

HA/SB/2023-24/WMF-1A

DATE: 18-04-2023

Er. MOHAN M
ME (Highways), MIRC.

To

Wisdom Montfort International School,
Thirumenahalli, Agrahara Badavane,
Yelahanka Post, Bangalore – 560064

Sir,

Sub: Report on the Structural Condition of the Building in Conformance to National Building Code

Ref: Letter NO: HA/NDT/WMF-Building /001, dated 13-04-2023

Please find here with the report on the structural condition of the building in conformance to Wisdom Montfort International School, Thirumenahalli, Agrahara Badavane, Yelahanka Post, Bangalore – 560064 in the State of Karnataka.

Please acknowledge the same with this report dated **18-04-2023**

Thanking you,

Yours faithfully

Mr. MOHAN M.

B.E.(Civil), M.E.(Highways), M.I.R.C., M.I.S.C.A.

Managing Director (Technical)

M/s. HENCON ASSOCIATES

Bangalore - 560 060.

conhen.2015@gmail.com

Enclosure: Pages Test Report



HA/SB/2023-24/WMF-2A

DATE: 18-04-2023

Sub: Assessment of structural condition of the building

{Project: Wisdom Montfort International School, Thirumenahalli, Agrahara Badavane, Yelahanka Post, Bangalore - 560064}

Ref.: Letter No. HA/NDT/WMF-Building /001, dated 13-04-2023

Report required for: Wisdom Montfort International School,
Thirumenahalli, Agrahara Badavane,
Yelahanka Post, Bangalore – 560064

REPORT ON THE STRUCTURAL CONDITION OF THE BUILDING IN CONFORMANCE TO NATIONAL BUILDING CODE

The client requested for our opinion as to the conformance to National Building Code for buildings as per IS 8827-1978 for approval from Karnataka Public Works Department. The Building is constructed by Tiles flooring.

Site Inspection was carried out on 18-04-2023 Methodology adopted was visual inspection for distress in building and Non-Destructive testing using Ultrasonic Pulse velocity test and Rebound Hammer test.

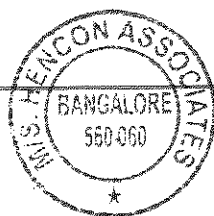
The building has not shown any signs of distress and it satisfies all the safety and serviceability requirements according to relevant Codes of practice, hence no action is needed towards retrofitting.

The findings are reported in the report as follows.

1. The building is as per the plans submitted along with this report. The structure is having a, Ground floor + 2 (Including Classroom, Office and Sports Room etc....)
2. Visible Distress Detrimental to the Safety of Buildings.

Table – 1.0 Presence and Severity Level of Structure

SL No	Type of Distress	Presence and Severity Level	Remarks
1	Cracks in RC beams	Not Present	
2	Cracks in Columns	Not Present	
3	Cracks in slabs	Not Present	
4	Cracks in masonry walls	Not Present	
5	Spalling of concrete	Not Present	
6	Sagging of beams or slabs	Not Present	
7	Tilting of columns or RC frames (out of plumb)	Not Present	
8	Corrosion in RC beam	Not Present	



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GSTIN : 29AAHFH3118H1ZF

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SL No	Type of Distress	Presence and Severity Level	Remarks
9	Buckling of Column	Not Present	
10	Corrosion in the RC Column	Not Present	
11	Settlement or Differential settlement of buildings	Not Present	

3. Results of Non-Destructive testing using Ultrasonic Pulse velocity test and Rebound Hammer test

The above investigation was under taken by ultra-sonic pulse velocity concrete tester of make PROCEQ PUNDIT LAB and PROCEQ concrete rebound hammer for the in-situ compressive strength

Table – 1.1 Velocity Criterions for Concrete Quality Grading

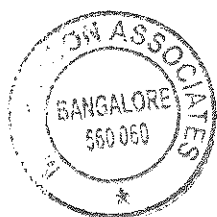
❖ As per the Indian code IS: 13311 (Part 1): 1992

