96	256.91	15.8
story 5	1.5(DL-RSY)	Combination	Min	Y	0.001911	6	293.54	313.3	15.8
story 5	DL+0.8LL+0.8EQX	Combination		X	0.001097	4	308.55	317.49	15.8
story 5	DL+0.8LL+0.8EQY	Combination		Y	0.001226	50	308.55	266.4	15.8
story 5	DL+0.8LL+0.8RSX	Combination		Y	0.001226	50	308.55	266.4	15.8
story 5	DL+0.8LL-0.8EQX	Combination		X	0.001236	3	293.54	319.01	15.8
story 5	DL+0.8LL-0.8EQY	Combination		Y	0.001255	6	293.54	313.3	15.8
story 5	DL+0.8LL-0.8RSX	Combination	Max	X	0.001083	2	300.29	319.01	15.8
story 5	DL+0.8LL-0.8RSX	Combination	Min	X	0.001222	3	293.54	319.01	15.8
story 5	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000195	6	293.54	313.3	15.8
story 5	DL+0.8LL+0.8RSY	Combination	Max	Y	0.000991	50	308.55	266.4	15.8
story 5	DL+0.8LL+0.8RSY	Combination	Min	Y	0.001033	6	293.54	313.3	15.8
story 5	DL+0.8LL-0.8RSY	Combination	Max	Y	0.000991	50	308.55	266.4	15.8
story 5	DL+0.8LL-0.8RSY	Combination	Min	Y	0.001033	6	293.54	313.3	15.8
story 5	DL+EQX	Combination		X	0.001394	2	300.29	319.01	15.8
story 5	DL+EQY	Combination		Y	0.001529	50	308.55	266.4	15.8
story 5	DL+RSX	Combination	Max	X	0.001377	2	300.29	319.01	15.8
story 5	DL+RSX	Combination	Max	Y	0.000203	50	308.55	266.4	15.8
story 5	DL+RSX	Combination	Min	X	0.001503	3	293.54	319.01	15.8
story 5	DL+RSX	Combination	Min	Y	0.000226	6	293.54	313.3	15.8
story 5	DL+RSY	Combination	Max	Y	0.001237	42	305.96	256.91	15.8
story 5	DL+RSY	Combination	Min	Y	0.001274	6	293.54	313.3	15.8
story 5	DL-EQX	Combination		X	0.00152	3	293.54	319.01	15.8
story 5	DL-EQY	Combination		Y	0.001553	23	293.54	295.81	15.8
story 5	DL-RSX	Combination	Max	X	0.001377	2	300.29	319.01	15.8
story 5	DL-RSX	Combination	Max	Y	0.000203	50	308.55	266.4	15.8
story 5	DL-RSX	Combination	Min	X	0.001503	3	293.54	319.01	15.8
story 5	DL-RSX	Combination	Min	Y	0.000226	6	293.54	313.3	15.8
story 5	DL-RSY	Combination	Max	Y	0.001237	42	305.96	256.91	15.8
story 5	DL-RSY	Combination	Min	Y	0.001274	6	293.54	313.3	15.8
story 5	1.5(DL+LL)	Combination		Y	6.2E-05	6	293.54	313.3	15.8
story 5	ultimate envelope	Combination	Max	X	0.002128	2	300.29	319.01	15.8
story 5	ultimate envelope	Combination	Max	Y	0.002294	50	308.55	266.4	15.8
story 5	ultimate envelope	Combination	Min	X	0.00228	3	293.54	319.01	15.8
story 5	ultimate envelope	Combination	Min	Y	0.002329	23	293.54	295.81	15.8
story 5	seismic weight	Combination		X	6.8E-05	3	293.54	319.01	15.8
story 5	seismic weight	Combination		Y	3.4E-05	6	293.54	313.3	15.8
story 4	Dead	LinStatic		X	2.9E-05	1	305.54	319.01	12.8
story 4	Dead	LinStatic		Y	1.6E-05	48	293.54	266.4	12.8
story 4	Live	LinStatic		X	1E-05	1	305.54	319.01	12.8
story 4	Live	LinStatic		Y	8E-06	6	293.54	313.3	12.8
story 4	Floor finish	LinStatic		X	1.6E-05	1	305.54	319.01	12.8
story 4	Floor finish	LinStatic		Y	8E-06	48	293.54	266.4	12.8
story 4	sunken filling	LinStatic		X	1E-05	43	308.55	256.91	12.8
story 4	sunken filling	LinStatic		Y	7E-06	50	308.55	266.4	12.8
story 4	wall load	LinStatic		X	1.6E-05	1	305.54	319.01	12.8

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
story 4	wall load	LinStatic		Y	1E-05	3	293.54	319.01	12.8
story 4	seismic - X	LinStatic		X	0.001849	3	293.54	319.01	12.8
story 4	seismic - Y	LinStatic		Y	0.001998	47	293.54	256.91	12.8
story 4	RSX	LinRespSpec	Max	X	0.001904	3	293.54	319.01	12.8
story 4	RSX	LinRespSpec	Max	Y	0.000265	5	308.55	314.02	12.8
story 4	RXY	LinRespSpec	Max	Y	0.001693	47	293.54	256.91	12.8
story 4	roof live	LinStatic		X	1.5E-05	42	305.96	256.91	12.8
story 4	(DL+LL)	Combination		X	6.9E-05	1	305.54	319.01	12.8
story 4	(DL+LL)	Combination		Y	3.7E-05	3	293.54	319.01	12.8
story 4	09DL+1.5EQX	Combination		X	0.00272	3	293.54	319.01	12.8
story 4	09DL-1.5EQX	Combination		X	0.002826	2	300.29	319.01	12.8
story 4	0.9DL+1.5RSX	Combination	Max	X	0.002803	3	293.54	319.01	12.8
story 4	0.9DL+1.5RSX	Combination	Max	Y	0.000394	5	308.55	314.02	12.8
story 4	0.9DL+1.5RSX	Combination	Min	X	0.002908	2	300.29	319.01	12.8
story 4	0.9DL+1.5RSX	Combination	Min	Y	0.000407	3	293.54	319.01	12.8
story 4	0.9DL-1.5RSX	Combination	Max	X	0.002803	3	293.54	319.01	12.8
story 4	0.9DL-1.5RSX	Combination	Max	Y	0.000394	5	308.55	314.02	12.8
story 4	0.9DL-1.5RSX	Combination	Min	X	0.002908	2	300.29	319.01	12.8
story 4	0.9DL-1.5RSX	Combination	Min	Y	0.000407	3	293.54	319.01	12.8
story 4	09DL-1.5EQY	Combination		Y	0.003021	48	293.54	266.4	12.8
story 4	09DL+1.5EQY	Combination		Y	0.002976	43	308.55	256.91	12.8
story 4	0.9DL+1.5RSY	Combination	Max	Y	0.002516	47	293.54	256.91	12.8
story 4	0.9DL+1.5RSY	Combination	Min	Y	0.002564	48	293.54	266.4	12.8
story 4	0.9DL-1.5RSY	Combination	Max	Y	0.002516	47	293.54	256.91	12.8
story 4	0.9DL-1.5RSY	Combination	Min	Y	0.002564	48	293.54	266.4	12.8
story 4	1.2(DL+LL+EQX)	Combination		X	0.002137	3	293.54	319.01	12.8
story 4	1.2(DL+LL+EQX)	Combination		X	0.0023	2	300.29	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Max	X	0.002203	3	293.54	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Max	Y	0.00031	5	308.55	314.02	12.8
story 4	1.2(DL+LL+RSX)	Combination	Min	X	0.002366	2	300.29	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Min	Y	0.000349	3	293.54	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Max	X	0.002203	3	293.54	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Max	Y	0.00031	5	308.55	314.02	12.8
story 4	1.2(DL+LL+RSX)	Combination	Min	X	0.002366	2	300.29	319.01	12.8
story 4	1.2(DL+LL+RSX)	Combination	Min	Y	0.000349	3	293.54	319.01	12.8
story 4	1.2(DL+LL+EQY)	Combination		Y	0.002379	43	308.55	256.91	12.8
story 4	1.2(DL+LL+EQY)	Combination		Y	0.002441	48	293.54	266.4	12.8
story 4	1.2(DL+LL+RSY)	Combination	Max	Y	0.001995	43	308.55	256.91	12.8
story 4	1.2(DL+LL+RSY)	Combination	Min	Y	0.002075	48	293.54	266.4	12.8
story 4	1.2(DL+LL+RSY)	Combination	Max	Y	0.001995	43	308.55	256.91	12.8
story 4	1.2(DL+LL+RSY)	Combination	Min	Y	0.002075	48	293.54	266.4	12.8
story 4	1.5(DL+EQX)	Combination		X	0.002685	3	293.54	319.01	12.8
story 4	1.5(DL+EQY)	Combination		Y	0.002975	43	308.55	256.91	12.8
story 4	1.5(DL+RSX)	Combination	Max	X	0.002768	3	293.54	319.01	12.8
story 4	1.5(DL+RSX)	Combination	Max	Y	0.000391	5	308.55	314.02	12.8
story 4	1.5(DL+RSX)	Combination	Min	X	0.002944	2	300.29	319.01	12.8
story 4	1.5(DL+RSX)	Combination	Min	Y	0.000424	3	293.54	319.01	12.8
story 4	1.5(DL+RSY)	Combination	Max	Y	0.0025	47	293.54	256.91	12.8
story 4	1.5(DL+RSY)	Combination	Min	Y	0.00258	48	293.54	266.4	12.8
story 4	1.5(DL+EQX)	Combination		X	0.002862	2	300.29	319.01	12.8
story 4	1.5(DL+EQY)	Combination		Y	0.003037	48	293.54	266.4	12.8
story 4	1.5(DL+RSX)	Combination	Max	X	0.002768	3	293.54	319.01	12.8
story 4	1.5(DL+RSX)	Combination	Max	Y	0.000391	5	308.55	314.02	12.8
story 4	1.5(DL+RSX)	Combination	Min	X	0.002944	2	300.29	319.01	12.8
story 4	1.5(DL+RSX)	Combination	Min	Y	0.000424	3	293.54	319.01	12.8

