

**Architectural Project Crafts
Development Center
in Zugdidi**

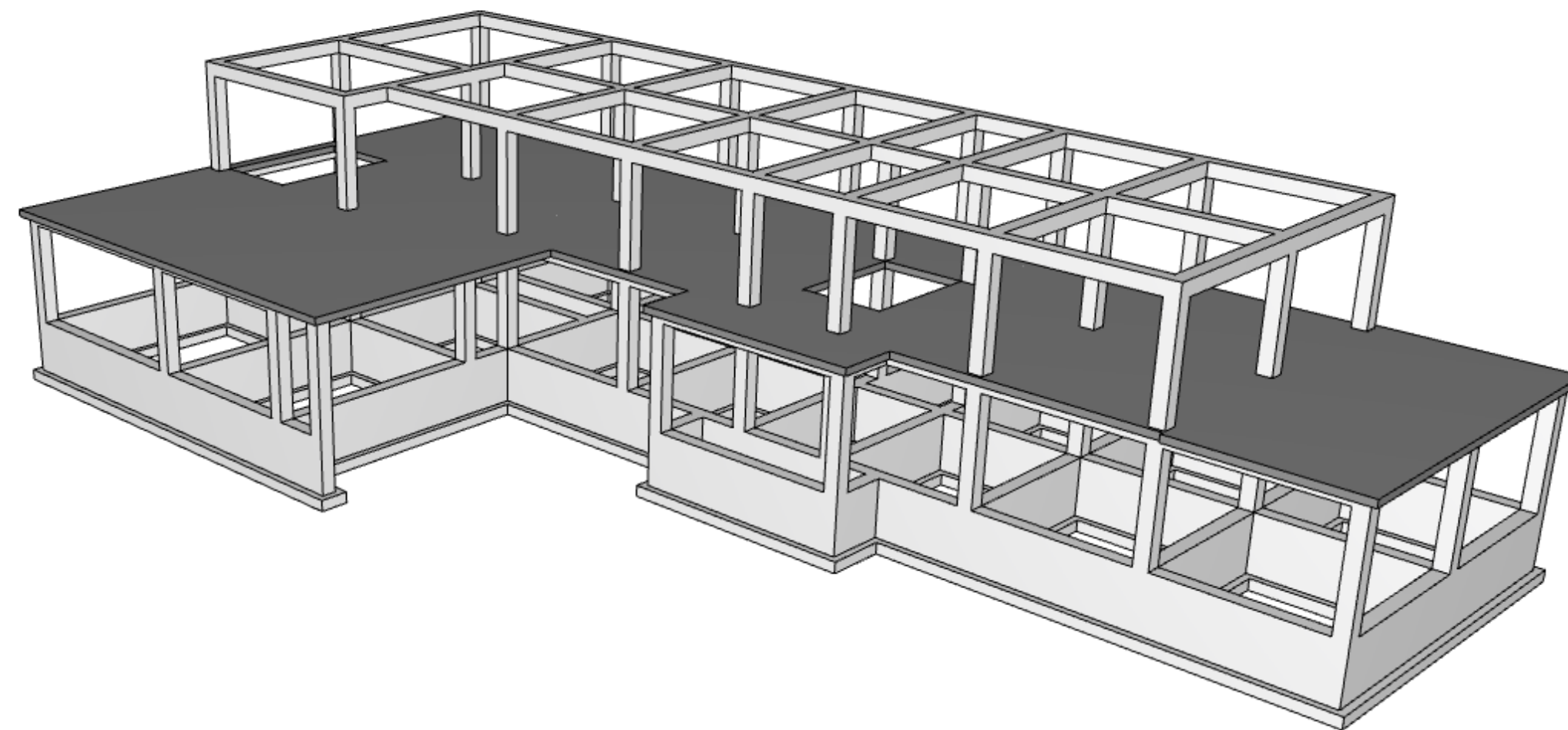


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Explanatory Note

General Information

The construction site (cadastral code of the land plot 43.31.69.443) is located in the town of Zugdidi, according to the norms - "Construction Climatology" the climatic characteristics of the construction site are:

- The average temperature of the year: + 13.8 ° C
- Absolute maximum temperature: + 40 ° C
- Absolute minimum temperature: - 19 ° C
- Annual precipitation: 1723 mm
- Weight of snow cover: 0.5 kPa
- Standard depth of seasonal ground freezing - 0 m
- Standard wind pressure: 0.3 kPa
- The prevailing wind direction: East
- According to the map of seismic zones, Zugdidi belongs to a seismic zone of magnitude 8.

From the engineering geological point of view, the area allocated for construction is in a satisfactory condition, no physical-geological events (landslides, collapses, etc.) are observed.

-Based on the geological survey (attached to the project) the foundation is taken II engineering-geological element with the following technical specifications:

Engineering-geologic element II - Clay, with reddish, brown and rusty stains, firm

E-G Eleme nt II	Characteristics of physical-mechanical properties	Index	UoM	Numeric value
1	Density	ρ	g/cm3	1.74
2	Frame density	ρd	""	1.42
3	Solid particle density	ρs	""	2.72
4	Porosity	n	%	47.71
5	Porosity coefficient	e	particle	0.912
6	Humidity	W	%	22.7
7	Moisture at the edge of fluctuation	WL	particle	41.85
8	Moisture at the edge of plasticity	Wp	""	22.73
9	The number of plasticity	Ip		19.21
10	Index of liquidity	S		-0.02
11	Angle of friction inside	φ	Degree	14
12	Specific traction	C	kPa	0.25
13	Deformation module	EO	mPa	15
14	Reporting impedance	RO	kPa	200
15	Poisson's ratio	μ		0.38

The report of the building construction scheme is executed in the program "LIRA-SAPR".

The building presented in the project is a two-storey stone building, the floor level of which is raised by an average of 0.5 meters from the ground floor (including the walkway).

The ground floor mark 0.00 corresponds to the absolute mark 105.45 The floor height of the building is 3.3 meters.

Natural sand-gravel mixture (fraction 0.5-70 mm) with density p = 1.85 g / cm3a and deformation modulus E = 50 MPa should be used for backfilling and arrangement of the embankment. It is necessary to compact it in layers every 20 cm in height with a vibrating machine.

The pad foundations are designed under which a gravel cushion is arranged.

The hearting of external walls is fulfilled with a reinforced masonry of small pumice blocks 30 cm thick, with a brick-textured cladding on the main façade.

The bearing structure of the building is a spatial frame structure composed of a complex reinforced concrete frame, reinforced concrete columns, monolithic reinforced concrete slabs, and reinforced concrete roofing slabs.

The partitions are made of a small reinforced pumice blocks with a thickness of 10 cm.

The mark of small pumice blocks is not less than M70 (volume weight 800 kg / m3), therefore the mark of the mortar used for the masonry should be not less than M70.

Floors in bathrooms are finished with tile, and in rooms with wooden planks (deck). Floor warming is done with XPS tiles, while ceiling warming is done with glass-wool.

The suspended ceilings of the toilets and the kitchen are made of plastic, while in the rooms they are made of plasterboard.

The bearing structure of the roof is made of wood, and the roof is made of painted metal tiles.

The windows are made of PVC with double glazing.

Entrance doors are made of steel and iso-aluminum, metal in the WC and bathroom units, and wood in the rooms (so-called MDF).

External stairs and platforms are finished with natural stone.

Concrete walkways are arranged around the building.

B25 grade concrete is used in the monolithic constructions of the frame.

The external surfaces of the foundation walls, columns, and foundation slab shall be treated with bitumen mastic up to the 0.00 marker, and waterproofing should be arranged in two layers before the backfilling of the soil.

Dimensions in the drawings are given in millimeters and meters, markers in meters. All sheets of the construction part are considered as one whole and when considering any sheet the data of other sheets as well as architectural drawings should be taken into account.

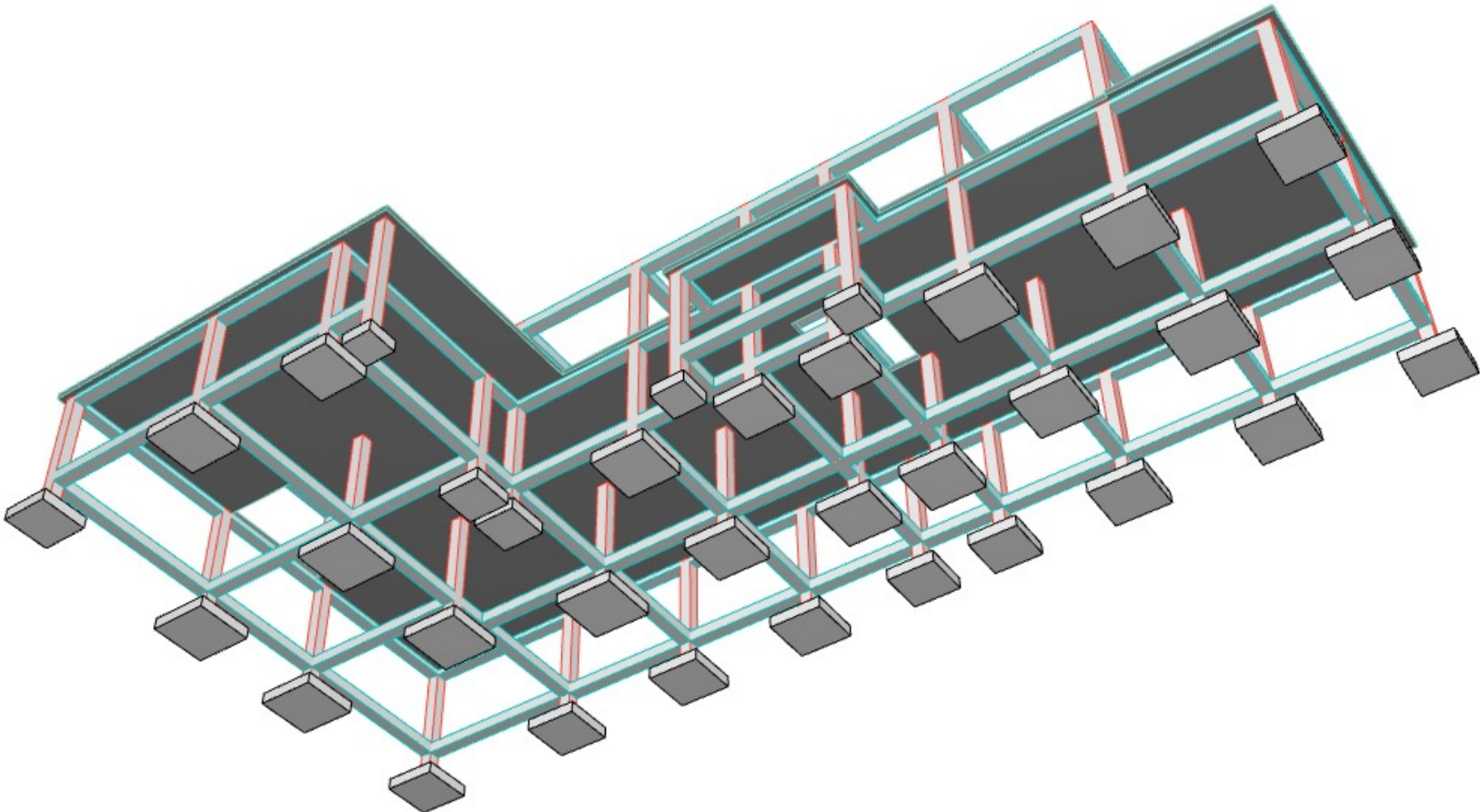
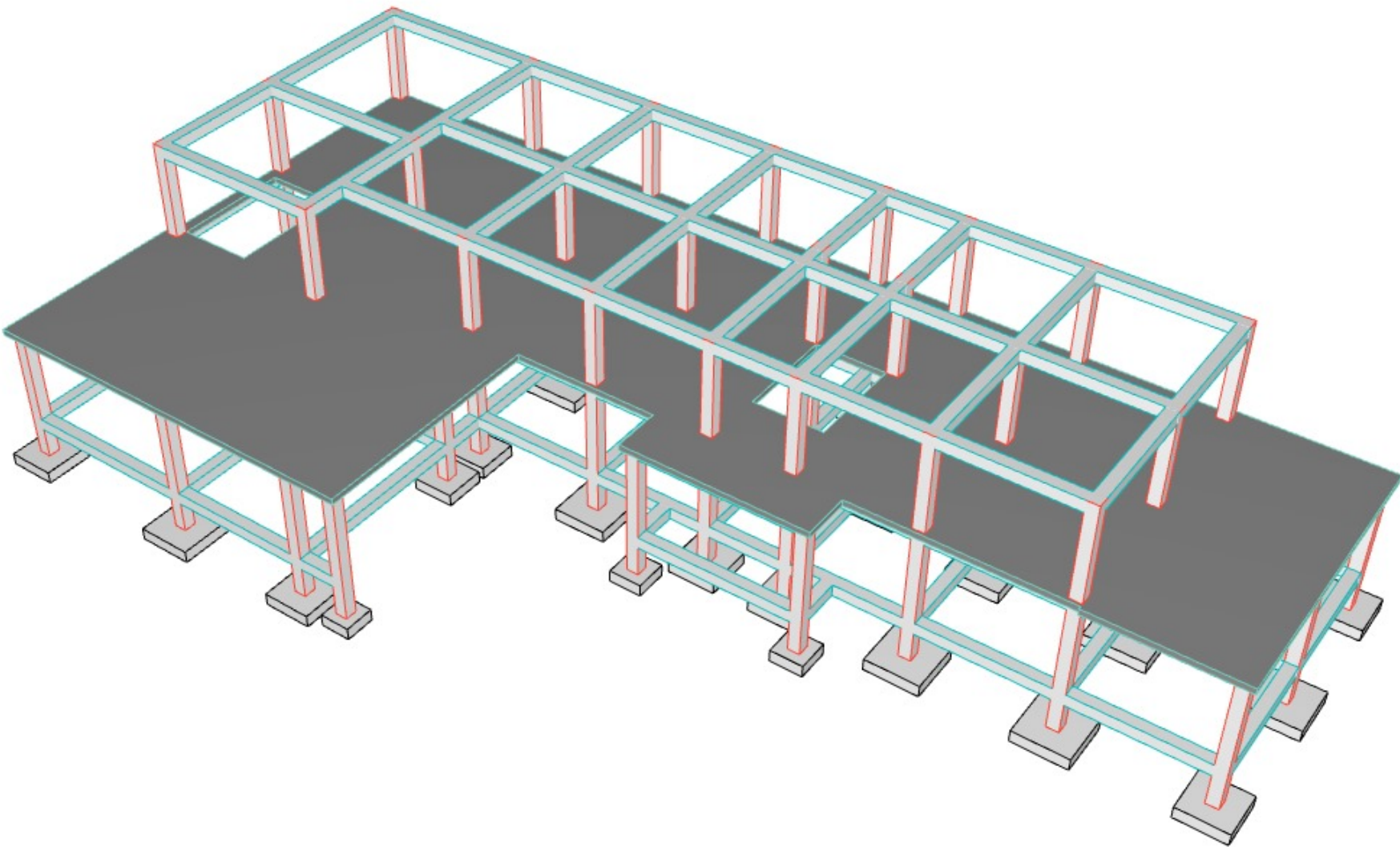
Bending of structural reinforcement elements must be done in a cold mechanical manner.

After excavating the pit, the condition of the soil must be additionally assessed so that the foundation construction can be adjusted.

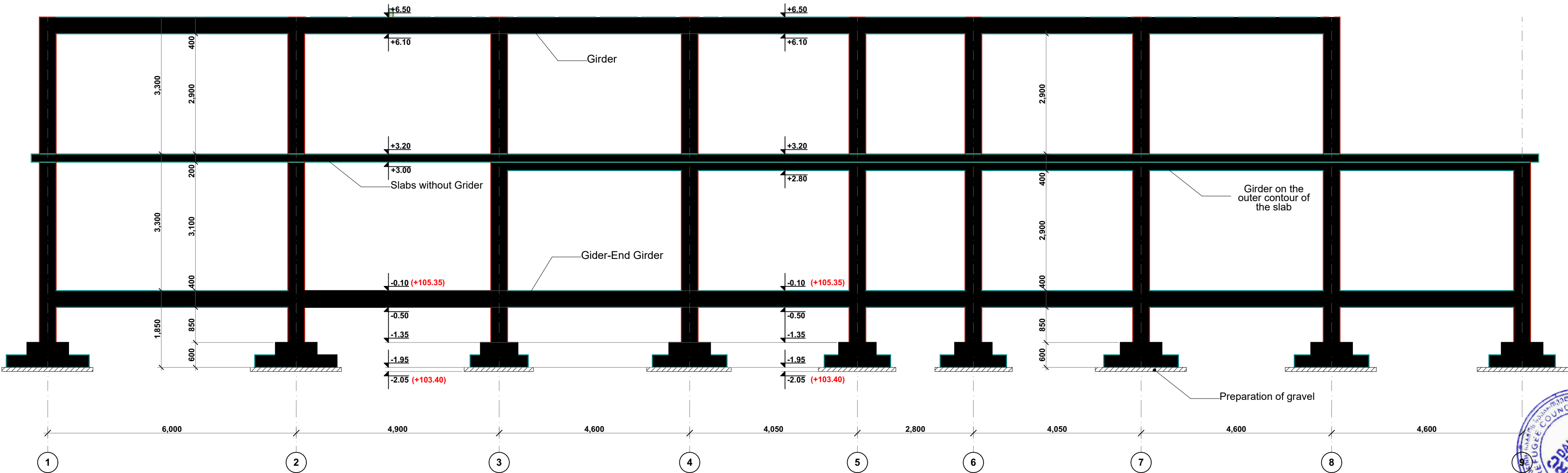
All changes made to the project during construction must be agreed upon with the project authors.

პროექტების დროს გამოყენებული ლიტერატურა:
- *CHmT. 2.03.01-84 ** - "გეტონის და რკინაბეტონის კონსტრუქციები"
- *CHmT. II-7-81 ** - "შესებლობა სეისმურ რაიონებში"
- *CHmT. 2.01.07-85 ** - "დატვირთვები და ზემოქმედება"
- *CHmT 2.02.01-83 ** - "შენიშვნების და ნაგებობების ფუძე-საძირკელები"
- *ГОСТ 14098-91* - "არმატურის და ლითონის ჩასატანებელი ელემენტების შეღებვა რკინის კონსტრუქციებში"
უხაფრთხოება: მშენებლობის პროცესში საჭიროა ვისეგმმდვანელოთ სამშენებლო ნორმების: *CHmT. II-4-80 **-ის მოთხოვნების შესაბამისად და მკაცრად დაიცვალდ უსაფრთხოების წესები.





Specific Section on a Reinforced Concrete
Structure



Community
Education
Center
in Zugdidi

Project address:
Georgia,
Zugdidi

Stage:
Architectural project

Rendering
Sections on
Structure

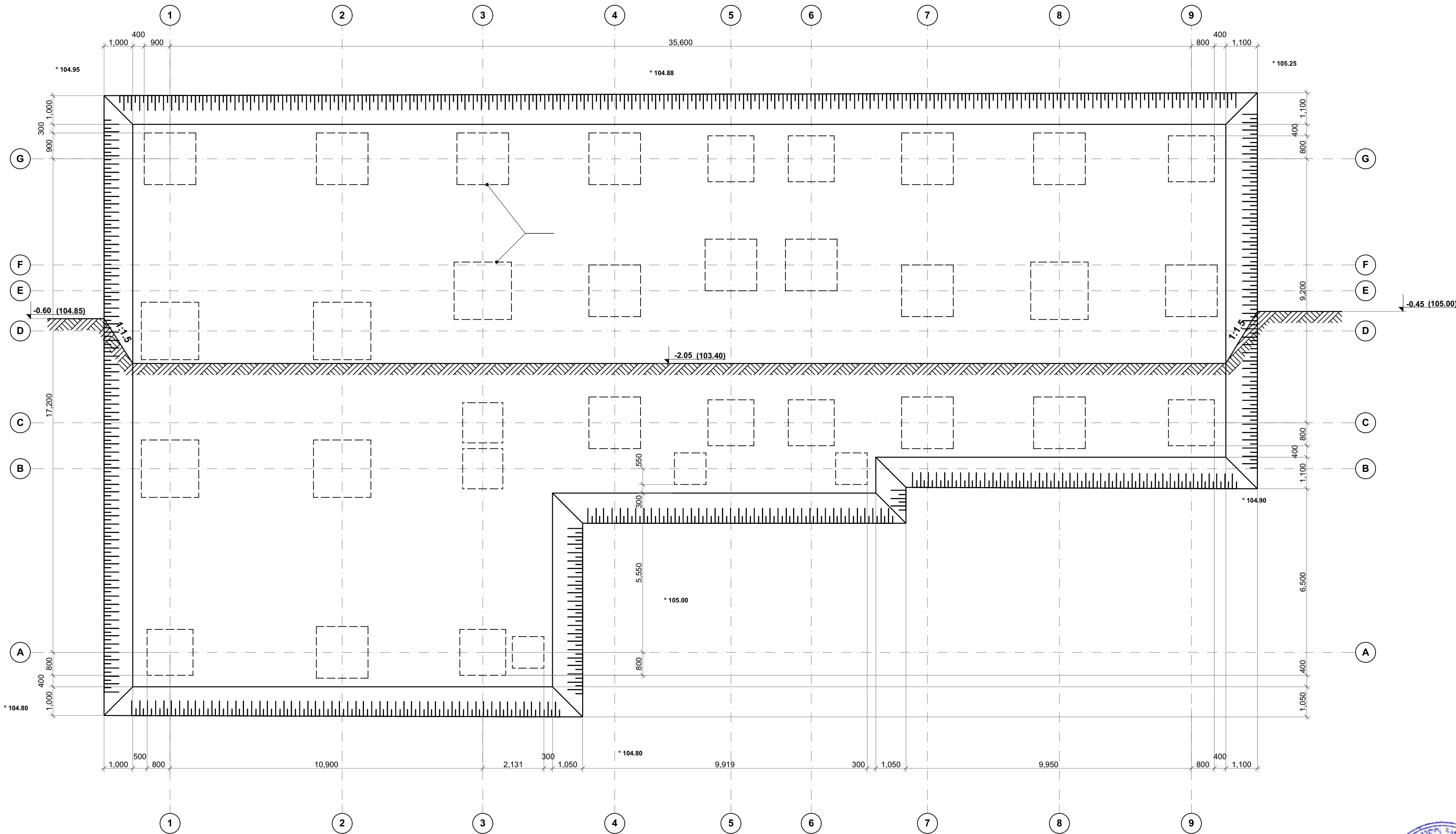
ბ. ქანთარია
B. Kantaria

გ. გერგდავა
A. Gergedava

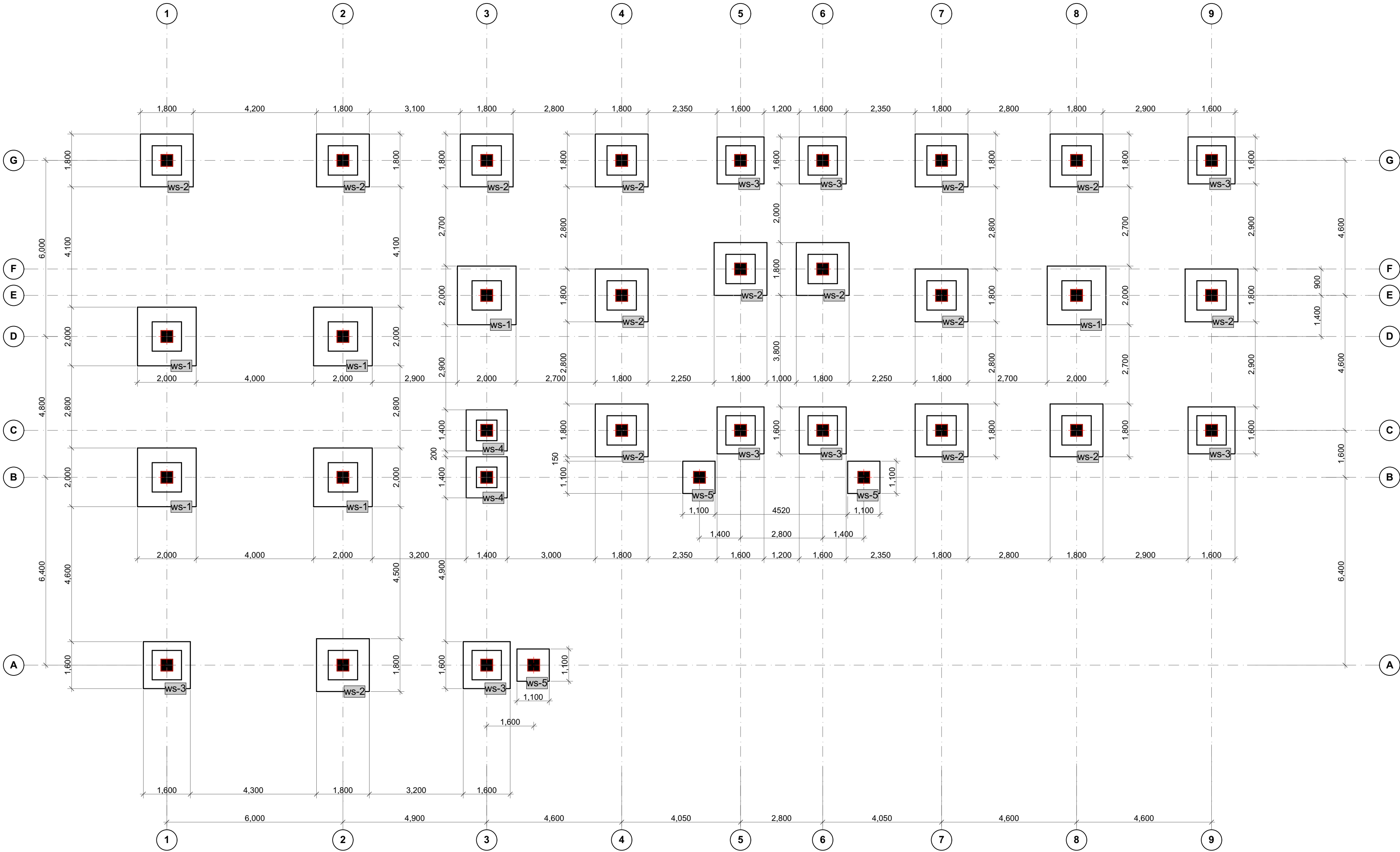
Format A - 2

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Foundation Excavation Plan

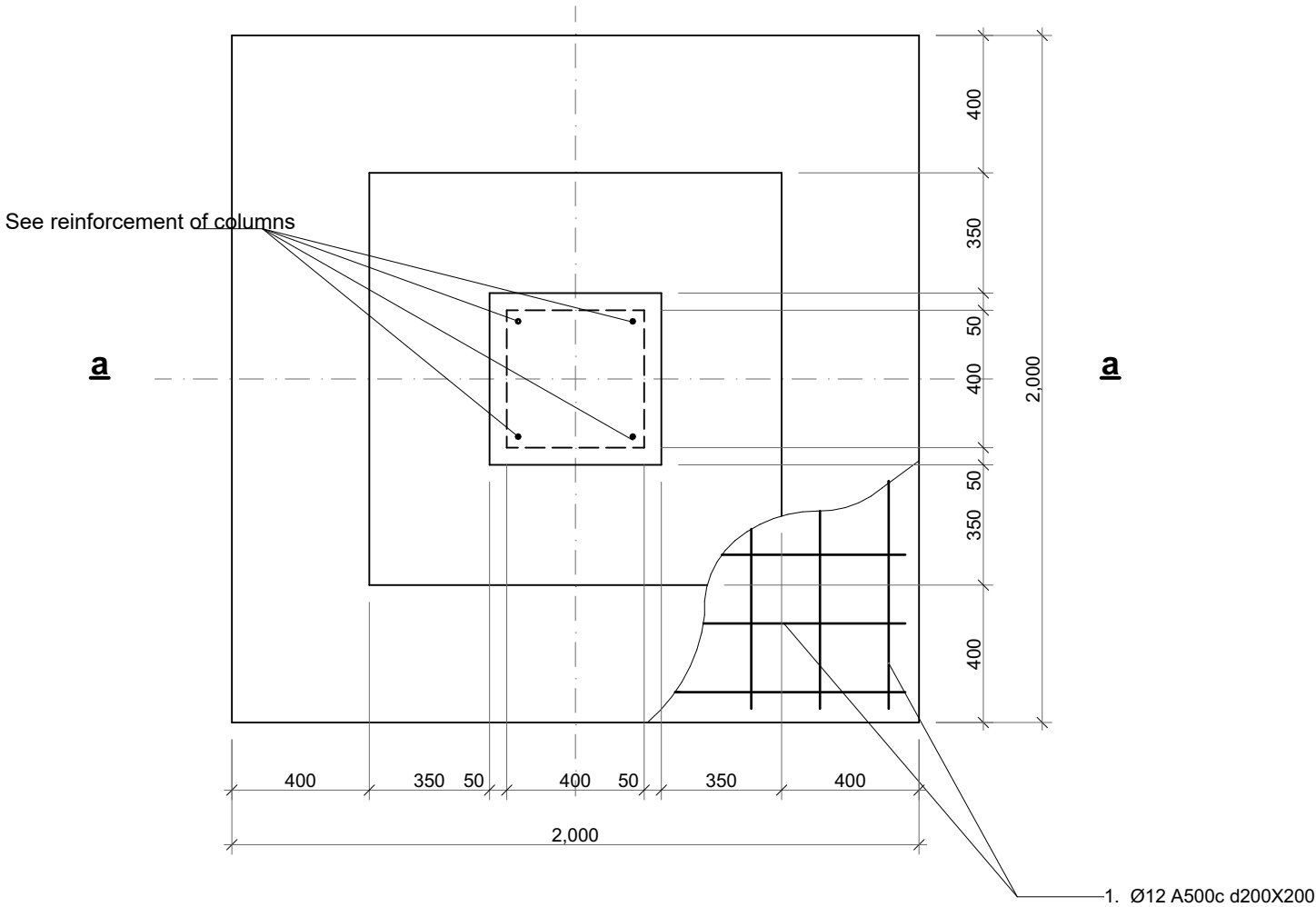


Foundation plan with marking of columns

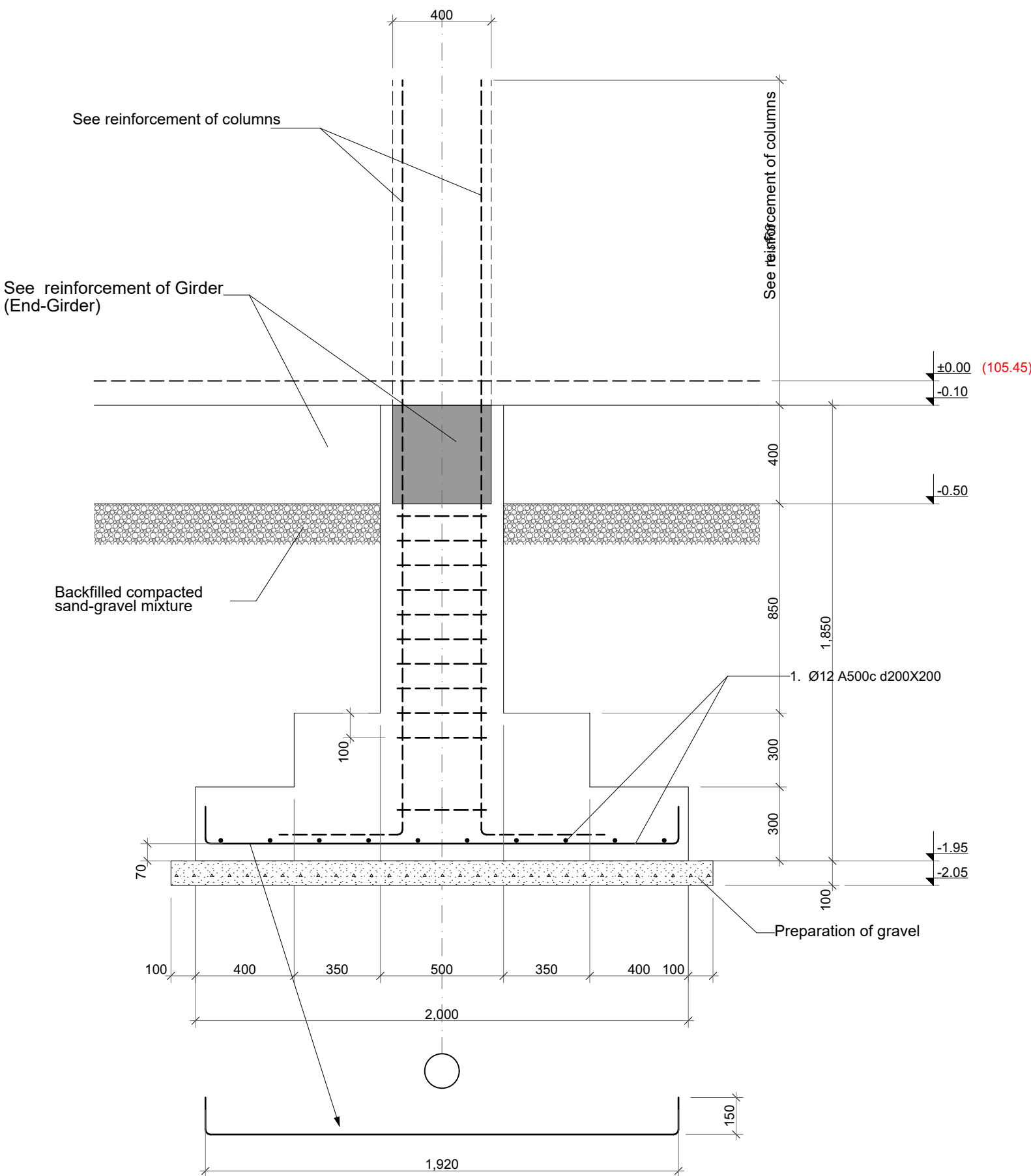


Note:
The anchors of the columns should be installed in the foundations in accordance with the drawings of the columns