SL No	Pulse Velocity By Cross Probing (Km/Sec)	Concrete Quality Grading
1	Above 4.5	Excellent
2	3.5 to 4.5	Good
3	3.0 to 3.5	Medium
4	Below 3.0	Doubtful

Table – 1.2 (a) Quality of Concrete for different values of Rebound Number

❖ As per the Indian code IS: 13311 (Part 2):1992

SL No	Avg. Rebound Number	Quality of Concrete
1	> 40	Very Good Hard Layer
2	30 to 40	Good Layer
3	20 to 30	Fair
4	< 20	Poor Concrete
5	0	Delaminated





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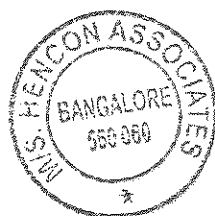
Table – 1.2 (b) Reference Strength Chart for Rebound Hammer Test

Technical reference : Based on the Lab Calibration

Rebound Number	Estimated Compressive Strength Range (N/mm ²)
22 to 26	10 to 14
26 to 30	14 to 18
30 to 34	18 to 22
34 to 38	22 to 26
38 to 42	26 to 32
42 to 46	32 to 36

Table - 1.3 Result of Ultra-Sonic Pulse Velocity & Rebound Hammer Test *

SL No	Location	Rebound Hammer Results		UPV Results	
		Avg, Rebound Number	Compressive Strength N/mm ²	Pulse Velocity (in KM/sec)	Grades
Ground Floor					
1	Classroom, Column	40	26-32	4.00	Good
2	Beam	38	26-32	4.08	Good
3	Slab	38	26-32	3.67	Good
4	Classroom, Column	40	26-32	3.81	Good
5	Beam	41	26-32	4.11	Good
6	Slab	39	26-32	3.52	Good
7	Classroom, Column	42	26-32	3.85	Good
8	Beam	40	26-32	4.02	Good
9	Slab	41	26-32	3.99	Good
First Floor					
10	Classroom, Column	39	26-32	3.71	Good
11	Beam	39	26-32	4.00	Good
12	Slab	38	26-32	3.82	Good
13	Classroom, Column	42	26-32	3.68	Good
14	Beam	41	26-32	3.62	Good
15	Slab	38	26-32	3.92	Good
Second Floor					
16	Classroom, Column	40	26-32	3.97	Good



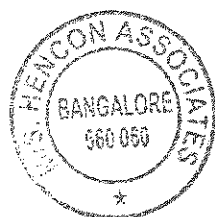
18/04/2023
 Mr. MOHAN M.
 E.E.(Civil), M.E.(Highways), M.I.R.C., M.I.S.C.A.
 Managing Director (Technical)
 M/s. HENCON ASSOCIATES
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17	Beam	42	26-32	4.22	Good
18	Slab	39	26-32	3.63	Good
19	Classroom, Column	38	26-32	3.70	Good
20	Beam	40	26-32	3.62	Good
21	Slab	39	26-32	3.55	Good

