KULAKARNI CONSULTANTS
STRUCTURAL ENGINEERS, PROJECT CONSULTANTS & ARCHITECTS

STRUCTURAL STABILITY CERTIFICATE

This is to certify that the structural designs/drawings of Amenities Block consisting Stilt plus Four upper floors in the proposed gated community lay-out cum group housing in Sy. No. 786 (P) situated at Miryalaguda Town and Mandal, Nalgonda District, Telangana belonging to **Mrs. A. Vasudha Reddy & others** all are residents of Flat No. A-402, Aditya Hill Top, Road No. 82, Jubilee Hills, Filmnagar Sub-port, Hyderabad are prepared by us. We are the structural consultants for the above said proposed residential gated community group housing lay-out.

The designs and drawings of RCC framed structure pertaining to the proposed Amenities Block shall confirm to the National Building Code of India relevant I.S Code's of practice for design and construction.

Place: Hyderabad.
Date: 12th October 2016.

M. DATTATRI
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

F-216, Kubera Towers, Narayanaguda, Hyderabad - 500029. Ph : 23223891, 56643724

DESIGN REPORT FOR THE PROPOSED GROUP HOUSING MIRYALGUDA BELONGS TO A.VASUDHA REDDY &OTHERS

STRUCTURAL CONSULTANTS:

STRUCTURAL ENGINEERS, ARCHITECTS & PROJECT CONSULTANT'S
#216, KUBERA TOWER'S, NARAYAN GUDA, HYDERABAD.
CONTACT NO'S:- 04023223891, 09246343724, 09246343720.
EMAIL:- kulku_kcons@yahoo.com

M. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

S.NO	CONTENT
1.	GENERAL
2.	SCOPE
3.	REFERENCE
4.	DESCRIPTION OF BUILDING
5.	STAAD MODELING AND DESIGN
6.	LOAD CASES
7.	LOAD COMBINATIONS
8.	STAAD INPUT
9.	STAAD OUTPUT
10.	FOUNDATION DESIGN
11.	CONCLUSION

M. DATTATHU RAO
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

1.0 GENERAL:

This document covers the Load establishment, Analysis and Design of CWC Building.

2.0 SCOPE:

This document contains the Design of all RCC members including foundations.

3.0 REFERENCES:

The following codes, standards and drawings have been referred.

a) IS: 875(1987) part 1 Dead loads

b) IS: 875(1987) part 2 Imposed loads

c) IS: 875(1987) part 3 Wind loads

d) IS: 875(1987) part 5 Load combinations

4.0 DESCRIPTION OF STRUCTURE:

The structure is an RC framed structure. The structure is approximately 12.0m long x 18 m wide 17 m height. The building is covered with brick cladding on all sides.

5.0 Staad Modeling and Design:

A Three Dimensional Staad Modeling is done with most of the structural members modeled. All Members modeled is designed by In-Built facility available in Staad as per the Indian Codes. RCC members are designed as per IS 456-2000. The foundation is designed separately taking the reaction from the staad model

6.0 LOAD CASES:

Load No.	The various load cases considered are as follows:	
1.	Seismic load in X Dir (+ve) (Left to right)	SX
2.	Seismic load in X Dir (-ve) (Right to left)	-SX
3.	Seismic load in Z Dir (+ve) (Back to front)	SZ
4.	Seismic load in Z Dir (-ve) (Front to back)	-SZ
5.	Dead Load	DL
6.	Live Load	LL
7.	Wind load in X Dir (+ve) (Left to right)	WX
8.	Wind load in X Dir (-ve) (Right to left)	-WX
9.	Wind load in Z Dir (+ve) (Back to front)	WZ
10.	Wind load in Z Dir (-ve) (Front to back)	-WZ

M. DATTATRI
STRUCTURAL ENGINEER
GHMC, Lic. No. 134

6.1 SEISMIC LOAD

Seismic loads on the structure is considered as per the provisions of

IS 1893-2002/2005.

Following cases are considered for seismic load acting along transverse frame direction

Load case 1 seismic load acting in + X direction
Load case 2 seismic load acting in - X direction
Load case 3 seismic load acting in Z direction
Load case 4 seismic load acting in -Z direction

6.5 DEAD LOAD

A. SELFWEIGHT
This Load case includes all the Dead weight of the structure, like weight of Columns, Beams,etc. Self-weight of all members modeled in STAAD is calculated by the Program.

B. Weight of RC slab is considered as 25KN/cum

C. Weight of brick wall is considered as 20KN/cu

6.6 LIVE LOAD

A. On floor slab it is considered as 3KN/sqm
B. On roof it is considered as 1.5KN/sqm

6.7 WIND LOAD

Wind loads on the structure is considered as per the provisions of IS 875-1987 (part 3).

Following cases are considered for wind load acting along transverse frame direction

Load case 7 wind load acting in + X direction
Load case 8 wind load acting in - X direction
Load case 9 wind load acting in Z direction
Load case 10 wind load acting in -Z direction

7. LOAD COMBINATIONS

FOR FOUNDATION DESIGN

1. DL + LL
2. DL + SX
3. DL - SX
4. DL + SZ
5. DL - SZ
6. DL + WX
7. DL - WX
8. DL + WZ
9. DL - WZ

M. DATTATREYA RAO
STRUCTURAL ENGINEER
GHMC. Lic. No.: 134

10. DL + LL + SX
11. DL + LL - SX
12. DL + LL + SZ
13. DL + LL -SZ
14. DL + LL + WX
15. DL + LL -WX
16. DL + LL +WZ
17. DL + LL- WZ

The RC designs are done in staad program itself. The design is done by limit state method. Appropriate factors are multiplied for the load combination to get the desired result. The load combinations used are as follows

18. 1.5(DL + LL)
19. 1.2(DL + SX) + 0.6LL
20. 1.2(DL - SX) + 0.6LL
21. 1.2(DL + SZ) + 0.6LL
22. 1.2(DL - SZ) + 0.6LL
23. 1.5(DL + SX)
24. 1.5(DL - SX)
25. 1.5(DL + SZ)
26. 1.5(DL - SZ)
27. 0.9DL + 1.5SX
28. 0.9DL - 1.5SX
29. 0.9DL + 1.5SZ
30. 0.9DL - 1.5SZ
31. 1.2(DL + LL + WX)
32. 1.2(DL + LL - WX)
33. 1.2(DL + LL + WZ)
34. 1.2(DL + LL - WZ)
35. 1.5(DL + WX)
36. 1.5(DL - WX)
37. 1.5(DL + WZ)
38. 1.5(DL - WZ)
39. 0.9DL + 1.5WX
40. 0.9DL - 1.5WX
41. 0.9DL + 1.5WZ
42. 0.9DL - 1.5WZ

M. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC. Lic. No.: 134

Design Details

Project:	Amenities Block in the proposed GATED COMMUNITY LAY-OUT CUM GROUP HOUSING IN SY. 786 (P) SITUATED AT MIRYALGUDA TOWN AND MANDAL BELONGS TO SMT. A. VASUDHA REDDY & OTHERS		
Present Scope:	STILT + FOUR UPPER FLOORS		
Future Expansion:			
Total floors designed	STILT + FOUR UPPER FLOORS		

Ref. to Arch Drawings:

1	Floor Plan	Asper plans submitted to Miryalaguda Municipality
2	Elevations	Asper plans submitted to Miryalaguda Municipality
3	Sections	Asper plans submitted to Miryalaguda Municipality

Soil Particulars:

Reference to the Soil Report	As recommended by M/s. Geo Technologies	
Recommended SBC	250 kN/m^2	
N Value and Soil Type	Considered as Medium Soil	
%age of Permissible Increase in Allowable Bearing Pressure or Resistance of Soils	Piles not resting on Hard soil	25
	Raft Foundations	50
	Combined, Isolated Footings	25

Seismic Data:

Zone	II	As per Annex E IS 1893-2002 Pg 35
Zone Factor (Z):	0.1	As per Table 2 IS 1893-2002 Pg 16
Imp Factor (I)	1	As per Table 6 IS 1893-2002 Pg 18
Response Reduction Factor	3	As per Table 7 IS 1893-2002 Pg 23
Px = 0.09h/Sqrt(L)	#REF!	As per Cl 7.6.2 IS 1893-2002 Pg 24
Pz = 0.09h/Sqrt(W)	#REF!	As per Cl 7.6.2 IS 1893-2002 Pg 24
Load Considered for Seismic Weights	50	As per Table 8 IS 1893-2002 Pg 24
Structure Type	RC Frame with infills (ST = 3 in STAAD INPUT)	

Lateral Wind Data:

Basic Wind Speed:		50 m/sec		Design Wind Speed Vz = Vb.K1.k2.k3
k1 probability factor		1.0		Design Wind Pressure = 0.6 Vz^2
k2 Terrain (Category 3), height and strucutre size (Class B) factor		10m	0.88	$0.6(50x1.0x1.03x1.0)^2$ = 1.162
		15m	0.94	$0.6(50x1.0x1.07x1.0)^2$ = 1.325
		20m	0.98	$0.6(50x1.0x1.10x1.0)^2$ = 1.441
k3 factor		1.0		
Ratio h/w	#REF!	Cpe	0.7	Tab 4 Cl 6.2.2.1 IS 875-Part-III Pg 14
Ratio l/w	#REF!	Cpi	0.5	Cl 6.2.3.2 IS 875-Part-III Pg 36

Wind Load Considered in STAAD				
Upto 10 m height	(0.7+0.5)x1.591	=	1.394	kN/m^2
From 10m to 15m height	(0.7+0.5)x1.717	=	1.590	kN/m^2
From 15m to 20m height	(0.7+0.5)x1.815	=	1.729	kN/m^2

Loading Particulars:

Dead Load

DL on Floor Slabs	0.15x25 + 1.50(FF) = 5.625 kN/m^2
DL on Terrace Slab	0.15x25 + 0.15x20 = 6.75 kN/m^2
230 Br. Wall Load	4.60 kN/m per metre Height of wall
115 Br. Wall Load	2.30 kN/m per metre Height of wall
Railing Load	1.875 kN/m per metre Height of Railing

Live Load: (As per IS 875 (Part 2) -1987

For RESIDENTIAL Buildings

Considered uniformly 2.0 kN/m^2

FOR CELLAR SLABS 4 kN/m2

Basic Load Cases:

1	Seismic in X-Direction	SX
2	Seismic in -X-Direction	-Sx
3	Seismic in Z-Direction	SZ
4	Seismic in -Z-Direction	-Sz
5	Dead Load	DL
6	Live Load on Floors	LLF
7	Wind in X-Direction	WX
8	Wind in -X-Direction	-Wx
9	Wind in Z-Direction	WX
10	Wind in -Z-Direction	-Wz

V. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC. Lr. No.: 134

Load Combinations Considered in the Analysis:

(Limit State of Collapse) as per IS 456-2000 Pg 68

11 1.5(DL + LL)

12 1.2(DL + SX) + 0.6LL

13 1.2(DL - SX) + 0.6LL

14 1.2(DL + SZ) + 0.6LL

15 1.2(DL - SZ) + 0.6LL

16 1.5(DL + SX)

17 1.5(DL - SX)

18 1.5(DL + SZ)

19 1.5(DL - SZ)

20 0.9DL + 1.5SX

21 0.9DL - 1.5SX

22 0.9DL + 1.5SZ

23 0.9DL - 1.5SZ

24 1.2(DL + LL + WX)

25 1.2(DL + LL - WX)

26 1.2(DL + LL + WZ)

27 1.2(DL + LL - WZ)

28 1.5(DL + WX)

29 1.5(DL - WX)

30 1.5(DL + WZ)

31 1.5(DL - WZ)

32 0.9DL + 1.5WX

33 0.9DL - 1.5WX

34 0.9DL + 1.5WZ

35 0.9DL - 1.5WZ

M. VENKATESWARA RAO
STRUCTURAL ENGINEER
GHMC. Lic. No.: 154

(Limit State of Serviceability) as per IS 456-200 Pg 68

41 1.0DL + 1.0LL

42 1.0 DL + 1.0SX

43 1.0 DL - 1.0SX

44 1.0 DL + 1.0Sz

45 1.0 DL - 1.0Sz

46 1.0 DL + 1.0WX

47 1.0 DL - 1.0WX

48 1.0 DL + 1.0Wz

49 1.0 DL - 1.0Wz

50 1.0 DL + 0.5 LL + 1.0SX

51 1.0 DL + 0.5 LL - 1.0SX

52 1.0 DL + 0.5 LL + 1.0Sz

53 1.0 DL + 0.5 LL - 1.0Sz

54 1.0 DL + 1.0 LL + 1.0Wx

55 1.0 DL + 1.0 LL - 1.0Wx

56 1.0 DL + 1.0 LL + 1.0Wz

57 1.0 DL + 1.0 LL- 1.0Wz

M. DATTATHREYA RAO
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

STAAD INPUT

STAAD SPACE
START JOB INFORMATION
ENGINEER DATE 09-Nov-16
END JOB INFORMATION
INPUT WIDTH 79
UNIT METER KN
JOINT COORDINATES
1 0 0 0; 2 0 2 0; 3 5.78 0 0; 4 5.78 2 0; 5 9.96 0 0; 6 9.96 2 0; 7 11.8 0 0;
8 11.8 2 0; 9 9.96 0 2.21; 10 9.96 2 2.21; 11 11.8 0 2.21; 12 11.8 2 2.21;
13 0 0 3.23; 14 0 2 3.23; 15 5.78 0 3.23; 16 5.78 2 3.23; 17 0 0 9.35;
18 0 2 9.35; 19 5.78 0 9.35; 20 5.78 2 9.35; 21 11.8 0 9.53; 22 11.8 2 9.53;
23 0 0 15; 24 0 2 15; 25 5.78 0 15; 26 5.78 2 15; 27 11.8 0 15.2;
28 11.8 2 15.2; 29 0 0 17.8; 30 0 2 17.8; 31 5.78 0 17.8; 32 5.78 2 17.8;
33 11.8 0 18; 34 11.8 2 18; 35 0 5 0; 36 5.78 5 0; 37 9.96 5 0; 38 11.8 5 0;
39 9.96 5 2.21; 40 11.8 5 2.21; 41 0 5 3.23; 42 5.78 5 3.23; 43 0 5 9.35;
44 5.78 5 9.35; 45 11.8 5 9.53; 46 0 5 15; 47 5.78 5 15; 48 11.8 5 15.2;
49 0 5 17.8; 50 5.78 5 17.8; 51 11.8 5 18; 52 0 5 12.4; 53 5.78 5 12.4;
54 11.8 5 12.6; 55 0 5 6.29; 56 5.78 5 6.29; 57 11.8 5 6.47; 58 11.8 5 3.23;
59 9.96 5 3.23; 60 4.04 5 0; 61 4.04 5 3.23; 62 0 8 0; 63 5.78 8 0;
64 9.96 8 0; 65 11.8 8 0; 66 9.96 8 2.21; 67 11.8 8 2.21; 68 0 8 3.23;
69 5.78 8 3.23; 70 0 8 9.35; 71 5.78 8 9.35; 72 11.8 8 9.53; 73 0 8 15;
74 5.78 8 15; 75 11.8 8 15.2; 76 0 8 17.8; 77 5.78 8 17.8; 78 11.8 8 18;
79 4.04 8 0; 80 4.04 8 3.23; 81 0 8 6.29; 82 0 8 12.4; 83 5.78 8 6.29;
84 5.78 8 12.4; 85 11.8 8 3.23; 86 11.8 8 12.6; 87 11.8 8 6.47; 88 9.96 8 3.23;
89 0 11 0; 90 5.78 11 0; 91 9.96 11 0; 92 11.8 11 0; 93 9.96 11 2.21;
94 11.8 11 2.21; 95 0 11 3.23; 96 5.78 11 3.23; 97 0 11 9.35; 98 5.78 11 9.35;
99 11.8 11 9.53; 100 0 11 15; 101 5.78 11 15; 102 11.8 11 15.2; 103 0 11 17.8;
104 5.78 11 17.8; 105 11.8 11 18; 106 4.04 11 0; 107 4.04 11 3.23;
108 0 11 6.29; 109 0 11 12.4; 110 5.78 11 6.29; 111 5.78 11 12.4;
112 11.8 11 3.23; 113 11.8 11 12.6; 114 11.8 11 6.47; 115 9.96 11 3.23;

