Electrical load Calculation - Group Housing "La Residentia"
at Plot No. 06A, Tech Zone - 4 at Noida Extn.

SUBSTATION SUMMARY

S.no	Description	Nos. of Unit						Total Load			kVA/Unit
CALCULATION FOR TRANSFORMER											
1	Phase - 01	1484						=	4760	KVA	3.21 kVA/Unit
2	Phase - 02	1772						=	5720	KVA	3.23 kVA/Unit
	Total	**3256**						**=**	**10480**	**KVA**	
Recommended Transformers = Phase- 01 : - 4 nos 1600 KVA & for Phase-02 : - 2 nos. 2000 KVA & 2 nos. 1600 KVA											
CALCULATION FOR DG SETS											
3	Phase - 01	1484						=	3880	KVA	2.61 kVA/Unit
4	Phase - 02	1772						=	4590	KVA	2.59 kVA/Unit
	Total	**3256**						**=**	**8470**	**KVA**	
Recommended DG SETS = Phase- 01 : - 2 nos 1010 KVA & 4 nos 500 KVA & for Phase-02 : - 2 nos 1010 KVA & 4 nos 750 KVA											

Electrical load Calculation - Group Housing "La Residentia" at Plot No. 06A, Tech Zone - 4 at Noida Extn.

PHASE - 01

S.no	Description		No. of unit			Load per Unit			Total Load		
	TOWER - 1 &7 (B+P+G+22)		**Nos of Towers**			**=**	**2**				
1	4 BHK + 5 T + Servant		184	units	@	7.90	KW		=	1454	KW
	(158 sq M @ 50 W/sqM =	7.90 KW)									
	TOWER - 2, 14 & 16 (B+P+G+18)		**Nos of Towers**			**=**	**3**				
2	3 BHK + 2 T (Large)		228	units	@	5.20	KW		=	1187	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)									
	TOWER - 3 & 17 (B+P+G+18)		**Nos of Towers**			**=**	**2**				
3	3 BHK + 3 T + Study		76	units	@	5.95	KW		=	452	KW
	(119 sq M @ 50 W/sqM =	5.95 KW)									
4	3 BHK + 4 T + Servant		76	units	@	6.70	KW		=	509	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)									
	TOWER - 4 (B+P+G+22)		**Nos of Towers**			**=**	**1**				
5	2 BHK + 2T		92	units	@	4.09	KW		=	376	KW
	(82 sq M @ 50 W/sqM =	4.09 KW)									
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)		**Nos of Towers**			**=**	**5**				
6	2 BHK + 2T + Study		190	units	@	3.95	KW		=	750	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)									
7	2 BHK + 2T		190	units	@	3.54	KW		=	672	KW
	(71 sq M @ 50 W/sqM =	3.54 KW)									
	TOWER - 8 & 10 (B+P+G+13)		**Nos of Towers**			**=**	**2**				
8	3 BHK + 2T		112	units	@	4.66	KW		=	522	KW
	(93 sq M @ 50 W/sqM =	4.66 KW)									

S.no	Description		No. of unit			Load per Unit			Total Load		
	TOWER - 9 (B+P+G+22)		**Nos of Towers**			**=**	**1**				
9	3 BHK + 3 T + Study		46	units	@	5.95	KW		=	274	KW
	(119 sq M @ 50 W/sqM =	5.95 KW)									
10	3 BHK + 4 T + Servant		46	units	@	6.70	KW		=	308	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)									
	TOWER - 11 (B+P+G+22)		**Nos of Towers**			**=**	**1**				
11	2 BHK + 2T + Study		46	units	@	3.95	KW		=	182	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)									
12	2 BHK + 2T		46	units	@	3.54	KW		=	163	KW
	(71 sq M @ 50 W/sqM =	3.54 KW)									
	TOWER - 13 & 19 (B+P+G+18)		**Nos of Towers**			**=**	**2**				
13	3 BHK + 2T		152	units	@	4.66	KW		=	708	KW
	(93 sq M @ 50 W/sqM =	4.66 KW)									
	COMMON SERVICES - TOWERS										
	TOWER - 1 &7 (B+P+G+22)		**Nos of Towers**			**=**	**2**				
14	Elevators (13 Passenger) 1.5 mps		2	nos	@	10.0	KW		=	20	KW
15	Elevators (16 Passenger) 1.5 mps		2	nos	@	15.0	KW		=	30	KW
16	Common Lights		2	towers	@	5.0	KW		=	10	KW
	TOWER - 2, 14 & 16 (B+P+G+18)		**Nos of Towers**			**=**	**3**				
17	Elevators (13 Passenger) 1.5 mps		3	nos	@	10.0	KW		=	30	KW
18	Elevators (16 Passenger) 1.5 mps		3	nos	@	15.0	KW		=	45	KW
19	Common Lights		3	towers	@	3.0	KW		=	9	KW
	TOWER - 3 & 17 (B+P+G+18)		**Nos of Towers**			**=**	**2**				
20	Elevators (13 Passenger) 1.5 mps		2	nos	@	10.0	KW		=	20	KW
21	Elevators (16 Passenger) 1.5 mps		2	nos	@	15.0	KW		=	30	KW
22	Common Lights		2	towers	@	4.0	KW		=	8	KW