NOTE: Average Rebound number indicates the average of Five Trial

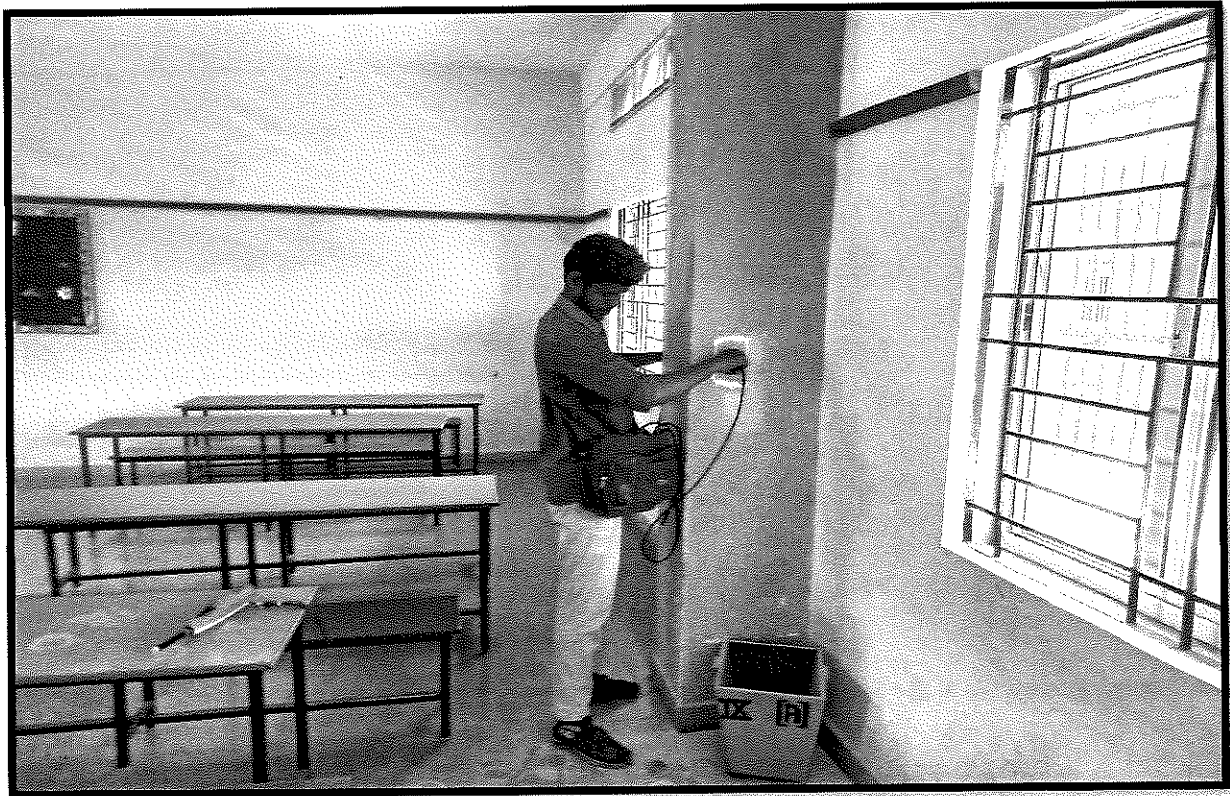
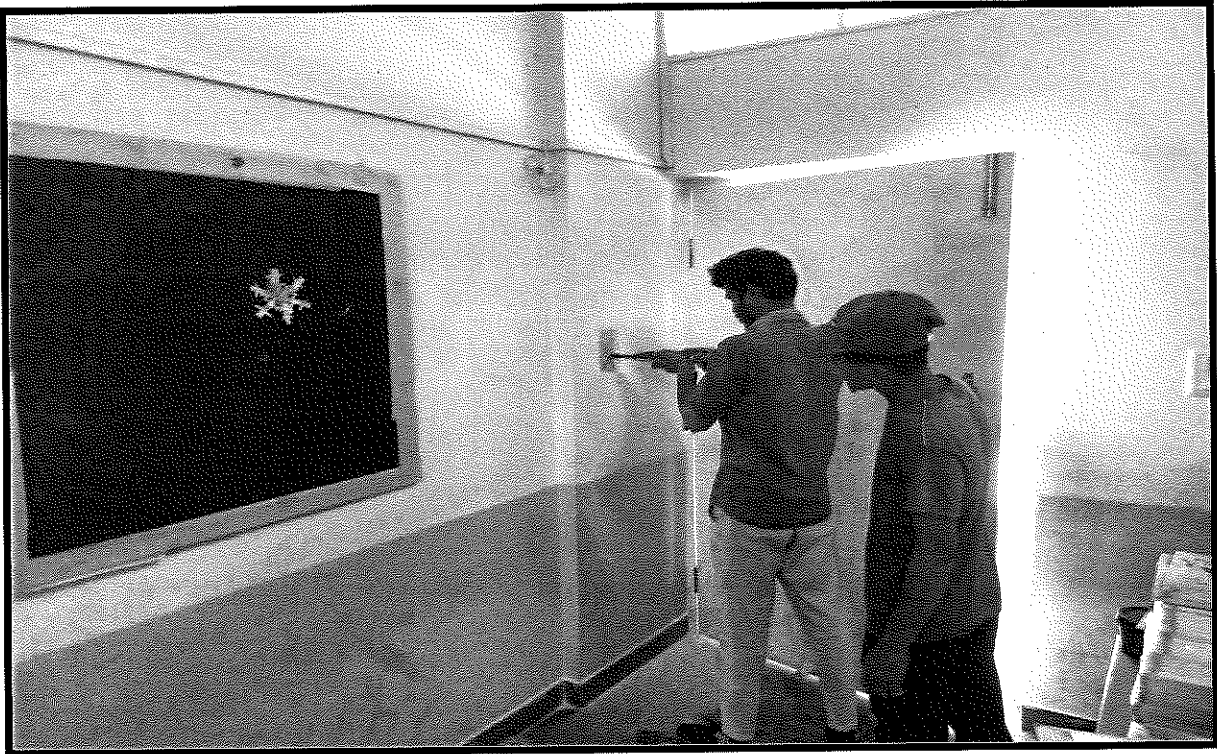
Inference:

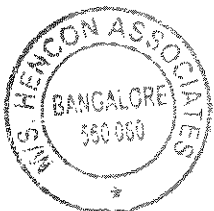
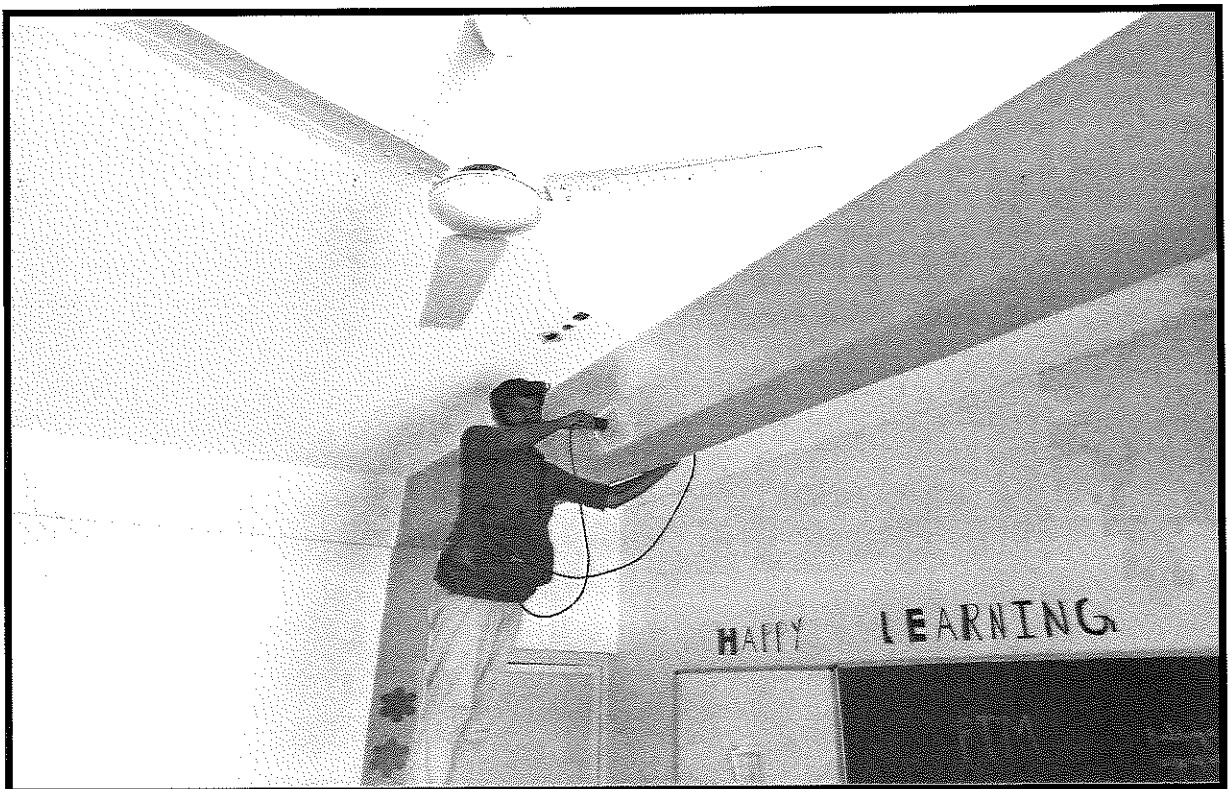
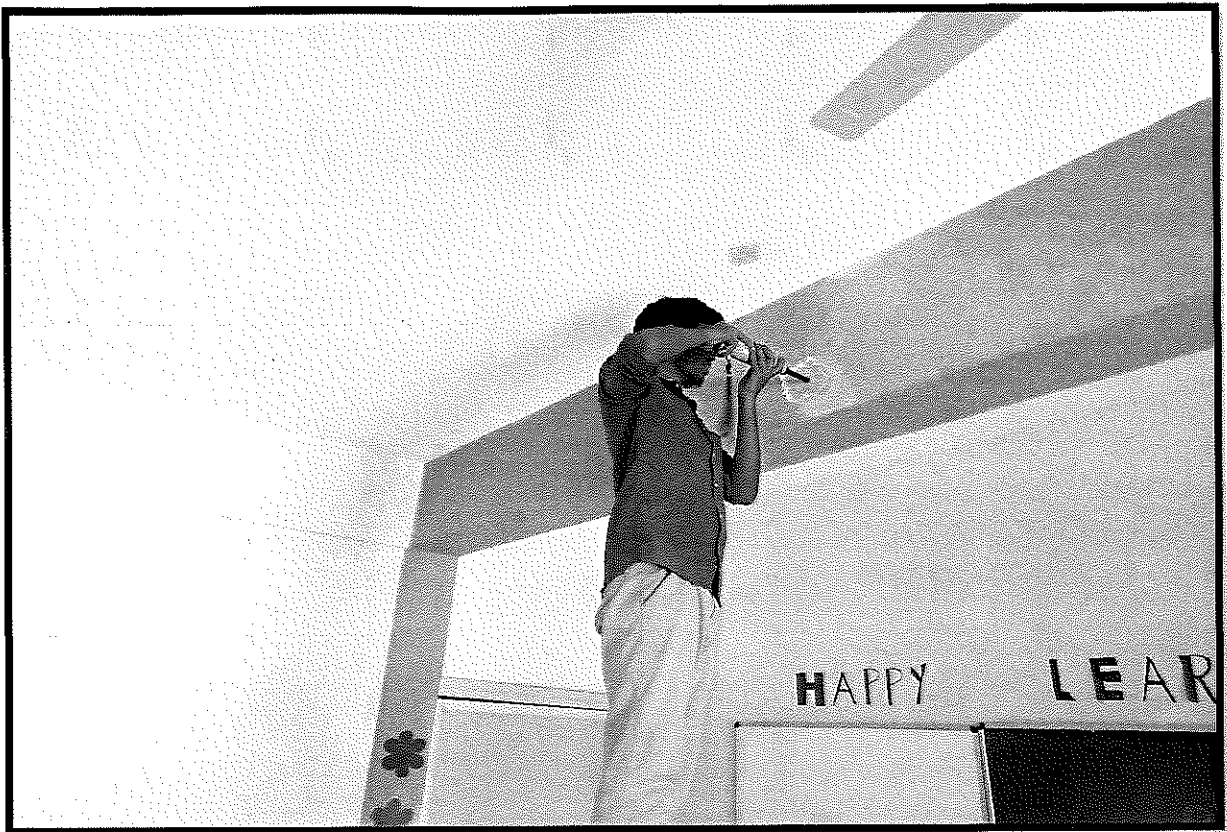
Based on the visual inspection for distresses in building and Non-Destructive testing using Ultrasonic Pulse Velocity test and Rebound Hammer test at selected Locations, it can be inferred that the building Wisdom Montfort International School, Thirumenahalli, Agrahara Badavane, Yelahanka Post, Bangalore – 560064 is structurally sound.

