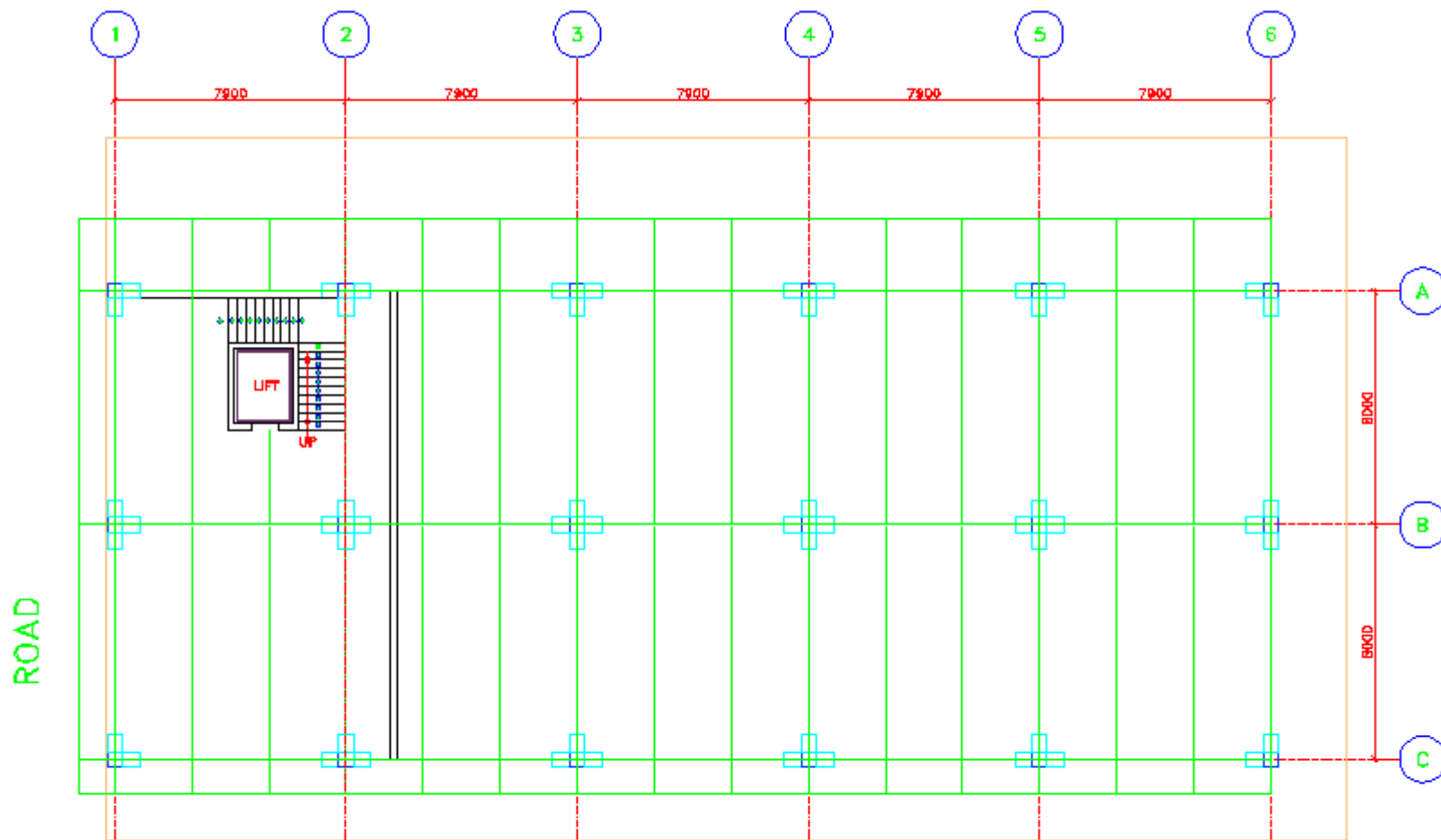




Composite Flooring System For Metalcraft, Chennai



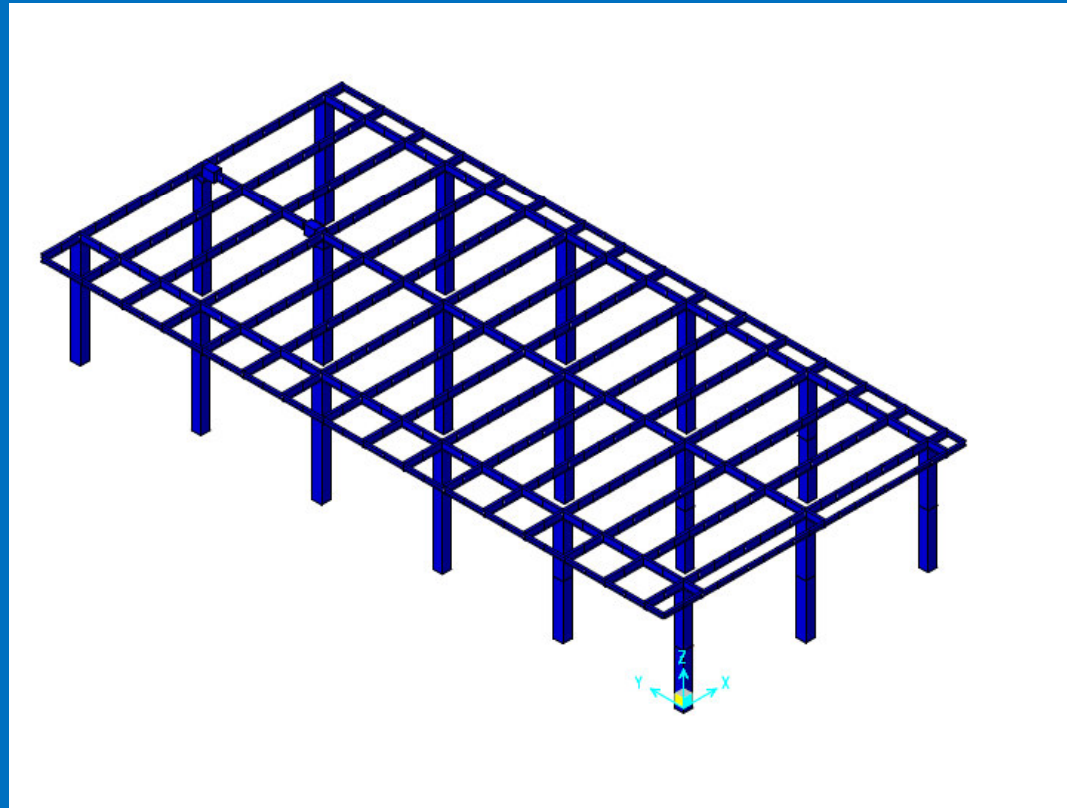
Metal Craft, Chennai : The building is a rectangle in plan with dimension of 41.5 m length and 16 meter wide. It is a ground and 2 floors, plus roof structure with an approximate area of 2400 sqm.