S.no	Description	No. of unit		Load per Unit			Total Load		
	TOWER - 4 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
23	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
24	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
25	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)	**Nos of Towers**		**=**	**5**				
26	Elevators (13 Passenger) 1.5 mps	5	nos	@	10.0	KW	=	50	KW
27	Elevators (16 Passenger) 1.5 mps	5	nos	@	15.0	KW	=	75	KW
28	Common Lights	5	towers	@	3.0	KW	=	15	KW
	TOWER - 8 & 10 (B+P+G+13)	**Nos of Towers**		**=**	**2**				
29	Elevators (13 Passenger) 1.0 mps	2	nos	@	7.0	KW	=	14	KW
30	Elevators (16 Passenger) 1.0 mps	2	nos	@	9.0	KW	=	18	KW
31	Common Lights	2	towers	@	3.0	KW	=	6	KW
	TOWER - 9 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
32	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
33	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
34	Common Lights	1	towers	@	5.0	KW	=	5	KW
	TOWER - 11 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
35	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
36	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
37	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 13 & 19 (B+P+G+18)	**Nos of Towers**		**=**	**2**				
38	Elevators (13 Passenger) 1.5 mps	2	nos	@	10.0	KW	=	20	KW
39	Elevators (16 Passenger) 1.5 mps	2	nos	@	15.0	KW	=	30	KW
40	Common Lights	2	towers	@	4.0	KW	=	8	KW

S.no	Description	No. of unit		Load per Unit				Total Load		
	COMMON SERVICES - General									
41	External / Gate / Landscape lighting							=	10	KW
42	Basement lights	33500	sqm	@	1.0	W/sqm		=	34	KW
43	Basement Ventillation							=	200	KW
44	Club / Swimming pool							=	250	KW
					Total Load			**=**	**8576**	**KW**
					By taking Overall Diversity factor	**50**	**%**	**=>**	**4288**	**KW**
					By taking Power factor	**0.90**		**=>**	**4760**	**KVA**

Total Electrical Load (Phase-01) = 4760 KVA

Recommended Transformers (at 85% loading) = 2 nos. 1600 KVA each at 2 different locations.
(Total 4 nos 1600 KVA each)

Electrical load Calculation - Group Housing "La Residentia" at Plot No. 06A, Tech Zone - 4 at Noida Extn.