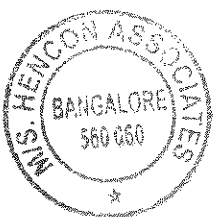
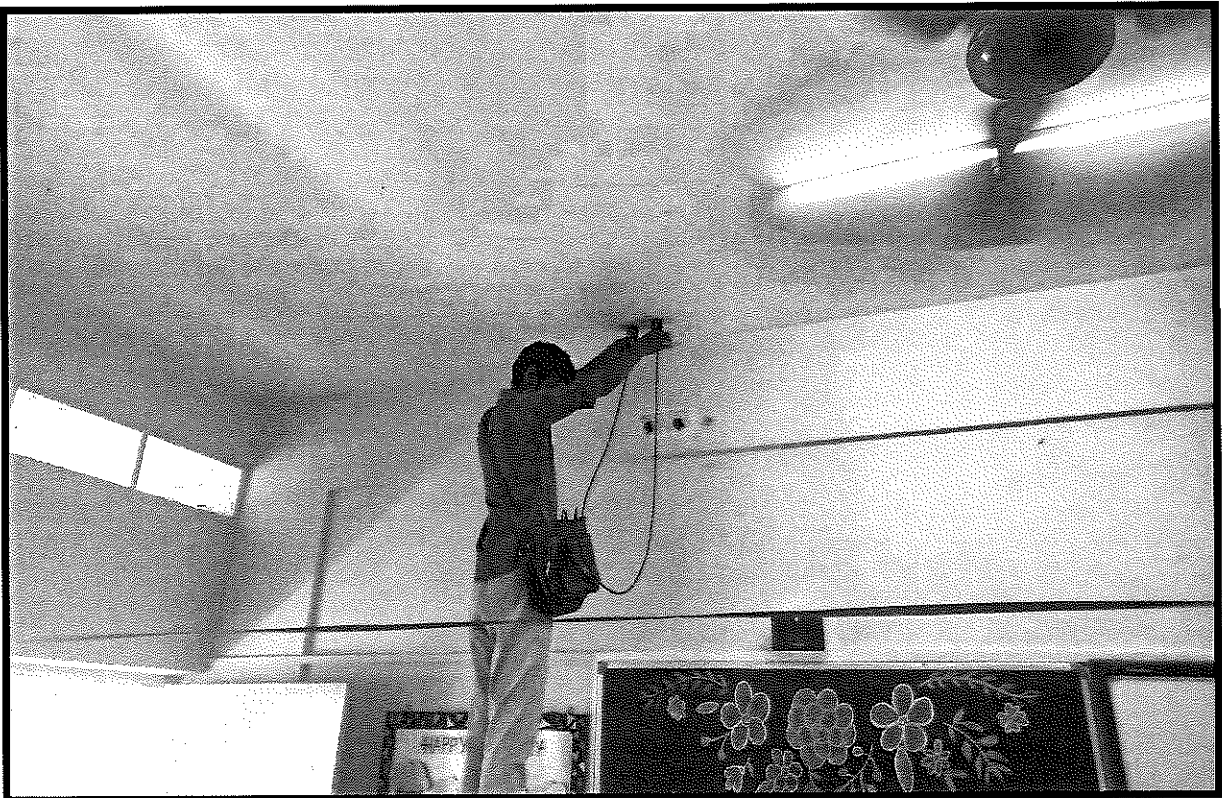
