

Starlight Sweaters Ltd.

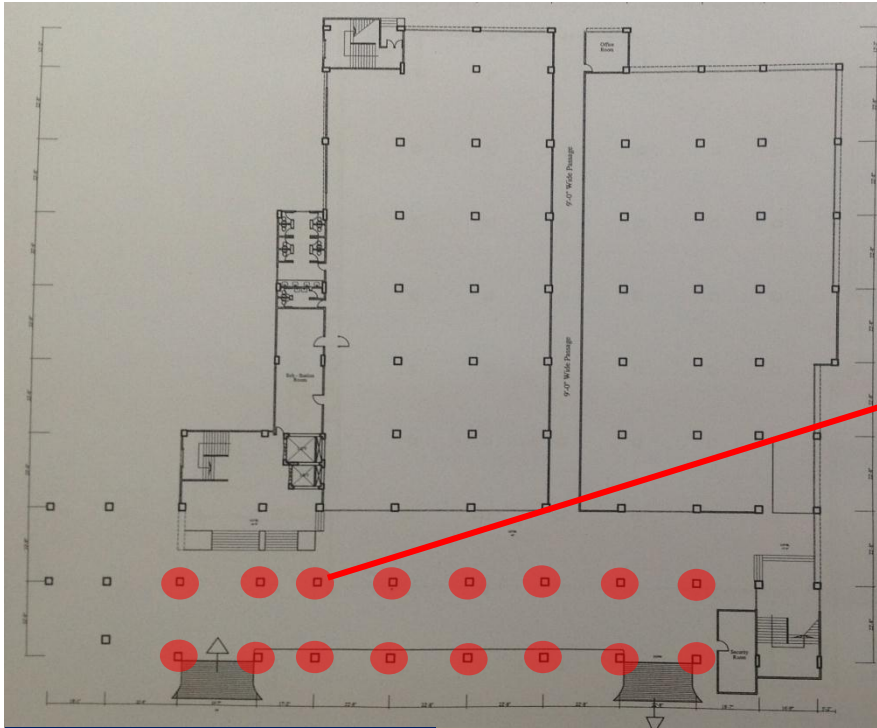
National University, Gazipur, Sadar
(23.97906N, 90.37702E)

19 March 2014



Observations

**Columns at the south of the building
adjacent to the entrances are in danger of
being accidentally hit by vehicles entering/
leaving the facility**



Ground Floor Plan



Delivery Area

16 No columns in delivery area at risk of being struck by vehicle.

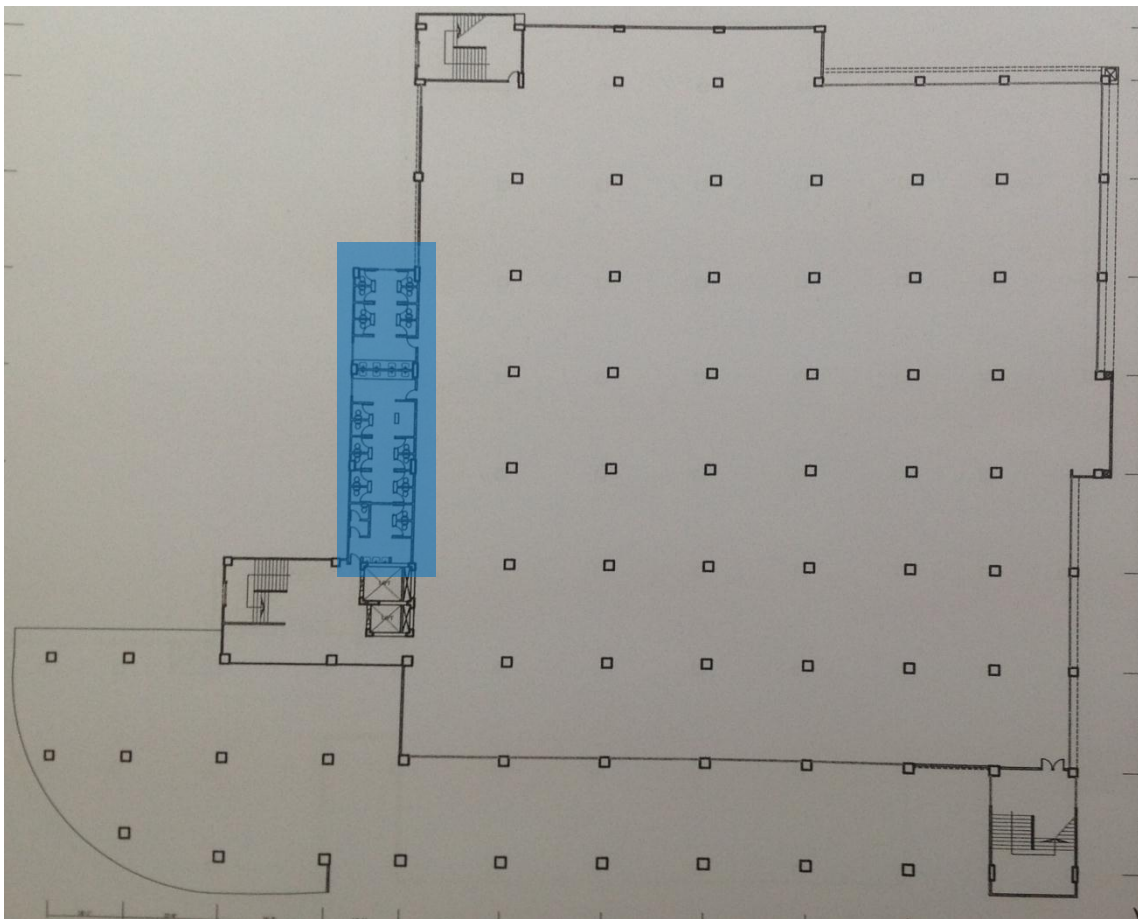
Building Engineer to check that the columns have been adequately designed for impact loading. Adequate protection to be provided to columns at risk of damage due to impact loading.