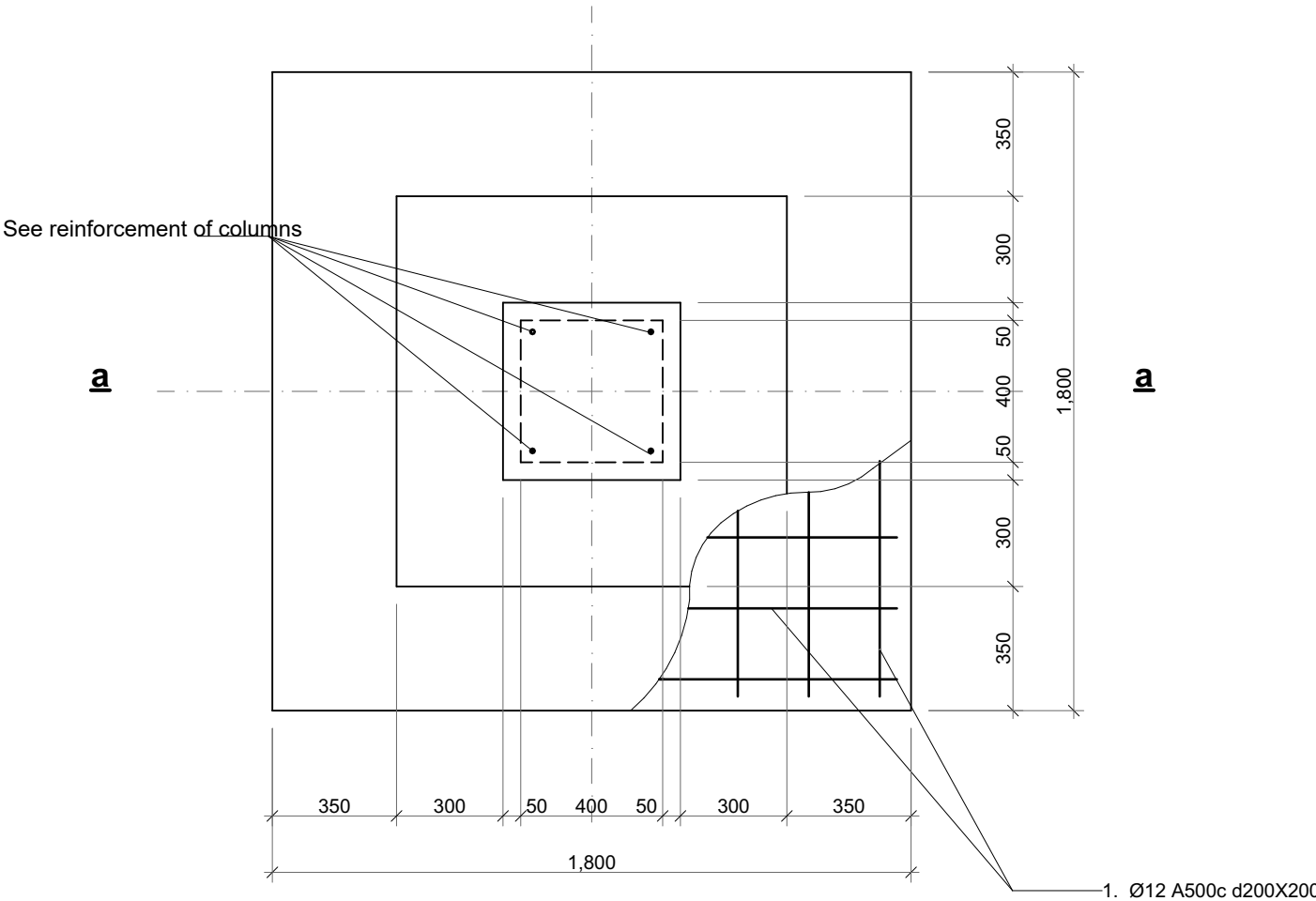
Pad foundation **ws-1**



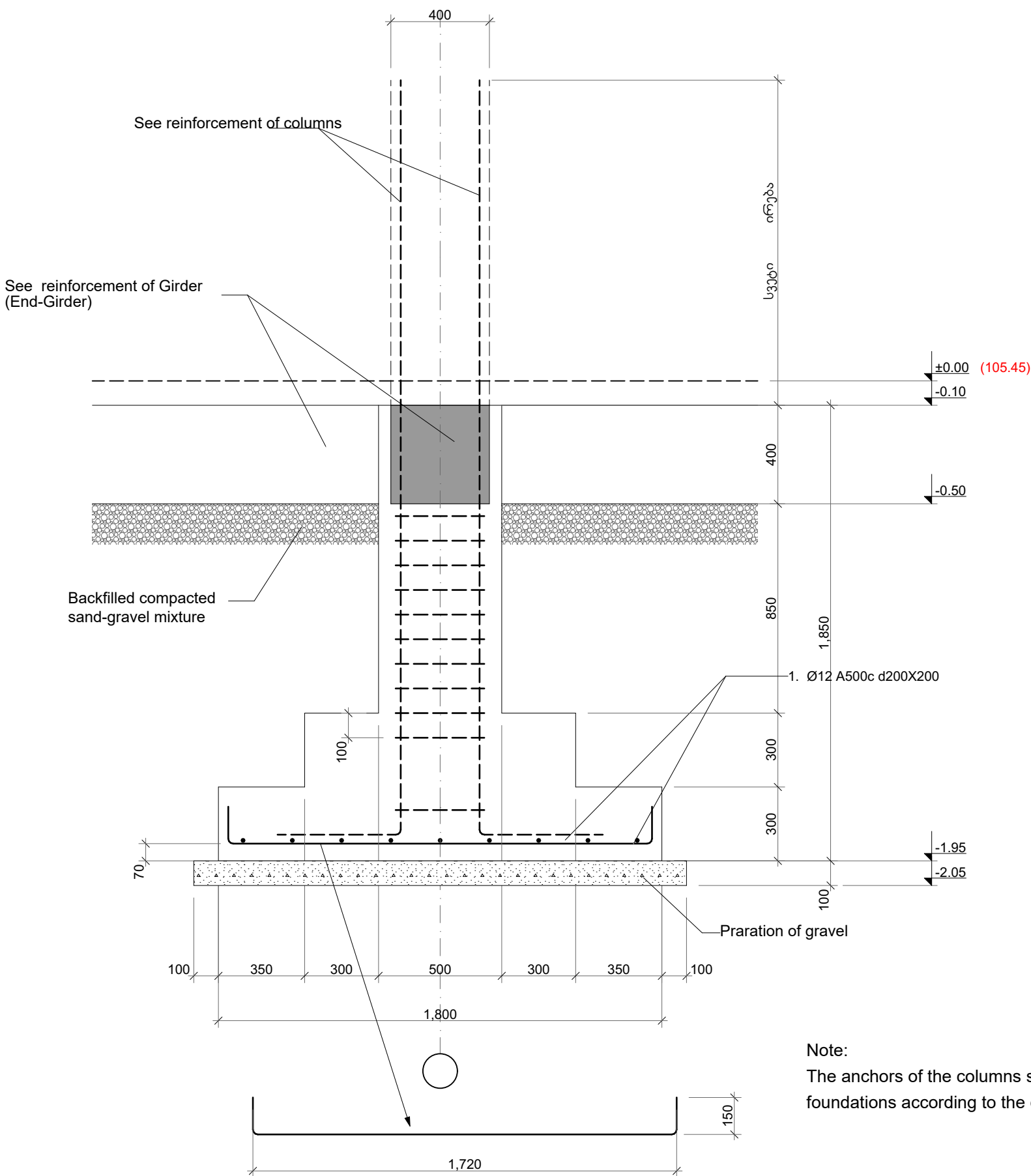
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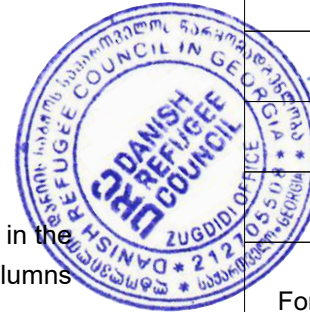
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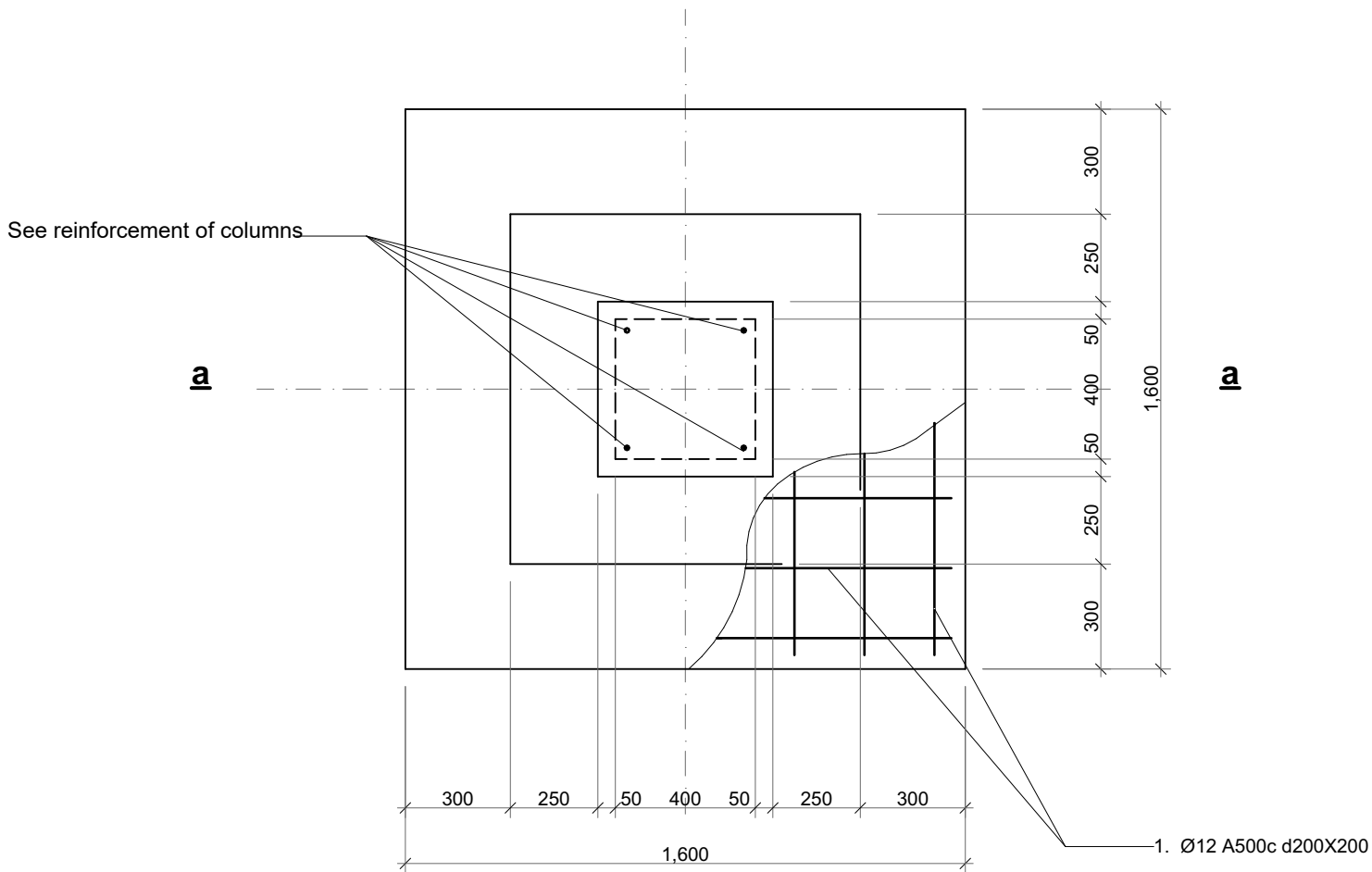
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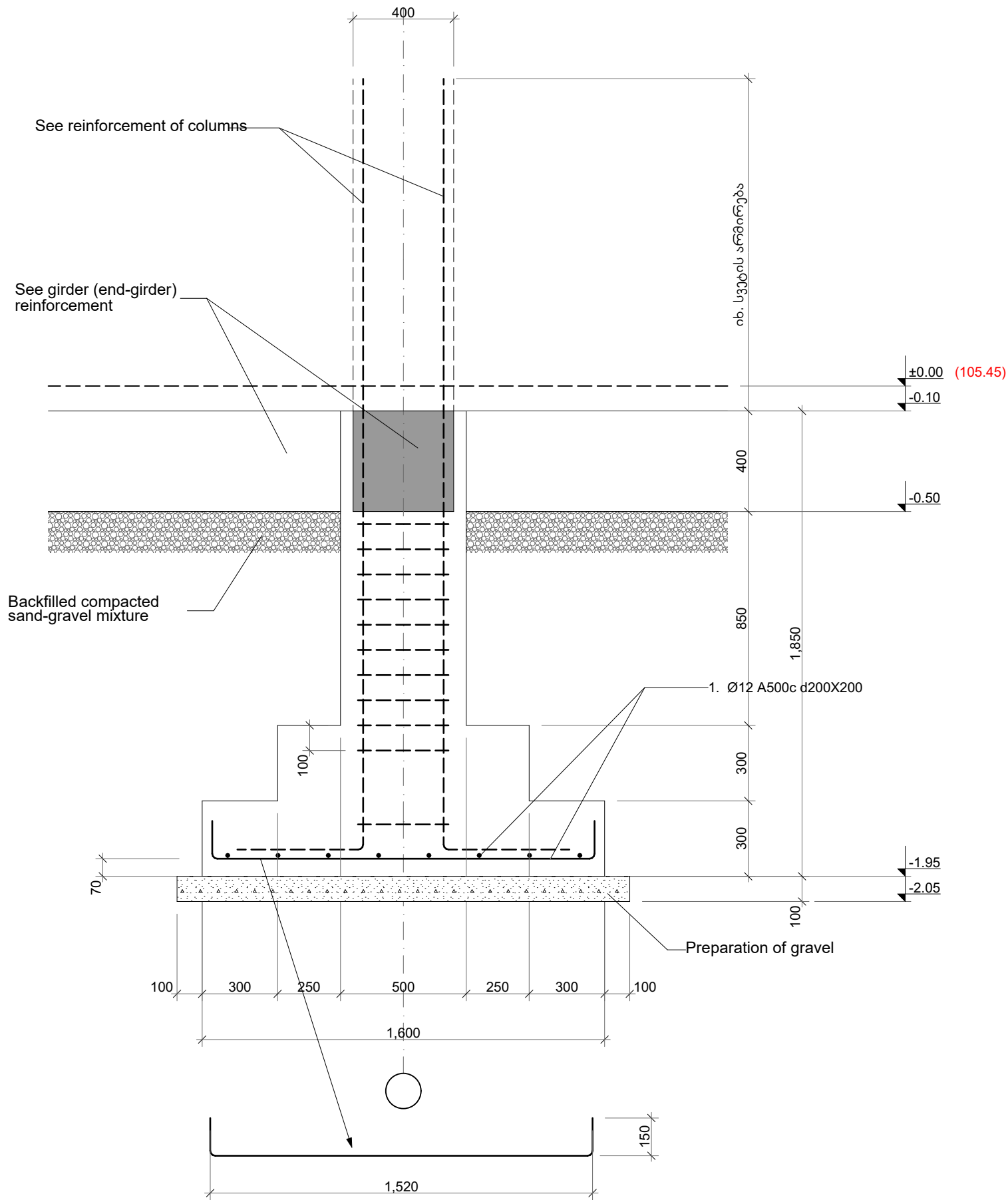
Note:
The anchors of the columns should be installed in the foundations according to the drawings of the columns



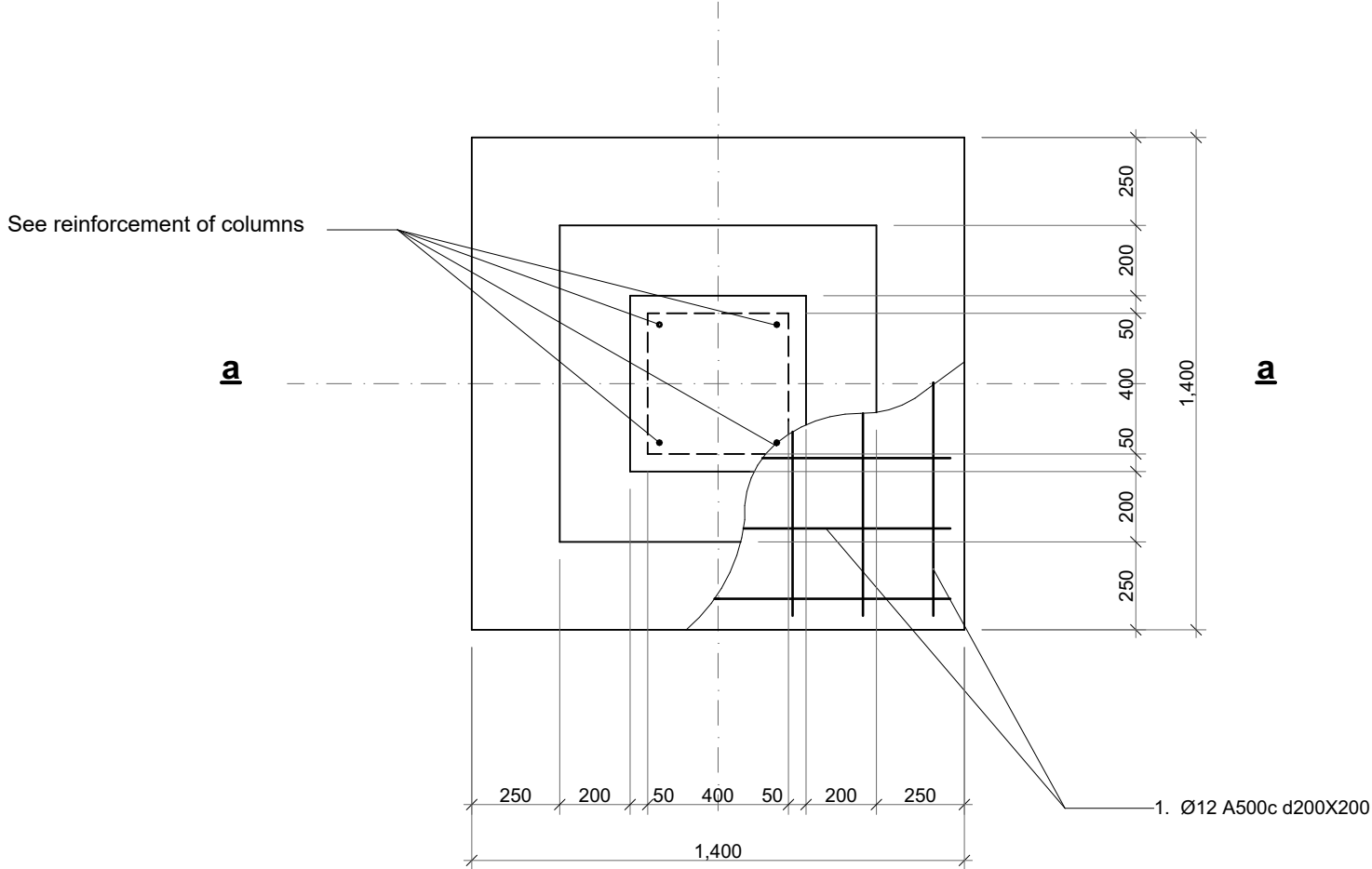
Pad Foundation **ws-3**



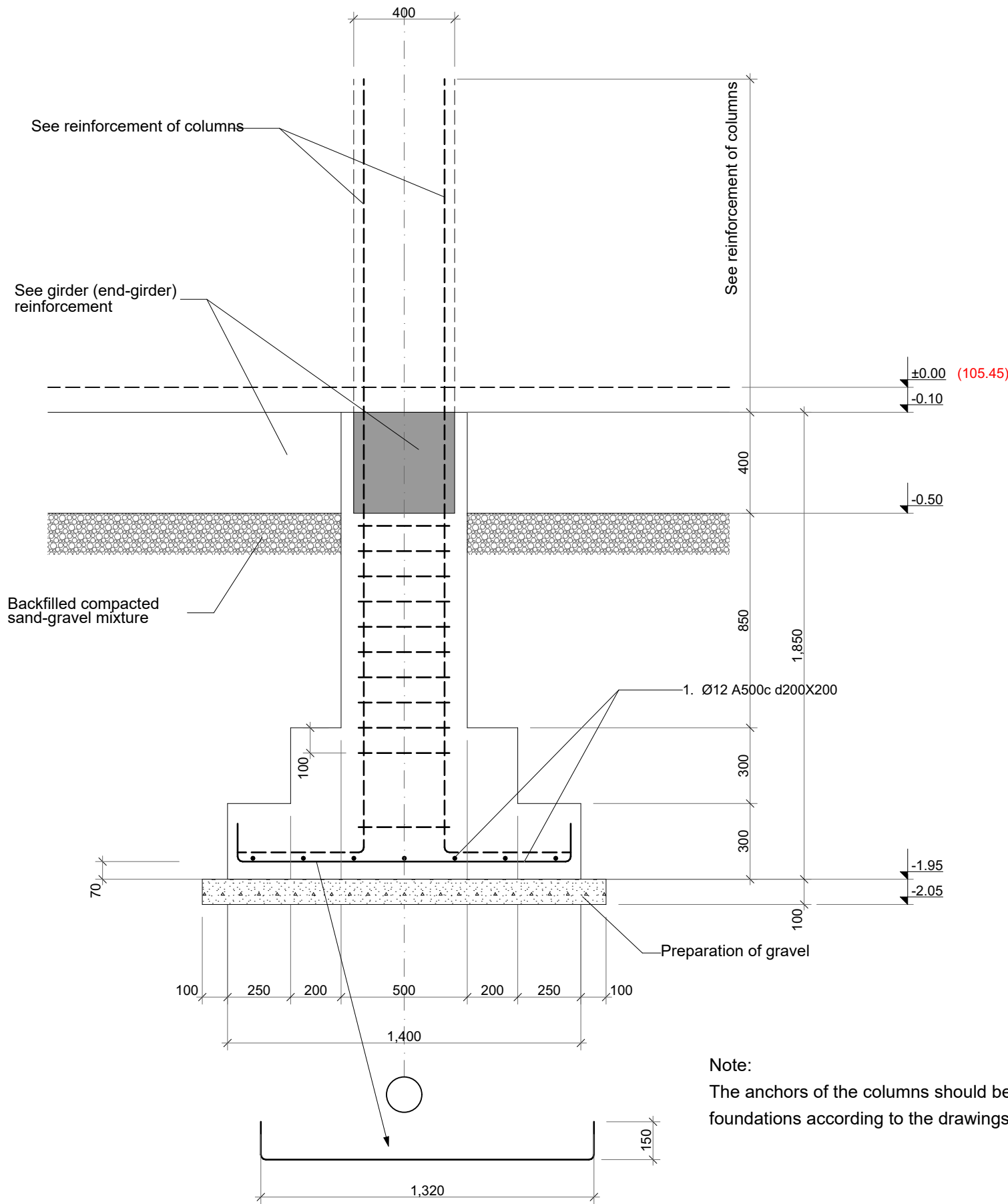
a-a



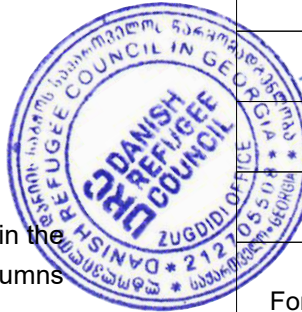
Pad Foundation **ws-4**

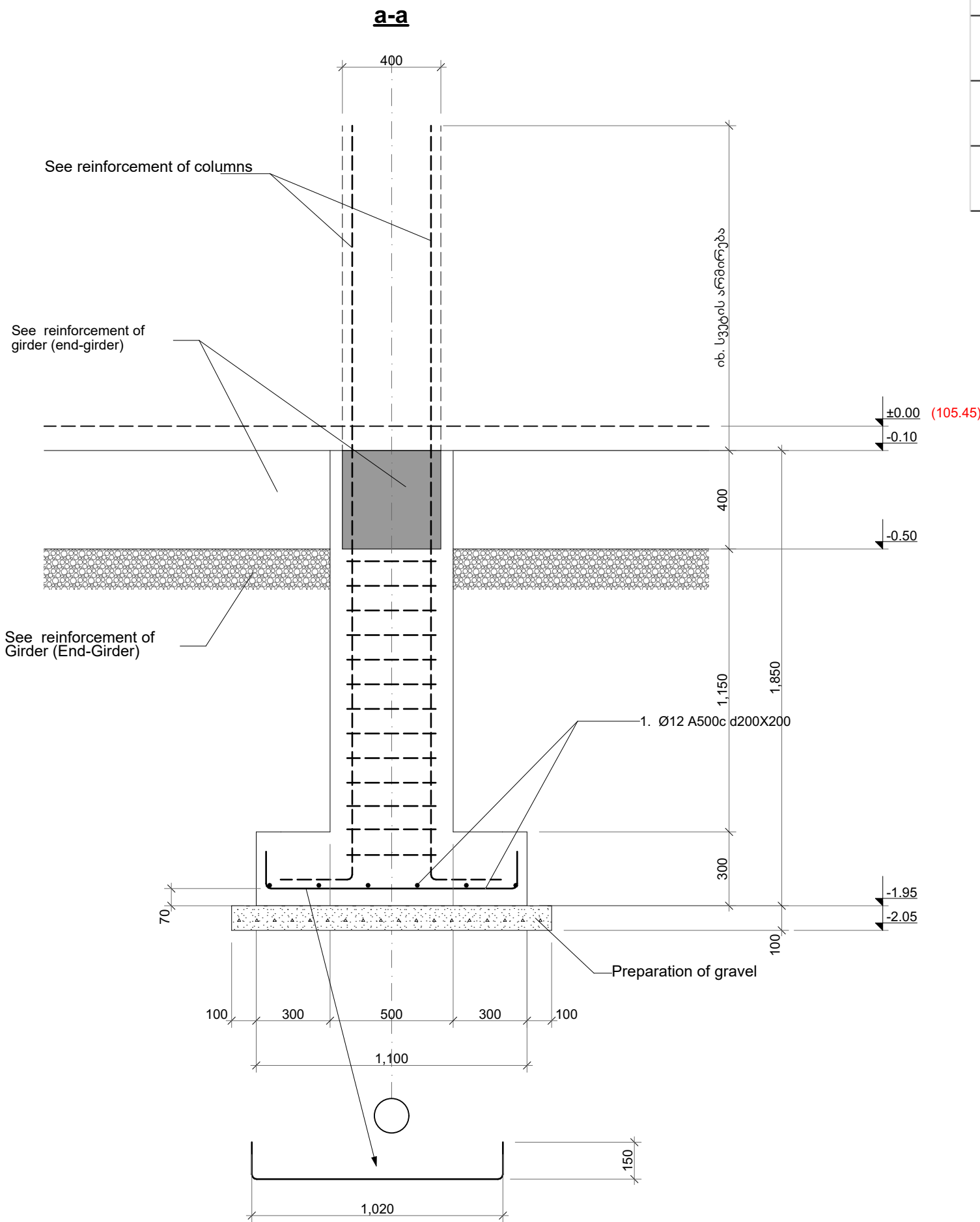
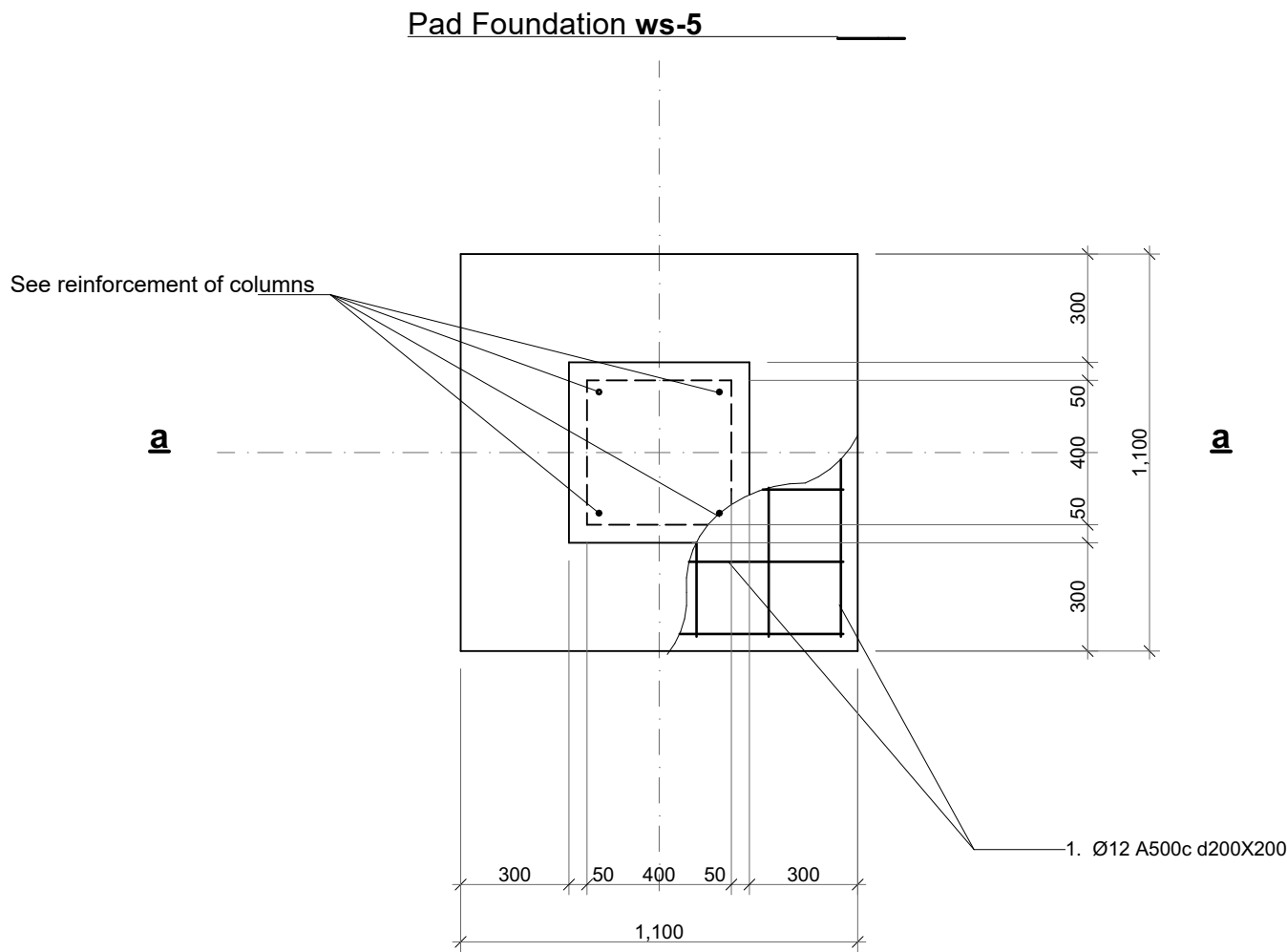


a-a



Note:
The anchors of the columns should be installed in the foundations according to the drawings of the columns



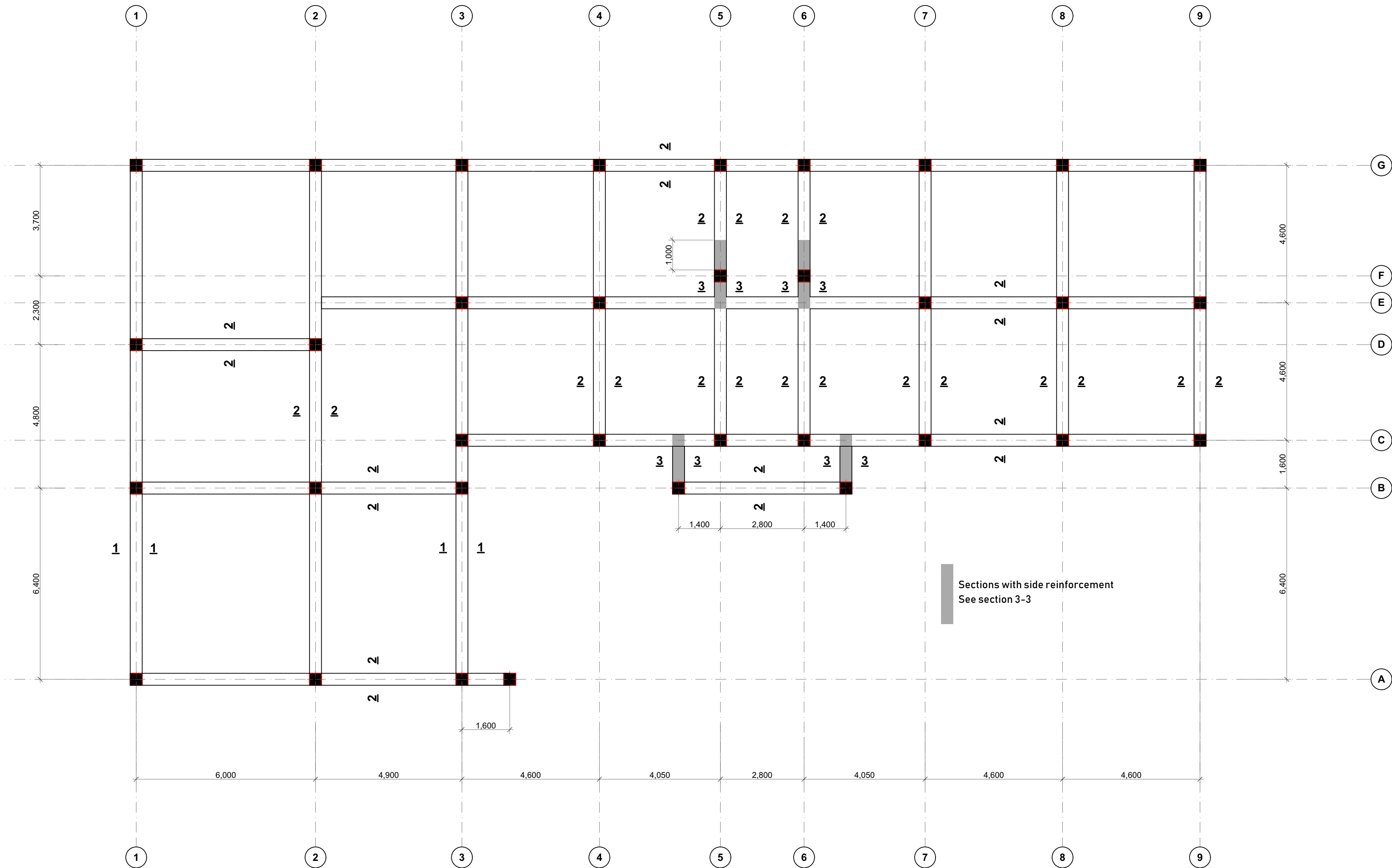


ელემენტი Element	№	Profile of the reinforcement არმატურის პროფილი	Length mm სიგრძე მმ	Qty რაოდენობა Total length m	საერთო სიგრძე მ	Concrete m3 ბეტონი მ3	Specifaion of Reinforcement არმატურის ამოკრეფა							
							კლასი Cross-section	საერთო სიგრძე მ Total length m	საერთო სიგრძე დანაკრევით მ	კლასის წონა Total length with loss m	საერთო წონა Total length, ton	საერთო წონა (კლასის მიხედვით) ტონა		
წერტილუვანი საძირკველი														
ws-1 (6 ცალი)		12 A500c	2210	120	265.2		A240c	6 A240c		0.0	0.222	0.00	0.0	
								8 A240c		0.0	0.394	0.00		
ws-2 (15 ცალი)		12 A500c	2010	270	542.7		A500c	6 A500c		0.0	0.222	0.00	1.1	
								8 A500c		0.0	0.394	0.00		
ws-3 (8 ცალი)		12 A500c	1810	128	231.7			10 A500c		0.0	0.616	0.00		
								12 A500c	1132.0	1188.6	0.887	1.05		
ws-4 (2 ცალი)		12 A500c	1610	28	45.1			14 A500c		0.0	1.208	0.00		
								16 A500c		0.0	1.578	0.00		
ws-5 (3 ცალი)		12 A500c	1310	36	47.2			18 A500c		0.0	1.997	0.00		
								20 A500c		0.0	2.465	0.00		
	ბეტონი B25 m3 Concrete m3					40.5		22 A500c		0.0	2.983	0.00		
									25 A500c		0.0	3.851		
								სულ Total			1.05			

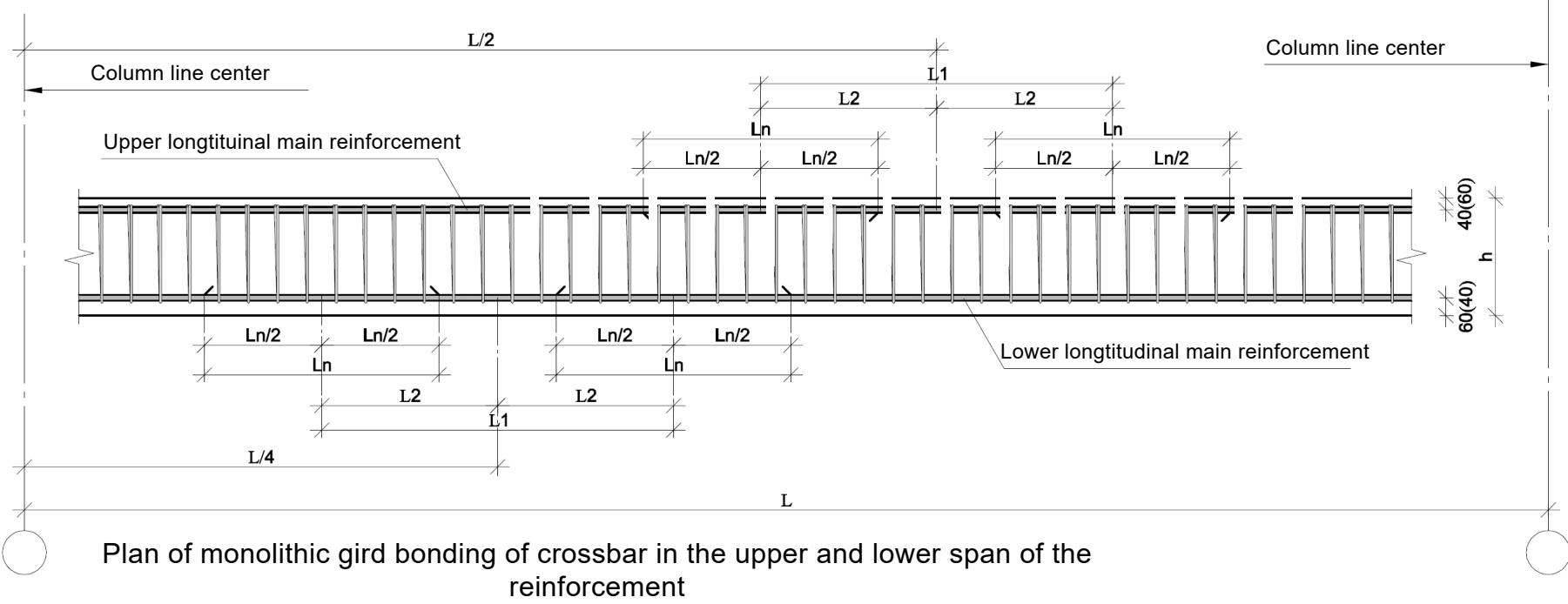
Note:
The anchors of the columns should be installed in the foundations in
accordance with the drawings of the columns



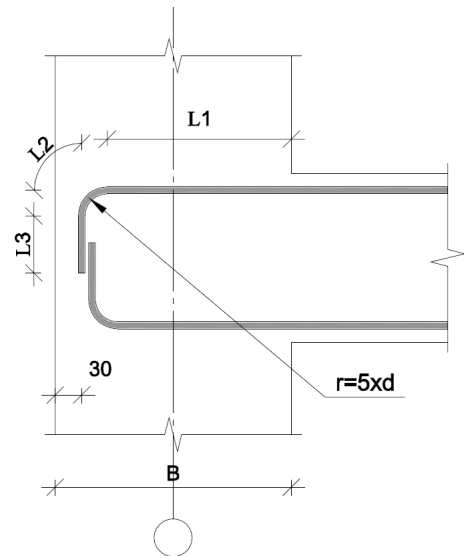
Girder (end-girder) plan at -0.100 mark



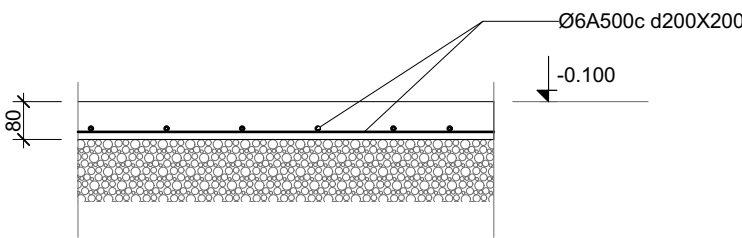
Locations of monolithic gird bonding by crossbar in the upper and lower span of the reinforcement on a vertical plane



Fixing (bending) node of gird in the upper and lower reinforcement column



Reinforcement of floor slabs



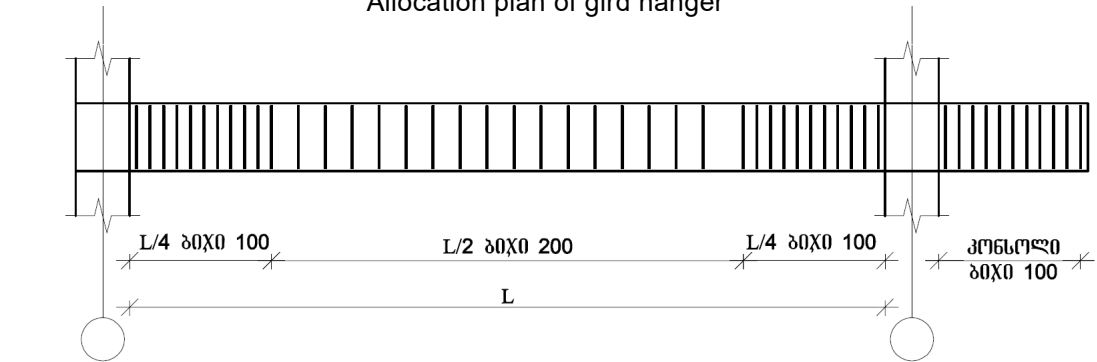
Parameters of gird bond crossbar in the upper and lower reinforcement

გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)
Ø16 A500C	640	960	480	1600
Ø18 A500C	720	1080	540	1800
Ø20 A500C	800	1200	600	2000
Ø22 A500C	880	1320	660	2200
Ø25 A500C	1000	1500	750	2500

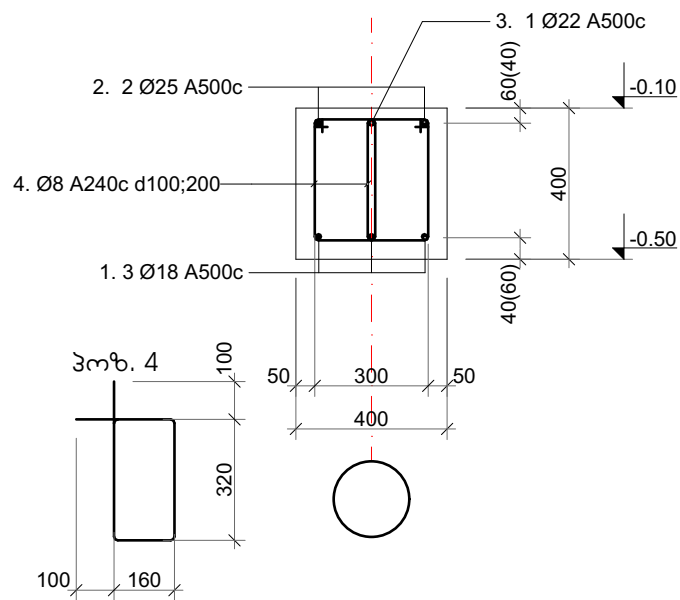
Parameters of fixing node of gird in the upper and lower reinforcement column

გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)	გირის სიგრძე (მ) (mm)
Ø16 A500C	640	80	320	126
Ø18 A500C	720	90	360	141
Ø20 A500C	800	100	400	157
Ø22 A500C	880	110	440	173
Ø25 A500C	1000	120	480	189

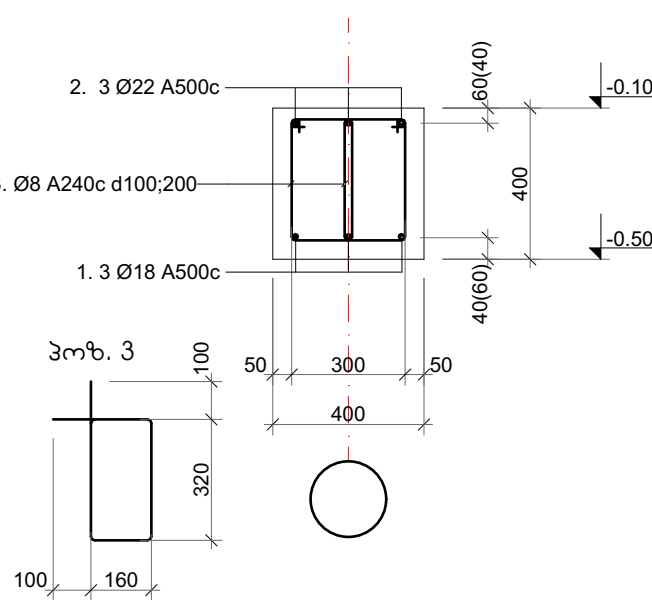
Allocation plan of gird hanger



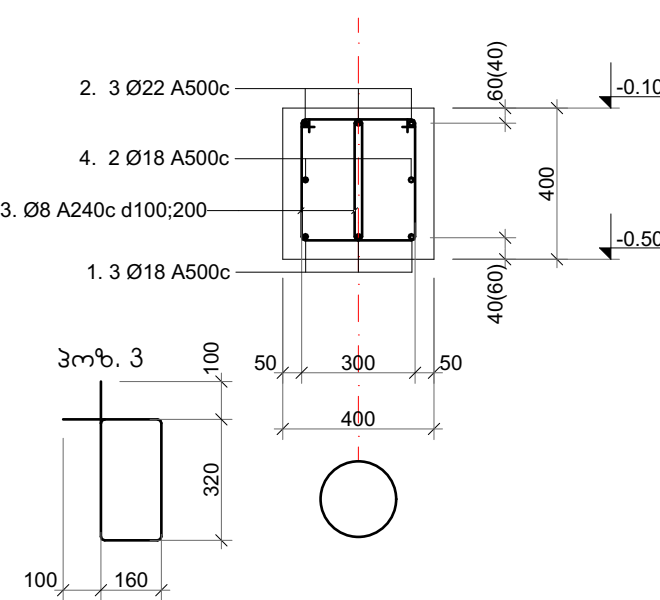
Section on the girder and end-girders 1-1

