USE GROUP :-	RESIDENTIAL			
1. AREA OF LAND =			8093.721	SQM
2. GROUND COVERAGE :				
(I) PERMISSIBLE GROUND COVERAGE FOR BUILDING.	45.0	% =	3642.17	SQM.
(II) EXTRA PERMISSIBLE GROUND COVERAGE FOR PARKING & SERVICES.	15.0	% =	1214.06	SQM.
2A. TOTAL PERMISSIBLE GROUND COVERAGE :	60.0	% =	4856.23	SQM.
(I) PROPOSED GROUND COVERAGE FOR BUILDING.	38.54	% =	3119.71	SQM.
(II) PROPOSED GROUND COVERAGE FOR PARKING & SERVICES.	14.54	% =	1176.62	SQM.
2B. TOTAL PROPOSED GROUND COVERAGE :	53.08	% =	4296.33	SQM.
3. PROPOSED HEIGHT OF THE BUILDING=			134.55	M
4. APPROACH ROAD WIDTH=			76.20	M

5. PROPOSED AREA CALCULATION :-

AT FLOOR	COVERED AREA	CUTOUT	EXEMPTED AREA			NET FLOOR AREA
			STAIR & STAIR LOBBY	LIFT LOBBY	SERVICE FLOOR	
BASEMENT	4410.02	3.24	25.00	18.00	00	4363.78
GROUND	1528.94	175.66	63.00	21.00	00	1269.28
1ST	1455.11	1015.77	00	3.00	00	436.34
2ND	1001.79	68.49	63.00	18.00	00	852.30
3RD & 6TH	2041.10 (1020.55X2)	136.98 (68.49X2)	126.00 (63X2)	36.00 (18X2)	00	1742.12 (871.06X2)
4TH	1000.99	68.49	63.00	18.00	00	851.50
5TH	993.19	68.49	63.00	18.00	00	843.70
8TH	993.19	68.49	63.00	18.00	00	843.70
9TH	993.19	68.49	63.00	18.00	00	843.70
12TH,15TH,18TH, 24TH & 30TH	4965.95 (993.19X5)	342.45 (68.49X5)	315.00 (63X5)	90.00 (18X5)	00	4218.50 (843.7X5)
7TH,10TH,13TH, 16TH,19TH,22ND, 25TH,28TH & 31ST	8938.71 (993.19X9)	616.41 (68.49X9)	567.00 (63X9)	162.00 (18X9)	00	7593.30 (843.7X9)
11TH,14TH,17TH, 20TH,23RD,26TH, 29TH & 32ND	7945.52 (993.19X8)	547.92 (68.49X8)	504.00 (63X8)	144.00 (18X8)	00	6749.60 (843.7X8)
21ST	993.19	68.49	63.00	18.00	00	843.70
27TH	993.19	68.49	63.00	18.00	00	843.70
33RD (SERVICE FL.)	1110.29	68.01	00	00	1042.28	00
34TH	717.99	64.10	63.00	18.00	00	572.89
35TH	783.31	64.69	63.00	18.00	00	637.62
TOTAL =	40865.67	3514.66	2167.00	636.00	1042.28	33505.73

6. TENEMENTS & CAR PARKING CALCULATION :-

MARKED	TENEMENT SIZE	PROP. AREA TO BE ADDED	ACTUAL TENEMENT AREA	NO. OF TENEMENT	REQ. CAR PARKING NOS.
A	212.88	74.51	287.39	30	30X2=60
B	332.19	116.27	448.46	31	31X4=124
C	193.28	67.65	260.93	31	31X2=62
A (2ND FLOOR)	221.59	77.55	299.14	01	1X2=2
TOTAL	N.A	N.A	N.A	93	248

7. TOTAL REQUIRED CAR PARKING :-	248
8. TOTAL PROVIDED CAR PARKING :-	314

OPEN (1 LAYER) =	OPEN (2 LAYER) =	COVERED-GR (1 LAYER) =	COVERED-GR (2 LAYER) =	COVERED-BASEMENT (1 LAYER)=
13	168	11	04	118

9. TOTAL NET FLOOR AREA :	33505.73	SQM
10. PERMISSIBLE AREA FOR PARKING :- MINIMUM NUMBER OF CAR PROVIDED AND REQUIRED & LOCATION (IN SQM)	5045.00	SQM
11. PROVIDED AREA OF CAR PARKING :- BASEMENT - 4104.61 GROUND FLOOR - 359.95	4464.56	SQM
12. PERMISSIBLE F.A.R = [INCLUDING 69A)(i)(c) 20% extra]	3.60	
13. PROPOSED F.A.R = [(33505.73 - 4464.56) / 8093.721] =	3.5881	
14. PROPOSED BUILT UP AREA FOR F.A.R =	29041.17	SQM
15. STAIR HEAD ROOM AREA :-	87.06	SQM
16. LIFT MACHINE ROOM AREA :-	135.73	SQM
17. OVER HEAD TANK AREA :-	63.36	SQM
18. TERRACE AREA :-	1673.85	SQM
19. CUP-BOARD AREA :-	168.52	SQM
20. TRIPLE HEIGHT BALCONY AREA :-	645.19	SQM
21. AREA OF GATE GOOMTY :-	9.00	SQM
22. AREA OF AC LEDGE :-	337.92	SQM
23.TOTAL FIRE REFUGE AREA =	241.28	SQM
24.SWIMMING POOL AREA =	248.19	SQM
25. OTHER AREAS ONLY FOR FEES (exempted area+20+21+22+23+10% of 24)=	5103.49	SQM
26. TREE COVER = 21.81 % =	1765.23	SQM