PHASE - 02

S.no	Description		No. of unit			Load per Unit			Total Load		
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)		**Nos of Towers**			**=**	**5**				
1	2 BHK + 2T + Study		230	units	@	3.95	KW		=	908	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)									
2	2 BHK + 2T		230	units	@	3.54	KW		=	813	KW
	(71 sq M @ 50 W/sqM =	3.54 KW)									
	TOWER - 21 & 23 (B+P+G+22)		**Nos of Towers**			**=**	**2**				
3	3 BHK + 3 T + Study		92	units	@	5.95	KW		=	547	KW
	(119 sq M @ 50 W/sqM =	5.95 KW)									
4	3 BHK + 4 T + Servant		92	units	@	6.70	KW		=	616	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)									
	TOWER - 25 (B+P+G+22)		**Nos of Towers**			**=**	**1**				
5	3 BHK + 2 T (Large)		92	units	@	5.20	KW		=	479	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)									
	TOWER - 26, 29 & 30 (B+P+G+22)		**Nos of Towers**			**=**	**3**				
6	3 BHK + 2T		276	units	@	4.66	KW		=	1286	KW
	(93 sq M @ 50 W/sqM =	4.66 KW)									
	TOWER - 28 & 31 (B+P+G+22)		**Nos of Towers**			**=**	**2**				
7	2 BHK + 2T		184	units	@	4.09	KW		=	752	KW
	(82 sq M @ 50 W/sqM =	4.09 KW)									
	TOWER - 33 (B+P+G+18)		**Nos of Towers**			**=**	**1**				
8	2 BHK + 2T + Study		76	units	@	3.95	KW		=	300	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)									

S.no	Description		No. of unit			Load per Unit			Total Load		
	TOWER - 34 (B+P+G+20)		**Nos of Towers**			**=**	**1**				
9	3 BHK + 3 T + Study		42	units	@	5.95	KW		=	250	KW
	(119 sq M @ 50 W/sqM =	5.95 KW)									
10	3 BHK + 4 T + Servant		42	units	@	6.70	KW		=	281	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)									
	TOWER - 35 (B+P+G+18)		**Nos of Towers**			**=**	**1**				
11	2 BHK + 2T + Study		38	units	@	3.95	KW		=	150	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)									
12	2 BHK + 2T		38	units	@	3.54	KW		=	134	KW
	(71 sq M @ 50 W/sqM =	3.54 KW)									
	TOWER - 36 (B+P+G+21)		**Nos of Towers**			**=**	**1**				
13	3 BHK + 3 T + Study		44	units	@	5.95	KW		=	262	KW
	(119 sq M @ 50 W/sqM =	5.95 KW)									
14	3 BHK + 4 T + Servant		44	units	@	6.70	KW		=	295	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)									
	TOWER - 37 (B+P+G+18)		**Nos of Towers**			**=**	**1**				
15	3 BHK + 2 T (Large)		76	units	@	5.20	KW		=	396	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)									
	TOWER - 38 (B+P+G+20)		**Nos of Towers**			**=**	**1**				
16	3 BHK + 2 T (Large)		84	units	@	5.20	KW		=	437	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)									
	TOWER - 39 (B+P+G+22)		**Nos of Towers**			**=**	**1**				
17	4 BHK + 5 T + Servant		92	units	@	7.90	KW		=	727	KW
	(158 sq M @ 50 W/sqM =	7.90 KW)									

S.no	Description	No. of unit		Load per Unit			Total Load		
	COMMON SERVICES - TOWERS								
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)	**Nos of Towers**			**=**	**5**			
18	Elevators (13 Passenger) 1.5 mps	5	nos	@	10.0	KW	=	50	KW
19	Elevators (16 Passenger) 1.5 mps	5	nos	@	15.0	KW	=	75	KW
20	Common Lights	5	towers	@	4.0	KW	=	20	KW
	TOWER - 21 & 23 (B+P+G+22)	**Nos of Towers**			**=**	**2**			
21	Elevators (13 Passenger) 1.5 mps	2	nos	@	10.0	KW	=	20	KW
22	Elevators (16 Passenger) 1.5 mps	2	nos	@	15.0	KW	=	30	KW
23	Common Lights	2	towers	@	5.0	KW	=	10	KW
	TOWER - 25 (B+P+G+22)	**Nos of Towers**			**=**	**1**			
24	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
25	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
26	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 26, 29 & 30 (B+P+G+22)	**Nos of Towers**			**=**	**3**			
27	Elevators (13 Passenger) 1.5 mps	3	nos	@	10.0	KW	=	30	KW
28	Elevators (16 Passenger) 1.5 mps	3	nos	@	15.0	KW	=	45	KW
29	Common Lights	3	towers	@	5.0	KW	=	15	KW
	TOWER - 28 & 31 (B+P+G+22)	**Nos of Towers**			**=**	**2**			
30	Elevators (13 Passenger) 1.5 mps	2	nos	@	10.0	KW	=	20	KW
31	Elevators (16 Passenger) 1.5 mps	2	nos	@	15.0	KW	=	30	KW
32	Common Lights	2	towers	@	4.0	KW	=	8	KW
	TOWER - 33 (B+P+G+18)	**Nos of Towers**			**=**	**1**			
33	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
34	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
35	Common Lights	1	towers	@	3.0	KW	=	3	KW

