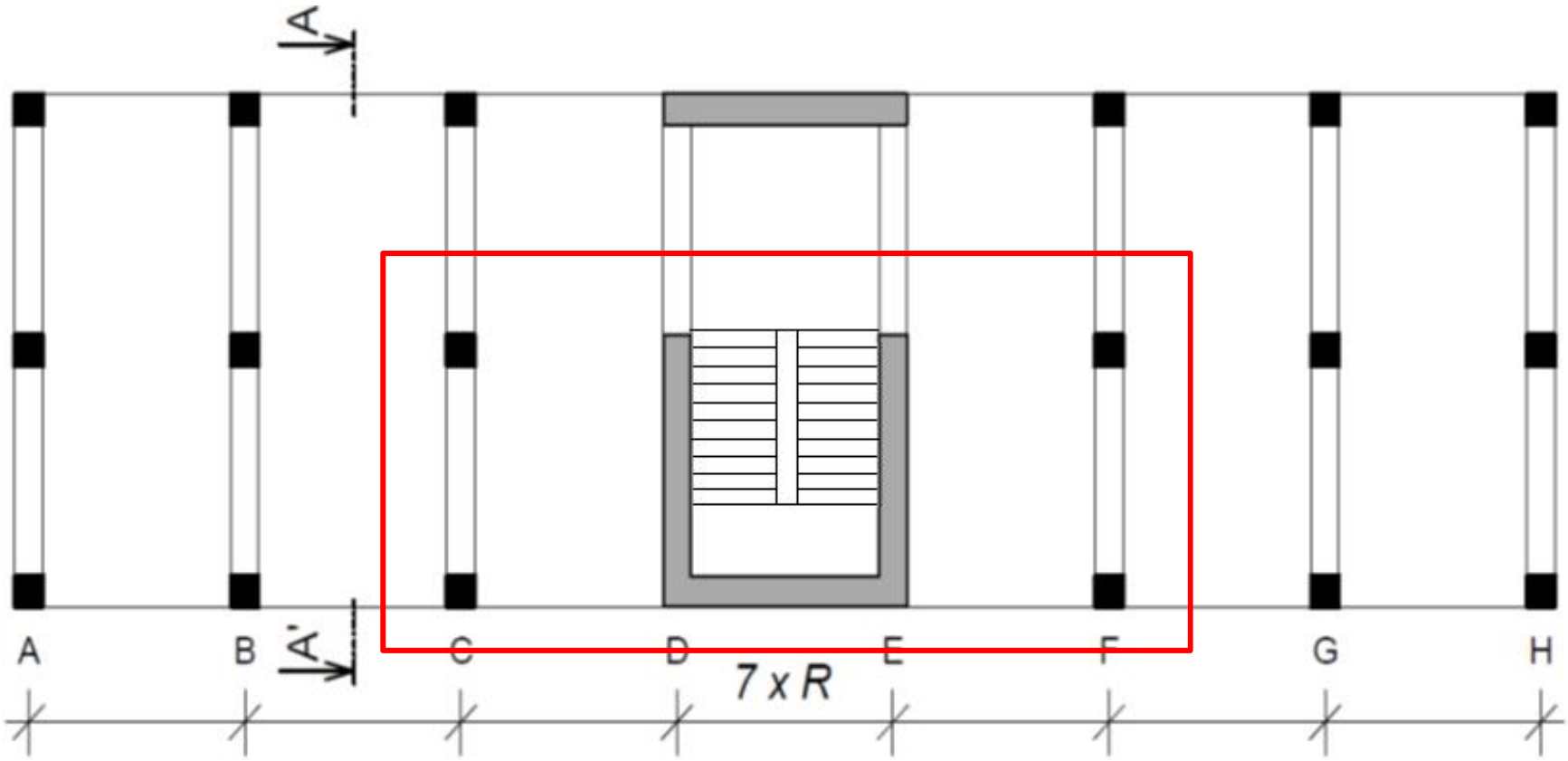
6th task:
Structural drawing



Structural drawing

- Draw structural drawing of a part of the structure from 1st task with the staircase from 5th task
- Hand made or CAD – your choice
- Use 1:25 scale (because of the staircase details; usually you use 1:50 or 1:100 scale for global structural drawings)
- If the drawing is bigger than A3, you can draw it on more papers and connect them with adhesive tape

What is structural drawing?

