Job Information

	Engineer	Checked	Approved
Name:	Bhavesh Bajaj		
Date:	02-Oct-25		

Comments:	
Structure Type:	SPACE FRAME

Geometry

Entity Type	Count	Highest
Nodes	18	18
Analytical Members	21	21
Plates	1	22

Load Cases

Load Case Type	Count
Primary	2
Combination	1

Included in this printout are data for:

All	The Whole Structure

Load Case Table

Included in this printout are results for load cases:

L/C	Type	Name
3	Combination	COMBINATION LOAD CASE 3

Sections

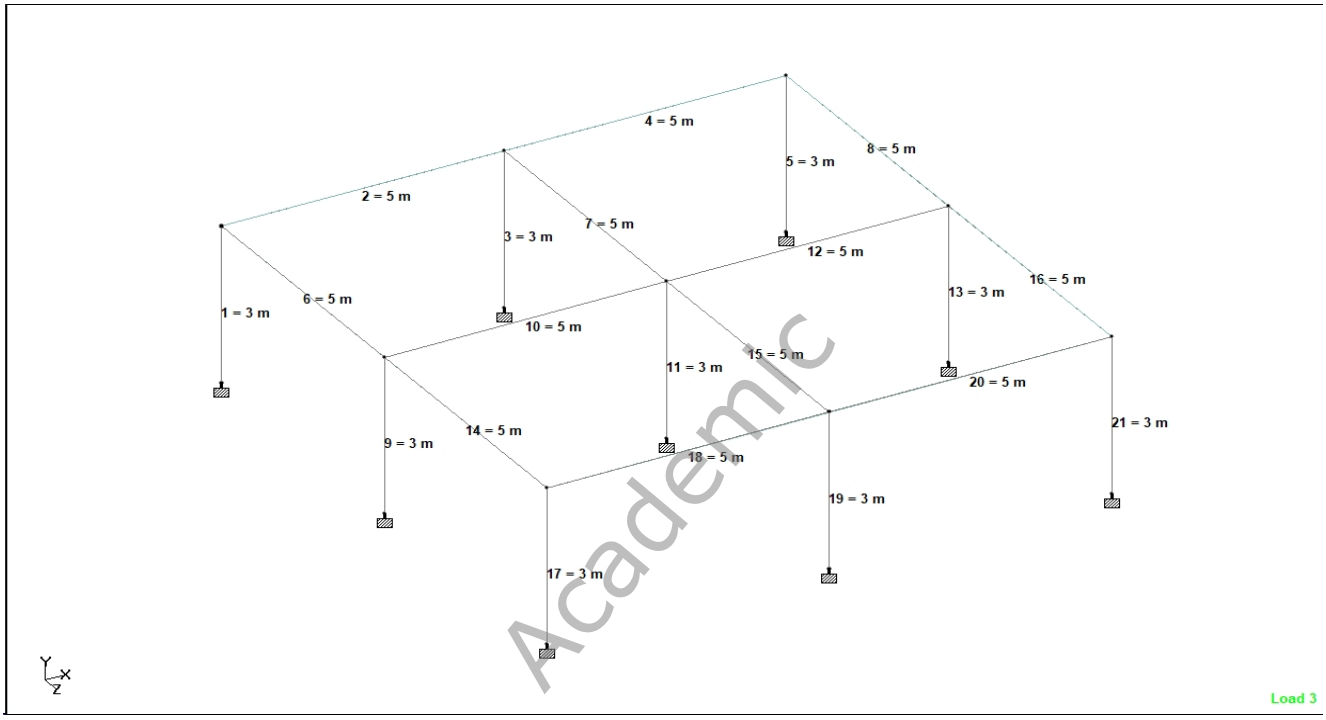
Prop	Name	Area (cm2)	Iyy (cm4)	Izz (cm4)	J (cm4)	Material	Source
1	Rect 0.40x0.25	1,000.000	52,083.336	133,333.344	127,345.164	CONCRETE	Parametric
2	Rect 0.40x0.40	1,600.000	213,333.328	213,333.328	360,000.031	CONCRETE	Parametric

Plate Thickness

Prop	Name	Node A (cm)	Node B (cm)	Node C (cm)	Node D (cm)	Material
3	Plate 0.15	15.000	15.000	15.000	15.000	CONCRETE