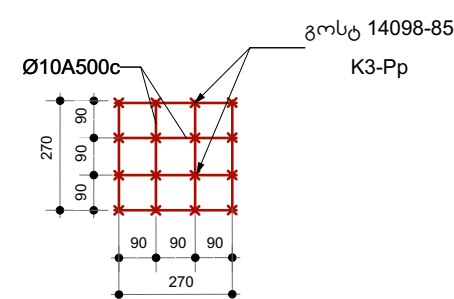
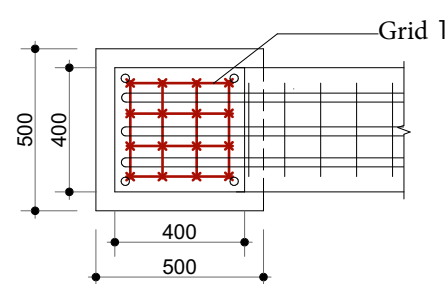
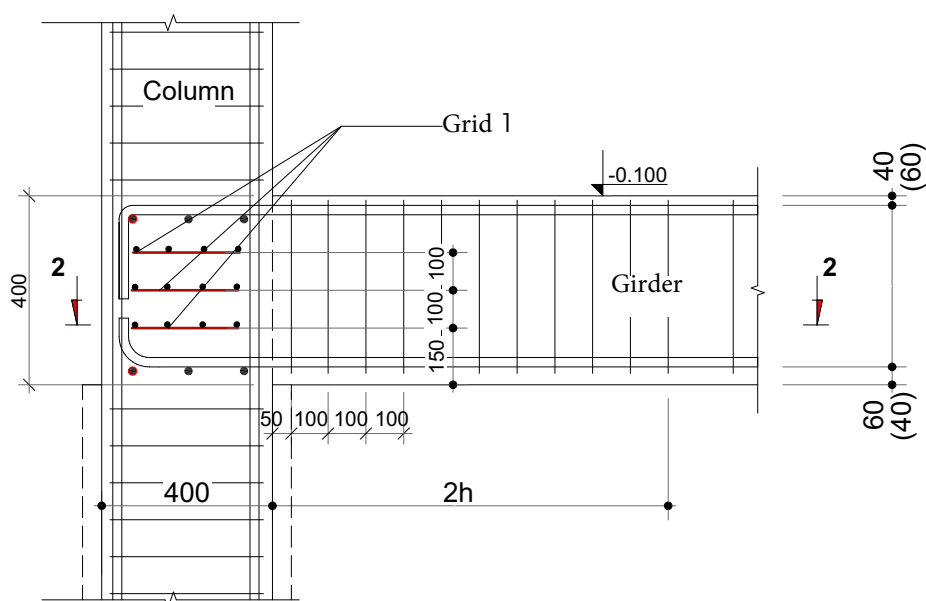
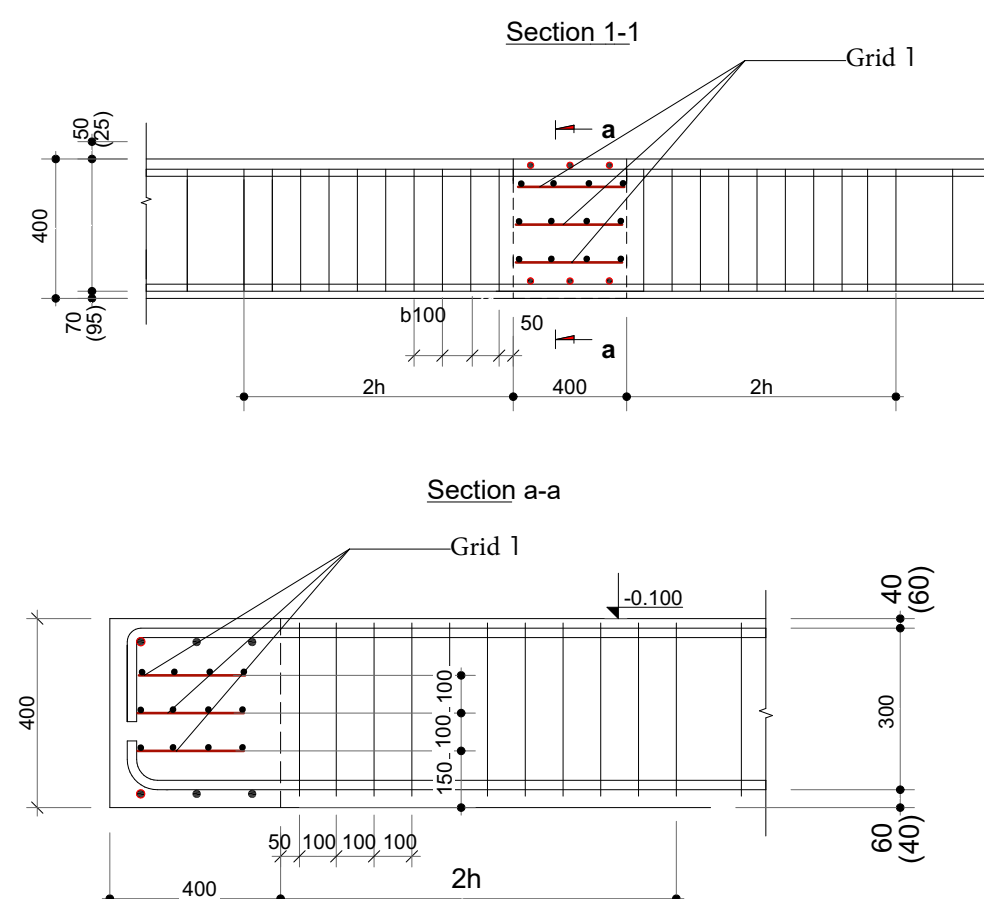
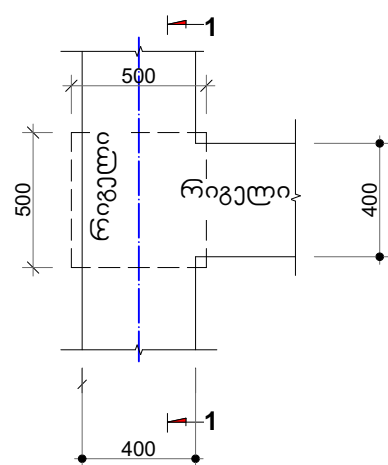


Section on the girder and end-girders 2-2



Section on the girder and end-girders 3-3





ელემენტი Element	№	არმატურის პროფილი Reinforcement profile	სიგრძე მმ Length mm	რაოდენობა Qty	საერთო სიგრძე მ Total length m	ბეტონი მ3 Concrete m3
რკინაბეტონის რიგელები (რანდოკები), იატაკის ფილა						
Section ჭრილი 1-1	1	18 A500c	38720	3	116.2	
	2	25 A500c	40480	2	81.0	
	3	22 A500c	40480	1	40.5	
	4	8 A240c	1160	470	545.2	
Section ჭრილი 2-2; 3-3	1	18 A500c	224250	3	672.8	
	2	22 A500c	214500	3	643.5	
	3	8 A240c	1160	2600	3016.0	
	4	18 A500c	12000	2	24.0	
	ბეტონი B25 m3 Concrete m3					36.
Reinforced concrete floor slabs იატაკის რკინაბეტონის ფილა		6 A500c			4180.0	
	ბეტონი B15 m3 Concrete m3					30.

არმატურის ამოკრეფა						
აბჯობი Section		საყბობო სიგრძე მ Total length m	საყბობო სიგრძე მ ჯამის,არგოთი მ Total length with loss m	უბნის წონა Weight of t/m	საყბობო წონა ტონის Total weight , ton	საყბობო წონა (ჯამის) მთავრობი ტონის Total weight ,ton class
A240c	6 A240c		0.0	0.222	0.00	1.5
	8 A240c	3561.0	3739.1	0.394	1.47	
A500c	6 A500c	4180.0	4180.0	0.222	0.93	5.1
	8 A500c		0.0	0.394	0.00	
	10 A500c		0.0	0.616	0.00	
	12 A500c		0.0	0.887	0.00	
	14 A500c		0.0	1.208	0.00	
	16 A500c		0.0	1.578	0.00	
	18 A500c	813.0	853.7	1.997	1.70	
	20 A500c		0.0	2.465	0.00	
	22 A500c	684.0	718.2	2.983	2.14	
	25 A500c	81.0	85.1	3.851	0.33	
სულ				6.58		

Georgia,
Zugdidi

Stage:
Architectural project

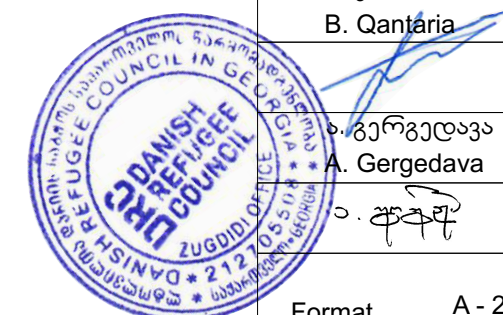
Monolithic
Girder (End-
girder)

Strengthening of nodes

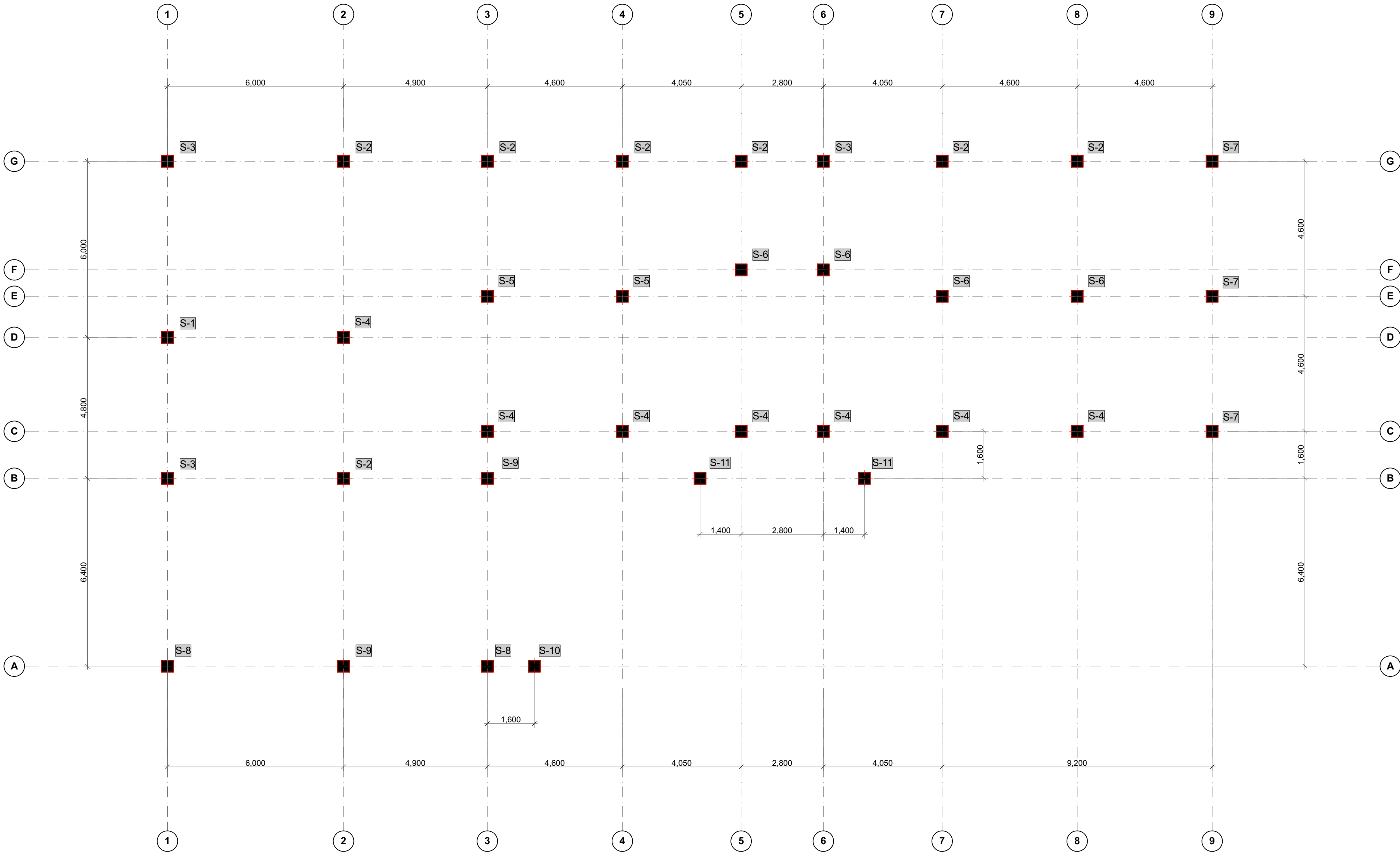
B. Qantaria

ა. გერგედავა
A. Gergedava

Format A - 2



Marking of Columns



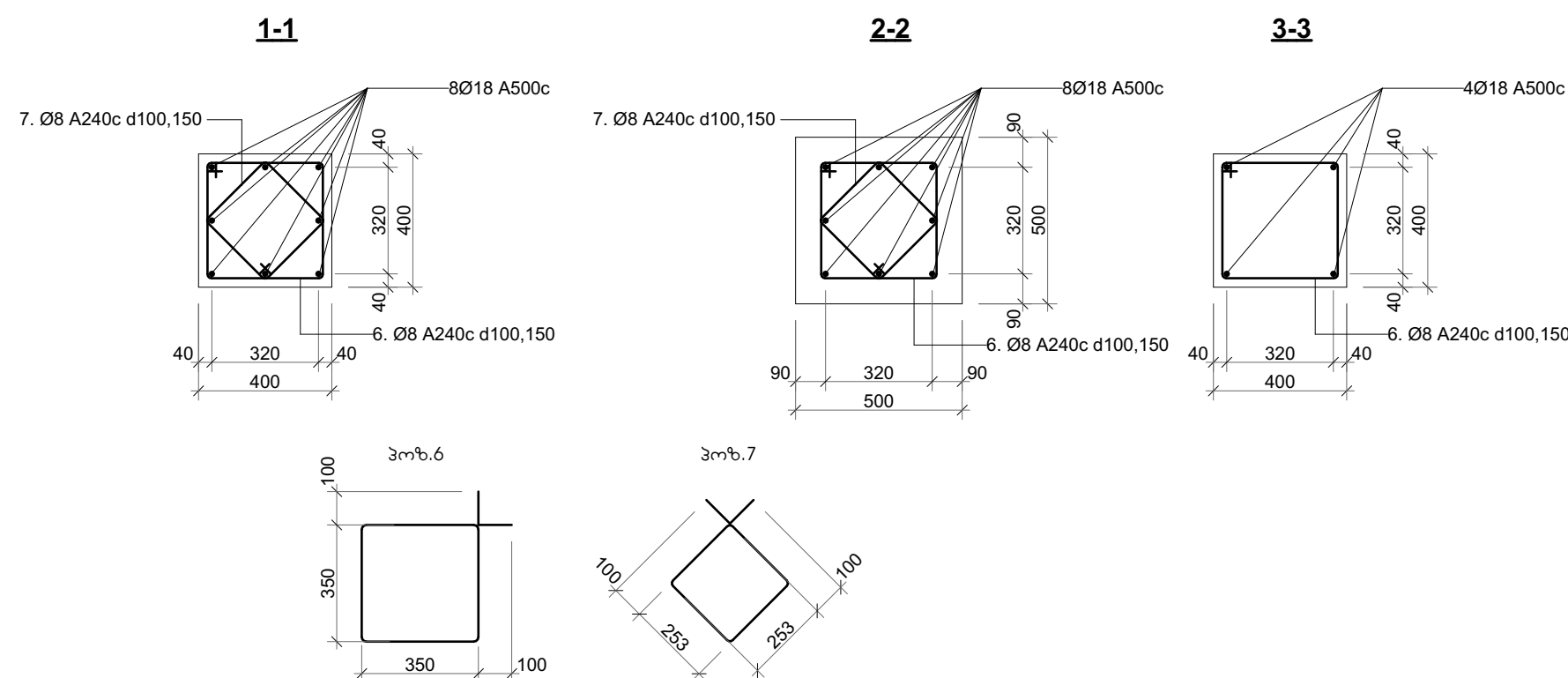
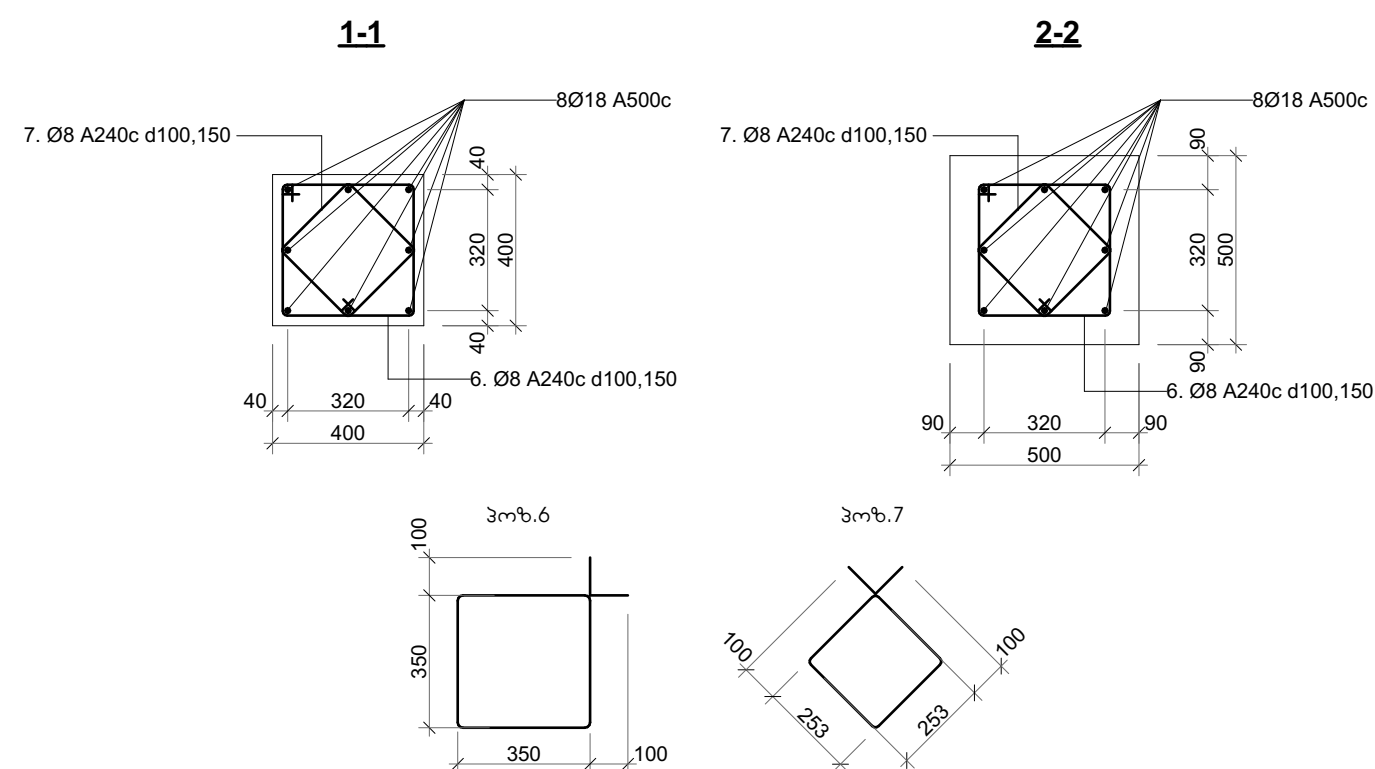
Georgia,
Zugdidi

Column **S-1**

Column **S-2**

ა. გერგედავა
A. Gergedava

Page	Pages
13	38



Georgia,
Zugdidi

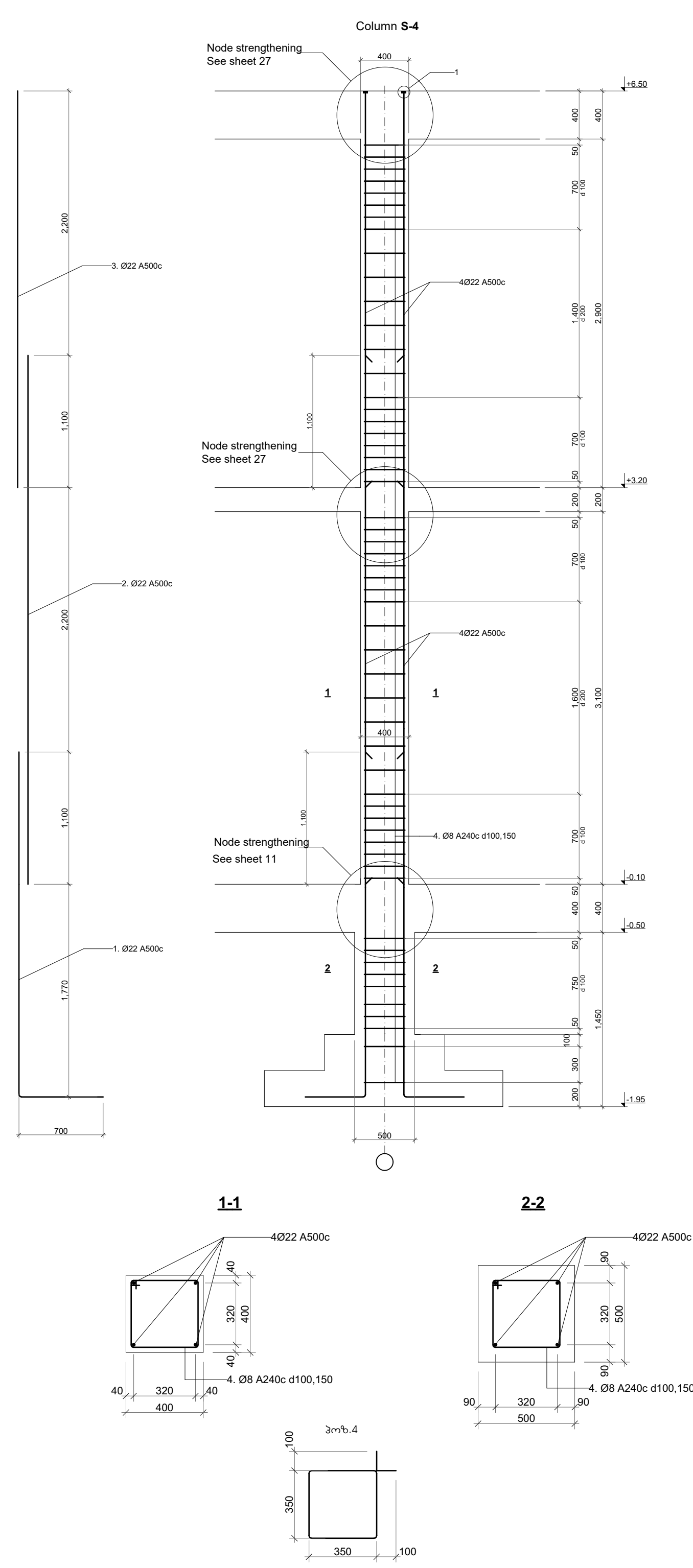
Stage:
Architectural project

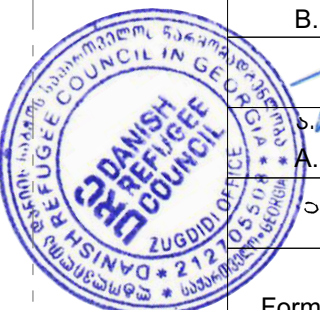
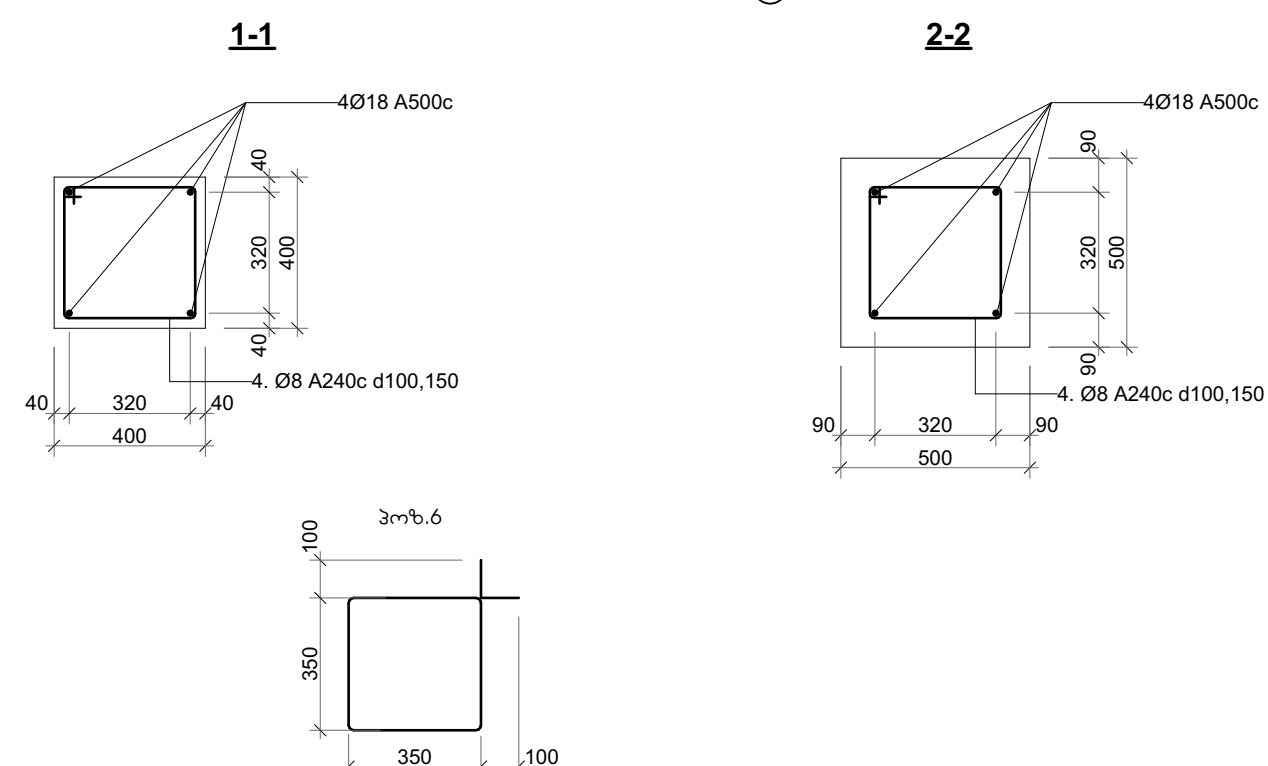
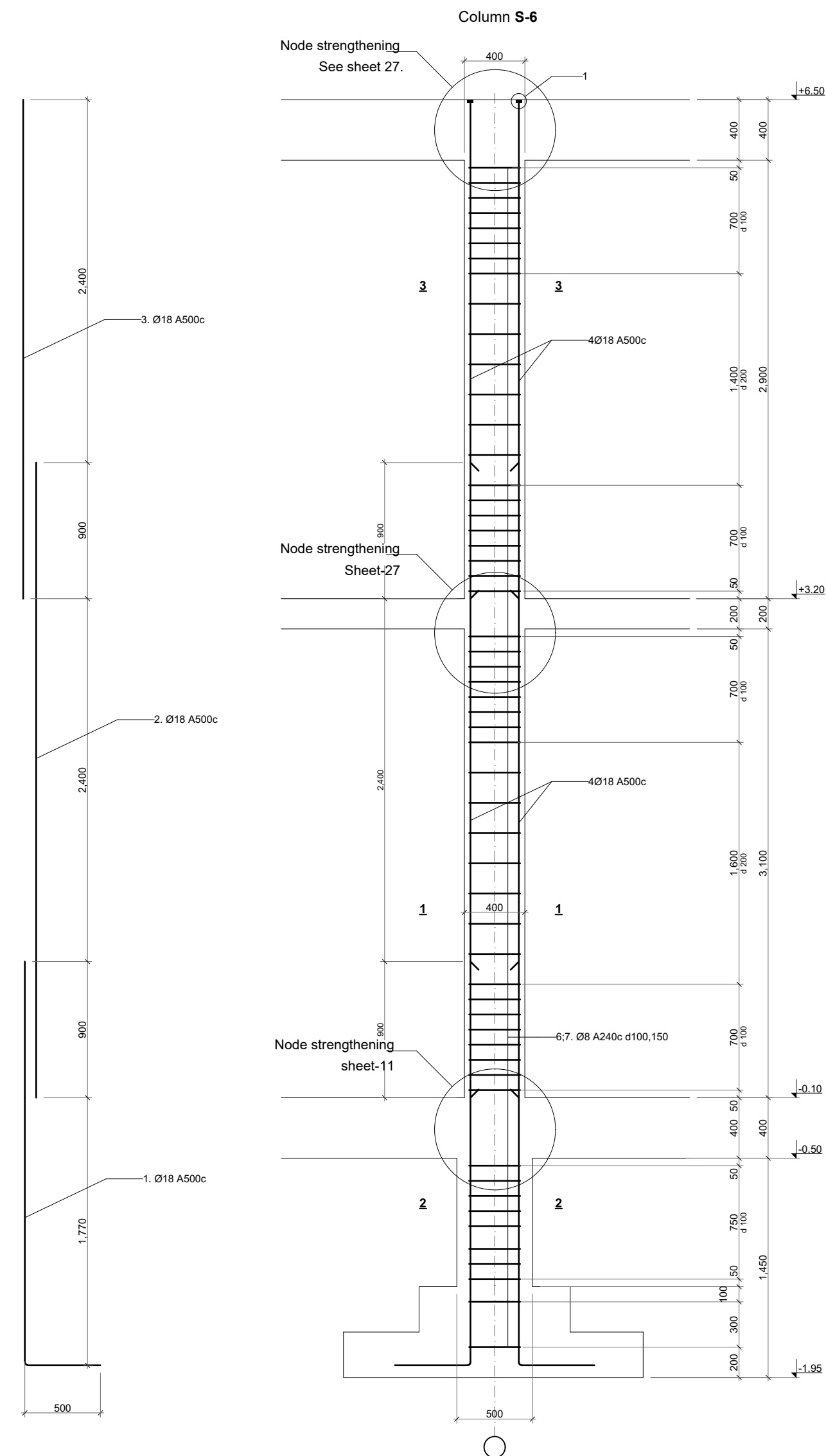
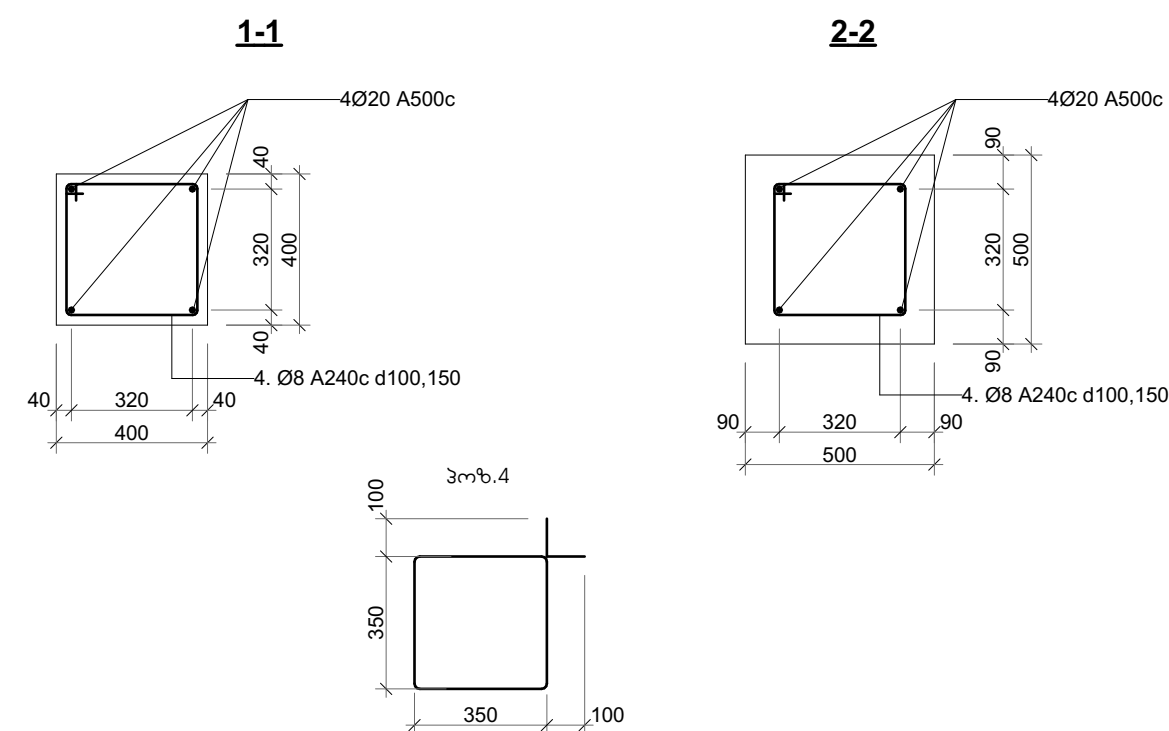
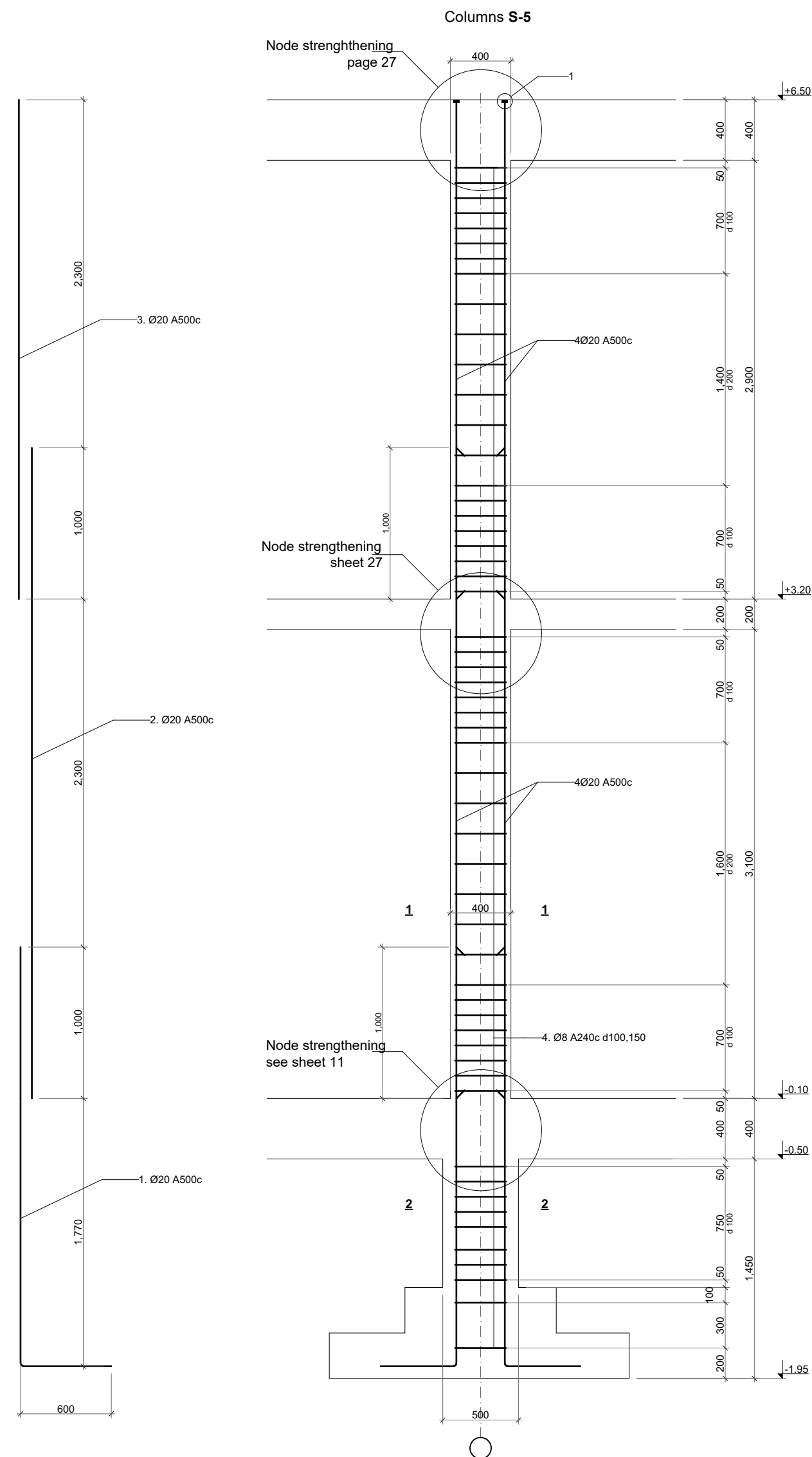
Column s-4

ა. გერგედავა
A. Gergedava

Format A - 2

Page	Pages
14	38





Project address:
Georgia,
Zugdidi

Stage:
Architectural project

Column s-7

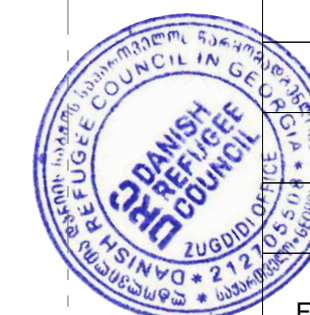
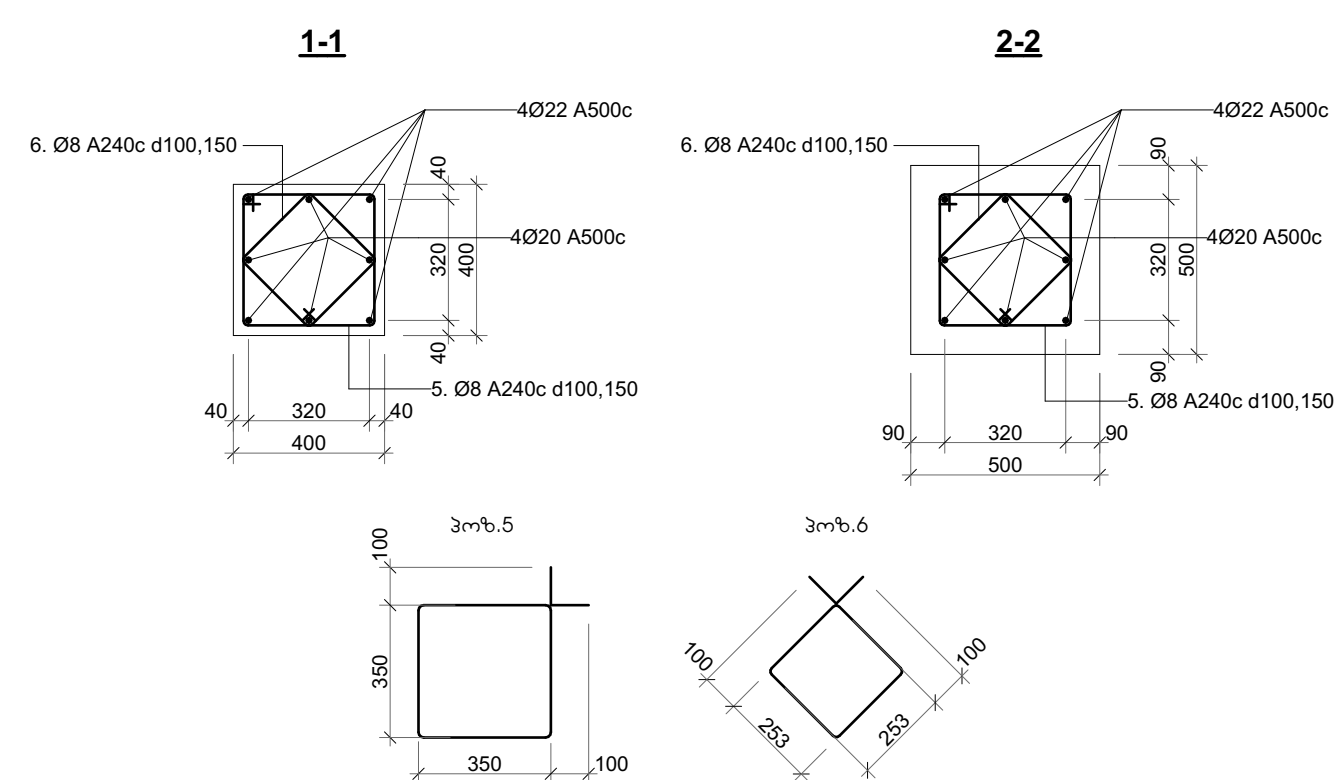
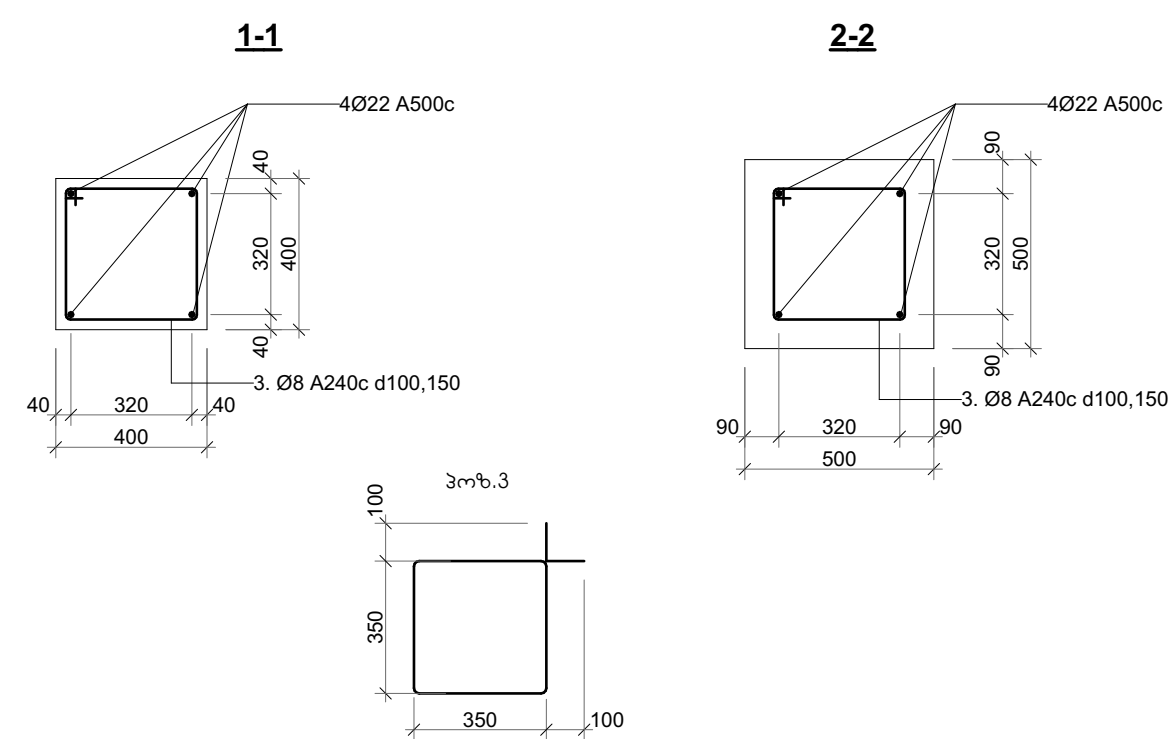
Column s-8