S.no	Description	No. of unit		Load per Unit			Total Load		
	TOWER - 34 (B+P+G+20)	**Nos of Towers**		**=**	**1**				
36	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
37	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
38	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 35 (B+P+G+18)	**Nos of Towers**		**=**	**1**				
39	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
40	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
41	Common Lights	1	towers	@	3.0	KW	=	3	KW
	TOWER - 36 (B+P+G+21)	**Nos of Towers**		**=**	**1**				
42	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
43	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
44	Common Lights	1	towers	@	5.0	KW	=	5	KW
	TOWER - 37 (B+P+G+18)	**Nos of Towers**		**=**	**1**				
45	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
46	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
47	Common Lights	1	towers	@	3.0	KW	=	3	KW
	TOWER - 38 (B+P+G+20)	**Nos of Towers**		**=**	**1**				
48	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
49	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
50	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 39 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
51	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
52	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
53	Common Lights	1	towers	@	5.0	KW	=	5	KW

S.no	Description	No. of unit		Load per Unit				Total Load		
	COMMON SERVICES - General									
54	Tube wells / Water Supply Pumps							=	200	KW
55	STP								200	KW
56	External / Gate / Landscape lighting							=	10	KW
57	Basement lights	37700	sqm	@	1.0	W/sqm		=	38	KW
58	Basement Ventillation							=	300	KW
59	Commercial etc							=	300	KW
60	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW		=	30	KW
					Total Load			**=**	**10297**	**KW**
	By taking Overall Diversity factor					**50**	**%**	**=>**	**5148**	**KW**
	By taking Power factor					**0.90**		**=>**	**5720**	**KVA**

Total Electrical Load (Phase-02) = 5720 KVA

Recommended Transformers (at 85% loading) = 2 nos. 2000 KVA & 2 nos. 1600 KVA.

Essential Electrical load Calculation - Group Housing "La Residentia" at Plot No. 06A, Tech Zone - 4 at Noida Extn.

PHASE - 01

S.no	Description	No. of unit			Load per Unit			Total Load		
	TOWER - 1 &7 (B+P+G+22)	**Nos of Towers**			**=**	**2**				
1	4 BHK + 5 T + Servant	184	units	@	3.00	KW		=	552	KW
	TOWER - 2, 14 & 16 (B+P+G+18)	**Nos of Towers**			**=**	**3**				
2	3 BHK + 2 T (Large)	228	units	@	2.00	KW		=	456	KW
	TOWER - 3 & 17 (B+P+G+18)	**Nos of Towers**			**=**	**2**				
3	3 BHK + 3 T + Study	76	units	@	2.00	KW		=	152	KW
4	3 BHK + 4 T + Servant	76	units	@	2.00	KW		=	152	KW
	TOWER - 4 (B+P+G+22)	**Nos of Towers**			**=**	**1**				
5	2 BHK + 2T	92	units	@	1.00	KW		=	92	KW
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)	**Nos of Towers**			**=**	**5**				
6	2 BHK + 2T + Study	190	units	@	1.00	KW		=	190	KW
7	2 BHK + 2T	190	units	@	1.00	KW		=	190	KW
	TOWER - 8 & 10 (B+P+G+13)	**Nos of Towers**			**=**	**2**				
8	3 BHK + 2T	112	units	@	2.00	KW		=	224	KW
	TOWER - 9 (B+P+G+22)	**Nos of Towers**			**=**	**1**				
9	3 BHK + 3 T + Study	46	units	@	2.00	KW		=	92	KW
10	3 BHK + 4 T + Servant	46	units	@	2.00	KW		=	92	KW
	TOWER - 11 (B+P+G+22)	**Nos of Towers**			**=**	**1**				
11	2 BHK + 2T + Study	46	units	@	1.00	KW		=	46	KW
12	2 BHK + 2T	46	units	@	1.00	KW		=	46	KW
	TOWER - 13 & 19 (B+P+G+18)	**Nos of Towers**			**=**	**2**				
13	3 BHK + 2T	152	units	@	2.00	KW		=	304	KW
					Total Load			**=**	**2588**	**KW**
					By taking Overall Diversity factor	**100**	**%**	**=>**	**2588**	**KW**
					By taking Power factor	**0.80**		**=>**	**3240**	**KVA**
					Essential Load (A)	**=**		**3240**		**KVA**