DOOR WINDOW GLAZING SCHEDULE			
MKG.	SIZE	LINTEL	SILL
FCD	1200X2450	2450	-
FCD1	900X2450	2450	-
FCD2	1000X2450	2450	-
D1	1200X2450	2450	-
D2	1000X2450	2450	-
D3	900X2450	2450	-
D3A	800X2550	2550	-
D4	900X2150	2150	-
D4A	1000X2150	2150	-
D5	800X2150	2150	-
D6	1000X2150	2350	150
SD1	2400X2550	2550	
SD2	1000X2450	2450	
SD3	3000X2550	2560	
SD4	4250X2550	2560	
SD4A	4250X2550	2560	
SD5	1800X2590	2560	
DW1	1500X2560	2560	
DW2	1350X2560	2560	
GD1	1500X2490	2450	
GD2	3200X2450	2450	
CG1	(2400+1400)X 4800	8750	150
CG2	2250X8600	8750	150
CG3	4800X8600	8750	150
CG4	7737X8900	3050	150
CG4A	7737X8900	2950	150
CG5	8900X2600	3050	150
CG6	5000X2600	3050	150
CG7	4650X2600	3050	150
CG8	4650X2600	3050	150
CG9	4650X2600	3050	150
CG10	4650X2600	3050	150

DOOR WINDOW GLAZING SCHEDULE			
MKG.	SIZE	LINTEL	SILL
G1	3500X2900	3050	150
G2	4725X2900	3050	150
G2a	4725X2800	2950	150
G3	4900X2900	3050	150
G3a	4900X2800	2950	150
G4	3150X2900	3050	150
G4a	3150X2800	2960	150
G5	3770X2900	2950	150
G6	5000X2400	2550	150
G7	22860X3550	3700	150
G7a	5315X3550	3700	150
G8	4015X6550	6700	150
G8a	5000X6550	6700	150
G8b	1680X6550	6700	150
G8c	5850X6550	6700	150
G8d	(2950+1875) X6550	6700	150
G8e	4950X6550	6700	150
G8f	1573X6550	6700	150
G8g	1175X6550	6700	150
G8h	2650X6550	6700	150
G8i	2125X6550	6700	150
W1	1800X2400	2550	150
W2	3000X2400	2650	150
W3	600X2400	2950	150
W4	900X1800	2550	1050
W5	2400X2400	2550	150
W6	2400X1800	2550	1050
W7	1200X2400	2560	150
W7A	1200X2400	2590	150
W7B	1200X2028	2185	150
W8	1000X2200	2380	180
W9	1000X1480	2450	1000
W10	5100X2400	2550	150
W11	4160X2400	2550	150
W12	1800X2400	2550	150
W13	2625X2400	2550	150
W14	4200X2400	2550	150
W15	2000X1200	2550	1200

STATEMENT OF PLAN PROPOSAL

1) ASSESSEE NO. =110583000033

2) DETAIL OF REG.DEED :
DATE OF REG.=04.03.2014.
BOOK NO. = I
VOLUME NO.= 4
BEING NO.= 01543 for the year 2014
PAGES = 6276-6299

3) DETAILS OF REGISTERED UNDERTAKING U/R 4(3).
DATE OF REG.=26.07.2018.
BOOK NO. = I
VOLUME NO.= 1603-2018
BEING NO.= 160303035
PAGES = 95456 TO 95466.

(OBSERVATION OF OTHER DEPARTMENTS)

1) FIRE NOC NO.- WBFES/719/19/IND/WB/FES/20182019/28524 Dated 06-02-2019
2) BSNL NOC NO.- G/MWC/1-150/T.B/2014-15/08/VOL- II Dated 04-07-2014
3) AS PER ENVIRONMENTAL CLEARANCE FROM SLEIAA, GOVT. OF WEST BENGAL VIDE NO. 1789/EN/T-II-1/020/2016 DT.- 16TH AUG. 2016

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. ALL EXTERNAL WALLS ARE 250mm THICK BRICK WALL AND INTERNAL WALLS ARE 125 mm THICK BRICK WALL UNLESS OTHERWISE SPECIFIED.
4. ALL STAIRCASE AND LIFT SHALL BE PRESSURISED ; LIFT GOING TO BASEMENT THAT WILL BE PRESSURISED.
5. 2 HRS FIRE RATING STAIRCASE , LIFT AND CORRIDOR.
6. ALL ELECTRICAL ROOMS HAVE 2 HRS RATING WALL.
7. FIRE REFUGE AREA NOT LESS THAN 15 SQM WITH FCD AT ENTRANCE.
8. ALL FLOORS ARE CENTRALLY AIR CONDITIONED.
9. ALL TOILETS ARE ARTIFICIALLY LIGHTED AND MECHANICALLY VENTILATED.
10. SPRINKLER SHALL BE PROVIDED.