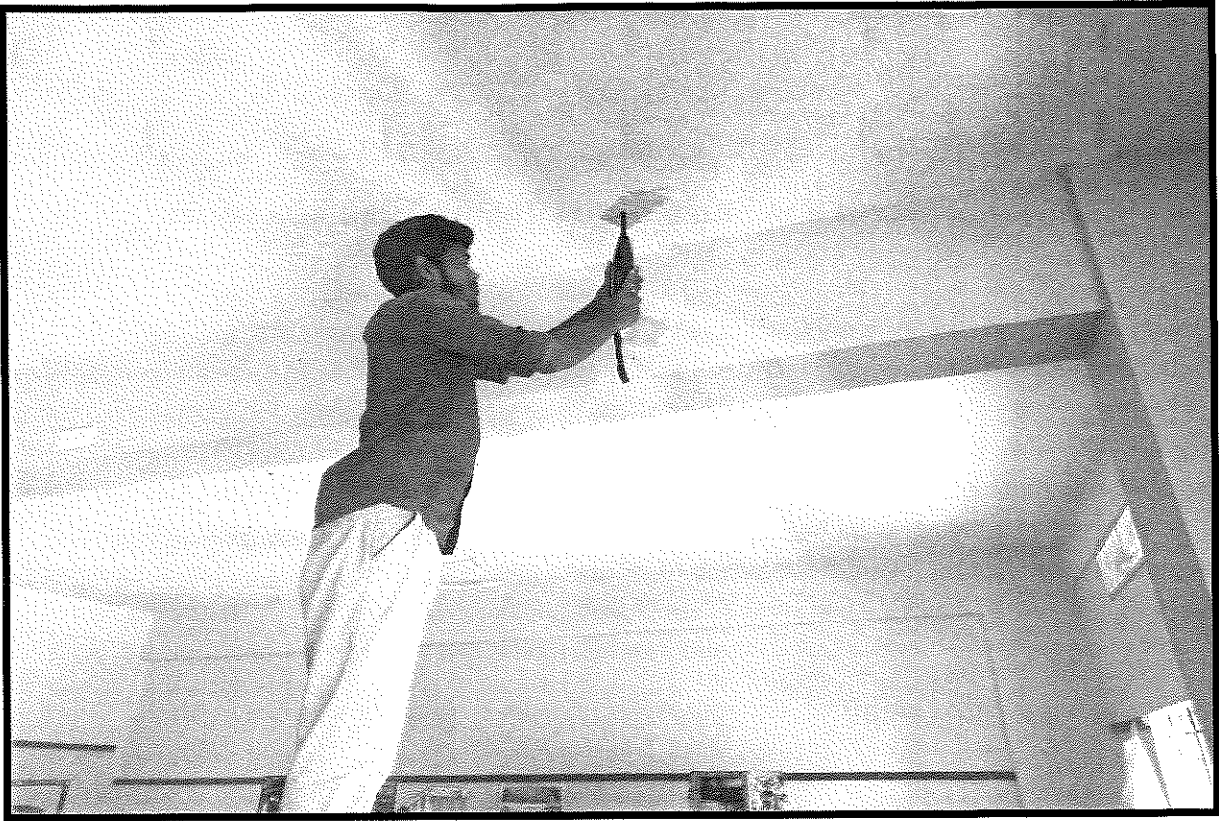


