

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Astro Knitwear Ltd.
Address of the Factory	: American Plaza, Jorun, Konabari, Gazipur
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 1 st November 2014

BASIC INFORMATION:

The present garment factory building is 5 (five)-storied Reinforced Concrete (RC) beam-column frame building with a some portion of extra floor with tin-shed roofing system on the roof surface. The following information were noted:

i.	Building Usage Type	: Garment factory building
ii.	Structural System	: RC beam-column framing system. Beams are spanning longitudinal direction only on the 1st and 2nd floors.
iii.	Floor Area	: Approximately 5,500 sft/floor
iv.	No. of Stories	: 5-storied
v.	Construction Year	: 2004-06, 2007, 2009-10.
vi.	Foundation Type	: Individual footings of different sizes (typically 9' x 9' for interior columns, 8' x 8' for exterior columns, and 6.5' x 6.5' for corner columns as per drawings)
vii.	Design Drawings	: Partially available
viii.	Soil Investigation Report	: Available (S. S. Boring and Engineers, Block-4, Section-10, Mirpur, Dhaka, January 2004)
ix.	Construction Materials	: Reinforced concrete with brick chips and steel deformed bar 40 Grade (No test report on construction materials is available)
x.	Generator	: 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)	: The factory owner has been instructed to prepare and submit the load plan for all floors.
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	: Astro Knitwear Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 19 th November 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

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

<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>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 easily accessible, 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, assembly areas, 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>Show methods to demonstrate how exit doors are to satisfy the occupancy load according to the Guideline</p> <p>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.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g., generator and boiler rooms) as per the Guidelines.</p> <p>Provide design to install proper detection and alarm system.</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, assembly areas, offices, and work areas.</p> <p>Ensure proper separation of high risk areas (e.g., generator and boiler rooms) as per the Guidelines.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install fire rated door as per guidelines.</p>

(B): Recommendations for Electrical Safety corrective actions:

<p style="text-align: center;">Electrical Safety Issues</p>	
<p>Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p style="text-align: center;">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>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel</p>

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide new Emergency Lighting system. Provide appropriate Lightening 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