S. DATTATREYA RAO
STRUCTURAL ENGINEER

116 0 14 0; 117 5.78 14 0; 118 9.96 14 0; 119 11.8 14 0; 120 9.96 14 2.21;
121 11.8 14 2.21; 122 0 14 3.23; 123 5.78 14 3.23; 124 0 14 9.35;
125 5.78 14 9.35; 126 11.8 14 9.53; 127 0 14 15; 128 5.78 14 15;
129 11.8 14 15.2; 130 0 14 17.8; 131 5.78 14 17.8; 132 11.8 14 18;
133 4.04 14 0; 134 4.04 14 3.23; 135 0 14 6.29; 136 0 14 12.4;
137 5.78 14 6.29; 138 5.78 14 12.4; 139 11.8 14 3.23; 140 11.8 14 12.6;
141 11.8 14 6.47; 142 9.96 14 3.23; 143 0 17 0; 144 5.78 17 0; 145 9.96 17 0;
146 11.8 17 0; 147 9.96 17 2.21; 148 11.8 17 2.21; 149 0 17 3.23;
150 5.78 17 3.23; 151 0 17 9.35; 152 5.78 17 9.35; 153 11.8 17 9.53;
154 0 17 15; 155 5.78 17 15; 156 11.8 17 15.2; 157 0 17 17.8; 158 5.78 17 17.8;
159 11.8 17 18; 160 4.04 17 0; 161 4.04 17 3.23; 162 0 17 6.29; 163 0 17 12.4;
164 5.78 17 6.29; 165 5.78 17 12.4; 166 11.8 17 3.23; 167 11.8 17 12.6;
168 11.8 17 6.47; 169 9.96 17 3.23;

MEMBER INCIDENCES

1 1 2; 2 3 4; 3 5 6; 4 7 8; 5 9 10; 6 11 12; 7 13 14; 8 15 16; 9 17 18;
10 19 20; 11 21 22; 12 23 24; 13 25 26; 14 27 28; 15 29 30; 16 31 32; 17 33 34;
18 2 4; 19 4 6; 20 6 8; 21 10 12; 22 14 16; 23 18 20; 24 24 26; 25 30 32;
26 2 14; 27 14 18; 28 18 24; 29 24 30; 30 4 16; 31 16 20; 32 20 26; 33 26 32;
34 6 10; 35 8 12; 36 12 22; 37 22 28; 38 28 34; 39 20 22; 40 26 28; 41 32 34;
42 16 10; 43 2 35; 44 4 36; 45 6 37; 46 8 38; 47 10 39; 48 12 40; 49 14 41;
50 16 42; 51 18 43; 52 20 44; 53 22 45; 54 24 46; 55 26 47; 56 28 48; 57 30 49;
58 32 50; 59 34 51; 60 35 60; 61 36 37; 62 37 38; 63 39 40; 64 41 61; 65 43 44;
66 46 47; 67 49 50; 68 35 41; 69 41 55; 70 43 52; 71 46 49; 73 42 56; 74 44 53;
75 47 50; 76 37 39; 77 38 40; 78 40 58; 79 45 54; 80 48 51; 81 50 51; 82 47 48;
83 44 45; 84 52 46; 85 53 47; 86 52 53; 87 54 48; 88 53 54; 89 55 43; 90 56 44;
91 55 56; 92 57 45; 93 56 57; 94 58 57; 95 42 59; 96 59 58; 97 39 59; 98 60 36;
99 61 42; 100 60 61; 101 35 62; 102 36 63; 103 37 64; 104 38 65; 105 39 66;
106 40 67; 107 41 68; 108 42 69; 109 43 70; 110 44 71; 111 45 72; 112 46 73;
113 47 74; 114 48 75; 115 49 76; 116 50 77; 117 51 78; 118 62 79; 119 63 64;
120 64 65; 121 66 67; 122 68 80; 123 70 71; 124 73 74; 125 76 77; 126 62 68;
127 68 81; 128 70 82; 129 73 76; 130 69 83; 131 71 84; 132 74 77; 133 64 66;
134 65 67; 135 67 85; 136 72 86; 137 75 78; 138 77 78; 139 74 75; 140 71 72;
141 82 73; 142 84 74; 143 82 84; 144 86 75; 145 84 86; 146 81 70; 147 83 71;

STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

148 81 83; 149 87 72; 150 83 87; 151 85 87; 152 69 88; 153 88 85; 154 66 88;
155 79 63; 156 80 69; 157 79 80; 158 62 89; 159 63 90; 160 64 91; 161 65 92;
162 66 93; 163 67 94; 164 68 95; 165 69 96; 166 70 97; 167 71 98; 168 72 99;
169 73 100; 170 74 101; 171 75 102; 172 76 103; 173 77 104; 174 78 105;
175 89 106; 176 90 91; 177 91 92; 178 93 94; 179 95 107; 180 97 98;
181 100 101; 182 103 104; 183 89 95; 184 95 108; 185 97 109; 186 100 103;
187 96 110; 188 98 111; 189 101 104; 190 91 93; 191 92 94; 192 94 112;
193 99 113; 194 102 105; 195 104 105; 196 101 102; 197 98 99; 198 109 100;
199 111 101; 200 109 111; 201 113 102; 202 111 113; 203 108 97; 204 110 98;
205 108 110; 206 114 99; 207 110 114; 208 112 114; 209 96 115; 210 115 112;
211 93 115; 212 106 90; 213 107 96; 214 106 107; 215 89 116; 216 90 117;
217 91 118; 218 92 119; 219 93 120; 220 94 121; 221 95 122; 222 96 123;
223 97 124; 224 98 125; 225 99 126; 226 100 127; 227 101 128; 228 102 129;
229 103 130; 230 104 131; 231 105 132; 232 116 133; 233 117 118; 234 118 119;
235 120 121; 236 122 134; 237 124 125; 238 127 128; 239 130 131; 240 116 122;
241 122 135; 242 124 136; 243 127 130; 244 123 137; 245 125 138; 246 128 131;
247 118 120; 248 119 121; 249 121 139; 250 126 140; 251 129 132; 252 131 132;
253 128 129; 254 125 126; 255 136 127; 256 138 128; 257 136 138; 258 140 129;
259 138 140; 260 135 124; 261 137 125; 262 135 137; 263 141 126; 264 137 141;
265 139 141; 266 123 142; 267 142 139; 268 120 142; 269 133 117; 270 134 123;
271 133 134; 272 116 143; 273 117 144; 274 118 145; 275 119 146; 276 120 147;
277 121 148; 278 122 149; 279 123 150; 280 124 151; 281 125 152; 282 126 153;
283 127 154; 284 128 155; 285 129 156; 286 130 157; 287 131 158; 288 132 159;
289 143 160; 290 144 145; 291 145 146; 292 147 148; 293 149 161; 294 151 152;
295 154 155; 296 157 158; 297 143 149; 298 149 162; 299 151 163; 300 154 157;
301 150 164; 302 152 165; 303 155 158; 304 145 147; 305 146 148; 306 148 166;
307 153 167; 308 156 159; 309 158 159; 310 155 156; 311 152 153; 312 163 154;
313 165 155; 314 163 165; 315 167 156; 316 165 167; 317 162 151; 318 164 152;
319 162 164; 320 168 153; 321 164 168; 322 166 168; 323 150 169; 324 169 166;
325 147 169; 326 160 144; 327 161 150; 328 160 161;

DEFINE MATERIAL START

ISOTROPIC CONCRETE

E 2.17185e+007

POISSON 0.17
DENSITY 23.5616
ALPHA 1e-005
DAMP 0.05
TYPE CONCRETE
STRENGTH FCU 27579
END DEFINE MATERIAL
MEMBER PROPERTY AMERICAN
18 TO 42 PRIS YD 0.3 ZD 0.23
60 TO 71 73 TO 100 118 TO 157 175 TO 214 232 TO 271 289 TO 327 -
328 PRIS YD 0.42 ZD 0.23
3 TO 5 45 TO 47 103 TO 105 160 TO 162 217 TO 219 274 TO 275 -
276 PRIS YD 0.45 ZD 0.23
MEMBER PROPERTY AMERICAN
1 2 6 9 12 14 15 17 43 44 48 51 54 56 57 59 101 102 106 109 111 112 114 115 -
117 158 159 163 166 168 169 171 172 174 215 216 220 223 225 226 228 229 231 -
272 273 277 280 282 283 285 286 288 PRIS YD 0.6 ZD 0.23
MEMBER PROPERTY
7 8 10 11 13 16 49 50 52 53 55 58 107 108 110 113 116 164 165 167 170 173 -
221 222 224 227 230 278 279 281 284 287 PRIS YD 0.6 ZD 0.3
CONSTANTS
BETA 90 MEMB 1 4 6 7 9 TO 15 17 43 46 48 49 51 TO 57 59 101 104 106 107 109 -
110 TO 115 117 158 161 163 164 166 TO 172 174 215 218 220 221 223 TO 229 231 -
272 275 277 278 280 TO 286 288
MATERIAL CONCRETE ALL
SUPPORTS
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 FIXED
UNIT MMS NEWTON
DEFINE WIND LOAD
TYPE 1 WIND 1
<! STAAD PRO GENERATED DATA DO NOT MODIFY !!!
ASCE-7-2010:PARAMS 44.000 M/SEC 0 1 1 0 0.000 FT 0.000 FT 0.000 FT 1 -
1 40.000 FT 30.000 FT 25.000 FT 2.000 0.010 0 -

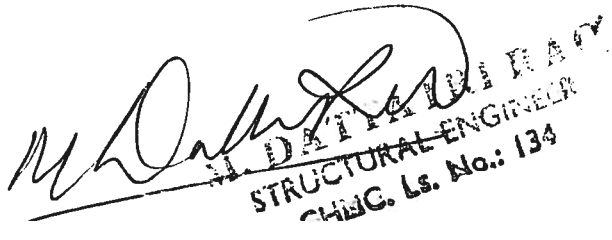
M. [illegible] RAO
STRUCTURAL ENGINEER
CHEC, Lic. No.: [illegible]

```
0 0 0 0 0.761 1.000 1.000 0.850 0 -
0 0 0 0.866 0.800 -0.550
!> END GENERATED DATA BLOCK
INT 0.000824016 0.000824016 0.000838105 0.000851093 0.000863165 0.000874463 -
 0.000885097 0.000895153 0.000904701 0.000913798 0.000922493 0.000930826 -
 0.000938831 0.000946537 0.00095397 HEIG  0  4572  5158.15  5744.31  6330.46 -
 6916.62  7502.77  8088.92  8675.08  9261.23  9847.39  10433.5  11019.7 -
 11605.9  12192
EXP 0.8 JOINT 1 TO 169
DEFINE 1893 LOAD
ZONE 0.1 RF 3 I 1 SS 2 ST 1
SELFWEIGHT 1
MEMBER WEIGHT
60 TO 62 64 66 TO 71 73 TO 75 77 TO 82 84 85 87 89 90 92 94 TO 96 98 TO 100 -
118 TO 121 125 TO 129 133 TO 138 141 144 146 149 151 155 175 TO 178 -
182 TO 186 190 TO 195 198 201 203 206 208 212 232 TO 235 239 TO 243 -
247 TO 252 255 258 260 263 265 269 UNI 8
122 124 130 TO 132 139 142 147 152 TO 154 156 157 179 181 187 TO 189 196 199 -
204 213 214 236 238 244 TO 246 253 256 261 270 271 UNI 6
289 TO 291 296 TO 300 305 TO 309 312 315 317 320 322 326 UNI 2.5
FLOOR WEIGHT
YRANGE 5000 17000 FLOAD 0.004625
UNIT METER KN
LOAD 1 LOADTYPE Seismic  TITLE EQ+X
1893 LOAD X 1
LOAD 2 LOADTYPE Seismic  TITLE EQ-X
1893 LOAD X -1
LOAD 3 LOADTYPE Seismic  TITLE EQ+Z
1893 LOAD Z 1
LOAD 4 LOADTYPE Seismic  TITLE EQ-Z
1893 LOAD Z -1
LOAD 5 LOADTYPE Dead  TITLE DL
SELFWEIGHT Y -1
```