DECLARATION OF OWNER

I DO HEREBY UNDERTAKE WITH FULL RESPONSIBILITY THAT
i) I ENGAGED L.B.A. & E.S.E. DURING CONSTRUCTION.
ii) I FOLLOWED THE INSTRUCTION OF L.B.A. & E.S.E. DURING CONSTRUCTION OF THE BUILDING (AS PER B.S. PLAN).
iii) K.M.C. AUTHORITY WILL NOT BE RESPONSIBLE FOR STRUCTURE STABILITY OF THE BUILDING AND ADJOINING STRUCTURE.
iv) IF ANY SUBMITTED DOCUMENTS ARE FOUND TO BE FAKE, THE K.M.C. AUTHORITY WILL REVOKE THE SANCTION PLAN.
v) THE CONSTRUCTION OF WATER RESERVOIR AND SEPTIC TANK WILL BE UNDER THE GUIDENCE OF L.B.A./E.S.E BEFORE STARTING OF BUILDING FOUNDATION WORK.
vi) DURING INSPECTION SITE WAS IDENTIFIED BY US.

AHW UNIMARK CONSORTIUM LLP
Designated Partn
SIGNATURE OF OWNER

CERTIFICATE OF GEO-TECHNICAL ENGINEER.

UNDERSIGNED HAS INSPECTED THE SITE AND CARRIED OUT SOIL INVESTIGATION THEREON. IT IS CERTIFIED THAT THE EXISTING SOIL OF THE SITE IS ABLE TO CARRY THE LOAD COMING FROM THE PROPOSED CONSTRUCTION AND THE FOUNDATION SYSTEM PROPOSED HEREIN IS SAFE & STABLE IN ALL PESPECT FROM GEO-TECHNICAL POINT OF VIEW.

ALOK ROY
Empanelled Geotechnical Engineer
Kolkata Municipal Corporation
Cleint. No.:- G:T//11
64, Mitan Park,
Kolkata-700 034

SIGNATURE OF GEO-TECHNICAL ENGINEER
NAME :ALOK ROY
NO : NO : GT//11

CERTIFICATE OF STRUCTURAL ENGINEER & REVIEWER.

I HEREBY CERTIFY THAT THE ERECTION/ADDITION TO/ALTERATION OF BUILDING ON PREMISES NO. - 992, E.M BYE PASS, BOROUGH - VII, HAS BEEN SUPERVISED BY ME AND THERE ARE SOME DEVIATIONS WHICH ARE WITHIN PERMISSIBLE LIMIT OF KMC BUILDING RULE 1990/2009.

THE WORKMANSHIP AND ALL THE MATERIALS (TYPE AND GRADE) HAVE BEEN USED STRICTLY IN ACCORDANCE WITH GENERAL AND DETAILED SPECIFICATION. NO PROVISIONS OF KOLKATA MUNICIPAL CORPORATION BUILDING RULES 1990/2009 HAVE BEEN VIOLATED IN COURSE OF WORK. THE BUILDING IS STRUCTURALLY SAFE AND STABLE IN ALL RESPECT FOR WHICH IT HAS BEEN ERECTED/RE-ERECTED/ALTERED/ADDED TO.

SANJIV J. PAREKH
M.E. (STRUCT.), M.I.E. (CONST. ENG.),
B. C. E., FIE-(F-61282-4)
E.S.E. NO. 104 (I) K. M. C.

SIGNATURE OF STRUCTURAL ENGINEER
NAME : SANJIV J. PAREKH
NO: ESE//104

SANJIB GUHA
BSC, BCE, FIE-(F-115555-5)
CHARTERED ENGINEER
ENLISTED STRUCTURAL REVIEWER 88/16 K.M.C.

SIGNATURE OF STRUCTURAL REVIEWER
NAME : SANJIB GUHA
NO: ESR//88/16

CERTIFICATE OF ARCHITECTS.

I HEREBY CERTIFY THAT THE ERECTION/ADDITION TO/ALTERATION OF BUILDING ON PREMISES NO. - 992, E.M BYE PASS, BOROUGH - VII, HAS BEEN SUPERVISED BY ME AND THERE ARE SOME DEVIATIONS WHICH ARE WITHIN PERMISSIBLE LIMIT OF KMC BUILDING RULE 1990/2009.

THE WORKMANSHIP AND ALL THE MATERIALS (TYPE AND GRADE) HAVE BEEN USED STRICTLY IN ACCORDANCE WITH GENERAL AND DETAILED SPECIFICATION. NO PROVISIONS OF KOLKATA MUNICIPAL CORPORATION BUILDING RULES 1990/2009 HAVE BEEN VIOLATED IN COURSE OF WORK. THE BUILDING IS STRUCTURALLY SAFE AND STABLE IN ALL RESPECT FOR WHICH IT HAS BEEN ERECTED/RE-ERECTED/ALTERED/ADDED TO.

ARCHITECT
JUI MALLIK
COA REGN. NO-

SIGNATURE OF ARCHITECT.
NAME : JUI MALLIK
NO: CA/98/23840

ARCHITECT:
ADS DESIGNS PVT. LTD.
ARCHITECTURE | INTERIOR | EXHIBITION | PRODUCT DESIGN | GRAPHICS
62/2, HINDUSTAN PARK, KOLKATA 700029, INDIA
E-MAIL : contact@adsindesignstudio.com

PROJECT:
REGULARIZATION PLANS U/R 26(2a)& (2b) OF THE SANCTIONED B+G+38 STORIED RESIDENTIAL BUILDING TO B+G+35 STORIED RESIDENTIAL BUILDING (OF BLDG. HT. 134.55 M.)
AT PRE. NO. 992, E.M. BYE PASS, WARD NO.- 58, BOROUGH - VII, KOLKATA- 700105, P.S.- PRAGATI MAIDAN SANCTIONED U/S 393 OF KMC BUILDING RULE 2009 VIDE BP NO .2015070071, DATED 20.08.2015. & ALSO U/S 394 ALONG WITH RULE 69A(II)(C) OF KMC BUILDING RULE 2009 VIDE B.P. NO. 2018070025 DATED 31.05.2018.

