APPNENDIX - XI

BUILDING SAFETY CERTIFICATE

No. Dated:

Certified that the existing building **Shri Nand Lal Malik Memorial Education Society** (name of the building or premises) at **Block-C7, Sector-7, Rohini, Delhi-110085** (address) comprised of **Basement(Upper Ground Floor** basement(s) and **1-Ground Floor, 2-Upper Floors** (upper floors) owned/occupied by **Manvi Public School** (name of the Institution) have complied with the Building safety requirements in accordance with National Building code Rules, and verified bythe officers concerned of **MCD** on _____ (date of inspection) in the presence of **K.C. Malik (Secretary), 51 Sukhdhaam Aptt, Sec-9, Rohini, Delhi-110085** (name and addresses of the Manager/Secretary or his representative) and that the building/premises is fit for occupancy upto classes **X** (X/ XII) with effect from _____ for a period of _____ years in accordance with rule and subject to compliance of the specific conditions as appended.-NIL

Remarks: All the fire equipments are working in good condition.

Issued on ..... at..... by

* Strike out whichever is not applicable.

Signature with Seal : _____

Name : Mrs. Mansi Malik Narula

Designation : H.O.S

MANVI PUBLIC SCHOOL
(Recognized)
(Affiliation No.-1413214)
C-7, Sector-7, Rohini,
Delhi-110085

Enclosure : **1. Structural Audit Report by Regd.MCD/ Engineer Structure- 23.04.2023.**

2.Regularisation Building Plan by MCD issued on19.01.2009

OFFICE OF THE DEPUTY DIRECTOR OF EDUCATION
DISTT. NORTH WEST (B)
FU BLK.: PITAMPURA:
DELHI.
*****

No. 2-XIII/2002/397 Dated : 11.4.2002

It is to certify that Manvi Public School, Block C, Sector VII, Rohini, Delhi-110 085 under the management of Shri Nand Lal Malik Memorial Education Society (Regd), 320, Bharat Nagar, Double Storey, Delhi was recognised vide letter No.DDE/Zone-XIII/97/708 dated 7.3.97. The school management has also fulfilled all the conditions of recognition.

15/4

(DR. R.K.SHARMA)
DY. DIRECTOR OF EDUCATION
DISTT. NORTH WEST (B)

D.D.E.(Estate)