FLOOR LOAD
YRANGE 5 17 FLOAD -4.625 GY
LOAD 6 LOADTYPE Live TITLE LL
FLOOR LOAD
YRANGE 5 17 FLOAD -3 GY
LOAD 7 LOADTYPE Dead TITLE WL
MEMBER LOAD
18 TO 21 25 TO 29 34 TO 38 41 60 TO 63 67 TO 71 76 TO 81 84 87 89 92 94 98 -
118 TO 121 125 TO 129 133 TO 138 141 144 146 149 151 155 175 TO 178 -
182 TO 186 190 TO 195 198 201 203 206 208 212 232 TO 235 239 TO 243 -
247 TO 252 255 258 260 263 265 269 291 292 304 305 UNI GY -12
64 73 TO 75 85 90 99 100 122 124 130 TO 132 139 142 147 152 TO 154 156 157 -
179 181 187 TO 189 196 199 204 209 TO 211 213 214 236 238 244 TO 246 253 -
256 261 266 TO 268 270 271 UNI GY -6
289 290 296 TO 300 306 TO 309 312 315 317 320 322 325 326 UNI GY -3
LOAD 8 LOADTYPE Wind TITLE W+X
WIND LOAD X 1 TYPE 1
LOAD 9 LOADTYPE Wind TITLE W-X
WIND LOAD -X -1 TYPE 1
LOAD 10 LOADTYPE Wind TITLE W+Z
WIND LOAD Z 1 TYPE 1
LOAD 11 LOADTYPE Wind TITLE W-Z
WIND LOAD -Z -1 TYPE 1
LOAD COMB 12 GENERATED INDIAN CODE GENRAL_STRUCTURES 1
5 1.5 7 1.5 6 1.5
LOAD COMB 13 GENERATED INDIAN CODE GENRAL_STRUCTURES 2
5 1.2 7 1.2 6 1.2 8 1.2
LOAD COMB 14 GENERATED INDIAN CODE GENRAL_STRUCTURES 3
5 1.2 7 1.2 6 1.2 9 1.2
LOAD COMB 15 GENERATED INDIAN CODE GENRAL_STRUCTURES 4
5 1.2 7 1.2 6 1.2 10 1.2
LOAD COMB 16 GENERATED INDIAN CODE GENRAL_STRUCTURES 5
5 1.2 7 1.2 6 1.2 11 1.2

M. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

LOAD COMB 17 GENERATED INDIAN CODE GENRAL_STRUCTURES 6
5 1.2 7 1.2 6 1.2 8 -1.2
LOAD COMB 18 GENERATED INDIAN CODE GENRAL_STRUCTURES 7
5 1.2 7 1.2 6 1.2 9 -1.2
LOAD COMB 19 GENERATED INDIAN CODE GENRAL_STRUCTURES 8
5 1.2 7 1.2 6 1.2 10 -1.2
LOAD COMB 20 GENERATED INDIAN CODE GENRAL_STRUCTURES 9
5 1.2 7 1.2 6 1.2 11 -1.2
LOAD COMB 21 GENERATED INDIAN CODE GENRAL_STRUCTURES 10
5 1.2 7 1.2 6 1.2 1 1.2
LOAD COMB 22 GENERATED INDIAN CODE GENRAL_STRUCTURES 11
5 1.2 7 1.2 6 1.2 2 1.2
LOAD COMB 23 GENERATED INDIAN CODE GENRAL_STRUCTURES 12
5 1.2 7 1.2 6 1.2 3 1.2
LOAD COMB 24 GENERATED INDIAN CODE GENRAL_STRUCTURES 13
5 1.2 7 1.2 6 1.2 4 1.2
LOAD COMB 25 GENERATED INDIAN CODE GENRAL_STRUCTURES 14
5 1.2 7 1.2 6 1.2 1 -1.2
LOAD COMB 26 GENERATED INDIAN CODE GENRAL_STRUCTURES 15
5 1.2 7 1.2 6 1.2 2 -1.2
LOAD COMB 27 GENERATED INDIAN CODE GENRAL_STRUCTURES 16
5 1.2 7 1.2 6 1.2 3 -1.2
LOAD COMB 28 GENERATED INDIAN CODE GENRAL_STRUCTURES 17
5 1.2 7 1.2 6 1.2 4 -1.2
LOAD COMB 29 GENERATED INDIAN CODE GENRAL_STRUCTURES 18
5 1.5 7 1.5 8 1.5
LOAD COMB 30 GENERATED INDIAN CODE GENRAL_STRUCTURES 19
5 1.5 7 1.5 9 1.5
LOAD COMB 31 GENERATED INDIAN CODE GENRAL_STRUCTURES 20
5 1.5 7 1.5 10 1.5
LOAD COMB 32 GENERATED INDIAN CODE GENRAL_STRUCTURES 21
5 1.5 7 1.5 11 1.5
LOAD COMB 33 GENERATED INDIAN CODE GENRAL_STRUCTURES 22



5 1.5 7 1.5 8 -1.5

LOAD COMB 34 GENERATED INDIAN CODE GENRAL_STRUCTURES 23

5 1.5 7 1.5 9 -1.5

LOAD COMB 35 GENERATED INDIAN CODE GENRAL_STRUCTURES 24

5 1.5 7 1.5 10 -1.5

LOAD COMB 36 GENERATED INDIAN CODE GENRAL_STRUCTURES 25

5 1.5 7 1.5 11 -1.5

LOAD COMB 37 GENERATED INDIAN CODE GENRAL_STRUCTURES 26

5 1.5 7 1.5 1 1.5

LOAD COMB 38 GENERATED INDIAN CODE GENRAL_STRUCTURES 27

5 1.5 7 1.5 2 1.5

LOAD COMB 39 GENERATED INDIAN CODE GENRAL_STRUCTURES 28

5 1.5 7 1.5 3 1.5

LOAD COMB 40 GENERATED INDIAN CODE GENRAL_STRUCTURES 29

5 1.5 7 1.5 4 1.5

LOAD COMB 41 GENERATED INDIAN CODE GENRAL_STRUCTURES 30

5 1.5 7 1.5 1 -1.5

LOAD COMB 42 GENERATED INDIAN CODE GENRAL_STRUCTURES 31

5 1.5 7 1.5 2 -1.5

LOAD COMB 43 GENERATED INDIAN CODE GENRAL_STRUCTURES 32

5 1.5 7 1.5 3 -1.5

LOAD COMB 44 GENERATED INDIAN CODE GENRAL_STRUCTURES 33

5 1.5 7 1.5 4 -1.5

LOAD COMB 45 GENERATED INDIAN CODE GENRAL_STRUCTURES 34

5 0.9 7 0.9 1 1.5

LOAD COMB 46 GENERATED INDIAN CODE GENRAL_STRUCTURES 35

5 0.9 7 0.9 2 1.5

LOAD COMB 47 GENERATED INDIAN CODE GENRAL_STRUCTURES 36

5 0.9 7 0.9 3 1.5

LOAD COMB 48 GENERATED INDIAN CODE GENRAL_STRUCTURES 37

5 0.9 7 0.9 4 1.5

LOAD COMB 49 GENERATED INDIAN CODE GENRAL_STRUCTURES 38

5 0.9 7 0.9 1 -1.5

V. DATTATHREYA RAO
STRUCTURAL ENGINEER
GHMC. Lic. No.: 134

LOAD COMB 50 GENERATED INDIAN CODE GENRAL_STRUCTURES 39

5 0.9 7 0.9 2 -1.5

LOAD COMB 51 GENERATED INDIAN CODE GENRAL_STRUCTURES 40

5 0.9 7 0.9 3 -1.5

LOAD COMB 52 GENERATED INDIAN CODE GENRAL_STRUCTURES 41

5 0.9 7 0.9 4 -1.5

PERFORM ANALYSIS

PRINT ANALYSIS RESULTS

START CONCRETE DESIGN

CODE INDIAN

CLEAR 0.025 ALL

FC 20000 MEMB 18 TO 42 60 TO 71 73 TO 100 118 TO 157 175 TO 214 232 TO 271 -

289 TO 328

FC 25000 MEMB 1 TO 17 43 TO 59 101 TO 117 158 TO 174 215 TO 231 272 TO 288

FYMAIN 500000 ALL

FYSEC 415000 ALL

MAXMAIN 20 ALL

MAXSEC 12 ALL

MINMAIN 10 ALL

MINSEC 8 ALL

DESIGN BEAM 18 TO 42 60 TO 71 73 TO 100 118 TO 157 175 TO 214 232 TO 271
289 -

290 TO 328

DESIGN COLUMN 1 TO 17 43 TO 59 101 TO 117 158 TO 174 215 TO 231 272 TO
288

END CONCRETE DESIGN

PRINT JOINT COORDINATES

PRINT MEMBER INFORMATION

PRINT SUPPORT REACTION

FINISH

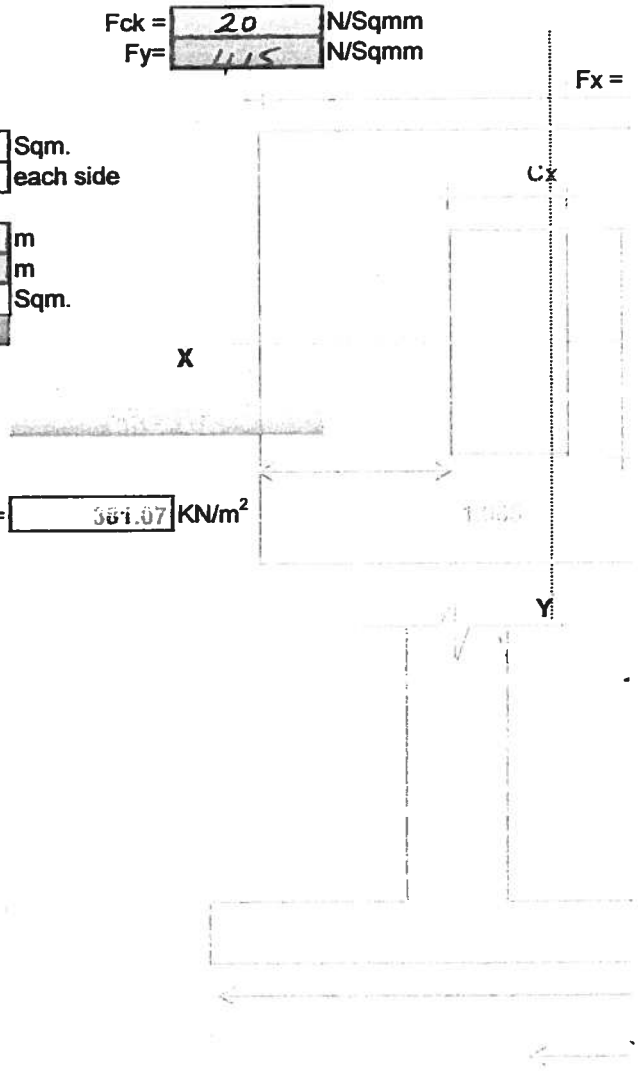
DESIGN OF FLAT FOOTING

LOAD DATA

Unfactored Load P =	2900	KN
Unfactored MOM-Mx =	194	KN-m
Unfactored MOM-My =	0.084	KN-m
SBC =	250	

Dimentions of
Cx = 0.23
Cy = 0.6

Fck = 20 N/Sqmm
Fy = 415 N/Sqmm



STABILITY CHECK - Check for Stresses

Area of the Footing Required = [illegible] Sqm.
Footing Size Required = [illegible] each side
However Provide
Fx = 2.4 m
Fy = 2.4 m
Area Provided = 5.76 Sqm.
OK

Zx = 2.30 Cum
Zy = 2.30 Cum

f = P/A + Mx/Zx + My/Zy

Fmax = 382.82 KN/m²
< [illegible] KN/m²

Fmin = [illegible] KN/m²

Net Upward Pressure = 346.10 KN/Sqm

D = 0.75 m
d = 0.7 m

S F in X dir @ d = [illegible] KN
S F in Y dir @ d = [illegible] KN

Shear Stress (Tvx) in X = [illegible] N/Sqmm

Shear Stress (Tvy) in Y = [illegible] N/Sqmm

DEPTH OF FOOTING REQUIRED AS PER MOMENT

For [illegible] Cantilever
Moment = 204.90 KN-m
Mu = 245.88

$d=(SQRT(Mu/0.138f_{ck}b))$
d = 0.30

CHECK FOR SHEAR STRESSES

M. DATTATHREYA
STRUCTURAL ENGINEER
C.I.N.C. Is No: [illegible]

The critical section for one way shear is taken at a distance equal to the effective depth from the column

Shear Force at critical section along X direction

SFu X = 385.98 **kN**

Shear Force at critical section along Z direction

SFu Z = 200.51 **kN**

q_{vx} =	0.23 N/sqmm	<	q_c
q_{vz} =	0.12 N/sqmm		FROM SP 16

The critical section for two way shear is taken at a distance equal to half the effective depth from the colu

d/2 =	0.35	m
(b+a) =	0.93	m
(d+a) =	1.30	m
b_0 =	4460.00	mm

a = 0.7 m

Shear Force at this critical section = S_u = 1584210.21 N

q_v = 0.76 N/sqmm

βc = short side of the column / long side of the column = 0.38

Ks = 0.5+βc = 0.88

But Ks is limited to 1.00

0.883333333

q_c = Ksx0.25(sqrt(f_{ck})) = 0.9876 N/sqmm

For _____ Cantilever WIDTH

Moment = _____ KN-m

Mu/bD^2 = _____

Pt = _____

$Ast._{reqd.}$ = _____ Sqmm

Provided _____ @ _____ mm c/c

NO OF BARS _____

$Ast._{provd.}$ = _____ Sqmm

CONCLUSION

The proposed group housing Miryalguda building was analyzed by using STAAD pro software. The design of all the super structure members was done using STAAD pro software only.

- Columns and beams are designed as per STAAD.
- Foundations are designed using spread sheet.
- Slabs are designed using spread sheet.

Hence it can be concluded that the group housing Miryalguda building structure is safe and stable for the purpose for which it is intended. It is recommended that no additional loads shall be applied on the structure.

