

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

Name of the Factory	: Immaculate (pvt) Ltd.
Address of the Factory	: Plot C-35, Purobi Super Market, Section 7, Pallabi, Mirpur, Dhaka-1216
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 24 <sup>th</sup> September 2014

### **BASIC INFORMATION:**

The factory building is a six storied RC frame commercial building. Initially, the plan of the building was approved by RAJUK in 1993, later revised drawing was approved in 1998. The following information was noted:

- i. Building Usage Type : Mixed (Garments factory, Shop)
- ii. Structural System : RC Frame Building
- iii. Floor System : RC beam supported slab
- iv. Floor Area : Approximately 9,900 sft per floor (Largest grid is 14.0 ft×14.5 ft).
- v. No. of Stories : six storied
- vi. Construction Year : 1986-1988
- vii. Foundation Type : Isolated column footing (1.98 m × 1.82 m for all columns as per drawing)
- viii. Design Drawings : No proper structural & architectural drawing is available
- ix. Soil Boring Report : not available
- x. Construction Materials : Reinforced Concrete, Coarse Aggregate is brick chips
- xi. Generator : outside 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) : The factory owner has been instructed to prepare and submit a load plan for vetting. PVC water tanks on roof must be distributed over the whole area of roof to prevent excessive loading in some areas. Waste materials must be removed from roof.

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	: Immaculate Garments Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 21 <sup>st</sup> December 2014

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

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

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<p>Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</p>	<p>Remove obstructions from all escape routes, aisles and passageways. Maintain minimum effective width of corridors, passageways and aisles. Ensure adequate numbers of fire drills. Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p>
<p>Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)</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, assembly areas, offices, and work areas as per the Guidelines. Prepare plans to ensure all exit access doors are side-swinging type and open to the direction of traffic flow. Produce 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 doors. Also show methods to ensure proper separation of high risk areas (e.g., boiler rooms) as per the Guidelines. Provide design to install proper detection and alarm system</p>
<p>Long Term (The remedial works indicated must be carried out within a period of 6 months)</p>	<p>Ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, assembly areas, offices, and work areas. Ensure all exit access doors are side-swinging type and open to the direction of traffic flow. Ensure proper separation of high risk areas (e.g., boiler rooms) as per the Guidelines. Install proper detection and alarm system. Provide fire rated enclosure, install self-closing fire rated door as per guidelines.</p>

### (B): Recommendations for Electrical Safety corrective actions:

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