MANVI PUBLIC SCHOOL
(Recognized)
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C-7, Sector-7, Rohini,
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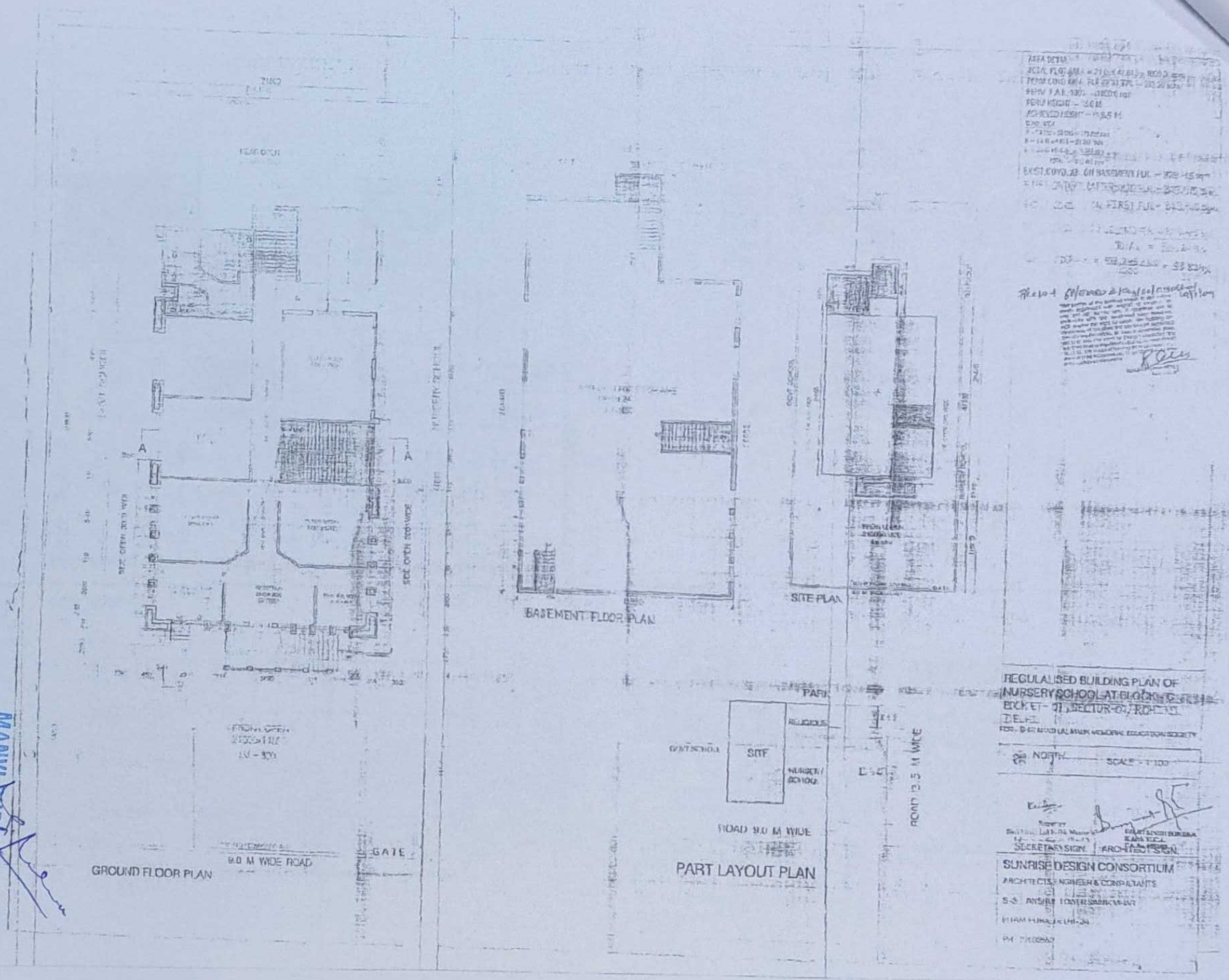