TITLE:
GROUND FLOOR PLAN,SITE PLAN, LOCATION PLAN & DETAIL OF UGR.

DATE :	14.05.19	REV. NO.:	NORTH: N
DATE OF REVISION :			
SCALE :	AS SHOWN	DRAWING NO.:	
DRAWN BY :	A.B	ANASSA/A01	
CHKD. BY :	C.P	SHEET 01 OUT OF 11	

THIS DRAWING IS THE SOLE PROPERTY OF ABIN DESIGN STUDIO AND IS NOT TO BE USED, COPIED OR CIRCULATED IN ANY MANNER OTHER THAN THE PURPOSE FOR WHICH IT IS ISSUED WITHOUT THEIR WRITTEN PERMISSION

THE KOLKATA MUNICIPAL CORPORATION

भारतीय गैर न्यायिक / INDIA NON JUDICIAL — दस रुपये TEN RUPEES रु.10 Rs.10

WEST BENGAL 30AB 496551

BEFORE THE COURT OF LD. 1ST CLASS JUDICIAL MAGISTRATE AT ALIPORE

AFFIDAVIT

We, AHW UNIMARK CONSORTIUM LLP having its office at 'Shyamkunj', 12C, Lord Sinha Road, 6th Floor, Kolkata – 700 071, represented by its Partner Mr. Ashish Bagaria, son of Sri Sheo Shanker Bagaria, residing at 2C, Burdwan Road, Alipore, Kolkata -700 027do hereby solemnly declare as follows:

1. That I am an Indian Citizen.
2. That we are the Lessee of the project at Premises No. 992, E M Bypass, Kolkata – 700 105 under Ward No. 58 Borough VII within the limit of the Kolkata Municipal Corporation.
3. That We have applied to K.M.C. for getting sanctioned building plan in terms of law;
4. That the Kolkata Municipal Corporation has approved the building plan, vide a Building Permit No. 2015070071 dated 20/08/2015 and 2018070025 dated 31/05/2018 for construction of building(s) at the above-mentioned premises.
5. That we require certain modification in the plans as approved in the above –mentioned Building Permit. We have submitted revised plans with required changes for approval to the Building Department of the Kolkata Municipal Corporation.
6. That we declare and confirm that we have complied with the provisions of West Bengal Housing Industry Regulation Act, 2017 alongwith WB Housing Industry Regulation Rules, 2018 for the project, as well as for revision of plans.
7. That we do hereby under take that if any violation of the provision related to West Bengal Housing Industry Regulation Act, 2017 alongwith WB Housing Industry Regulation Rules, 2018 is occurred by us, we shall be liable and penalized for the said act in accordance with law for the time being in force and K.M.C. authorities shall have the liberty to cancel/revoke the Building Sanction Plan as sanctioned and/or addition/alterations to the building permit already sanctioned without any notice.

That the above paragraphs contained in the affidavit are true to my best of knowledge and belief.

For: AHW UNIMARK CONSORTIUM LLP

(DESIGNATED PARTNER)

Deponent(s)

Identified by me

Advocate

Solemnly affirmed before me ... 10 ... 2019

Judicial Magistrate 1st Class, Alipore

Resolutions of MBC Meeting

MeetingNo 557 MeetingDate 05/03/2019 Total No of Cases: 27

MembersPresent
1. Municipal Commissioner, Chairman
2. Director General (Building), Convenor
3. Representative of KMDA
4. Representative of DC (Traffic), Kolkata Police
5. Representative of WBFAES
6. Representative of Council of Architecture
7. Representative of ITPI
8. Representative of WBPCB

ItemNo 274/18-19 Br 07 Ward 058 PremisesNo 992, Eastern Metropolitan Bye-pass

Proposal:
Initially a B+G+32 storied residential building was sanctioned vide BP No 2015070071 dated 20/08/2015 u/s 393 of the KMC Act, 1980 and subsequently additional six floors above existing B+G+32 story of total height 132.80 meter was sanctioned vide BP no 2018070025 dated 31/05/2018 u/s 394 of the KMC Act, 1980 read with rule 69A(1c) of the KMC Building Rules, 2009.
The present proposal is for addition/alteration of sanctioned B+G+XXXVIII storied residential building of total height 137.85 meter u/r 26(2a&2b) of the KMC Building Rules, 2009. Area of the plot is 8093.721 Sq.M. & width of abutting road is 76.20 meter.
Changes are mainly :
1) Number of floors has been reduced from sanctioned B+G+38 story to B+G+35 but total height of the building increased from sanctioned 132.80 meter to 137.85 meter,
2) Individual floor height has been changed including column size,
3) Internal partition wall, Column size and orientation has been changes,
4) Position of STP, Pump room etc has been changes,
5) Two new lift has been introduced.