Plates

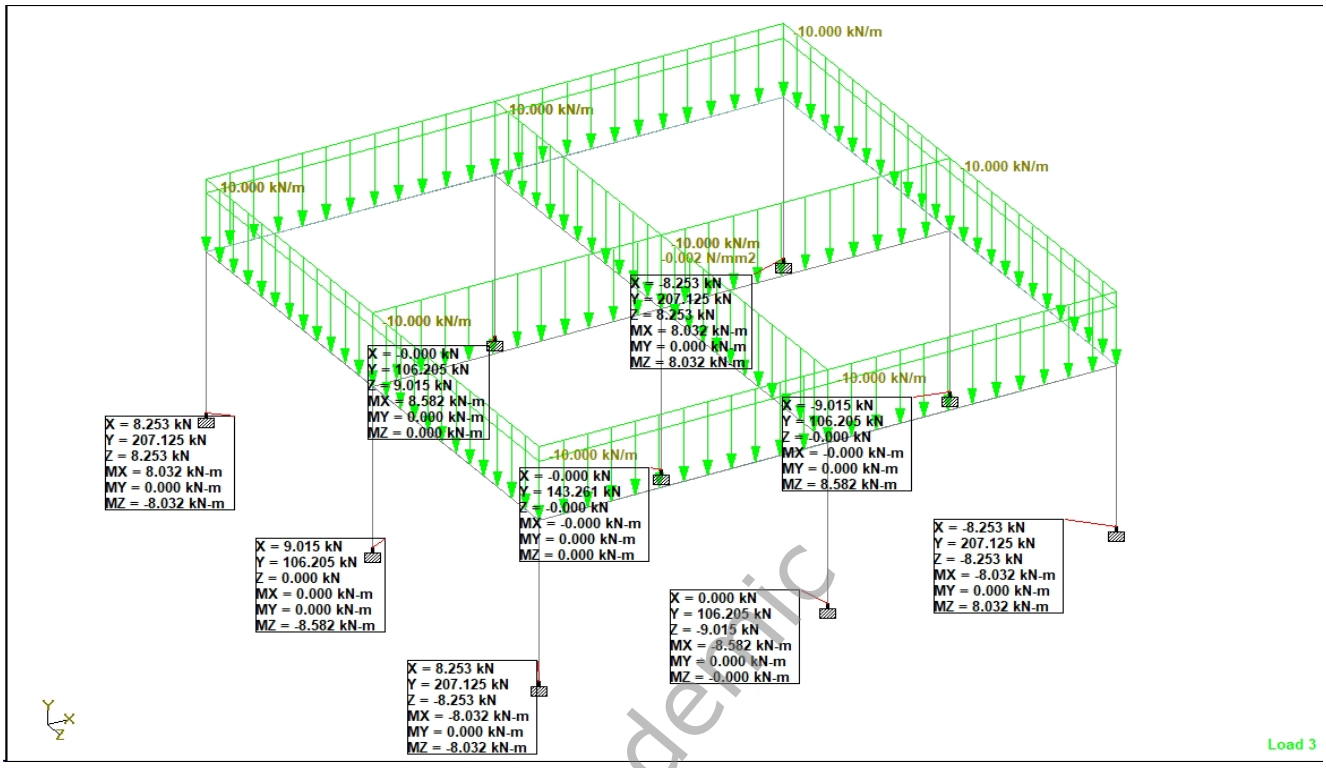
Plate	Node A	Node B	Node C	Node D	Property
22	2	5	17	14	3