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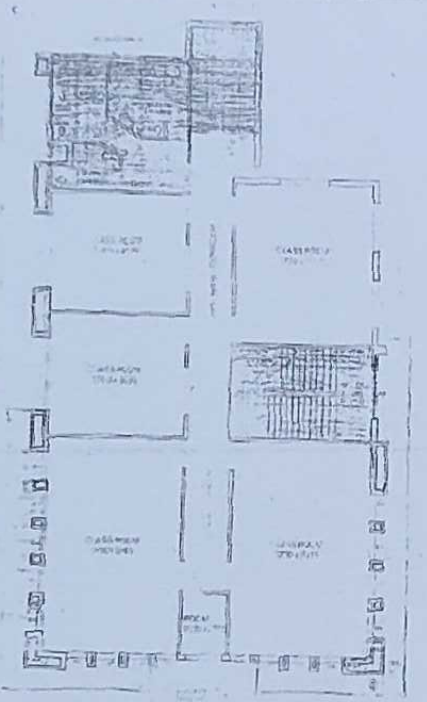
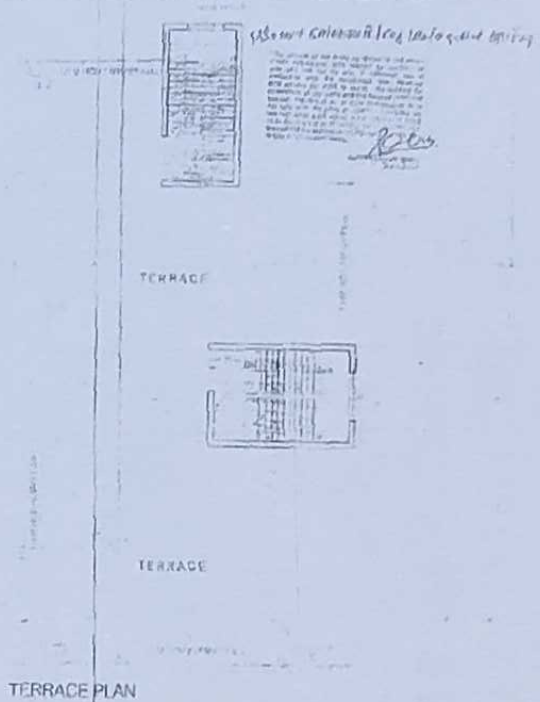
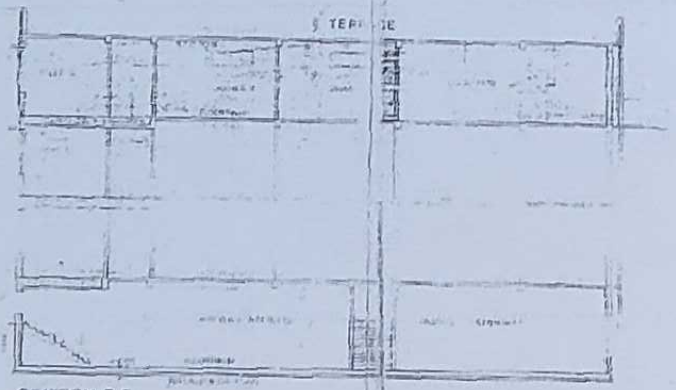


FIRST FLOOR PLAN

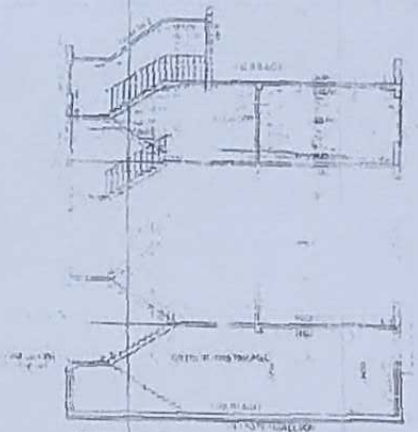
SECOND FLOOR PLAN



TERRACE PLAN



SECTION B-B



SECTION A-A

REGULARISED BUILDING PLAN OF NURSERY SCHOOL AT BLOCK - C

SUNRISE DESIGN CONSORTIUM

MANVI PUBLIC SCHOOL
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(Affiliation No.-1413214)
C-7, Sector-7, Rohini,
Delhi-110085

HEALTH AUDIT REPORT
OF
SHIR NANDLAL MALIK MEMORIAL EDUCATION SOCIETY, SECTOR - 07 POCKET-07 ROHINI NEW DELHI

AUDIT REPORT

STRUCTURAL CONSULTANTS: -

B. K. SINGH

REGD. M.C.D. STRUCTURE ENGINEER

SE/0046

Technical Report on
Non-Destructive Tests of Civil Structures

REPORT PREPARED FOR

B. K. Singh Consultants
New Delhi
APRIL 23, 2023
Submitted By

B. K. SINGH
H-5/316, Aggarwal Tower, M.S.P., Delhi-34
M.: 125932-0
M.TECH (Structure)

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Delhi-110085

1.0 INTRODUCTION

This report refers to the Non Destructive Testing of Civil Structures at shir Nandlal Malik Memorial Education Society sector-07,pocket-07,Rohini New Delhi by carrying outvarious non-destructive and in-situ test techniques as per the contract between B. K. Singh Consultants diagnosis of the causes of distress observed in the various structures.