S.no	Description	No. of unit		Load per Unit			Total Load		
	COMMON SERVICES - TOWERS								
	TOWER - 1 &7 (B+P+G+22)	**Nos of Towers**		**=**	**2**				
14	Elevators (13 Passenger) 1.5 mps	2	nos	@	10.0	KW	=	20	KW
15	Elevators (16 Passenger) 1.5 mps	2	nos	@	15.0	KW	=	30	KW
16	Common Lights	2	towers	@	5.0	KW	=	10	KW
	TOWER - 2, 14 & 16 (B+P+G+18)	**Nos of Towers**		**=**	**3**				
17	Elevators (13 Passenger) 1.5 mps	3	nos	@	10.0	KW	=	30	KW
18	Elevators (16 Passenger) 1.5 mps	3	nos	@	15.0	KW	=	45	KW
19	Common Lights	3	towers	@	3.0	KW	=	9	KW
	TOWER - 3 & 17 (B+P+G+18)	**Nos of Towers**		**=**	**2**				
20	Elevators (13 Passenger) 1.5 mps	2	nos	@	10.0	KW	=	20	KW
21	Elevators (16 Passenger) 1.5 mps	2	nos	@	15.0	KW	=	30	KW
22	Common Lights	2	towers	@	4.0	KW	=	8	KW
	TOWER - 4 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
23	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
24	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
25	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)	**Nos of Towers**		**=**	**5**				
26	Elevators (13 Passenger) 1.5 mps	5	nos	@	10.0	KW	=	50	KW
27	Elevators (16 Passenger) 1.5 mps	5	nos	@	15.0	KW	=	75	KW
28	Common Lights	5	towers	@	3.0	KW	=	15	KW
	TOWER - 8 & 10 (B+P+G+13)	**Nos of Towers**		**=**	**2**				
29	Elevators (13 Passenger) 1.0 mps	2	nos	@	7.0	KW	=	14	KW
30	Elevators (16 Passenger) 1.0 mps	2	nos	@	9.0	KW	=	18	KW
31	Common Lights	2	towers	@	3.0	KW	=	6	KW

S.no	Description		No. of unit		Load per Unit			Total Load		
	TOWER - 9 (B+P+G+22)		**Nos of Towers**		**=**	**1**				
32	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW	=	10	KW
33	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW	=	15	KW
34	Common Lights		1	towers	@	5.0	KW	=	5	KW
	TOWER - 11 (B+P+G+22)		**Nos of Towers**		**=**	**1**				
35	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW	=	10	KW
36	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW	=	15	KW
37	Common Lights		1	towers	@	4.0	KW	=	4	KW
	TOWER - 13 & 19 (B+P+G+18)		**Nos of Towers**		**=**	**2**				
38	Elevators (13 Passenger) 1.5 mps		2	nos	@	10.0	KW	=	20	KW
39	Elevators (16 Passenger) 1.5 mps		2	nos	@	15.0	KW	=	30	KW
40	Common Lights		2	towers	@	4.0	KW	=	8	KW
	COMMON SERVICES - General									
41	External / Gate / Landscape lighting							=	10	KW
42	Basement lights	33500	sqm		@	1.0	W/sqm	=	34	KW
43	Basement Ventillation							=	200	KW
44	Club / Swimming pool							=	250	KW
						Total Load		**=**	**1020**	**KW**
	By taking Overall Diversity factor					**50**	**%**	**=>**	**510**	**KW**
	By taking Power factor					**0.80**		**=>**	**640**	**KVA**
	Essential Load (B)					**=**		**640**		**KVA**
	Total Essential Load : Phase-01 (A + B)				**=**	**3880**	**KVA**			

Recommended DG Sets at 95% loading = 1 nos 1010 KVA and 2 nos. 500 KVA at 2 different location.
(Total 2 nos 1010 KVA & 4 nos 500 KVA)

Essential Electrical load Calculation - Group Housing "La Residentia" at Plot No. 06A, Tech Zone - 4 at Noida Extn.