Story	Output Case	Case Type	Step Type	Direction	Drift	Label	X m	Y m	Z m
story 4	1.5(DL-RSY)	Combination	Max	Y	0.0025	47	293.54	256.91	12.8
story 4	1.5(DL-RSY)	Combination	Min	Y	0.00258	48	293.54	266.4	12.8
story 4	DL+0.8LL+0.8EQX	Combination		X	0.001413	3	293.54	319.01	12.8
story 4	DL+0.8LL+0.8EQY	Combination		Y	0.001586	43	308.55	256.91	12.8
story 4	DL+0.8LL+0.8RSX	Combination		Y	0.001586	43	308.55	256.91	12.8
story 4	DL+0.8LL-0.8EQX	Combination		X	0.001545	2	300.29	319.01	12.8
story 4	DL+0.8LL-0.8EQY	Combination		Y	0.001633	48	293.54	266.4	12.8
story 4	DL+0.8LL-0.8RSX	Combination	Max	X	0.001457	3	293.54	319.01	12.8
story 4	DL+0.8LL-0.8RSX	Combination	Min	X	0.001589	2	300.29	319.01	12.8
story 4	DL+0.8LL-0.8RSY	Combination	Min	Y	0.000239	3	293.54	319.01	12.8
story 4	DL+0.8LL+0.8RSY	Combination	Max	Y	0.00133	43	308.55	256.91	12.8
story 4	DL+0.8LL+0.8RSY	Combination	Min	Y	0.001389	48	293.54	266.4	12.8
story 4	DL+0.8LL-0.8RSY	Combination	Max	Y	0.00133	43	308.55	256.91	12.8
story 4	DL+0.8LL-0.8RSY	Combination	Min	Y	0.001389	48	293.54	266.4	12.8
story 4	DL+EQX	Combination		X	0.00179	3	293.54	319.01	12.8
story 4	DL+EQY	Combination		Y	0.001984	43	308.55	256.91	12.8
story 4	DL+RSX	Combination	Max	X	0.001845	3	293.54	319.01	12.8
story 4	DL+RSX	Combination	Max	Y	0.000261	5	308.55	314.02	12.8
story 4	DL+RSX	Combination	Min	X	0.001963	2	300.29	319.01	12.8
story 4	DL+RSX	Combination	Min	Y	0.000283	3	293.54	319.01	12.8
story 4	DL+RSY	Combination	Max	Y	0.001667	47	293.54	256.91	12.8
story 4	DL+RSY	Combination	Min	Y	0.00172	48	293.54	266.4	12.8
story 4	DL-EQX	Combination		X	0.001908	2	300.29	319.01	12.8
story 4	DL-EQY	Combination		Y	0.002025	48	293.54	266.4	12.8
story 4	DL-RSX	Combination	Max	X	0.001845	3	293.54	319.01	12.8
story 4	DL-RSX	Combination	Max	Y	0.000261	5	308.55	314.02	12.8
story 4	DL-RSX	Combination	Min	X	0.001963	2	300.29	319.01	12.8
story 4	DL-RSX	Combination	Min	Y	0.000283	3	293.54	319.01	12.8
story 4	DL-RSY	Combination	Max	Y	0.001667	47	293.54	256.91	12.8
story 4	DL-RSY	Combination	Min	Y	0.00172	48	293.54	266.4	12.8
story 4	1.5(DL+LL)	Combination		X	0.000103	1	305.54	319.01	12.8
story 4	1.5(DL+LL)	Combination		Y	5.6E-05	3	293.54	319.01	12.8
story 4	ultimate envelope	Combination	Max	X	0.002803	3	293.54	319.01	12.8
story 4	ultimate envelope	Combination	Max	Y	0.002976	43	308.55	256.91	12.8
story 4	ultimate envelope	Combination	Min	X	0.002944	2	300.29	319.01	12.8
story 4	ultimate envelope	Combination	Min	Y	0.003037	48	293.54	266.4	12.8
story 4	seismic weight	Combination		X	6.2E-05	1	305.54	319.01	12.8
story 4	seismic weight	Combination		Y	3.1E-05	3	293.54	319.01	12.8
story 3	Dead	LinStatic		X	2.9E-05	3	293.54	319.01	9.8
story 3	Dead	LinStatic		Y	1.9E-05	3	293.54	319.01	9.8
story 3	Live	LinStatic		X	1E-05	1	305.54	319.01	9.8
story 3	Live	LinStatic		Y	9E-06	3	293.54	319.01	9.8
story 3	Floor finish	LinStatic		X	1.6E-05	3	293.54	319.01	9.8
story 3	Floor finish	LinStatic		Y	9E-06	3	293.54	319.01	9.8
story 3	sunken filling	LinStatic		X	1E-05	43	308.55	256.91	9.8
story 3	sunken filling	LinStatic		Y	7E-06	50	308.55	266.4	9.8
story 3	wall load	LinStatic		X	1.4E-05	3	293.54	319.01	9.8
story 3	wall load	LinStatic		Y	1.2E-05	3	293.54	319.01	9.8
story 3	seismic - X	LinStatic		X	0.002084	1	305.54	319.01	9.8
story 3	seismic - Y	LinStatic		Y	0.002351	23	293.54	295.81	9.8
story 3	RSX	LinRespSpec	Max	X	0.002282	1	305.54	319.01	9.8
story 3	RSX	LinRespSpec	Max	Y	0.000318	43	308.55	256.91	9.8
story 3	RXY	LinRespSpec	Max	Y	0.002095	26	293.54	288	9.8
story 3	roof live	LinStatic		X	1.1E-05	43	308.55	256.91	9.8
story 3	(DL+LL)	Combination		X	6.8E-05	3	293.54	319.01	9.8