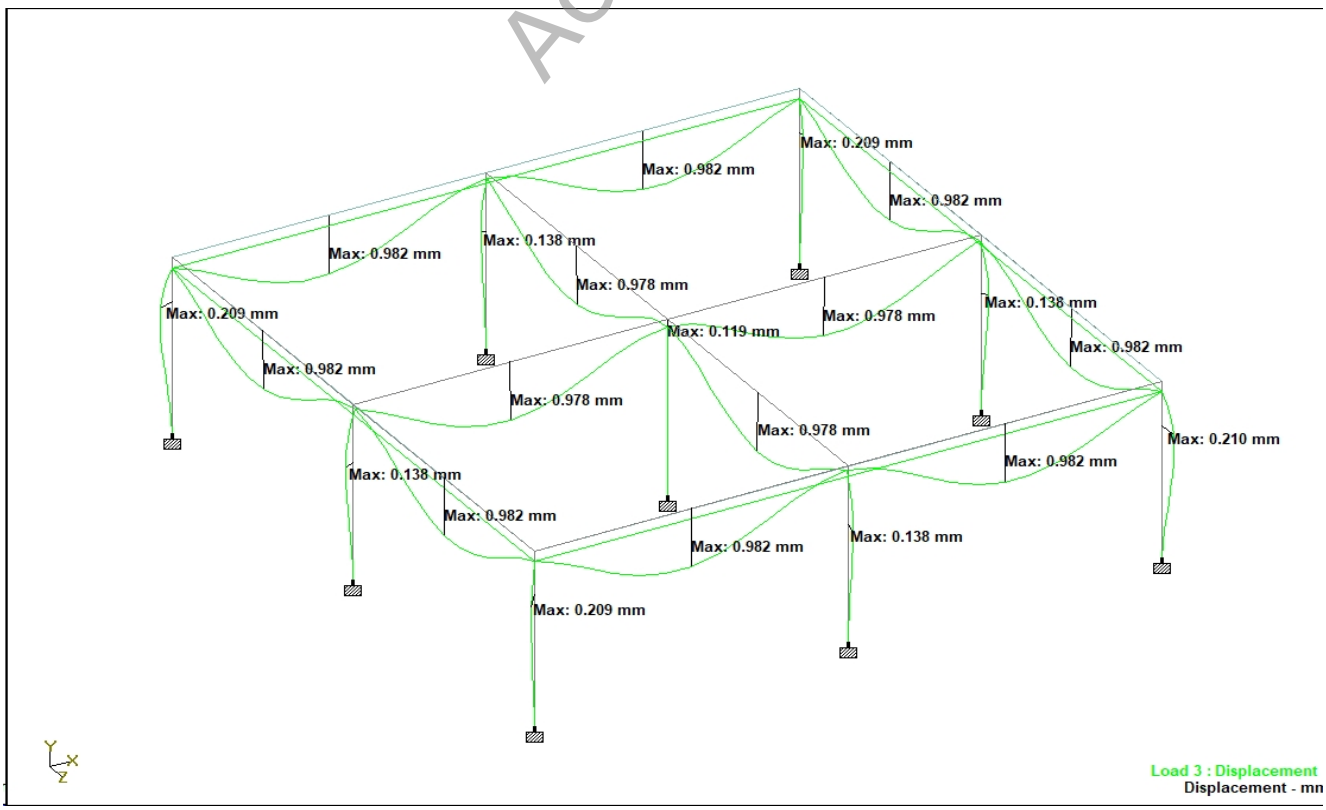
Structure

Reactions

Node	L/C	Horizontal FX (kN)	Vertical FY (kN)	Horizontal FZ (kN)	Moment MX (kN-m)	MY (kN-m)	MZ (kN-m)
1	3	8.253	207.125	8.253	8.032	0.000	-8.032
4	3	0.000	106.205	9.015	8.582	0.000	0.000
6	3	-8.253	207.125	8.253	8.032	0.000	8.032
7	3	9.015	106.205	0.000	0.000	0.000	-8.582
10	3	0.000	143.261	0.000	0.000	0.000	0.000
12	3	-9.015	106.205	0.000	0.000	0.000	8.582
13	3	8.253	207.125	-8.253	-8.032	0.000	-8.032
16	3	0.000	106.205	-9.015	-8.582	0.000	0.000
18	3	-8.253	207.125	-8.253	-8.032	0.000	8.032