1 GROUND FLOOR PLAN



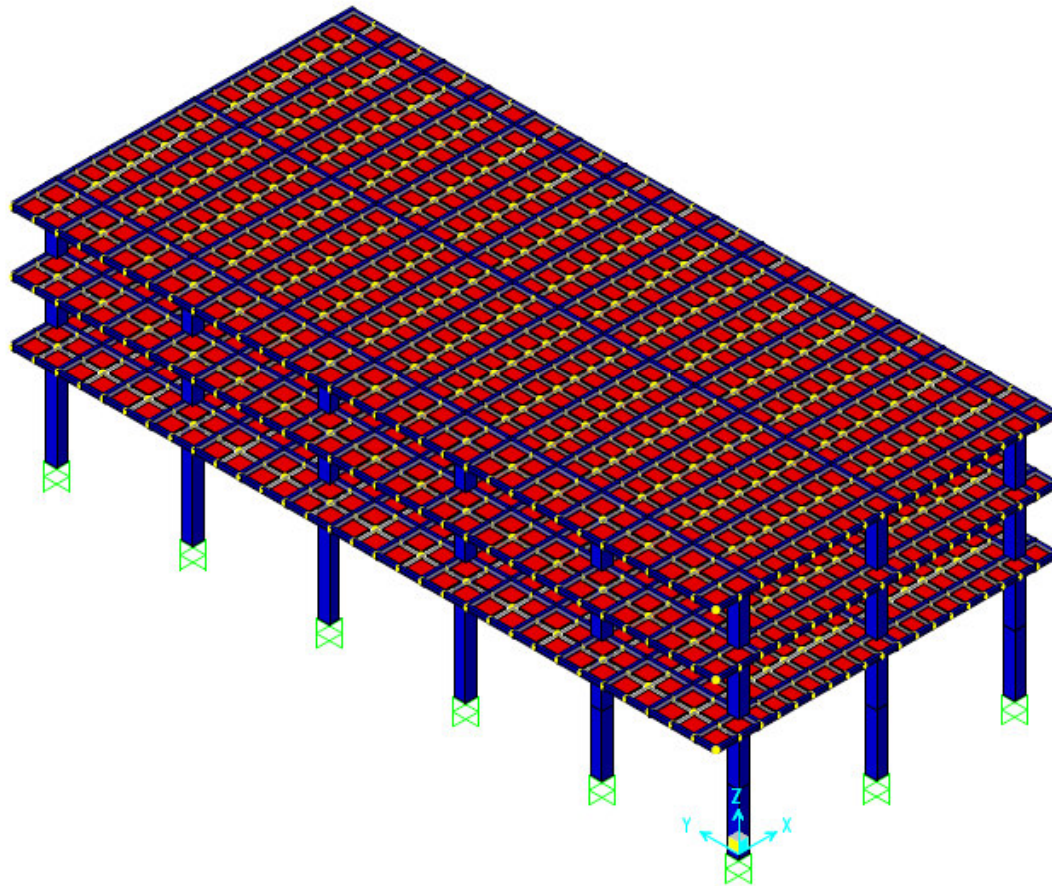
The structural system is composed of composite moment frames consisting of steel beams and RCC Column on a grid of 8.4m x 7.7m, as primary framing to resist both gravity and lateral loads, and Composite flooring system with steel beams and formed metal deck with concrete topping as secondary framing to transfer gravity loads.