Name of Architect : Jai Mallik, CA/98/23840
Name of ESE : Sanjiv J Parekh, I/104
Name of Structural Reviewer : Sanjib Guha, I/88/16
Name of Geo-Technical Engineer : Alok Roy, I/11
Name of Applicant : AHW Unimark Consortium LLP (Lessee)
Total Proposed Gross Floor Area : 37351.07 Sq.M.
NOC / Observation Submitted : WBF&ES (vide no. WBFES/719/19/IND/WB/FES/20182019/28524, dated 06/02/2019), BSNL (150.00 meter vide no G/MWC/1-150/T.B/2014-15/08/Vol-II dated

Signatures of Members

P.T.O

Hon'ble Mayor & MMIC(Bldg)

Above recommendation of MBC requires approval of the Mayor-in-Council in order to enable this department to process the Plan Case for sanction.

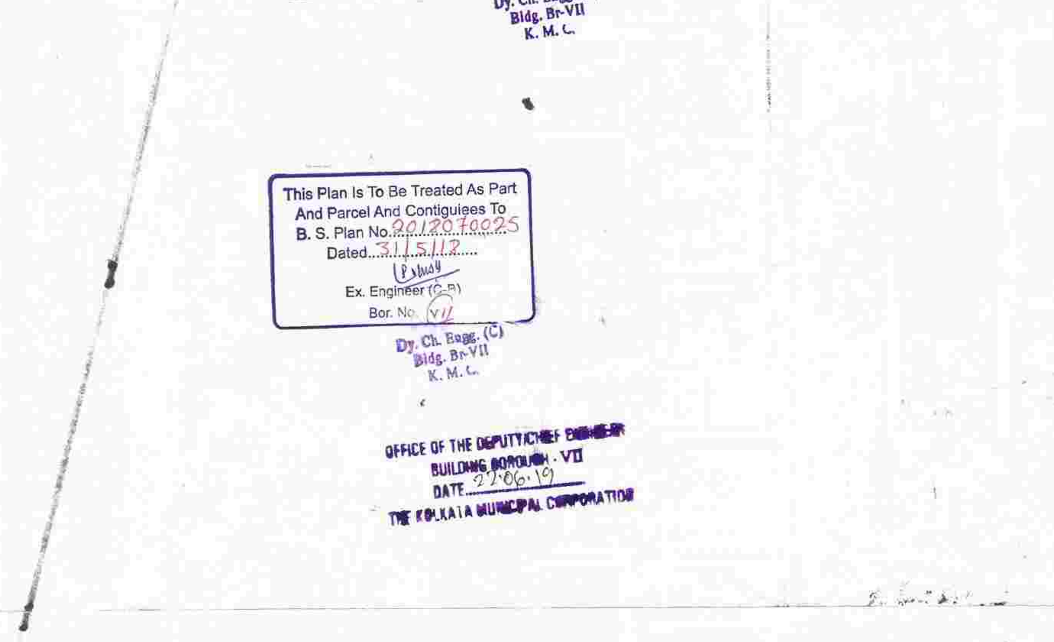
Director General (Bldg) Municipal Commissioner

Page 1 of 2

भारतीय विमानपत्तन प्राधिकरण / AIRPORTS AUTHORITY OF INDIA

No Objection Certificate for Height Clearance

PARTY'S COPY



KOLKATA MUNICIPAL CORPORATION
BUILDING DEPTT.
PLANS APPROVED U/R 26 (2a) & (2b) of
K.M.C. BUILDING RULES 2009
By D.G(Bldg) Dy. C.E(S/N) Ex.Engr. MBC
ON 05/3/19 vide meeting no. 557, item no. 247/18-19
B.P. No. 2018070025 Dt. 31/5/18 BR. No. VII
Assistant Engineer Ex. Engr (Civil)
Br. No. : VII Br. No. : VII

Dy. Ch. Engg. (C) Bldg. Br-VII K.M.C.

This Plan Is To Be Treated As Part
And Parcel And Contiguees To
B. S. Plan No. 2018070025
Dated 31/5/18
Ex. Engineer (C-B)
Bor. No. VII

Dy. Ch. Engg. (C) Bldg. Br-VII K.M.C.

OFFICE OF THE DEPUTY/CHIEF ENGINEER
BUILDING BOROUGH - VII
DATE 27.06.19
THE KOLKATA MUNICIPAL CORPORATION

GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIRECTOR GENERAL
WEST BENGAL FIRE & EMERGENCY SERVICES
13-D, Mirza Ghalib Street, Kolkata – 700 016

Memo No.: WBFES/ 719/19 /IND/WB/FES/20182019/28524 Date: 06/02/2019

From : Director
West Bengal Fire & Emergency Services

To : Gaurav Duggar
992, E.M.Bypass
Ward No. – 58, Borough No. - VII
Kolkata – 700 105

Subject : Revised Fire safety recommendation for a proposed under construction of B+G+XXXVI including service floor) storied under group Residential Building at the Premises No.- 992, E.M.Bye Pass, Ward No. – 58, Borough No. – VII, Kolkata – 700 105 for Fire Safety measures.

This is in reference to your Application No.- IND/WB/FES/20182019/28524 regarding revised Fire Safety recommendation for a proposed under construction of B+G+XXXVI including service floor) storied under group Residential Building at the Premises No.- 992, E.M. Bye Pass, Ward No. – 58, Borough No. – VII, Kolkata – 700 105 for Fire Safety measures.

The plan drawings submitted by you were scrutinized and marked as found necessary from fire safety point of view. In returning one set of plan with revised recommendation, this office is issuing Revised Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measures.