Columns at risk

Column Impact Loading

Columns below storage areas and water tanks appear to be stressed in excess of normal design limits – Building Engineer to verify concrete stresses and in-situ concrete strength



Typical Column Layout

Cursory calculations indicate that the working stresses of columns in the area of the concrete water tank are in excess of normal design limits

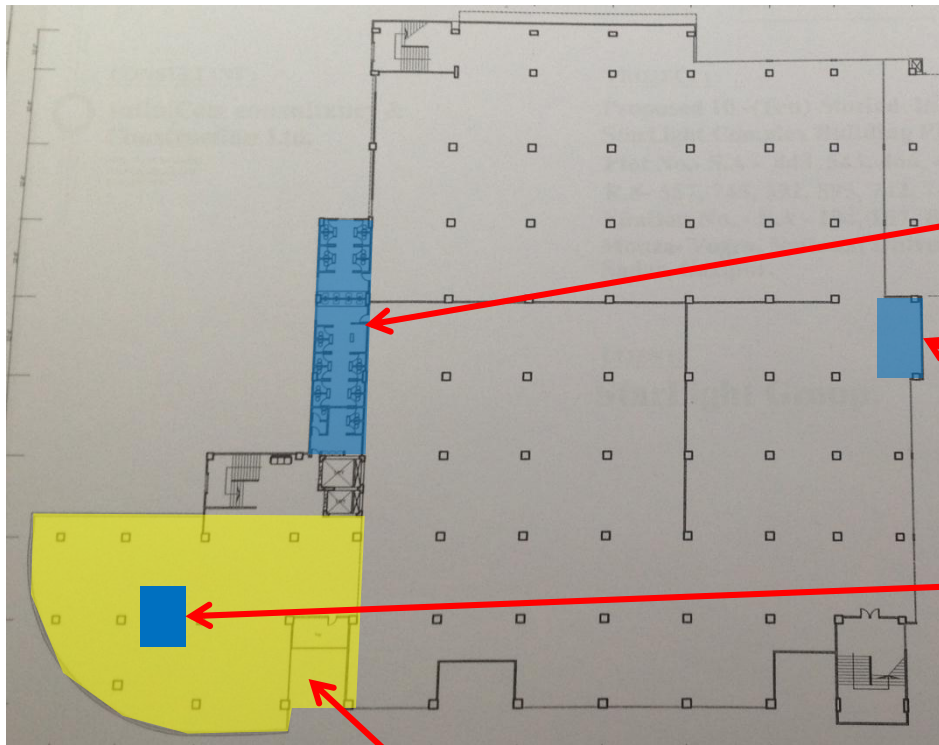
Building Engineer to check that columns in the area highlighted have been designed to accommodate loads.



Tested Ground Floor Column

Columns strength

Design Check required for the loading from the water tanks (plastic and concrete) at roof level and for areas of observed high floor loading as indicated



