

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

|                                    |  |
|------------------------------------|--|
| Name of the Factory                | : Auto Tex Fabrics Ltd.  |
| Address of the Factory             | : “Nurul Shopping Complex” 5 Sujat Nagar (7 <sup>th</sup> & 8 <sup>th</sup> floor), Section-12, Pallabi, Mirpur, Dhaka |
| Present Status of the Factory      | : Under Operation  |
| Structural Assessment Conducted by | : BUET   |
| Date of Structural Inspection      | : 29 <sup>th</sup> September 2014  |

### **BASIC INFORMATION:**

The factory building is 9 storied (plus one basement) RC beam column frame structure named Nurul Shopping Complex at 5 Sujat Nagar, Pallabi, Mirpur-12, Dhaka-1216. The following information was noted:

|       |                           |   |
|-------|---------------------------|---|
| i.    | Building Usage Type       | : Garment factory building, shops at ground floor level |
| ii.   | Structural System         | : RC Frame Building                                     |
| iii.  | Floor System              | : Edge supported RCC slabs, thickness= 5” (assumed)     |
| iv.   | Floor Area                | : Approximately 790 sq. m (3850 sft) per floor          |
| v.    | No. of Stories            | : 9-Stories   |
| vi.   | Construction Year         | : Approximately 1995                                    |
| vii.  | Foundation Type           | : Isolated individual footing (as reported)             |
| viii. | Design Drawings           | : Not provided  |
| ix.   | Soil Investigation Report | : Not provided  |
| x.    | Construction Materials    | : Reinforced Concrete, Stone Chips (verified)           |
| xi.   | Generator                 | : Outside 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) | : None   |
| Mid Term (6-weeks)     | : None   |
| Long Term (6-months)   | : The factory owner has been instructed to prepare and submit a load plan for vetting. Soil exploration report in order to check foundation adequacy by a qualified engineer. A thorough structural adequacy check will also be needed in future for vertical extension of the building. |

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

|   |                                  |
|---|----------------------------------|
| Name of the Factory                       | : Auto Tex Fabrics Ltd.          |
| Fire & Electrical assessment conducted by | : BUET                           |
| Date of Fire & Electrical Inspection      | : 18 <sup>th</sup> November 2014 |

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

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

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|   |   |
|---|---|
| <p>Short Term<br/><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>Maintain minimum effective width aisles.</p> <p>Remove all combustible materials from transformer/ generator room.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure adequate numbers of fire drills.</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 and exit sign in Bangla and English as per guidelines.</p>   |
| <p>Mid Term<br/><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></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>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, 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/sliding doors. 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. Install command station as per guidelines.</p> |
| <p>Long Term<br/><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>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</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. Install proper detection and alarm system.</p>  |

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

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

| Electrical Safety Issues  |   |
|---|---|
| Immediate<br><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>                            | N/A   |
| Short Term<br><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 cover on the cable trench 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 burn/broken/loose MCB/MCCB box/socket.</p> |
| Mid Term<br><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<br><i>(The remedial works indicated must be carried out within a period of 6 months)</i>  | N/A   |