Enclo.:
1. One set of plan.
2. Recommendation.

Director
West Bengal Fire & Emergency Services

Provisional EC

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. 1782 / EN/T – II – 1/020 / 2016 Date: 16th August, 2016

To
M/s. AHW Unimark Consortium LLP,
204, AJC Bose Road, 1st floor,
Kolkata – 700 017.

Sub: Environmental clearance application for the proposed Residential Building "Unimark Solitaire" at 992, EM bypass, Ward No. 58 of KMC, PS – Pragati Maidan, Borough VII, Kolkata 700 105 West Bengal.

Member Secretary, SEIAA

RECOMMENDATION

CONSTRUCTION :

1. The whole construction of the proposed buildings shall be carried out as per approved plan drawings conforming the relevant buildings rules of KMC.
2. The floor area exceeds 3000 Sq.Mts. shall be suitably compartmented seperation walls / water curtain up to ceiling level having at least two hours Fire resisting capacityas per N.B.C. Part – IV -2016.
3. The interior finish decoration of the buildings shall be made low flame spread materials conforming I.S. specifications.
4. Provision of ventilation at the crown of the central core-duct of the buildings shall be provided.
5. Arrangements shall have to be made for sealing all the vertical and horizontal ducts, shafts by the materials of adequate Fire resisting capacity.

OPEN SPACE &APPROACH :

1. The open space surrounding the buildings shall conform the relevant buildings rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.
2. The approach&internal roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
3. The width and height of the access gates into the premises shall not be less than 4.5 Mts. and 5 Mts respecting abutting the road.

STAIRCASE :

1. The staircase of the buildings shall be enclosed type. Entire construction shall be made of bricks/R.C.C. type having Fire resisting capacity not less than 4 hours.
2. The staircase of the buildings shall have permanent vents at the top and openable sashes at each floor level in the external wall of the buildings.
3. The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant buildings rules with up to date amendment.
4. All the staircases shall be extended up to the terrace of the buildings and shall be negotiable to each other without entering into any room.
5. Fire and smoke doors at the entrances of all the staircase enclosures and also as marked in the plan at each floor level shall be provided. The F.C.D. assembly shall be of at least two hour Fire resisting wire glass window fitted with self-closing type openable in the direction of escape& insulation criteria shall be 20 minute.

LIFT :

1. The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.
2. One of the liftshall be designed as Fire Lift. The word "FIRE LIFT" shall conspicuously writtenin fluorescent paint on the lift landing doors at each floor level.
Lift lobby at all levels to be pressurized (25-30 Pa)as per N.B.C. Part – IV 2016.
3. Alternate source of power supply shall be provided for all lifts through manually operated change over switch.
4. In case of failure normal electric supply it shall automatically trip over to alter supply.
5. The Speed of the fire lift shall be such that it can reach the top floor from ground level within one minute.
6. Lift communication system shall be provided in the lift and this system shall be connected to fire control room of the buildings.

REFUGE AREA :

1. Refuge area is not less than 15sqm. Shall be provided on the external wall with cantilever projection or other suitable means at 25.271 mtr., 39.671 mtr., 54.071 mtr., 68.471 mtr., 82.871 mtr., 97.271 mtr., 111.671mtr., 126.300 mtr. of front block &24.414 mtr., 38.814mtr., 53.214mtr., 67.614mtr., 82.014mtr., 96.414 mtr., 110.814mtr., 125.475 mtr.of rear block levelsof the building as shown in the plan.
2. The refuge area shall be of Fire Resisting construction and protected with self closing F.C.D. at the entrance from the corridor or the staircase lobbies.
4. The position of Refuge areas shall be such that they are negotiable by the fire service ladder from the ground& shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
5. Refuge area shall be provided with first aid box, fire extinguishers, public address speaker, fire man talk back, adequate emergency lighting as well as drinking water facility.

HALL :

1. The doors/aisles/gangway/cross gangways/sitting arrangements/corridors in hall etc shall be made as per good practice of N.B.C. part-IV fire protection.

BASEMENT:

1. The Basements shall be adequately ventilated with aggregate cross sectional area of not less than 2.5% of the total basement floor area.
2. Mechanical extractor for smoke venting system shall be provided for the entire basement areaconforming the I.S. Specification. The system shall be of such design as to operate on actuation of heat/smoke sensitive detector or sprinkling. It shall also have an arrangement to start it manually.
3. The exit from the basement shall be from open Air.
4. The entire basement shall be protected with Auto Sprinkler System, Landing valve and Hose Reel HoseSystem conforming to I.S. 3844-1989.
5. The staircase of basement shall be of enclosed type havingFire resistance of not less than 2 hrs. and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such position that smoke from any Fire in the basement shall not obstruct any exit or conveyserving the ground and upper floor of the buildings.
6. Mechanical extractors shall have an alternative source of supply.
7. Mechanical extractor shall have an internal locking arrangement so that extracting shall continue to operate and supply fans shall stop automatically with the actuation of Fire Detectors.
8. If cut outs are provided from basement to the upper floors or to the atmospheres, all sides cut outs openings in the basements shall be protected by sprinkler head to form a water curtain in the event of a fire.