Computer Model

SAP2000

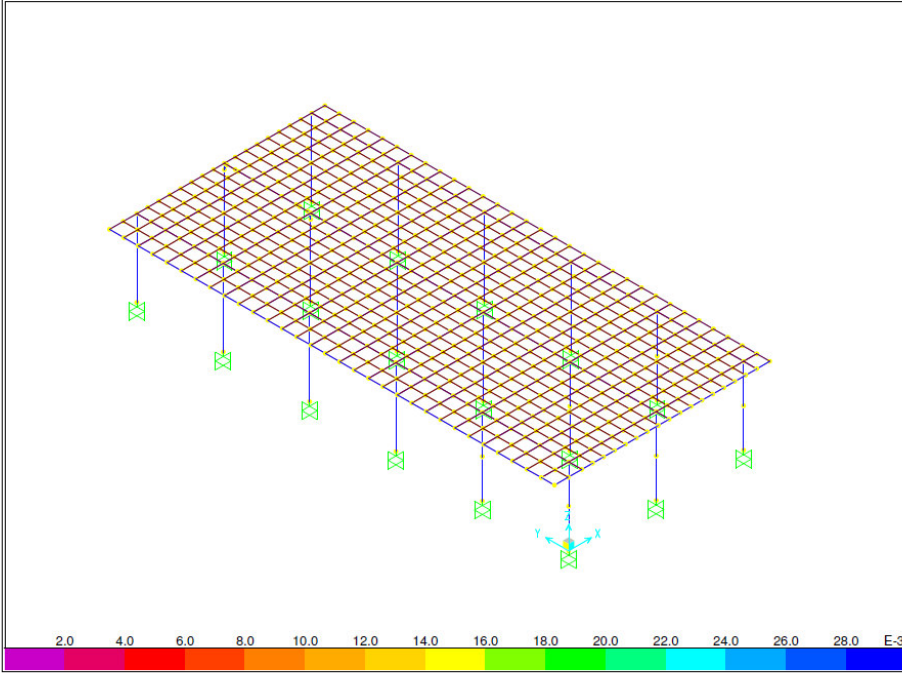
1/19/12 19:22:20



SAP2000 v8.1.2 - File:final001 - 3-D View - Kgf, m, C Units

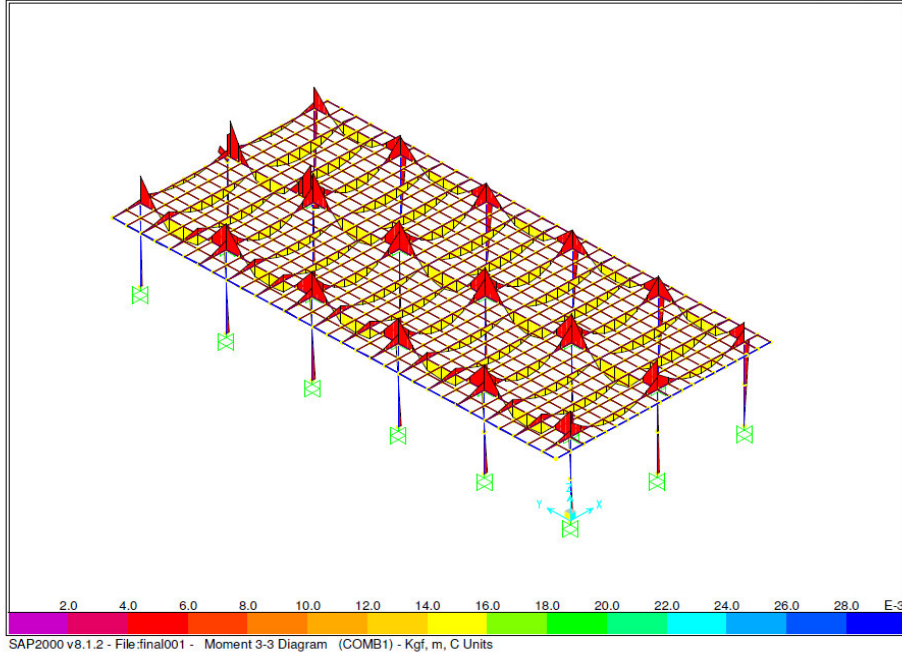
SAP2000

1/19/12 19:16:25



SAP2000

1/19/12 19:15:15

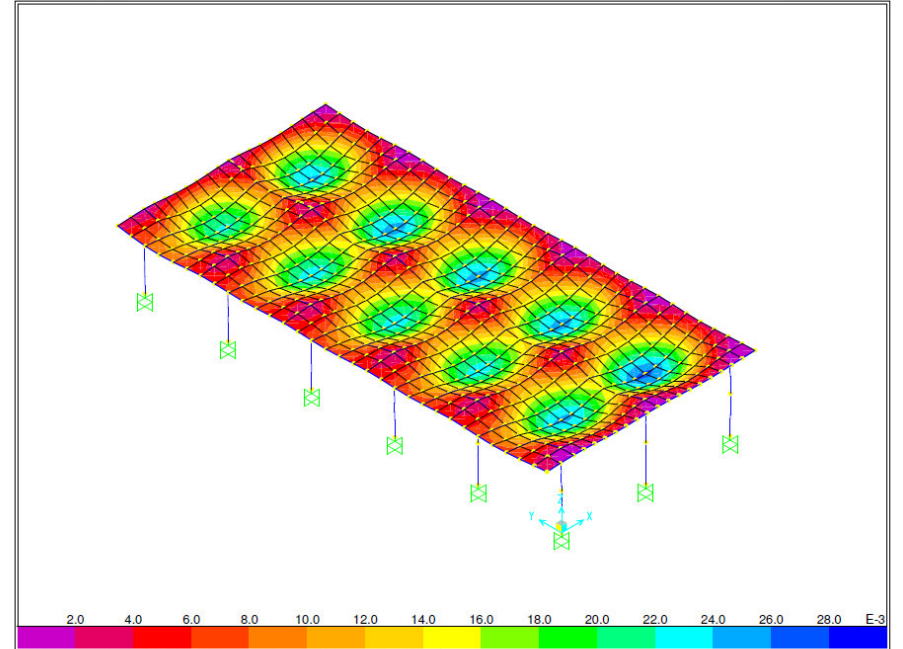