story 3	(DL+LL)	Combination		Y	4.5E-05	3	293.54	319.01	9.8
story 3	09DL+1.5EQX	Combination		X	0.003075	1	305.54	319.01	9.8
story 3	09DL-1.5EQX	Combination		X	0.003177	1	305.54	319.01	9.8
story 3	0.9DL+1.5RSX	Combination	Max	X	0.003371	1	305.54	319.01	9.8
story 3	0.9DL+1.5RSX	Combination	Max	Y	0.000471	50	308.55	266.4	9.8
story 3	0.9DL+1.5RSX	Combination	Min	X	0.003474	1	305.54	319.01	9.8
story 3	0.9DL+1.5RSX	Combination	Min	Y	0.000488	4	308.55	317.49	9.8
story 3	0.9DL-1.5RSX	Combination	Max	X	0.003371	1	305.54	319.01	9.8
story 3	0.9DL-1.5RSX	Combination	Max	Y	0.000471	50	308.55	266.4	9.8
story 3	0.9DL-1.5RSX	Combination	Min	X	0.003474	1	305.54	319.01	9.8
story 3	0.9DL-1.5RSX	Combination	Min	Y	0.000488	4	308.55	317.49	9.8
story 3	09DL-1.5EQY	Combination		Y	0.003556	23	293.54	295.81	9.8
story 3	09DL+1.5EQY	Combination		Y	0.003498	26	293.54	288	9.8
story 3	0.9DL+1.5RSY	Combination	Max	Y	0.003115	26	293.54	288	9.8
story 3	0.9DL+1.5RSY	Combination	Min	Y	0.003173	23	293.54	295.81	9.8
story 3	0.9DL-1.5RSY	Combination	Max	Y	0.003115	26	293.54	288	9.8
story 3	0.9DL-1.5RSY	Combination	Min	Y	0.003173	23	293.54	295.81	9.8
story 3	1.2(DL+LL+EQX)	Combination		X	0.002421	1	305.54	319.01	9.8
story 3	1.2(DL+LL+EQX)	Combination		X	0.002581	1	305.54	319.01	9.8
story 3	1.2(DL+LL+RSX)	Combination	Max	X	0.002658	1	305.54	319.01	9.8
story 3	1.2(DL+LL+RSX)	Combination	Min	X	0.002818	1	305.54	319.01	9.8
story 3	1.2(DL+LL+RSX)	Combination	Min	Y	0.00041	3	293.54	319.01	9.8
story 3	1.2(DL+LL-RSX)	Combination	Max	X	0.002658	1	305.54	319.01	9.8
story 3	1.2(DL+LL-RSX)	Combination	Min	X	0.002818	1	305.54	319.01	9.8
story 3	1.2(DL+LL-RSX)	Combination	Min	Y	0.00041	3	293.54	319.01	9.8
story 3	1.2(DL+LL+EQY)	Combination		Y	0.002792	50	308.55	266.4	9.8
story 3	1.2(DL+LL+EQY)	Combination		Y	0.002872	23	293.54	295.81	9.8
story 3	1.2(DL+LL+RSY)	Combination	Max	Y	0.002468	29	293.54	281.07	9.8
story 3	1.2(DL+LL+RSY)	Combination	Min	Y	0.002565	23	293.54	295.81	9.8
story 3	1.2(DL+LL-RSY)	Combination	Max	Y	0.002468	29	293.54	281.07	9.8
story 3	1.2(DL+LL-RSY)	Combination	Min	Y	0.002565	23	293.54	295.81	9.8
story 3	1.5(DL+EQX)	Combination		X	0.003041	1	305.54	319.01	9.8
story 3	1.5(DL+EQY)	Combination		Y	0.003492	50	308.55	266.4	9.8
story 3	1.5(DL+RSX)	Combination	Max	X	0.003337	1	305.54	319.01	9.8
story 3	1.5(DL+RSX)	Combination	Max	Y	0.000467	50	308.55	266.4	9.8
story 3	1.5(DL+RSX)	Combination	Min	X	0.003508	1	305.54	319.01	9.8
story 3	1.5(DL+RSX)	Combination	Min	Y	0.000498	3	293.54	319.01	9.8
story 3	1.5(DL+RSY)	Combination	Max	Y	0.003097	29	293.54	281.07	9.8
story 3	1.5(DL+RSY)	Combination	Min	Y	0.003193	23	293.54	295.81	9.8
story 3	1.5(DL-EQX)	Combination		X	0.003212	1	305.54	319.01	9.8
story 3	1.5(DL-EQY)	Combination		Y	0.003576	23	293.54	295.81	9.8
story 3	1.5(DL-RSX)	Combination	Max	X	0.003337	1	305.54	319.01	9.8
story 3	1.5(DL-RSX)	Combination	Max	Y	0.000467	50	308.55	266.4	9.8
story 3	1.5(DL-RSX)	Combination	Min	X	0.003508	1	305.54	319.01	9.8
story 3	1.5(DL-RSX)	Combination	Min	Y	0.000498	3	293.54	319.01	9.8
story 3	1.5(DL-RSY)	Combination	Max	Y	0.003097	29	293.54	281.07	9.8

story 3	1.5(DL-RSY)	Combination	Min	Y	0.003193	23	293.54	295.81	9.8
story 3	DL+0.8LL+0.8EQX	Combination		X	0.001603	1	305.54	319.01	9.8
story 3	DL+0.8LL+0.8EQY	Combination		Y	0.00186	50	308.55	266.4	9.8
story 3	DL+0.8LL+0.8RSX	Combination		Y	0.00186	50	308.55	266.4	9.8
story 3	DL+0.8LL-0.8EQX	Combination		X	0.001732	1	305.54	319.01	9.8
story 3	DL+0.8LL-0.8EQY	Combination		Y	0.001921	23	293.54	295.81	9.8
story 3	DL+0.8LL-0.8RSX	Combination	Max	X	0.00176	1	305.54	319.01	9.8
story 3	DL+0.8LL-0.8RSX	Combination	Min	X	0.00189	1	305.54	319.01	9.8
story 3	DL+0.8LL-0.8RSX	Combination	Min	Y	0.00028	3	293.54	319.01	9.8
story 3	DL+0.8LL+0.8RSY	Combination	Max	Y	0.001641	42	305.96	256.91	9.8
story 3	DL+0.8LL+0.8RSY	Combination	Min	Y	0.001716	23	293.54	295.81	9.8
story 3	DL+0.8LL-0.8RSY	Combination	Max	Y	0.001641	42	305.96	256.91	9.8
story 3	DL+0.8LL-0.8RSY	Combination	Min	Y	0.001716	23	293.54	295.81	9.8
story 3	DL+EQX	Combination		X	0.002027	1	305.54	319.01	9.8
story 3	DL+EQY	Combination		Y	0.002328	50	308.55	266.4	9.8
story 3	DL+RSX	Combination	Max	X	0.002225	1	305.54	319.01	9.8
story 3	DL+RSX	Combination	Max	Y	0.000311	50	308.55	266.4	9.8
story 3	DL+RSX	Combination	Min	X	0.002338	1	305.54	319.01	9.8
story 3	DL+RSX	Combination	Min	Y	0.000332	3	293.54	319.01	9.8
story 3	DL+RSY	Combination	Max	Y	0.002065	29	293.54	281.07	9.8
story 3	DL+RSY	Combination	Min	Y	0.002128	23	293.54	295.81	9.8
story 3	DL-EQX	Combination		X	0.002141	1	305.54	319.01	9.8
story 3	DL-EQY	Combination		Y	0.002384	23	293.54	295.81	9.8
story 3	DL-RSX	Combination	Max	X	0.002225	1	305.54	319.01	9.8
story 3	DL-RSX	Combination	Max	Y	0.000311	50	308.55	266.4	9.8
story 3	DL-RSX	Combination	Min	X	0.002338	1	305.54	319.01	9.8
story 3	DL-RSX	Combination	Min	Y	0.000332	3	293.54	319.01	9.8
story 3	DL-RSY	Combination	Max	Y	0.002065	29	293.54	281.07	9.8
story 3	DL-RSY	Combination	Min	Y	0.002128	23	293.54	295.81	9.8
story 3	1.5(DL+LL)	Combination		X	0.000103	3	293.54	319.01	9.8
story 3	1.5(DL+LL)	Combination		Y	6.8E-05	3	293.54	319.01	9.8
story 3	ultimate envelope	Combination	Max	X	0.003371	1	305.54	319.01	9.8
story 3	ultimate envelope	Combination	Max	Y	0.003498	26	293.54	288	9.8
story 3	ultimate envelope	Combination	Min	X	0.003508	1	305.54	319.01	9.8
story 3	ultimate envelope	Combination	Min	Y	0.003576	23	293.54	295.81	9.8
story 3	seismic weight	Combination		X	6.1E-05	3	293.54	319.01	9.8
story 3	seismic weight	Combination		Y	3.8E-05	3	293.54	319.01	9.8
story 2	Dead	LinStatic		X	3.3E-05	7	308.55	310.14	6.8
story 2	Dead	LinStatic		Y	3.2E-05	1	305.54	319.01	6.8
story 2	Live	LinStatic		X	1.4E-05	7	308.55	310.14	6.8
story 2	Live	LinStatic		Y	1.4E-05	1	305.54	319.01	6.8
story 2	Floor finish	LinStatic		X	2E-05	7	308.55	310.14	6.8
story 2	Floor finish	LinStatic		Y	1.7E-05	1	305.54	319.01	6.8
story 2	sunken filling	LinStatic		X	1.1E-05	32	293.54	272.07	6.8
story 2	sunken filling	LinStatic		Y	8E-06	43	308.55	256.91	6.8
story 2	wall load	LinStatic		X	1.3E-05	7	308.55	310.14	6.8
story 2	wall load	LinStatic		Y	1.7E-05	1	305.54	319.01	6.8
story 2	seismic - X	LinStatic		X	0.002334	3	293.54	319.01	6.8
story 2	seismic - Y	LinStatic		Y	0.0029	19	300.29	314.14	6.8
story 2	RSX	LinRespSpec	Max	X	0.002782	3	293.54	319.01	6.8
story 2	RSX	LinRespSpec	Max	Y	0.000394	5	308.55	314.02	6.8
story 2	RXY	LinRespSpec	Max	Y	0.002774	19	300.29	314.14	6.8
story 2	roof live	LinStatic		X	8E-06	47	293.54	256.91	6.8
story 2	(DL+LL)	Combination		X	7.8E-05	7	308.55	310.14	6.8
story 2	(DL+LL)	Combination		Y	8E-05	1	305.54	319.01	6.8
story 2	09DL+1.5EQX	Combination		X	0.003471	3	293.54	319.01	6.8
story 2	09DL-1.5EQX	Combination		X	0.00353	3	293.54	319.01	6.8