FIRE FIGHTING WATER :

Underground water reservoir having water capacity of 2,00,000Ltrs. and overhead reservoir of 48,000Ltrs. capacity exclusively for Fire Fighting purpose with replenishing arrangement @ 1000 Ltrs./Min. preferably from two different sources of water supply shall be provided. The Fire Water Reservoir shall have overflow arrangement with the domestic Water Reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all time.

HYDRANT SYSTEM :

1. The building shall be provided with Wet Riser of 150 mm internal diameter pipe lineswith provision of landing valves at the staircase landing/half landings at the rate of one such riser for 1000 Sq.Mt. of floor area. The system shall be so designed that be kept charged with Water all the time under pressure and capable to discharge 2850 Ltrs./Min. at the ground floor level outlet and minimum 900 Ltrs./Min. at the top most outlet. In both cases the running pressure shall not be less than 3.5 Kgs./Sq.cm. All other requirements shall conform I.S. 3844-1989.
2. Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.
3. Yard Hydrant &Ring Main Hydrant with provision of adequate numbers Hydrant alongwith Fire Service inlet shall be installed surrounding the buildings in accordance with relevant I.S. specification.

SPRINKLER INSTALLATION :

The automatic Sprinkler installation shall be provided in basement, refuge areas and in all floor areas of of the building as per I.S. 9972. Alarm gang to be incorporated along with the sprinkler system.

FIRE PUMP :

Provision of the Fire Pump shall have to be made to supply water at the rate-designed pressure and discharge into the water based system, which shall be installed in the buildings. One such pump shall always be kept on Stand-by of diesel driven type.
A separate fire pump shall be made for the total Sprinkler installation of the building.
Provision of Jockey Pumps shall also have to be made to keep the Water based system under pressurized condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities.
To avoid high pressure in lower levels of wet riser in the building multi stage, multi -outlets pumps (creating pressure zones) or variable frequency drive pumps or any other suitable arrangement to be provided as per N.B.C. Part – IV 2016.

ELECTRICAL INSTALLATION &DISTRIBUTION :

1. The electrical installation including transformers, Switch Gears, Main & Meters etc and the distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general buildings as laid down in the I.S. specification 1946-1982.
2. All ducts shall be supply sealed at all floor level.
3. The electrical installation shall be adequately protected with CO2/D.C.P. or High/Medium Velocity Projector System.
4. Alternative Power Supply :
Arrangements shall have to be made to supply power with help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Alarm System, Fire Lift, pressurization fans and blowers,smoke extraction and damper systems etc. and also for illuminating the Staircase, Corridors, fire refuge areas etc. and other places of assembly of the buildings incase of normal power failure.

INTELLIGENCY ANALOGUESYSTEM :

1. Auto Fire Alarm System which analogue addressable smoke/ heat detectors as per suitability shall be installed in all floor area of the building including basement area.
2. Addressable analogue manual call boxes incorporating with sounders shall be installed in all the floor area of the building in such a manner that maximum travel distance shall not be more than 22.5m in order to reach any of the call point.
3. Micro Processor based fire alarm panel shall be installed and all shall also be connected with main panel at the Fire Control Room of the premises.
4. Both way Public address system linked between all floors& fire refuge areas and Control Room shall have to be established.
5. All the installation shall also satisfy the I.S. Specification 2189 as amended and the code of practice as laid down in N.B.C. Part – IV.

AIR CONDITIONING SYSTEM : (if any)

1. The A.H.U. shall be separated for each floor with the system Air Ducts for individual floors.
2. Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.
3. The Air Handling Units room shall not be used for storage of any combustible materials.
4. Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.
5. The system of auto shut down of AHU shall be incorporated with the auto detection and alarm system.
6. Escape route like staircase etc. shall not be used as return air passage.
7. Whenever the ducts pass through Fire wall of floors, the opening arounding the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.
8. The metallic ducts shall be used even for the return air instead of space above the false ceiling.
9. The materials used for insulating the duct system (inside or outside) shall be of non – combustible materials glass wool shall not be wrapped or secured by any materials of combustible nature.
10. Area more than 750 sq. m. on individual floor shall be segregated by a Fire wall and automatic fire damper for isolation shall be provided.
11. Air duct services main floor area, corridors etc. shall not pass through the staircase enclosures.
12. The air handling units shall be separation for each floor, and air ducts for every floor shall be separated and in no way interconnected with the ducting of any other floor.
13. If the air handling units serve more than 1 floor, the recommendation given above shall be complied with in addition to the conditions given below:-
a. Proper arrangements by way of automatic Fire dampers working on fuseable link for isolating all ducting at every floor from the main riser shall be made.
b. When the automatic Fire alarm operates the respective air handling units of the air conditioning system shall automatically switched off.
14. The vertical shaft for treated fresh air shall be of masonry construction.
15. The air filters for air handling units shall be of non combustible materials.
16. The air handling units room shall not be storage of any combustible materials.
17. Inspection panel shall be provided in the main trucking to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.
18. No combustible materials shall be fixed nearer than 15cm to any duct unless such duct properly enclosed and protected with non combustible materials (glass wool or Spun wool with neoprene facing enclosed and wrapped with aluminum sheeting) at least 3.2m thick. And which would not readily conduct heat.

FIRST AID FIRE FIGHTING SYSTEM :

First Aid Fire Fighting arrangement in the style of placing suitable type of portable Fire Extinguishers, Fire Buckets etc. in all floors including basements and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992.

