

# INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name: **SHADE FASHIONS INT'L LTD**

Address: **Riom Complex, 157, Berun (Jamgara) Savar Savar  
Dhaka Bangladesh**

Assessor: **Emkay Enterprises LTD**

Date: **24 Apr 2014**





## Introduction to the Report

The following report contains a site profile and summary of non-conformities identified during an onsite assessment commissioned by the Alliance for Bangladesh Worker Safety (Alliance) and conducted by a third-party Qualified Assessment Firm (QAF). The assessment was conducted against the Alliance for Bangladesh Worker Safety Assessment Protocols (APs) and Fire Safety and Structural Integrity Standard, which is harmonized with the factory assessment guidelines developed by Bangladesh University of Engineering and Technology (BUET) for the Bangladesh National Tripartite Plan of Action (NTPA). The goal of the Alliance process is to provide clear and practical technical requirements by which Bangladeshi Ready Made Garment (RMG) Factories producing for Alliance members may be consistently and fairly evaluated for fire, structural, and electrical safety in a non-duplicative manner. Each assessment will prompt action plans that will be used by RMG factories to systematically and sustainably improve safety conditions for garment workers. Beyond tracking and reporting on action steps taken in a transparent manner, the Alliance organization and its members will seek to further support factory improvements through technical assistance, training, implementation support for functional Worker Committees, and in some cases financial assistance and wage support for workers if factories are closed for remediation.

The contents of the report do not constitute a guarantee of compliance with the applicable laws, the Alliance Standard or the absolute or continued safety against fire, electrical and/or structural integrity issues that may lead to injury or loss of life. The report is designed to provide a non-exhaustive summary of risk issues, based on a limited sampling and duration of time onsite by the named QAF. Neither the QAF nor the Alliance can certify or guarantee the quality, outcome, or effectiveness of actions taken in response to the report.

For more information and report feedback please go to: [www.bangladeshworkersafety.org](http://www.bangladeshworkersafety.org).





## GENERAL INFORMATION

### General Information

Factory Name:	SHADE FASHIONS INT'L LTD
Address:	Riom Complex, 157, Berun (Jamgara) Savar Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Savar
Zip Code:	
Audit Duration:	
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	6/6/2014
Final Report Date :	7/15/14
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	Main buildings =1 Ancillary buildings & sheds= 7
Number of Building Levels (Stories) :	Main building 6 storied with sheds on roof top (partial) Other ancillary structures and sheds are 1 storied.
Approximate Building Area (SF) :	Approximate area of main building is 123400 sft
Date of Building Construction :	Year of construction 2000-2001 as informed by director.
Date of Last Building Renovation/Addition :	Addition of steel stair is on going in the main building. Renovate regularly.
Is the Building mixed use?:	No
Ancillary Structures in Complex :	Total 7 (seven) numbers of ancillary buildings/sheds found in the complex. all are 1 storied. Tin shed used for scrap cloth store = 1 nos. Pump house = 1 nos Generator = 1 nos. Ansar camp = 2 nos ( separate two buildings) Guard shed = 1 nos. Lunch room = 1 nos.
Number of Ancillary Levels (Stories) :	Each ancillary structures is 1 storied.



Approximate Ancillary Structures Area (SF) :	1,370
Number of Occupants :	total number of occupants is approximately 1966
Exterior Facade Description :	5" brick wall with exterior surface plaster finished and painted. The front facade of the building is partially decorated with glass.
Structural System Description :	Floor system is a flat slab with beams on the periphery of the main building. Shallow foundations and individual column footings. On the roof, there is corrugated tin shed.
Issues were not found during the structural integrity assessment that required the Emergency Escalation Protocol (and referral to NTC Review Panel)?:	Yes



## ASSESSMENT FINDINGS

### Structural System Design

Question:	If the structure has been previously expanded, was the structural impact on the entire structure analytically evaluated and confirmed by a qualified structural engineer.
Priority Level:	Medium
Non-Compliance Level:	2
Description:	Reference Alliance Standards Part 8 Section 8.1 Applicability of Building Code. Includes vertical extensions, addition of water tanks, etc. There are no documents available for the roof top shed, the over head water tank and the billboard. Each of these requires an analytical evaluation of the connection with the main building and the steel stair for lateral load and deflection due to full live load.
Source of Findings:	Photograph: Photograph of roof, water tank and the steel stair
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Reference Alliance Standards Part 8 Section 8.1 Applicability of Building Code.