story 2	0.9DL+1.5RSX	Combination	Max	X	0.004142	3	293.54	319.01	6.8
story 2	0.9DL+1.5RSX	Combination	Max	Y	0.000594	43	308.55	256.91	6.8
story 2	0.9DL+1.5RSX	Combination	Min	X	0.004202	3	293.54	319.01	6.8
story 2	0.9DL+1.5RSX	Combination	Min	Y	0.000625	5	308.55	314.02	6.8
story 2	0.9DL-1.5RSX	Combination	Max	X	0.004142	3	293.54	319.01	6.8
story 2	0.9DL-1.5RSX	Combination	Max	Y	0.000594	43	308.55	256.91	6.8
story 2	0.9DL-1.5RSX	Combination	Min	X	0.004202	3	293.54	319.01	6.8
story 2	0.9DL-1.5RSX	Combination	Min	Y	0.000625	5	308.55	314.02	6.8
story 2	0.9DL-1.5EQY	Combination		Y	0.004379	19	300.29	314.14	6.8
story 2	0.9DL+1.5EQY	Combination		Y	0.004321	19	300.29	314.14	6.8
story 2	0.9DL+1.5RSY	Combination	Max	Y	0.004133	19	300.29	314.14	6.8
story 2	0.9DL+1.5RSY	Combination	Min	Y	0.00419	19	300.29	314.14	6.8
story 2	0.9DL-1.5RSY	Combination	Max	Y	0.004133	19	300.29	314.14	6.8
story 2	0.9DL-1.5RSY	Combination	Min	Y	0.00419	19	300.29	314.14	6.8
story 2	1.2(DL+LL+EQX)	Combination		X	0.002751	3	293.54	319.01	6.8
story 2	1.2(DL+LL-EQX)	Combination		X	0.00285	3	293.54	319.01	6.8
story 2	1.2(DL+LL+RSX)	Combination	Max	X	0.003288	3	293.54	319.01	6.8
story 2	1.2(DL+LL+RSX)	Combination	Max	Y	0.000482	43	308.55	256.91	6.8
story 2	1.2(DL+LL+RSX)	Combination	Min	X	0.003387	3	293.54	319.01	6.8
story 2	1.2(DL+LL+RSX)	Combination	Min	Y	0.000527	4	308.55	317.49	6.8
story 2	1.2(DL+LL-RSX)	Combination	Max	X	0.003288	3	293.54	319.01	6.8
story 2	1.2(DL+LL-RSX)	Combination	Max	Y	0.000482	43	308.55	256.91	6.8
story 2	1.2(DL+LL-RSX)	Combination	Min	X	0.003387	3	293.54	319.01	6.8
story 2	1.2(DL+LL-RSX)	Combination	Min	Y	0.000527	4	308.55	317.49	6.8
story 2	1.2(DL+LL+EQY)	Combination		Y	0.003434	244	300.29	312.94	6.8
story 2	1.2(DL+LL-EQY)	Combination		Y	0.003527	19	300.29	314.14	6.8
story 2	1.2(DL+LL+RSY)	Combination	Max	Y	0.003283	244	300.29	312.94	6.8
story 2	1.2(DL+LL+RSY)	Combination	Min	Y	0.003377	19	300.29	314.14	6.8
story 2	1.2(DL+LL-RSY)	Combination	Max	Y	0.003283	244	300.29	312.94	6.8
story 2	1.2(DL+LL-RSY)	Combination	Min	Y	0.003377	19	300.29	314.14	6.8
story 2	1.5(DL+EQX)	Combination		X	0.003451	3	293.54	319.01	6.8
story 2	1.5(DL+EQY)	Combination		Y	0.004303	244	300.29	312.94	6.8
story 2	1.5(DL+RSX)	Combination	Max	X	0.004123	3	293.54	319.01	6.8
story 2	1.5(DL+RSX)	Combination	Max	Y	0.000601	43	308.55	256.91	6.8
story 2	1.5(DL+RSX)	Combination	Min	X	0.004222	3	293.54	319.01	6.8
story 2	1.5(DL+RSX)	Combination	Min	Y	0.000647	5	308.55	314.02	6.8
story 2	1.5(DL+RSY)	Combination	Max	Y	0.004115	244	300.29	312.94	6.8
story 2	1.5(DL+RSY)	Combination	Min	Y	0.004209	19	300.29	314.14	6.8
story 2	1.5(DL-EQX)	Combination		X	0.00355	3	293.54	319.01	6.8
story 2	1.5(DL-EQY)	Combination		Y	0.004398	19	300.29	314.14	6.8
story 2	1.5(DL-RSX)	Combination	Max	X	0.004123	3	293.54	319.01	6.8
story 2	1.5(DL-RSX)	Combination	Max	Y	0.000601	43	308.55	256.91	6.8
story 2	1.5(DL-RSX)	Combination	Min	X	0.004222	3	293.54	319.01	6.8
story 2	1.5(DL-RSX)	Combination	Min	Y	0.000647	5	308.55	314.02	6.8
story 2	1.5(DL-RSY)	Combination	Max	Y	0.004115	244	300.29	312.94	6.8
story 2	1.5(DL-RSY)	Combination	Min	Y	0.004209	19	300.29	314.14	6.8
story 2	DL+0.8LL+0.8EQX	Combination		X	0.001827	3	293.54	319.01	6.8
story 2	DL+0.8LL+0.8EQY	Combination		Y	0.002283	244	300.29	312.94	6.8
story 2	DL+0.8LL+0.8RSX	Combination		Y	0.002283	244	300.29	312.94	6.8
story 2	DL+0.8LL-0.8EQX	Combination		X	0.001907	3	293.54	319.01	6.8
story 2	DL+0.8LL-0.8EQY	Combination		Y	0.002358	19	300.29	314.14	6.8
story 2	DL+0.8LL-0.8RSX	Combination	Max	X	0.002186	3	293.54	319.01	6.8
story 2	DL+0.8LL-0.8RSX	Combination	Max	Y	0.000324	43	308.55	256.91	6.8
story 2	DL+0.8LL-0.8RSX	Combination	Min	X	0.002265	3	293.54	319.01	6.8
story 2	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000359	4	308.55	317.49	6.8
story 2	DL+0.8LL+0.8RSY	Combination	Max	Y	0.002183	244	300.29	312.94	6.8
story 2	DL+0.8LL+0.8RSY	Combination	Min	Y	0.002257	19	300.29	314.14	6.8