M. DATTATHREYA
STRUCTURAL ENGINEER
CHNG. Ls. No.: 154

SUPPORT REACTIONS DETAILS

Node No	Load Case	Fx	Fy	Fz	Mx	My	Mz
1							
	12	14.67	871.85	8.12	7.76	0.53	9.11
	13	6.19	672.56	5.01	2.15	0.09	0.72
	14	17.28	722.4	7.98	10.27	0.76	15.29
	15	12.02	663.71	5.67	18.66	0.31	7.71
	16	11.45	731.24	18.66	31.08	0.54	6.86
	17	17.28	722.4	7.98	10.27	0.76	15.29
	18	6.19	672.56	5.01	2.15	0.09	0.72
	32	15.38	802.88	22.24	36.76	0.53	9.35
	33	22.67	791.82	8.89	10.75	0.81	19.89
	34	8.81	729.53	5.18	0.59	0.03	0.13
	35	15.38	802.88	22.24	36.76	0.53	9.35
	36	16.09	718.46	8.17	25.42	0.24	10.41
	37	3.73	668.69	2.52	6.7	0.12	13.61
	38	27.74	852.65	11.55	18.04	0.9	33.37
	42	3.73	668.69	2.52	6.7	0.12	13.61
	43	15.57	958.35	43.71	108.86	0.18	9.76
	44	15.91	562.99	29.64	97.52	0.59	10
	45	2.56	364.42	0.29	8.97	0.28	17.57
3							
	12	11.02	1215.93	3.08	2.83	0.24	11.07
	13	28.17	954.47	2.45	2.2	0.25	55.08
	14	10.54	991.01	2.47	2.33	0.14	37.38
	15	7.86	963.06	3.95	2.93	0.27	6.63
	16	9.77	982.42	8.88	7.45	0.66	11.08
	17	10.54	991.01	2.47	2.33	0.14	37.38
	18	28.17	954.47	2.45	2.2	0.25	55.08
	19	9.77	982.42	8.88	7.45	0.66	11.08
	20	7.86	963.06	3.95	2.93	0.27	6.63
	21	52.76	916.53	2.51	2.22	0.34	119.41
	22	35.13	1028.95	2.42	2.3	0.05	101.7
	23	9.06	933.51	9.94	15.94	0.33	8.91
	24	8.57	1011.97	14.87	20.46	0.05	8.8
	25	35.13	1028.95	2.42	2.3	0.05	101.7
	26	52.76	916.53	2.51	2.22	0.34	119.41
	27	8.57	1011.97	14.87	20.46	0.05	8.8
	28	9.06	933.51	9.94	15.94	0.33	8.91
	29	35.25	1006.85	2.23	1.95	0.25	67.78
	30	13.14	1052.53	2.26	2.11	0.1	47.78

M. DATTATREYA

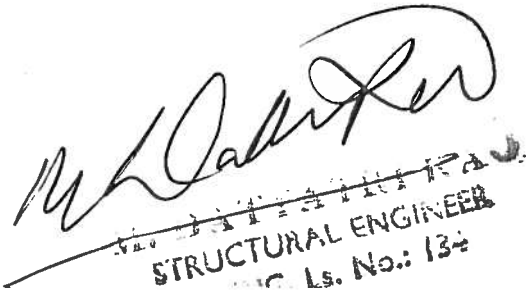
	31	9.86	1017.59	5.77	4.46	0.41	7.22
	32	12.25	1041.79	10.26	8.52	0.76	12.78
	33	13.14	1052.53	2.26	2.11	0.1	47.78
	34	35.25	1006.85	2.23	1.95	0.25	67.78
	35	12.25	1041.79	10.26	8.52	0.76	12.78
	36	9.86	1017.59	5.77	4.46	0.41	7.22
	37	65.99	959.43	2.3	1.98	0.36	148.19
	38	43.88	1099.95	2.19	2.08	0.01	128.2
	39	11.36	980.65	13.26	20.72	0.35	10.07
	40	10.75	1078.73	17.75	24.78	0	9.93
	41	43.88	1099.95	2.19	2.08	0.01	128.2
	42	65.99	959.43	2.3	1.98	0.36	148.19
	43	10.75	1078.73	17.75	24.78	0	9.93
5							
	12	9.61	672.47	6.74	6.08	0.44	7.93
	13	21.08	504.91	5.45	4.96	0.11	29.39
	14	5.71	571.04	5.33	4.76	0.6	16.7
	15	6.96	506.82	1.85	1.48	0.03	5.17
	16	8.41	569.13	12.63	11.21	0.74	7.52
	17	5.71	571.04	5.33	4.76	0.6	16.7
	18	21.08	504.91	5.45	4.96	0.11	29.39
	19	8.41	569.13	12.63	11.21	0.74	7.52
	20	6.96	506.82	1.85	1.48	0.03	5.17
	21	38.93	442.25	5.65	5.36	0.01	61.67
	22	23.56	633.7	5.13	4.36	0.7	48.99
	23	7.81	404.53	4.6	9.29	0.28	6.41
	24	7.56	671.42	15.38	19.02	0.43	6.28
	25	23.56	633.7	5.13	4.36	0.7	48.99
	26	38.93	442.25	5.65	5.36	0.01	61.67
	27	7.56	671.42	15.38	19.02	0.43	6.28
	28	7.81	404.53	4.6	9.29	0.28	6.41
	29	25.86	561.7	5.51	4.87	0.02	35.92
	30	7.64	644.36	5.37	4.63	0.64	21.7
	31	8.2	564.09	3.61	3.18	0.15	5.64
	32	10.02	641.98	14.48	12.68	0.8	8.58
	33	7.64	644.36	5.37	4.63	0.64	21.7
	34	25.86	561.7	5.51	4.87	0.02	35.92
	35	10.02	641.98	14.48	12.68	0.8	8.58
	36	8.2	564.09	3.61	3.18	0.15	5.64
	37	48.17	483.37	5.76	5.37	0.11	76.28
	38	29.95	722.69	5.12	4.12	0.76	62.05
7							
	12	2.79	441.51	5.76	5.69	0.67	2.34

13	8.13	424.81	5.73	6.75	0.22	9.58
14	3.66	281.6	3.49	2.35	0.85	5.83
15	1.93	307.08	2.34	7.83	0.14	1.48
16	2.53	399.34	11.55	16.92	0.94	2.26
17	3.66	281.6	3.49	2.35	0.85	5.83
18	8.13	424.81	5.73	6.75	0.22	9.58
19	2.53	399.34	11.55	16.92	0.94	2.26
20	1.93	307.08	2.34	7.83	0.14	1.48
21	16.21	562.56	7.01	9.5	0.11	20.41
22	11.74	143.85	2.2	0.4	0.96	16.67
23	2.39	160.68	14.45	35.36	0.43	1.97
24	2.08	545.73	23.66	44.46	0.65	1.77
25	11.74	143.85	2.2	0.4	0.96	16.67
26	16.21	562.56	7.01	9.5	0.11	20.41
42	19.91	664.61	7.59	10.42	0.03	25.15
43	2.25	643.58	28.4	54.11	0.64	1.85

9

12	3.83	1049.77	0.08	1.75	0.53	4.82
13	13.97	791.26	0.65	1.85	0.16	24.01
14	20.1	888.37	0.52	0.95	0.69	31.73
15	1.89	866.3	4.79	4.92	0.14	2.38
16	4.23	813.33	4.92	7.72	0.7	5.34
17	20.1	888.37	0.52	0.95	0.69	31.73
18	13.97	791.26	0.65	1.85	0.16	24.01
19	4.23	813.33	4.92	7.72	0.7	5.34
20	1.89	866.3	4.79	4.92	0.14	2.38
21	31.59	702.28	1.46	2.65	0.08	55.98
22	37.72	977.36	1.33	0.15	0.77	63.7
23	3.81	946.74	9.91	12.74	0.33	4.11
24	2.32	732.9	10.04	15.54	0.52	3.61
25	37.72	977.36	1.33	0.15	0.77	63.7
26	31.59	702.28	1.46	2.65	0.08	55.98
27	2.32	732.9	10.04	15.54	0.52	3.61
28	3.81	946.74	9.91	12.74	0.33	4.11
29	18.36	792.85	0.23	1.44	0.06	31.22
30	24.23	914.23	1.24	0.32	0.72	38.45
31	1.47	886.65	6.57	7.02	0.04	1.77
32	4.39	820.44	5.56	8.78	0.74	5.46
41	46.25	1025.47	2.26	0.68	0.82	78.42
42	40.38	681.62	1.24	2.44	0.04	71.19
43	2	719.89	11.96	18.56	0.51	3.31
44	3.87	987.19	12.98	16.8	0.27	3.92

11

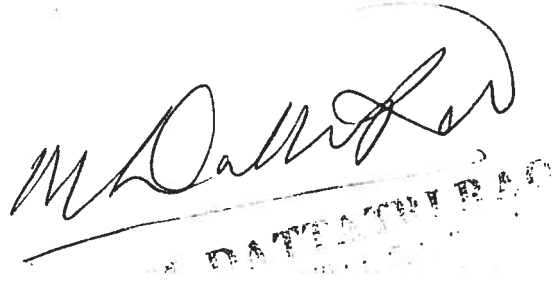


	12	0.01	1183.8	25.95	20.13	0.82	0.82
	13	8.07	1022.47	22.75	20.82	0.12	10.64
	14	8.06	871.61	18.76	11.39	1.19	11.96
	15	0.65	986.07	9.18	10.68	0.13	0.02
	16	0.64	908.01	32.34	42.89	1.18	1.34
	17	8.06	871.61	18.76	11.39	1.19	11.96
	18	8.07	1022.47	22.75	20.82	0.12	10.64
	19	0.64	908.01	32.34	42.89	1.18	1.34
	20	0.65	986.07	9.18	10.68	0.13	0.02
	21	16.73	1170.88	25.09	26.82	0.05	23.67
	22	16.72	723.2	16.42	5.39	1.37	24.98
	23	0.22	1115.76	14.85	71.12	0.51	0.44
	24	0.21	778.32	56.36	103.33	0.81	0.87
	25	16.72	723.2	16.42	5.39	1.37	24.98
	26	16.73	1170.88	25.09	26.82	0.05	23.67
	27	0.21	778.32	56.36	103.33	0.81	0.87
	28	0.22	1115.76	14.85	71.12	0.51	0.44
	29	10.51	1113.41	28.93	24.56	0.06	13.8
	30	9.66	924.83	23.94	12.78	1.28	14.46
	31	1.23	1067.91	11.96	14.81	0.04	0.52
	32	0.38	970.33	40.91	52.15	1.27	1.18
	41	20.48	739.32	21.01	5.28	1.5	30.74
	42	21.33	1298.92	31.85	32.06	0.28	30.07
	43	0.16	808.22	70.94	127.7	0.8	0.6
	44	0.7	1230.01	18.07	90.37	0.42	0.06
13							
	12	3.44	1558.75	14.2	12.2	0.52	0.79
	13	15.14	1225.39	9.43	4.45	0.98	19.1
	14	9.64	1268.61	13.3	15.06	1.81	20.37
	15	2.78	1269.47	1.27	22.12	0.66	0.36
	16	2.73	1224.53	24	41.63	0.17	0.9
	17	9.64	1268.61	13.3	15.06	1.81	20.37
	18	15.14	1225.39	9.43	4.45	0.98	19.1
	19	2.73	1224.53	24	41.63	0.17	0.9
	20	2.78	1269.47	1.27	22.12	0.66	0.36
	21	18.54	1177.91	6.65	3.18	1.69	39.65
	22	13.03	1316.09	16.08	22.7	2.53	40.92
	23	3.02	1351.1	28.12	98.83	0.51	0.29
	24	2.48	1142.9	50.85	118.35	0.32	0.98
	25	13.03	1316.09	16.08	22.7	2.53	40.92
	26	18.54	1177.91	6.65	3.18	1.69	39.65
	27	2.48	1142.9	50.85	118.35	0.32	0.98
	28	3.02	1351.1	28.12	98.83	0.51	0.29
	29	17.24	1249.36	11.86	3.72	1.36	23.67

	30	13.73	1303.39	16.7	16.99	2.13	25.66
	31	1.79	1304.46	1.51	29.48	0.69	0.66
	32	1.73	1248.28	30.07	50.2	0.08	1.33
	41	17.98	1362.74	20.17	26.53	3.02	51.35
	42	21.49	1190	8.39	5.82	2.25	49.36
	43	1.42	1146.24	63.63	146.1	0.27	1.43
	44	2.09	1406.5	35.07	125.38	0.5	0.56
	45	20.79	679.45	2.67	9.96	2.4	49.76
	46	18.68	852.19	14.46	22.39	2.86	50.95
15							
	12	7.32	2219.97	8.67	3.77	0.17	10.21
	13	21.33	1774.25	6.36	2.78	0.98	62.19
	14	33.04	1777.7	7.5	3.26	0.71	78.53
	15	6.63	1776.8	15.38	16.03	0.68	7.65
	16	5.07	1775.15	1.52	9.99	0.41	8.68
	17	33.04	1777.7	7.5	3.26	0.71	78.53
	18	21.33	1774.25	6.36	2.78	0.98	62.19
	19	5.07	1775.15	1.52	9.99	0.41	8.68
	20	6.63	1776.8	15.38	16.03	0.68	7.65
	21	48.2	1771.7	5.23	2.07	1.57	142.92
	22	59.9	1780.24	8.64	3.97	1.3	159.26
	23	6.77	1767.31	26.04	37.94	0.19	7.92
	24	4.93	1784.63	12.17	31.91	0.09	8.42
	25	59.9	1780.24	8.64	3.97	1.3	159.26
	26	48.2	1771.7	5.23	2.07	1.57	142.92
	27	4.93	1784.63	12.17	31.91	0.09	8.42
	28	6.77	1767.31	26.04	37.94	0.19	7.92
	29	29.05	1621.86	4.99	2.11	1.2	80.93
	30	38.91	1626.17	6.42	2.72	0.92	94.97
	31	5.9	1625.04	16.26	18.68	0.83	6.38
	32	3.95	1622.98	4.86	13.84	0.54	7.66
	41	72.49	1629.35	7.83	3.61	1.65	195.88
	42	62.63	1618.68	3.57	1.23	1.94	181.84
	43	3.77	1634.84	18.18	41.24	0.08	7.33
	44	6.08	1613.19	29.58	46.07	0.21	6.71
	45	64.61	969.07	1.29	0.26	1.88	184.65
	46	70.52	979.74	5.55	2.64	1.71	193.07
17							
	12	3.15	1725.95	2.39	0.85	0.06	1.28
	13	17.53	1354.51	3.42	4.71	0.46	18.61
	14	12.5	1407.01	0.41	3.35	0.37	16.56
	15	2.69	1378.65	11.15	24.53	0.01	1.32
	16	2.35	1382.87	7.32	23.17	0.11	0.73