METHODOLOGY

Carried out Non-Destructive, in-situ tests as follows:

1- Ultrasonic Pulse Velocity Test [IS516 (Part5)]

2- Cut and Pull-Out Test [ASTM C 900]

3- Cover meter Test (BS1881:Part204)

4- Half-cell Potential Test (ASTM

C876)5- Chloride Test

6- Carbonation Test (BS EN 14630)

The test principle and test methodology adopted for each of the above tests is described below

Ultrasonic Pulse Velocity Test [IS 516 (Part-5)]

UPV test measures the speed of sound waves in concrete. UPV test provides very useful information regarding presence of cracks, honey combing and therefore homogeneity of concrete.

Principle

Ultra-sonic Pulse Velocity (UPV) test is a wave propagation test and consists of transmitting ultrasonic pulses through concrete and measuring the transit time. The path length (usually the thickness of concrete member) divided by the transit time gives the velocity which is usually expressed in KM/sec and can be correlated to concrete homogeneity and quality. UPV values can be interpreted to assess the condition of concrete with regards to its homogeneity, integrity, presence of voids, and relative quality of concrete within or between the members. In this investigation, UPV values have been interpreted to make a qualitative assessment with regard to homogeneity and integrity of concrete.

Concrete quality can be appraised as `excellent', `good' or `doubtful'. The meanings of the term `excellent', `good' and `doubtful' are based on ultra sonic pulse velocity measured at site and are as per the nomenclature of IS 516 (part-5)

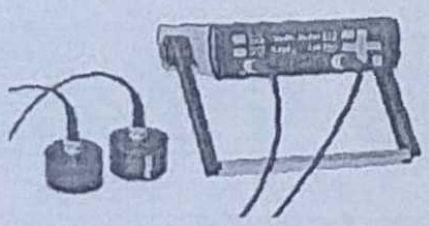
The relevant table is reproduced here in Table- 1 for the purpose of reference.

Table 1: Velocity Criterion for Concrete Quality Grading, [Ref: IS 516 (Part-5)]

Sl.No.	USPV by Cross Probing (km/sec)	Concrete Quality Grading
1	Above 4.5	Excellent
2	3.5 — 4.5	Good
3	Below 3.5	Doubtful

UPV Test procedure:

The ultra-sonic pulse velocity was measured by placing the high frequency (54 kHz) transducers on pair of opposite points in beams, slabs and columns. The minimum recommended thickness of the section for above frequency is 100 mm, the section encountered in this investigation for direct measurement has been greater than 100 mm. Steel reinforcement present in the concrete tends to increase the observed ultra-sonic pulse velocity and it is necessary to apply a correction for the same, if present directly in the path of the ultra-sonic waves. While testing thus, the locations of the transducer points were ensured to be away from the reinforcements and as such no reinforcement was longitudinally or transversely placed directly on the transducer path. The direct path length was also measured suitably at every location, using measuring tape. The distance divided by the time in appropriate unit gives the ultra-sonic pulse velocity at that location in direct mode.



Pic 1: An ultrasonic test being conducted

<u>Cut and Pull out (CAPO) test:</u>

Principle:

The surface at the test location is ground flat and a 18.4 mm hole is cored perpendicular to the surface. A recess (slot) is routed in the hole to a diameter of 25 mm. A split ring is expanded in the recess and pulled out using a pull machine reacting against 55 mm diameter counter pressure ring. The concrete in the strut between the expanded ring and the counter pressure ring is in compression. Hence, the ultimate pullout force F is related directly to compressive strength. The test is performed until the conic frustum between the expanded ring and the inner diameter of the counter pressure is dislodged. Thus, thereis minor surface damage, which should be repaired for aesthetic reasons or to avoid potential durability problems.

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Conclusion:

The building has been analysed and designed considering all latest parameters of BIS codes. Material strengths have also been considered as per the NDT test reports. it is satisfies as per the codal provision. for it is considered to be safe.

(Mr. B. K. Singh)
REGD. M.C.D. Structure Engineer- SE/0046

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