story 2	DL+0.8LL-0.8RSY	Combination	Max	Y	0.002183	244	300.29	312.94	6.8
story 2	DL+0.8LL-0.8RSY	Combination	Min	Y	0.002257	19	300.29	314.14	6.8
story 2	DL+EQX	Combination		X	0.0023	3	293.54	319.01	6.8
story 2	DL+EQY	Combination		Y	0.002869	244	300.29	312.94	6.8
story 2	DL+RSX	Combination	Max	X	0.002748	3	293.54	319.01	6.8
story 2	DL+RSX	Combination	Max	Y	0.000401	43	308.55	256.91	6.8
story 2	DL+RSX	Combination	Min	X	0.002815	3	293.54	319.01	6.8
story 2	DL+RSX	Combination	Min	Y	0.000431	5	308.55	314.02	6.8
story 2	DL+RSY	Combination	Max	Y	0.002743	244	300.29	312.94	6.8
story 2	DL+RSY	Combination	Min	Y	0.002806	19	300.29	314.14	6.8
story 2	DL-EQX	Combination		X	0.002367	3	293.54	319.01	6.8
story 2	DL-EQY	Combination		Y	0.002932	19	300.29	314.14	6.8
story 2	DL-RSX	Combination	Max	X	0.002748	3	293.54	319.01	6.8
story 2	DL-RSX	Combination	Max	Y	0.000401	43	308.55	256.91	6.8
story 2	DL-RSX	Combination	Min	X	0.002815	3	293.54	319.01	6.8
story 2	DL-RSX	Combination	Min	Y	0.000431	5	308.55	314.02	6.8
story 2	DL-RSY	Combination	Max	Y	0.002743	244	300.29	312.94	6.8
story 2	DL-RSY	Combination	Min	Y	0.002806	19	300.29	314.14	6.8
story 2	1.5(DL+LL)	Combination		X	0.000118	7	308.55	310.14	6.8
story 2	1.5(DL+LL)	Combination		Y	0.00012	1	305.54	319.01	6.8
story 2	ultimate envelope	Combination	Max	X	0.004142	3	293.54	319.01	6.8
story 2	ultimate envelope	Combination	Max	Y	0.004321	19	300.29	314.14	6.8
story 2	ultimate envelope	Combination	Min	X	0.004222	3	293.54	319.01	6.8
story 2	ultimate envelope	Combination	Min	Y	0.004398	19	300.29	314.14	6.8
story 2	seismic weight	Combination		X	6.9E-05	7	308.55	310.14	6.8
story 2	seismic weight	Combination		Y	7E-05	1	305.54	319.01	6.8
story 1	Dead	LinStatic		X	4.1E-05	4	308.55	317.49	3.8
story 1	Dead	LinStatic		Y	6.4E-05	98	302.11	281.07	3.8
story 1	Live	LinStatic		X	1.6E-05	4	308.55	317.49	3.8
story 1	Live	LinStatic		Y	3.7E-05	98	302.11	281.07	3.8
story 1	Floor finish	LinStatic		X	2.3E-05	4	308.55	317.49	3.8
story 1	Floor finish	LinStatic		Y	4.2E-05	98	302.11	281.07	3.8
story 1	sunken filling	LinStatic		X	6E-06	41	305.96	259.77	3.8
story 1	sunken filling	LinStatic		Y	9E-06	96	302.11	295.81	3.8
story 1	wall load	LinStatic		X	2.1E-05	5	308.55	314.02	3.8
story 1	wall load	LinStatic		Y	2.3E-05	100	302.11	266.4	3.8
story 1	seismic - X	LinStatic		X	0.003113	2	300.29	319.01	3.8
story 1	seismic - Y	LinStatic		Y	0.00424	39	296.7	262.93	3.8
story 1	RSX	LinRespSpec	Max	X	0.004011	2	300.29	319.01	3.8
story 1	RSX	LinRespSpec	Max	Y	0.000612	22	308.55	302.63	3.8
story 1	RXY	LinRespSpec	Max	Y	0.004342	39	296.7	262.93	3.8
story 1	roof live	LinStatic		X	5E-06	39	296.7	262.93	3.8
story 1	roof live	LinStatic		Y	3E-06	41	305.96	259.77	3.8
story 1	(DL+LL)	Combination		X	0.000105	4	308.55	317.49	3.8
story 1	0.9DL+1.5EQX	Combination		X	0.004632	2	300.29	319.01	3.8
story 1	0.9DL+1.5EQX	Combination		X	0.004708	1	305.54	319.01	3.8
story 1	0.9DL+1.5RSX	Combination	Max	X	0.00598	2	300.29	319.01	3.8
story 1	0.9DL+1.5RSX	Combination	Max	Y	0.000903	7	308.55	310.14	3.8
story 1	0.9DL+1.5RSX	Combination	Min	X	0.006055	1	305.54	319.01	3.8
story 1	0.9DL+1.5RSX	Combination	Min	Y	0.000935	22	308.55	302.63	3.8
story 1	0.9DL+1.5RSX	Combination	Max	X	0.00598	2	300.29	319.01	3.8
story 1	0.9DL+1.5RSX	Combination	Max	Y	0.000903	7	308.55	310.14	3.8
story 1	0.9DL+1.5RSX	Combination	Min	X	0.006055	1	305.54	319.01	3.8
story 1	0.9DL+1.5RSX	Combination	Min	Y	0.000935	22	308.55	302.63	3.8
story 1	0.9DL+1.5EQY	Combination		Y	0.006408	39	296.7	262.93	3.8
story 1	0.9DL+1.5EQY	Combination		Y	0.006312	39	296.7	262.93	3.8
story 1	0.9DL+1.5RSY	Combination	Max	Y	0.006465	39	296.7	262.93	3.8