	17	12.5	1407.01	0.41	3.35	0.37	16.56
	18	17.53	1354.51	3.42	4.71	0.46	18.61
	19	2.35	1382.87	7.32	23.17	0.11	0.73
	20	2.69	1378.65	11.15	24.53	0.01	1.32
	21	18.93	1298.89	5.6	10.58	0.89	31.68
	22	13.9	1462.63	1.77	9.22	0.79	29.63
	23	2.59	1372.47	32.27	84.17	0.05	1.13
	24	2.44	1389.06	28.44	82.81	0.14	0.92
	25	13.9	1462.63	1.77	9.22	0.79	29.63
	26	18.93	1298.89	5.6	10.58	0.89	31.68
	27	2.44	1389.06	28.44	82.81	0.14	0.92
	28	2.59	1372.47	32.27	84.17	0.05	1.13
	29	19.84	1342.37	4.72	6.67	0.57	22.14
	30	17.69	1408	0.96	3.4	0.47	21.83
	31	1.28	1372.55	14.38	31.44	0.02	0.53
	32	0.86	1377.82	8.71	28.18	0.13	0.22
	41	19.44	1477.53	1.76	10.74	1	38.16
	42	21.59	1272.84	7.44	14	1.1	38.47
	43	0.98	1385.56	35.1	102.73	0.17	0.02
	44	1.17	1364.81	40.78	106	0.07	0.28
	45	21.16	722.77	6.31	13.35	1.08	38.41
	46	19.87	927.45	2.9	11.39	1.02	38.22
19							
	12	0.8	2856.91	1.69	2.81	0.09	1.13
	13	20.24	2286.67	0.73	2.83	0.77	36.06
	14	21.53	2284.38	1.97	1.66	0.62	37.87
	15	0.26	2282.16	13.93	39.27	0.01	0.23
	16	1.03	2288.89	16.63	34.77	0.16	1.57
	17	21.53	2284.38	1.97	1.66	0.62	37.87
	18	20.24	2286.67	0.73	2.83	0.77	36.06
	19	1.03	2288.89	16.63	34.77	0.16	1.57
	20	0.26	2282.16	13.93	39.27	0.01	0.23
	21	33.98	2290.24	0.49	3.15	1.54	65.61
	22	35.26	2280.82	2.21	1.34	1.39	67.41
	23	0.38	2268.64	36.33	116.19	0.04	0.61
	24	0.91	2302.41	39.03	111.7	0.11	1.2
	25	35.26	2280.82	2.21	1.34	1.39	67.41
	26	33.98	2290.24	0.49	3.15	1.54	65.61
	27	0.91	2302.41	39.03	111.7	0.11	1.2
	28	0.38	2268.64	36.33	116.19	0.04	0.61
	29	25.49	2010.36	0.49	2.46	0.95	45.27
	30	26.72	2007.5	2.04	1	0.8	47.15
	31	0.13	2004.73	17.83	48	0.03	0.1
	32	1.1	2013.13	20.37	44.55	0.18	1.78

	42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	43	0.95	2030.04	48.37	140.71	0.12	1.31
	44	0.28	1987.82	45.84	144.16	0.03	0.57
	45	42.91	1211.25	0.32	2.17	1.88	82.57
	46	43.65	1199.47	1.84	0.1	1.79	83.7
	47	0.04	1184.25	46.34	143.47	0	0.19
	48	0.7	1226.47	47.86	141.4	0.09	0.94
21							
	12	1.82	1953.42	9.31	4.53	0.28	0.69
	13	14.93	1589.75	5.59	1.87	1.01	33.28
	14	17.85	1535.72	9.31	9.11	0.57	34.39
	15	1.12	1558.25	19.34	35.9	0.14	0.11
	16	1.8	1567.22	4.44	28.66	0.31	1.22
	17	17.85	1535.72	9.31	9.11	0.57	34.39
	18	14.93	1589.75	5.59	1.87	1.01	33.28
	19	1.8	1567.22	4.44	28.66	0.31	1.22
	20	1.12	1558.25	19.34	35.9	0.14	0.11
	21	25.1	1645.74	3.16	9.29	1.88	60.79
	22	28.02	1479.73	11.74	16.54	1.43	61.9
	23	1.22	1541.18	44.85	111.22	0.32	0.22
	24	1.7	1584.29	29.95	103.98	0.13	0.88
	25	28.02	1479.73	11.74	16.54	1.43	61.9
	26	25.1	1645.74	3.16	9.29	1.88	60.79
	27	1.7	1584.29	29.95	103.98	0.13	0.88
	28	1.22	1541.18	44.85	111.22	0.32	0.22
	29	20.21	1583.84	7.98	1.56	1.19	42.25
	30	20.76	1516.3	12.62	12.17	0.78	42.34
	31	0.15	1544.46	25.17	45.66	0.1	0.78
	32	0.7	1555.67	4.57	35.04	0.31	0.87
	41	33.47	1446.31	15.66	21.45	1.87	76.72
	42	32.92	1653.82	4.93	10.84	2.27	76.63
	43	0.57	1577.01	36.45	129.19	0.08	0.46
	44	0.02	1523.12	57.05	139.81	0.33	0.37
	45	33.03	1033.8	0.82	12.96	2.19	76.65
	46	33.36	826.28	11.54	19.33	1.95	76.71
	47	0.13	903.09	52.93	137.68	0.25	0.38
	48	0.46	956.99	40.57	131.32	0	0.44
23							
	12	1.02	1314.57	12.25	8.48	0.03	0.08
	13	13.74	1020.29	11.46	10.85	0.56	16.66
	14	12.11	1083.03	8.15	2.72	0.61	16.52
	15	0.86	1025.39	19.75	30.9	0.02	0.14



	15	0.23	1043.69	20.41	32.02	0.02	0.26
	16	0.06	1098.3	0.51	18.78	0.05	0.04
	17	8.89	1040.75	11.59	10.89	0.6	15.89
	18	9.17	1101.23	8.32	2.35	0.53	16.19
	19	0.06	1098.3	0.51	18.78	0.05	0.04
	20	0.23	1043.69	20.41	32.02	0.02	0.26
	21	16.94	1161.07	6.1	3.55	0.48	32.11
	22	16.66	980.91	13.8	16.79	0.55	31.81
	23	0.26	950.28	43.62	92.14	0.06	0.21
	24	0.03	1191.7	23.72	78.9	0.01	0.09
	25	16.66	980.91	13.8	16.79	0.55	31.81
	26	16.94	1161.07	6.1	3.55	0.48	32.11
	27	0.03	1191.7	23.72	78.9	0.01	0.09
	28	0.26	950.28	43.62	92.14	0.06	0.21
	29	12.52	1125.47	10.55	2.56	0.68	20.86
	30	10.05	1049.87	14.63	13.24	0.73	19.24
	31	1.34	1053.53	25.67	39.65	0.01	0.94
	32	1.13	1121.8	0.48	23.85	0.04	0.67
29							
	12	16.17	807.25	6.86	5.29	0	10.83
	13	5.57	624.92	6.94	8.16	0.63	3.48
	14	20.31	666.67	4.03	0.3	0.64	20.82
	15	12.94	685.31	14.52	27.72	0.05	8.67
	16	12.94	606.28	3.55	19.26	0.06	8.66
	17	20.31	666.67	4.03	0.3	0.64	20.82
	18	5.57	624.92	6.94	8.16	0.63	3.48
	19	12.94	606.28	3.55	19.26	0.06	8.66
	20	12.94	685.31	14.52	27.72	0.05	8.67
	21	0.64	580.45	9.1	13.98	0.65	18.7
	22	26.51	711.14	1.88	5.52	0.65	36.03
	23	12.97	828.54	36.1	87.88	0.14	8.76
	24	12.91	463.06	25.13	79.42	0.14	8.57
	25	26.51	711.14	1.88	5.52	0.65	36.03
	26	0.64	580.45	9.1	13.98	0.65	18.7
	27	12.91	463.06	25.13	79.42	0.14	8.57
	28	12.97	828.54	36.1	87.88	0.14	8.76
	29	7.77	683.66	7.89	9.59	0.79	3.91
	30	26.2	735.84	4.25	0.23	0.8	26.46
	31	16.99	759.15	17.36	34.05	0.06	11.28
	32	16.98	660.35	5.23	24.68	0.08	11.27
31							
	12	2.89	1422.08	3.74	5.17	0.01	2.91
	13	32.04	1138.76	3.17	4.28	0.66	88.16

	14	36.66	1136.57	2.81	3.99	0.68	92.8
	15	2.28	1178.09	8.35	14.45	0.04	2.34
	16	2.34	1097.23	2.38	6.18	0.06	2.31
	17	36.66	1136.57	2.81	3.99	0.68	92.8
	18	32.04	1138.76	3.17	4.28	0.66	88.16
	19	2.34	1097.23	2.38	6.18	0.06	2.31
	20	2.28	1178.09	8.35	14.45	0.04	2.34
	21	71.59	1141.23	3.35	4.46	0.57	203.79
	22	76.21	1134.1	2.62	3.81	0.58	208.44
	23	2.35	1336.47	18.93	37.88	0.02	2.96
	24	2.28	938.86	12.95	29.61	0.04	1.69
	25	76.21	1134.1	2.62	3.81	0.58	208.44
	26	71.59	1141.23	3.35	4.46	0.57	203.79
	27	2.28	938.86	12.95	29.61	0.04	1.69
	28	2.35	1336.47	18.93	37.88	0.02	2.96
	29	40.32	1210.57	2.52	3.49	0.82	110.46
	30	45.55	1207.83	2.07	3.13	0.85	115.74
	31	2.58	1259.73	9	16.21	0.05	2.66
	32	2.66	1158.66	4.41	9.58	0.08	2.62
33							
	12	18.29	837.73	7.11	5.16	0.04	11.92
	13	20.76	688.08	4.24	0.02	0.57	21.5
	14	8.51	652.29	7.14	8.28	0.64	2.42
	15	14.67	712.04	15.21	28.89	0.04	9.57
	16	14.6	628.32	3.83	20.63	0.03	9.51
	17	8.51	652.29	7.14	8.28	0.64	2.42
	18	20.76	688.08	4.24	0.02	0.57	21.5
	19	14.6	628.32	3.83	20.63	0.03	9.51
	20	14.67	712.04	15.21	28.89	0.04	9.57
	21	27.96	726.03	2.27	5.76	0.62	36.79
	22	1.3	614.34	9.1	14.02	0.69	17.71
	23	14.72	855.56	36.36	87.68	0.15	9.56
	24	14.55	484.8	24.99	79.42	0.08	9.52
	25	1.3	614.34	9.1	14.02	0.69	17.71
	26	27.96	726.03	2.27	5.76	0.62	36.79
	27	14.55	484.8	24.99	79.42	0.08	9.52
	28	14.72	855.56	36.36	87.68	0.15	9.56
	29	26.51	757.62	4.34	1.04	0.74	27.18
	30	11.19	712.89	7.97	9.33	0.78	2.72
	31	18.9	787.58	18.05	35.09	0.03	12.27
	32	18.8	682.93	5.75	26.81	0.01	12.19

M. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC, Ls. No.: 137

COLUMN MEMBER INFORMATION

Memb No	Ast	Column Type	Reinforcement Distribution	% of Steel	Lateral Ties
1					
2	1104	TENSION COLUMN	Equal	0.98	8@190c/c
3	1104	TENSION COLUMN	Equal	0.98	8@190c/c
4	828	TENSION COLUMN	Equal	0.87	8@190c/c
5	910.8	TENSION COLUMN	Equal	1.31	8@190c/c
6	1397.95	SHORT COLUMN	Equal	1.55	8@230c/c
7	1104	TENSION COLUMN	Equal	0.98	8@190c/c
8	1440	TENSION COLUMN	Equal	0.89	8@255c/c
9	1987.37	SHORT COLUMN	Equal	1.26	8@190c/c
10	1876.8	SHORT COLUMN	Equal	1.75	8@230c/c
11	4116.66	SHORT COLUMN	Equal	2.79	8@300c/c
12	1440	TENSION COLUMN	Equal	0.89	8@255c/c
13	1104	TENSION COLUMN	Equal	0.98	8@190c/c
14	1872	SHORT COLUMN	Equal	1.26	8@190c/c
15	1104	TENSION COLUMN	Equal	0.98	8@190c/c
16	1104	TENSION COLUMN	Equal	0.98	8@190c/c
17	2247.4	SHORT COLUMN	Equal	1.26	8@190c/c
43	1104	TENSION COLUMN	Equal	0.98	8@190c/c
44	1104	TENSION COLUMN	Equal	0.98	8@190c/c
45	1104	TENSION COLUMN	Equal	0.98	8@190c/c
46	1021.2	SHORT(Z) /BRACED LONG(Y)	Equal	1.31	8@190c/c
47	828	TENSION COLUMN	Equal	0.87	8@190c/c
48	1345	SHORT(Z) /BRACED LONG(Y)	Equal	1.31	8@190c/c
49	1104	TENSION COLUMN	Equal	0.98	8@190c/c
50	1440	TENSION COLUMN	Equal	0.89	8@255c/c
51	2736	SHORT COLUMN	Equal	1.79	8@255c/c
52	2002.66	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
53	3924.39	SHORT COLUMN	Equal	2.79	8@300c/c
54	1440	TENSION COLUMN	Equal	0.89	8@255c/c
55	1385.27	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
56	1872	SHORT COLUMN	Equal	1.26	8@190c/c
57	1104	TENSION COLUMN	Equal	0.98	8@190c/c
58	1577.41	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
59	1440	TENSION COLUMN	Equal	0.89	8@255c/c
101	1505.71	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
102	1245.24	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
103	1104	TENSION COLUMN	Equal	0.98	8@190c/c
104	995.2	SHORT(Z) /BRACED LONG(Y)	Equal	1.31	8@190c/c

M. DATTATRI RAO
STRUCTURAL ENGINEER

105	828	TENSION COLUMN	Equal	0.87	8@190c/c
106	828	TENSION COLUMN	Equal	0.87	8@190c/c
107	1233.79	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
108	1440	TENSION COLUMN	Equal	0.89	8@255c/c
109	3393.13	SHORT COLUMN	Equal	2.09	8@300c/c
110	2197.78	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
111	2016	SHORT COLUMN	Equal	1.26	8@190c/c
112	1666.54	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
113	2067.43	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
114	1440	TENSION COLUMN	Equal	0.89	8@255c/c
115	1722.04	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
116	1886.47	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
117	1440	TENSION COLUMN	Equal	0.89	8@255c/c
158	1732.41	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
159	1389.67	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
160	1104	TENSION COLUMN	Equal	0.98	8@190c/c
161	861.9	SHORT(Z) /BRACED LONG(Y)	Equal	0.87	8@190c/c
162	828	TENSION COLUMN	Equal	0.87	8@190c/c
163	828	TENSION COLUMN	Equal	0.87	8@190c/c
164	1214.93	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
165	1440	TENSION COLUMN	Equal	0.89	8@255c/c
166	2101.25	SHORT COLUMN	Equal	1.26	8@190c/c
167	1600.67	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
168	1440	TENSION COLUMN	Equal	0.89	8@255c/c
169	1327.74	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
170	2036.1	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
171	1440	TENSION COLUMN	Equal	0.89	8@255c/c
172	1753.41	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
173	1677.04	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
174	1440	TENSION COLUMN	Equal	0.89	8@255c/c
215	1665.6	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
216	1513.61	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
217	1104	TENSION COLUMN	Equal	0.98	8@190c/c
218	828	TENSION COLUMN	Equal	0.87	8@190c/c
219	828	TENSION COLUMN	Equal	0.87	8@190c/c
220	828	TENSION COLUMN	Equal	0.87	8@190c/c
221	1195.52	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
222	1523.25	SHORT COLUMN	Equal	0.89	8@255c/c
223	1733.55	SHORT COLUMN	Equal	1.01	8@190c/c
224	1184.32	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
225	1440	TENSION COLUMN	Equal	0.89	8@255c/c
226	1104	TENSION COLUMN	Equal	0.98	8@190c/c
227	1974.45	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
228	1440	TENSION COLUMN	Equal	0.89	8@255c/c
229	1841.58	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c