Loading diagram and Reactions at supports



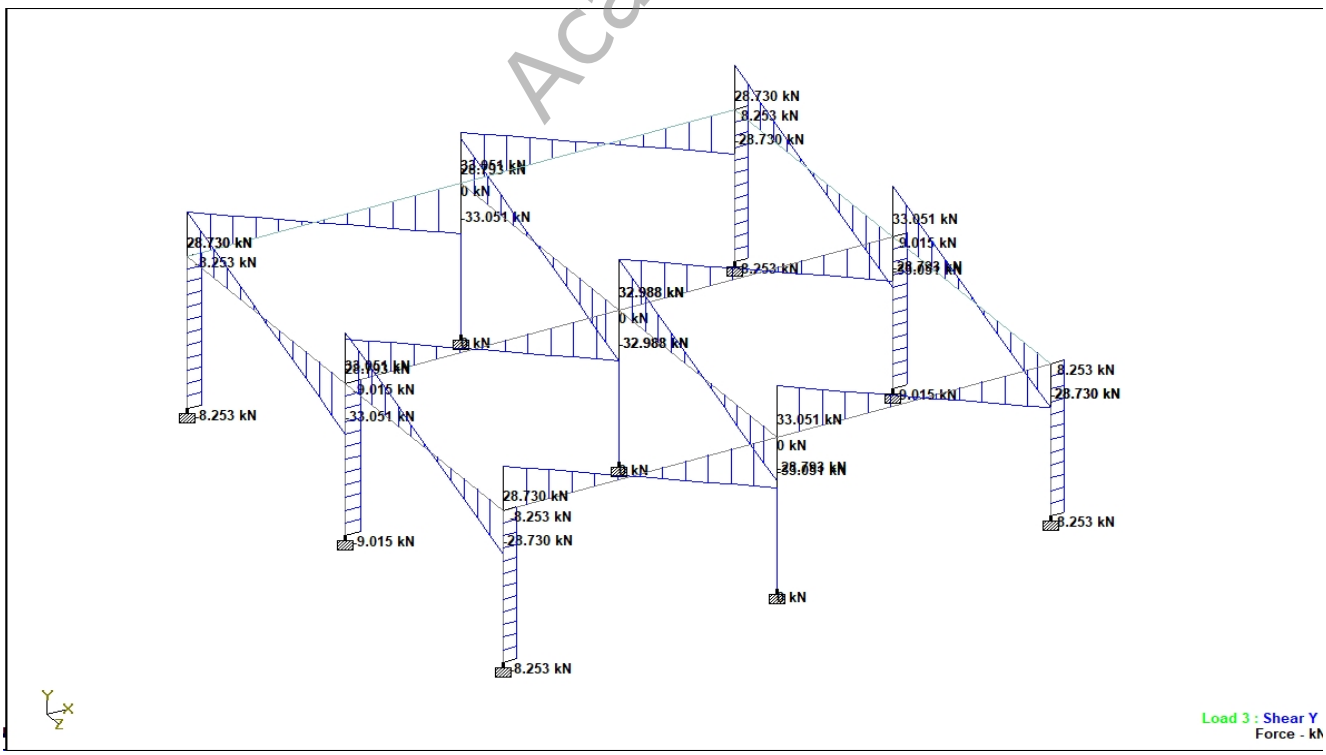
Displacement and Deflection Profile

Beam End Forces

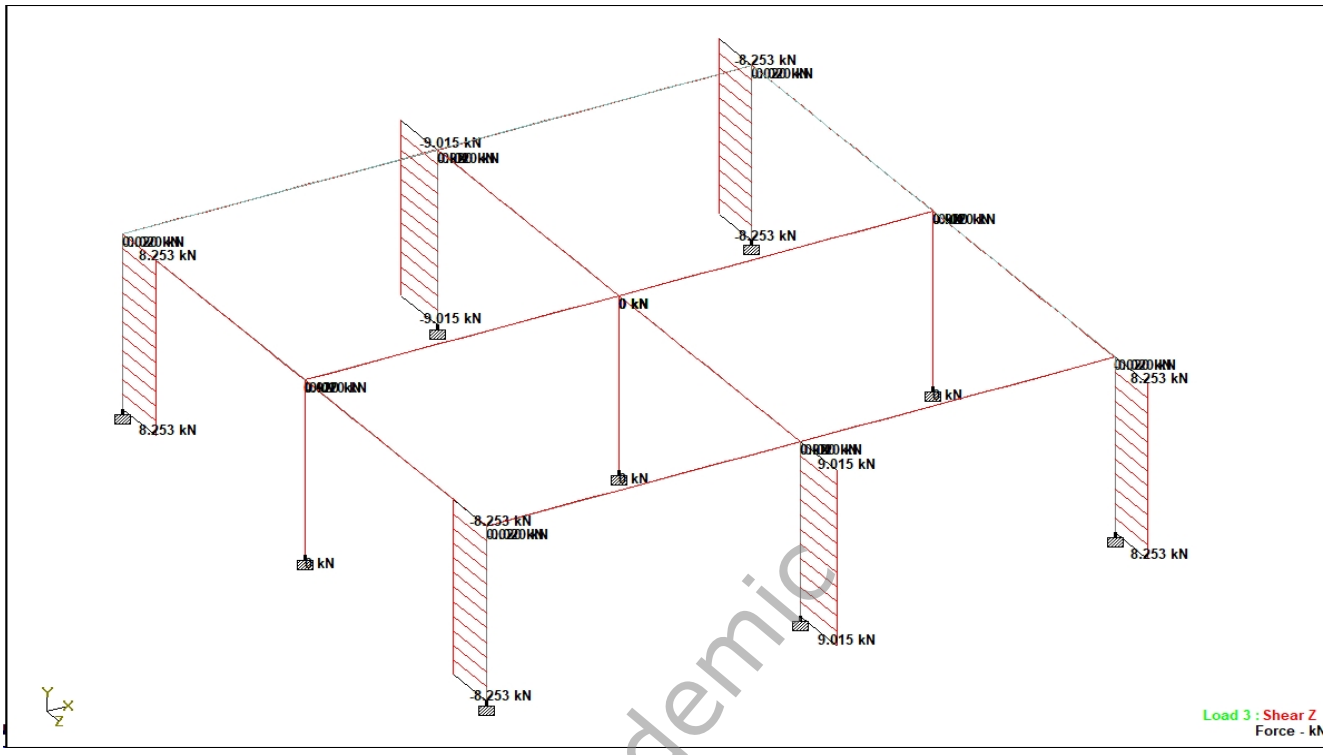
			Axial	Shear		Torsion	Bending	
Beam	Node	L/C	Fx (kN)	Fy (kN)	Fz (kN)	Mx (kN-m)	My (kN-m)	Mz (kN-m)
1	1	3	207.125	-8.253	8.253	0.000	-8.032	-8.032
	2	3	-195.815	8.253	-8.253	0.000	-16.728	-16.728
2	2	3	0.824	28.730	-0.020	-0.091	0.051	18.709
	3	3	-0.824	33.051	0.020	0.091	0.051	-29.513
3	3	3	94.895	0.000	-9.015	0.000	18.464	0.000
	4	3	-106.205	0.000	9.015	0.000	8.582	0.000
4	3	3	0.824	33.051	0.020	0.091	-0.051	29.513
	5	3	-0.824	28.730	-0.020	-0.091	-0.051	-18.709
5	5	3	195.815	8.253	-8.253	0.000	16.728	16.728
	6	3	-207.125	-8.253	8.253	0.000	8.032	8.032
6	2	3	0.824	28.730	0.020	0.091	-0.051	18.709
	8	3	-0.824	33.051	-0.020	-0.091	-0.051	-29.513
7	3	3	8.975	28.793	0.000	0.000	0.000	18.645