story 1	0.9DL+1.5RSY	Combination	Min	Y	0.006561	39	296.7	262.93	3.8
story 1	0.9DL-1.5RSY	Combination	Max	Y	0.006465	39	296.7	262.93	3.8
story 1	0.9DL-1.5RSY	Combination	Min	Y	0.006561	39	296.7	262.93	3.8
story 1	1.2(DL+LL+EQX)	Combination		X	0.003674	2	300.29	319.01	3.8
story 1	1.2(DL+LL-EQX)	Combination		X	0.003801	1	305.54	319.01	3.8
story 1	1.2(DL+LL+RSX)	Combination	Max	X	0.004752	2	300.29	319.01	3.8
story 1	1.2(DL+LL+RSX)	Combination	Min	X	0.004878	1	305.54	319.01	3.8
story 1	1.2(DL+LL+RSX)	Combination	Min	Y	0.000759	22	308.55	302.63	3.8
story 1	1.2(DL+LL-RSX)	Combination	Max	X	0.004752	2	300.29	319.01	3.8
story 1	1.2(DL+LL-RSX)	Combination	Min	X	0.004878	1	305.54	319.01	3.8
story 1	1.2(DL+LL-RSX)	Combination	Min	Y	0.000759	22	308.55	302.63	3.8
story 1	1.2(DL+LL+EQY)	Combination		Y	0.005013	39	296.7	262.93	3.8
story 1	1.2(DL+LL-EQY)	Combination		Y	0.005164	39	296.7	262.93	3.8
story 1	1.2(DL+LL+RSY)	Combination	Max	Y	0.005135	39	296.7	262.93	3.8
story 1	1.2(DL+LL+RSY)	Combination	Min	Y	0.005286	39	296.7	262.93	3.8
story 1	1.2(DL+LL-RSY)	Combination	Max	Y	0.005135	39	296.7	262.93	3.8
story 1	1.2(DL+LL-RSY)	Combination	Min	Y	0.005286	39	296.7	262.93	3.8
story 1	1.5(DL+EQX)	Combination		X	0.004608	2	300.29	319.01	3.8
story 1	1.5(DL+EQY)	Combination		Y	0.00628	39	296.7	262.93	3.8
story 1	1.5(DL+RSX)	Combination	Max	X	0.005956	2	300.29	319.01	3.8
story 1	1.5(DL+RSX)	Combination	Max	Y	0.000895	7	308.55	310.14	3.8
story 1	1.5(DL+RSX)	Combination	Min	X	0.006081	1	305.54	319.01	3.8
story 1	1.5(DL+RSX)	Combination	Min	Y	0.000945	22	308.55	302.63	3.8
story 1	1.5(DL+RSY)	Combination	Max	Y	0.006433	39	296.7	262.93	3.8
story 1	1.5(DL+RSY)	Combination	Min	Y	0.006593	39	296.7	262.93	3.8
story 1	1.5(DL-EQX)	Combination		X	0.004735	1	305.54	319.01	3.8
story 1	1.5(DL-EQY)	Combination		Y	0.00644	39	296.7	262.93	3.8
story 1	1.5(DL-RSX)	Combination	Max	X	0.005956	2	300.29	319.01	3.8
story 1	1.5(DL-RSX)	Combination	Max	Y	0.000895	7	308.55	310.14	3.8
story 1	1.5(DL-RSX)	Combination	Min	X	0.006081	1	305.54	319.01	3.8
story 1	1.5(DL-RSX)	Combination	Min	Y	0.000945	22	308.55	302.63	3.8
story 1	1.5(DL-RSY)	Combination	Max	Y	0.006433	39	296.7	262.93	3.8
story 1	1.5(DL-RSY)	Combination	Min	Y	0.006593	39	296.7	262.93	3.8
story 1	DL+0.8LL+0.8EQX	Combination		X	0.002442	3	293.54	319.01	3.8
story 1	DL+0.8LL+0.8EQY	Combination		Y	0.003331	39	296.7	262.93	3.8
story 1	DL+0.8LL+0.8RSX	Combination		Y	0.003331	39	296.7	262.93	3.8
story 1	DL+0.8LL-0.8EQX	Combination		X	0.002544	4	308.55	317.49	3.8
story 1	DL+0.8LL-0.8EQY	Combination		Y	0.003453	39	296.7	262.93	3.8
story 1	DL+0.8LL-0.8RSX	Combination	Max	X	0.00316	2	300.29	319.01	3.8
story 1	DL+0.8LL-0.8RSX	Combination	Min	X	0.003261	1	305.54	319.01	3.8
story 1	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000509	22	308.55	302.63	3.8
story 1	DL+0.8LL+0.8RSY	Combination	Max	Y	0.003413	39	296.7	262.93	3.8
story 1	DL+0.8LL+0.8RSY	Combination	Min	Y	0.003534	39	296.7	262.93	3.8
story 1	DL+0.8LL-0.8RSY	Combination	Max	Y	0.003413	39	296.7	262.93	3.8
story 1	DL+0.8LL-0.8RSY	Combination	Min	Y	0.003534	39	296.7	262.93	3.8
story 1	DL+EQX	Combination		X	0.003072	2	300.29	319.01	3.8
story 1	DL+EQY	Combination		Y	0.004187	39	296.7	262.93	3.8
story 1	DL+RSX	Combination	Max	X	0.00397	2	300.29	319.01	3.8
story 1	DL+RSX	Combination	Max	Y	0.000596	7	308.55	310.14	3.8
story 1	DL+RSX	Combination	Min	X	0.004054	1	305.54	319.01	3.8
story 1	DL+RSX	Combination	Min	Y	0.00063	22	308.55	302.63	3.8
story 1	DL+RSY	Combination	Max	Y	0.004289	39	296.7	262.93	3.8
story 1	DL+RSY	Combination	Min	Y	0.004395	39	296.7	262.93	3.8
story 1	DL-EQX	Combination		X	0.003156	1	305.54	319.01	3.8
story 1	DL-EQY	Combination		Y	0.004294	39	296.7	262.93	3.8
story 1	DL-RSX	Combination	Max	X	0.00397	2	300.29	319.01	3.8
story 1	DL-RSX	Combination	Max	Y	0.000596	7	308.55	310.14	3.8

story 1	DL-RSX	Combination	Min	X	0.004054	1	305.54	319.01	3.8
story 1	DL-RSX	Combination	Min	Y	0.00063	22	308.55	302.63	3.8
story 1	DL-RSY	Combination	Max	Y	0.004289	39	296.7	262.93	3.8
story 1	DL-RSY	Combination	Min	Y	0.004395	39	296.7	262.93	3.8
story 1	1.5(DL+LL)	Combination		X	0.000158	4	308.55	317.49	3.8
story 1	ultimate envelope	Combination	Max	X	0.00598	2	300.29	319.01	3.8
story 1	ultimate envelope	Combination	Max	Y	0.006465	39	296.7	262.93	3.8
story 1	ultimate envelope	Combination	Min	X	0.006081	1	305.54	319.01	3.8
story 1	ultimate envelope	Combination	Min	Y	0.006593	39	296.7	262.93	3.8
story 1	seismic weight	Combination		X	9.2E-05	4	308.55	317.49	3.8
plinth beam	Dead	LinStatic		X	3.6E-05	93	293.54	261.65	0
plinth beam	Dead	LinStatic		Y	0.000104	99	302.11	272.07	0
plinth beam	Live	LinStatic		Y	5.3E-05	99	302.11	272.07	0
plinth beam	Floor finish	LinStatic		Y	6E-05	99	302.11	272.07	0
plinth beam	sunken filling	LinStatic		X	8E-06	93	293.54	261.65	0
plinth beam	sunken filling	LinStatic		Y	1.5E-05	1	305.54	319.01	0
plinth beam	wall load	LinStatic		X	2.6E-05	93	293.54	261.65	0
plinth beam	wall load	LinStatic		Y	4.1E-05	99	302.11	272.07	0
plinth beam	seismic - X	LinStatic		X	0.001813	5	308.55	314.02	0
plinth beam	seismic - Y	LinStatic		Y	0.003324	100	302.11	266.4	0
plinth beam	RSX	LinRespSpec	Max	X	0.002346	4	308.55	317.49	0
plinth beam	RSX	LinRespSpec	Max	Y	0.000384	5	308.55	314.02	0
plinth beam	RXY	LinRespSpec	Max	Y	0.003442	100	302.11	266.4	0
plinth beam	roof live	LinStatic		X	2E-06	99	302.11	272.07	0
plinth beam	roof live	LinStatic		Y	3E-06	42	305.96	256.91	0
plinth beam	(DL+LL)	Combination		X	9.4E-05	93	293.54	261.65	0
plinth beam	(DL+LL)	Combination		Y	0.000256	99	302.11	272.07	0
plinth beam	0.9DL+1.5EQX	Combination		X	0.002754	5	308.55	314.02	0
plinth beam	0.9DL-1.5EQX	Combination		X	0.002731	6	293.54	313.3	0
plinth beam	0.9DL+1.5RSX	Combination	Max	X	0.003549	4	308.55	317.49	0
plinth beam	0.9DL+1.5RSX	Combination	Max	Y	0.000602	4	308.55	317.49	0
plinth beam	0.9DL+1.5RSX	Combination	Min	X	0.003554	3	293.54	319.01	0
plinth beam	0.9DL+1.5RSX	Combination	Min	Y	0.000565	75	304.42	272.07	0
plinth beam	0.9DL-1.5RSX	Combination	Max	X	0.003549	4	308.55	317.49	0
plinth beam	0.9DL-1.5RSX	Combination	Max	Y	0.000602	4	308.55	317.49	0
plinth beam	0.9DL-1.5RSX	Combination	Min	X	0.003554	3	293.54	319.01	0
plinth beam	0.9DL-1.5RSX	Combination	Min	Y	0.000565	75	304.42	272.07	0
plinth beam	0.9DL-1.5EQY	Combination		Y	0.005135	99	302.11	272.07	0
plinth beam	0.9DL+1.5EQY	Combination		Y	0.005037	100	302.11	266.4	0
plinth beam	0.9DL+1.5RSY	Combination	Max	Y	0.005214	100	302.11	266.4	0
plinth beam	0.9DL+1.5RSY	Combination	Min	Y	0.005315	99	302.11	272.07	0
plinth beam	0.9DL-1.5RSY	Combination	Max	Y	0.005214	100	302.11	266.4	0
plinth beam	0.9DL-1.5RSY	Combination	Min	Y	0.005315	99	302.11	272.07	0
plinth beam	1.2(DL+LL+EQX)	Combination		X	0.00223	5	308.55	314.02	0
plinth beam	1.2(DL+LL+EQX)	Combination		X	0.002222	6	293.54	313.3	0
plinth beam	1.2(DL+LL+RSX)	Combination	Max	X	0.002865	4	308.55	317.49	0
plinth beam	1.2(DL+LL+RSX)	Combination	Max	Y	0.000531	1	305.54	319.01	0
plinth beam	1.2(DL+LL+RSX)	Combination	Min	X	0.002877	3	293.54	319.01	0
plinth beam	1.2(DL+LL+RSX)	Combination	Min	Y	0.000606	75	304.42	272.07	0
plinth beam	1.2(DL+LL+RSX)	Combination	Max	X	0.002865	4	308.55	317.49	0
plinth beam	1.2(DL+LL+RSX)	Combination	Max	Y	0.000531	1	305.54	319.01	0
plinth beam	1.2(DL+LL+RSX)	Combination	Min	X	0.002877	3	293.54	319.01	0
plinth beam	1.2(DL+LL+RSX)	Combination	Min	Y	0.000606	75	304.42	272.07	0
plinth beam	1.2(DL+LL+EQY)	Combination		Y	0.00412	98	302.11	281.07	0
plinth beam	1.2(DL+LL+EQY)	Combination		Y	0.004269	99	302.11	272.07	0
plinth beam	1.2(DL+LL+RSY)	Combination	Max	Y	0.004262	98	302.11	281.07	0
plinth beam	1.2(DL+LL+RSY)	Combination	Min	Y	0.004413	99	302.11	272.07	0