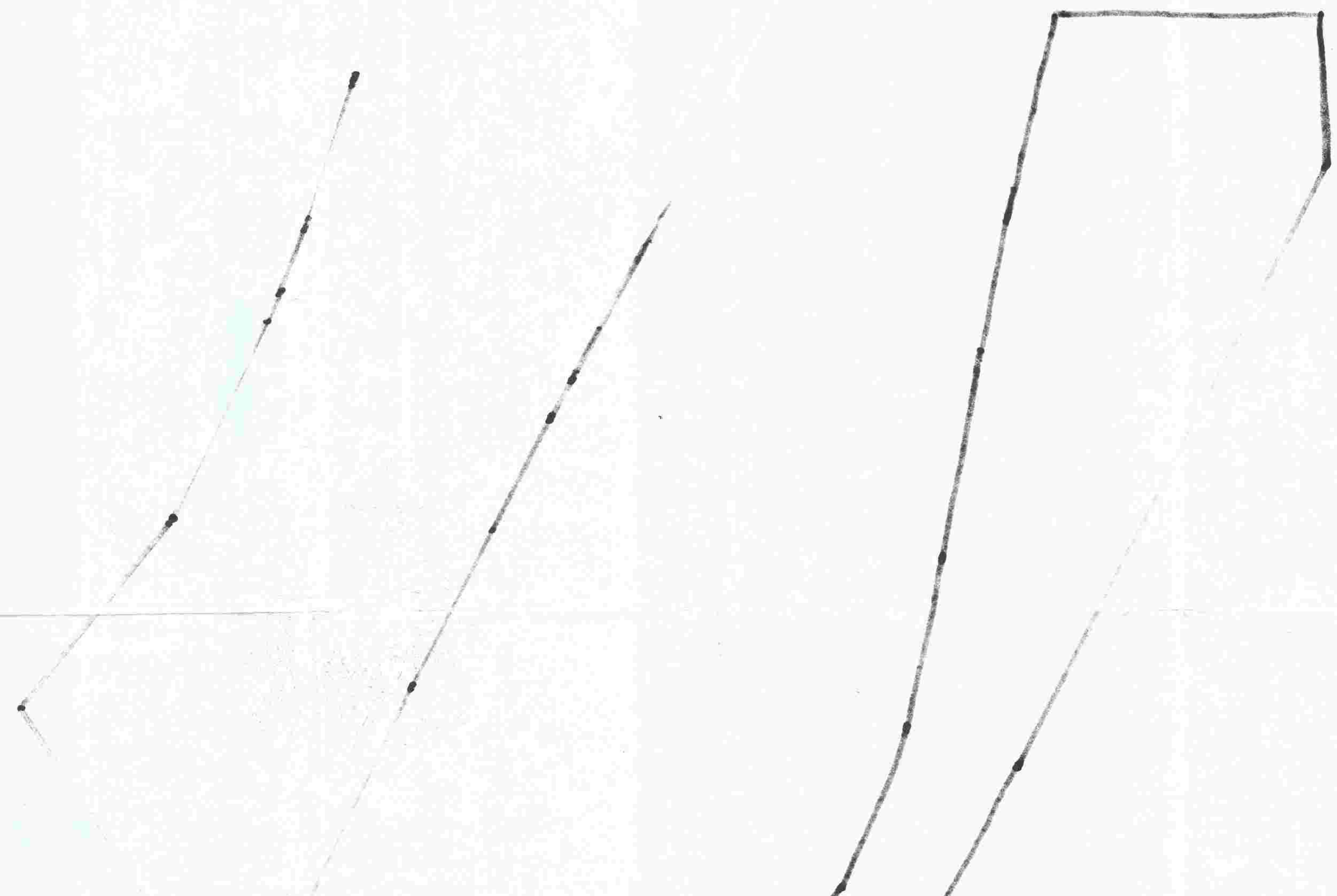
GENERAL RECOMMENDATIONS :

1. Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles.
2. Lightning protection for buildings shall be provided as per Part – "Building Services , Section 2 Electrical installations.
3. Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
4. Floor numbers and directional sign of escape route shall be displayed prominently.
5. The employees and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.
6. Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.
7. A crew of trained Fireman under the experienced Officer shall be maintained round the clock for safety of the building.
8. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of the building.
9. Close circuit T.V. shall have to be provided for the entire floor area including the basement area of the building.
10. After obtaining Fire Safety Certificate each year a certificate is to be obtained from the **Director General, West Bengal Fire & Emergency Services** certifying about the satisfactory services, performances of all Fire Safety arrangements and installation of the buildings.
11. On compliance of all the above Fire Safety recommendations, the **Director General, West Bengal Fire & Emergency Services** shall be approached for necessary inspection and testing of the installation before occupancy of the buildings. Fire Safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installation of the buildings.

N.B. : Any deviation and changes the nature of use of the building in respect of the approved plan drawings, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.

Director
West Bengal Fire & Emergency Services

Relevant parts of the Minutes of the 125th SEAC Meeting for stipulating conditions for environmental clearance of proposed expansion of Residential Building "Unimark Solitaire" by M/s. AHW Unimark Consortium LLP at 992, E.M bypass, Ward No. 58 of KMC, PS – Pragati Maidan, Borough-VII, Kolkata-700105, West Bengal.

(Dr. S.Mukherjee) Secretary, State Expert Appraisal Committee, West Bengal

(Prof. Sudarshan Neogi) Chairman, State Expert Appraisal Committee, West Bengal