SAP2000 v8.1.2 - File:final001 - Moment 3-3 Diagram (COMB1) - Kgf, m, C Units

Computer Model Deflection and Beam Bending Moment

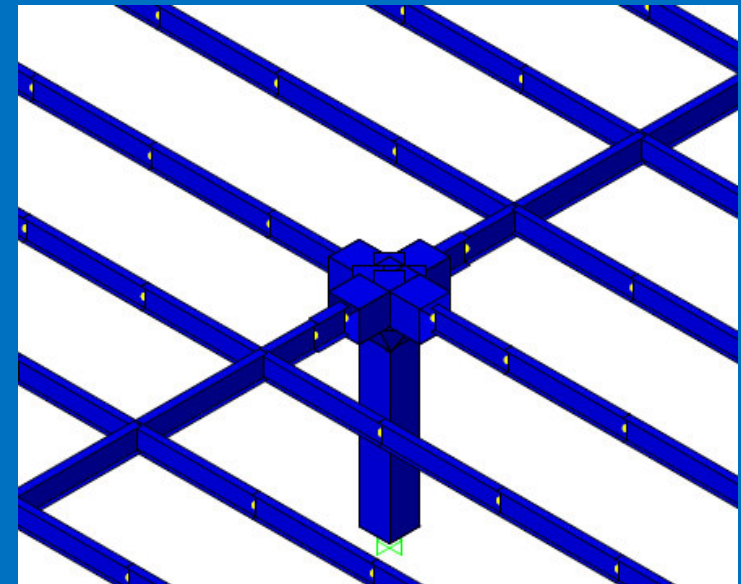
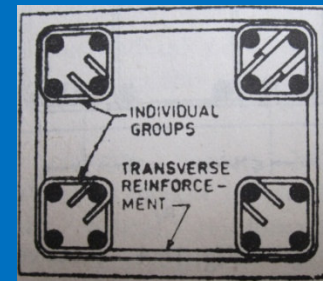
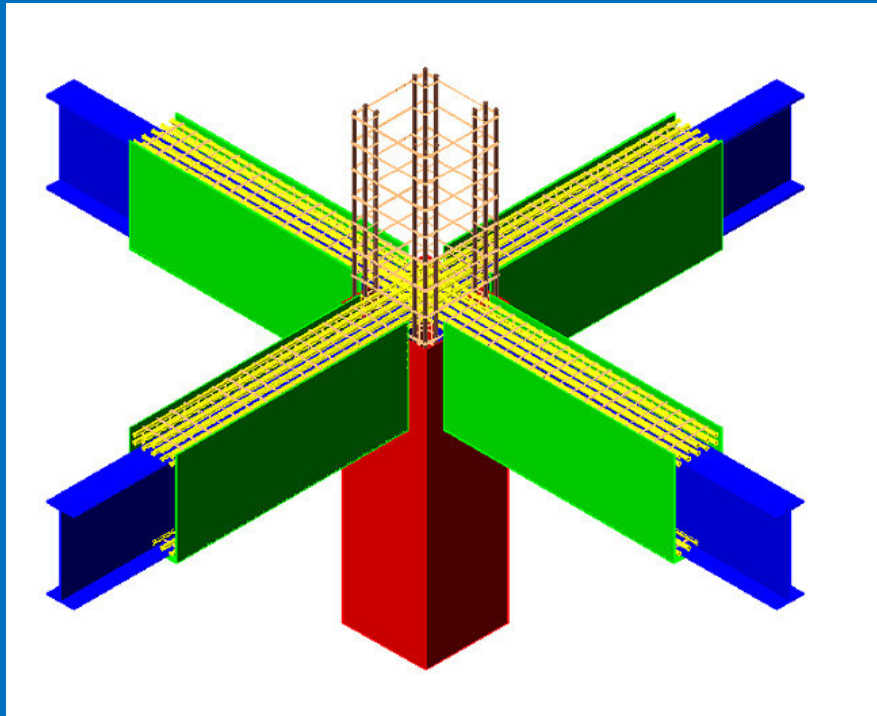
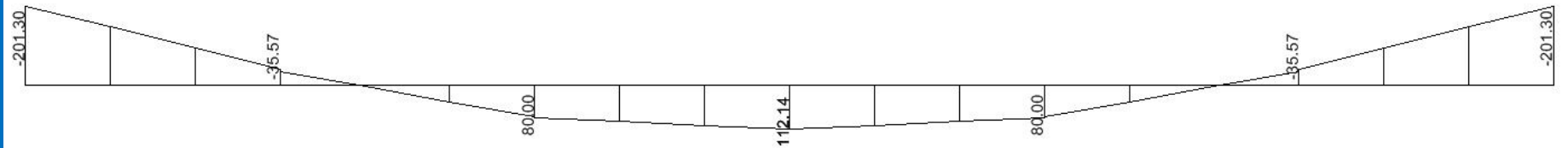
SAP2000