plinth beam	1.2(DL+LL-RSY)	Combination	Max	Y	0.004262	98	302.11	281.07	0
plinth beam	1.2(DL+LL-RSY)	Combination	Min	Y	0.004413	99	302.11	272.07	0
plinth beam	1.5(DL+EQX)	Combination		X	0.002777	5	308.55	314.02	0
plinth beam	1.5(DL+EQY)	Combination		Y	0.005089	98	302.11	281.07	0
plinth beam	1.5(DL+RSX)	Combination	Max	X	0.003569	4	308.55	317.49	0
plinth beam	1.5(DL+RSX)	Combination	Max	Y	0.000621	1	305.54	319.01	0
plinth beam	1.5(DL+RSX)	Combination	Min	X	0.003587	3	293.54	319.01	0
plinth beam	1.5(DL+RSX)	Combination	Min	Y	0.000681	75	304.42	272.07	0
plinth beam	1.5(DL+RSY)	Combination	Max	Y	0.005267	98	302.11	281.07	0
plinth beam	1.5(DL+RSY)	Combination	Min	Y	0.005437	99	302.11	272.07	0
plinth beam	1.5(DL-EQX)	Combination		X	0.00276	6	293.54	313.3	0
plinth beam	1.5(DL-EQY)	Combination		Y	0.005257	99	302.11	272.07	0
plinth beam	1.5(DL-RSX)	Combination	Max	X	0.003569	4	308.55	317.49	0
plinth beam	1.5(DL-RSX)	Combination	Max	Y	0.000621	1	305.54	319.01	0
plinth beam	1.5(DL-RSX)	Combination	Min	X	0.003587	3	293.54	319.01	0
plinth beam	1.5(DL-RSX)	Combination	Min	Y	0.000681	75	304.42	272.07	0
plinth beam	1.5(DL-RSY)	Combination	Max	Y	0.005267	98	302.11	281.07	0
plinth beam	1.5(DL-RSY)	Combination	Min	Y	0.005437	99	302.11	272.07	0
plinth beam	DL+0.8LL+0.8EQX	Combination		X	0.001495	5	308.55	314.02	0
plinth beam	DL+0.8LL+0.8EQY	Combination		Y	0.00277	98	302.11	281.07	0
plinth beam	DL+0.8LL+0.8RSX	Combination		Y	0.00277	98	302.11	281.07	0
plinth beam	DL+0.8LL-0.8EQX	Combination		X	0.001491	6	293.54	313.3	0
plinth beam	DL+0.8LL-0.8EQY	Combination		Y	0.002887	99	302.11	272.07	0
plinth beam	DL+0.8LL-0.8RSX	Combination	Max	X	0.001917	4	308.55	317.49	0
plinth beam	DL+0.8LL-0.8RSX	Combination	Max	Y	0.000382	1	305.54	319.01	0
plinth beam	DL+0.8LL-0.8RSX	Combination	Min	X	0.001929	3	293.54	319.01	0
plinth beam	DL+0.8LL-0.8RSX	Combination	Min	Y	0.000443	75	304.42	272.07	0
plinth beam	DL+0.8LL+0.8RSY	Combination	Max	Y	0.002865	98	302.11	281.07	0
plinth beam	DL+0.8LL+0.8RSY	Combination	Min	Y	0.002983	99	302.11	272.07	0
plinth beam	DL+0.8LL-0.8RSY	Combination	Max	Y	0.002865	98	302.11	281.07	0
plinth beam	DL+0.8LL-0.8RSY	Combination	Min	Y	0.002983	99	302.11	272.07	0
plinth beam	DL+EQX	Combination		X	0.001851	5	308.55	314.02	0
plinth beam	DL+EQY	Combination		Y	0.003393	98	302.11	281.07	0
plinth beam	DL+RSX	Combination	Max	X	0.00238	4	308.55	317.49	0
plinth beam	DL+RSX	Combination	Max	Y	0.000414	1	305.54	319.01	0
plinth beam	DL+RSX	Combination	Min	X	0.002391	3	293.54	319.01	0
plinth beam	DL+RSX	Combination	Min	Y	0.000454	75	304.42	272.07	0
plinth beam	DL+RSY	Combination	Max	Y	0.003512	98	302.11	281.07	0
plinth beam	DL+RSY	Combination	Min	Y	0.003624	99	302.11	272.07	0
plinth beam	DL-EQX	Combination		X	0.00184	6	293.54	313.3	0
plinth beam	DL-EQY	Combination		Y	0.003505	99	302.11	272.07	0
plinth beam	DL-RSX	Combination	Max	X	0.00238	4	308.55	317.49	0
plinth beam	DL-RSX	Combination	Max	Y	0.000414	1	305.54	319.01	0
plinth beam	DL-RSX	Combination	Min	X	0.002391	3	293.54	319.01	0
plinth beam	DL-RSX	Combination	Min	Y	0.000454	75	304.42	272.07	0
plinth beam	DL-RSY	Combination	Max	Y	0.003512	98	302.11	281.07	0
plinth beam	DL-RSY	Combination	Min	Y	0.003624	99	302.11	272.07	0
plinth beam	1.5(DL+LL)	Combination		X	0.000142	93	293.54	261.65	0
plinth beam	1.5(DL+LL)	Combination		Y	0.000385	99	302.11	272.07	0
plinth beam	ultimate envelope	Combination	Max	X	0.003569	4	308.55	317.49	0
plinth beam	ultimate envelope	Combination	Max	Y	0.005267	98	302.11	281.07	0
plinth beam	ultimate envelope	Combination	Min	X	0.003587	3	293.54	319.01	0
plinth beam	ultimate envelope	Combination	Min	Y	0.005437	99	302.11	272.07	0
plinth beam	seismic weight	Combination		X	8.6E-05	93	293.54	261.65	0
plinth beam	seismic weight	Combination		Y	0.000216	99	302.11	272.07	0

4.2 Modal Results

Table 4.2 - Modal Participating Mass Ratios (Part 1 of 2)

Case	Mode	Period sec	UX	UY	UZ	SumUX	SumUY	SumUZ	RX	RY	RZ	SumRX
Modal	1	1.697	0.0016	0.9199	0	0.0016	0.9199	0	0.0785	0.0002	0.0004	0.0785
Modal	2	1.478	0.6914	0.0022	0	0.693	0.9221	0	0.0001	0.0661	0.216	0.0786
Modal	3	1.292	0.2148	2.647E-06	0	0.9078	0.9221	0	1.643E-06	0.029	0.6873	0.0786
Modal	4	0.502	0.0002	0.0459	0	0.908	0.9681	0	0.7743	0.0017	0.0001	0.8529
Modal	5	0.441	0.0411	0.0001	0	0.9492	0.9682	0	0.0029	0.5373	0.0152	0.8558
Modal	6	0.398	0.0162	5.541E-07	0	0.9654	0.9682	0	2.855E-05	0.2096	0.0412	0.8559
Modal	7	0.272	3.58E-06	0.0082	0	0.9654	0.9764	0	0.0178	1.247E-05	1.108E-05	0.8737
Modal	8	0.264	0.0004	6.198E-06	0	0.9658	0.9764	0	1.104E-06	0.0004	0.0013	0.8737
Modal	9	0.233	0.0056	8.495E-07	0	0.9714	0.9764	0	0	0.015	0.0039	0.8737
Modal	10	0.223	0.0003	3.271E-05	0	0.9717	0.9764	0	0.0001	0.0001	0.0003	0.8738
Modal	11	0.22	0.0013	0.0006	0	0.973	0.977	0	0.003	0.0032	0.0012	0.8768
Modal	12	0.212	0.0035	0.0003	0	0.9765	0.9773	0	0.002	0.0125	0.004	0.8787