M. DATTATRI RAO
STRUCTURAL ENGINEER
134

230	1554.75	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
231	1440	TENSION COLUMN	Equal	0.89	8@255c/c
272	1593.7	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
273	1464.11	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
274	1104	TENSION COLUMN	Equal	0.98	8@190c/c
275	828	TENSION COLUMN	Equal	0.87	8@190c/c
276	828	TENSION COLUMN	Equal	0.87	8@190c/c
277	828	TENSION COLUMN	Equal	0.87	8@190c/c
278	1306.51	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c
279	2491.77	SHORT COLUMN	Equal	1.4	8@300c/c
280	4172.3	SHORT COLUMN	Equal	2.79	8@300c/c
281	1847.08	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
282	1440	TENSION COLUMN	Equal	0.89	8@255c/c
283	1795.69	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
284	2462.51	SHORT(Z) /BRACED LONG(Y)	Equal	1.82	8@230c/c
285	1440	TENSION COLUMN	Equal	0.89	8@255c/c
286	1934.32	SHORT(Z) /BRACED LONG(Y)	Equal	1.75	8@230c/c
287	1414.75	SHORT(Z) /BRACED LONG(Y)	Equal	1.17	8@230c/c
288	1440	TENSION COLUMN	Equal	0.89	8@255c/c
	1345.32	SHORT(Z) /BRACED LONG(Y)	Equal	0.98	8@190c/c

M. DATTATRI P.A.C.
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

BEAM DESIGN DETAILS

Memb No	Top Left Ast	Top Cen Ast	Top Rht Ast	Bot Left Ast	Bot Cen Ast	Bot Rht Ast	Stirrup Dia	Left Spacing	Cen Spacing	Right Spacing
18										
19	747.99	105.18	852.63	314.61	299.68	431.4	2L 8	110	110	11
20	614.02	105.18	588.21	174.52	144.12	165.11	2L 8	110	110	11
21	524.1	105.57	478.85	415.11	105.18	342.61	2L 8	110	110	11
22	600.27	105.57	532.1	477.31	105.57	482.46	2L 8	110	110	11
23	325.27	105.18	290.33	176.78	105.18	192.76	2L 8	110	110	11
24	406.29	105.57	375.8	250.49	105.57	267.9	2L 8	110	110	11
25	418.43	105.57	403.81	273.31	105.57	283.83	2L 8	110	110	11
26	840.55	105.57	944.95	406.81	299.79	525.53	2L 8	110	110	11
27	526.93	105.57	528.02	182.97	110.49	181.56	2L 8	110	110	11
28	844.93	105.18	839.92	423.17	324.4	417.81	2L 8	110	110	11
29	768.58	105.57	761.25	344.26	265.33	336.41	2L 8	110	110	11
30	507.94	105.57	521.41	241.76	105.57	237.18	2L 8	110	110	11
31	268.44	105.57	232.49	199.18	105.57	260.83	2L 8	110	110	11
32	237.98	105.57	221.05	105.57	105.57	113.85	2L 8	110	110	11
33	231.46	105.57	258.97	146.49	105.57	130.44	2L 8	110	110	11
34	331.99	105.57	406.59	377.26	105.57	302.65	2L 8	110	110	11
35	392.57	105.57	278.17	189.89	105.57	248.99	2L 8	110	110	11
36	498.18	105.57	474.68	285.28	105.18	312.95	2L 8	110	110	11
37	1115.85	105.18	1123.44	733.75	501.76	742.03	2L 8	110	110	11
38	780.36	105.57	758.79	356.87	266.07	333.78	2L 8	110	110	11
39	511.09	105.57	517.88	239.2	105.57	238.64	2L 8	110	110	11
40	386.91	105.57	412.93	258.46	105.57	260.71	2L 8	110	110	11
41	399.73	105.57	401.95	264.72	105.57	262.33	2L 8	110	110	11
42	977.12	104.4	867.61	551.68	333.91	434.05	2L 8	110	110	11
60	321.24	105.57	314.88	265.14	105.57	233.83	2L 8	110	110	11
61	881.42	152.1	152.1	231.66	419.18	525.6	2L 8	140	140	14
62	920.07	152.1	763.88	332.07	177.28	288.8	2L 8	140	140	14
63	547.38	152.49	413.43	431.01	152.1	321.57	2L 8	140	140	14
64	728.82	152.49	656.14	762.99	164.67	445.83	2L 8	140	140	14
65	1082.1	152.1	152.1	448.16	452.92	586.79	2L 8	140	140	14
66	741.01	152.1	960.08	355.7	428.19	298.7	2L 8	140	140	14
67	761.88	152.49	937	344.89	374.42	299.12	2L 8	140	140	14
68	961.82	152.1	1299.88	403.12	400.26	673.47	2L 8	140	140	14
69	819.57	152.49	832.62	502.27	152.49	477.61	2L 8	140	140	14
70	1298.45	166.99	254.39	671.98	333.85	902.08	2L 8	140	100	14
71	1171.97	152.49	151.32	533.97	323.05	753.38	2L 8	140	140	14
73	776.89	152.1	817.83	519.34	152.1	543.22	2L 8	140	140	14
74	1536.59	151.32	802.82	918.66	399.92	1424.23	2L 8	140	135	14
75	1587.71	151.32	514.57	971.9	318.45	1155.31	2L 8	140	135	14

M. DATTATRI RAO
STRUCTURAL ENGINEER
No. 134

76	886.32	152.1	767.92	556	152.1	513.76	2L 8	140	140	14
77	357.41	152.49	605.26	273.71	152.49	179.98	2L 8	140	140	14
78	728.1	152.49	731.03	473.92	152.1	549.46	2L 8	140	140	14
79	1376.85	935.66	756.41	762.71	272.92	152.49	2L 8	120	125	12
80	1246.97	152.49	150.54	608.55	324.05	705.57	2L 8	140	135	14
81	820.45	152.49	852.79	509.96	152.49	538.43	2L 8	140	140	14
82	1280.73	151.32	946.73	652.87	388.94	393.96	2L 8	140	140	14
83	888.06	152.1	702.61	289.53	296.32	311.18	2L 8	140	140	14
84	908.12	152.1	782.82	289.91	323.67	327.43	2L 8	140	140	14
85	151.32	217.95	1160.11	784.13	306.67	521.53	2L 8	140	105	14
86	551.35	182.69	1594.32	1190.52	276.42	978.79	2L 8	140	105	14
87	170.2	152.49	745.08	404.44	549.35	151.32	2L 8	140	140	14
88	151.32	172.25	1163.81	710.86	309.36	525.41	2L 8	140	120	14
89	727.57	152.49	152.99	152.1	382.32	276.63	2L 8	140	140	14
90	227.85	152.65	1250.74	875.82	332.32	608.39	2L 8	140	110	14
91	810.47	151.32	1980	1431.55	271.72	1418.84	2L 8	140	120	14
92	187.15	152.49	781.16	427.78	598.08	150.54	2L 8	140	140	14
93	284.29	197.87	1658.49	945.24	209.75	1053.95	2L 8	140	105	14
94	786.54	151.32	152.49	152.49	449.97	326.99	2L 8	140	140	14
95	709.93	152.49	304.57	321.52	729.99	966.25	2L 8	140	140	14
96	848.89	152.49	308.51	294.48	227.72	152.49	2L 8	140	140	14
97	239.48	152.49	152.49	152.49	175.47	224.36	2L 8	140	140	14
98	864.66	518.59	354.73	223.38	167.8	152.49	2L10	135	135	13
99	195.09	514.24	1223.35	492.71	175.31	577.28	2L 8	140	90	14
100										
118	152.1	152.1	165.16	155.59	220.85	152.1	2L 8	140	140	14
119	886.54	152.1	152.1	236.96	405.96	525.43	2L 8	140	140	14
120	894.21	152.49	748.3	305.36	183.13	273.77	2L 8	140	140	14
121	432.87	152.49	361.41	354.04	152.49	265.29	2L 8	140	140	14
122	603.5	152.49	615.54	713.18	168.91	367.62	2L 8	140	140	14
123	1079.45	152.1	152.1	445.39	428.5	562.95	2L 8	140	140	14
124	751.53	152.1	944.6	331.86	411.85	282.66	2L 8	140	140	14
125	878.33	152.1	1118.37	376.26	487.5	486.94	2L 8	140	140	14
126	940.88	151.32	1214.45	388.07	401.08	568.02	2L 8	140	140	14
127	794.75	152.1	755.49	420.57	152.1	436.14	2L 8	140	140	14
128	1306.2	177.04	259.56	680.08	324.59	907.04	2L 8	140	100	14
129	1162.27	152.49	151.32	523.8	328.8	764.26	2L 8	140	135	14
130	683.96	152.49	791.51	494.08	152.49	449.77	2L 8	140	140	14
131	1632.64	151.32	777.17	1022.63	348.84	1402.32	2L 8	140	125	14
132	1572.65	151.32	514.96	956.22	319.82	1155.68	2L 8	140	135	14
133	786.87	152.1	773.03	551.72	152.1	459.99	2L 8	140	140	14
134	323.14	152.49	648.8	255.45	152.49	164.54	2L 8	140	140	14
135	709.35	152.49	597.67	379.36	152.49	508.87	2L 8	140	140	14
136	1410.87	930.57	737.66	801.7	267.66	152.49	2L 8	130	130	14
137	1222.14	152.49	151.32	588.88	322.74	702.66	2L 8	140	140	14

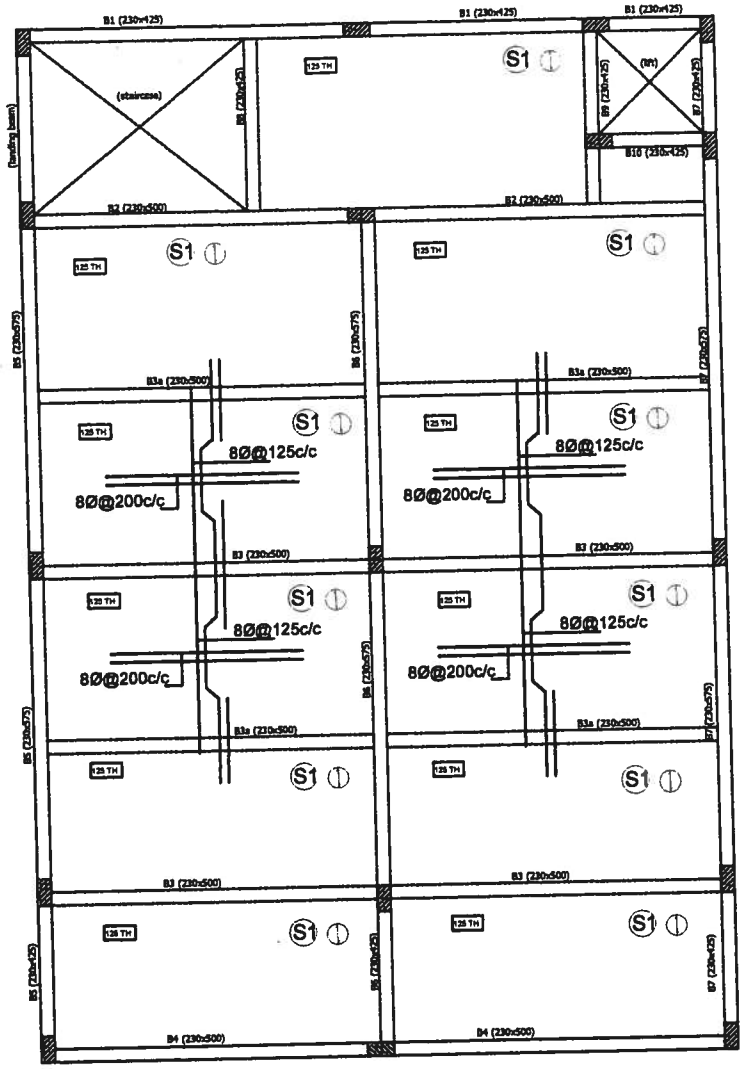
138	698.49	152.49	834.79	478.96	152.49	418.44	2L 8	140	140	140
139	1207	152.1	915.2	564.6	386.13	375.79	2L 8	140	140	140
140	1055.16	152.1	819.29	418.6	411.98	346.61	2L 8	140	140	140
141	853.93	152.1	702.32	259.62	333.09	278.72	2L 8	140	140	140
142	151.32	208.92	1150.4	777.62	288.33	511.36	2L 8	140	110	140
143	543.31	183	1609.9	1184.65	266.61	998.94	2L 8	140	105	140
144	170.37	152.49	741.84	403.2	550.15	151.32	2L 8	140	140	140
145	151.32	168.47	1161.28	700.95	282.24	522.77	2L 8	140	125	140
146	719.9	152.49	152.49	152.1	388.47	281.74	2L 8	140	140	140
147	234.17	152.1	1229.96	881.87	335.8	586.69	2L 8	140	110	140
148	788.78	151.32	1923.71	1410.8	273.69	1359.01	2L 8	140	125	140
149	189.62	152.49	782.32	417.12	587.39	150.54	2L 8	140	140	140
150	286.68	187.81	1659.75	947.53	198.94	1055.25	2L 8	140	115	140
151	788.13	151.32	152.49	152.49	460.12	337.99	2L 8	140	140	140
152	670.11	152.1	297.64	325.54	728.59	959.05	2L 8	140	140	140
153	944.12	152.1	364.24	282.16	307.29	207.07	2L 8	140	140	140
154	218.65	152.1	152.1	152.1	170.08	183.22	2L 8	140	140	140
155										
156	173.03	475.65	1202.41	492.71	159.07	565.88	2L 8	140	95	140
157										
175	152.49	152.49	152.49	153.17	224.13	152.49	2L 8	140	140	140
176	845.42	152.1	152.1	194.38	408.44	533.51	2L 8	140	140	140
177	831.76	152.49	693.13	257.79	187.52	234.12	2L 8	140	140	140
178	298.8	152.49	278.12	240.2	152.49	177.55	2L 8	140	140	140
179	406.31	152.49	506.91	556.65	155.85	250.32	2L 8	140	140	140
180	980.72	151.32	151.32	321.19	405.93	564.22	2L 8	140	140	140
181	704.43	152.1	905.77	302.52	418.48	257.33	2L 8	140	140	140
182	820.16	152.1	1037.47	334.85	490	399.54	2L 8	140	140	140
183	860.79	152.1	1136.84	334.72	405.14	506.22	2L 8	140	140	140
184	718.79	152.49	631.79	297.2	152.1	334.35	2L 8	140	140	140
185	1246.48	164.24	263.79	603.94	295.85	910.22	2L 8	140	100	140
186	1123.96	152.49	152.1	492.78	304.94	763.73	2L 8	140	130	140
187	506.81	152.49	705.18	367.68	152.49	300.73	2L 8	140	140	140
188	1636.42	151.32	779.59	1026.57	324.58	1404.64	2L 8	140	130	140
189	1540.87	151.32	513.47	923.12	290.8	1154.25	2L 8	140	140	140
190	675.57	152.49	708.36	433.75	152.1	333.82	2L 8	140	140	14
191	279.29	152.49	545.62	191.76	152.1	152.1	2L 8	140	140	14
192	592.74	152.49	392.49	238.77	152.49	375.72	2L 8	140	140	14
193	1424.1	907.7	716.03	815.75	244	152.49	2L 8	140	140	14
194	1163.89	152.49	151.32	525.5	308.57	703.94	2L 8	140	140	14
195	521.95	152.49	768.1	371.42	152.49	279.94	2L 8	140	140	14
196	1126.29	152.1	848.4	495.2	392.56	326.21	2L 8	140	140	14
197	958.11	152.1	754.72	296.66	412.2	305.28	2L 8	140	140	14
198	796.17	152.1	644.12	221.32	334.56	254.49	2L 8	140	140	14
199	152.1	187.28	1121.01	780.61	264.43	489.69	2L 8	140	105	14