	9	3	-8.975	32.988	0.000	0.000	0.000	-29.133
8	5	3	0.824	28.730	-0.020	-0.091	0.051	18.709
	11	3	-0.824	33.051	0.020	0.091	0.051	-29.513
9	7	3	106.205	-9.015	0.000	0.000	0.000	-8.582
	8	3	-94.895	9.015	0.000	0.000	0.000	-18.464
10	8	3	8.975	28.793	0.000	0.000	0.000	18.645
	9	3	-8.975	32.988	0.000	0.000	0.000	-29.133
11	9	3	131.952	0.000	0.000	0.000	0.000	0.000
	10	3	-143.261	0.000	0.000	0.000	0.000	0.000
12	9	3	8.975	32.988	0.000	0.000	0.000	29.133
	11	3	-8.975	28.793	0.000	0.000	0.000	-18.645
13	11	3	94.895	9.015	0.000	0.000	0.000	18.464
	12	3	-106.205	-9.015	0.000	0.000	0.000	8.582
14	8	3	0.824	33.051	-0.020	-0.091	0.051	29.513
	14	3	-0.824	28.730	0.020	0.091	0.051	-18.709
15	9	3	8.975	32.988	0.000	0.000	0.000	29.133
	15	3	-8.975	28.793	0.000	0.000	0.000	-18.645
16	11	3	0.824	33.051	0.020	0.091	-0.051	29.513

Beam End Forces Cont...