DESIGN OF ISOLATED SQUARE FOOTING: (C33)

Load in kn (P)	2270	Breadth of pedestal	380
SBC in kn/m ²	190	Length of pedestal	750
Size of the footing required (B)	3.456497	Free end thickness	230
Net upward pressure (q)	185.3061	Size provided in m	3.5
Maximum bending moment @ face of the column (Mu)	1183.773	Size in feet	11.48
Depth required (d)	748.1863	Depth provided (d)	875
K	2.917268		
Pt	0.768		
Ast in mm ²	3561.6		
Spacing of 10mm dia	77.1816		
Spacing of 12mm dia	111.1439		
Spacing of 16mm dia	197.5825		

Check for one way shear:

Shear force (V)	666.4071		
Eff. Depth (d')	527.5253		
Top width	2280		
Tv	0.554066	Tc from table-19	0.59
Pt	0.65		Safe in SHEAR
Ast in mm ²	7817.924		
Spacing of 10mm dia	35.16151		
Spacing of 12mm dia	50.63364		
Spacing of 16mm dia	90.01238		

Check for two way shear:

Punching shear (Vp)	2838.137
Perimeter of the critical section	5760
Eff. Depth (d')	717.5505

Tv	0.686686		
Tc	1.369306	Punching Ratio	0.5

Check for transfer of load @ the column base:

Permissible bearing stress	27
Actual bearing stress	7.964912

Safe in
punching

Design of short column with bi axial bending:C37

Description	GF	
Axial load in Kn	2426	
Moment in Knm (Mux)	118	
Moment in Knm (Muy)	230	
Assumed length of column in mm (D)	675	
Assumed breadth of column in mm (B)	300	
Assumed % of steel	3.7	
Grade of concrete	30	
p/fck	0.123333333	
d'/D	0.074074074	
d'/B	0.166666667	
Pu/(fck*B*D)	0.399341564	
Referring to chart in SP-16	chart-48	
Value from chart	0.15	
Mux1 in Knm	615.09375	
Referring to chart in SP-16	chart-50	
Value from chart	0.14	
Muy1 in Knm	255.15	
Referring to chart-63 of SP-16		
Puz/ Ag	27	
Puz in Kn	5467.5	
Pu/Puz	0.443712849	
Mux/Mux1	0.191840675	
Muy/Muy1	0.901430531	
Referring to chart-64 of SP-16		
Permissible Muy/Muy1	0.92	
Check	safe and assumed % of steel is	
Ast required	correct	
Provide steel	7492.5	
Dia of lateral ties:		
Dia of main rod provided	25	
6mm	6mm	
1/4 times Dia of main rod	06.25	
Dia of lateral ties choosen	8mm	
Spacing of lateral ties:		
16 times the dia of main rod		320
Least lateral dimension of column		300
Provide 8mm dia 2 legged lateral ties		
@	175 mm c/c	

Design of Floor Slab:

Assume the slab thickness as 150 mm

$$\text{Dead load of slab (} 0.150 \times 25 \text{)} = 3.75 \text{ kn/m}^2$$

$$\text{Live load} = 2.00 \text{ kn/m}^2$$

$$\text{Partition wall load} = 1.00 \text{ kn/m}^2$$

$$\text{Floor finish load} = 1.25 \text{ kn/m}^2$$

$$8.00 \text{ kn/m}^2$$

$$w = 8.0 \text{ kn/m}^2$$

$$\text{Long span } L_y = 5.30 \text{ m}$$

$$\text{Short span } L_x = 4.95 \text{ m}$$

$$L_y / L_x = 1.07 < 2.0$$

To design as two way slab with two long edges continuous & slab thickness as 150mm

$$\begin{aligned} \text{Positive moment @ mid span} &= 0.037 \times 1.5 \times 8 \times 4.95^2 \\ &= 10.88 \text{ knm} \end{aligned}$$

$$\begin{aligned} \text{Negative moment @ mid span} &= 0.049 \times 1.5 \times 8 \times 4.95^2 \\ &= 14.41 \text{ knm} \end{aligned}$$

Referring to the table – 37 of SP – 16 and assuming the slab thickness as 150mm

Provide 8mm dia @ 130mm c/c along shorter span and 8mm dia @ 140mm c/c along the longer span with alternate rods cranked @ 0.2 times of respective span

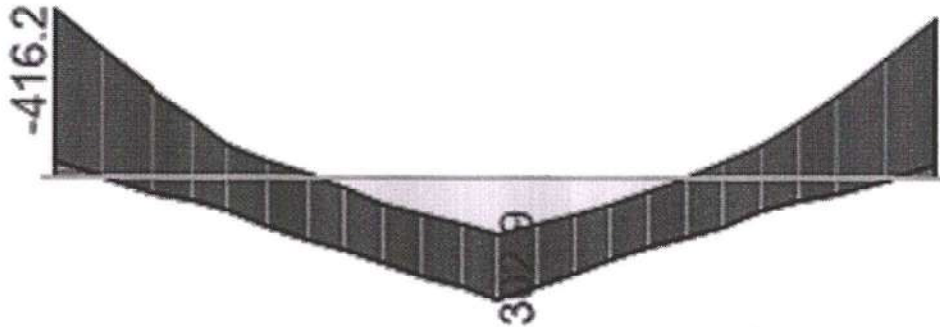
Check for deflection:

$$\begin{aligned} \text{Permissible span / depth} &= 23.0 \times 1.7 \text{ (referring to fig.4 of IS456)} \\ &= 39.1 \end{aligned}$$

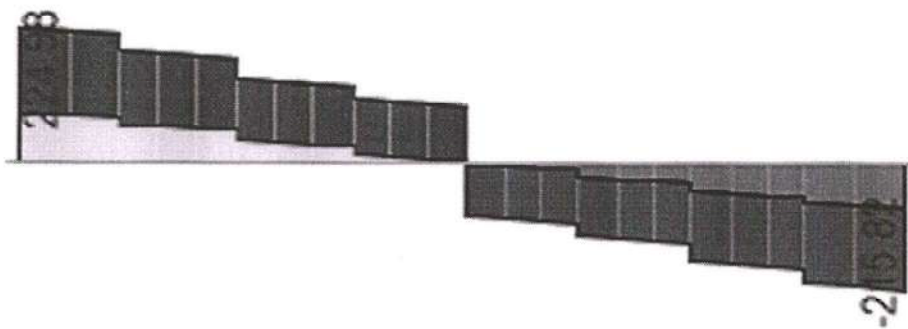
$$\begin{aligned} \text{Actual deflection} &= 4950 / 130 \\ &= 38.07 < 39.1 \end{aligned}$$

Hence safe

Design of critical floor beam:



Critical Bending Moment Diagram



Critical Shear Force Diagram

Assume beam size as 230mm x 675mm

Max factored B.M @ top of support = 417kNm

$K = 4.64$, $P_t = 1.305$, $P_c = 0.182$

$A_{st} = 1876 \text{ mm}^2$ $A_{sc} = 262 \text{ mm}^2$

Therefore provide 3-20+3-20mm dia@ top of support

Max factored moment @ bottom = 303kNm

$K = 3.37$, $P_t = 0.925$

$A_{st} = 1330 \text{ mm}^2$

Therefore provide 3-20+2-16mm dia @ bottom

Factored shear force @ support = 225kn

$$V_{us} = 225000 - (0.72 \times 230 \times 625)$$

$$V_{us}/d = 1.94\text{kn/cm}$$

Referring to Table – 62 of SP-16, provide 8mm dia stirrups @ 150mm c/c

end of report