B. Qantaria

ა. გერგედავა
A. Gergedava

Format A - 2

Page	Pages
16	38



Project address:
Georgia,
Zugdidi

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Column **s-9**

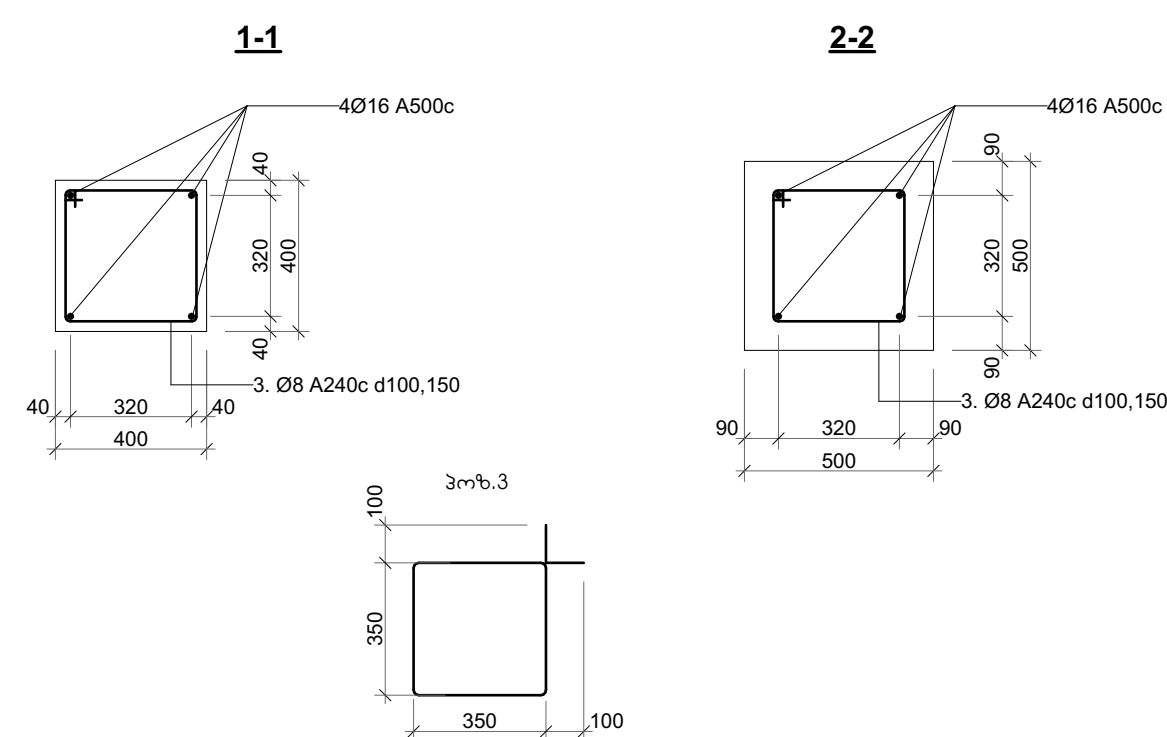
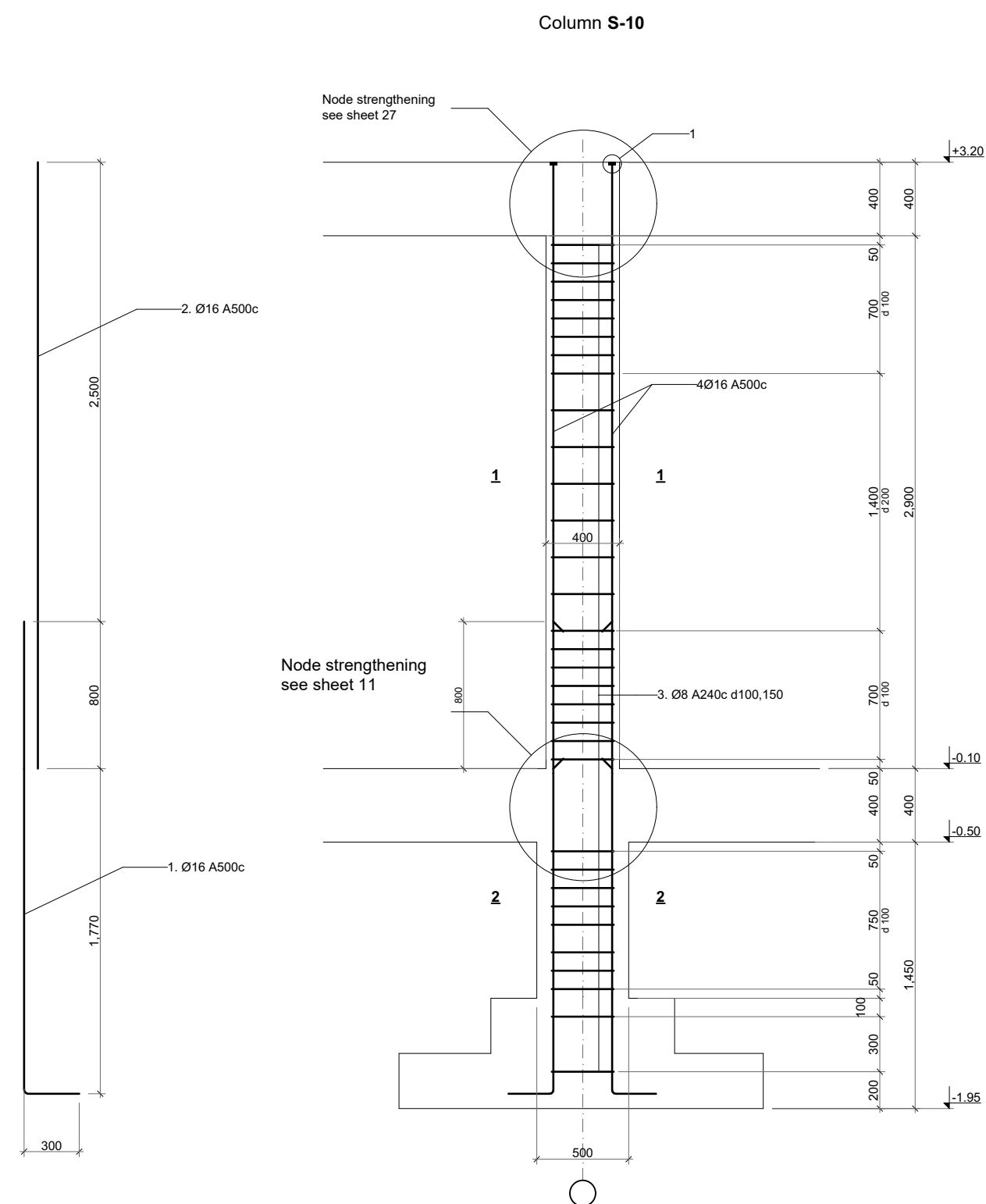
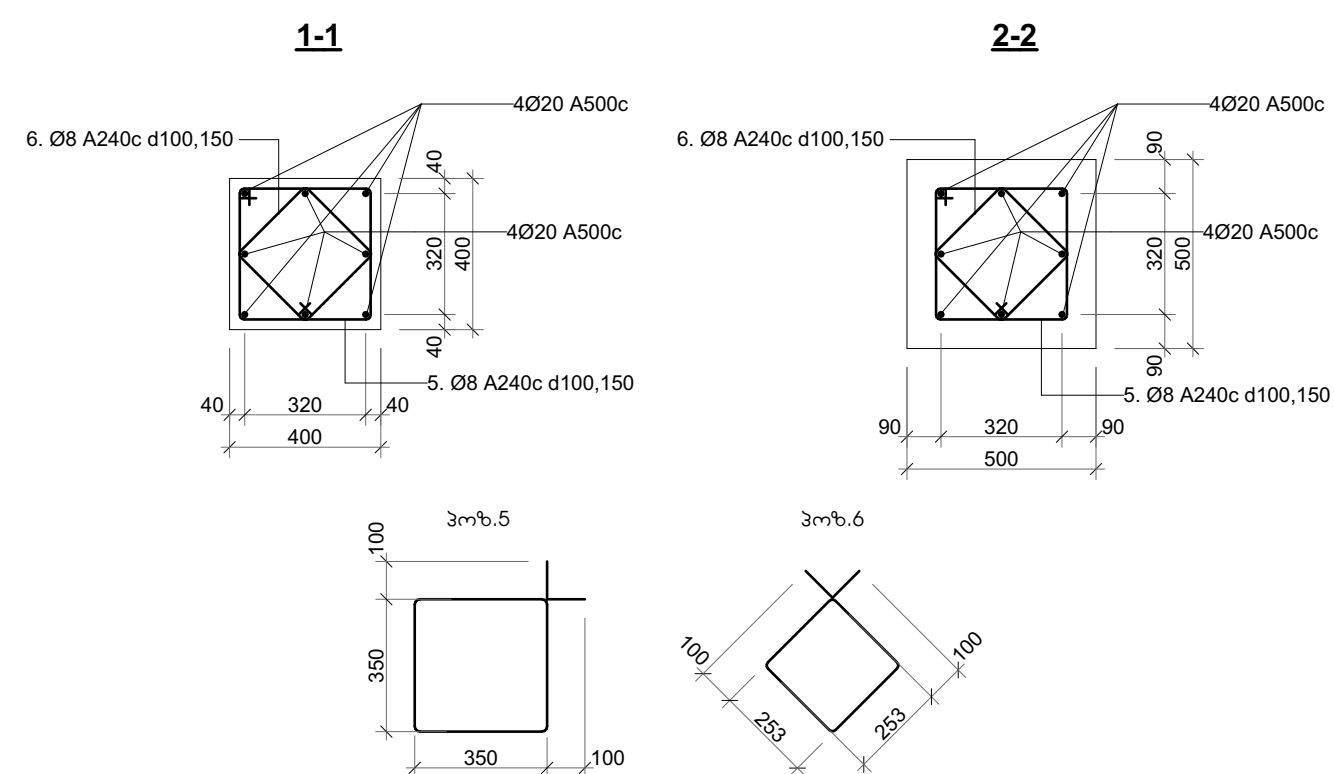
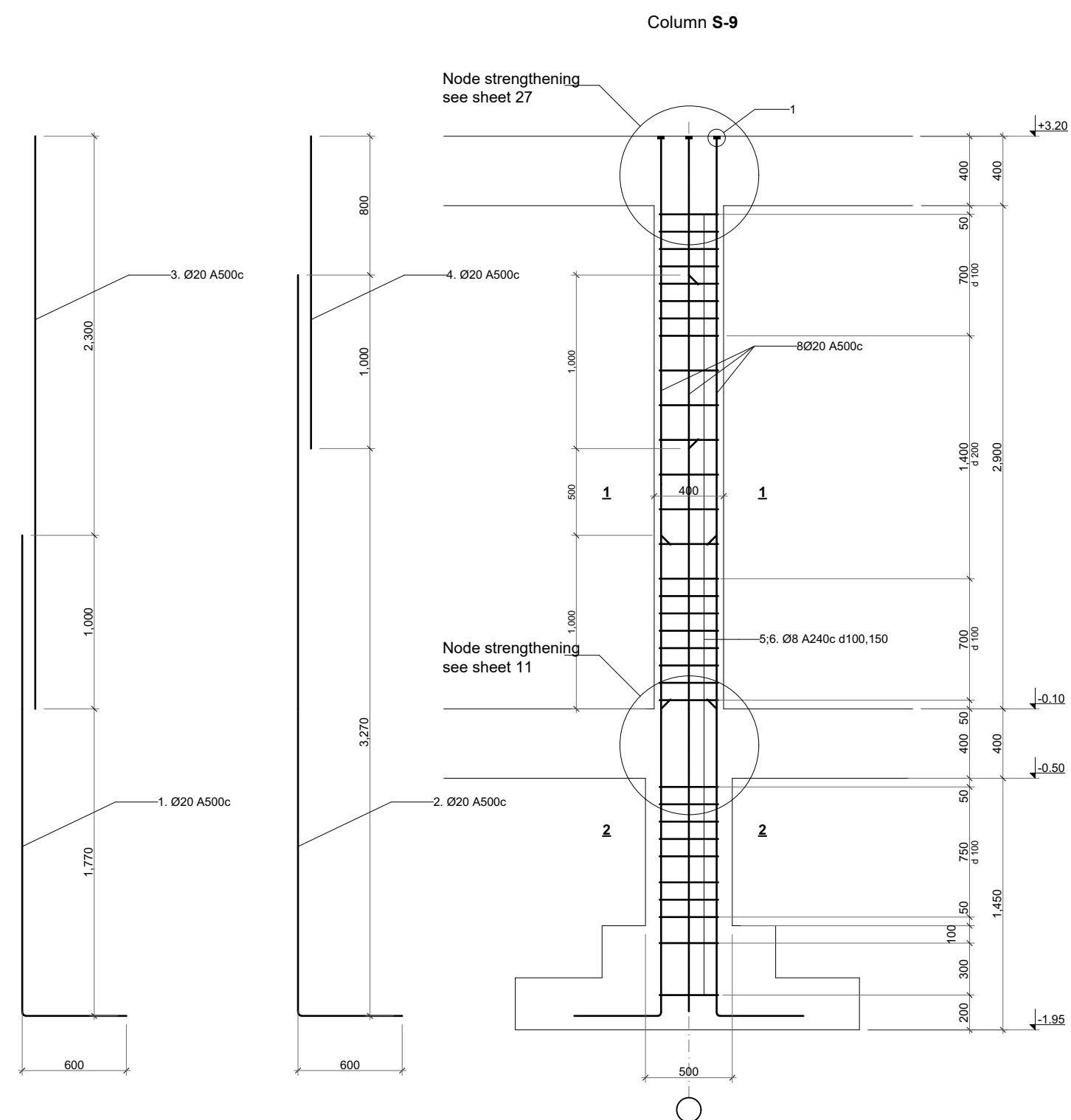
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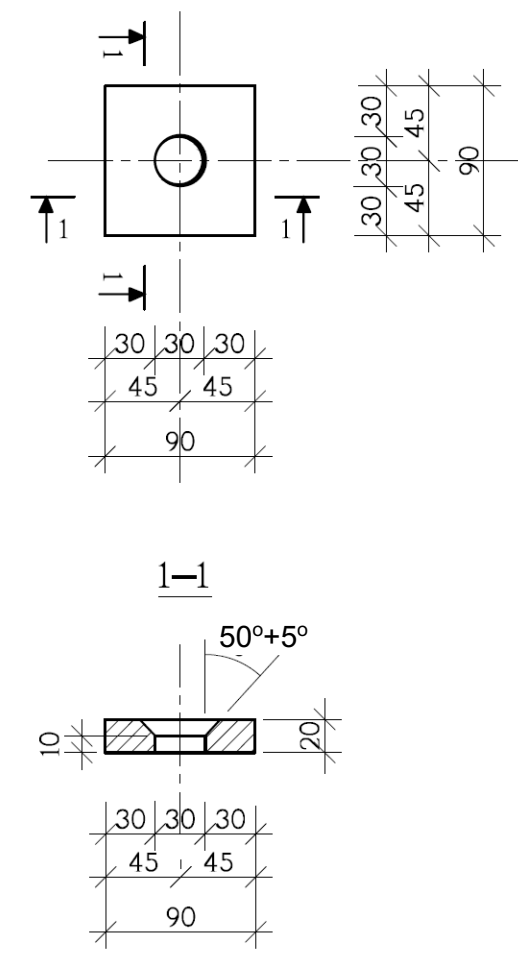
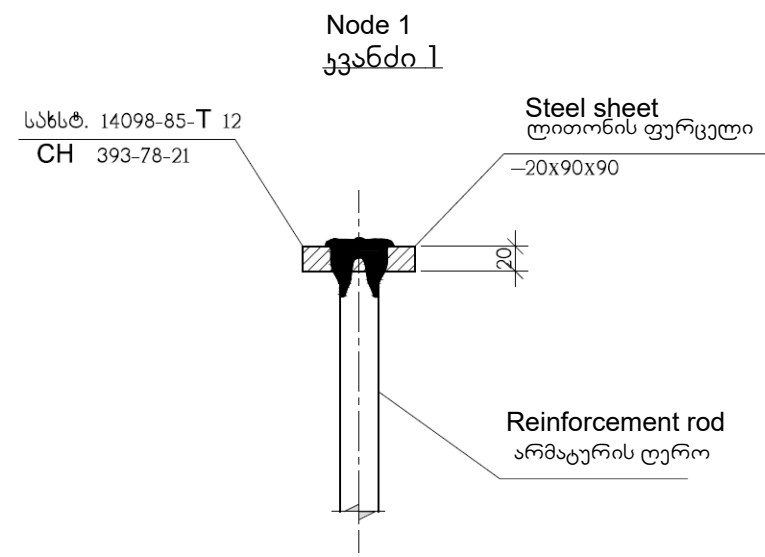
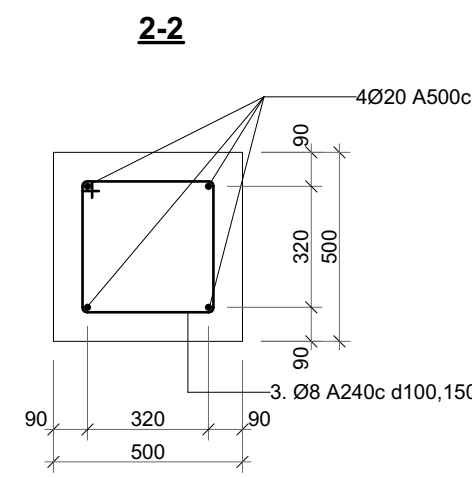
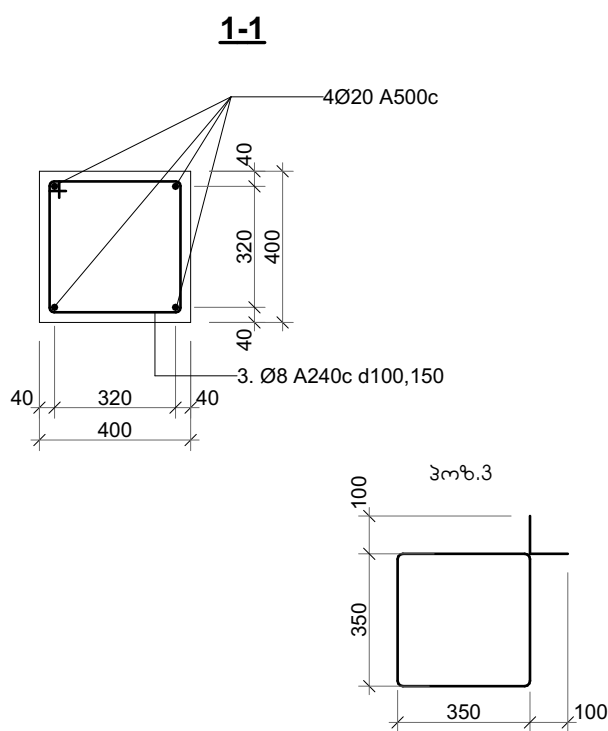
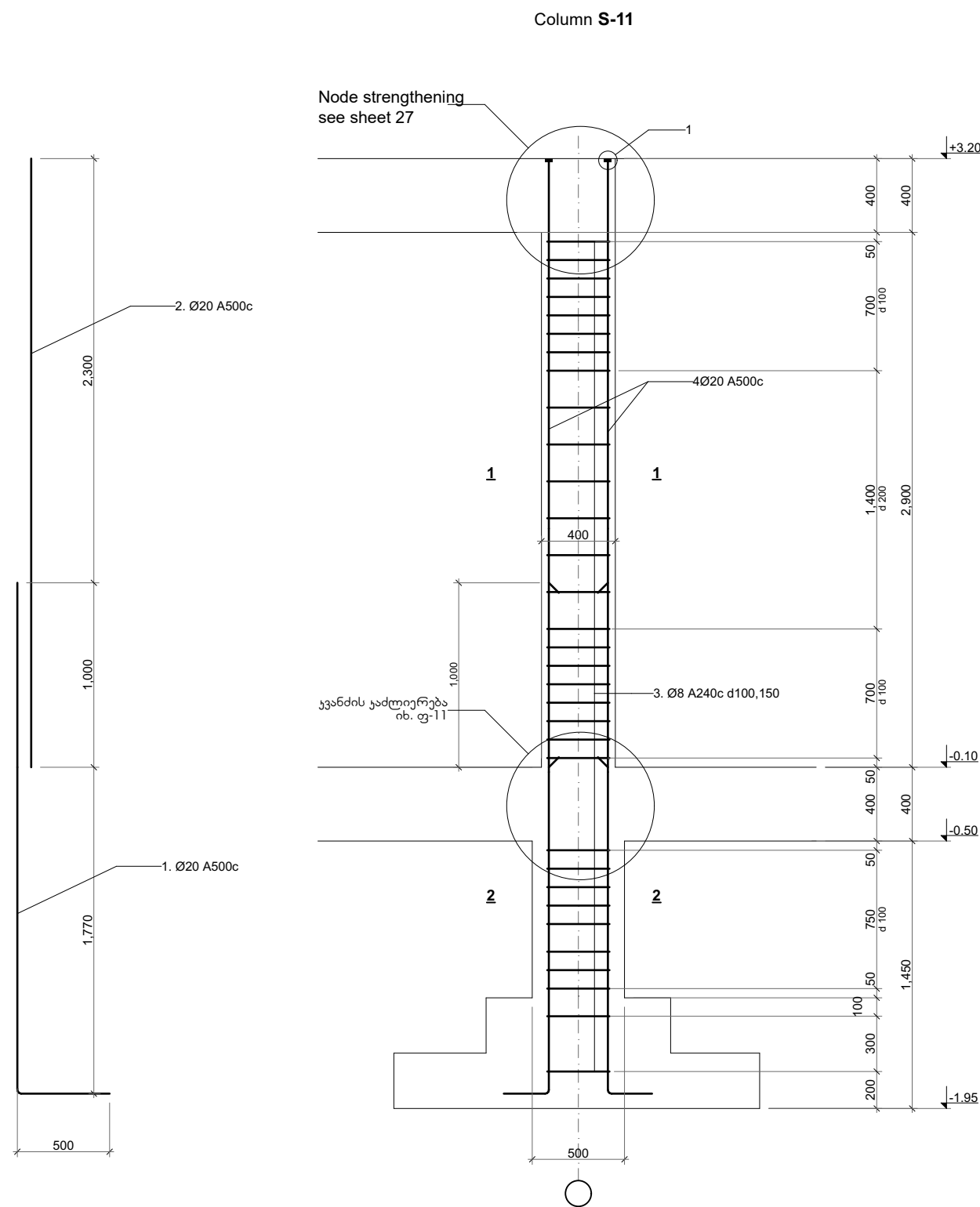
ბ. ჟანთარია
B. Qantaria

ა. გერგედავა
A. Gergedava

Format A - 2

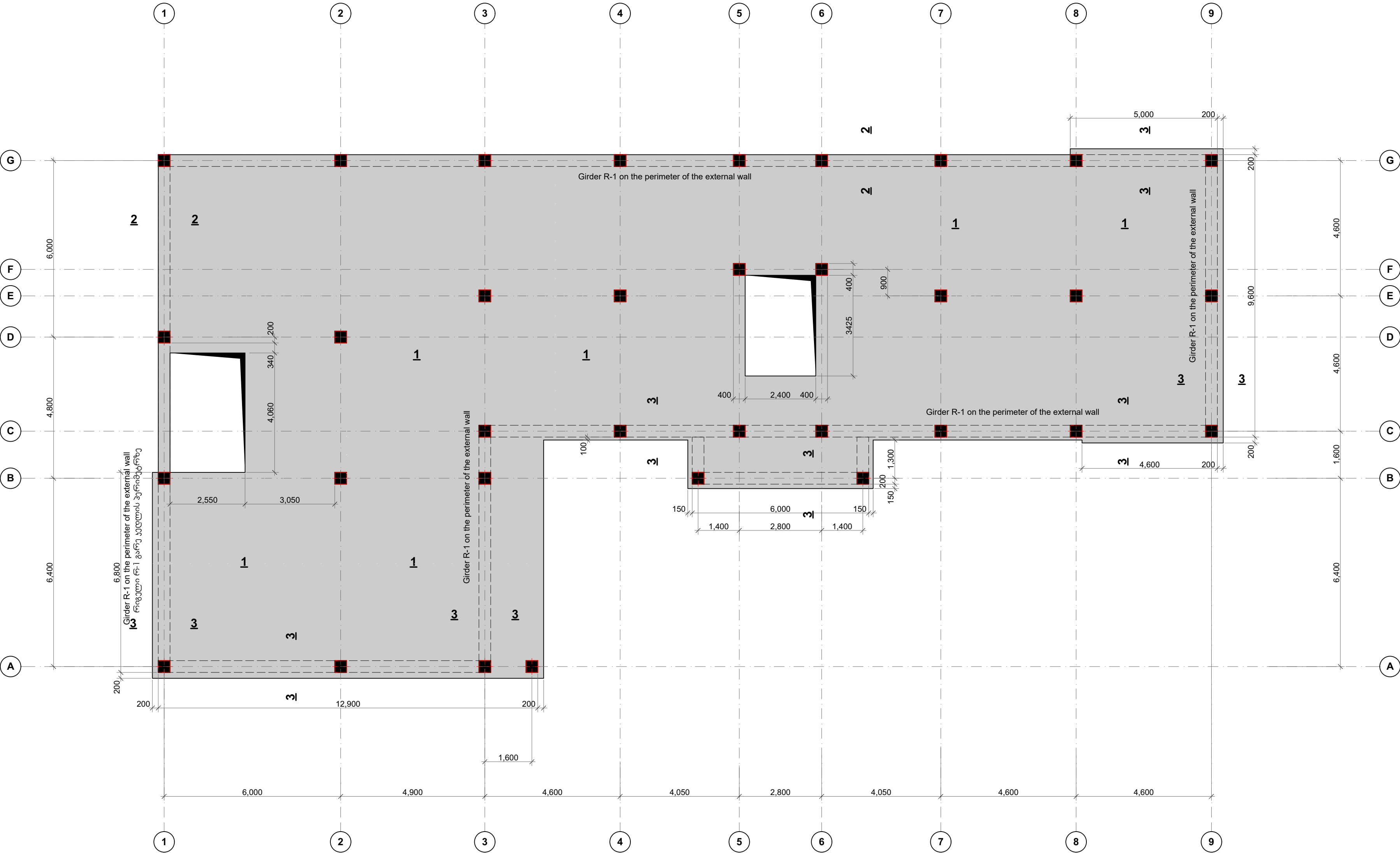
Page	Pages
17	38



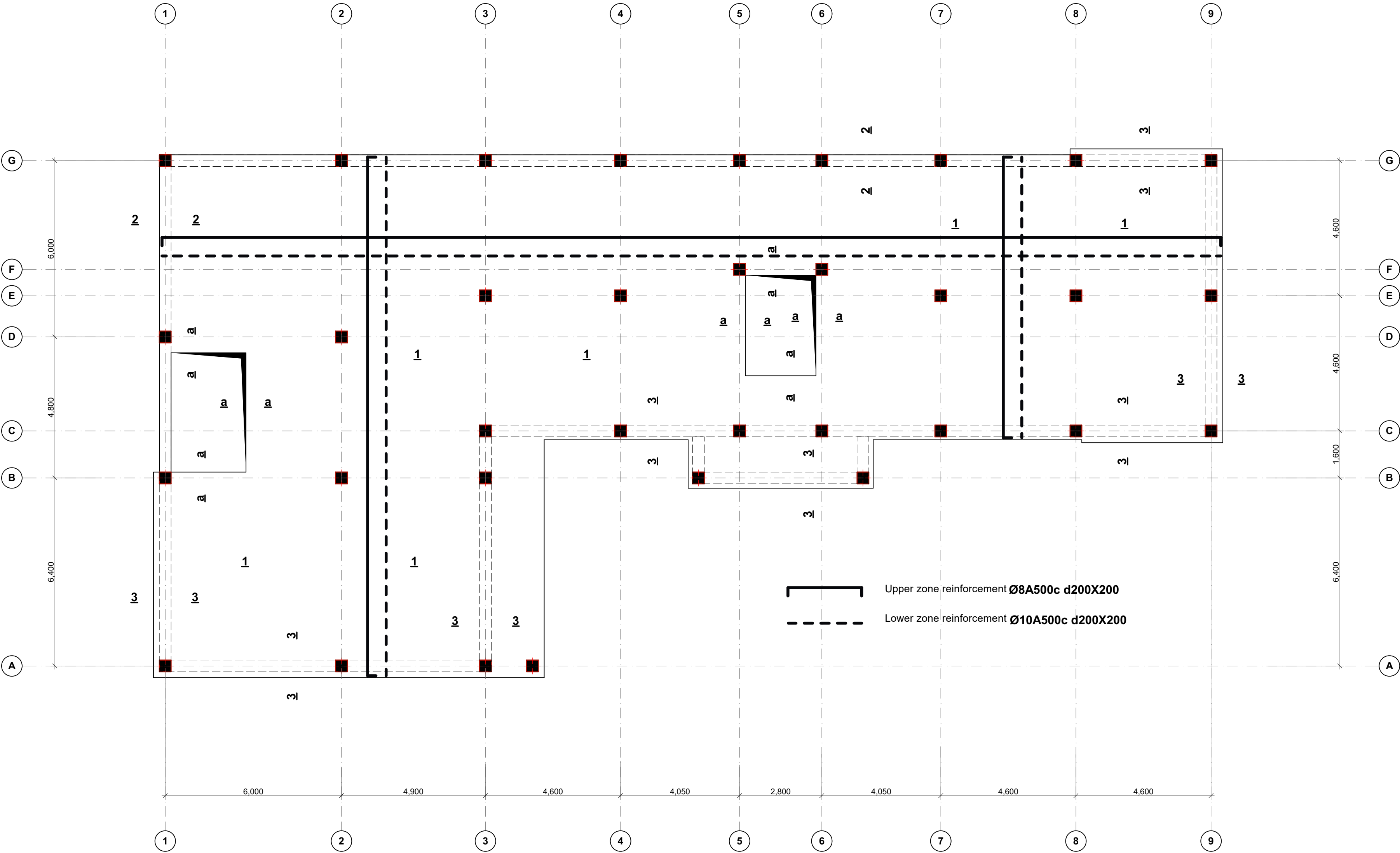


Specification of reinforcement							ელემენტი Element	№	არმატურის პროფილი	სიგრძე მმ	რაოდენობა	საერთო სიგრძე მ	ბეტონი მ3	
არმატურის ამოკრეფა							რკინაბეტონის სვეტები Reinforced concrete columns							
კვეთი Cross-section		საერთო სიგრძე მ Total length	საერთო სიგრძე დანაკლებით მ Total length with loss m	გრძელის წონა Weight of rim	საერთო წონა ტონა Total weight, ton	საერთო წონა (კლასის მისხვედი) ტონა Total weight per class, ton	s-1 (1 ცალი) (1 pcs)	1	18 A500c	3160	4	12.6		
								2	18 A500c	4510	4	18.0		
3	18 A500c	4200	8	33.6										
4	18 A500c	3300	4	13.2										
5	18 A500c	1950	4	7.8										
6	8 A240c	1600	55	88.0										
7	8 A240c	1212	55	66.7										
A500c	6 A500c		0.0	0.222	0.00	s-2 (7 ცალი) (7 pcs)		1	18 A500c	3160	28	88.5		
	8 A500c		0.0	0.394	0.00			2	18 A500c	4510	28	126.3		
	10 A500c	960.0	1008.0	0.616	0.62			3	18 A500c	4200	28	117.6		
	12 A500c		0.0	0.887	0.00			4	18 A500c	2850	28	79.8		
	14 A500c		0.0	1.208	0.00		5	18 A500c	3300	28	92.4			
	16 A500c	25.0	26.3	1.578	0.04		6	8 A240c	1600	385	616.0			
	18 A500c	760	798.0	1.997	1.59		7	8 A240c	1212	287	347.8			
	20 A500c	523	549.2	2.465	1.35	s-3 (3 ცალი) (3 pcs)	1	20 A500c	3360	12	40.3			
	22 A500c	439	461.0	2.983	1.37		2	20 A500c	4860	12	58.3			
	24 A500c		0.0	3.851	0.00		3	20 A500c	4300	12	51.6			
25 A500c		0.0	3.851	0.00	4		20 A500c	2800	12	33.6				
სულ Total					6.37		5	20 A500c	3300	12	39.6			
							6	8 A240c	1600	165	264.0			
							7	8 A240c	1212	123	149.1			
							s-4 (7 ცალი) (7 pcs)	1	22 A500c	3560	28	99.7		
								2	22 A500c	4400	28	123.2		
								3	22 A500c	3300	28	92.4		
								4	8 A240c	1600	385	616.0		
							s-5 (2 ცალი) (2 pcs)	1	20 A500c	3360	8	26.9		
								2	20 A500c	4300	8	34.4		
								3	20 A500c	3300	8	26.4		
								4	8 A240c	1600	110	176.0		
							s-6 (4 ცალი) (4 pcs)	1	18 A500c	3160	16	50.6		
								2	18 A500c	4200	16	67.2		
								3	18 A500c	3300	16	52.8		
								4	8 A240c	1600	220	352.0		
							s-7 (3 ცალი) (3 pcs)	1	22 A500c	3560	12	42.7		
								2	22 A500c	2200	12	26.4		
								3	8 A240c	1600	96	153.6		
							s-8 (2 ცალი) (2 pcs)	1	22 A500c	3560	8	28.5		
								2	20 A500c	4960	8	39.7		
								3	22 A500c	3300	8	26.4		
								4	20 A500c	1700	8	13.6		
								5	8 A240c	1600	64	102.4		
								6	8 A240c	1212	64	77.6		
							s-9 (2 ცალი) (2 pcs)	1	20 A500c	3360	8	26.9		
								2	20 A500c	4860	8	38.9		
								3	20 A500c	3300	8	26.4		
								4	20 A500c	1800	8	14.4		
								5	8 A240c	1600	64	102.4		
								6	8 A240c	1212	64	77.6		
							s-10 (1 ცალი) (1 pcs)	1	16 A500c	2860	4	11.4		
								2	16 A500c	3300	4	13.2		
								3	8 A240c	1600	32	51.2		
							s-11 (2 ცალი) (2 pcs)	1	20 A500c	3260	8	26.1		
								2	20 A500c	3300	8	26.4		
								3	8 A240c	1600	64	102.4		
						</								

Roof slab drawing at +3.20 mark



Primary reinforcement of floor slab (upper and lower zone)



Additional reinforcement of the floor slab
(upper zone)



Project address:
Georgia,
Zugdidi

Stage:
Architectural project

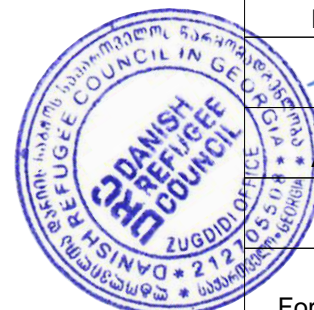
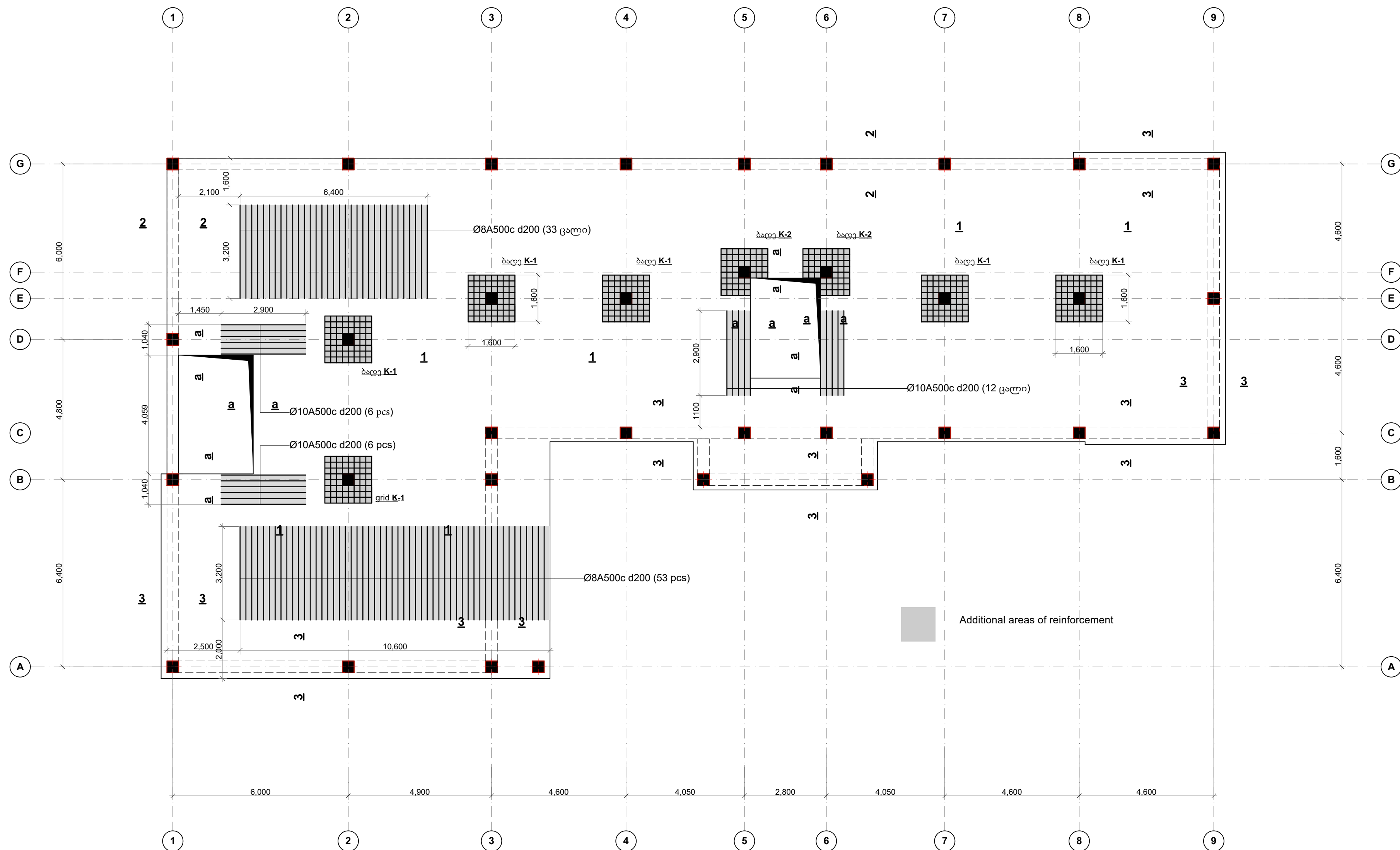
Additional
reinforcement of
the floor slab
(lower zone)