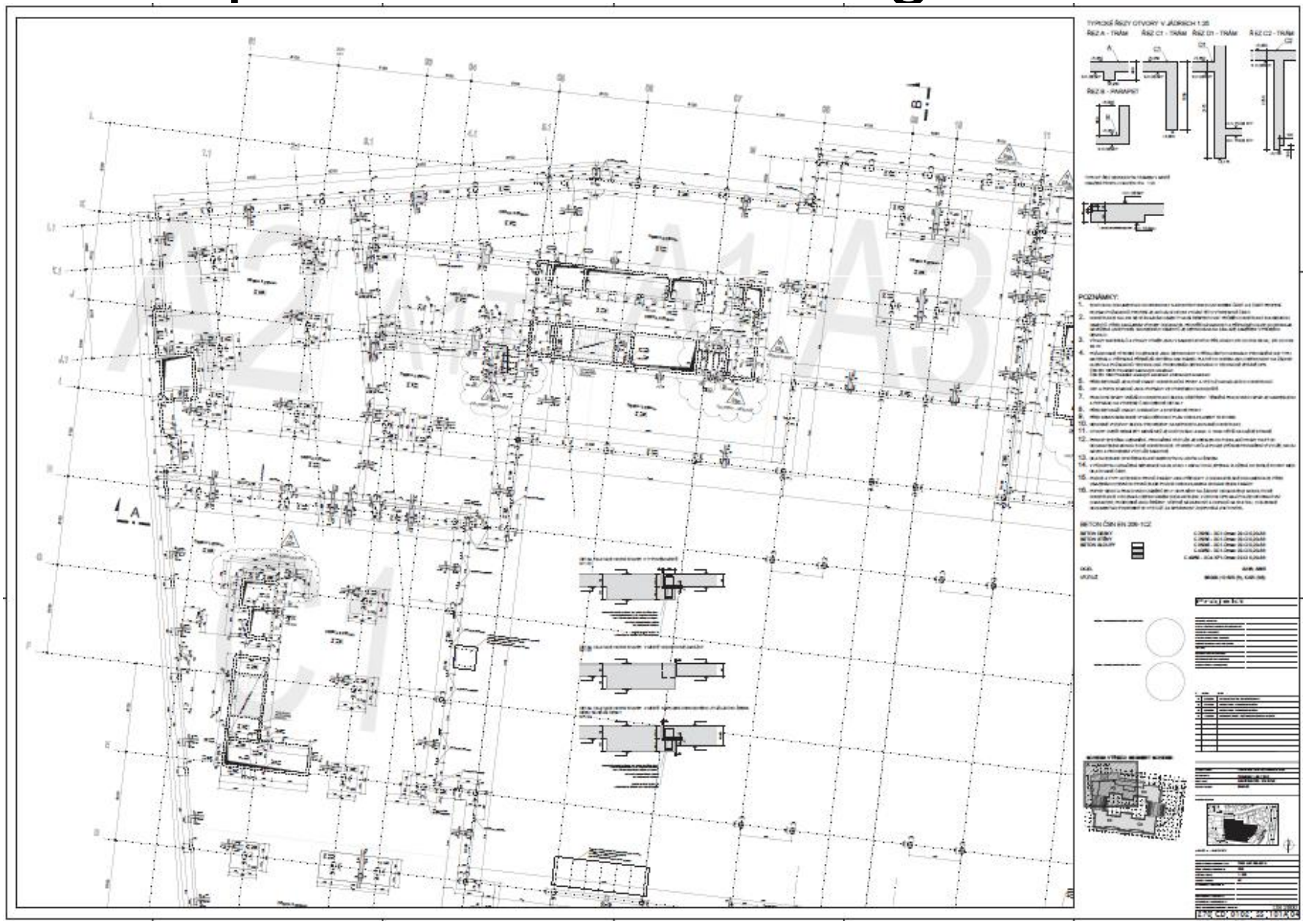
- Edges that you can see if you look into the formwork of the ceiling structure + outline of the load-bearing elements supporting the ceiling

- All the elements that should be inserted into the formwork before concreting should be drawn (anchors, sound and thermal insulation elements etc. – NOT the reinforcement)