PHASE - 02

S.no	Description	No. of unit			Load per Unit			Total Load		
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)	**Nos of Towers**			**=**	**5**				
1	2 BHK + 2T + Study	230	units	@	1.00	KW		=	230	KW
2	2 BHK + 2T	230	units	@	1.00	KW		=	230	KW
	TOWER - 21 & 23 (B+P+G+22)	**Nos of Towers**			**=**	**2**				
3	3 BHK + 3 T + Study	92	units	@	2.00	KW		=	184	KW
4	3 BHK + 4 T + Servant	92	units	@	2.00	KW		=	184	KW
	TOWER - 25 (B+P+G+22)	**Nos of Towers**			**=**	**1**				
5	3 BHK + 2 T (Large)	92	units	@	2.00	KW		=	184	KW
	TOWER - 26, 29 & 30 (B+P+G+22)	**Nos of Towers**			**=**	**3**				
6	3 BHK + 2T	276	units	@	2.00	KW		=	552	KW
	TOWER - 28 & 31 (B+P+G+22)	**Nos of Towers**			**=**	**2**				
7	2 BHK + 2T	184	units	@	1.00	KW		=	184	KW
	TOWER - 33 (B+P+G+18)	**Nos of Towers**			**=**	**1**				
8	2 BHK + 2T + Study	76	units	@	1.00	KW		=	76	KW
	TOWER - 34 (B+P+G+20)	**Nos of Towers**			**=**	**1**				
9	3 BHK + 3 T + Study	42	units	@	2.00	KW		=	84	KW
10	3 BHK + 4 T + Servant	42	units	@	2.00	KW		=	84	KW
	TOWER - 35 (B+P+G+18)	**Nos of Towers**			**=**	**1**				
11	2 BHK + 2T + Study	38	units	@	1.00	KW		=	38	KW
12	2 BHK + 2T	38	units	@	1.00	KW		=	38	KW
	TOWER - 36 (B+P+G+21)	**Nos of Towers**			**=**	**1**				
13	3 BHK + 3 T + Study	44	units	@	2.00	KW		=	88	KW
14	3 BHK + 4 T + Servant	44	units	@	2.00	KW		=	88	KW

S.no	Description	No. of unit		Load per Unit			Total Load		
	TOWER - 37 (B+P+G+18)	**Nos of Towers**		**=**	**1**				
15	3 BHK + 2 T (Large)	76	units	@ 2.00	KW		=	152	KW
	TOWER - 38 (B+P+G+20)	**Nos of Towers**		**=**	**1**				
16	3 BHK + 2 T (Large)	84	units	@ 2.00	KW		=	168	KW
	TOWER - 39 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
17	4 BHK + 5 T + Servant	92	units	@ 3.00	KW		=	276	KW
				Total Load			**=**	**2840**	**KW**
				By taking Overall Diversity factor	**100**	**%**	**=>**	**2840**	**KW**
				By taking Power factor	**0.80**		**=>**	**3550**	**KVA**
				Essential Load (A)	**=**		**3550**		**KVA**
	COMMON SERVICES - TOWERS								
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)	**Nos of Towers**		**=**	**5**				
18	Elevators (13 Passenger) 1.5 mps	5	nos	@ 10.0	KW		=	50	KW
19	Elevators (16 Passenger) 1.5 mps	5	nos	@ 15.0	KW		=	75	KW
20	Common Lights	5	towers	@ 4.0	KW		=	20	KW
	TOWER - 21 & 23 (B+P+G+22)	**Nos of Towers**		**=**	**2**				
21	Elevators (13 Passenger) 1.5 mps	2	nos	@ 10.0	KW		=	20	KW
22	Elevators (16 Passenger) 1.5 mps	2	nos	@ 15.0	KW		=	30	KW
23	Common Lights	2	towers	@ 5.0	KW		=	10	KW
	TOWER - 25 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
24	Elevators (13 Passenger) 1.5 mps	1	nos	@ 10.0	KW		=	10	KW
25	Elevators (16 Passenger) 1.5 mps	1	nos	@ 15.0	KW		=	15	KW
26	Common Lights	1	towers	@ 4.0	KW		=	4	KW

