

- **DESIGNATION OF THE WALL CONSTRUCTION**

- START WITH:

- ARCHITECTURAL CONCEPT
- FUNCTION OF THE WALL → requirements (stability, separation, insulation etc.)
- Product / Material selection
 - dimensions, fabrication
 - consider solid sections and openings
- WALL UNIT RULES
 - building block sizes are modular
 - elements outside of the modular system

pillar, solid wall, opening, free span, etc. dimensions should be designated to be simple multiplications of the block+gap size of the building block used.

 - horizontal modularity
 - Layout of bricks in a given wall length (standard solid small brick)
 - Arrangement → “play” with mortar joints, detailed in book pages #40-45
 - vertical modularity – **sketches**
- Role of the reinforced concrete ringbeam – must be located at the connection of slabs and load bearing walls!
 1. distributes, equalizes concentrated loads
 2. twisting forces, weights are distributed on longer wall parts
 3. takes up horizontal forces and transfers these to the slab
 4. keep the walls in position
 5. spans openings
- Ringbeam types
 - full size
 - reduced size
 - with face brick
 - unified with beams over openings
- Typical errors of wall constructions

possibly:

 - inaccurate defining / set out
 - not even / vertical surface
 - too dense or too light mortar (setting)
 - not keeping bonding rules
 - the use of dry block units (dipping, soaking)
 - joining of different, non-comform elements (different λ)
 - winter construction

PARTITIONS

- Not a load bearing element
- load for the slab, or self supporting

Tasks:

- noise
 - keeping equipment's, furniture's
- smell
 - nowadays: holding the pipes, cables,
- view
 - special cases (cold store, studio,
- drought
 - special functions)
- classification of partition walls - according to structural construction:
 - SMALL brick, laid, plastered walls
 - standing BLOCK, mortared, plastered walls (partition blocks)
 - standing, glued PANELS, non-plastered walls (gypsum-ceramic, gypsum-pearlite, gypsum-PS foam), (round hollow gypsum-pearlite, gypsum rib planks)

- WALL SIZE large block partitions (panel system)
- WALL SIZE on-site manufactured partitions (poured, sprayed concrete walls)
- ASSEMBLED ribbed, studded Light construction partitions (RIGIPS drywall)
- Different types- according to loadbearing - self supporting or not – **sketches**
 - wire lattice wall, arch - self supporting
 - from brick, block (sl. ratio - reinforcement) - load
 - light constructions load – but small

Stability:

- How is it staying there? What from? Why?
- folding wedges - diagonal is longer than height
- wall strength vs. slenderness ratio
- What, if too high?

Connections to the surrounding structures:

(for all the three case!!!) Sketches

- bottom, top
- corner, “T” joint
- ... to load bearing wall

Internal apartment walls without doors

The air **noise** insulation minimum value requires 10 cm-es partition wall block wall construction, or equivalent..

Walls between living / sleeping room space and bathroom

Due to the allocation of piping and fixtures, dual layer wall construction is necessary. This is satisfied, for example, by a dual layer wall constructed from either 10 cm or 6,0 cm thick ceramic partition wall blocks.