1/19/12 19:14:20



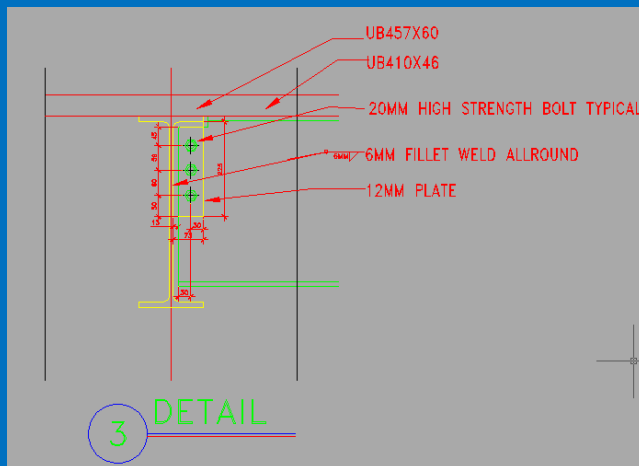
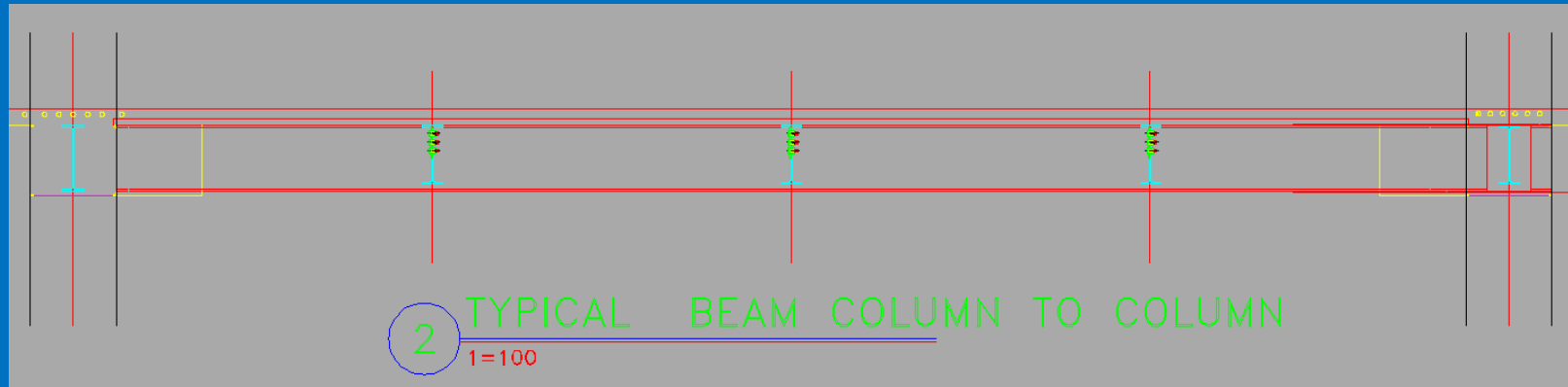
SAP2000 v8.1.2 - File:final001 - Deformed Shape (COMB1) - Kgf, m, C Units

