



RC CONSTRUCTION SYSTEMS

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LECTURE CONTENT

EXAMPLES OF PRE-CAST CONCRETE COMPONENTS

- Slabs
- Beams
- Columns
- Walls

PRE-CAST CONCRETE UNITS

- Building Units
- Stairs
- Drainage Units
- Toilet Units
- Finished Fences
- Special Bricks

ASSIGNMENT # 11

- Introduce Assignment
- Discuss Alternatives

PRE-CAST COMPONENTS



Slabs



Beams



Columns



Walls

SLABS



Solid Flat Slab

Span: 3.6 – 7.0 m
Width: 0.12 m
Depth: Span/ 40



Hollow Core

Span: 3.6 – 12.0 m
Width: 0.4 – 1.4 m
Depth: Span/ 40



Single Tee

Span: 9.0 – 36.0 m
Width: 2.4, 3.0 m
Depth: Span/ 30



Double Tee

Span: 9.0 – 36.0 m
Width: 2.4, 3.0 m
Depth: Span/ 28

BEAMS



Rectangular

Width: 0.3 – 0.4 m
Depth: 0.61, 0.81,
1.0 m



L-Shaped

Width: 0.45/ 0.3 m
Depth: 0.61, 0.81,
1.0 m



Inverted Tee

Width: 0.45/ 0.25 m
Depth: 0.51, 1.52 m



AASHTO Girder

Width: 0.45 m
Depth: 0.91, 1.14,
1.37 m

COLUMNS



One Story



Multi Story

WALLS



Solid Panels

Height: Up to 7.0m

Thickness: 0.09 – 0.25 m



Composite Panels

Height: Up to 7.0m

Thickness: 0.14 – 0.3 m



Ribbed Panels

Height: Up to 14.0m

Thickness: 0.3 – 0.61 m

PRE-CAST CONCRETE UNITS



Building Units



Stairs

PRE-CAST CONCRETE UNITS



Drainage Units



Toilet Units

PRE-CAST CONCRETE UNITS



Finished Fences

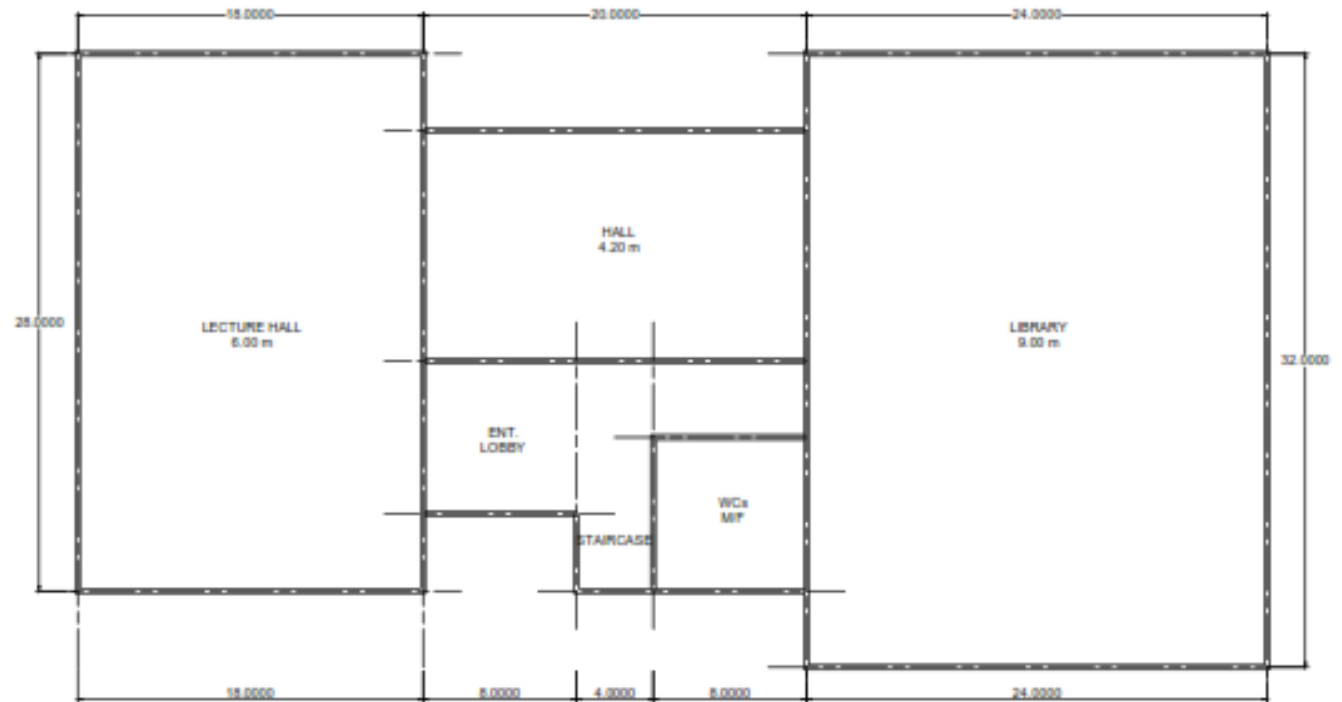


Special Bricks

ASSIGNMENT # 11

The following drawing indicates roughly plan view for a multi-purpose hall consists of a group of spaces that differentiate in functions, areas and heights. The designer intends to use RC structural systems (Cast in Site/ Pre-Cast). You are required to:

- Choose the suitable structural systems for these spaces.
- Design the main elements of these systems. You should determine the parameters of all elements.
- Draw to scale 1:100 Detailed Plan, looking-up plan and cross section showing all systems.



CONTACTS



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Saturday, Sunday and Tuesday ... 9:00 am to 2:00 pm



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