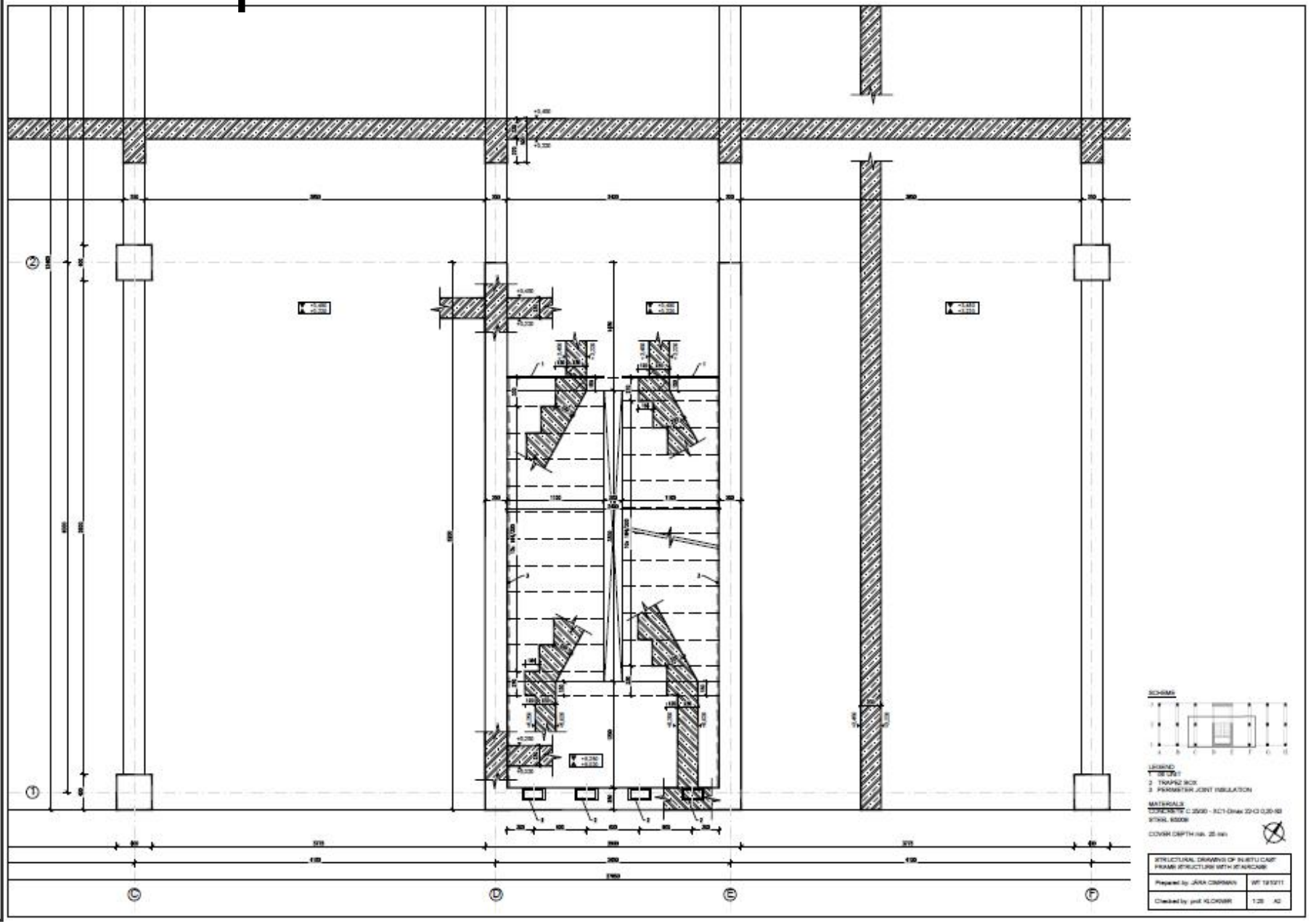
Contents of structural drawing

- Structural grid with numbering
- Plan of the structure
- Sections describing all different details in the structure (workers on the construction site use the drawing to prepare the formwork)
- Legend of materials
- List of special elements (anchors, insulation...)
- List of precast elements (if they are present in the structure)
- Notes (as little as possible)
- Drawing title

Example – real drawing



Example – homework



Line types

- Edges of horizontal structures (beams, slabs, openings) – thin solid line
- Edges above the main formwork (steps) – thin dashed line
- Edges of vertical load bearing structures – bold solid line
- Axes – thin dashdot line
- Edges in section – bold solid line
- Hatches – thin line
- Dimensions – very thin solid line, height of the letters and numbers at least 2 mm on the paper

Dimensions

- Dimensions and positions of all the elements and edges must be clearly specified
- Total dimensions of the building – outside the structure
- Structural grid dimensions – outside the structure
- Dimensions of vertical load bearing structures – outside the structure if possible
- Dimensions of beams, openings – inside the structure
- Dimensions of sections – in sections
- Ground elevations – plan and sections