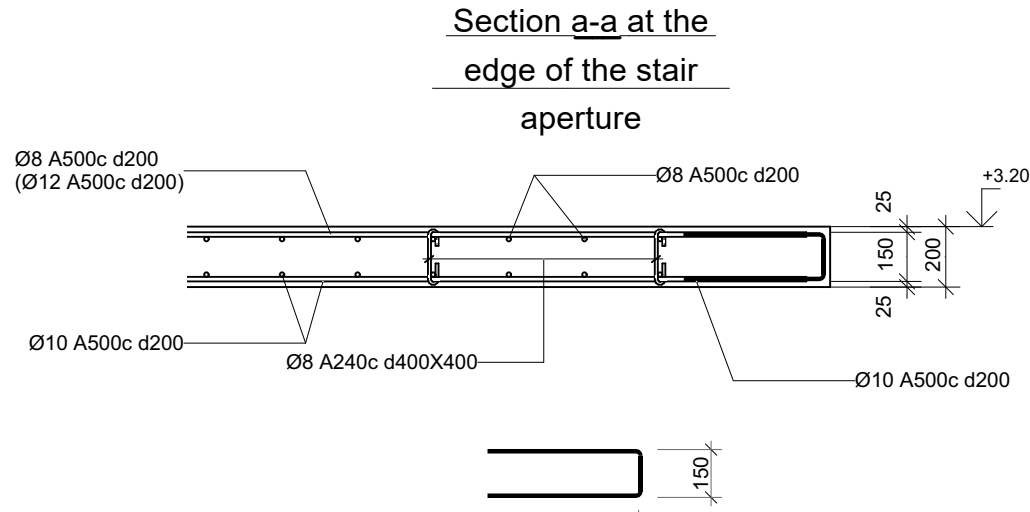
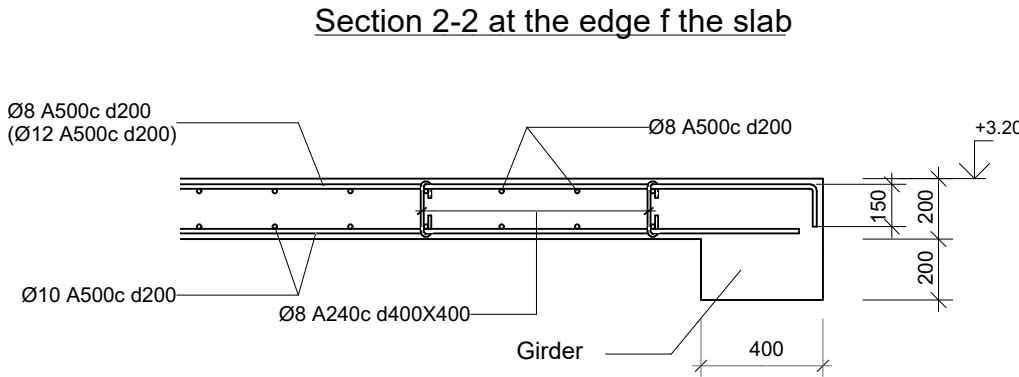
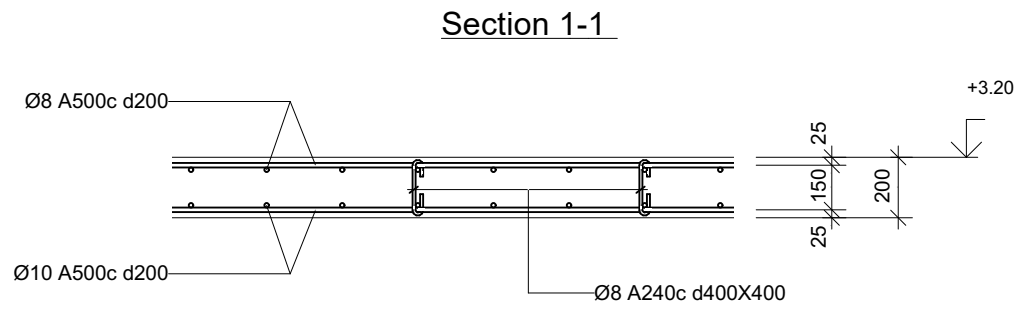
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B. Qantaria

ს. გერგედავა
A. Gergedava

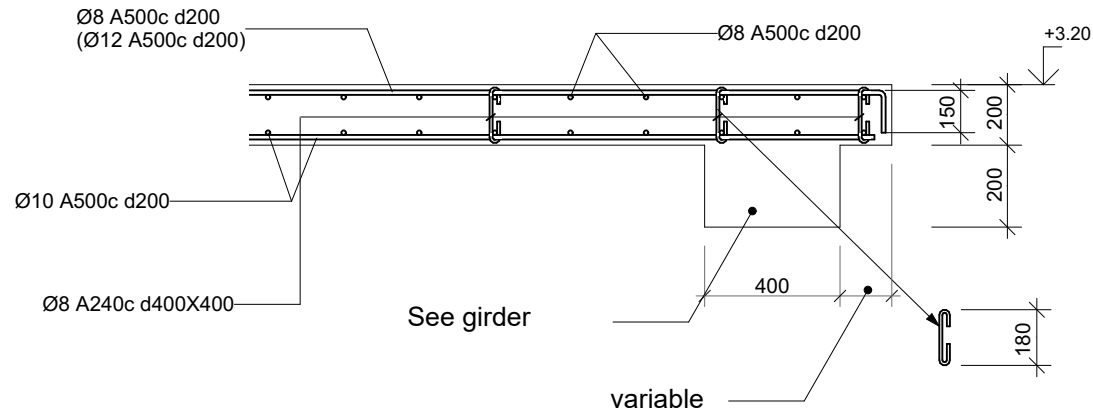
Format A - 2

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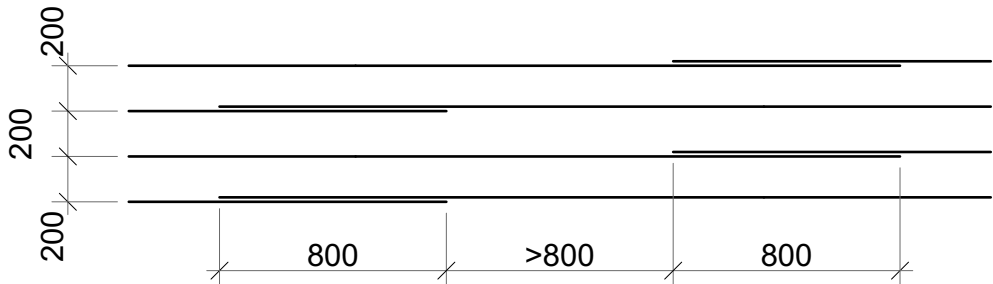




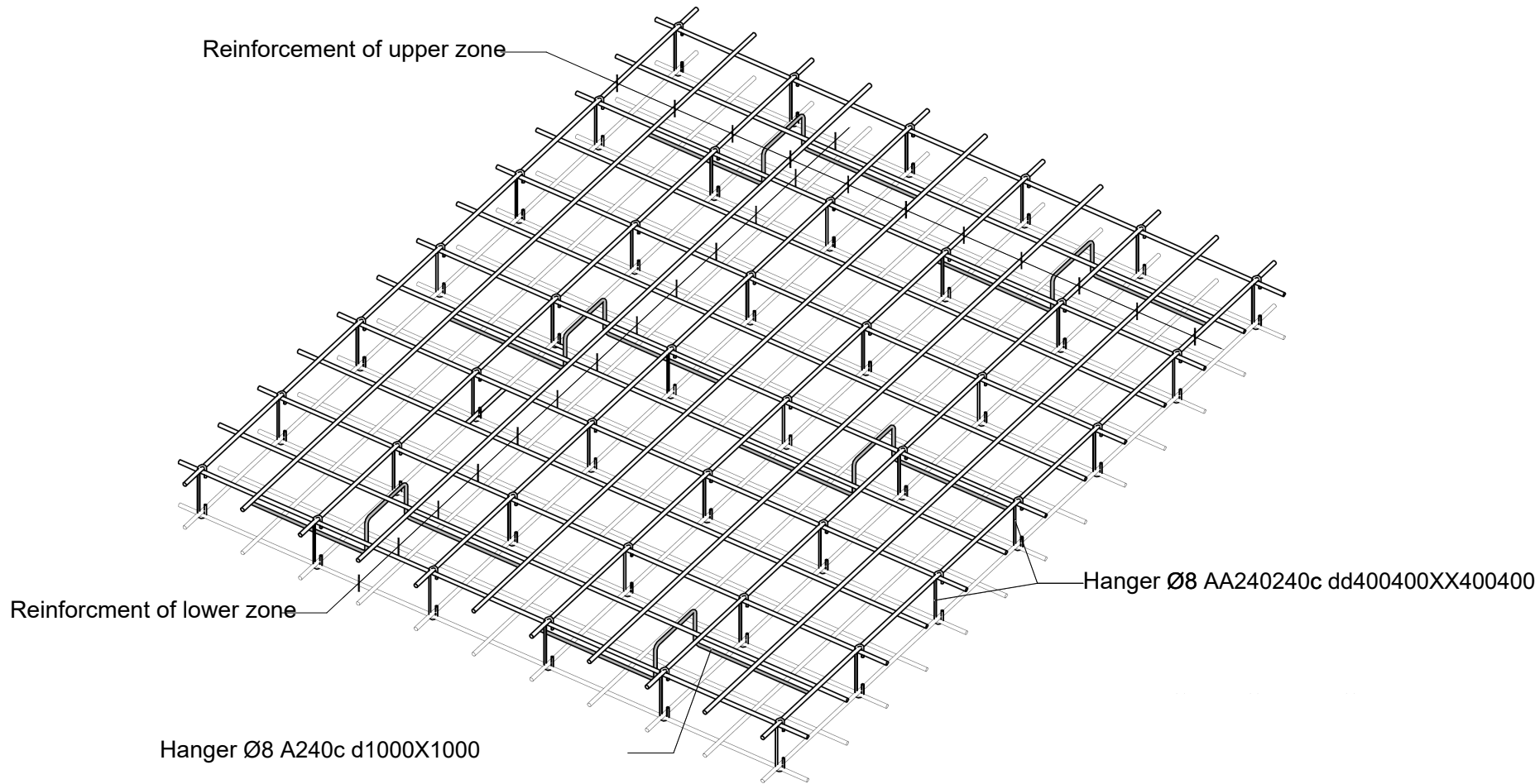
Section 3-3 at the edge of slab



Crossbar Bonding Plan



Plan of the layout of the hangers and the handling reinforcement in the slab



Hanger Ø8 A240c d1000X1000

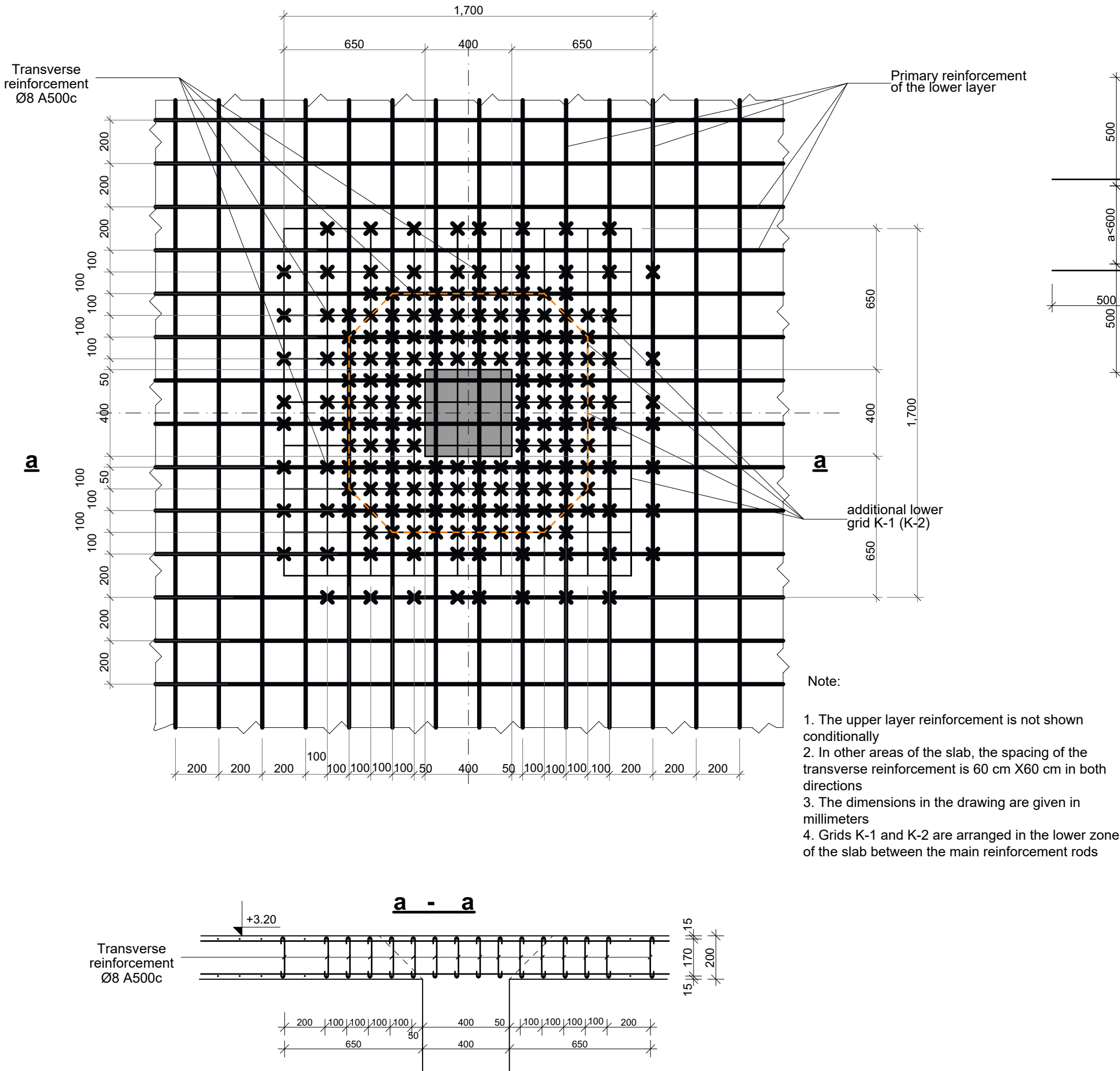
Specification of the Reinforcement

არმატურის აპოკრეფა						
კვეთი Cross-section	საერთო სიგრძე მ Total length m	საერთო სიგრძე განაკვეთი მ Total length with loss m	უძრავი წონა Weight of iron	საერთო წონა Total weight, ton	საერთო წონა (კვანძის მძლეობის) წონა Total weight per class, ton	
A240c	6 A240c	0.0	0.222	0.00	0.0	
	8 A240c	0.0	0.394	0.00		
A500c	6 A500c	0.0	0.222	0.00	7.7	
	8 A500c	5850.0	6142.5	0.394		
	10 A500c	5580.0	5859.0	0.616		
	12 A500c	1760.0	1848.0	0.887		
	14 A500c		0.0	1.208		
	16 A500c		0.0	1.578		
	18 A500c		0.0	1.997		
	20 A500c		0.0	2.465		
	22 A500c		0.0	2.983		
	25 A500c		0.0	3.851		
სულ Total				7.67		

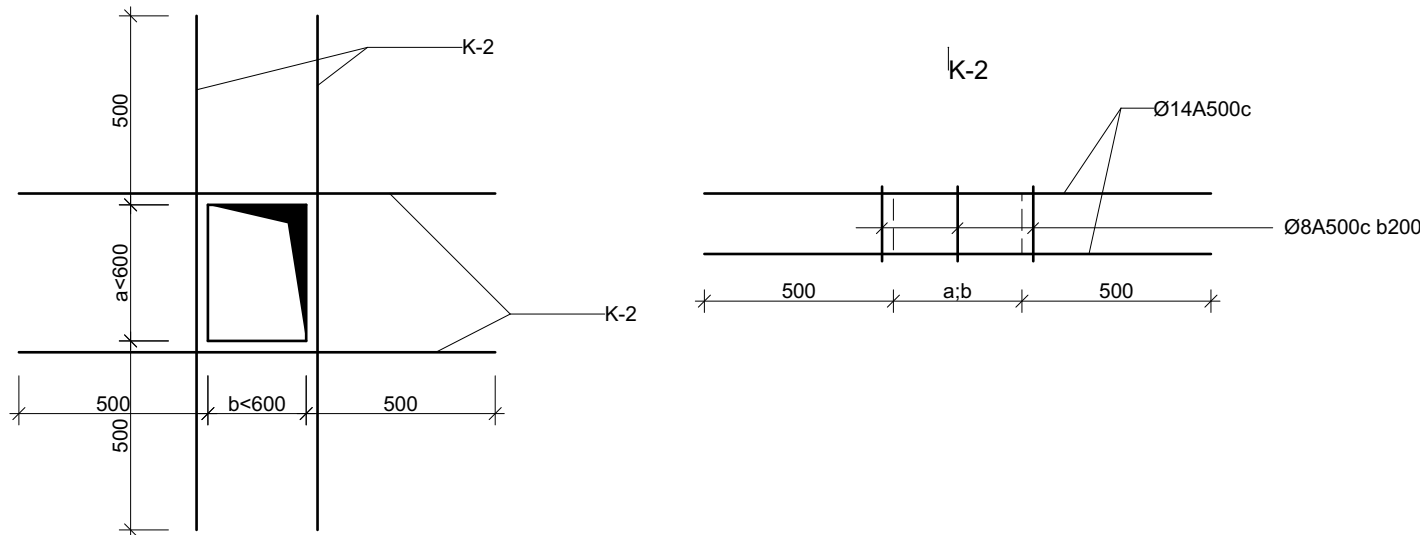
ელემენტი Element	№	არმატურის ძირითადი reinforcement	სიგრძე მმ Length mm	რაოდენობა Qty	საერთო სიგრძე მ Total length m	ბეტონი მ3 Concrete m3
ტინაპეტონის ფილა +3.20 ნიშნულზე Reinforced concrete slab at +3.20 mark						
ფილა Slab		10 A500c			5580.0	
		8 A500c			5850.0	
		12 A500c			1760.0	
		ბეტონი B25 m3	Concrete B25 m3			90.4



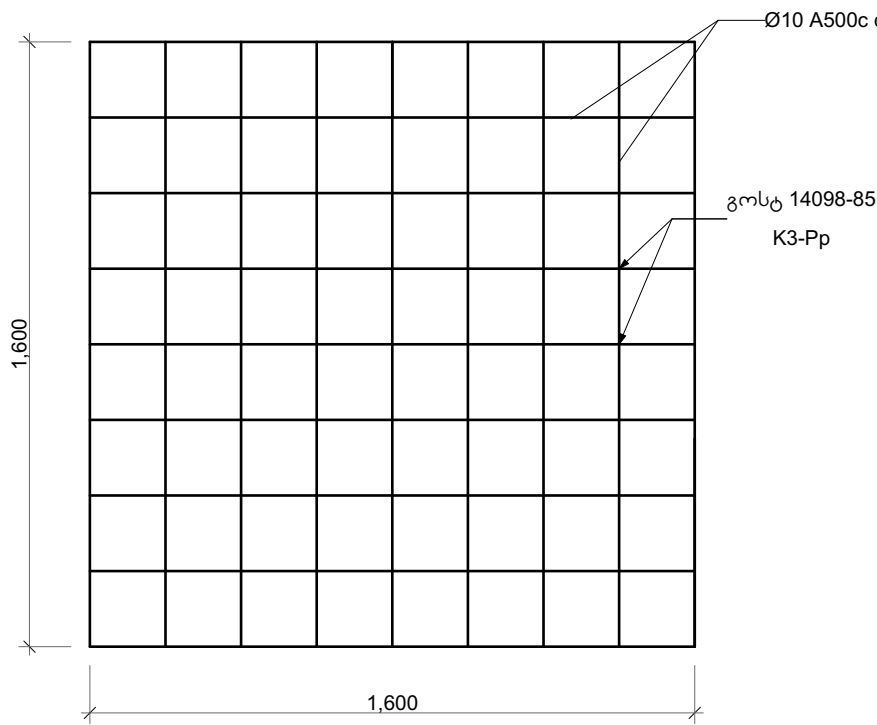
Transverse reinforcement location diagram at the column cap



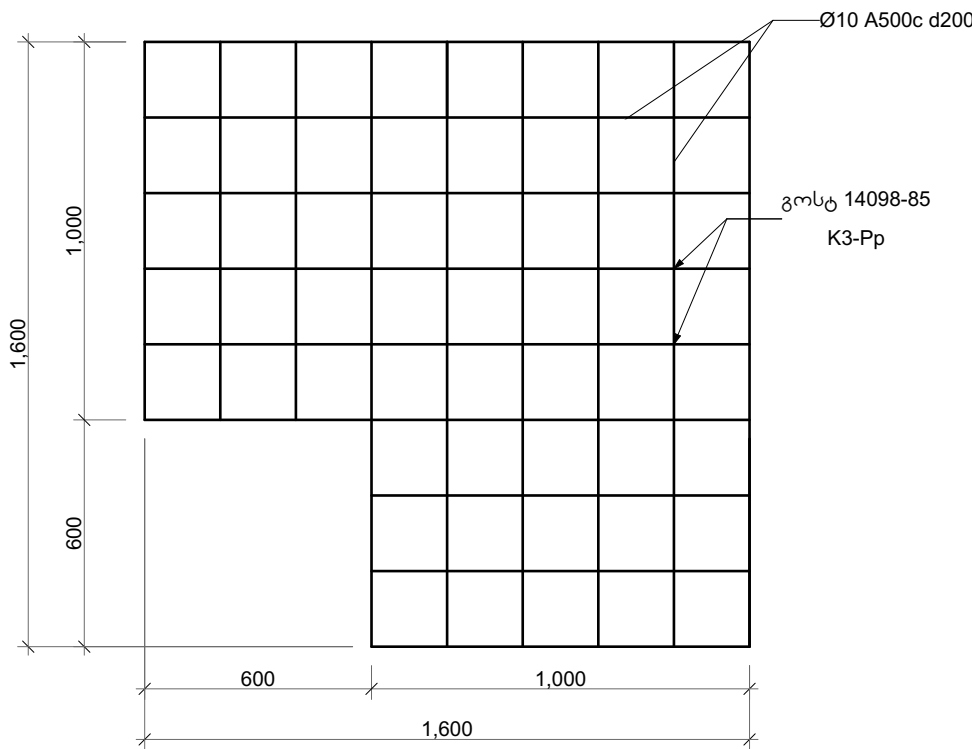
Reinforcement scheme at holes in a slab



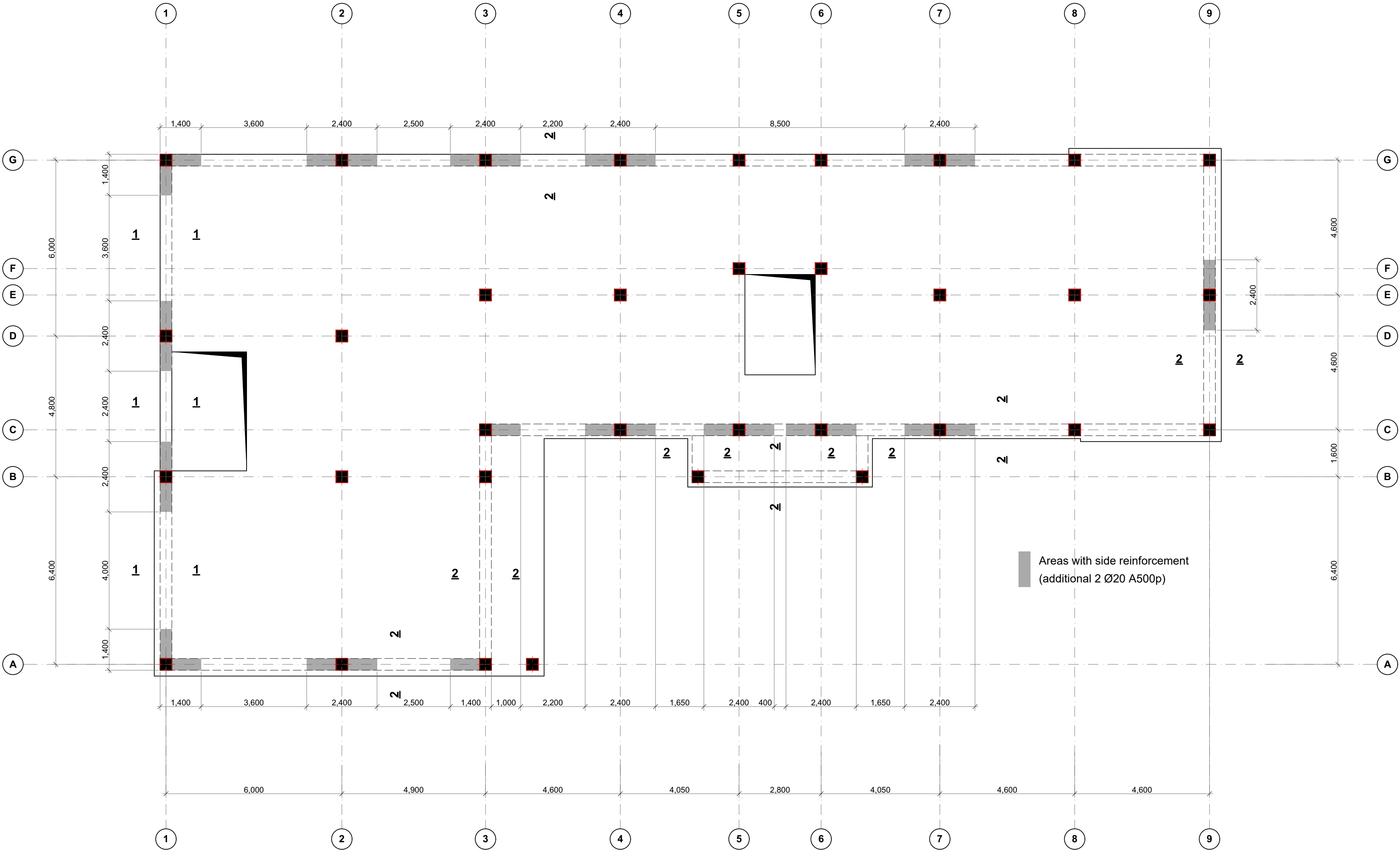
Grid K-1



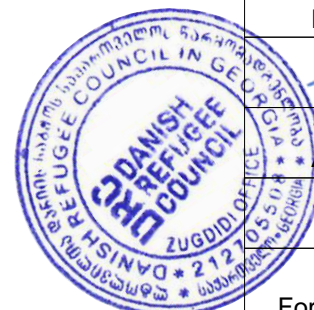
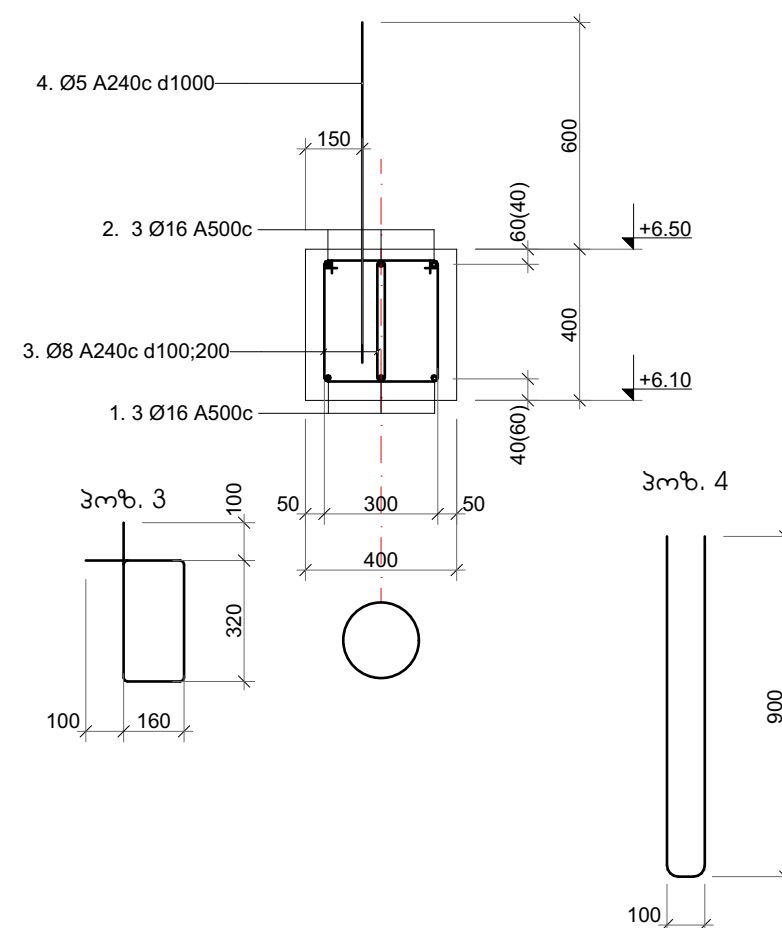
Grid K-2



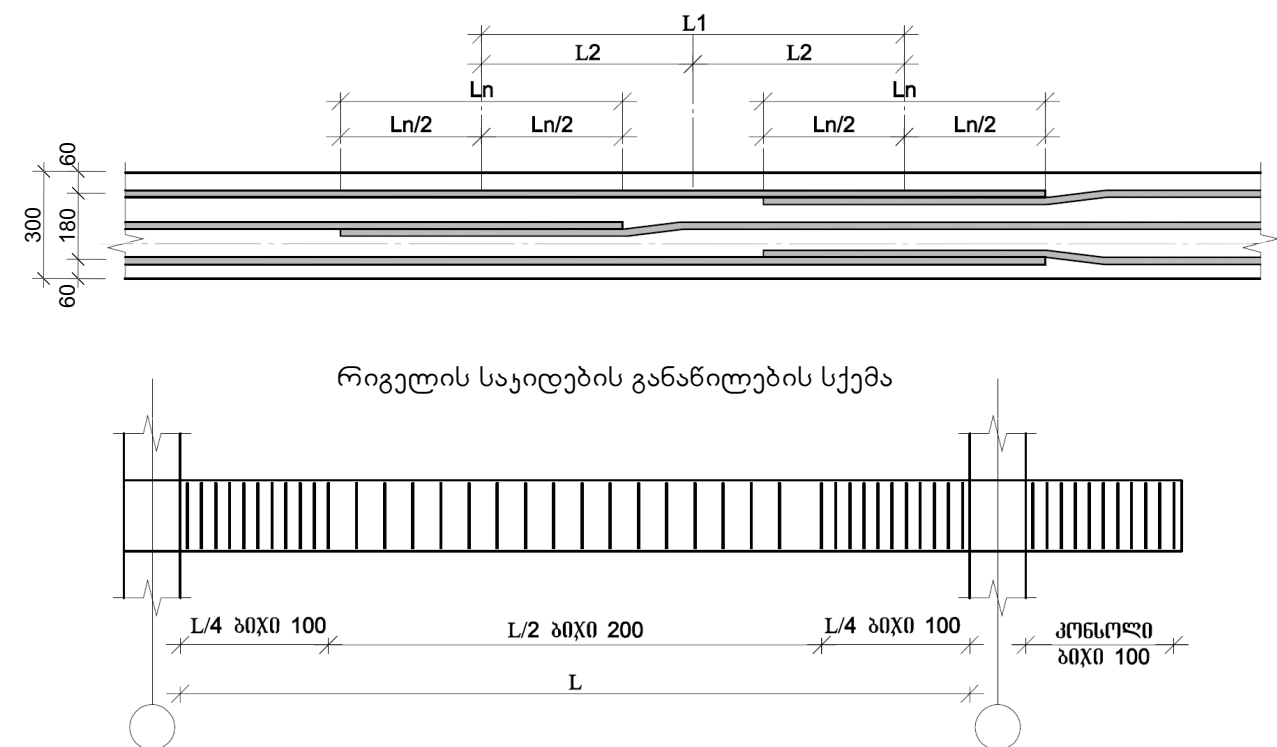
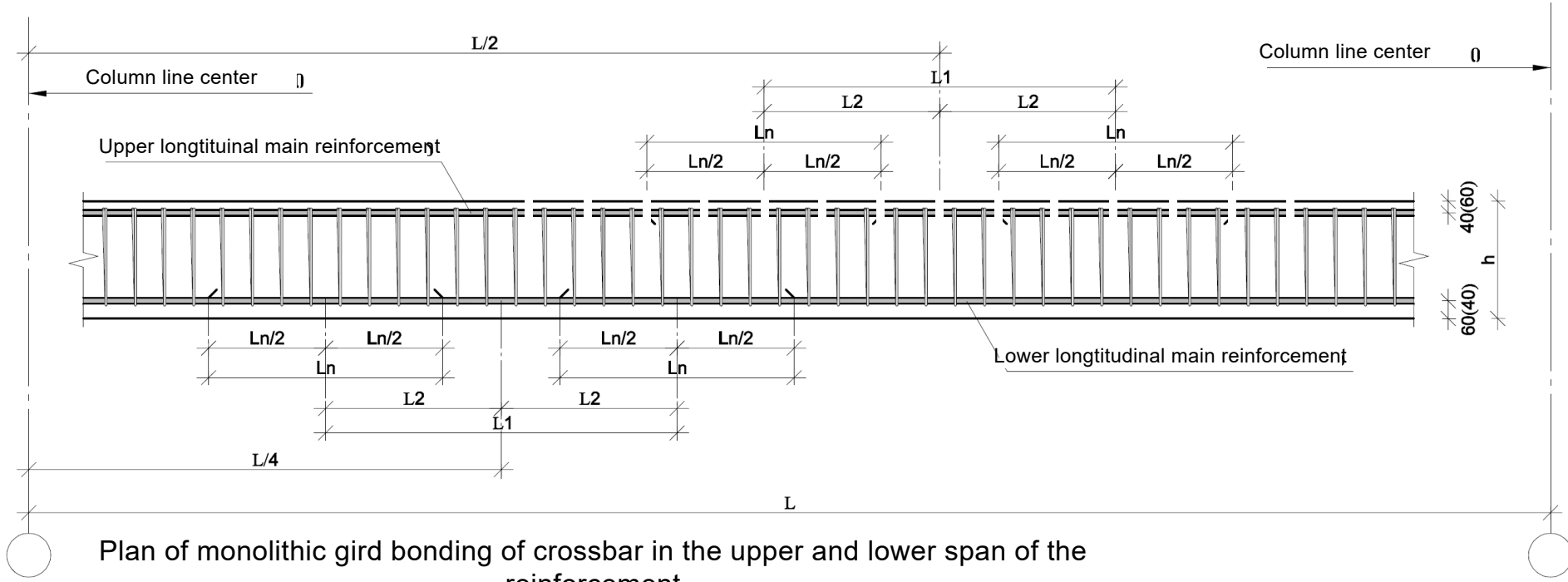
Plan of Girders at +3.20 Mark



Section on the Girder
4-4



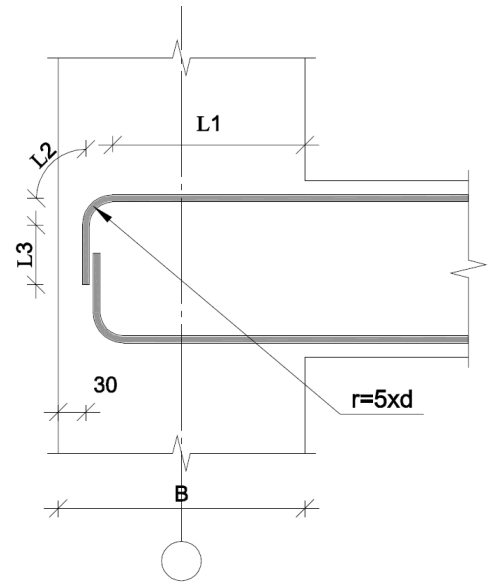
Locations of monolithic gird bonding by crossbar in the upper and lower span of the reinforcement on a vertical plane



Parameters of gird bond crossbar in the upper and lower reinforcement

არმატურის დიამეტრი (მმ)	არმატურის სიგრძე (მმ)	არმატურის რაოდენობა (მმ)	არმატურის სიგრძე (მმ)
Ø16 A500C	640	960	480
Ø18 A500C	720	1080	540
Ø20 A500C	800	1200	600
Ø22 A500C	880	1320	660
Ø25 A500C	1000	1500	750

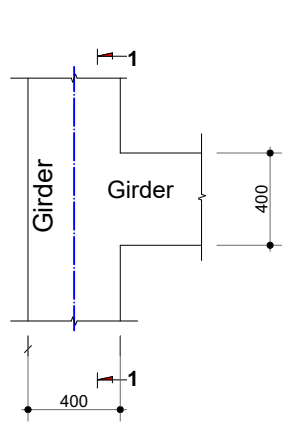
Fixing (bending) Node of Grid in the upper and lower reinforcement column



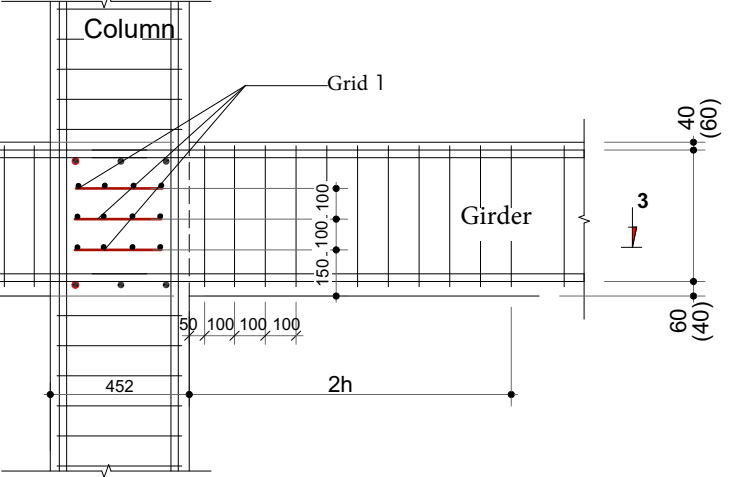
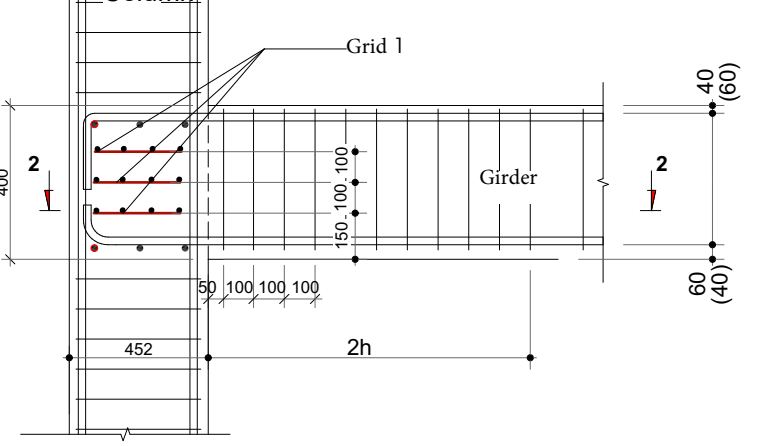
Parameters of fixing node of grid in the upper and lower reinforcement column

არმატურის დიამეტრი (მმ)	არმატურის სიგრძე (მმ)	არმატურის რაოდენობა (მმ)	არმატურის სიგრძე (მმ)
Ø16 A500C	640	80	320
Ø18 A500C	720	90	360
Ø20 A500C	800	100	400
Ø22 A500C	880	110	440
Ø25 A500C	1000	120	480

Strengthening of the Gird to Gird Connection Node

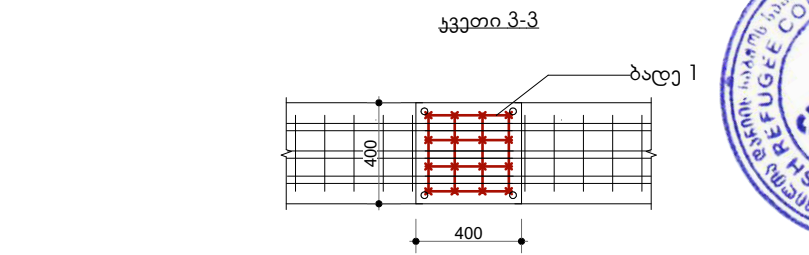
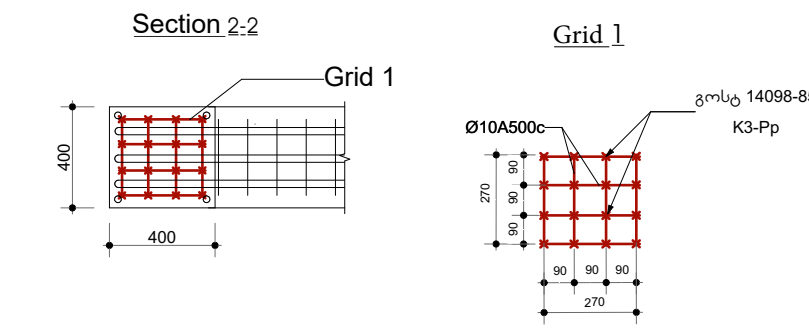
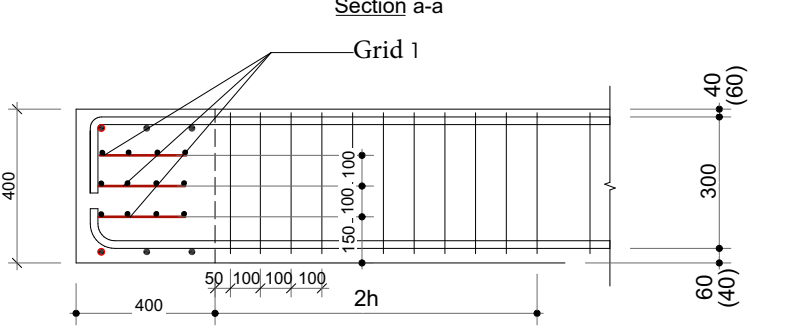
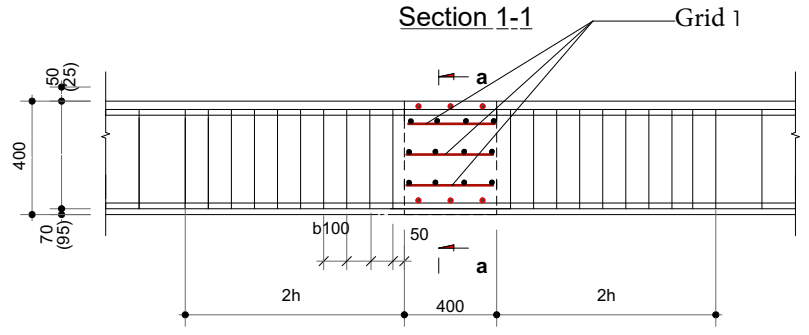


