

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Aditi Apparels Limited
Address of the Factory	: Sofurakhatun Super Market, 1 No Sujat Nagar, Pallabi, Mirpur 12, Dhaka 1216
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 10 <sup>th</sup> October 2014

### **BASIC INFORMATION:**

The present garment factory is a commercial building with beam-column frame system. The following information were noted:

- i. Building Usage Type : Primarily as Garments Factory
- ii. Structural System : RC beam column frame structure
- iii. Floor System : Edge supported RC solid floor slab system on RC beam.
- iv. Floor Area : Approx. 4,000 sft/floor
- v. No. of Stories : 11 with one basement
- vi. Construction Year : 1998-2001
- vii. Foundation Type : Mat
- viii. Design Drawings : not available
- ix. Soil Investigation Report : Available (By O. S. Foundation and Consulting Engineers Ltd, 18/2, Pallabi, Mirpur-12, Dhaka-1216)
- x. Construction Materials : Reinforced Concrete with brick chips (as reported) and steel plain rebars 60 Grade (assumed as per construction year).
- xi. Generator : One Generator is located in the Ground Floor of the building

### **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) : Intensity of load does not exceed 40 psf (2.0 kN/m<sup>2</sup>) in any floor.
- Mid Term (6-weeks) : A Detail Engineering Assessment (DEA) has to be completed.
- Long Term (6-months) : Necessary remediation's after completion of DEA.

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

Name of the Factory	: Aditi Apparels Limited
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 23 <sup>rd</sup> September 2014

#### ***(A): Recommendations for Fire Safety corrective actions:***

Fire Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A

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<p>Short Term <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 obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from transformer, substation, boiler and generator room, if exists.</p> <p>Maintain minimum effective width of corridors, passageways and aisles.</p> <p>Confirm adequate numbers of fire drills.</p> <p>Make sure that portable extinguishers are monitored and maintained at regular interval as per the Guidelines.</p> <p>Provide proper directional signs and exit signs in Bangla and English as per the Guidelines.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Remove temporary structures from roof top.</p> <p>Prepare drawings to ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, lift lobby, offices, and work areas. Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Provide drawing and plans to ensure exit access doors are as per guide lines. Show methods to demonstrate how stairways are to satisfy the occupancy load according to the Guideline.</p> <p>Prepare plans to install lift with lift lobby and appropriate fire rated separation or to close the unused lift core.</p> <p>Provide design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system.</p> <p>Establish command station as per the Guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, lift lobby, offices, and work areas.</p> <p>Ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Ensure exit access doors are as per guide lines.</p> <p>Install lift with lift lobby and appropriate fire rated separation or to close the unused lift core.</p> <p>Install standard standpipe, hose and fire pump system.</p> <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:

Electrical Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A
Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i>	<p>Provide instructions for first aid and artificial respiration from exposure to electrical shock.</p> <p>Provide cable trench with cover and rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body &amp; door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p> <p>Remove burnt/broken/loose MCB/MCCB box/socket.</p>
Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	<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>
Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i>	N/A