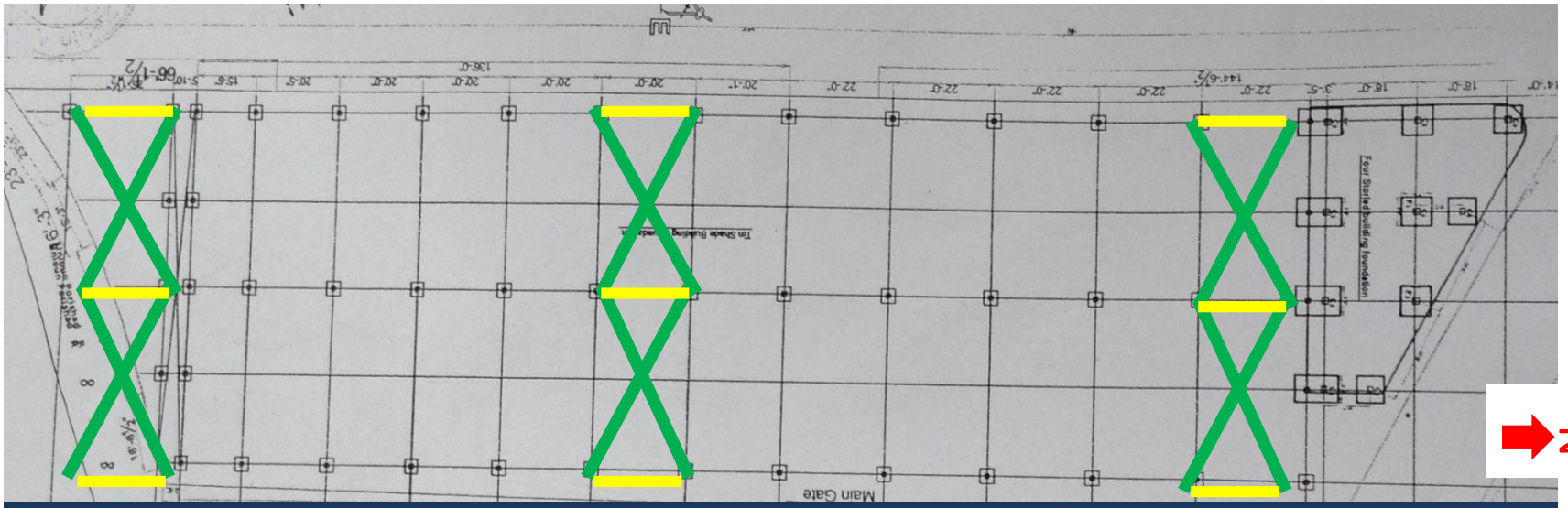
Florence Fabrics Ltd

Bimile, Konabari, Gazipur-1346
(24.007558 N, 90.334931E)
24 February 2015

ACCORD on Fire and Building Safety in Bangladesh ARUP

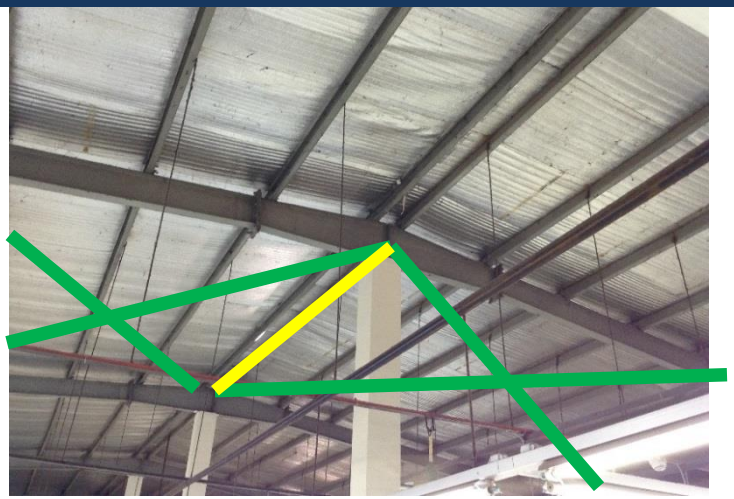
Observations

Possible lack of lateral bracing in the Production Building



The Production Building doesn't have any obvious lateral bracing.
Connection to the Office Building structure to be investigated. The capacity of the concrete columns to provide lateral stability to be investigated.

A possible lateral bracing system is presented in green and yellow if required



Observations

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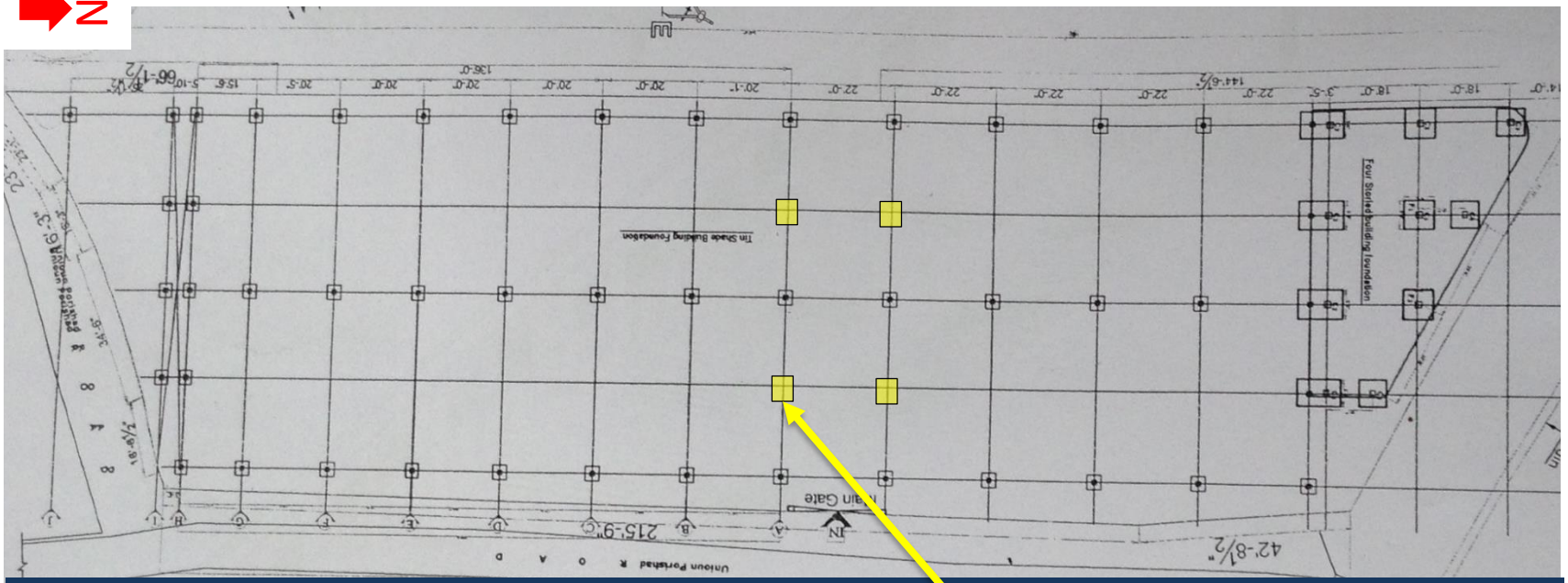
Discrepancies between Structural Drawings and As build status



Production Building plan and the position of the additional columns

Additional columns were found in the middle of the building but they are not shown on the Structural drawings.

Observations

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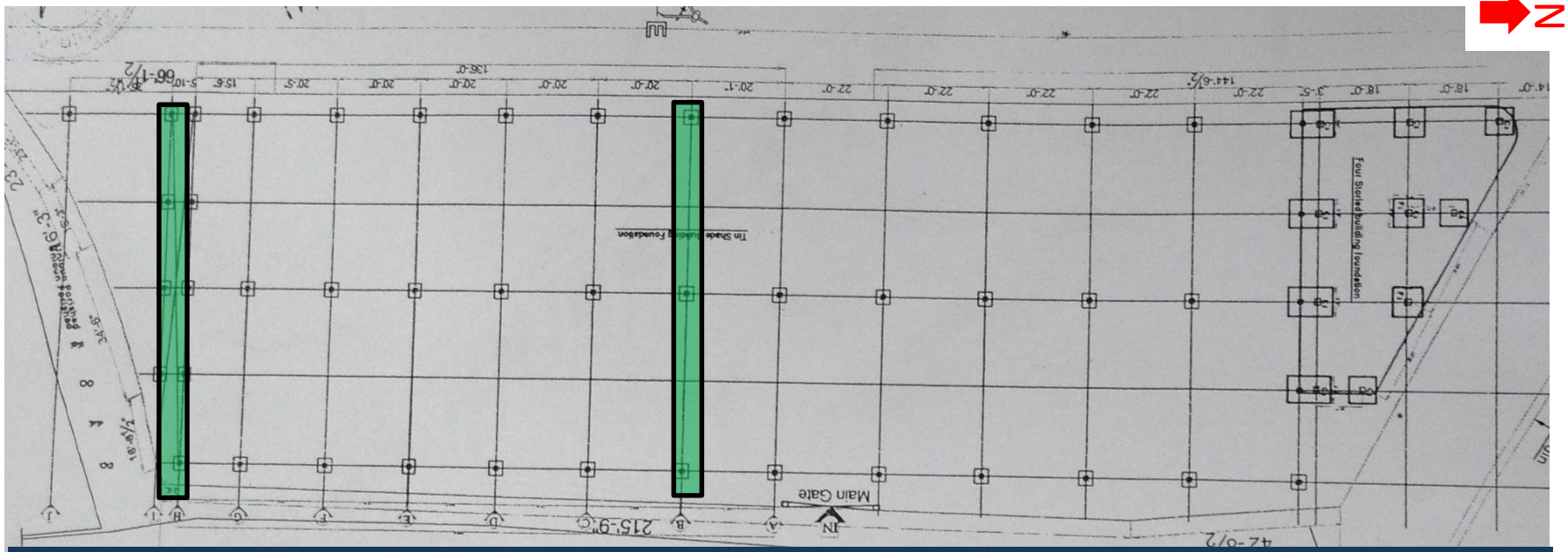

The steel roof frame in 2 grids has a different shape to the typical frame shape. This is not defined in the structural documentation.

Observations

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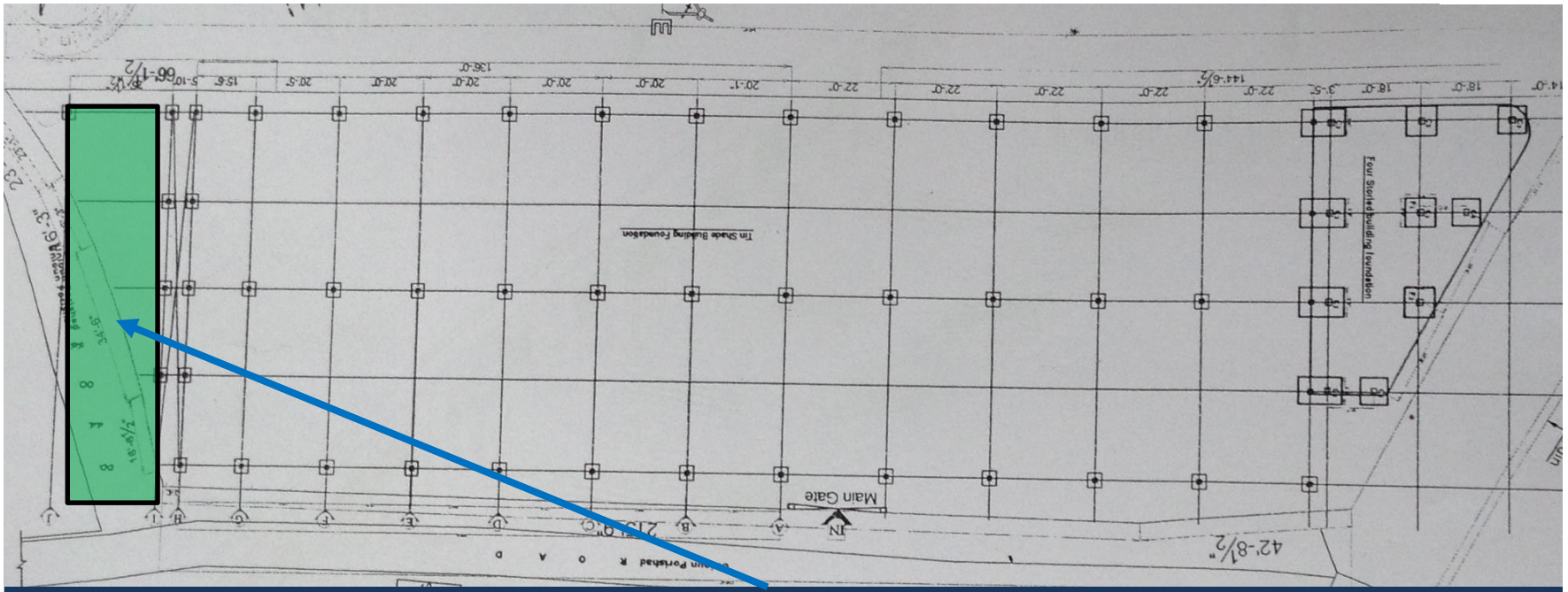

One additional bay was found in the South side of the building.

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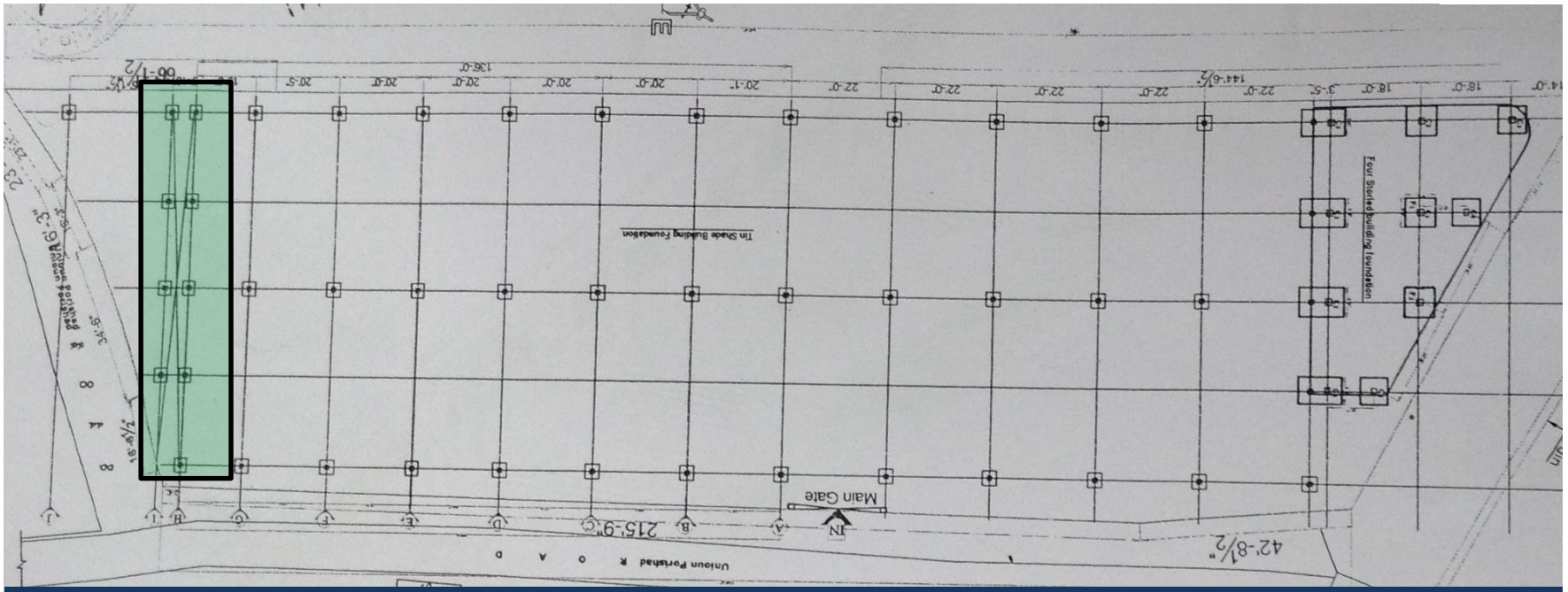

The proposed lateral bracing between these two grids is not present.

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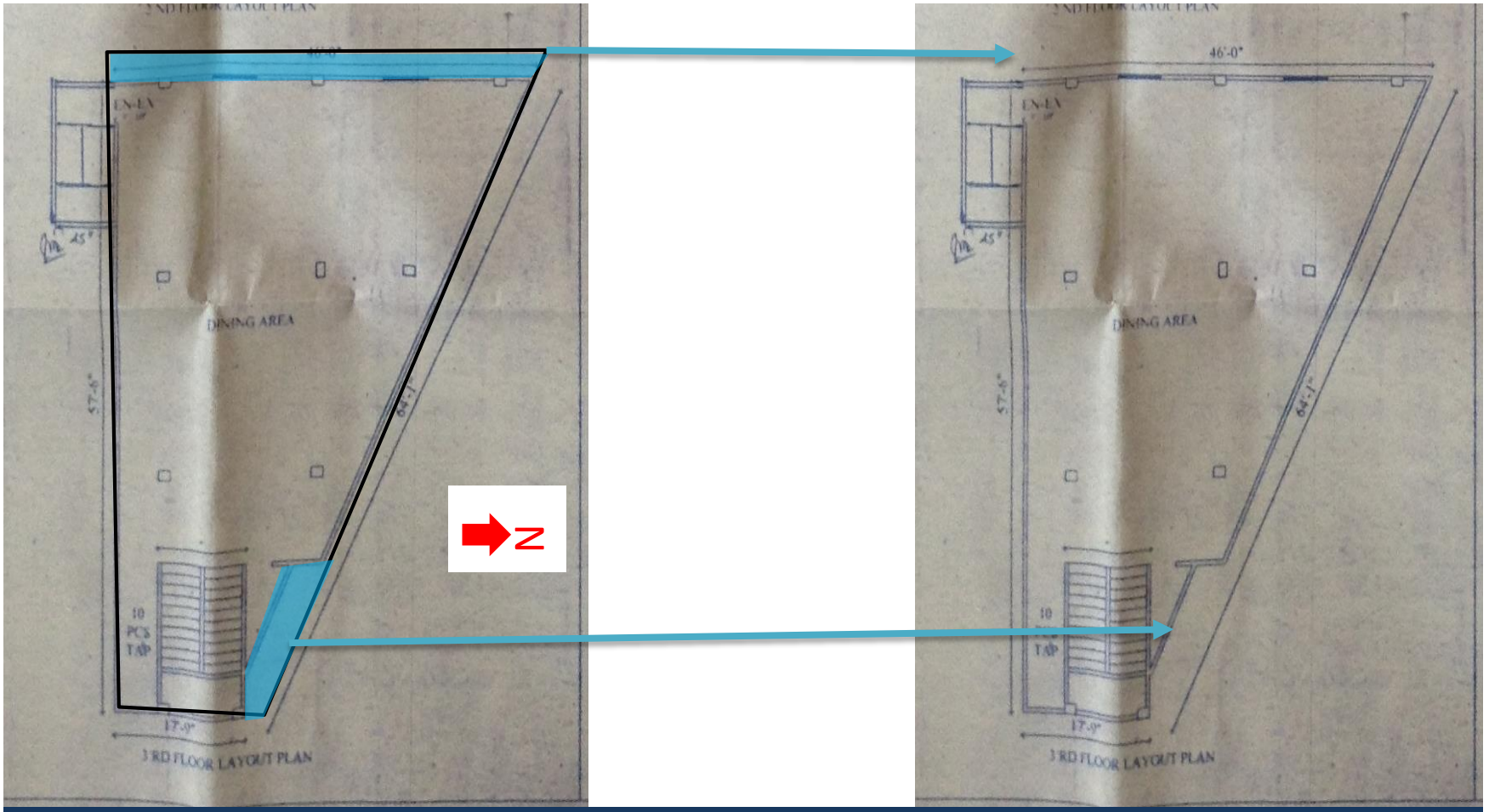

Additional Cantilevers were build beyond those shown on the Office Building permit drawings.

Observations

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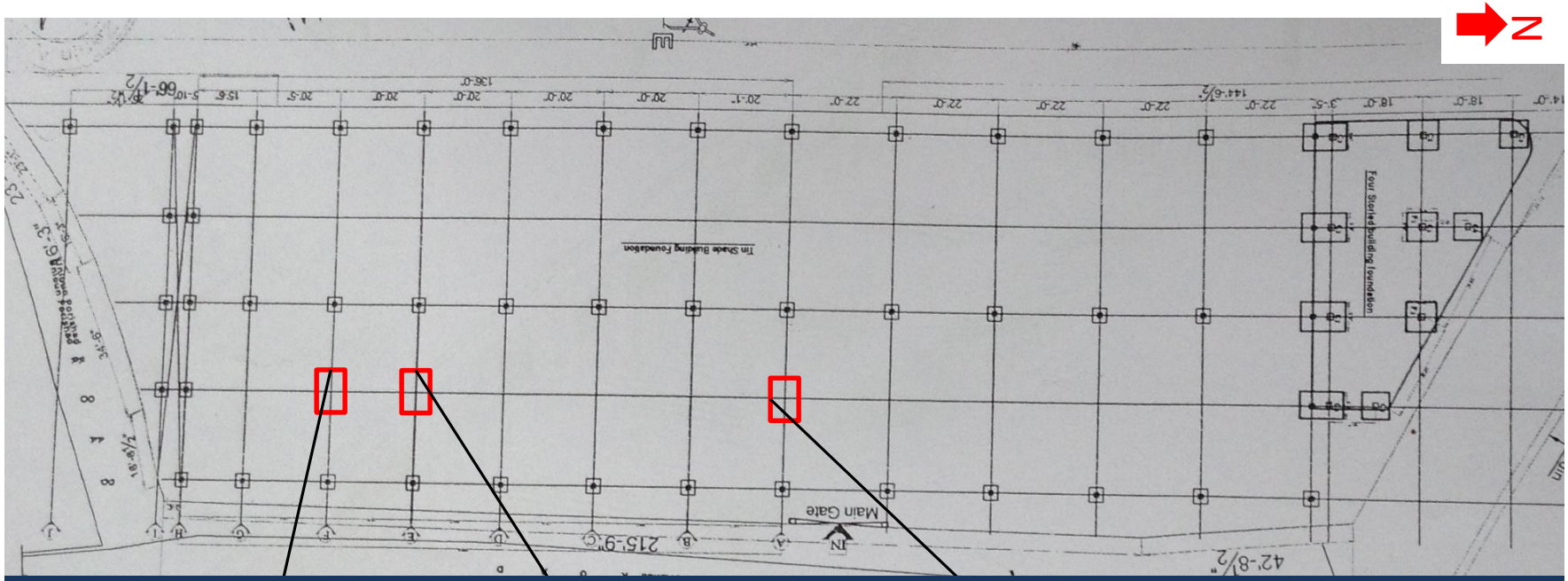
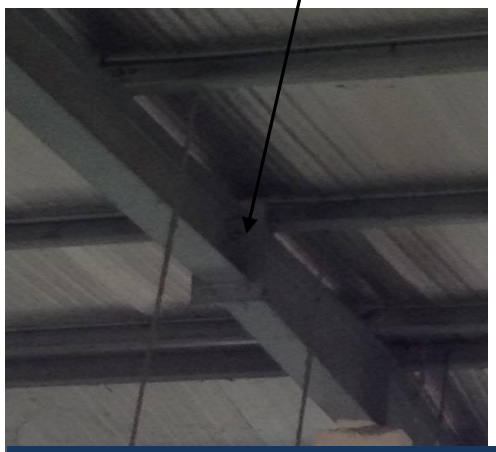
Missing Connection bolts in the Roof steel frame of the Production Building



Some connection bolts were missing in the Steel roof frame.



Missing Connection bolts

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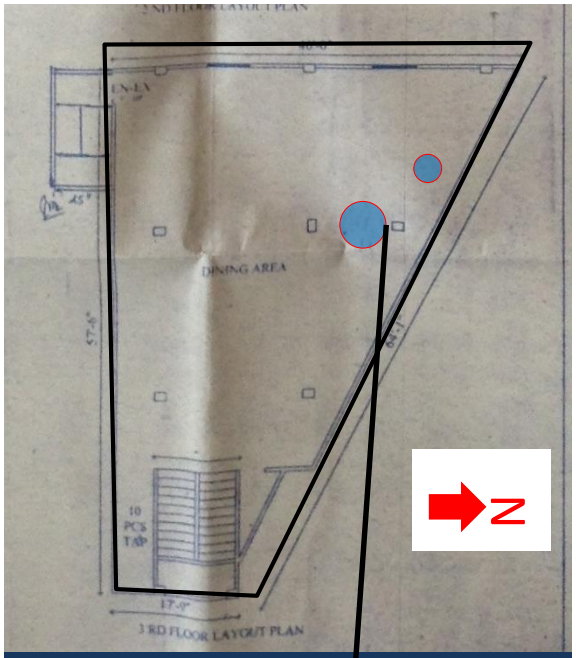
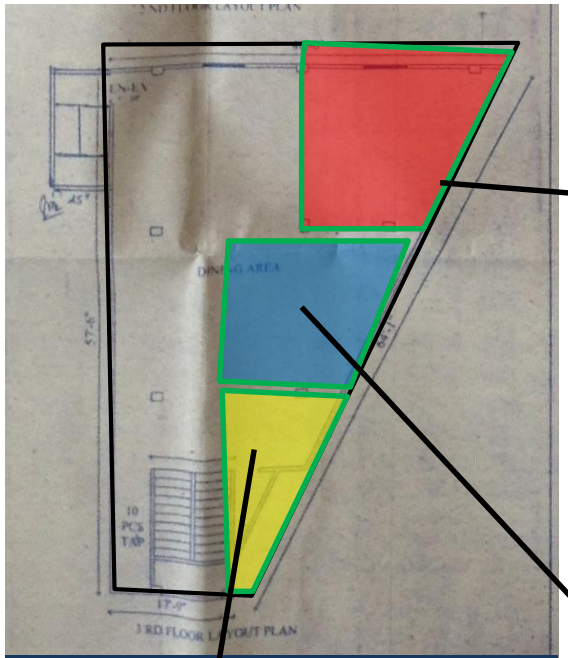
Uncontrolled storage loading and water tank in the Office Building



Roof plan



2nd floor

Loose garments storage – 2m height

Water tank

Sewing and finishing

Finish goods packet storage – 2.4 m height

Observations

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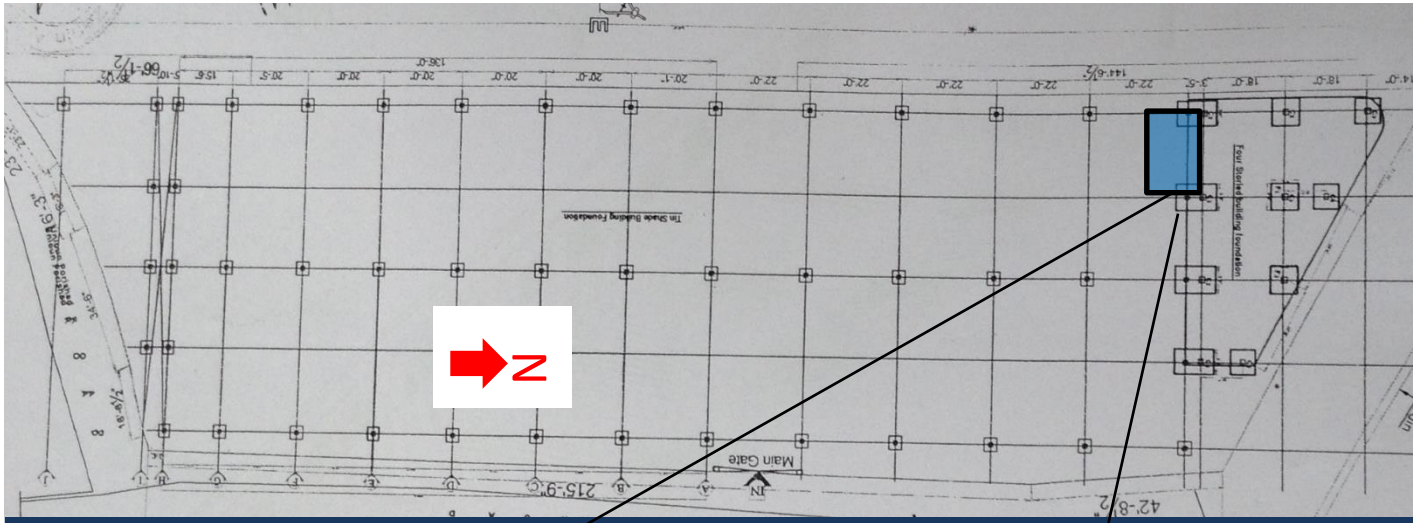
Lateral Stability of the steel stair structure



Building Plan

Lightweight steel stairs may not be adequately connected to the load bearing elements of the Office building and there is no lateral bracing.