[Signature]
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 Managing Director (Technical)
M/s. HENCON ASSOCIATES
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Photos








ANNEX 1.

[Clause 13.2(0)]


FORM FOR CERTIFICATE FOR SUBSURFACE INVESTIGATION

With respect to the construction of building No **Wisdom Montfort International School, Thirumenahalli, Agrahara Badavane, Yelahanka Post, Bangalore – 560064** we certify that we have carried out subsurface investigation at site and have performed various tests required to determine engineering properties of soil substrata and ground water based on which we have given recommendations about the type of foundation, soil bearing capacity and the depth at which the foundations shall be placed, considering the structural system and loads supplied by the structural engineer to enable the engineer/structural engineer to design the foundations and other structures below ground, as stipulated in National Building Code of India and its Part 6 "Structural Design, Section 2 Soils and Foundations and other relevant Codes.

I am enclosing a copy of the report of subsurface investigation carried out as above and submitted to the Structural Engineer.


Signature of owner with date
Name (in block letters): **DR. VITAY SEBASTIAN**
Address: **WISDOM MONTFORT INTL SCHOOL**
AGRAHARA LAYOUT, YELAHANKA
BANGALORE - 560064

PRINCIPAL
WISDOM MONTFORT
INTERNATIONAL SCHOOL
Thirumenahalli, Bangalore - 560 064

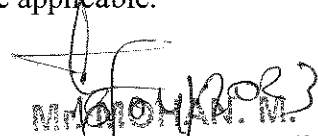

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B.E.(Civil), M.E.(Highways), M.I.R.C., M.I.S.C.A.
Managing Director (Registered)
Geotechnical Engineering Associates
M/S. HENSON ASSOCIATES
Registration No. with date
Bangalore - 560064
conhen.2015@gmail.com

ANNEX 2

[Clause 13.2(f)]

**FORM FOR CERTIFICATE FOR COMPLETED STRUCTURAL DESIGN WORK AS
PER STRUCTURAL SAFETY REQUIREMENTS**

With respect to the construction of building No **Wisdom Montfort International School, Thirumenahalli, Agrahara Badavane, Yelahanka Post, Bangalore – 560064** we certify that the structural design, structural drawings and details of the building which has been tested by us satisfy the structural safety requirements at the tested locations for all situations including natural disasters, as applicable, as stipulated in National Building Code of India and its Part 6 "Structural Design and other relevant Codes considering the report of subsurface investigation, where applicable.


M/s. Srinivas Associates
B.E.(Civil), M.E.(Highways), M.I.R.C., M.I.S.C.A.
Managing Director (Registered)
M/s. Srinivas Associates
Structural Engineer with
Registration No. 560064
conhen.2015@gmail.com

JMJ



BUILDERS

11/11/2016 10:00 AM
11/11/2016 10:00 AM

ANNEX 3

[Clause 13.2(f)]

FORM FOR CERTIFICATE FOR COMPLETED WORK BY BUILDERS /CONSTRUCTOR

With respect to the construction of building Wisdom Montfort International School, Agrahara Badavane, Thirumenahalli, Yelahanka, Bangalore-560 064 we certify.

- That the building has been constructed by us according to the sanctioned plans, structural drawings details issued to the site by the Engineer/Structural Engineer. And
- That the work has been completed with high level of workmanship observing due diligence and all the materials have been used strictly in accordance with the general and detailed specifications.

Signature of owner with date

Name (in block letters): BRO. VIJAY SEBASTIAN

Address: WISDOM MONTFORT INTL SCHOOL
AGRAHARA LAYOUT, YELAHANKA, BANGALORE-64

PRINCIPAL
WISDOM MONTFORT
INTERNATIONAL SCHOOL
Thirumenahalli, Bangalore - 560 064

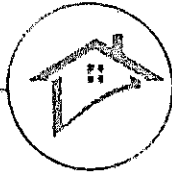
Signature of the Registered

Builder/constructor

For JMJBUILDERS

Partner/Authorized Signatory

JMJBUILDERS



Mr. S. John Richard B.L.,
Managing Director

BUILDERS

ANNEX 4

[Clause 13.2(f)]

FORM FOR CERTIFICATE FOR SUPERVISION OF WORK

With respect to the construction of building No Wisdom Montfort International School, Agrahara Badavane Thirumenahalli, Yelahanka, Bangalore-560 064 we certify.

- That the building has been constructed by us according to the sanctioned plans, structural details and drawings details issued to the site by the Engineer/Structural Engineer (one site of drawing as executed enclosed): And
- That the construction has been under our supervision and record of supervision has been maintained.

Any subsequent changes from the completion shall be the responsibility of the owner.

Signature of owner with date

Name (in block letters): BRO. VIJAY SEBASTIAN

Address: WISDOM MONTFORT INTL SCHOOL

AGRAHARA LAYOUT, YELAHANKA, BANGALORE-64

WISDOM MONTFORT
INTERNATIONAL SCHOOL
Thirumenahalli, Bangalore - 560 064

Signature of the

Engineer/Supervision

For JMJBUILDERS

Partner / Authorised Signatory