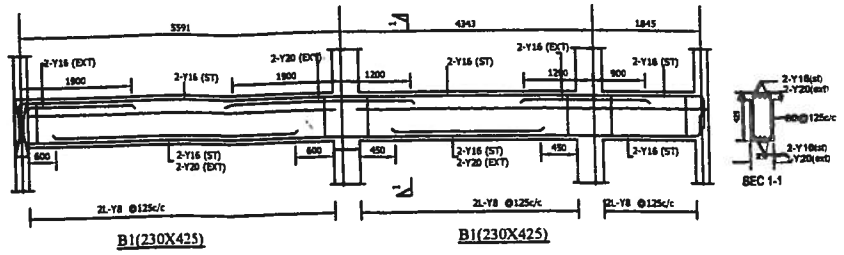
200	546.3	155.69	1569.57	1185.69	240.71	953.01	2L 8	140	110	14(
201	162.06	152.49	735.69	404.01	553.23	151.32	2L 8	140	140	14(
202	152.1	153.36	1151.75	704.31	255.51	524.56	2L 8	140	125	14(
203	711.59	152.49	152.49	152.1	388.82	280.02	2L 8	140	140	14(
204	233.87	152.1	1179.58	882.37	315.57	536.17	2L 8	140	110	14(
205	791.03	151.32	1889.29	1412.95	254.86	1309.23	2L 8	140	130	14(
206	181.45	152.49	774.59	419.12	592.36	150.54	2L 8	140	140	14(
207	292.07	169.4	1660.24	952.72	182.75	1055.76	2L 8	140	115	14(
208	791.43	152.1	152.49	152.49	463.76	339.18	2L 8	140	140	14(
209	647.56	152.1	299.35	308.07	728.52	960.71	2L 8	140	140	14(
210	909.1	152.49	338.57	260.33	287.22	210.97	2L 8	140	140	14(
211	214.96	152.1	152.1	152.1	170.64	177.7	2L 8	140	140	14(
212	963.66	558.05	342.81	302.41	152.1	175.39	2L10	80	80	12(
213	152.49	428.25	1146.64	469.59	152.49	507.42	2L 8	140	100	14(
214	247.03	594.74	1321.33	584.01	213.47	695.9	2L10	140	85	14(
232	152.49	152.49	152.49	152.1	222.59	152.1	2L 8	140	140	14(
233	778.46	152.49	152.49	152.49	404.83	536.31	2L 8	140	140	14(
234	730.96	152.49	565.15	182.36	189.53	188.76	2L 8	140	140	14(
235	161.64	152.49	170.41	152.49	152.49	152.49	2L 8	140	140	14(
236	206.68	152.49	349.53	351.48	152.49	152.49	2L 8	140	140	14(
237	905.39	152.1	152.1	256.93	390.58	552.89	2L 8	140	140	14(
238	622.28	152.1	793.49	237.27	410.62	166.41	2L 8	140	140	14(
239	712.05	152.1	908.86	270.82	486.28	260.08	2L 8	140	140	14(
240	728.68	152.1	964.76	278.94	402.26	303.55	2L 8	140	140	14(
241	537.8	152.49	428.86	172.81	152.1	191.23	2L 8	140	140	14(
242	1253.06	152.1	265.18	610.82	261.35	911.54	2L10	140	100	14(
243	1044.04	152.49	152.1	406.34	272.5	771.13	2L 8	140	130	14(
244	302.65	152.49	502.89	210.94	152.1	166.41	2L 8	140	140	14(
245	1719.02	151.32	772.4	1127.78	262.05	1397.73	2L 8	140	135	14(
246	1541.41	151.32	513	923.68	244.02	1153.81	2L 8	140	140	14(
247	434.51	152.49	504.87	248.4	152.49	184.53	2L 8	140	140	14(
248	191.83	152.49	440.99	152.49	152.49	152.49	2L 8	140	140	14(
249	414.1	152.1	200.32	152.1	152.1	212.22	2L 8	140	140	14(
250	1436.57	907.3	688.26	828.99	243.59	152.49	2L 8	140	140	14(
251	1100.11	152.49	152.1	467.88	279.4	709.8	2L 8	140	140	14(
252	328.66	152.49	589.05	222.97	152.49	175.29	2L 8	140	140	14(
253	961.75	151.32	717.1	301.47	395.19	276.88	2L 8	140	140	14(
254	855.92	152.1	645.41	205.61	414.54	247.21	2L 8	140	140	14(
255	700.58	152.49	545.72	152.1	333.54	193.82	2L 8	140	140	14(
256	152.1	160.7	1056.42	784.91	226.62	419.17	2L 8	140	100	14(
257	545.01	151.32	1565.76	1184.45	191.17	949.04	2L 8	140	115	14(
258	152.49	152.49	730.84	400.31	552.47	151.32	2L 8	140	140	14(
259	152.1	152.49	1097.29	706.77	213.84	464.94	2L 8	140	120	14(
260	705.1	152.49	152.49	152.1	389.71	278.38	2L 8	140	140	14(
261	239.64	152.1	1143.83	887.92	285.92	499.09	2L 8	140	105	14(

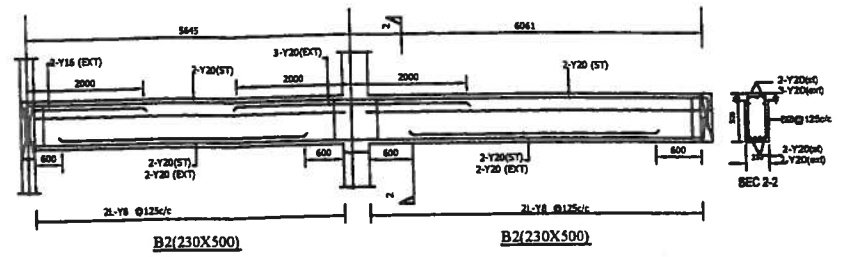
M. DATTATRI
STRUCTURAL ENGI

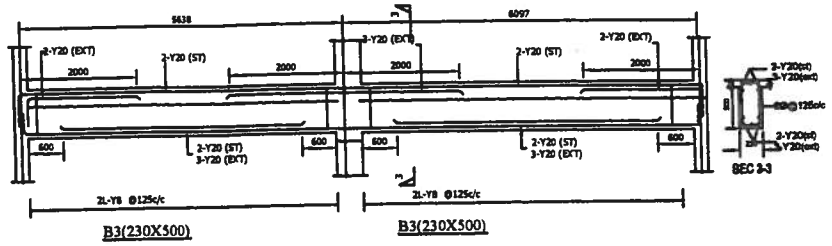
262	772.12	151.32	1848.16	1397.46	215.7	1263.65	2L 8	140	125	14
263	174.18	152.49	773.05	413.64	587.35	150.54	2L 8	140	140	14
264	297.61	151.32	1663.72	958.04	156.47	1059.39	2L 8	140	110	14
265	791.23	152.1	152.49	152.49	466.93	341.36	2L 8	140	140	14
266	594.96	151.32	299.32	277.22	726.07	959.69	2L 8	140	140	14
267	819.68	152.49	303.56	175.87	276.1	228.13	2L 8	140	140	14
268	209.78	152.1	152.1	152.1	160.26	162.24	2L 8	140	140	14
269	902.79	474.44	280.41	253.79	152.49	152.49	2L 8	95	100	9
270	152.1	349.47	1064.44	438.31	152.1	428.23	2L 8	140	110	14
271	175.05	481.4	1188.55	515.87	152.49	551.35	2L 8	140	95	14
289	152.49	152.49	152.49	152.49	226.01	152.49	2L 8	140	140	14
290	333.28	152.49	152.49	152.49	292.64	341.38	2L 8	140	140	14
291	397.61	152.49	286.19	152.49	152.49	152.49	2L 8	140	140	14
292	152.49	152.49	152.49	152.49	152.49	152.49	2L 8	140	140	14
293	152.49	152.49	153.28	152.49	152.49	152.49	2L 8	140	140	14
294	517.14	152.49	152.49	152.1	358.03	436.43	2L 8	140	140	14
295	326.11	151.32	791.46	297.16	491.06	152.49	2L 8	140	140	14
296	335.74	152.49	733.11	249.3	420.6	152.1	2L 8	140	140	14
297	295.73	152.49	546.29	170.57	271.58	152.49	2L 8	140	140	14
298	241.58	152.49	218.11	152.49	152.49	152.49	2L 8	140	140	14
299	934.69	152.49	151.32	271.92	214.49	782.6	2L 8	140	110	14
300	772.89	152.49	152.49	151.32	169.94	591.15	2L 8	140	140	14
301	152.96	152.49	248.81	152.49	152.49	152.49	2L 8	140	140	14
302	1251.35	151.32	736.04	606.4	340.56	1360.33	2L 8	140	140	14
303	1461.47	152.1	480.58	849	157.18	1111.59	2L 8	140	140	14
304	296.21	152.49	216.74	152.49	152.49	152.49	2L 8	140	140	14
305	152.49	152.49	373.61	152.49	152.49	152.49	2L 8	140	140	14
306	192.17	152.49	152.49	152.49	152.49	152.49	2L 8	140	140	14
307	963.78	649.83	454.6	302.53	152.1	152.1	2L 8	140	140	14
308	858.57	152.49	152.49	208	169.56	528.62	2L 8	140	140	14
309	169.89	152.49	295.13	152.49	152.49	152.49	2L 8	140	140	14
310	517.22	152.49	280.03	152.49	237.66	152.49	2L 8	140	140	14
311	637.68	152.1	271.64	152.1	323.24	180.33	2L 8	140	140	14
312	706.85	152.49	275.86	152.49	364.42	204.5	2L 8	140	140	14
313	152.49	152.49	763.37	650.12	189.79	152.1	2L 8	140	135	14
314	507.48	152.1	1313.99	1139.06	163.58	688.23	2L 8	140	140	14
315	152.49	152.49	724.16	425.55	573.42	151.32	2L 8	140	140	14
316	152.49	152.49	795.69	547.78	188.25	152.1	2L 8	140	140	14
317	705.82	152.49	152.49	152.1	398.81	291.33	2L 8	140	140	14
318	152.1	152.49	860.95	735.59	200.49	210.46	2L 8	140	140	14
319	740.09	151.32	1732.95	1366.7	151.32	1142.43	2L 8	140	130	14
320	161.64	152.49	737.32	441.59	635.51	178.84	2L 8	140	140	14
321	150.54	152.49	1218.07	797.39	152.49	578.15	2L 8	140	140	14
322	743.69	152.49	152.49	152.49	469.66	332.23	2L 8	140	140	14
323	442.24	152.1	183.97	229.93	597.44	835.07	2L 8	140	140	14

