

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Tms Fashions Ltd
Address of the Factory	: 25/2, Shah Ali Bagh, Solimuddin Market, Mirpur, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 6 th December 2013
Fire & Electrical Assessment Conducted by	: BUET
Date of Fire & Electrical Inspection	: 20 th December 2013

BASIC INFORMATION:

The factory building has RC beam column frame structural system. The following information was noted:

i.	Building Usage Type	: Garment factory building
ii.	Structural System	: RC Frame Building
iii.	Floor System	: Edge supported RC slab (no info on slab thickness was available)
iv.	Floor Area	: Approximately 1025sq. m per floor with typical grid of 6.35m by 4.83m
v.	No. of Stories	: Eight story and partly 8 th floor
vi.	Construction Year	: Not available (appears to be around mid 90's)
vii.	Foundation Type	: Isolated footing (as per drawing)
viii.	Design Drawings	: Available (Part)
ix.	Soil Investigation Report	: Available
x.	Construction Materials	: Reinforced Concrete
xi.	Generator	: At ground floor

LOAD PLAN:

The factory owner has been instructed to prepare and submit a load plan for vetting. Once it is submitted by the factory owner, it will be duly vetted.

ACTIONS AND TIMESCALES:

- Due to concerns of high stress in columns, core testing should be conducted within 6 months from issue date of this report.
- A minimum of 4 number 4inch diameter cores (3inch if taken from column) are to be taken in column locations and tested with results used in the DEA report.
- No authentic foundation detail is available to evaluate the adequacy of the foundation system and therefore, the Consultants strongly recommend checking adequacy of the foundation in six months from issue date of this report.
- The building has extra floors without approval and should be removed as soon as possible.
- Other than ground floor all areas of storage loading is to be limited to 40psf (2kN/m²).
- No modification of the structural configuration or further construction is to be carried out without detail analysis.

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate)	:
Mid Term (6-weeks)	:

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Long Term (6-months) :

The recommendations for **Fire & Electrical Safety** corrective action are:

(A): Recommendations for Fire Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity</i></p>	<p>Remove all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from generator room.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide proper directional sign.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, lift lobby, offices, work areas. Also design to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per guidelines.</p> <p>Remove all collapsible gates/roller shutters. Produce design drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Produce design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system.</p> <p>Install command station as per guidelines.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, lift lobby, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per approved design.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</p> <p>Install standard standpipe, hose and fire pump system.</p>

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

	<p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self closing fire rated door as per guidelines.</p>
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(B): Recommendations for Electrical Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	N/A
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity</i></p>	<p>Provide instructions for first aid and artificial respiration from exposure to electrical shock.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body & door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide separate service ducts for electrical cables.</p> <p>Provide new Emergency Lighting system.</p> <p>Provide appropriate Lightning Protection System as per guidelines.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	N/A