S.no	Description		No. of unit			Load per Unit			Total Load		
	TOWER - 26, 29 & 30 (B+P+G+22)		**Nos of Towers**			**=**	**3**				
27	Elevators (13 Passenger) 1.5 mps		3	nos	@	10.0	KW		=	30	KW
28	Elevators (16 Passenger) 1.5 mps		3	nos	@	15.0	KW		=	45	KW
29	Common Lights		3	towers	@	5.0	KW		=	15	KW
	TOWER - 28 & 31 (B+P+G+22)		**Nos of Towers**			**=**	**2**				
30	Elevators (13 Passenger) 1.5 mps		2	nos	@	10.0	KW		=	20	KW
31	Elevators (16 Passenger) 1.5 mps		2	nos	@	15.0	KW		=	30	KW
32	Common Lights		2	towers	@	4.0	KW		=	8	KW
	TOWER - 33 (B+P+G+18)		**Nos of Towers**			**=**	**1**				
33	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW		=	10	KW
34	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW		=	15	KW
35	Common Lights		1	towers	@	3.0	KW		=	3	KW
	TOWER - 34 (B+P+G+20)		**Nos of Towers**			**=**	**1**				
36	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW		=	10	KW
37	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW		=	15	KW
38	Common Lights		1	towers	@	4.0	KW		=	4	KW
	TOWER - 35 (B+P+G+18)		**Nos of Towers**			**=**	**1**				
39	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW		=	10	KW
40	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW		=	15	KW
41	Common Lights		1	towers	@	3.0	KW		=	3	KW
	TOWER - 36 (B+P+G+21)		**Nos of Towers**			**=**	**1**				
42	Elevators (13 Passenger) 1.5 mps		1	nos	@	10.0	KW		=	10	KW
43	Elevators (16 Passenger) 1.5 mps		1	nos	@	15.0	KW		=	15	KW
44	Common Lights		1	towers	@	5.0	KW		=	5	KW

S.no	Description	No. of unit		Load per Unit			Total Load		
	TOWER - 37 (B+P+G+18)	**Nos of Towers**		**=**	**1**				
45	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
46	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
47	Common Lights	1	towers	@	3.0	KW	=	3	KW
	TOWER - 38 (B+P+G+20)	**Nos of Towers**		**=**	**1**				
48	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
49	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
50	Common Lights	1	towers	@	4.0	KW	=	4	KW
	TOWER - 39 (B+P+G+22)	**Nos of Towers**		**=**	**1**				
51	Elevators (13 Passenger) 1.5 mps	1	nos	@	10.0	KW	=	10	KW
52	Elevators (16 Passenger) 1.5 mps	1	nos	@	15.0	KW	=	15	KW
53	Common Lights	1	towers	@	5.0	KW	=	5	KW
	COMMON SERVICES - General								
54	Tube wells / Water Supply Pumps						=	200	KW
55	STP							200	KW
56	External / Gate / Landscape lighting						=	10	KW
57	Basement lights	37700	sqm	@	1.0	W/sqm	=	38	KW
58	Basement Ventillation						=	300	KW
59	Commercial etc						=	300	KW
60	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW	=	30	KW
					Total Load		**=**	**1662**	**KW**
	By taking Overall Diversity factor				**50**	**%**	**=>**	**831**	**KW**
	By taking Power factor				**0.80**		**=>**	**1040**	**KVA**
	Essential Load (B)				**=**		**1040**		**KVA**
	Total Essential Load : Phase-02 (A + B)			**=**	**4590**	**KVA**			

Recommended DG Sets at 95% loading = 1 nos 1010 KVA and 2 nos. 750 KVA at 2 different location.
(Total 2 nos 1010 KVA & 4 nos 750 KVA)