

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: ALLIANCE STITCHES LTD.
Address of the Factory	: SFB # 04 & 07, Dhaka Export Processing Zone (Old), Savar, Bangladesh
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 11 June, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 17 June, 2014

Basic Information: The present garment factory is a commercial building with beam-column frame system. The following general information was noted:

i.	Building Usage Type	: Garment factory
ii.	Structural System	: R.C Beam and column frame with a 2-way solid slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: The total floor area of the building is 1500 sq.m per floor
v.	No. of Stories	: 3 storied
vi.	Construction Year	: 1993
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Unavailable
xi.	Generator	: No generator was provided for the building

Recommendations for Corrective Action: The recommendations of corrective action for both Structural and Fire & Electrical Safety are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate (Now): NA

Mid Term (Within 6 Weeks):

1. A Detailed Engineering Assessment is required to determine the cause and extent of this cracking.
2. All deteriorated concrete needs to be repaired to prevent further damage and falling concrete.
3. An Engineering Assessment is required to determine the cause and extent of the damaged lintel and warping of windows in the link.

Long Term (Within 6 Months):

1. Implement any recommendations from the DEA.
2. Concrete tests should be carried out to determine the current concrete strength.
3. Implement any recommendations from EA.
4. Structural Engineer to provide drawings reflecting existing conditions.
5. Structural Design Engineer to provide loading plans based on capacity, not current loading.

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6. Post and manage loading plans.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Keep egress paths and stairs clear of storage.
3. Remove all storage from exit stairs and egress paths.
4. Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
5. Remove manual on/off switches from emergency lighting units to prevent them from being switched off.

Short Term (Within 3 Months):

1. Separate the boiler transformer and EMR room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
2. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms may not be feasible, provide defined storage areas and limit the storage arrangement as follows:

-Maximum height of 2.4m and maximum area of 23m²

-If sprinkler protected: maximum height of 3.66m and maximum area of 93m².

Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.

3. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.
4. Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor level.
5. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
6. Provide minimum aisle widths of 36-in.
7. Modify the egress door to swing in the direction of egress travel.
8. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
9. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.
10. Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.

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Mid Term (within 6 Months):

1. Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, in accordance with NFPA 72.

Long Term (More than 6 months):

1. Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Provide steel pipe for supporting the service line. Ensure the insulation of the cable does not get damage during installation. Seal the remaining penetrations by fire rated material.

Short Term (Within 3 Months):

1. Wires and cables must be supported with cable tray and nicely fastened.
2. Wiring must be drawn in industrial graded conduit with proper size bend and fastened at different interval with clamps.
3. Cables must be routed through safe locations and must be installed on trench and cable trays.
4. PVC flexible conduit must be replaced with industrial graded conduit and supported with cable riser/tray.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA