

# Louietex Manufacturing Ltd. S2L Fashions PVT Ltd

Shondha Sharifpur, National University, Gazipur, Bangladesh  
(+23.967791N, 90.374339E)

24th June 2014



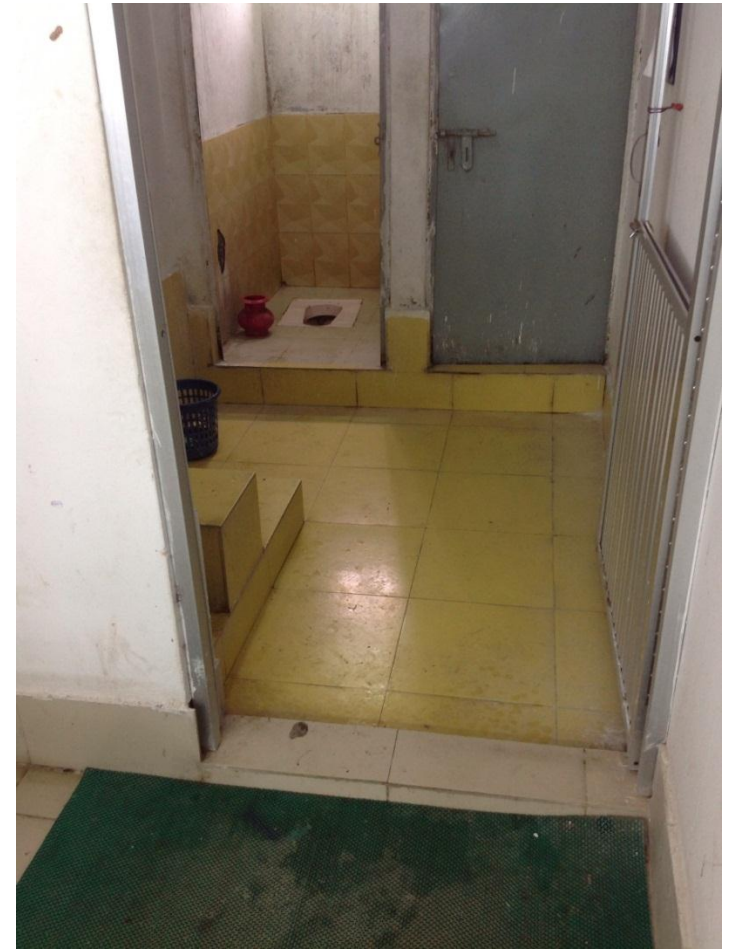
# Observations

# Floor slab load management



Construction materials and water tanks at roof level. This imparts a significant load to localised slabs and columns.

## Load Management



Storage loading and significant finishes to the toilet areas impart significant load to localised slabs and columns

## Load Management

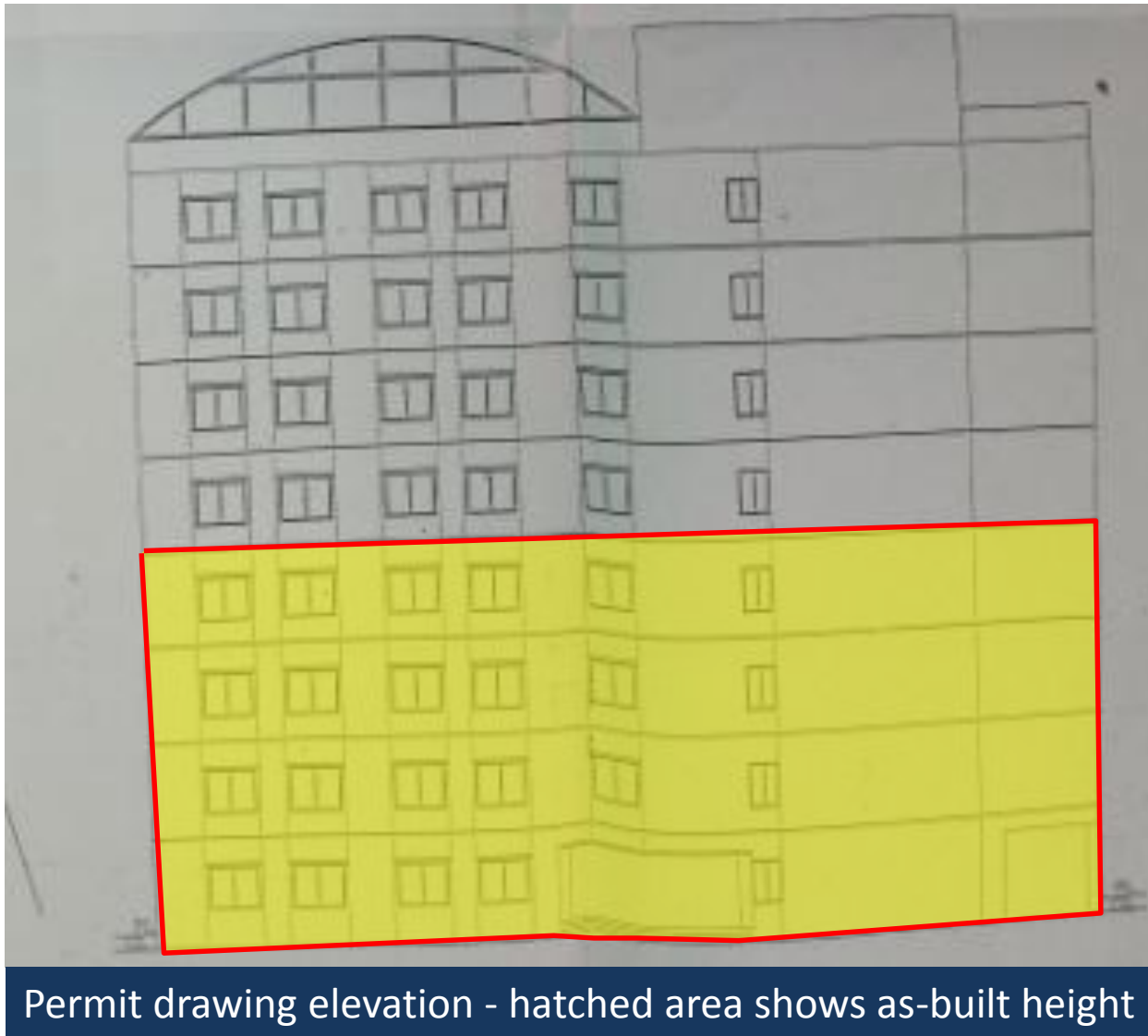
# Local damage of floor slab due to pipe penetrations

Toilet waste pipe penetrations have been formed in the slab column strips after casting. Damage to reinforcement may have occurred.



## Floor slab penetrations

**Future extension likely to result in high column stresses**



During the visit only 4 storeys were constructed but a permit existed for 8 storeys plus a roof shed. If the 8 storeys are constructed the column stresses will need to be reviewed by the Building Engineer.

Permit drawing elevation - hatched area shows as-built height

## Future Building Extension

# Non-engineered structures

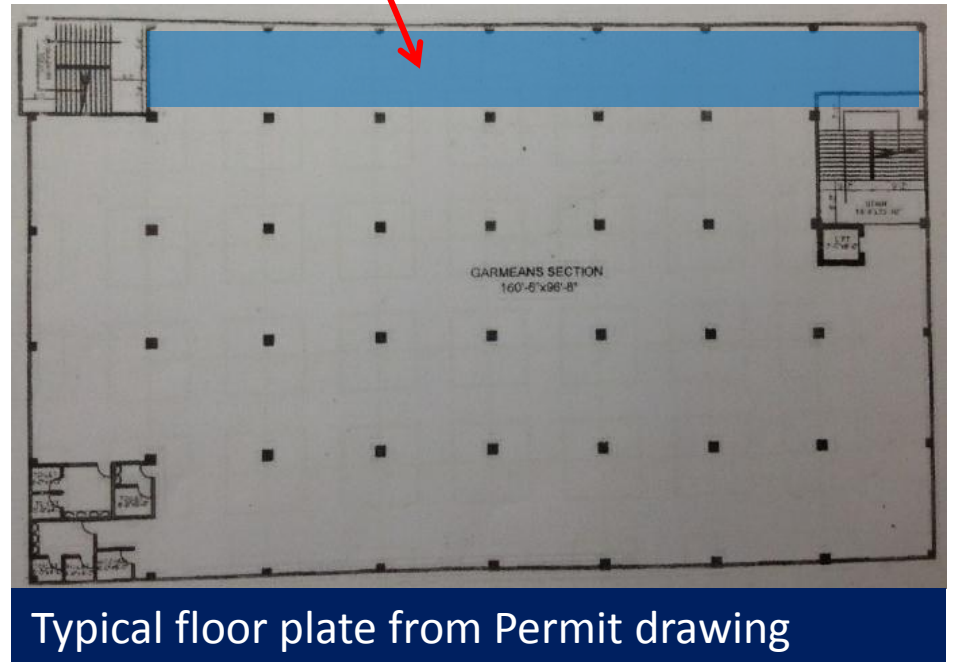
Ancillary buildings and generator room appear to be non-engineered. Structural adequacy of these structures to be assessed for design imposed and wind loads.



## Non-engineered structures

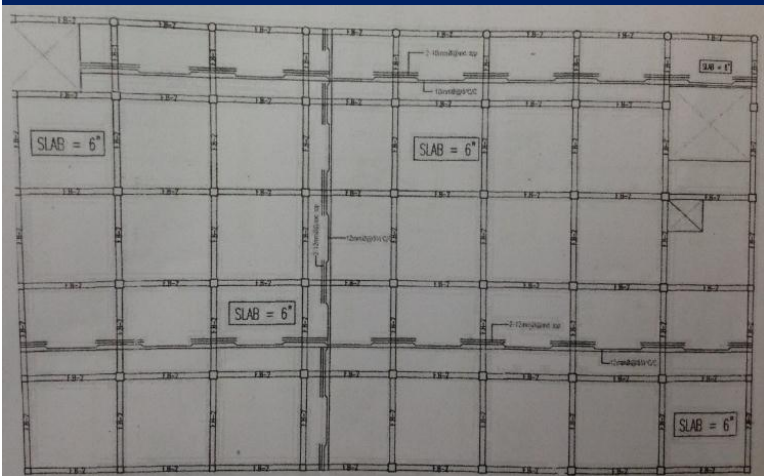
# Documentation & available drawings

Permit drawings were different to what was seen on site. Cantilever slabs and irregular column grids were identified in area shaded below. No as-built architectural or structural information was available.

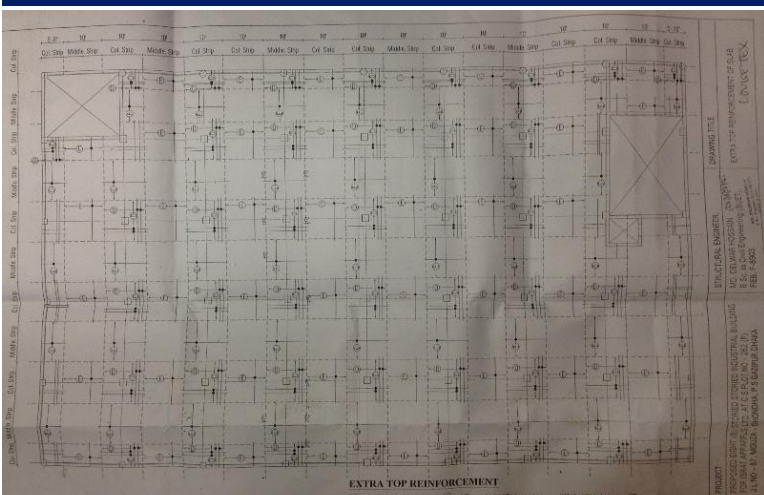


## Documentation

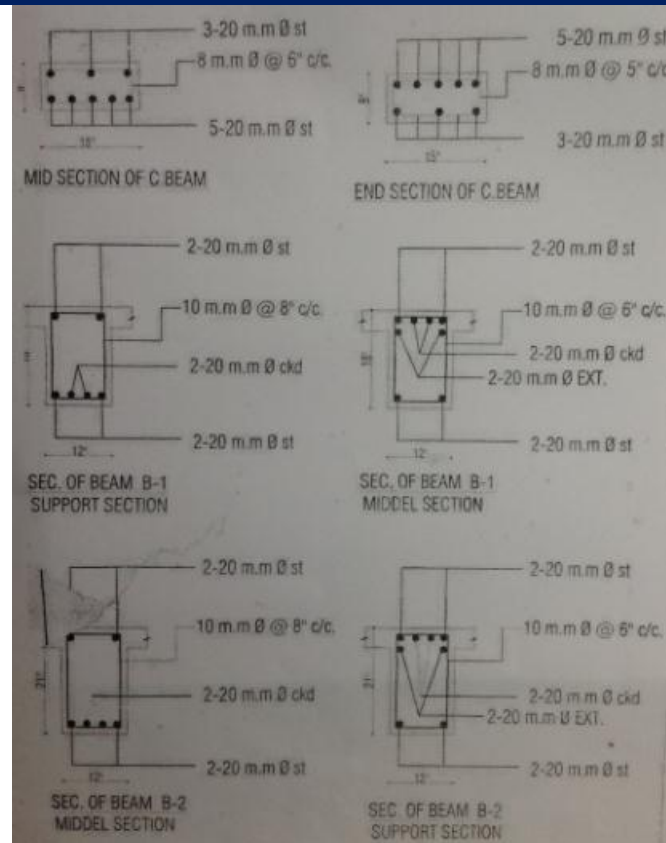
A flat slab was viewed on site. Structural drawings were unclear. We were shown drawings with both downstand beams and flat slabs. Both drawing sets were incomplete.



Beam & slab reinforcement drawing



Flat slab reinforcement drawing



Beam and slab strip detailing

# Water ingress

Masonry façade showing signs of water ingress in a number of locations.



## Water Ingress

# Priority Actions

# Problems Observed

**ITEM 1:** Floor slab load management

**ITEM 2:** Local damage of floor slab due to pipe penetrations

**ITEM 3:** Future extension likely to result in high column stresses

**ITEM 4:** Non-engineered structures

**ITEM 5:** Documentation & available drawings

**ITEM 6:** Water ingress

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Check localised high loading from water tanks, construction materials, storage areas and toilet finishes	Building Engineer to check that slab has sufficient capacity to support areas of locally high loading described above.	6-weeks
2	Check localised high loading from water tanks, construction materials, storage areas and toilet finishes	Building Engineer to produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-months
3	Local damage of floor slab due to pipe penetrations	Building Engineer to undertake design checks to confirm that penetrations are acceptable in the design of the slab. Allowable floor loading plans to be updated.	6-weeks
4	Any proposed additions to the existing building structure, including additional storeys, should be reviewed by the Building Engineer	If any additions to the building structure are proposed, the Building Engineer shall provide calculations showing the structural adequacy of all columns taking into account any additions to the existing structure, the loading plans and as built structure, including insitu concrete strength testing.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
5	Non-engineered structures	Ancillary structures should be designed and upgraded to support code vertical and wind loads by the Building Engineer.	<b>6-months</b>
6	Structural drawings do not match current arrangement of the structure	Building Engineer to commence checking, collecting information and produce accurate and complete as-built documentation.	<b>6-weeks</b>
7	Structural drawings do not match current arrangement of the structure	Complete issue of as-built documentation.	<b>6-months</b>
8	Water damage to masonry façade	Repair/install render and/or waterproofing to ensure prevention of water ingress.	<b>6-weeks</b>
9	Water damage to masonry façade	Inspect structure to ensure no deterioration.	<b>6-weeks</b>