Design as a RC Column and Steel Beam Joint

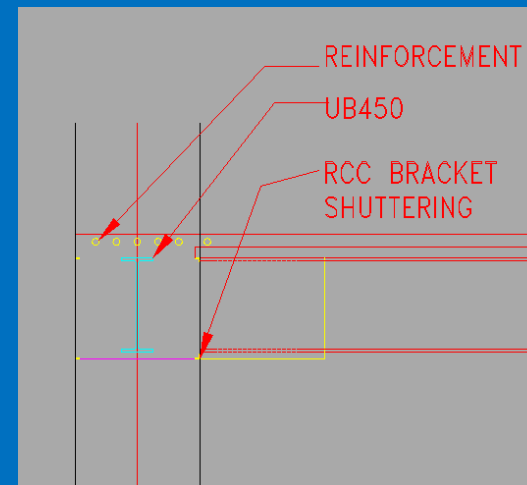


RC Column and Steel Beam Joint

Steel Beam Typical



Steel Beam to Beam Joint



RCC Bracket

Jindal Beams

PRODUCT RANGE

Universal Beams & Columns, Channels and Rails



ANNEXURE - A

Description Beams	Sectional Weight	Total Depth	Flange Width	Thickness of Web	Thickness of Flange	Root radius	Area of section	Moment of Inertia		Sectional Modulus		Radius of gyration		Remarks
	w	H	B	t _w	t _f	r	A	X Axis I _{xx}	Y Axis I _{yy}	X Axis Z _{xx}	Y Axis Z _{yy}	X Axis r _{xx}	Y Axis r _{yy}	
	Kg/m	mm	mm	mm	mm	mm	cm ²	cm ⁴	cm ⁴	cm ³	cm ³	cm	cm	
PARALLEL FLANGE BEAMS; UB SERIES														
UB 203 x 133 x 25	25.1	203.2	133.2	5.7	7.8	7.6	31.97	2340	307.6	230.3	46.2	8.56	3.10	
UB 203 x 133 x 30	30.0	206.8	133.9	6.4	9.6	7.6	38.21	2896	384.7	280	57.5	8.71	3.17	
UB 254 x 146 x 31	31.1	251.4	146.1	6	8.6	7.6	39.68	4413	447.5	351.1	61.3	10.55	3.36	
UB 254 x 146 x 37	37.0	256	146.4	6.3	10.9	7.6	47.17	5537	570.6	432.6	78	10.83	3.48	
UB 254 x 146 x 43	43.0	259.6	147.3	7.2	12.7	7.6	54.77	6544	677.4	504.1	92	10.93	3.52	
UB 305 x 165 x 40	40.3	303.4	165	6	10.2	8.9	51.32	8503	764.4	560.5	92.6	12.87	3.86	
UB 305 x 165 x 46	46.1	306.6	165.7	6.7	11.8	8.9	58.75	9899	895.7	645.7	108	12.98	3.90	
UB 305 x 165 x 54	54.0	310.4	166.9	7.9	13.7	8.9	68.77	11700	1063	753.6	127	13.04	3.93	
UB 356 x 171 x 45	45.0	351.4	171.1	7	9.7	10.2	57.33	12070	811.1	686.7	94.81	14.51	3.76	
UB 356 x 171 x 51	51.0	355	171.5	7.4	11.5	10.2	64.91	14140	968.3	796.4	112.9	14.76	3.86	
UB 356 x 171 x 57	57.0	358	172.2	8.1	13	10.2	72.56	16040	1108	896	128.7	14.87	3.91	
UB 356 x 171 x 67	67.1	363.4	173.2	9.1	15.7	10.2	85.49	19460	1362	1071	157.3	15.09	3.99	
UB 406 x 178 x 54	54.1	402.6	177.7	7.7	10.9	10.2	68.95	18720	1021	930	115	16.48	3.85	
UB 406 x 178 x 60	60.1	406.4	177.9	7.9	12.8	10.2	76.52	21600	1203	1063	135	16.8	3.97	
UB 406 x 178 x 67	67.1	409.4	178.8	8.8	14.3	10.2	85.54	24330	1365	1189	153	16.87	3.99	
UB 406 x 178 x 74	74.2	412.8	179.5	9.5	16	10.2	94.51	27310	1545	1323	172	17	4.04	
UB 457 x 152 x 52	52.3	449.8	152.4	7.6	10.9	10.2	66.64	21370	645	950	84.64	17.91	3.11	
UB 457 x 152 x 60	59.8	454.6	152.9	8.1	13.3	10.2	76.23	25500	794.6	1122	103.9	18.29	3.23	
UB 457 x 152 x 67	67.2	458	153.8	9	15	10.2	85.55	28930	912.6	1263	118.7	18.39	3.27	
UB 457 x 152 x 74	74.2	462	154.4	9.6	17	10.2	94.48	32670	1047	1414	135.6	18.6	3.33	
UB 457 x 152 x 82	82.1	465.8	155.3	10.5	18.9	10.2	104.5	36590	1185	1571	152.5	18.71	3.37	
UB 457 x 191 x 67	67.1	453.4	189.9	8.5	12.7	10.2	85.51	29380	1452	1296	152.9	18.54	4.12	
UB 457 x 191 x 74	74.3	457	190.4	9	14.5	10.2	94.63	33320	1671	1458	175.5	18.76	4.20	
UB 457 x 191 x 82	82.0	460	191.3	9.9	16	10.2	104.5	37050	1871	1611	195.6	18.83	4.23	
UB 457 x 191 x 89	89.3	463.4	191.9	10.5	17.7	10.2	113.8	41020	2089	1770	217.8	18.99	4.29	
UB 457 x 191 x 98	98.3	467.2	192.8	11.4	19.6	10.2	125.3	45730	2347	1957	243.5	19.11	4.33	

