

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Alps Apparels Ltd.
Address of the Factory	: "Eastern Housing Ltd." Plot # B/11, Block # B, Pallabi Extension, Mirpur, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 5 th November 2014

BASIC INFORMATION:

The present garment factory is a commercial building with beam-column frame system. The building is constructed on individual footings of different sizes as found in the drawings. 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. 2266.8 sq. ft per floor (as per structural drawings).
v. No. of Stories	: Six (designed and approved as six storied residential building).
vi. Construction Year	: Phase 1 (Ground to 4 th Floor): 1999-2000; Phase 2 (5 th to 6 th Floor): 2000-2002
vii. Foundation Type	: Individual footing of different sizes (7'×7' for central columns, 8'×8' also 6'×6' for edge columns, 5'×5' for corner columns as per structural drawing).
viii. Design Drawings	: Approval drawing available (Approval from RAJUK on 25 May 1999; Designed by: Arch. Gazi Tariq Mahmood, M-027).
ix. Soil Investigation Report	: Available (By Parash Engineering & Consultants, Suzat Plaza, 2 No. Suzat Nagar, Mirpur-12, Dhaka-1216).
x. Construction Materials	: Reinforced Concrete with brick chips (as reported) and steel plain rebar 40 Grade (assumed as per construction year).
xi. Generator	: No Generator is located in 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)	: None
Mid Term (6-weeks)	: None
Long Term (6-months)	: 4 nos. 4in. cores (3 in. when taken from column) have to be collected and tested. Shrinkage cracks in the 3 rd floor should be repaired. Necessary remedial measures to be taken for dampness and proper painting should be done.

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

Name of the Factory	: Alps Apparels Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 20 th December 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 generator room, if exists.</p> <p>Confirm adequate numbers of fire drills.</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, offices, and work areas as per the Guidelines.</p> <p>Prepare plans to ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p> <p>Produce drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into continuous fire-rated enclosures equipped with fire-rated doors.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler rooms) as per the Guidelines.</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, offices, and work areas.</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>

(B): Recommendations for Electrical Safety corrective actions:

Electrical Safety Issues	
<p>Immediate <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 <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>Provide 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 & door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p>

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Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide separate service shaft for electrical cables. Provide new Emergency Lighting system. Provide appropriate Lightning Protection System as per guidelines.
Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i>	N/A