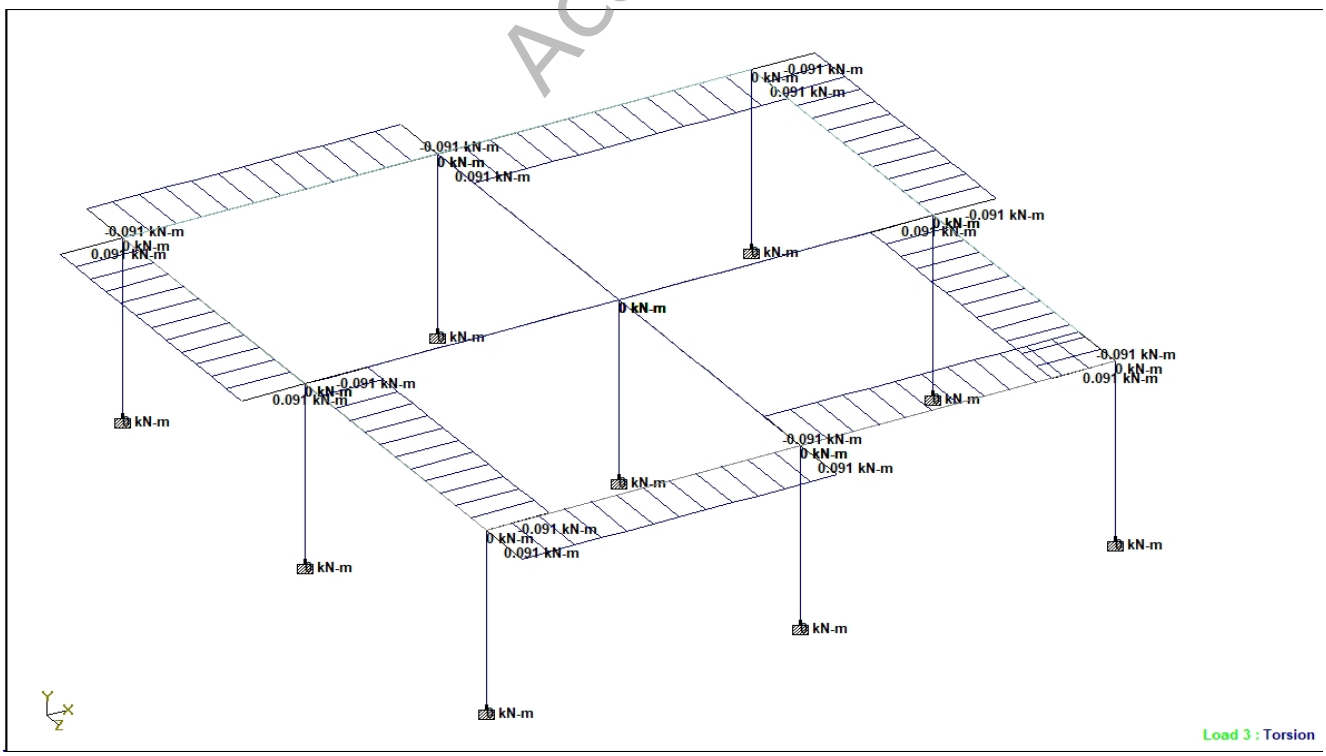
			Axial	Shear		Torsion	Bending	
Beam	Node	L/C	Fx (kN)	Fy (kN)	Fz (kN)	Mx (kN-m)	My (kN-m)	Mz (kN-m)
16	17	3	-0.824	28.730	-0.020	-0.091	-0.051	-18.709
17	13	3	207.125	-8.253	-8.253	0.000	8.032	-8.032
	14	3	-195.815	8.253	8.253	0.000	16.728	-16.728
18	14	3	0.824	28.730	0.020	0.091	-0.051	18.709
	15	3	-0.824	33.051	-0.020	-0.091	-0.051	-29.513
19	15	3	94.895	0.000	9.015	0.000	-18.464	0.000
	16	3	-106.205	0.000	-9.015	0.000	-8.582	0.000
20	15	3	0.824	33.051	-0.020	-0.091	0.051	29.513
	17	3	-0.824	28.730	0.020	0.091	0.051	-18.709
21	17	3	195.815	8.253	8.253	0.000	-16.728	16.728
	18	3	-207.125	-8.253	-8.253	0.000	-8.032	8.032