Typical Floor Plan



Concrete Water Tank



Plastic Water Tanks



Plastic Water Tanks



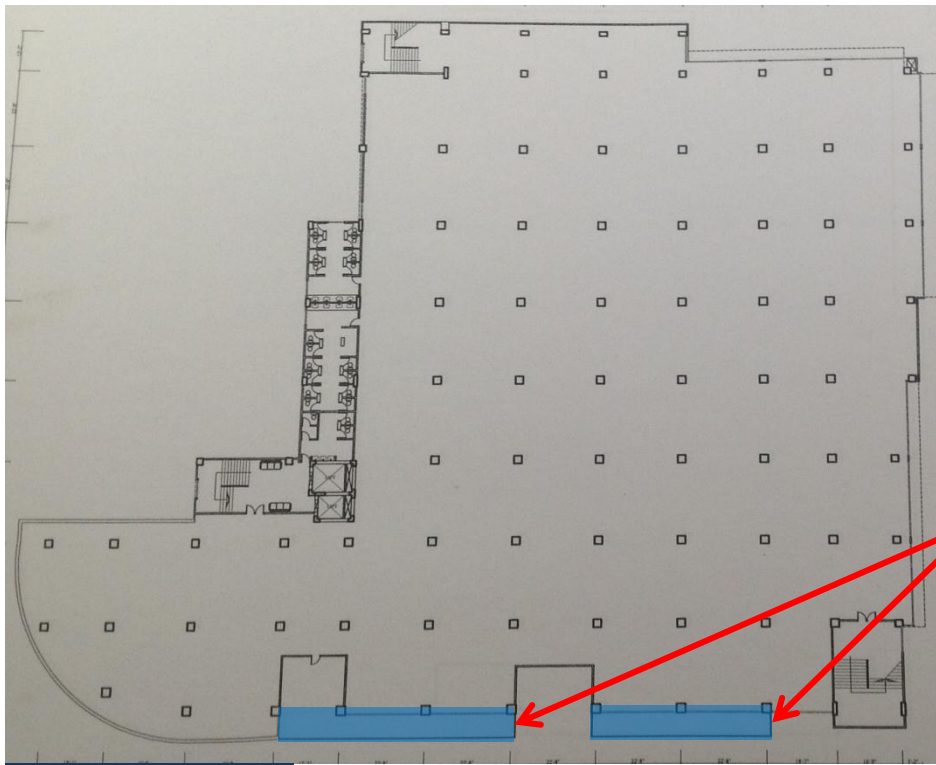
2nd & 5th to 7th Floor – Storage Area

Building Engineer to prepare controlled loading plans for all floors, which will designate where storage can be placed.

- 1 no. concrete and 7 no. plastic water tanks located on roof slab.
- Building Engineer to check that the slab and beams have been adequately designed to carry loads due to concrete and plastic water tanks.

Water Tank Loads / Load Management

Design check required for the slab cantilevers at the south of the building to confirm their load capacity to support floor and façade loadings



Plan



Cantilever slab

Floor slab cantilevers (with no downstand beams) on south side on various floors

Building Engineer to check that the slab has been adequately designed to carry loading due to façade and floor loads

Cantilever Floor Slab

Priority Actions

Problems Observed

ITEM 1: Columns at the south of the building adjacent to the entrances are in danger of being accidentally hit by vehicles entering/ leaving the facility.

ITEM 2: Columns under storage areas and water tanks appear to be stressed in excess of normal design limits – Building Engineer to verify concrete stresses and in-situ concrete strength.

ITEM 3: Design Check required for the loading from the water tanks (plastic and concrete) at roof level and for areas of observed high floor loading as indicated.

ITEM 4: Design check required for the slab cantilevers at the south of the building to confirm their load capacity to support floor and façade loadings.

Item No.	Observation	Recommended Action Plan	Priority
1	Columns at the south of the building adjacent to the entrances are in danger of being accidentally hit by vehicles entering/ leaving the facility.	Suitable column protection barriers to be designed and constructed.	6-weeks
2	Columns at the south of the building adjacent to the entrances are in danger of being accidentally hit by vehicles entering/ leaving the facility.	Building Engineer to check that the columns have been adequately designed for impact loading	6-weeks
3	Columns under storage areas and water tanks appear to be stressed in excess of normal design limits	Factory Engineer to review design, loads and columns stresses in area identified above.	6-weeks
4	Columns under storage areas and water tanks appear to be stressed in excess of normal design limits	Verify in-situ concrete stresses either by 100mm diameter cores or existing cylinder strength data for cores from minimum 4 columns.	6-weeks
5	Columns under storage areas and water tanks appear to be stressed in excess of normal design limits	Factory Engineer to confirm that column stresses are within acceptable limits.	6-months
6	Columns under storage areas and water tanks appear to be stressed in excess of normal design limits	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-months

Item No.	Observation	Recommended Action Plan	Priority
7	Design Check required for the loading from the water tanks (plastic and concrete) at roof level and for areas of observed high floor loading as indicated	Locations of loading noted to be surveyed and capacity of floor structure to be assessed by the Building Engineer to confirm that the floor slab is designed to carry these loads.	6-months
8	Design Check required for the loading from the water tanks (plastic and concrete) at roof level and for areas of observed high floor loading as indicated	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity including punching shear in flat slabs and column capacity.	6-months
9	Design check required for the slab cantilevers at the south of the building to confirm their load capacity to support floor and façade loadings.	Building Engineer to confirm the capacity of the slab to support the combination of the floor loading and the façade loading.	6-months