Observations

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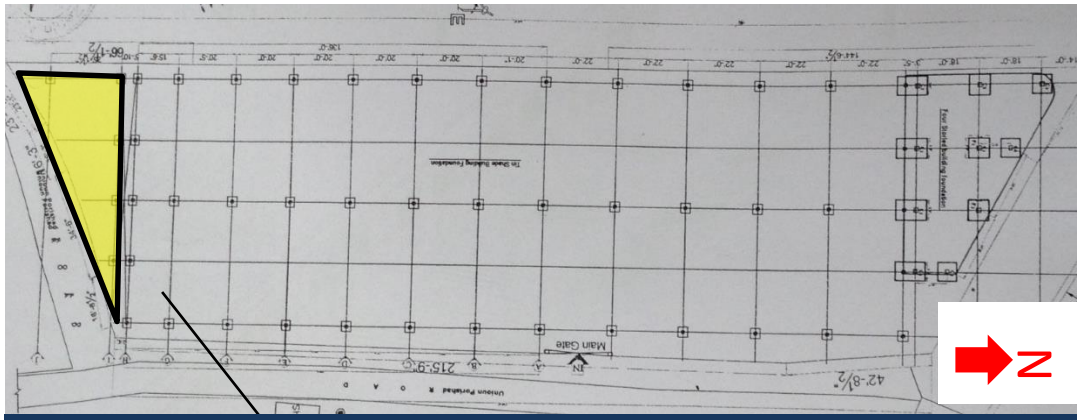
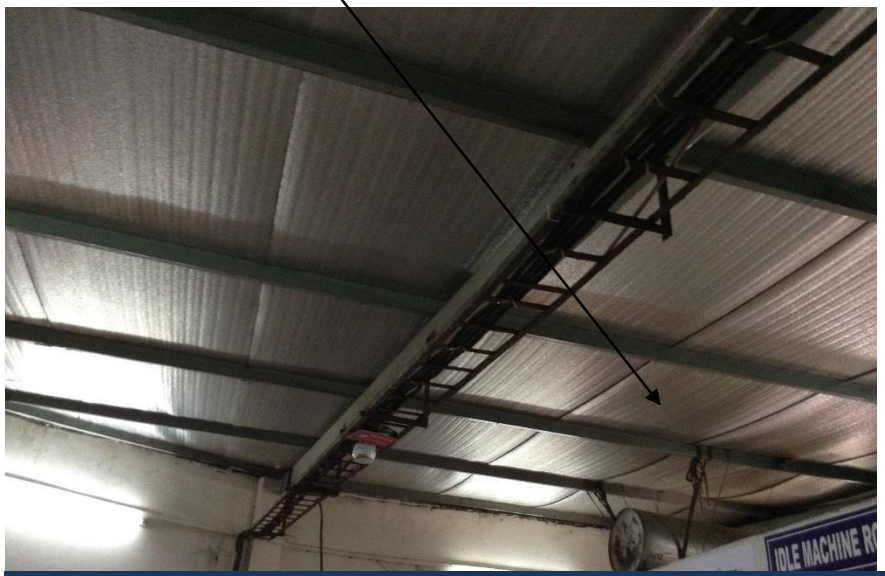
Apparently non-engineered roof structure of the Generator building



Building Plan



The Generator Building has an apparently non-engineered light weight steel roof structure. The roof frames appear to be supported on brick walls. The brick walls show some cracking under the connection point loads.

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Priority Actions

Problems Observed

- Possible lack of lateral bracing for the steel roof frame of the Production Building
- Discrepancies between structural drawings and the as-constructed arrangement of the factory
- Missing Connection bolts in the Roof steel frame of the Production building
- Uncontrolled storage loading and water tanks in the Office Building
- Lateral Stability of the steel stair structure
- Apparently non-engineered roof structure of the Generator building

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Possible lack of lateral bracing for the steel roof frame of the Production building	The Engineer to investigate the lateral longitudinal bracing, and advise on any necessary alterations.	**6-months**
2	Possible lack of lateral bracing for the steel roof frame of the Production building	Make any structural alterations as advised by Factory Engineer.	**6-months**
3	Discrepancies between structural drawings and the as-constructed arrangement of the factory	Building engineer to survey as constructed building. Updated drawings to be prepared showing the correct as constructed layout.	**6-months**
4	Missing Connection bolts in the Roof steel frame of the Production building	Building Engineer to identify all the omissions and supervise remedial works to the lightweight steel roof to ensure structural adequacy under code vertical and horizontal loads.	**6-months**
5	Uncontrolled storage loading and water tanks (Office Building)	Building Engineer to confirm design loading on slabs and take appropriate action by removing storage loads where required.	**6-months**
6	Uncontrolled storage loading and water tanks (Office Building)	Engineer to design a loading plan for the building.	**6-months**
7	Uncontrolled storage loading and water tanks (Office Building)	Spread the load of the roof water tanks on a bigger area.	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Lateral Stability of the steel stair structure	Building Engineer to confirm design loading, lateral bracing and the connection to the Office Building.	**6-months**
9	Lateral Stability of the steel stair structure	Lightweight steel stairs to be reconstructed/upgraded to ensure structural adequacy under code vertical and lateral loads by the Building Engineer.	**6-months**
10	Apparently non-engineered lightweight roof of the Generator building	Lightweight steel roof are to be reconstructed/upgraded to ensure structural adequacy under code vertical and lateral loads by the Building Engineer.	**6-months**