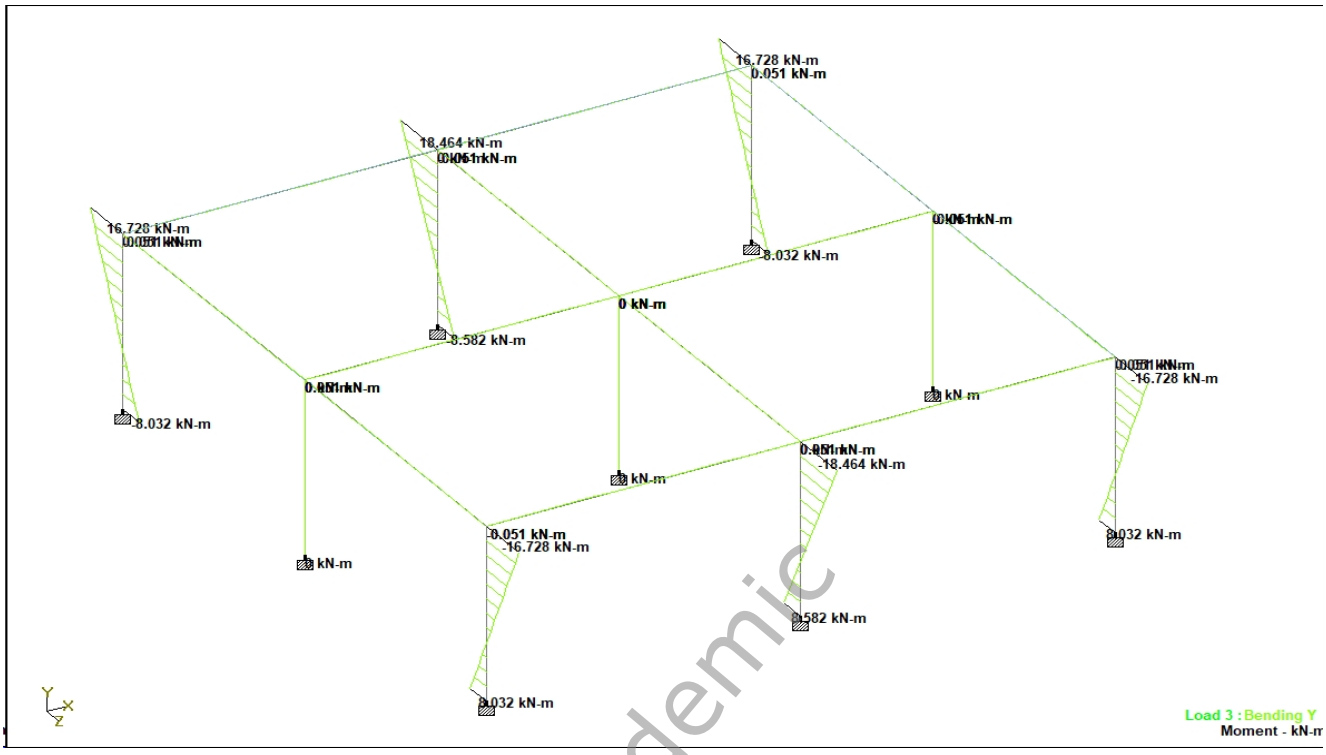
Shaer Diagram in Y direction



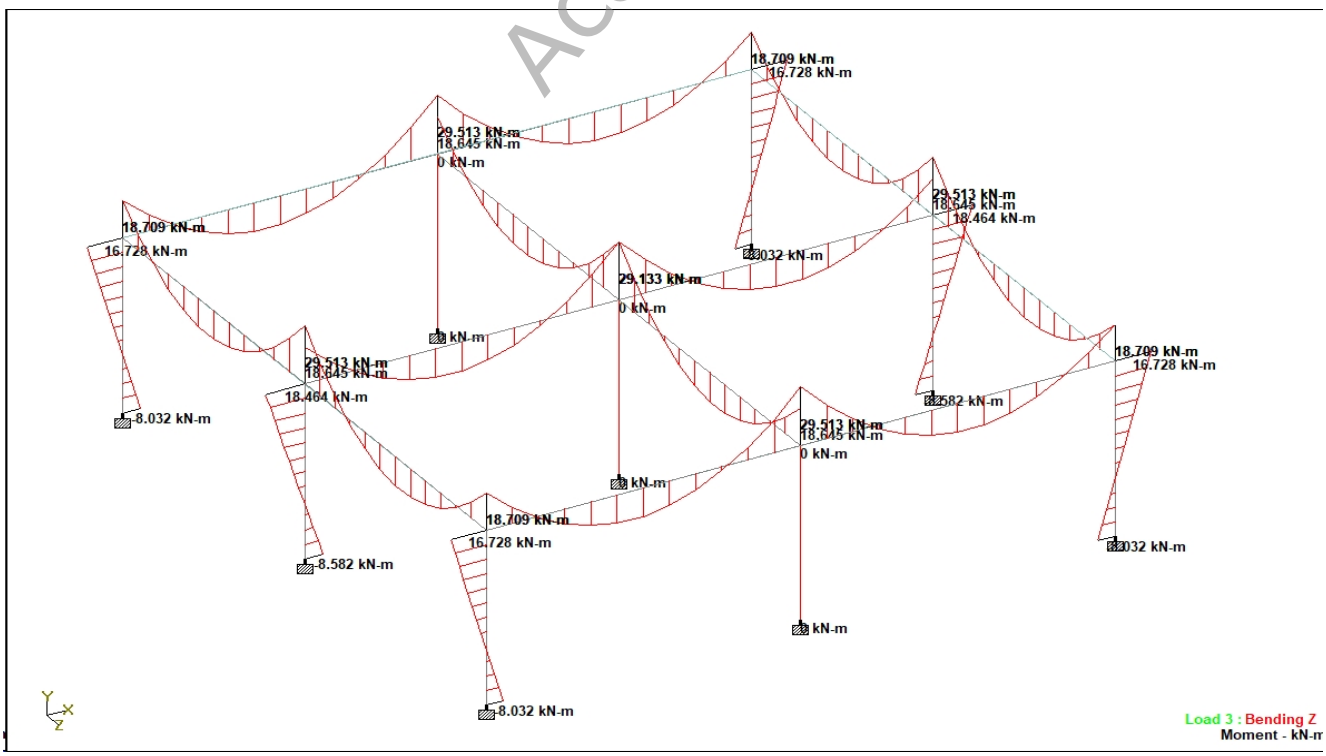
Shear diagram in Z direction



Torsion(X direction moment diagram)



Bending diagram in Y direction



Benging diagram in Z direction

Plate Center Stresses

		Shear (Local)		Membrane (Local)			Bending Moment (Local)		
Plate	L/C	SQX (N/mm2)	SQY (N/mm2)	SX (N/mm2)	SY (N/mm2)	SXY (N/mm2)	MX (kN-m/m)	MY (kN-m/m)	MXY (kN-m/m)
22	3	0.000	0.000	-0.010	-0.010	0.000	0.414	0.414	0.000

Plate Center Principal Stresses

		Principal		Von Mis		Tresca	
Plate	L/C	Top (N/mm2)	Bottom (N/mm2)	Top (N/mm2)	Bottom (N/mm2)	Top (N/mm2)	Bottom (N/mm2)
22	3	0.101	-0.120	0.101	0.120	0.101	0.120

Plate Center Global Moments

Plate Center Global Moments For Positive Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (+ve) (kN-m/m)	Z (+ve) (kN-m/m)	X (+ve) (kN-m/m)	Z (+ve) (kN-m/m)	X (+ve) (kN-m/m)	Y (+ve) (kN-m/m)
22	3	-0.414	0.000	0.000	0.000	0.000	-0.414

Plate Center Global Moments For Negative Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (-ve) (kN-m/m)	Z (-ve) (kN-m/m)	X (-ve) (kN-m/m)	Z (-ve) (kN-m/m)	X (-ve) (kN-m/m)	Y (-ve) (kN-m/m)
22	3	0.414	0.000	0.000	0.000	0.000	0.414

Plate Center Global Direct Stresses