Strengthening of the intersection of girder and columns

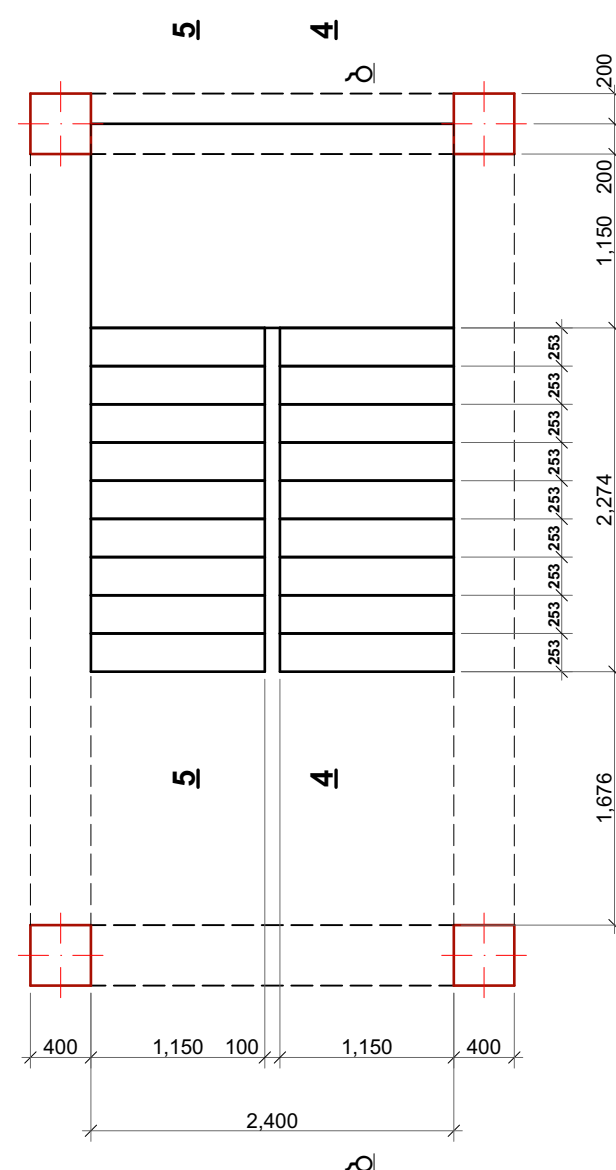


ელემენტი Element	№	არმატურის პროფილი Profile of reinforcement	სიგრძე მმ length mm	რაოდენობა Qty	საერთო სიგრძე მ total length m	ბეტონის მ3 Concrete m3
რკინაბეტონის რიგელები +3.20 და +5.50 ნიშნულზე Reinforced Concrete Girders						
რიგელები +3.20 ნიშნულზე კოორდინატი 1-1 Girders at +3.20 mark Section 1-1	1	18 A500c	18800	3	56.4	
	2	25 A500c	20680	2	41.4	
	3	22 A500c	20680	1	20.7	
	4	8 A240c	1160	228	264.5	
	ღამ.	20 A500c	2400	22	52.8	
რიგელები +3.20 ნიშნულზე კოორდინატი 2-2 Girders at +3.20 mark Section 2-2	1	18 A500c	105000	3	315.0	
	2	22 A500c	115500	3	346.5	
	3	8 A240c	1160	1330	1542.8	
	ღამ.	20 A500c	2400	8	19.2	
რიგელები +5.50 ნიშნულზე კოორდინატი 3-3 Girds at +5.50 mark Section 3-3	1	16 A500c	90300	3	270.9	
	2	16 A500c	99330	3	298.0	
	3	8 A240c	1160	1130	1310.8	
რიგელები +5.50 ნიშნულზე კოორდინატი 4-4 Girders at +5.50 mark Section 4-4	1	16 A500c	87150	3	261.5	
	2	16 A500c	95865	3	287.6	
	3	8 A240c	1160	1080	1252.8	
	4	5 A240c	1900	88	167.2	
ბეტონის B25 m3 Concete B25 m3						44.5

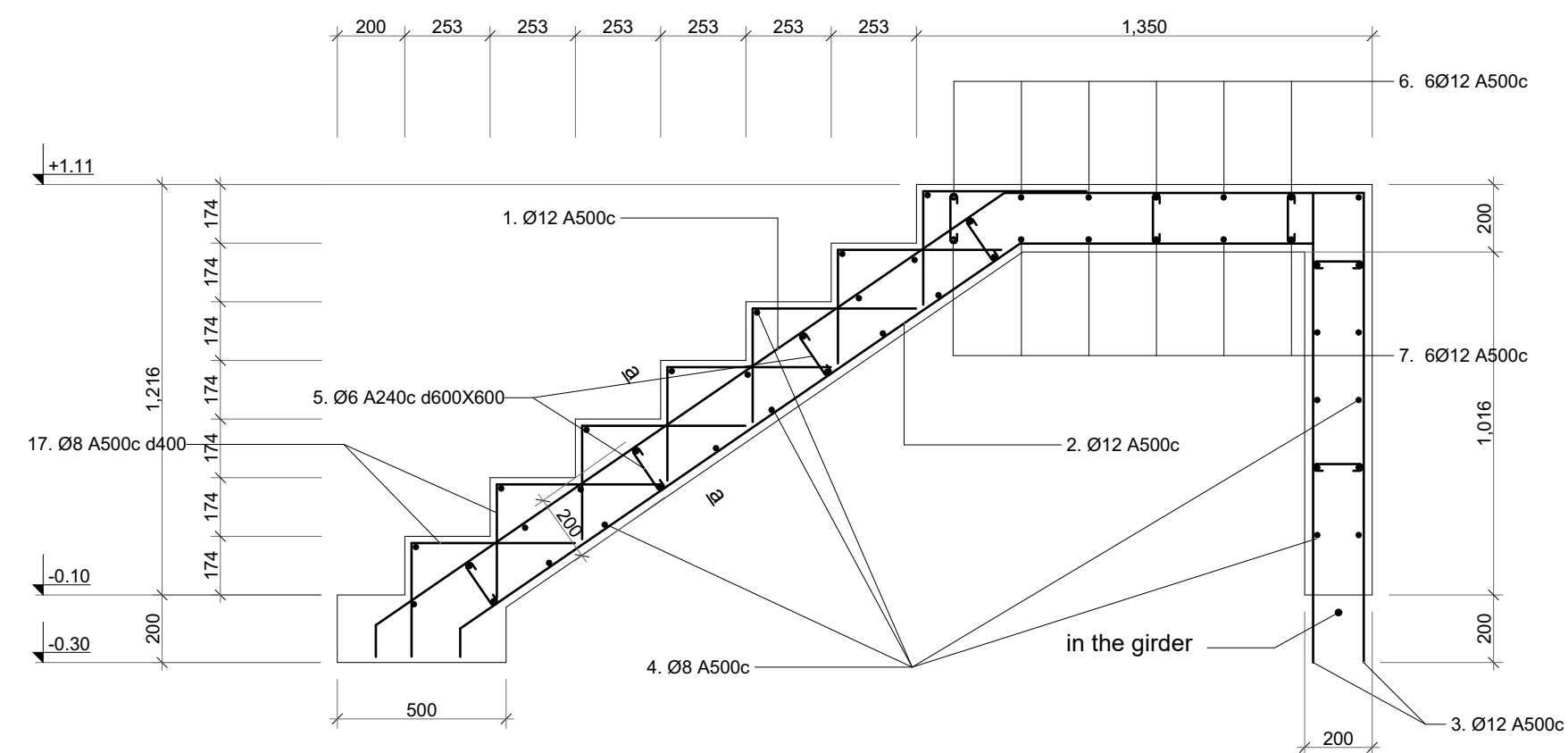
არმატურის ამოცრევა						
კვეთი	საერთო სიგრძე მ	საერთო სიგრძე დანაკარგი მ	გამოსახ. წონა	საერთო წონა ტონა	საერთო წონა (გამოსახ. მიხედვით) ტონა	
A240c	6 A240c	167.0	167.0	0.222	0.04	1.8
	8 A240c	4371.0	4589.6	0.394	1.81	
A500c	6 A500c		0.0	0.222	0.00	4.1
	8 A500c		0.0	0.394	0.00	
	10 A500c		0.0	0.616	0.00	
	12 A500c		0.0	0.887	0.00	
	14 A500c		0.0	1.208	0.00	
	16 A500c	1118.0	1173.9	1.578	1.85	
	18 A500c	371.0	389.6	1.997	0.78	
	20 A500c	72.0	75.6	2.465	0.19	
	22 A500c	367.0	385.4	2.983	1.15	
სულ					5.98	



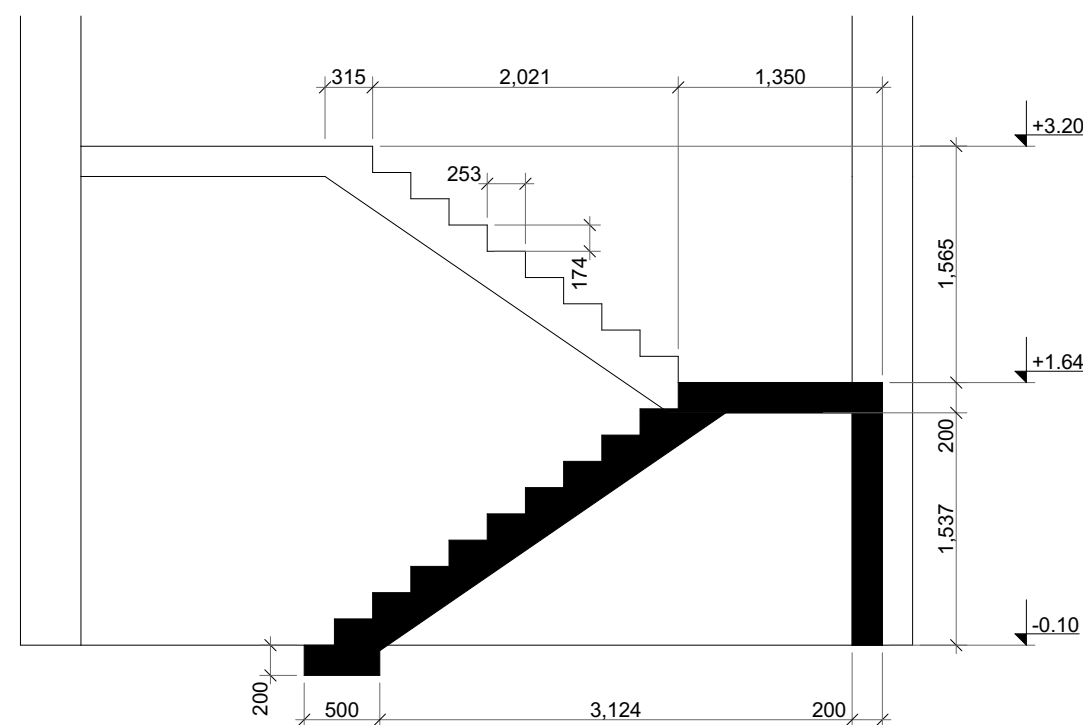
PLan of Staircase kb-2



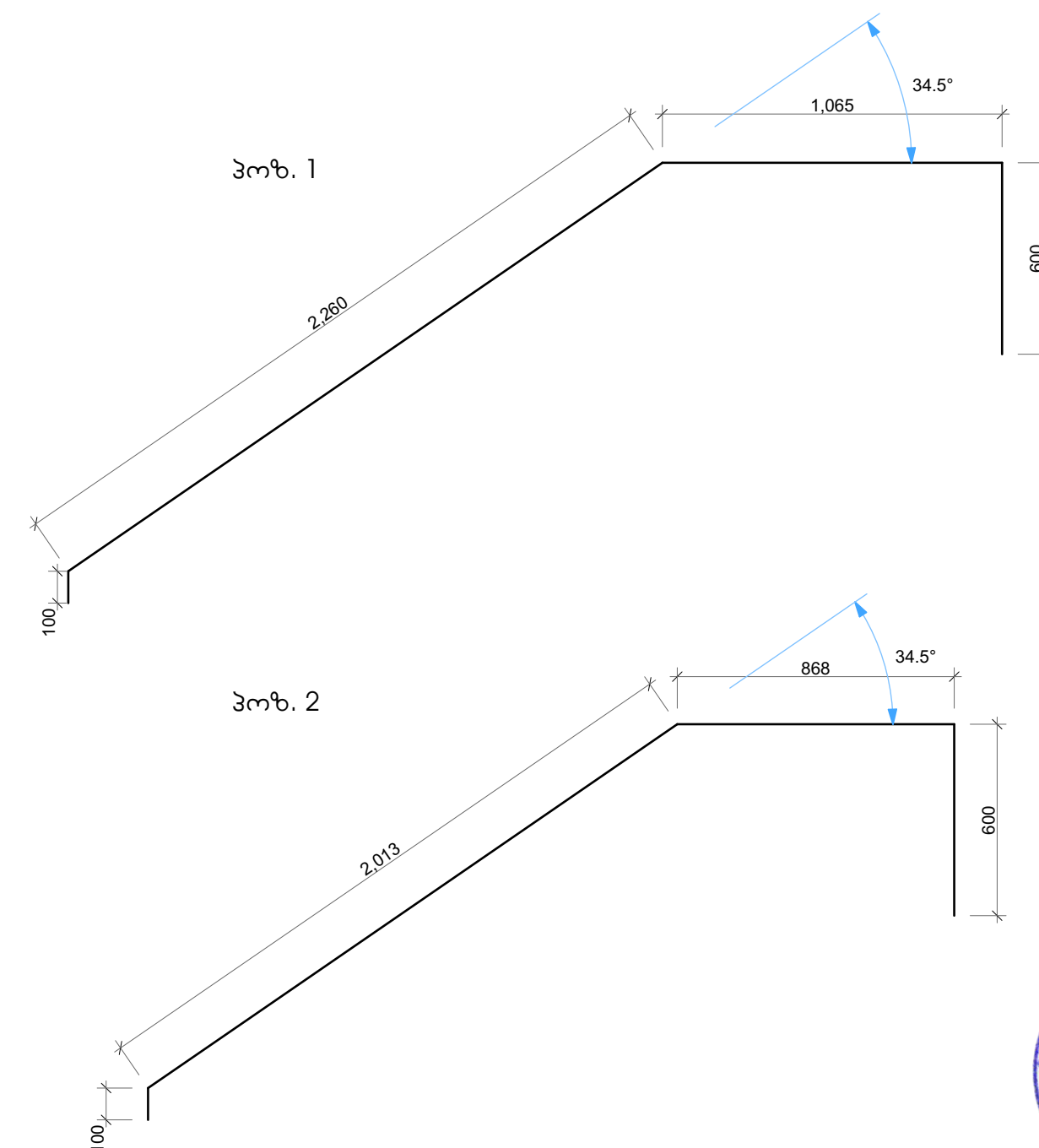
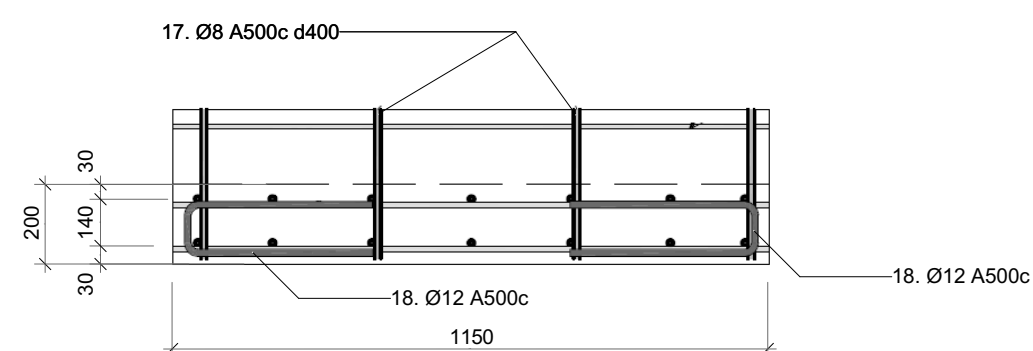
Section 1-1



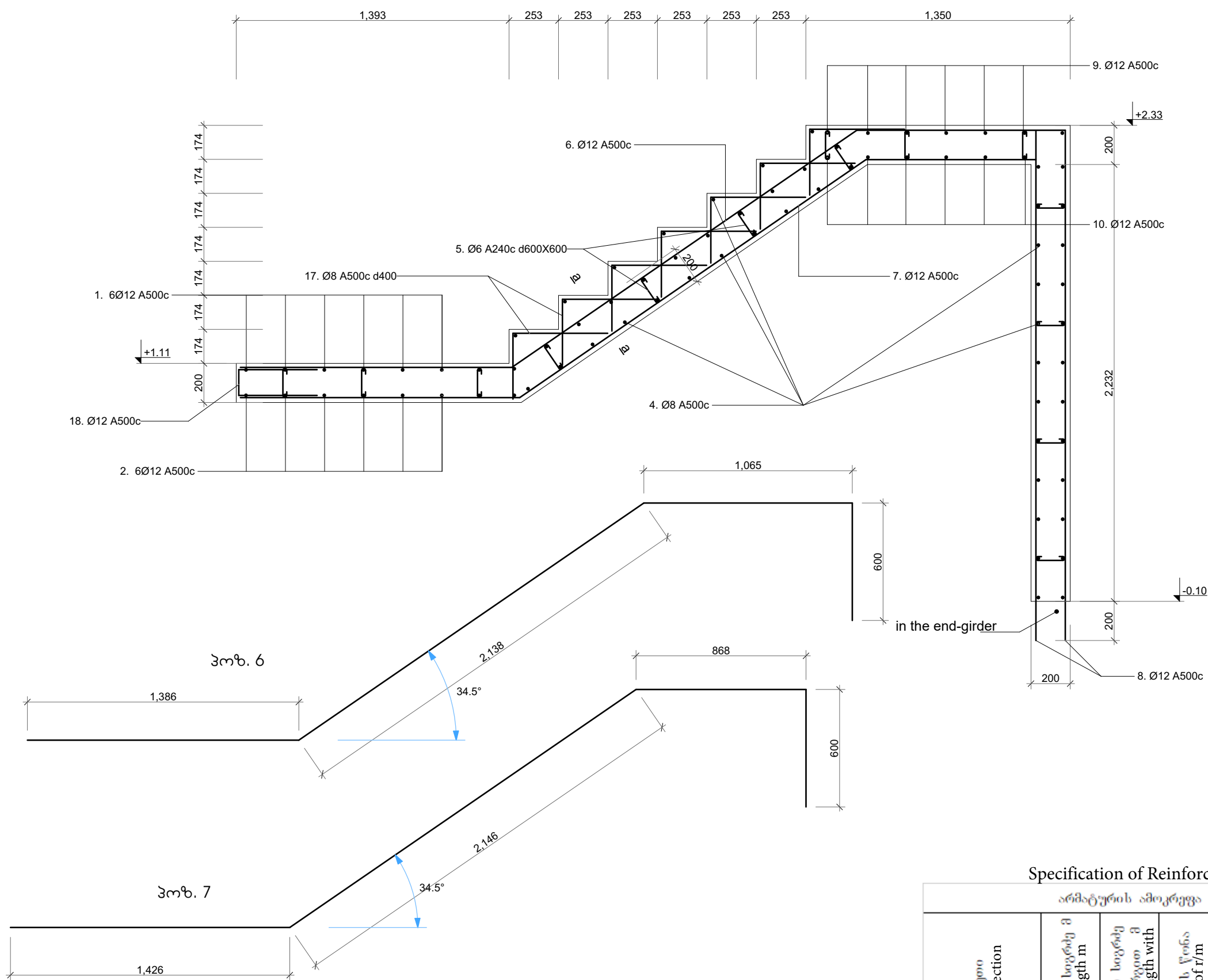
Section b-b



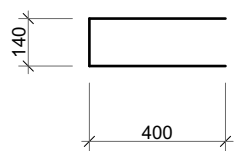
Section a-a



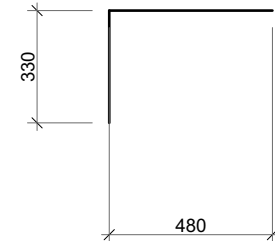
Section 2-2



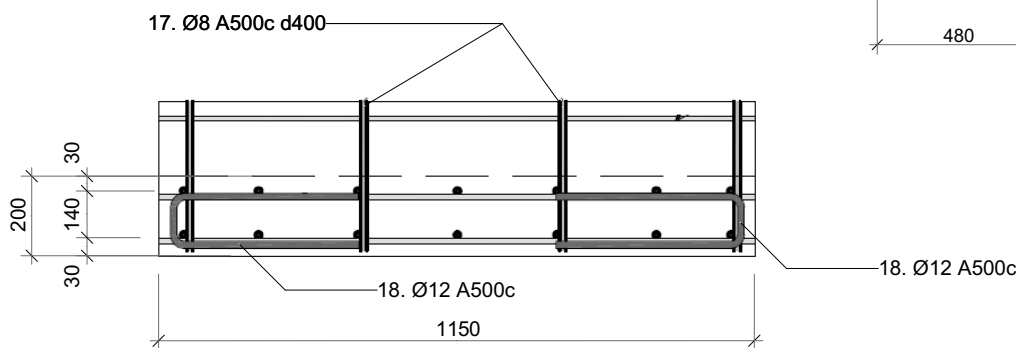
პოზ. 18



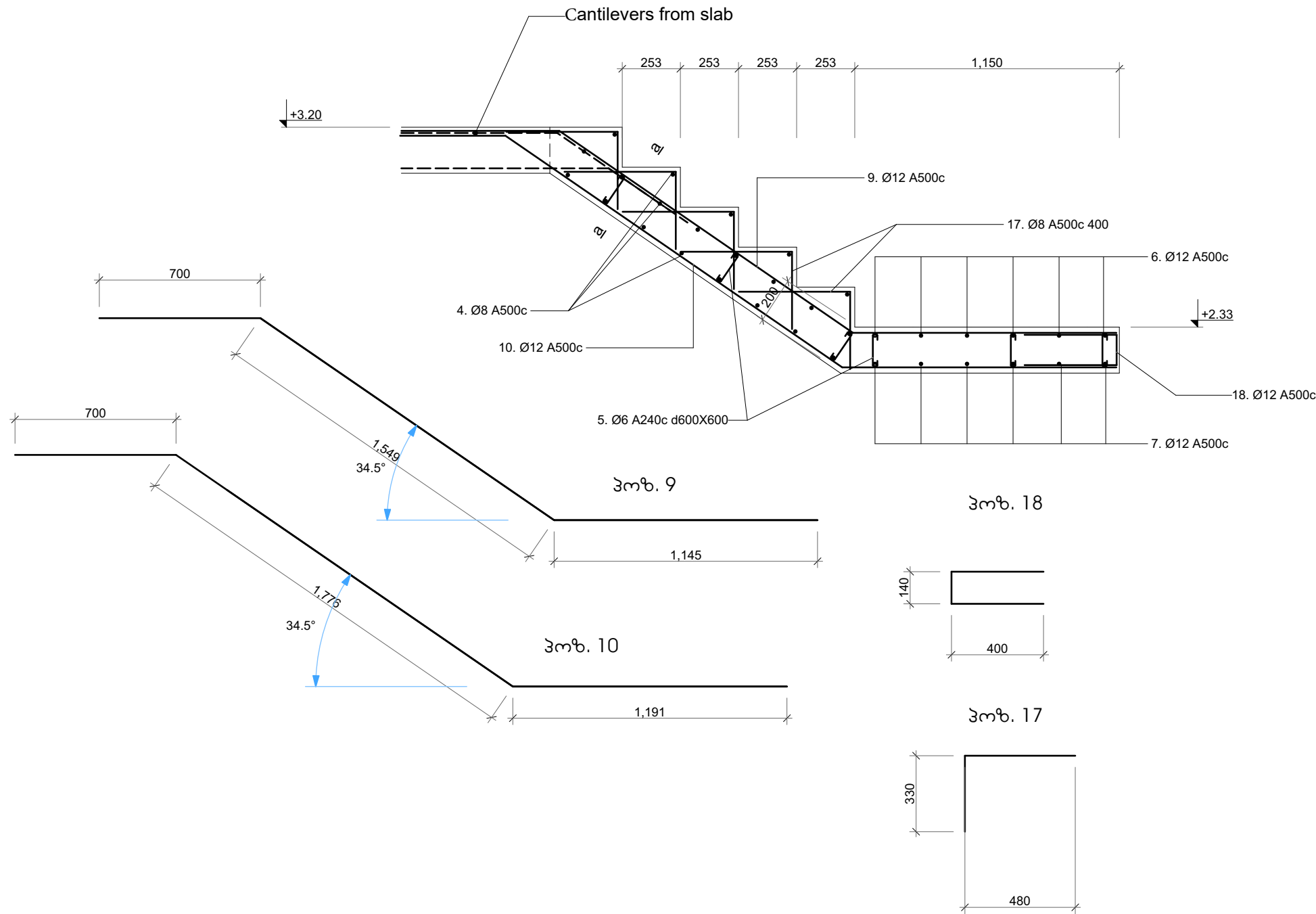
პოზ. 17



Section a-a

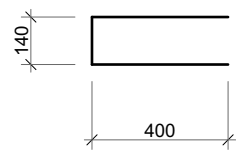


Section 3-3

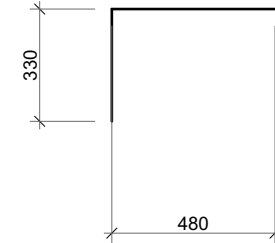


პოზ. 9

პოზ. 18



პოზ. 17



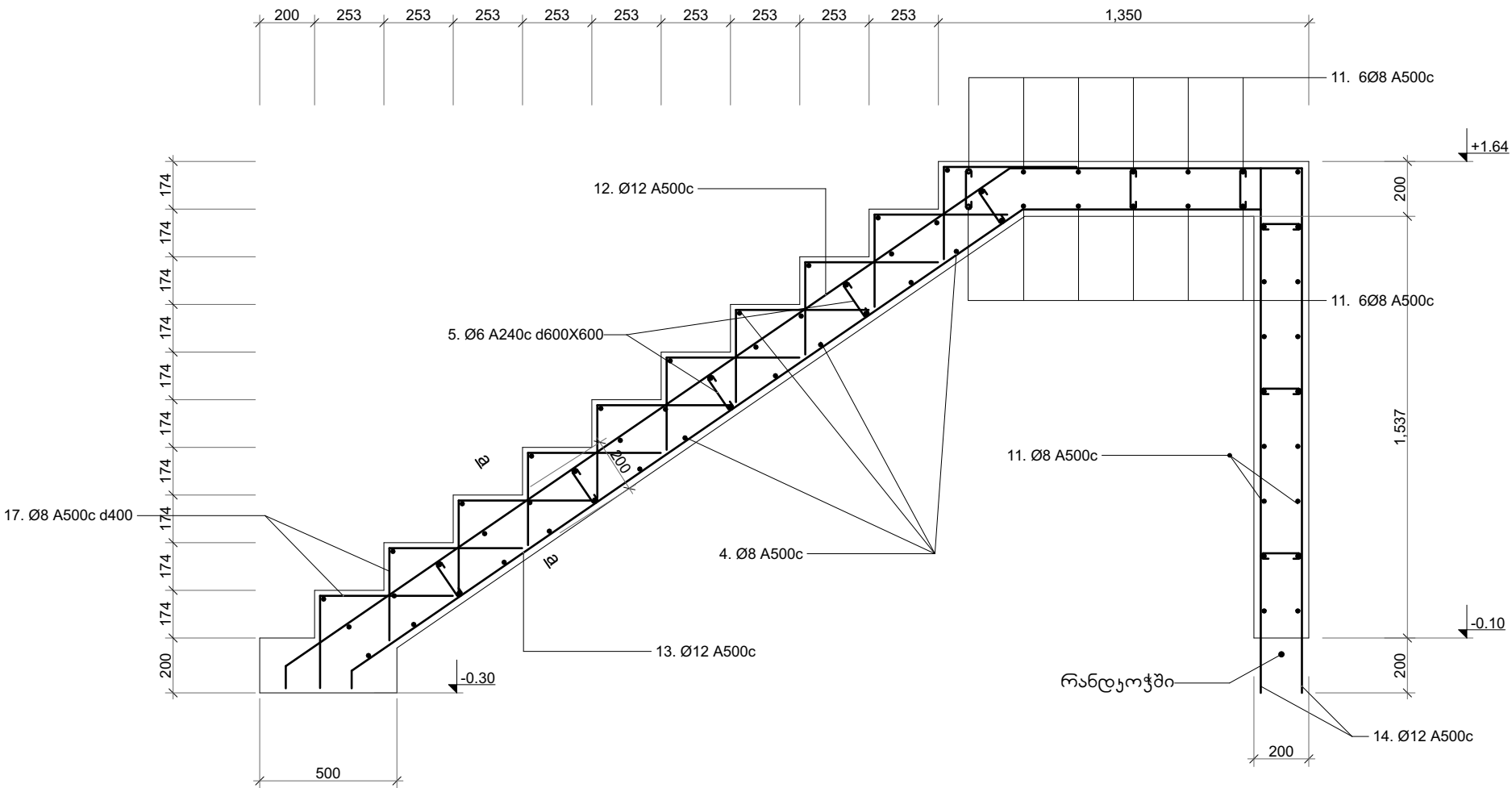
Specification of Reinforcement

არმატურის აღმკვეთვა					
კვეთი cross-section	საერთო სიგრძე მ Total length m	საერთო სიგრძე დანაკლებით მ Total length with loss m	გრამაჰის წონა weight of r/m	საერთო წონა total weight, ton	საერთო წონა (კლასის მიხედვით) ტონა Total weight per class, ton
A240c	6 A240c	44.0	0.222	0.01	0.0
	8 A240c	0.0	0.394	0.00	
A500c	6 A500c	0.0	0.222	0.00	0.6
	8 A500c	351.2	0.394	0.15	
	10 A500c	0.0	0.616	0.00	
	12 A500c	450.4	0.887	0.42	
	14 A500c	0.0	1.208	0.00	
	16 A500c	0.0	1.578	0.00	
	18 A500c	0.0	1.997	0.00	
	20 A500c	0.0	2.465	0.00	
	22 A500c	0.0	2.983	0.00	
	25 A500c	0.0	3.851	0.00	
სულ				0.57	

ელემენტი Element	№	არმატურის პროფილი Profile of reinforcement	სიგრძე მმ Length mm	რაოდენობა Q-ty	საერთო სიგრძე მ Total length m	ბეტონი მ3 Concrete m3
შიგა კიბეები Internal staircases						
კიბე 1 Staircase 1	1	12 A500c	4020	7	28.1	
	2	12 A500c	3560	7	24.9	
	3	12 A500c	1390	14	19.5	
	4	8 A500c	1120	154	172.5	
	5	6 A240c	300	54	16.2	
	6	12 A500c	5180	7	36.3	
	7	12 A500c	5040	7	35.3	
	8	12 A500c	2610	14	36.5	
	9	12 A500c	2680	7	18.8	
	10	12 A500c	2680	7	18.8	
კიბე 2 Staircase 2	4	8 A500c	1120	64	71.7	
	5	6 A240c	300	94	28.2	
	11	8 A500c	2380	30	71.4	
	12	12 A500c	4340	7	30.4	
	13	12 A500c	3900	7	27.3	
	14	12 A500c	1910	28	53.5	
	15	12 A500c	4705	7	32.9	
	16	12 A500c	4560	7	31.9	
	17	8 A500c	810	44	35.6	
	18	12 A500c	940	60	56.4	
ბეტონი B25 m3 Coocrete B25 m3						9.4