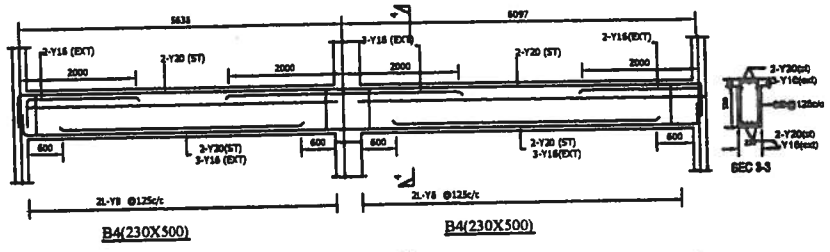
M. DATTATRI RAO
STRUCTURAL ENGINEER

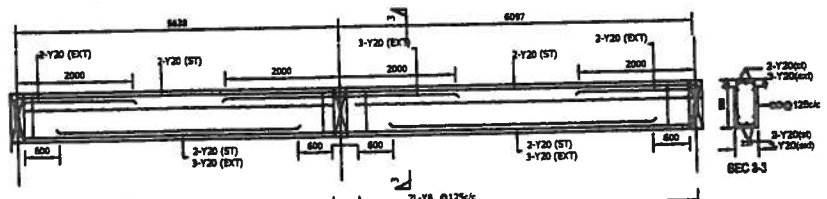


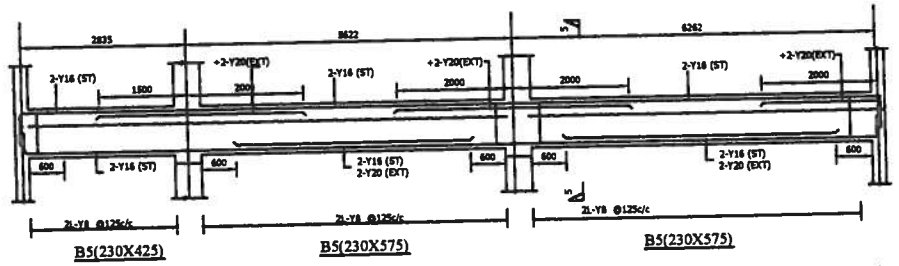


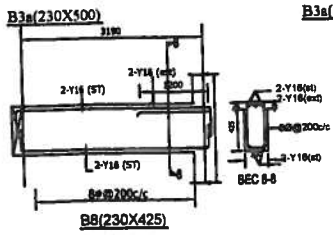


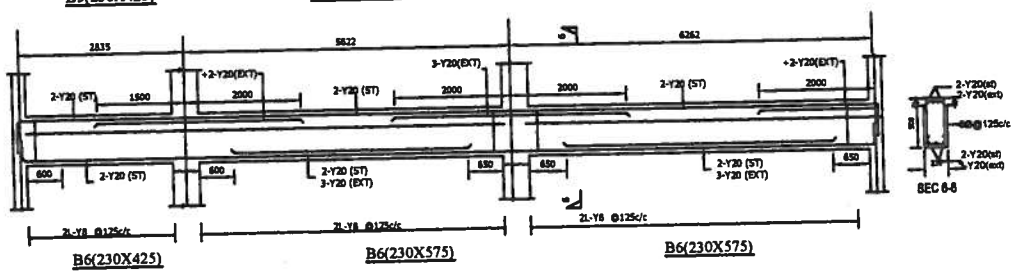


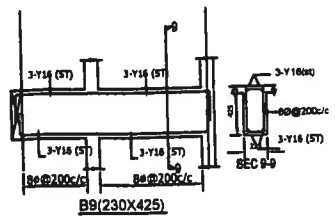


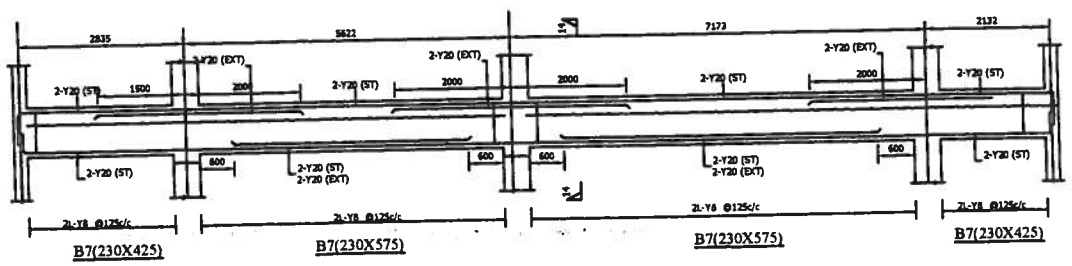


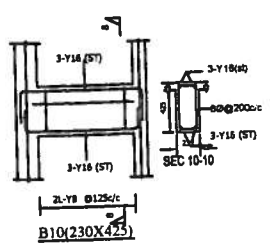












GENERAL NOTES

1. USE M25 GRADE OF CONCRETE FOR COLUMNS,FOOTINGS,
2. BEAMS & SLABS. (RATIO AS PER DESIGN MIX).
3. USE FE 500 GRADE TOR STEEL.
4. FOOTING IS DESIGN FOR STILT & UPPER FOUR FLOORS .
5. S.B.C OF the soil is taken as per soil report
6. USE FE 500 GRADE TOR STEEL.
7. PROVIDE CLEAR COVER TO STEEL 40mm FOR COLUMNS, 50mm FOR FOOTINGS, 25mmBEAMS AND 20mm FOR SLABS .
8. PROVIDE 25MM CAMBER AT FREE END FOR CANTILEVER BEAMS & SLABS.
9. IN SLAB EXTEND -VE STEEL UPTO 0.3Ol FROM FACE OF SUPPORT.
10. DO NOT PROVIDE EXTRA REINFORCEMENT AT SIMPLE SUPPORTS.
11. LAP LENGTH 48 D (D- IS THE DIA OF THE BAR) IN COMPRESSION.
12. LAP LENGTH 52 D(D- IS THE DIA OF THE BAR) IN TENSION.
13. DESIGNED FOR ZONE-II EARTHQUAKE LOADS AS PER IS 1893 -2002 & WIND LOADS AS PER IS 875 PART-3.
14. ALL THE DIMENSIONS ARE IN MILLIMETRES.

PLAN SHOWING THE PROPOSED GATED COMMUNITY LAYOUT CUM GROUPHOUSING IN SY. NO.786 (P) SITUATED AT MIRIYALAGUDA VILLAGE AND MANDAL, NALGONDA DISTRICT, TELANGANA.

BELONGING TO:

1. MRS. A.VASUDHA REDDY
   W/O.LATE.SRI. VEERA REDDY
2. SRI. A. SUJAY REDDY
   S/O.LATE. SRI. VEERA REDDY
3. SRI. A. AJAY REDDY
   S/O.LATE.SRI. VEERA REDDY

AMENITIES BLOCK

TYPICAL SLAB & BEAM SECTION DETAILS

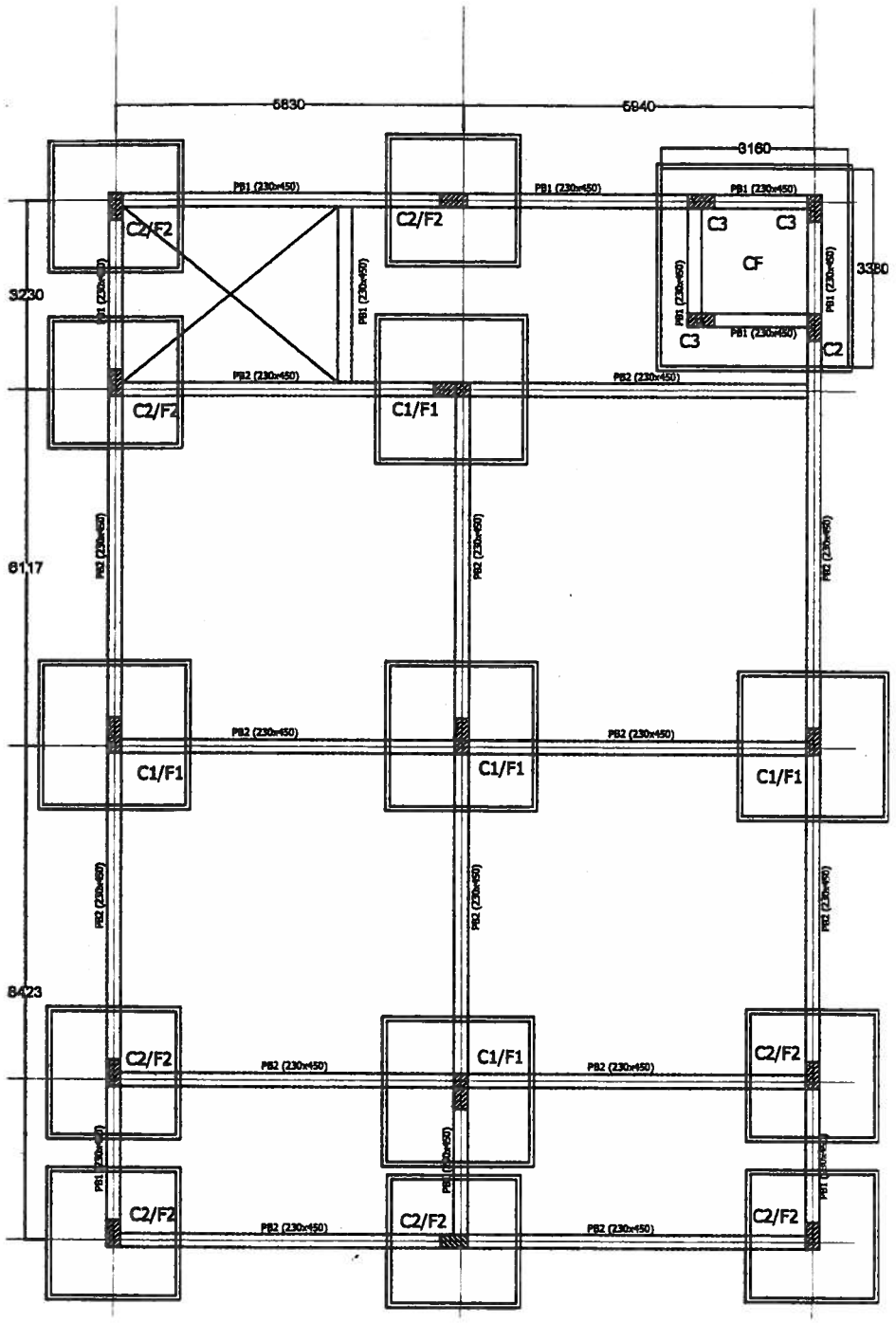
NORTH

Structural Enginreer's Signature :

M.Dattatri Rao
GHMC License No. 134

M. DATTATRI RAO
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

SHEET NO. : 2



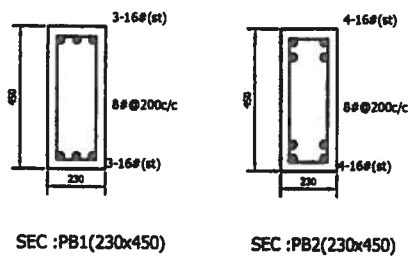
COLIMN CENTERLINE

COLUMN SECTION DETAILS

TYPE	MIX	COLUMN SIZE	SECTION	REINFORCEMENT
C1	M25	230x600		#4nos-25Ø +6-20Ø 8Ø@200 c/c 2- ties
C2	M25	230x600		#6nos-20Ø +4-16Ø 8Ø@200 c/c 2- ties
C3	M25	230x450		#4nos-20Ø +4-16Ø 8Ø@200 c/c 2- ties

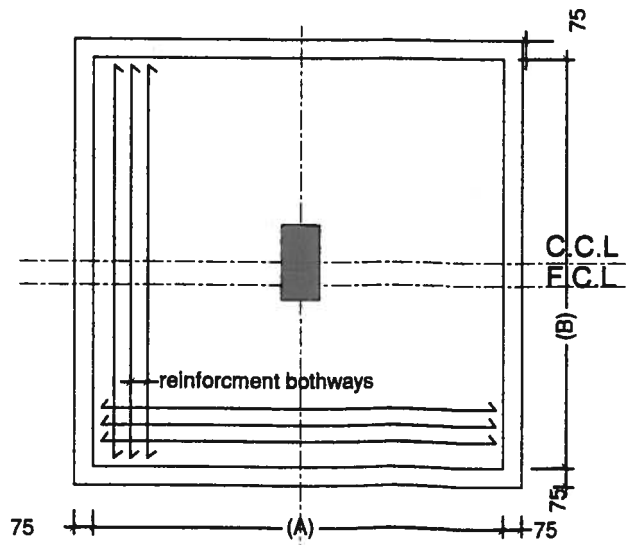
FOOTING DETAILS

Sno	FOOT SIZE	A	B	D1	REINFOR CEMENT
1	F 1	2400	2400	750	16Ø@150c/c bothways
2	F 2	2100	2100	600	12Ø@125c/c bothways
3	F 3	1800	1800	525	12Ø@150c/c bothways
4	CF	3160	3380	750	16Ø@150c/c bothways top &bottom

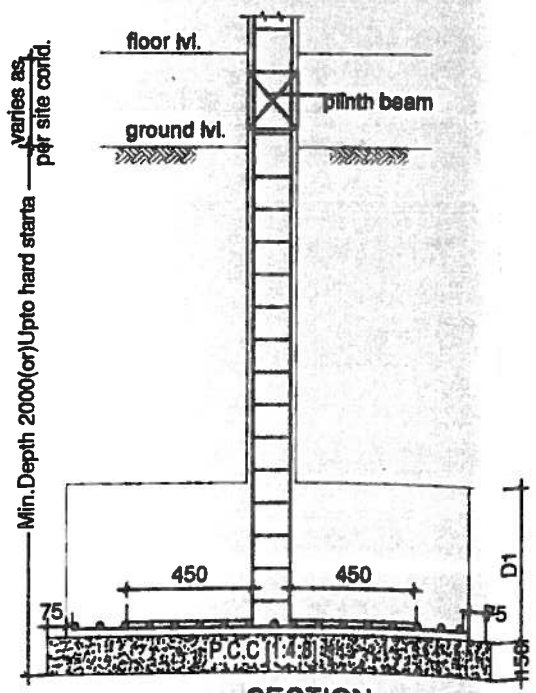


SEC :PB1(230x450) SEC :PB2(230x450)

PLINTH BEAM SECTION



PLAN



SECTION

GENERAL NOTES

1. USE M25 GRADE OF CONCRETE FOR COLUMNS,FOOTINGS,
2. BEAMS & SLABS. (RATIO AS PER DESIGN MIX).
3. USE FE 500 GRADE TOR STEEL.
4. FOOTING IS DESIGN FOR STILT & UPPER FOUR FLOORS.
5. S.B.C OF the soil is taken as per soil report
6. USE FE 500 GRADE TOR STEEL.
7. PROVIDE CLEAR COVER TO STEEL 40mm FOR COLUMNS, 50mm FOR FOOTINGS, 25mmBEAMS AND 20mm FOR SLABS.
8. PROVIDE 25MM CAMBER AT FREE END FOR CANTILEVER BEAMS & SLABS.
9. IN SLAB EXTEND -VE STEEL UPTO 0.30L FROM FACE OF SUPPORT.
10. DO NOT PROVIDE EXTRA REINFORCEMENT AT SIMPLE SUPPORTS.
11. LAP LENGTH 48 D (D- IS THE DIA OF THE BAR) INCOMPRESSI
12. LAP LENGTH 52 D(D- IS THE DIA OF THE BAR) IN TENSION.
13. DESIGNED FOR ZONE-II EARTHQUAKE LOADS AS PER IS 1893 -2002 & WIND LOADS AS PER IS 875 PART-3.
14. ALL THE DIMENSIONS ARE IN MILLIMETRES.

PLAN SHOWING THE PROPOSED GATED COMMUNITY LAYOUT CUM GROUPHOUSING IN SY. NO.786 (P) SITUATED AT MIRIYALAGUDA VILLAGE AND MANDAL, NALGONDA DISTRICT, TELANGANA.

BELONGING TO:

1. MRS. A.VASUDHA REDDY W/O.LATE.SRI. VEERA REDDY
2. SRI. A. SUJAY REDDY S/O.LATE. SRI. VEERA REDDY
3. SRI. A. AJAY REDDY S/O.LATE.SRI. VEERA REDDY

AMENITIES BLOCK

COLUMN & FOOTING SECTION DETAILS

NORTH

Structural Engineer's Signature

M.Dattatri Rao
GHMC License No. 134
M. DATTATRI
STRUCTURAL ENGINEER
GHMC. Ls. No.: 134

SHEET NO. : 1