DEPARTMENT OF CIVIL ENGINEERING
COLLEGE OF ENGINEERING (A) - ANDHRA UNIVERSITY

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Visakhapatnam
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To

The Principal
KV NAD
Visakhapatnam

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Technical report on status of the Kendriya Vidyalaya School, NAD Visakhapatnam

Date of Inspection:-04-06-2021

Introduction:-

The framed structure is built more than thirty years ago. It is ground plus 2 floors building. The plan of the building is of U shape. Most of the rooms in all the floors are used for class room purpose. Few rooms are meant for laboratories and library. The school building was under regular maintenance and required recurring repairs of late. The Principal of the School has requested Andhra University through official letter to take up the study of the buildings for their longevity and stability as little children are studying. The total building needed physical inspection for identifying the damage locations and extent of damage.

Visual Observation & Study:-

All the three sides of the school building taken up for this study are constructed more than thirty years ago. The study of the school building was taken up with the following technical aspects in view.

General condition/deterioration of the building from visual observation with due emphasis on the condition of columns and beams. Slabs were also checked for the leakage and possible spalling. Under this, physical damage locations and leakage areas for structural and non-structural members were recorded.

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Visual inspection of all columns and beams from inside and outside of the building was done. Individual strength study for concrete members was not done as majority of the members are in good condition.

Expansion joint has to be repaired at the terrace level to avoid leakage in all the floors. Dias front facia urgent removal required. Drains on dias slab and terrace slab require regular cleaning.

From the observations, it is found that at several locations mainly in columns and at few places in slab, spalling problem has developed and reinforcement is exposed. The areas where the reinforcement bars are exposed need to be repaired immediately to prevent further damage by corrosion.

Further, the mesh work is damaged near verandah portion in above floors and the damaged portions needs to be removed as the item is beyond repair due to corrosion. Either it needs replacement or removal. Sunshades which are in dilapidated condition near staircase have to be removed.

General Observations and Conclusions:-

From the visual study of the total structure(G+2), it appears that some pockets have developed distress due to spalling and leakage. Due to proximity to coast and deficiencies of workmanship, corrosion and seepage, problems normally develop with age. Near the toilets on the outside , the leakage has to be arrested immediately. Corrosion induced damage extends very fast, and needs to be repaired immediately to prevent further structural damage to the buildings. Mere cosmetic repairs would not suffice in making the school building safe for occupation. Urgent repairs at the damaged locations with chemicals would enhance the life of the structure. Dias facia mesh work has to be dismantled immediately. On the whole, the school building is satisfactory at present from strength and integrity point and repairs recommended urgently. The building may require structural audit after two or three years again.

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