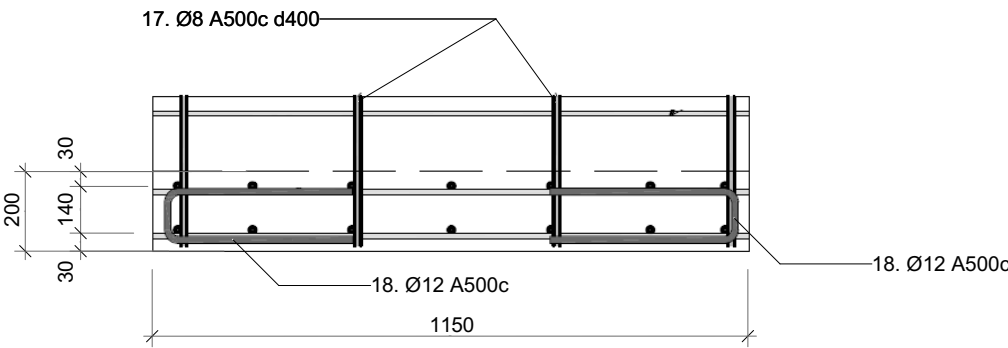
Section 4-4



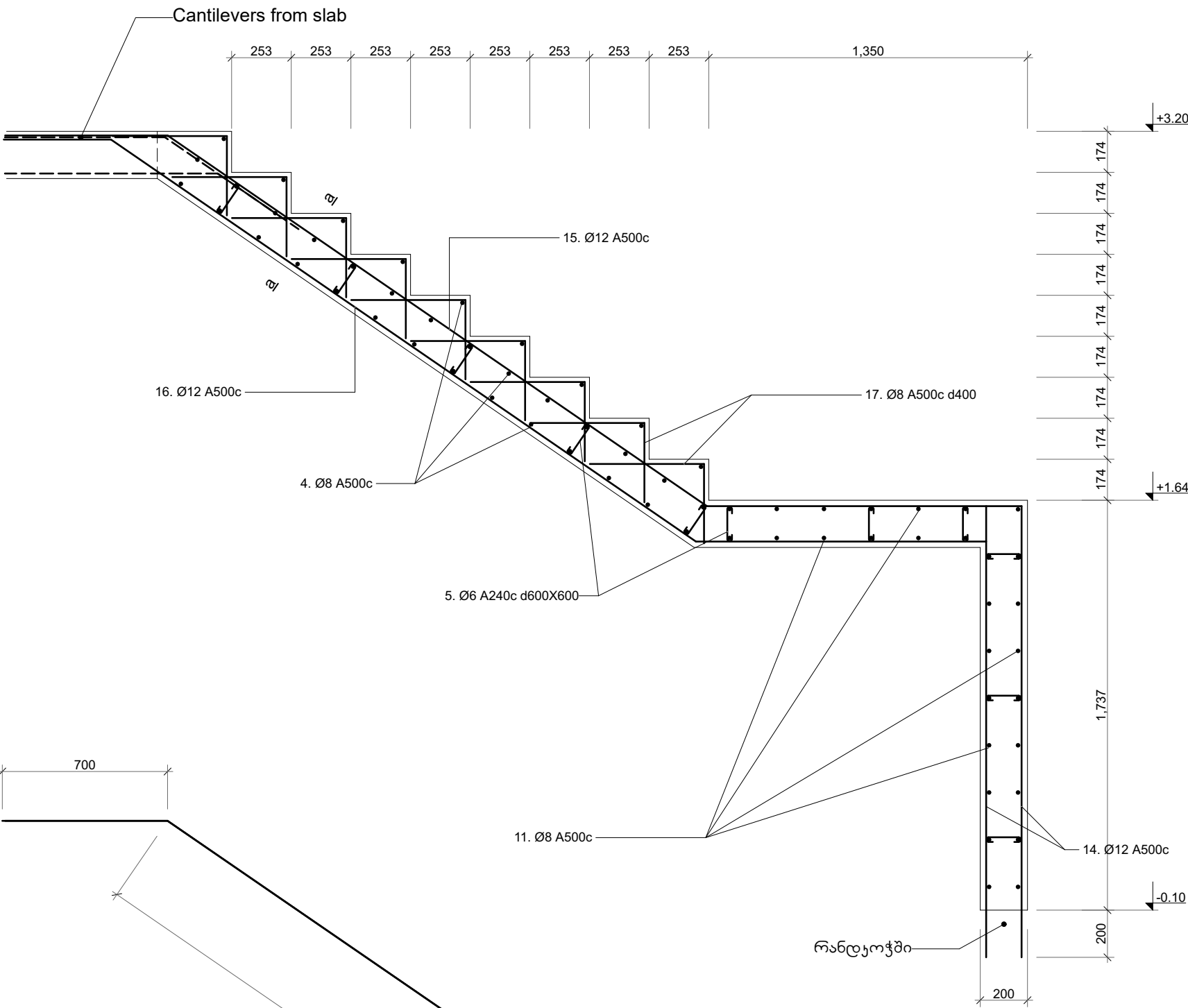
პრობ. 12

პრობ. 13

Section a-a



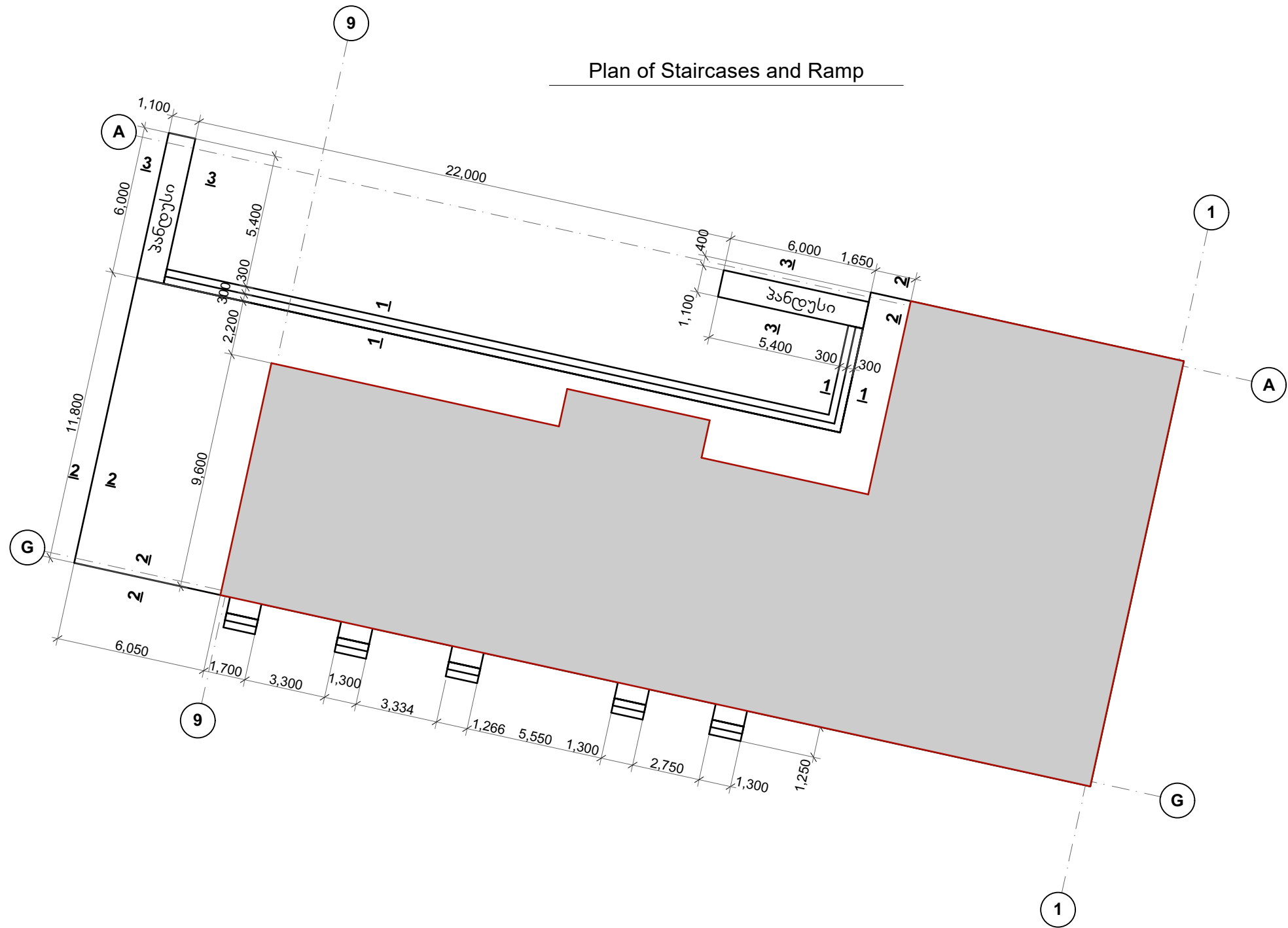
Section 5-5



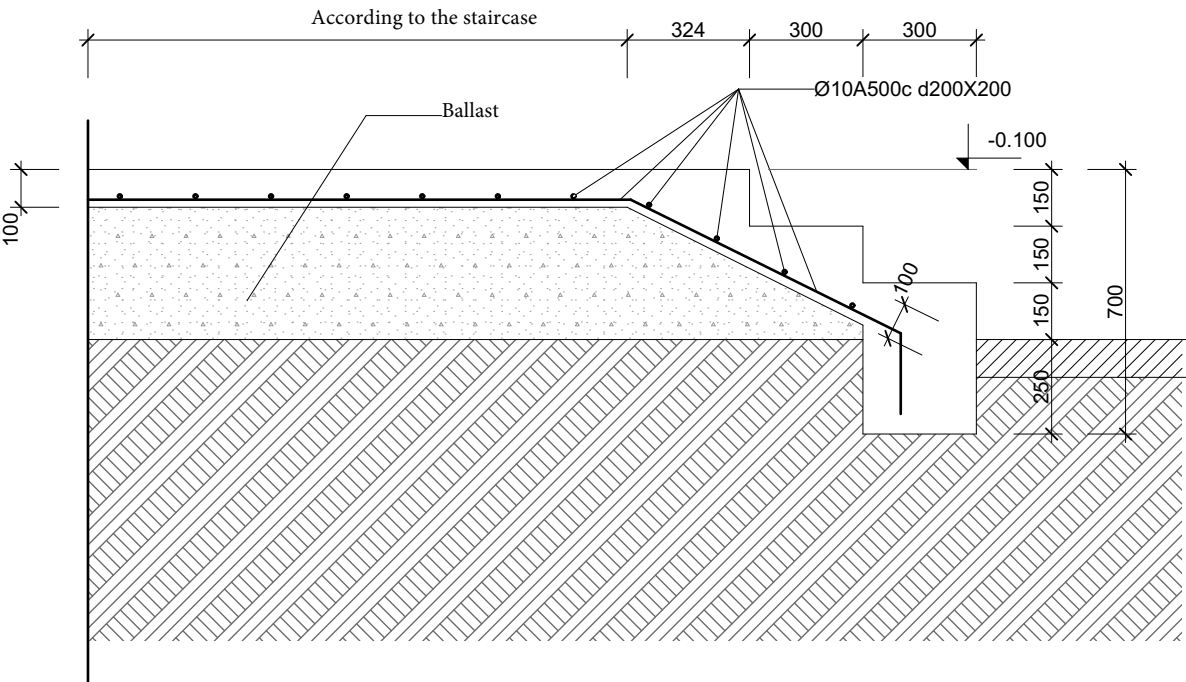
პრობ. 15

პრობ. 16

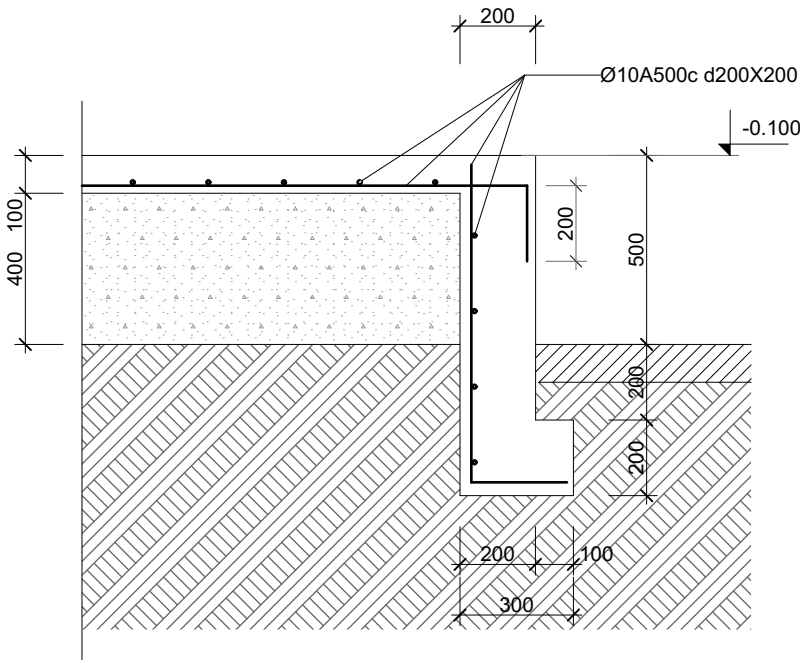




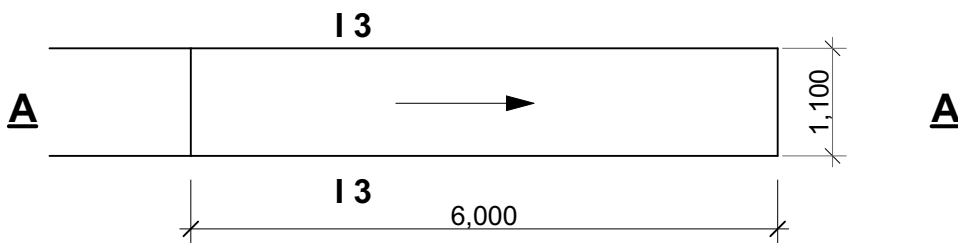
Section 1-1



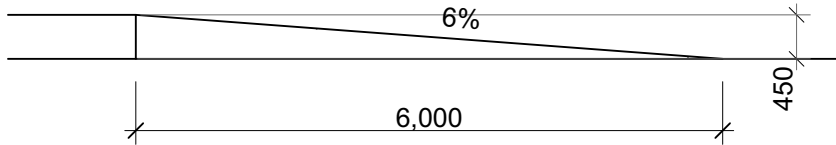
Section 2-2



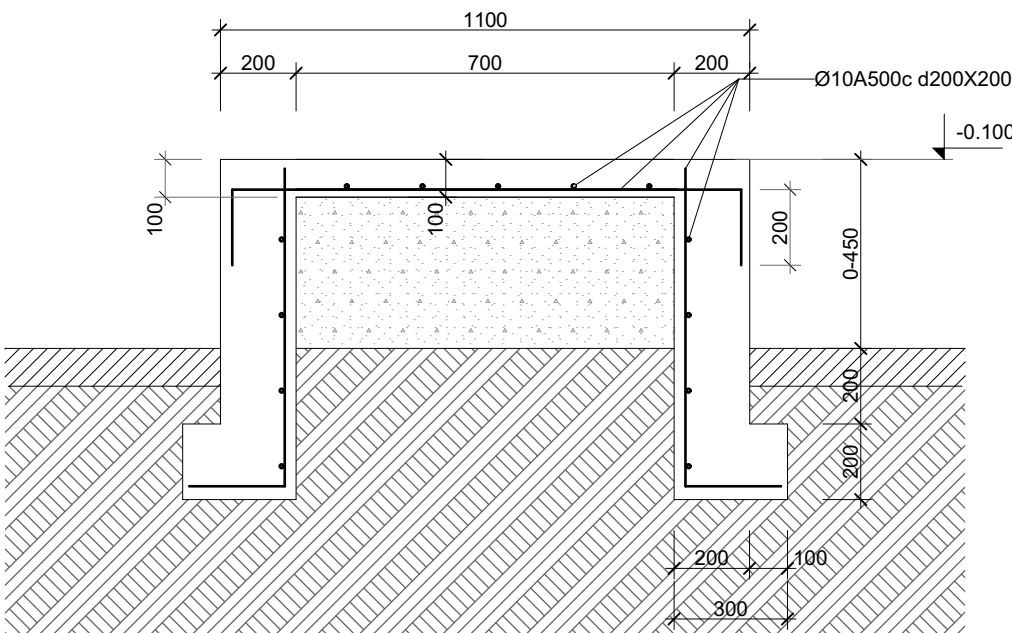
Plan of Ramp



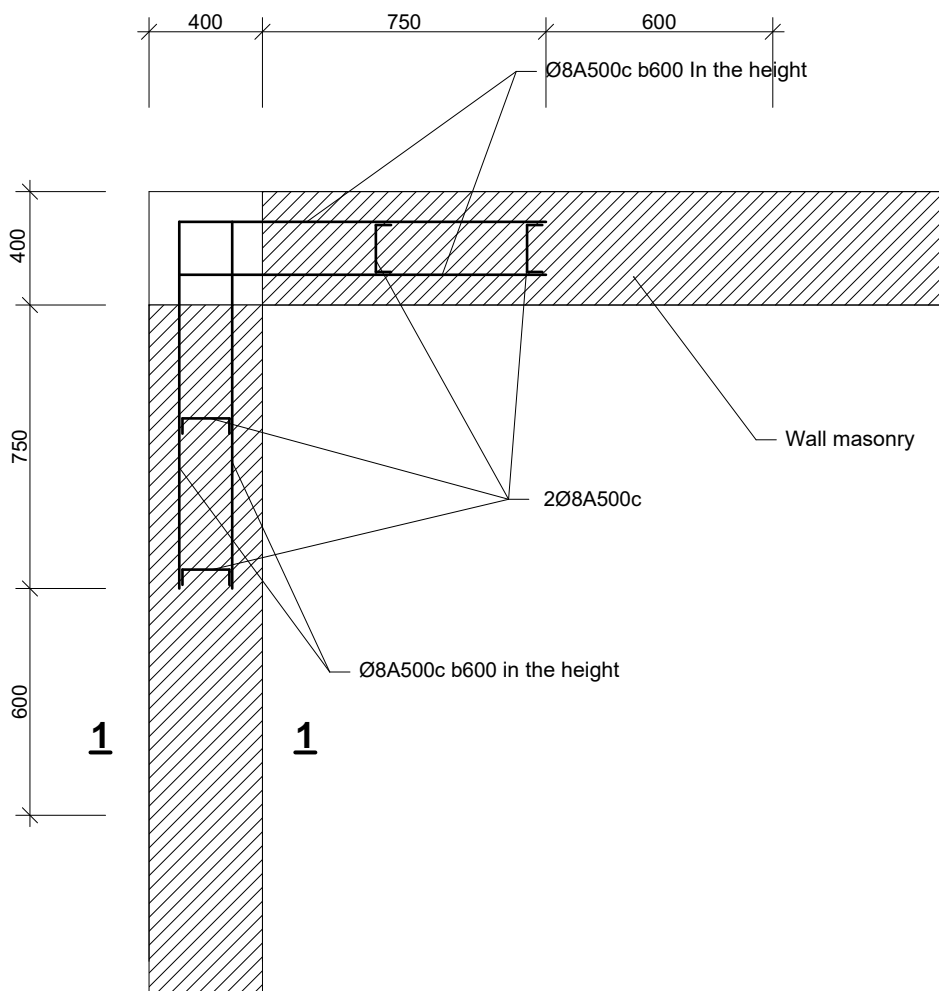
View A-A



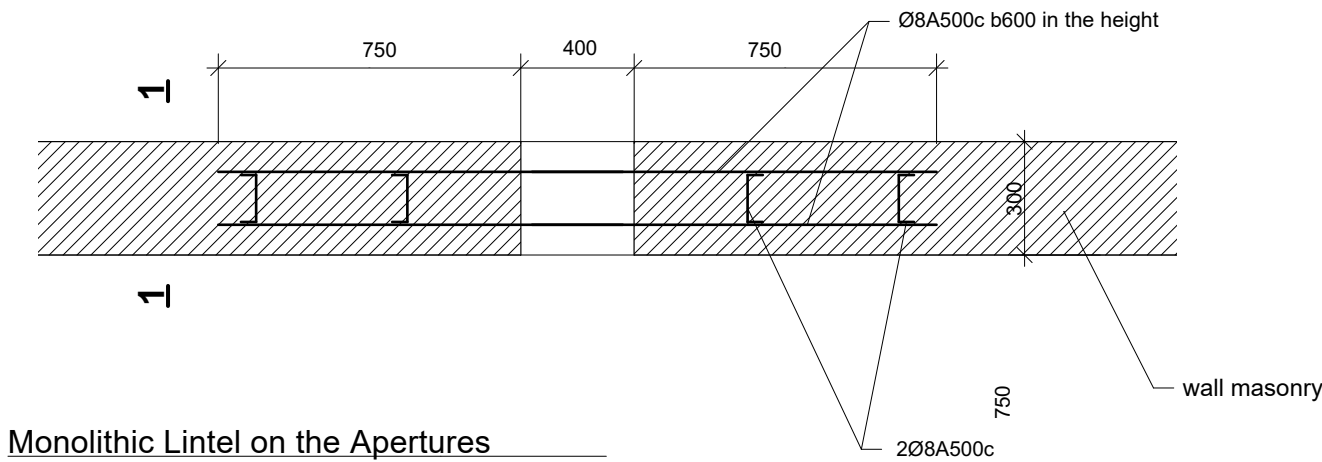
Section 3-3



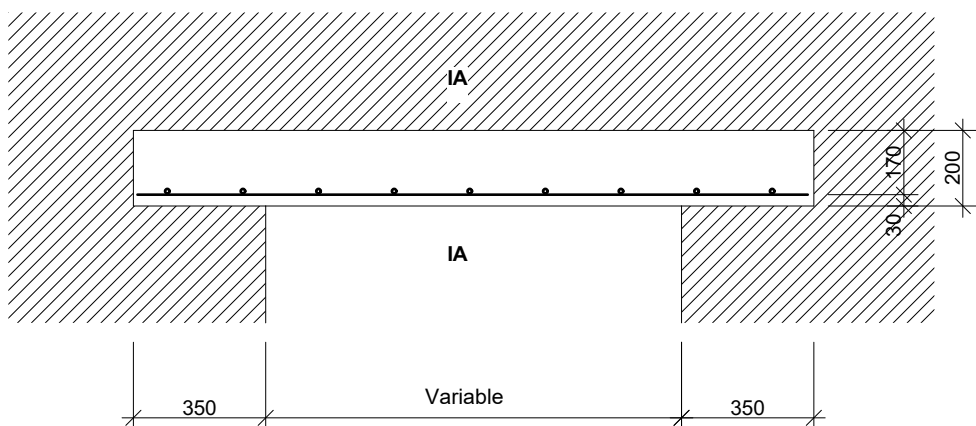
Connection of the Columns to the External Wall



1 - 1

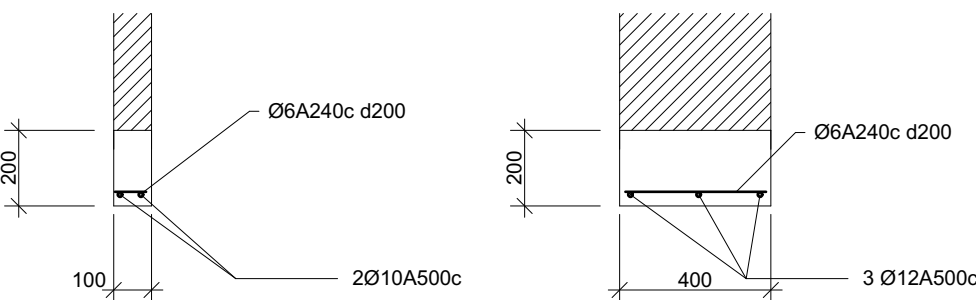


Monolithic Lintel on the Apertures



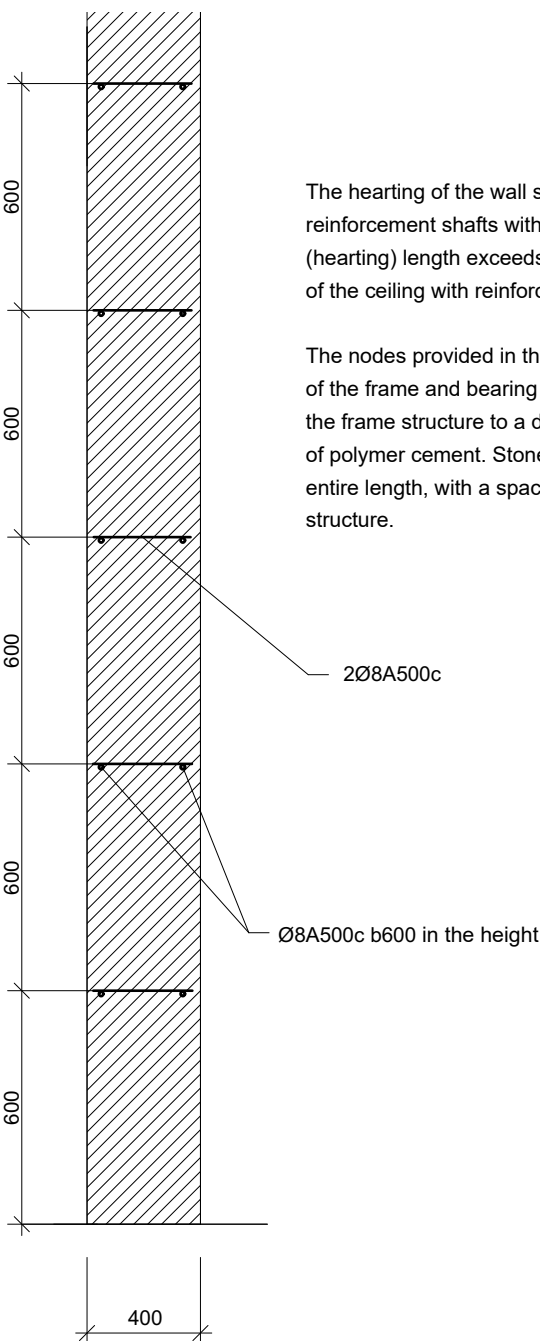
A-A
on the partition

on the external
wall



The heating of the wall stone masonry should be connected with the frame columns by reinforcement shafts with a length of 750 mm, with a spacing height of 600 mm. If the wall (heating) length exceeds 3 meters, it must be connected to the reinforced concrete structure of the ceiling with reinforcement rods.

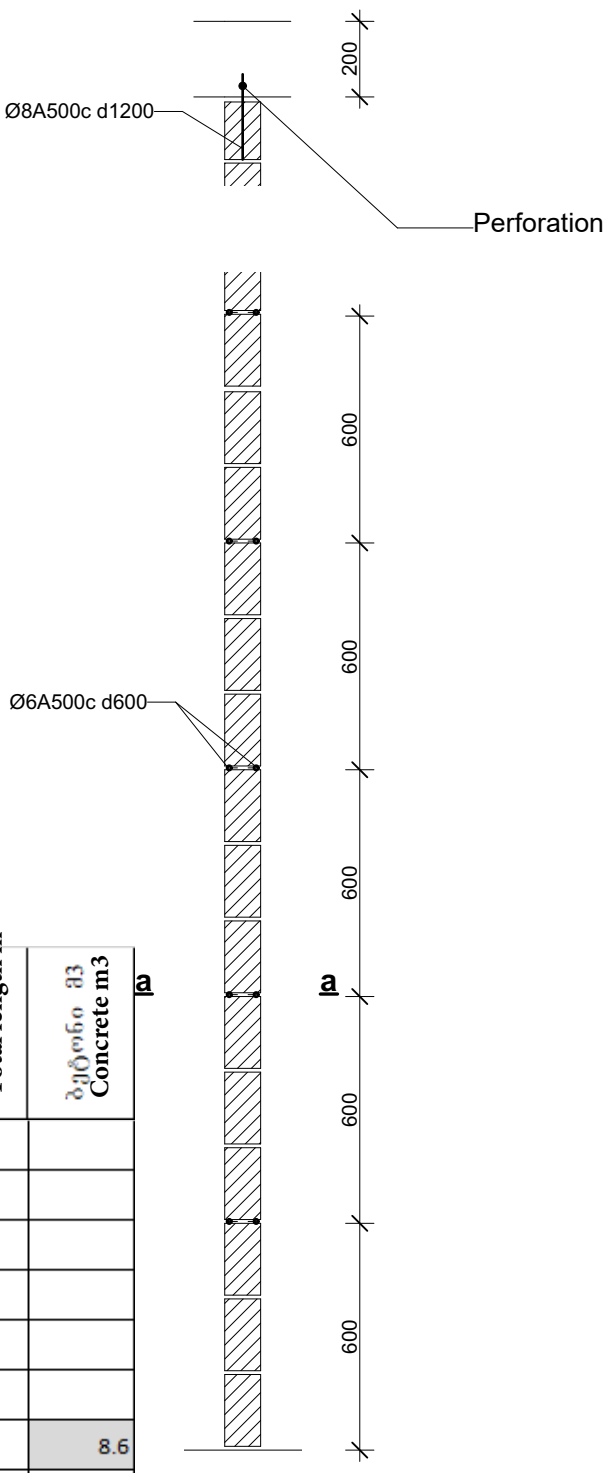
The nodes provided in the drawing can be performed simultaneously with the masonry works of the frame and bearing walls, as well as after concreting. For this, it is necessary to perforate the frame structure to a depth of 20 cm and to insert the reinforcement rods in it with a solution of polymer cement. Stone partitions need to be reinforced with 2Ø6A1 reinforcement along the entire length, with a spacing height of 600 mm and anchored to the concrete frame or wall structure.



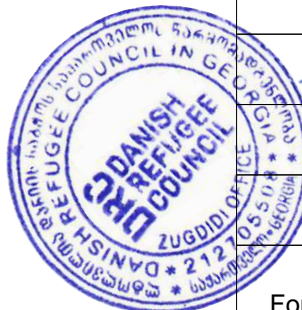
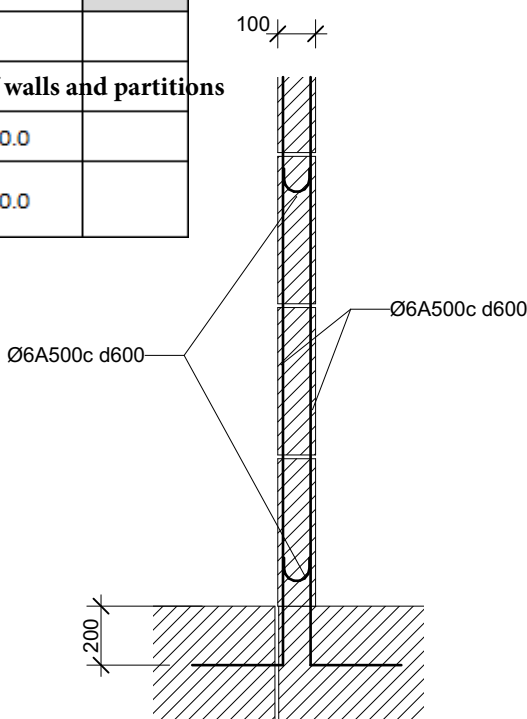
Specification of Reinforcement						
არმატურის ამოკრეფა						
კლასი Cross-section	საყობო სიგრძე მ Total length m	საყობო სიგრძე დანაკლები მ Total length with loss m	განაკლები წონა Weight of l/m	საყობო წონა Total weight, ton	საყობო წონა (კვადრატული მეტრი) Total weight per class, ton	კლასი Cross-section
A240c	6 A240c	5108.0	5108.0	0.222	1.13	1.1
	8 A240c		0.0	0.394	0.00	
A500c	6 A500c		0.0	0.222	0.00	4.3
	8 A500c		0.0	0.394	0.00	
	10 A500c	5232.0	5493.6	0.616	3.39	
	12 A500c	1024.0	1075.2	0.887	0.95	
	14 A500c		0.0	1.208	0.00	
	16 A500c		0.0	1.578	0.00	
	18 A500c		0.0	1.997	0.00	
	20 A500c		0.0	2.465	0.00	
	22 A500c		0.0	2.983	0.00	
	25 A500c		0.0	3.851	0.00	
	სულ Total			5.47		

ელემენტი Element	№	არმატურის პროფილი Profiles of reinforcement	სიგრძე მმ length mm	რაოდენობა Qty	საერთო სიგრძე მ Total length m	ბეტონის მ3 Concrete m3
ზღუდრები Lintels						
ზღუდარი გარე კედელზე Lintels on the external walls	1	12 A500c			1024.0	
	2	6 A240c			820.0	
ზღუდარი შიდა კედლებზე Lintels on the internal walls	1	10 A500c			792.0	
	2	6 A240c			228.0	
ბეტონი B25 m3 Concrete B25 m3						8.6
კიბეები და პანდუსი Staircases and Ramp						
კიბეები და პანდუსი Staircases and Ramp	1	10 A500c			1980.0	
ბეტონი B25 m3 Concrete B25 m3						31.4
კედლების და ტიხრების არმირება Reinforcement of walls and partitions						
ტიხრების არმირება Reinforcement of partitions		6 A500c			4060.0	
გარე კედლების და სვეტების კავშირი Conectios of external walls and columns		10 A500c			2460.0	

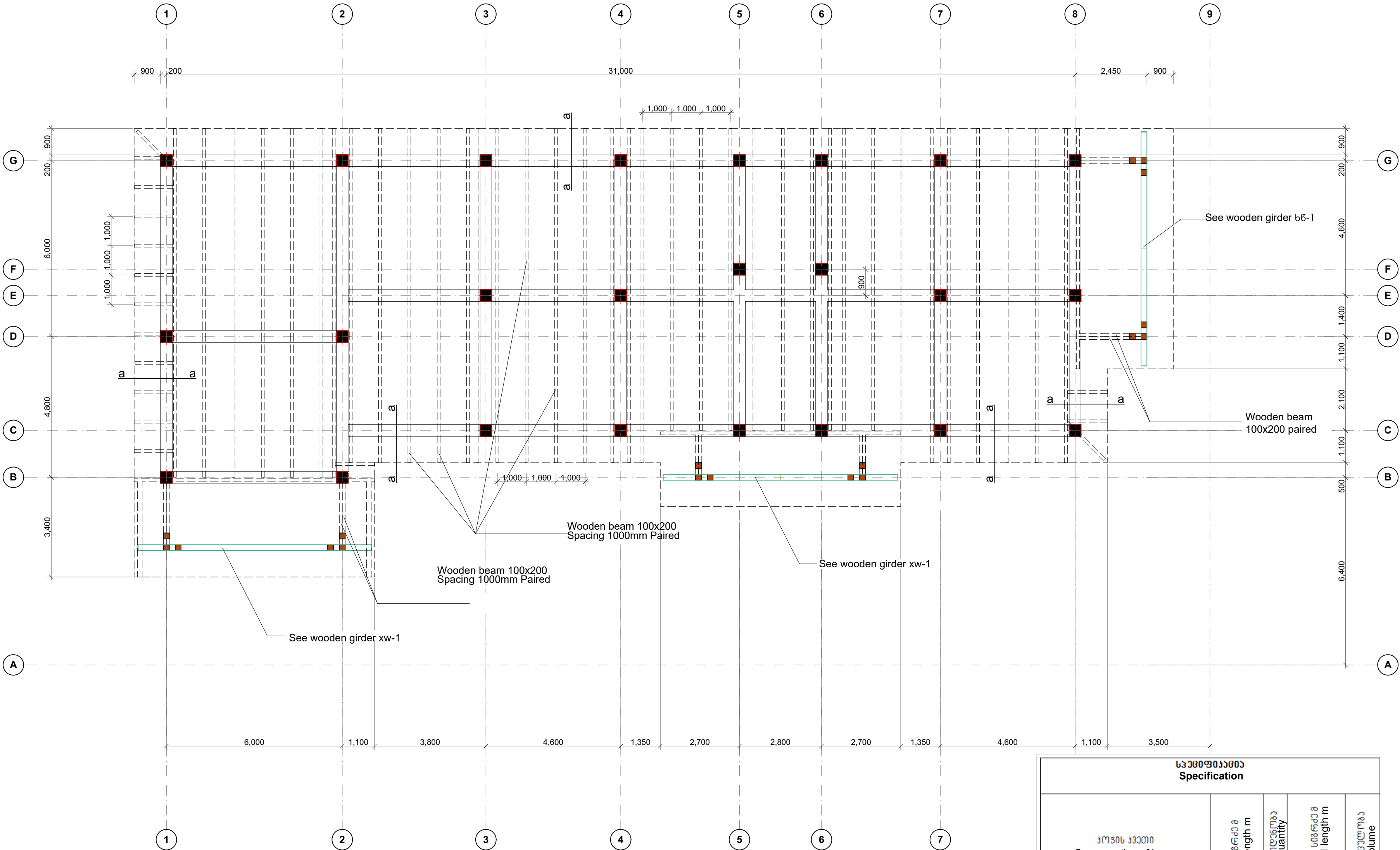
Partition reinforcement



a - a

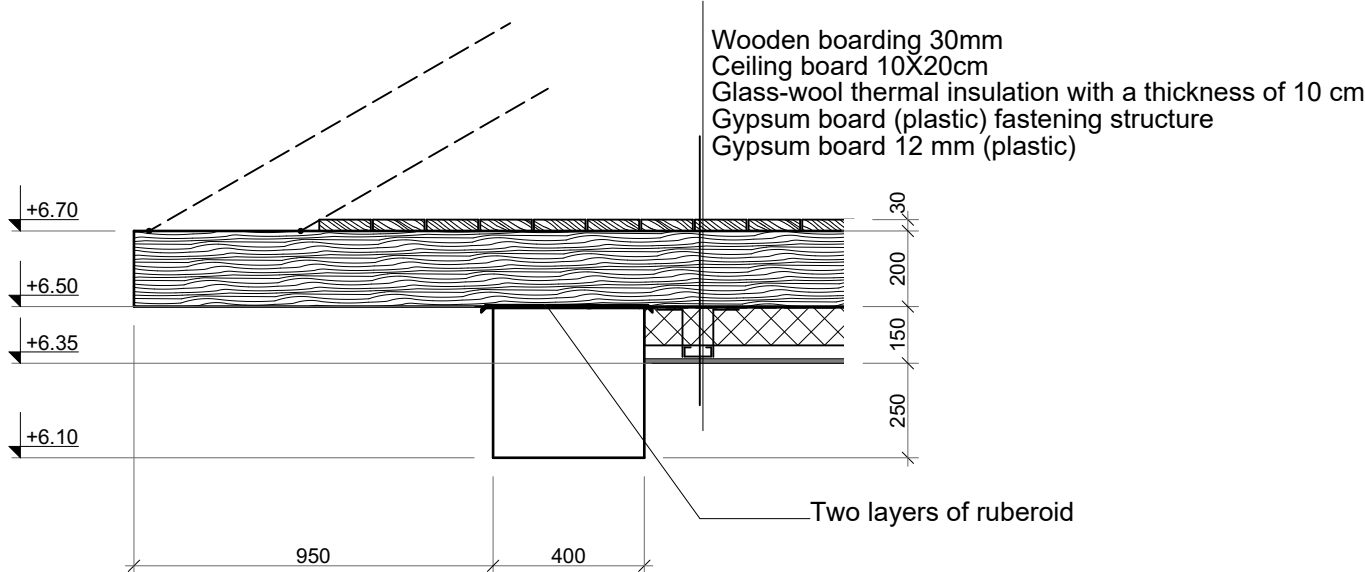
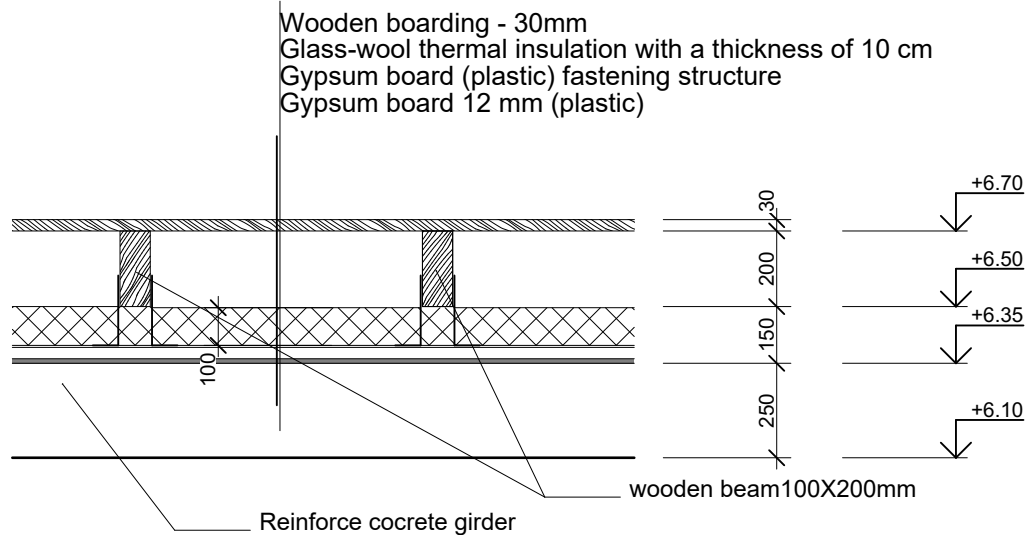


Plan of wooden beams in the ceiling at +6.50 mark



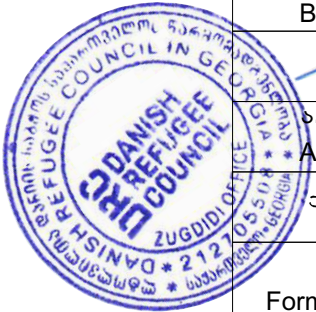
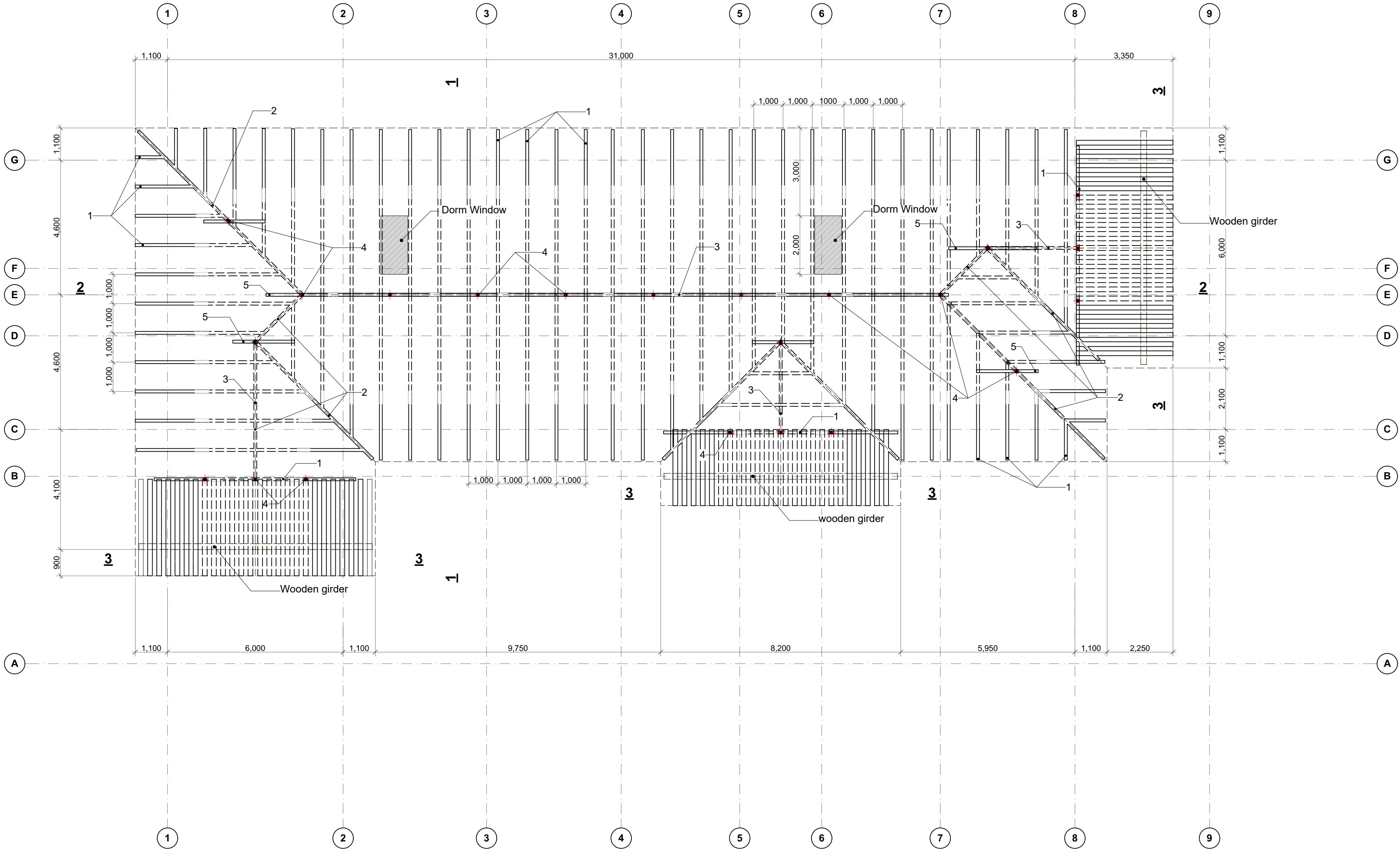
Ceiling Structure