Plate Center Global Direct Stresses For positive Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (+ve) (N/mm2)	Z (+ve) (N/mm2)	X (+ve) (N/mm2)	Z (+ve) (N/mm2)	X (+ve) (N/mm2)	Y (+ve) (N/mm2)
22	3	-0.010	0.000	0.000	0.000	0.000	-0.010

Plate Center Global Direct Stresses For Negative Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (-ve) (N/mm2)	Z (-ve) (N/mm2)	X (-ve) (N/mm2)	Z (-ve) (N/mm2)	X (-ve) (N/mm2)	Y (-ve) (N/mm2)
22	3	-0.010	0.000	0.000	0.000	0.000	-0.010

Plate Center Global Shear Stresses

Plate Center Global Shear Stresses For positive Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (+ve) (N/mm2)	Z (+ve) (N/mm2)	X (+ve) (N/mm2)	Z (+ve) (N/mm2)	X (+ve) (N/mm2)	Y (+ve) (N/mm2)
22	3	0.000	0.000	0.000	0.000	0.000	0.000

Plate Center Global Shear Stresses For Negative Axis

		Global X		Global Y		Global Z	
Plate	L/C	Y (-ve) (N/mm2)	Z (-ve) (N/mm2)	X (-ve) (N/mm2)	Z (-ve) (N/mm2)	X (-ve) (N/mm2)	Y (-ve) (N/mm2)
22	3	0.000	0.000	0.000	0.000	0.000	0.000

Plate Corner Stresses

			Shear (Local)		Membrane (Local)			Bending Moment (Local)		
Plate	L/C	Node	SQX (N/mm2)	SQY (N/mm2)	SX (N/mm2)	SY (N/mm2)	SXY (N/mm2)	MX (kN-m/m)	MY (kN-m/m)	MXY (kN-m/m)
22	3	2	0.000	0.000	-0.010	-0.010	0.000	0.414	0.414	0.000
		5	0.000	0.000	-0.010	-0.010	0.000	0.414	0.414	0.000
		17	0.000	0.000	-0.010	-0.010	0.000	0.414	0.414	0.000
		14	0.000	0.000	-0.010	-0.010	0.000	0.414	0.414	0.000