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Question:	Have provisions been made in floors or decks for a concentrated load (such as heavy equipment, water tanks, stored materials, etc) applied at a location wherever this load acting upon an otherwise unloaded floor would produce stresses greater than those caused by a uniform load?
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Priority Level:	Medium
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Non-Compliance Level:	2
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Description:	Roof top RCC water tank of size 10'X18.5'X6.5', which has no structural drawings and no structural analytical evaluation available. A steel Billboard is placed on the roof top, which has no analytical structural and analytical documents.
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Source of Findings:	Document Review: Drawings of Roof top RCC water tank not found. , Photograph: Water tank on roof Billboard structure
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Suggested Plan of Action:	
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Suggested Deadline Date:	
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Standard:	Alliance Standard Part 8 Section 8.13 and 8.14
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Question:	Are Certificates of Occupancy available for review?
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Priority Level:	Low
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Non-Compliance Level:	2
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Description:	No certificates of occupancy is available according to the requirement of Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment
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Source of Findings:	Document Review: No occupancy certificate found.
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Suggested Plan of Action:	
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Suggested Deadline	
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Date:		
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
<b>Structural System Construction</b>		
Question:	Is the structural system free of distress, settlement, shifting, or cracking in columns or walls?	
Priority Level:	High	
Non-Compliance Level:	1	
Description:	Inter-facial crack was found in the 5th floor in brick wall-RCC beam joints.	
Source of Findings:	Photograph: Crack in wall	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.3.3	
Question:	Have all areas of needed maintenance, including areas with efflorescence, dampness, standing water on rooftops, and corrosion been addressed.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance. Dampness found on the 5th floor prayer room below water tank and wash room of 4th floor. There was also ponded water located on the roof of the building.	
Source of Findings:	Photograph: Photographs of dampness	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	
Question:	If yes, have the structural members constructed with MCAC been investigated by an appropriate program of in-situ testing and representative destructive testing or core samples?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Reference Alliance Standards part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC) The beam and slabs are constructed with	



	MCAC. No destructive or cores test has been completed.	
Source of Findings:	Document Review: No in-situ test report of concrete strength has been found.	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Reference Alliance Standards Part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC)	
Question:	Are all non-structural elements suspended from, attached to, or resting atop the structure adequately anchored and braced to resist earthquake forces?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6 Needs seismic bracing or anchoring on all floors of non structural elements like shelves). Needs the anchoring to the plastic water tank near the RCC water tank	
Source of Findings:	Photograph: Storage racks	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6	
Question:	The exterior façade is free of cracking.	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	One crack found in the wall in front facade behind the curtain glass portion.	
Source of Findings:	Photograph: Exterior wall crack	
Suggested Plan of Action:		
Suggested Deadline Date:		
Standard:	Alliance Standard Part 8 Section 8.2	

**Structural Safety Programs**





Question:	Is a program in place to ensure that the live loads for which a floor or roof is or has been designed will not be exceeded?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	No program for allocation of floor or roof load available according to the requirement of 2006 BNBC Part 6 Chapter 1 Section 1.4.6 and Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.
Source of Findings:	Document Review: Program for floor load management not found.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.
Question:	Have Load Plans been prepared for each floor documenting the actual maximum operational loading that is intended and/or allowable on each floor.
Priority Level:	Low
Non-Compliance Level:	2
Description:	Load plans have not been prepared as per the requirement of Alliance Standard Part 8 Section 8.10 Floor Loading Plans (Load Plans)
Source of Findings:	Document Review: Floor load plans not found.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 8 Section 8.10 Floor Loading Plans (Load Plans)
Question:	Are Floor Load Plans posted as required?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Alliance Standard Part 8 Section 8.20.5.3. No floor load plans available.
Source of Findings:	Visual Assessment: Posted floor load plans not found.
Suggested Plan of Action:	
Suggested Deadline Date:	





Standard:	Alliance Standard Part 8 Section 8.20.5.3
Question:	Is a designated representative (Factory Load Manager), who is onsite full time, trained regarding the structural floor capacity, and serves as an ongoing vendor resource and monitor of operational factory floor loadings?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Alliance Standards Part 8 Section 8.9 Factory Load Manager. No trained full time designated factory load manager found.
Source of Findings:	Visual Assessment: Factory load manager not found during visual assessment.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standards Part 8 Section 8.9 Factory Load Manager
Question:	Are areas used for storage of work materials and work products, clearly marked to indicate the acceptable loading limits as described in the Load Plan for that floor?
Priority Level:	Low
Non-Compliance Level:	1
Description:	Storage load markings were not available as per the requirement of Alliance Standard Part 8 Section 8.11 Floor Load Markings
Source of Findings:	Visual Assessment: Load marking in the storage area not found.
Suggested Plan of Action:	
Suggested Deadline Date:	
Standard:	Alliance Standard Part 8 Section 8.11 Floor Load Markings