a-a

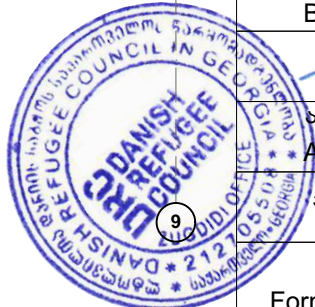
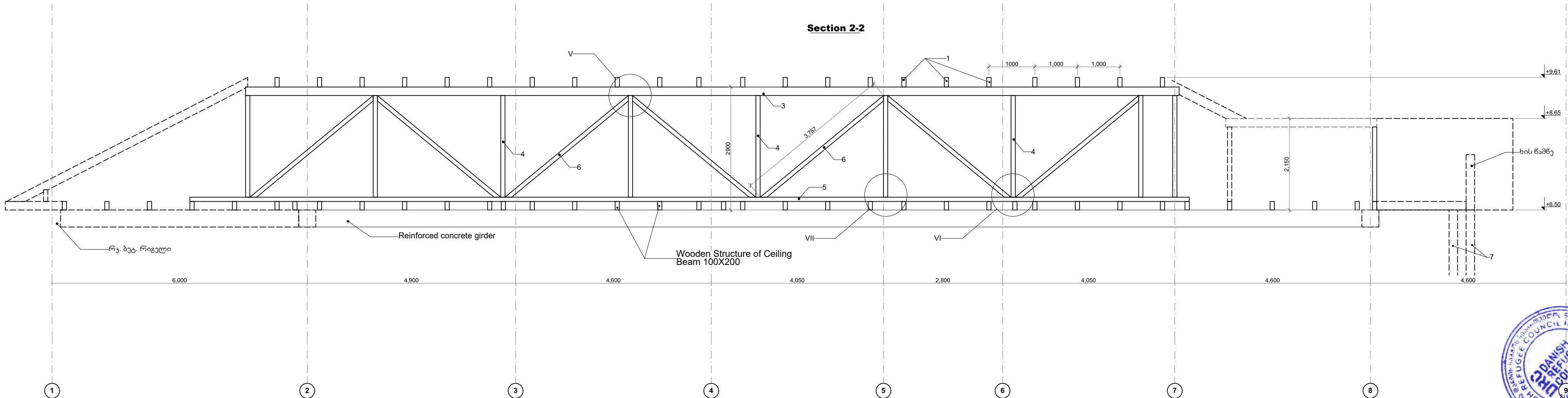
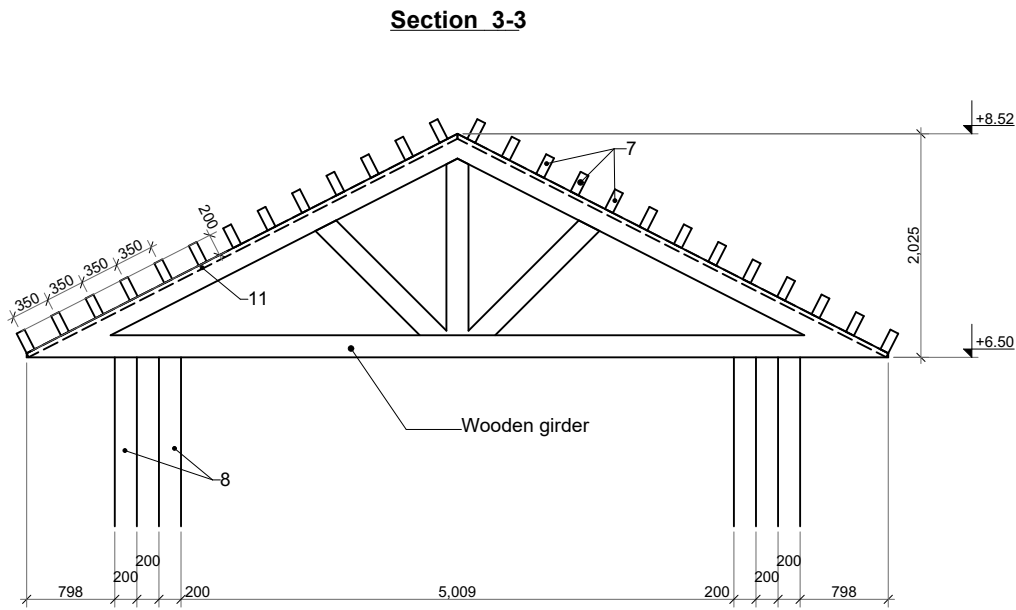
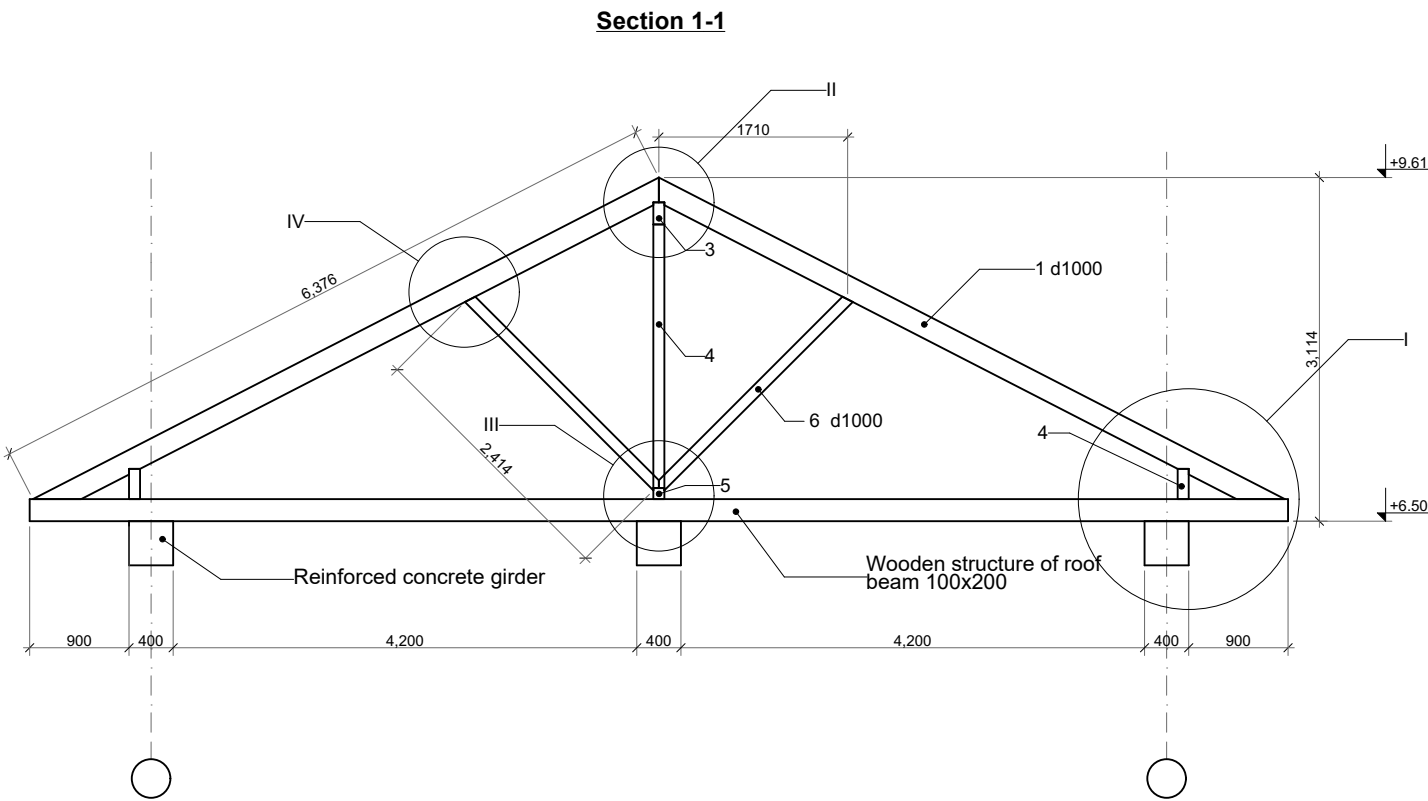
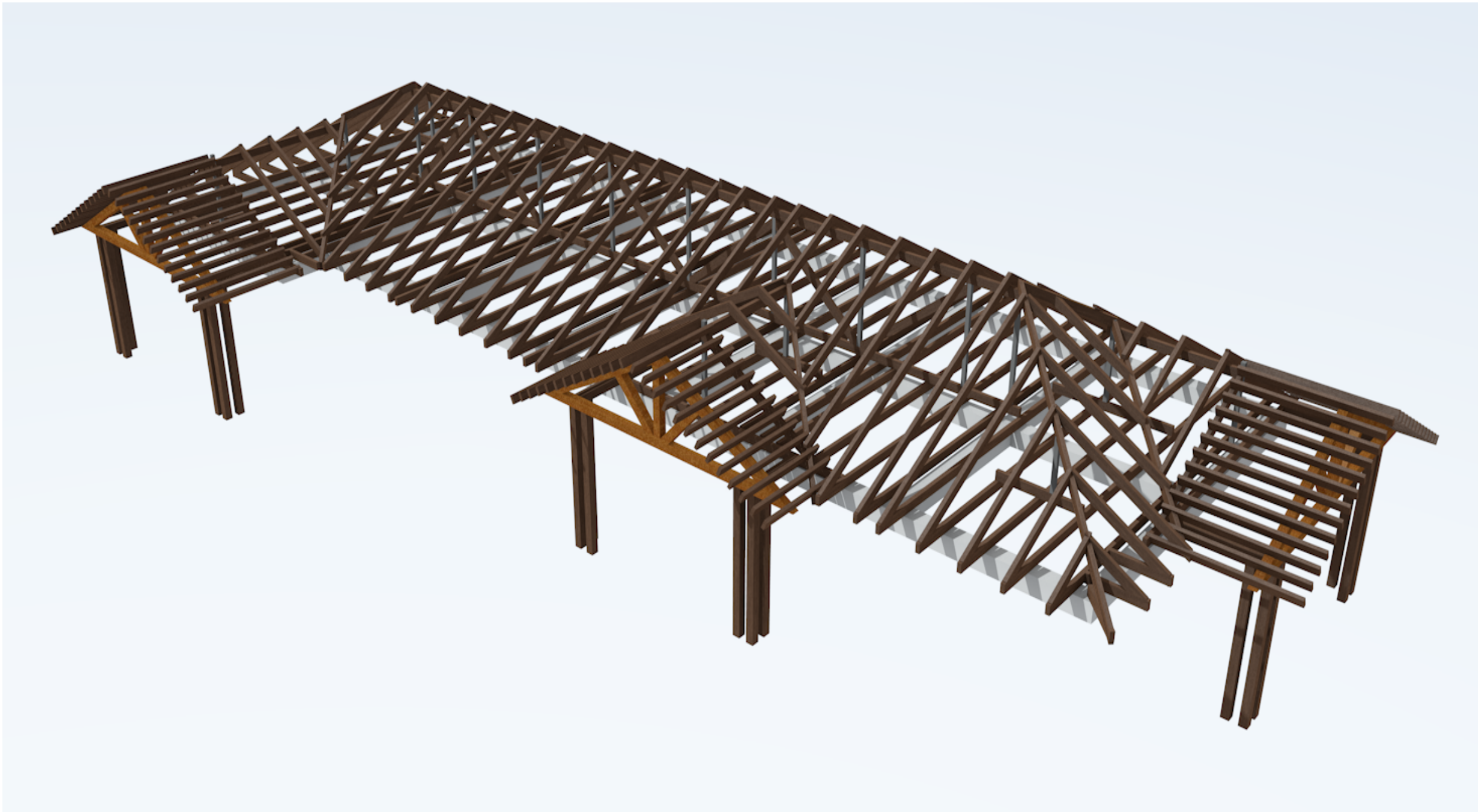


სპეციფიკაცია Specification				
კროსის კვეთი Cross-section of beam	სიგრძე მ Length m	რაოდენობა Quantity	სულ სიგრძე მ Total length m	მოცულობა Volume
ბის კროსი 100x200 Wooden beam 100x200	12	9	108	2.4
ბის კროსი 100x200 Wooden beam 100x200	11.4	21	239.4	5.3
ბის კროსი 100x200 Wooden beam 100x200	10.4	9	93.6	2.1
ბის კროსი 100x200 Wooden beam 100x200	1.4	14	19.6	0.4
ბის კროსი 100x200 Wooden beam 100x200	3.3	8	26.4	0.6
			Σ	10.7
სხვადასხვა ზომის ფანჯრები 30x200 (375 მ2) Boarding of attic 30x200 (375m2)				11.3

Plan of the Wooden Structure of the Roof

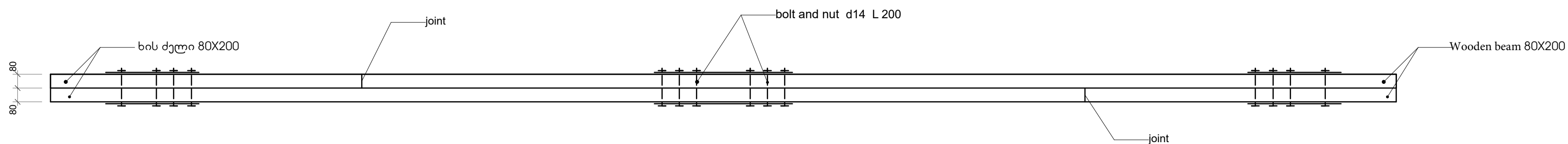


Render of the Wooden Structure of the Roof

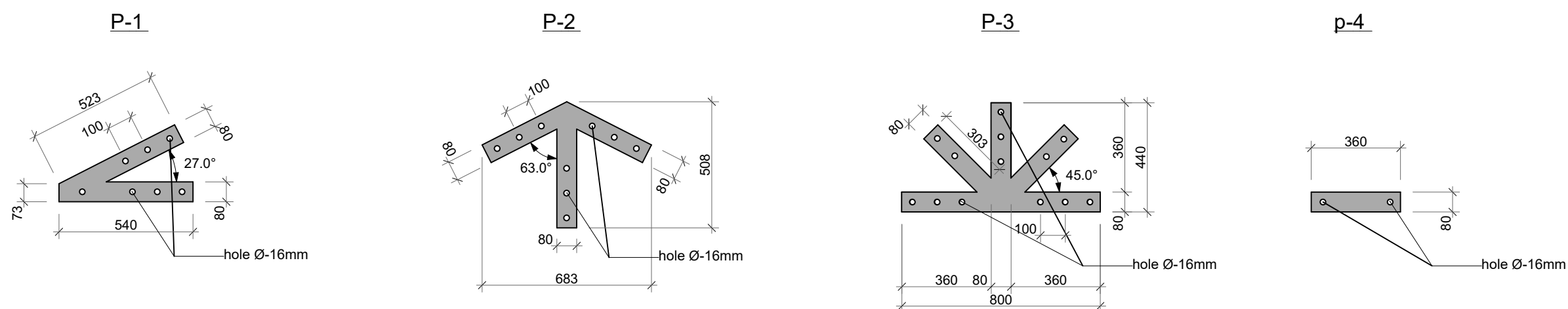


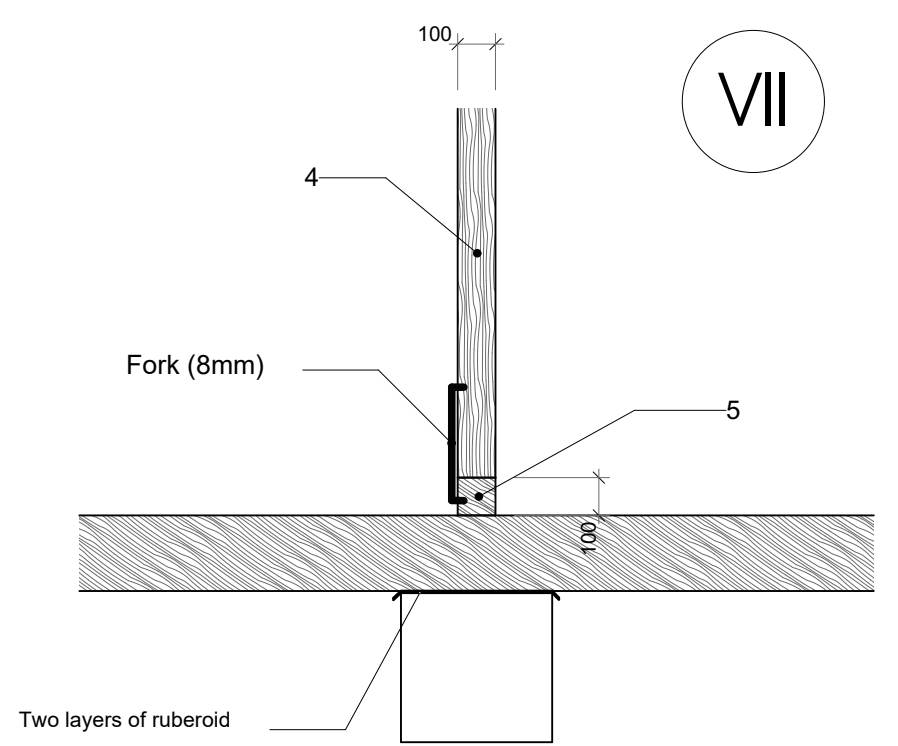
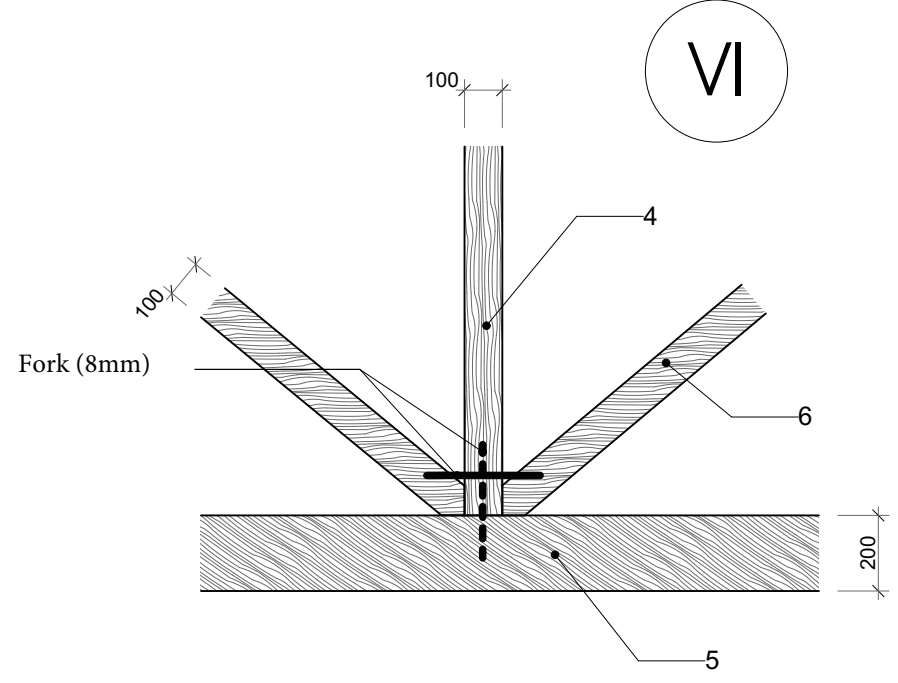
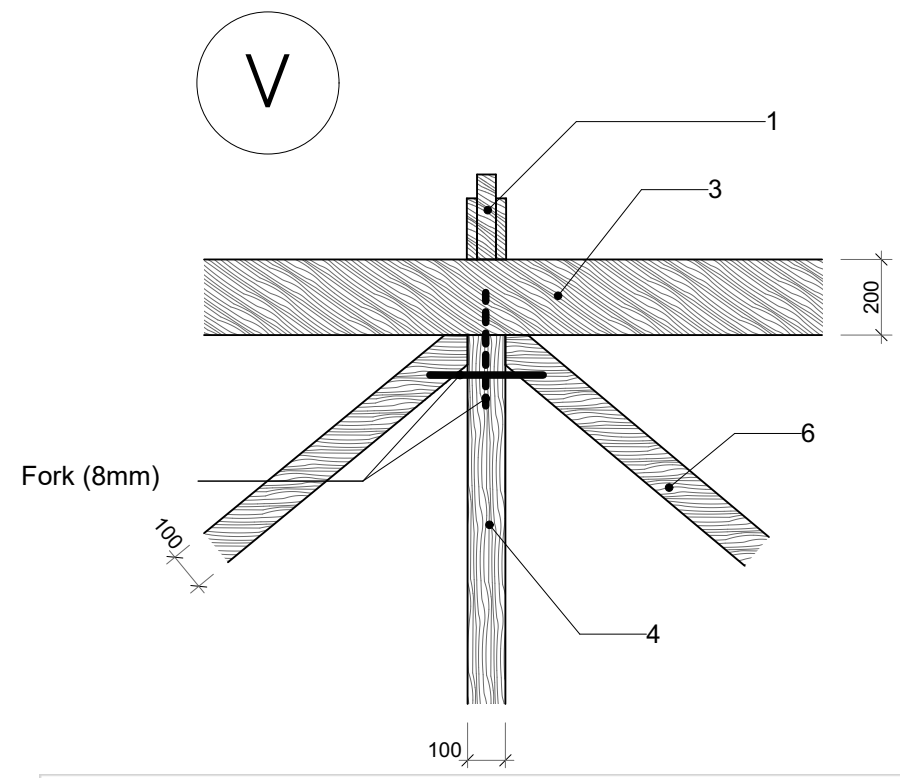
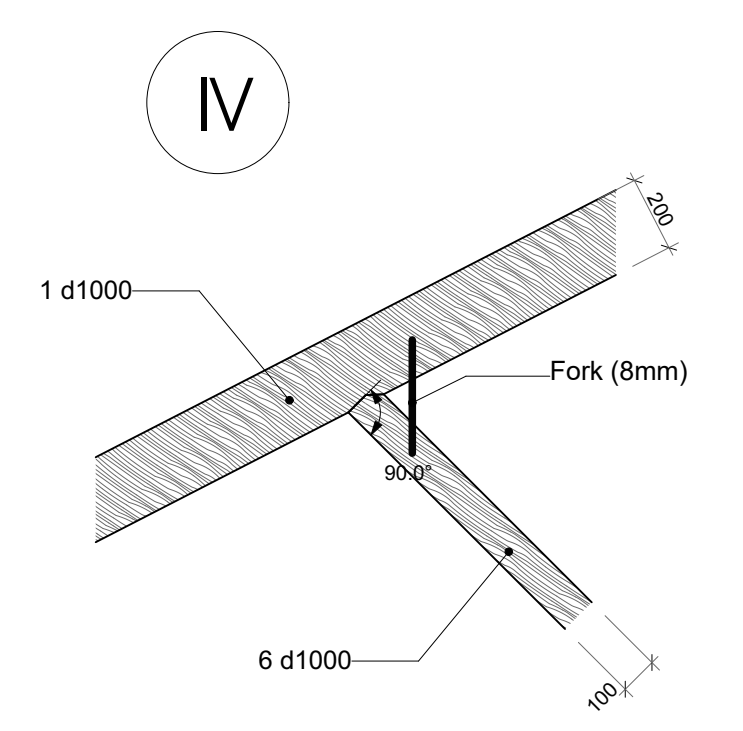
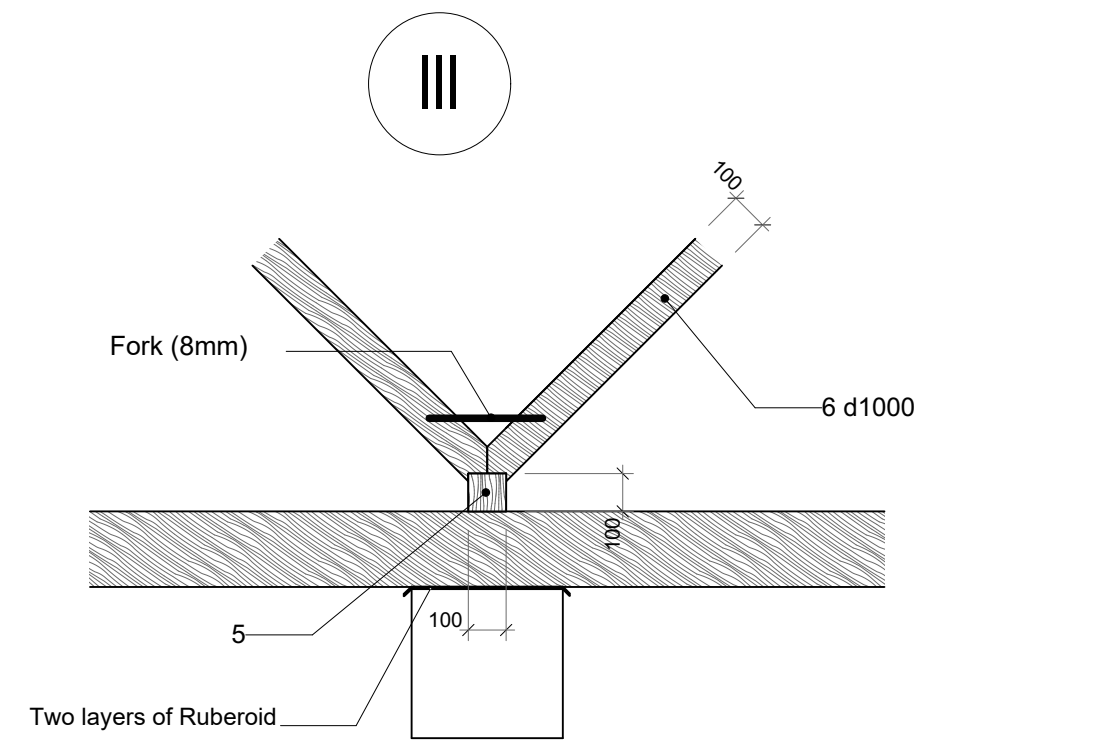
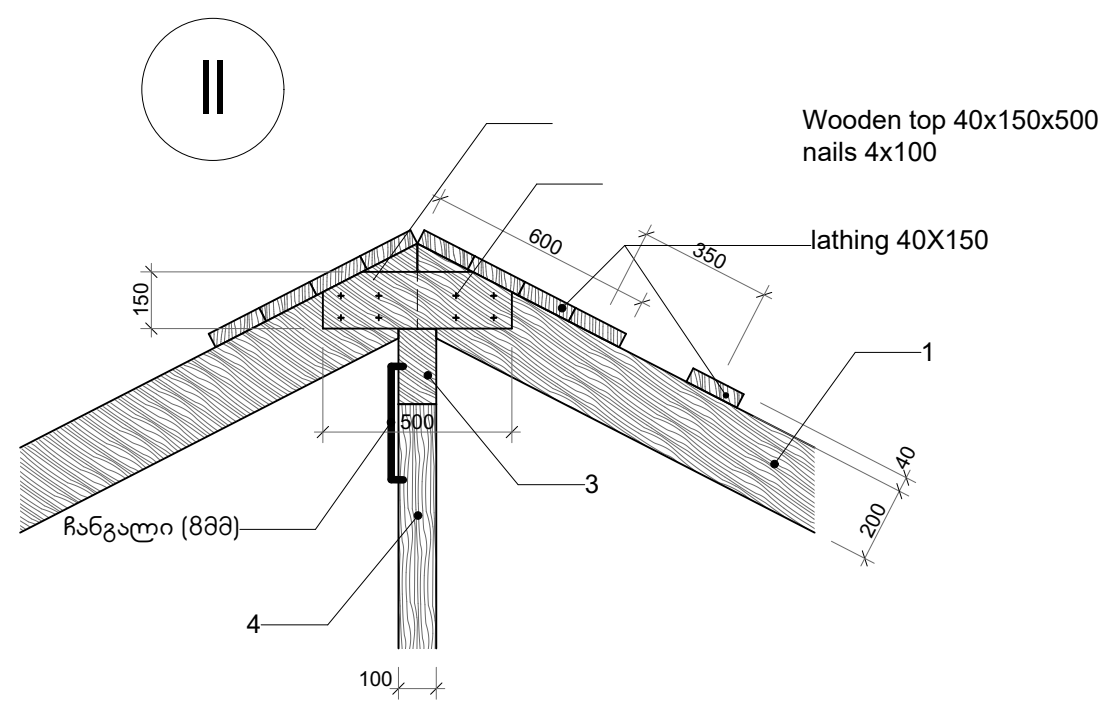
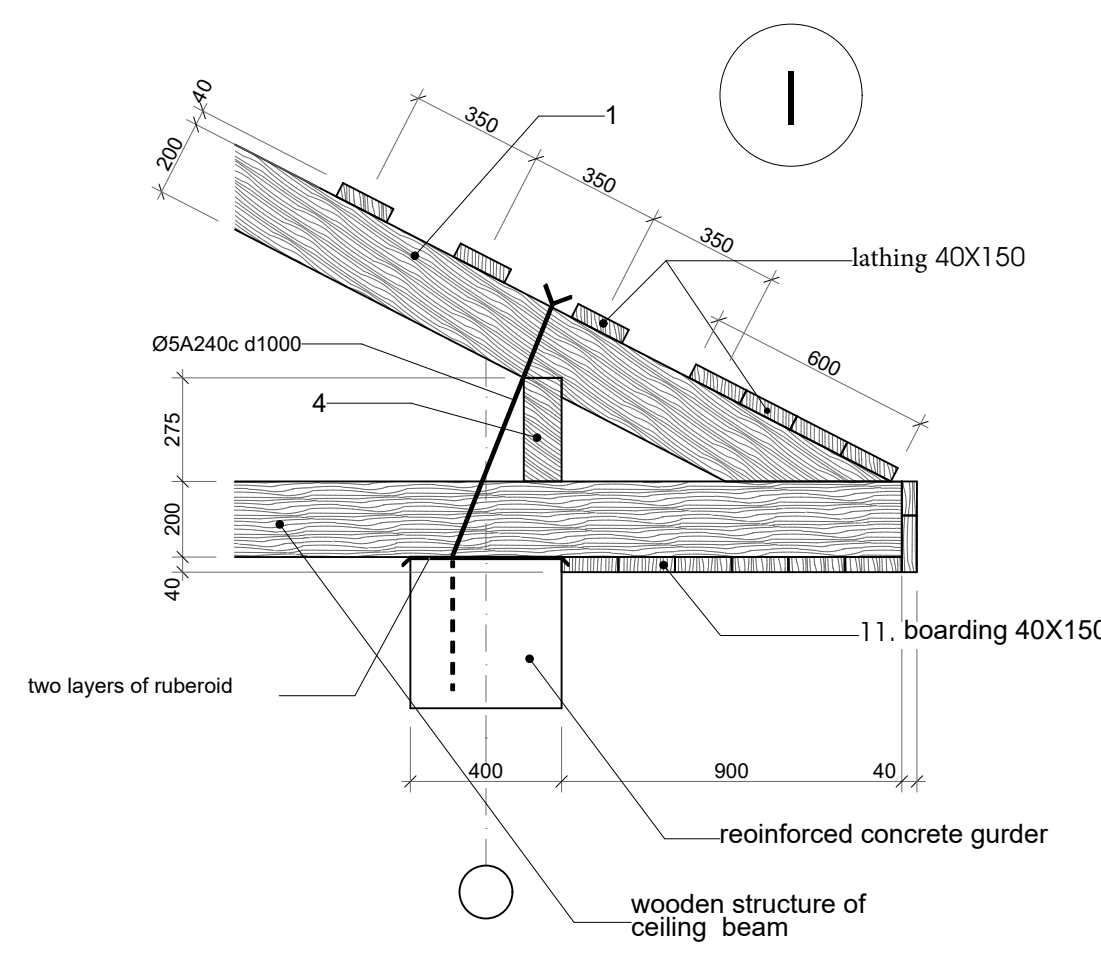
[illegible]

View 1-1



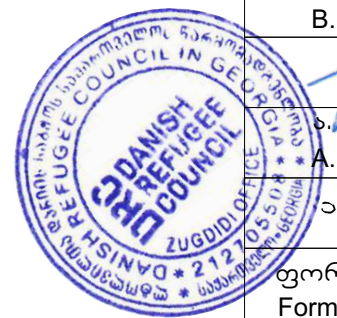
Parts made of 4 mm sheet steel

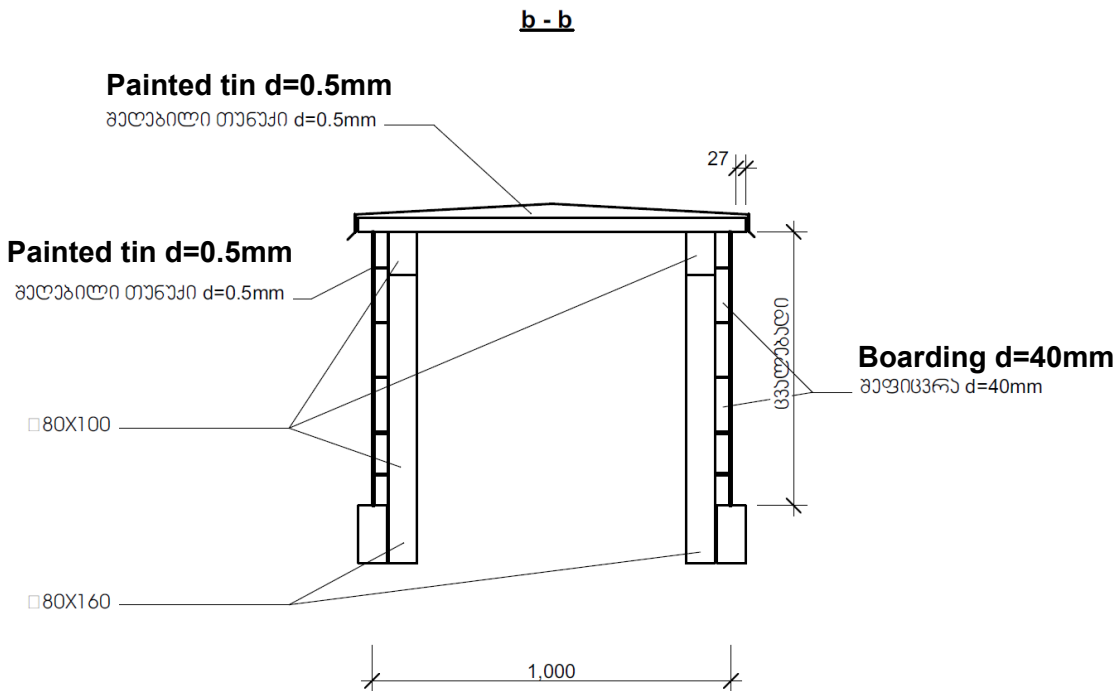
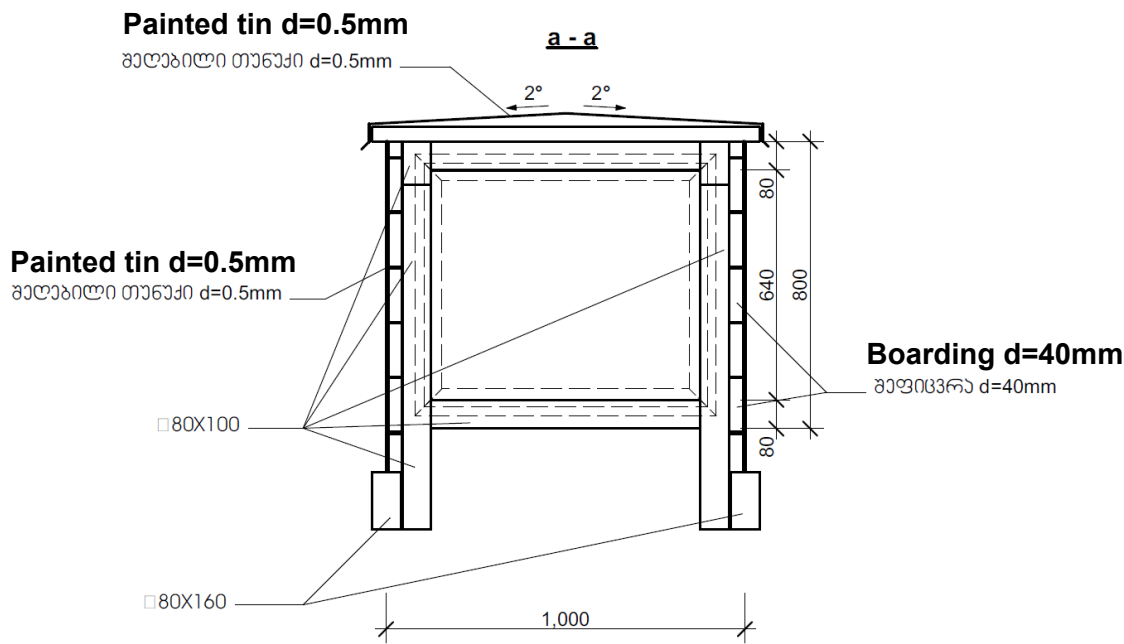
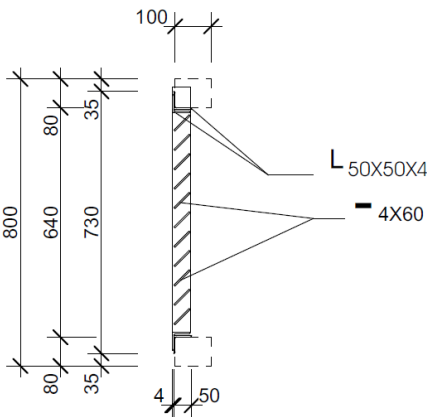
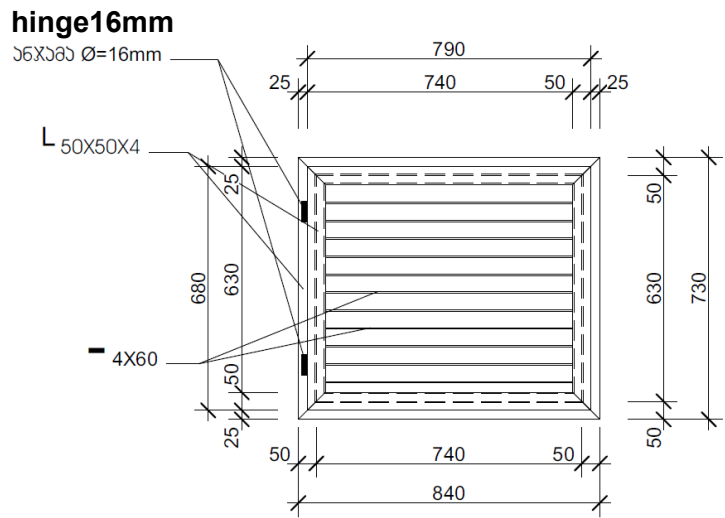
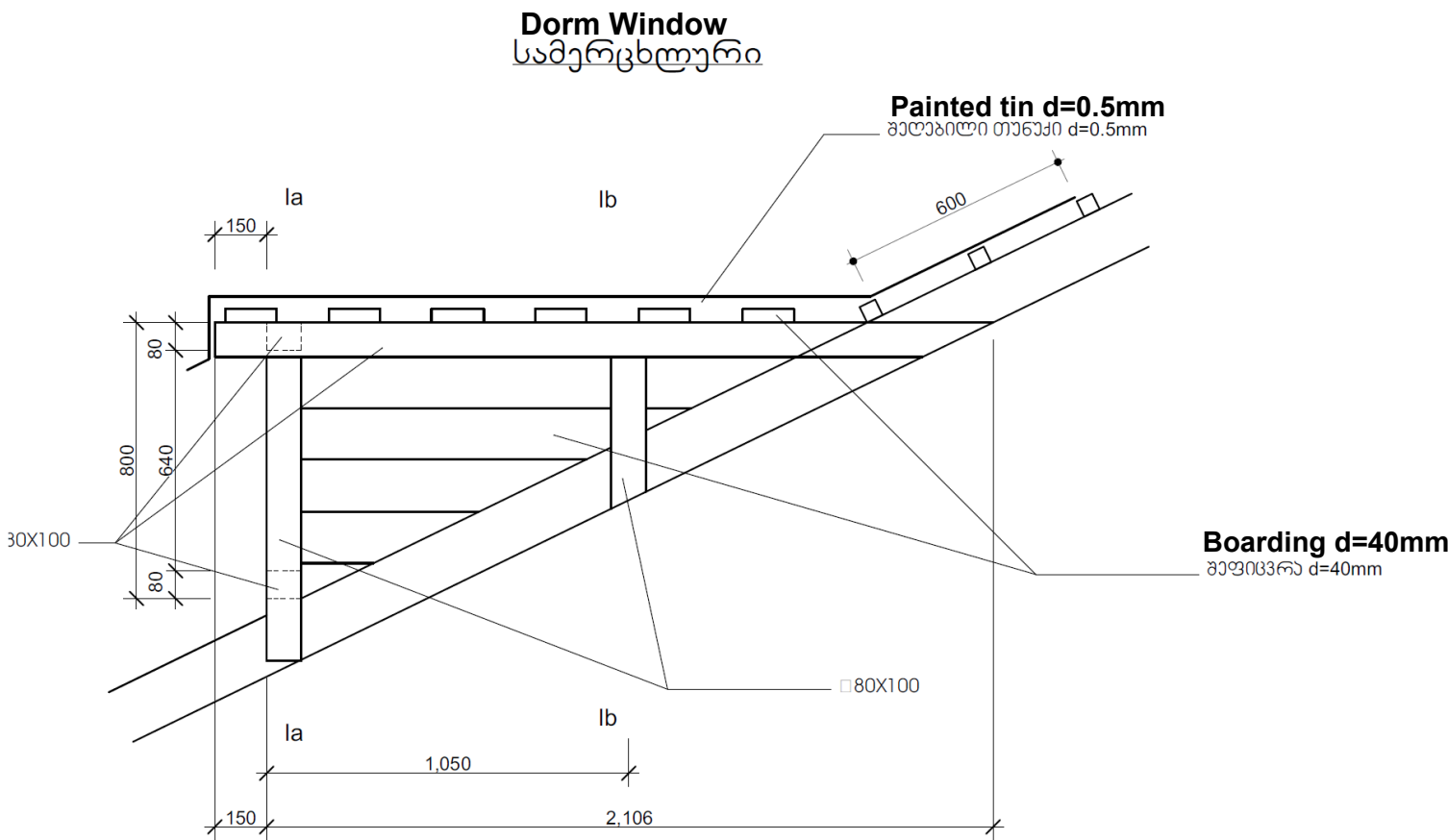




სის ელემენტების სპეციფიკაცია Specification of Wooden Elements					
№	ქოვის კვეთი Cross-section of beam	სიგანა მმ Width mm	სიმაღლე მმ Height m	საერთო სიგრძე მ Total length m	მოცულობა მ3 Volume m3
1	ბოჭბოჭა Rafter	50	200	455	4.55
2	დიაგონალური ბოჭბოჭა Diagonal rafter	100	200	83	1.65
3	ხის ქოვი Ridge pole	100	200	45	0.90
4	ლბარი Pillar	100	100	115	1.15
5	გამანაწილებელი ქოვი spreading beam	100	200	33	0.65
6	ორიგანები და ირიგანები კავშირებისთვის Crossbeams for connections	100	100	270	2.70
7	ქოვი ლარბა Lathing	50	200	285	2.85
8	სვეტი Column	200	200	81	3.25
9	ხის ნახეა (3 ცალი) Wooden girder (3 pcs)				2.10
10	ლარბის ქალაი Lathing beam	40	150	1750	10.50
11	ლაგარდისა და ბარის ხარის შეფუთვა Boarding of the ceiling of eaves ad terrace	40	200	1063	8.50
				Σ	38.80

Note
It is necessary to treat wooden constructions
with both fire-retardant and antiseptics
solutions.





Specification of Steel

ფოლადის სპეციფიკაცია				
კვეთი	სიგრძე მ	რაოდენობა	საერთო სიგრძე მ	წონა კგ
Cross-section	Length m	Qty	Total length m	weight kg
L-50X50X4	0.73	2	1.46	4.23
L-50X50X4	0.84	2	1.68	4.87
L-50X50X4	0.68	2	1.36	3.94
L-50X50X4	0.79	2	1.58	4.58
60X4	0.69	11	7.59	14.27
			Σ	31.90