Preliminary architectural design for library building in Gevgelija

The proposal for the library is somewhat controversial. Instead of using the part of CP 3313 as site, the site is transferred to the next plot CP 3312. The Children Culture Center is completely demolished and the new library is ought to take the functions of the old Children Culture Center. If the CP 3313 is used as building site the height of the library will reach 8-10 floors if the existing buildings are respected. In the city of Gevgelija where the urban pattern is with buildings of low height building a library tower is evaluated as worst alternative then demolition of the Children Culture Center.

Therefore the proposal for the library has height of 3 floors and it is located in CP 3312.

The proposal for the library tries to follow the loose urban pattern of the city as well and instead of 1 library building, the library was divided on 4 parts that function independently. The 4 parts of the library are connected with covered or open passages, platform or courtyard. The idea was to create diverse spaces that can shelter various services both inside the library and outside in the library yard.

The 4 independent parts of the preliminary design are "the library", "the children library", the "center" zone and 24/7 zone.

Library

The library shelters the "classical" library services, place where people can borrow media, read books and newspapers, study, hear the news and search for information. The library has working hours between 9:00 and 21:00.

The organization of the library has been divided in regard to the stakeholders, the users (1xxx area numbers in the floor plans), the staff (2xxx) and the media (3xxx).

The user library

The library entrance is placed on the ground floor and includes reception desk with wardrobe and information desk. The entrance is connected to the paths in the yard with ramp and stairs and to the rest of the library with a 1 elevator and several stairs giving the users cleared access to any public area of the library.

The total number of displayed media in the public areas is 61700 books, CDs, or DVDs or 52% of the total number of media which is 118900. (In the calculations the 35/50cm bookshelf with height of 180cm and 7 shelves could exhibit 100 various media)

The users can search for media in several sections of the library. The literature section consists of 21000 (8100 on the first floor and 12900 in the gallery) novellas, dramas, poetry, books of philosophy, religion, literature science etc. The civics section includes 7400 media from social sciences like sociology, economy, laws, psychology, history etc. In the foreign languages section 8800 books, CDs, or DVDs of various languages are displayed. The nature and technology section includes 6400 media from natural sciences, like medicine, biology, agronomy, ecology, technology etc. The arts section includes 7400 media from painting, sculpture, architecture, photography, music, film, etc, 2 music rooms and 1 TV room (room for video projections) with capacity of 12 people. The local culture section has 4100 media capacity and study area for 12 people.

This nature and technology section is very important since Gevgelija is known for cultivating vegetables and fruits. Therefore the section includes additional information desk on agriculture and cultivating techniques.

The public areas also include news zone where 28 people can seat in armchairs and read newspapers or journals and 12 people can browse for news on internet.

Every floor of the library has one toilet for disabled person.

Mobile library

A very important part of the proposal is the mobile library with 1 hour stand in every settlement in the municipality, with this extending the "classical library" service in the entire municipality. There is a need of 2 mobile library buses. The mobile libraries are widely used in the Nordic countries and in United Kingdom with great effect on the local culture and morale. In Finland currently cruise around 190 mobile libraries. There is no library bus manufacturer in Macedonia, so in the proposal for the mobile library is included link to the famous library bus entrepreneur in Finland Kiitokori [1]. The media should be borrowed on every information and approximate costs of a library bus in Kiitokori are around 100.000€ for the chassis plus around 150.000€ for the body of the library bus.

[1] http://www.kiitokori.fi/

The staff library

The accent on the staff areas in the library is design for comfortable work conditions. The entrance for the staff is connected to the pedestrian and bike paths with ramp and stairs enabling cleared access.

The staff areas in the library include break area and kitchen where the employed can take a break with coffee, tea or have lunch or snack, or just lie or seat on a sofa for a while.

The media management

The unblocked media flows are important for the work efficiency and the number of staff in the library. The media management includes borrowing and handling of returned media, receiving new media, repairing the broken or damaged and depositing media and supplying the mobile library. The media should be borrowed on every information and staff desk and there are borrowing machines in the entrance. The media can be returned only on the reception desk in the entrance. The returned media from the info desk are transferred to the logistics center. The core of the media management is the logistics center. It is consisted of several rooms. The logistics center is the place where the media are sorted and put in pushing carts and send to the different sections. The logistics center is also connected with a loading platform from where new media and periodical arrive and from where the mobile library is supplied with media. The repairing the broken or damaged media is also done in the logistics center.

The media that are rarely used are placed in a depository in the basement floor which has capacity of 45600 books and it has possibility to enlarge the capacity.

Children library

The children library has working hours between 9:00 and 18:00. It was designed in regard to the children age. The first section includes storytelling room (1204) and playing area (in 1203) where small group of younger children can listen to stories, draw and look at comic and picture books.

The section for older children has been designed "classically" with reading desks, computers for internet and library searches and bookshelves.

"Center" zone

The "center" zone is multifunctional. It serves as civic center to the city and it has flexible working hours, on demand. The zone includes indoors exhibition area and café with foyer and outdoors the "vineyard grove" platform and the inner courtyard.

The exhibition area can be used all around the year for almost any community activity like community meetings and workshops, exhibitions, recitals, video projections, theater performances, lectures etc.

The "vineyard grove" platform is platform between the "center" and "24/7" zone. It is place shaded with vines where in the summer people can organize various community activities, like open theater or just use it as a reading or gathering place as extension to the café. The inner courtyard can have the same function in the summers.

"24/7" zone

The "24/7" zone is the most intensive area in the library. It works around the clock, 7 days in a week.

The zone is consisted of IT center for 12 people and 1 learning room for 20 people. Both rooms are connected with the internet and the users can come anytime, day or night, if they need internet or to study or read.
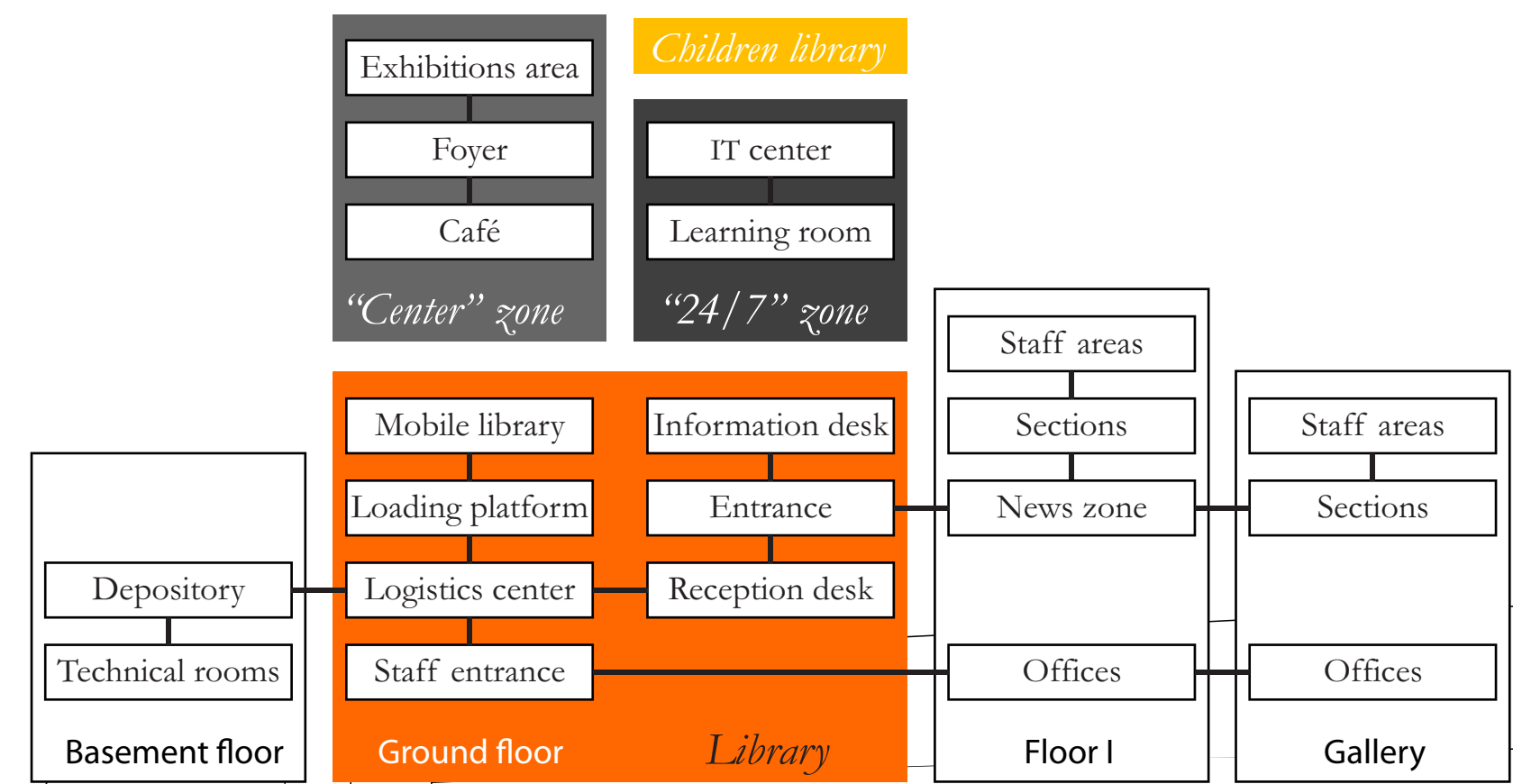
End note

In total net area of the library is 1990.5m2. The basement floor has additional 389.2m2. The urban coefficients are k_i=0.22 while p_i=0.40. (The coefficient p_i is percent of the area under the building divided with the area of the plot, while the second coefficient k_i is the quotient of the net area of all floors and the area of the plot.)

Somewhat controversial the design for the new library tries to go above the project task to give alternative that will closely follow the existing urban pattern without producing strong visual impact and bring first grade civic services to the community.

Organization scheme

Exhibitions area	*Children library*			
Foyer	IT center			
Café	Learning room			
"Center" zone	"24/7" zone			
Mobile library	Information desk	Staff areas	Staff areas	
Loading platform	Entrance	Sections	Sections	
Depository	Logistics center	Reception desk	News zone	
Technical rooms	Staff entrance		Offices	Offices
Basement floor	Ground floor	*Library*	Floor I	Gallery

Site plan
1:500

7th November Street

11th October Street

⬛	Existing buildings	Library	– – – Automobiles
▨	Library	Children library	– · – · Pedestrian & bicycles
⋮	Park	"Center" zone	········· Pedestrian
▱	Existing plots & streets	"24/7" zone	— Mobile library way

3D Photos 001 & 002

3D Photos 010 & 016

Parterre
1:200

7th November Street

1. Main entrance
2. Staff entrance
3. Loading platform
4. "Center" zone entrance
5. Children library entrance
6. "24/7" zone entrance
7. "Vineyard grove" platform
8. Park

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Floor 0: Ground
1:100

Floor		No		Height	Area	Σ
0	Staff	2001	Entrance	3.50	3.24	
0	Media	3101	Logistic Center	3.50	11.90	
0	Media	3102	Logistic Center	3.50	18.11	
0	Media	3103	Logistic Center	3.50	14.36	
0	Media	3902	Communications	3.50	33.42	
0	Public	1001	Entrance	3.50	51.02	
0	Public	1002	Entrance	3.50	11.67	
0	Public	1003	Reception desk	3.50	11.74	
0	Public	1004	Information desk	2.50	25.99	
0	Public	1005	Entrance	3.50	23.53	
0	Public	1006	Wardrobe	3.50	4.25	
0	Public	1101	"Center" Foyer	3.50	35.70	
0	Public	1102	"Center"	3.50	92.31	
0	Public	1103	Café	3.50	3.52	
0	Public	1104	Café	3.50	4.23	
0	Public	1105	Café	3.50	61.58	
0	Public	1106	"24/7" IT Center	3.50	48.64	
0	Public	1107	"24/7" Learning room	3.50	61.21	
0	Public	1201	Entrance	3.50	5.54	
0	Public	1202	Children library	3.50	18.95	
0	Public	1203	Children library	3.50	101.2	
0	Public	1204	Children library	3.50	19.11	
0	Public	1205	Children library	3.50	18.63	
0	Public	1206	Children library	3.50	47.61	
0	Public	1901	Communications	3.50	6.88	
0	Public	1902	Toilet	3.50	3.30	
0	Public	1903	Toilet	3.50	2.14	
0	Public	1904	Toilet	3.50	2.12	
0	Public	1905	Communications	3.50	13.20	
0	Public	1906	Toilet	3.50	4.04	
0	Public	1907	Toilet	3.50	2.14	
0	Public	1908	Toilet	3.50	3.55	764.8
1	Staff	2101	Office	2.50	18.63	
1	Staff	2301	Break Area	2.50	14.32	
1	Staff	2302	Kitchen	2.50	4.23	
1	Staff	2303	Storage	2.50	3.52	
1	Media	3903	Communications	2.50	47.31	
1	Public	1201	News zone	2.50	175.7	
1	Public	1301	Nature & technology section	5.20	92.29	
1	Public	1302	Literature section	2.50	109.7	
1	Public	1303	Civics section	5.20	79.92	
1	Public	1304	Civics section	2.50	19.90	
1	Public	1305	Civics section	5.20	47.90	
1	Public	1306	Foreign languages section	5.20	79.92	
1	Public	1307	Foreign languages section	2.50	19.90	
1	Public	1308	Local culture section	5.20	47.76	
1	Public	1909	Communications	2.50	10.15	
1	Public	1910	Toilet	2.50	3.30	
1	Public	1911	Toilet	2.50	2.14	
1	Public	1912	Communications	2.50	6.88	
1	Public	1913	Toilet	2.50	2.12	785.6
2	Staff	2102	Office	2.5	15.01	
2	Staff	2103	Office	2.5	22.84	
2	Staff	2304	Break Area	2.5	14.32	
2	Staff	2305	Storage	2.5	8.11	
2	Staff	2901	Toilet	2.5	2.14	
2	Staff	2902	Communications	2.5	2.14	
2	Media	3904	Communications	2.5	39.73	
2	Public	1309	Literature section	2.5	109.71	
2	Public	1310	Literature section	2.5	19.9	
2	Public	1311	Literature section	2.5	19.9	
2	Public	1312	Arts section	2.5	140.73	
2	Public	1313	Music room	2.5	10.89	
2	Public	1314	Music room	2.5	10.89	
2	Public	1315	TV room	2.5	22.84	
2	Public	1914	Toilet	2.5	2.14	
2	Public	1915	Toilet	2.5	3.3	
2	Public	1916	Communications	2.5	4.46	
2	Public	1917	Communications	2.5	10	440.0
						1990.5

Floor		No		Height	Area	Σ
-1	Staff	2201	Technical room	2.5	36.23	
-1	Staff	2202	Technical room	2.5	23.81	
-1	Staff	2203	Technical room	2.5	18.11	
-1	Staff	2204	Technical room	2.5	29.2	
-1	Staff	2205	Technical room	2.5	14.36	
-1	Media	3001	Depository	2.5	47.82	
-1	Media	3002	Depository	2.5	99.36	
-1	Media	3003	Depository	2.5	78.14	
-1	Media	3901	Communications	2.5	42.12	389.2

Section B-B
1:100

Section A-A
1:100

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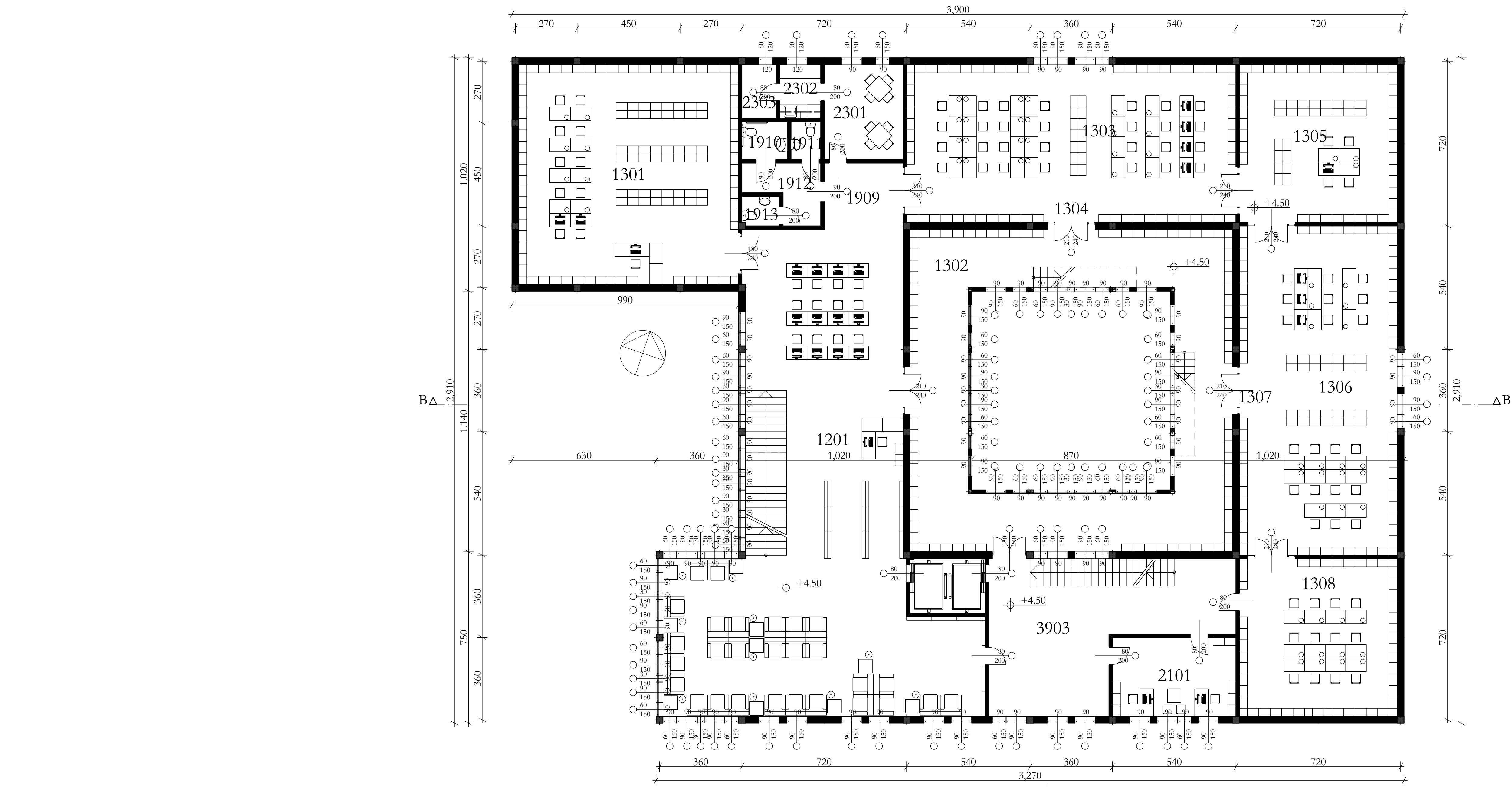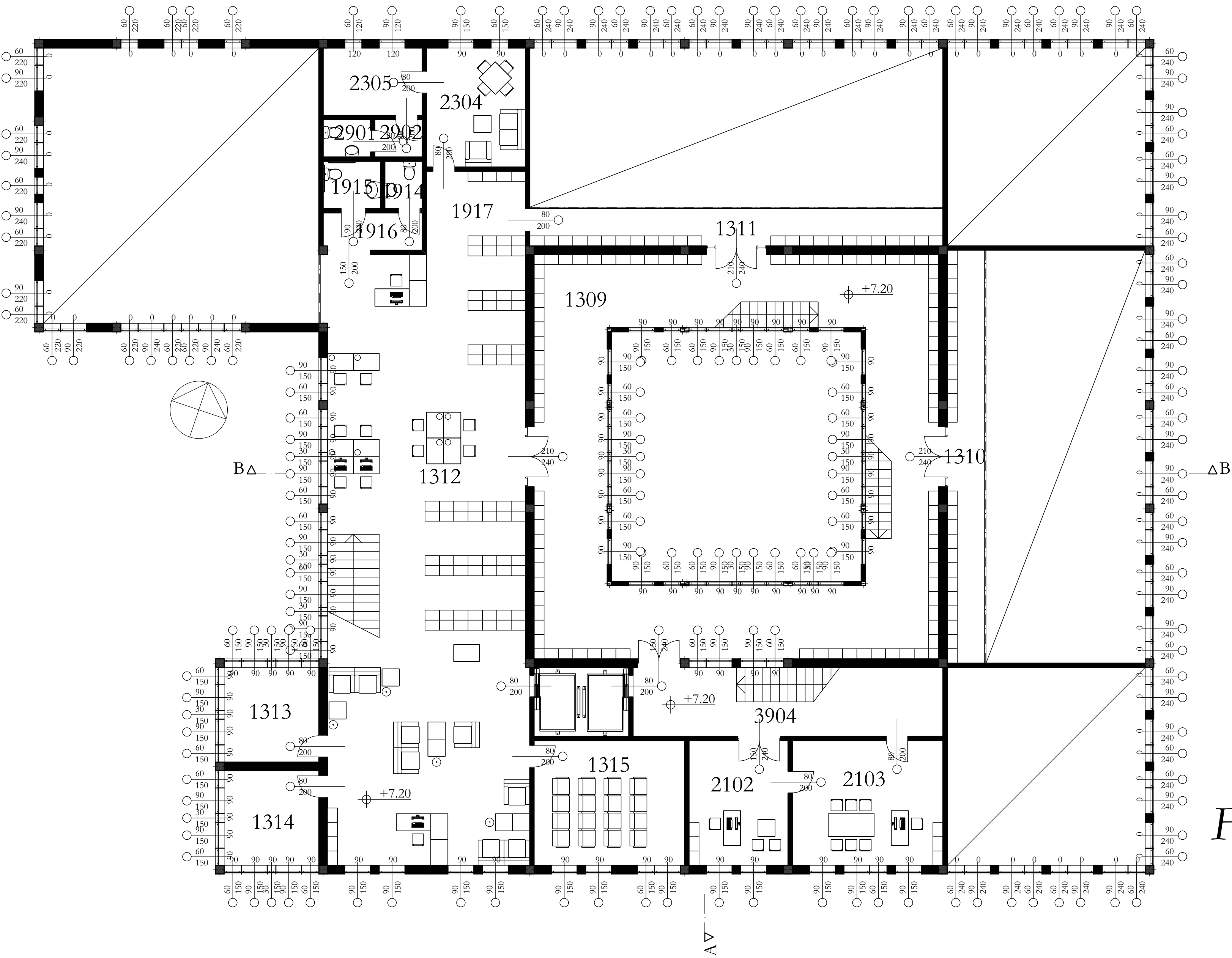
Floor 1
1:100

Floor 2: Gallery
1:100

Floor -1: Basement
1:100

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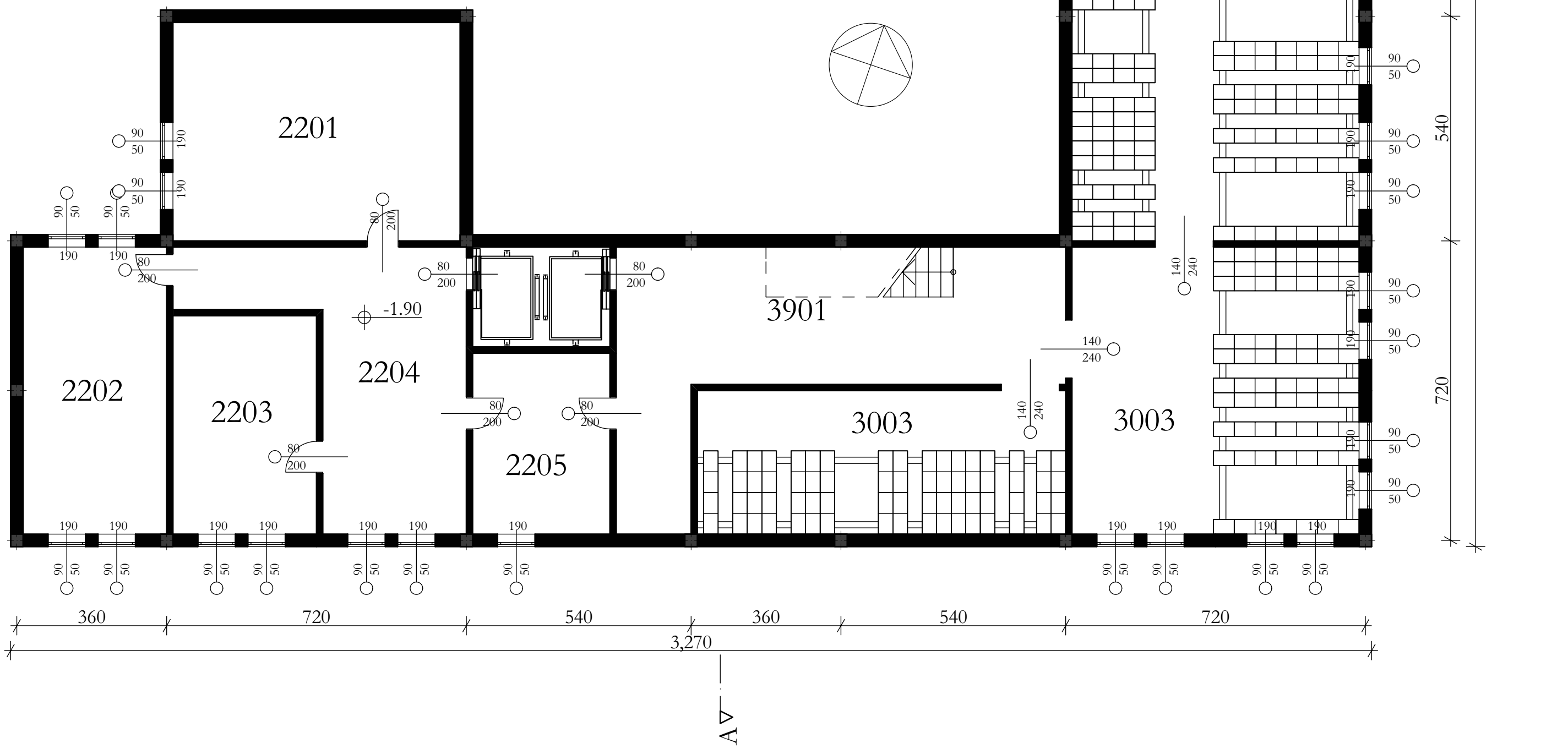
East façade
1:100

South façade
1:100
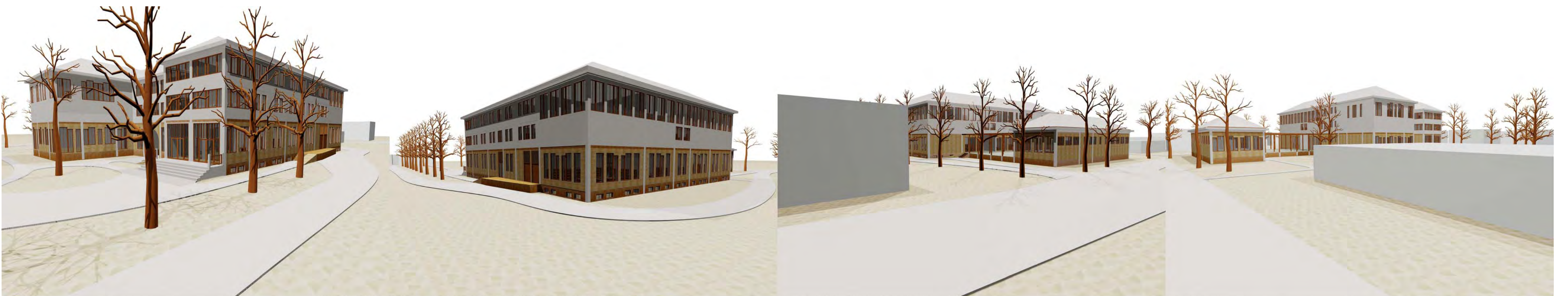
Exterior & interior perspectives

West façade
1:100

North façade
1:100

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Details

The detail A shows on the movement of the stakeholders in the library, while the detail B focuses on the flexibility of the "center" zone. Since the "center" zone ought to take multifunctions, detail B shows 4 flexible interior solutions for use of the zone, first as exibition area, secondly as community meeting or lecture, thirdly as workshop and in the end as children theater.

The details present conceptualy the solutions for the outer and inner walls.

The structural system and the building materials

There are two alternatives for the structural system, steel and wood alternative of steel columns and wood, steel and insulation composite walls and slabs and reinforced concrete alternative of reinforced columns and beamless slabs with wood and insulation or ceramic blocks and insulation composite walls.

While the steel and wood alternative is more sustainable from material resources and recycling point of view the reinforced concrete alternative is more socially accepted today by the public. There is a technological "concrete myth" in Macedonian culture in the last 50 years of the wood as ephemeral, short living, and easily flammable building material compared to stone or earth based building materials which are regarded as durable, bound and firm and are preferred more, like concrete, bricks, gypsum, mortar etc. and seldom wooden buildings are built.

For the preliminary phase of the design it is important myth especially when public buildings are in question. Building a wooden library could be understood as building a short living and ephemeral building in respect to the myth. The "concrete myth" completely replaced the traditional Macedonian architecture which was made out of wood and abandoned as a style and practice more then 50 years ago.

Security and IT

The technical room for security of the library is placed in the basement floor. The library should be supplied with video control equipment. A system of cameras should be placed in the whole library together with a book barcode identification machine on the entrances to prevent stealing of the media.

Every staff desk should have computer and bar code reader and all computers should be networked. A system of barcode member cards should be used. Software for library management should be installed with option for online search and reservation of books. The online search and reservation of books is planned to be part of the web page for the library, as subdomain to the main Gevgelija municipality web page.

For example http://www.biblioteka.gevgelija.gov.mk/

Energy

The loose design of the library bodies tries to create shades to prevent the overheating of the building. Also shades for the windows are recommended for the summer period.

For heating in the winter it is recommendable with a warm water heating system. It is a flexible system where solar heat can take a big load and it is combined with other heat sources like electricity. The technical rooms for the heating include boiler room and accumulation tank room in the basement.
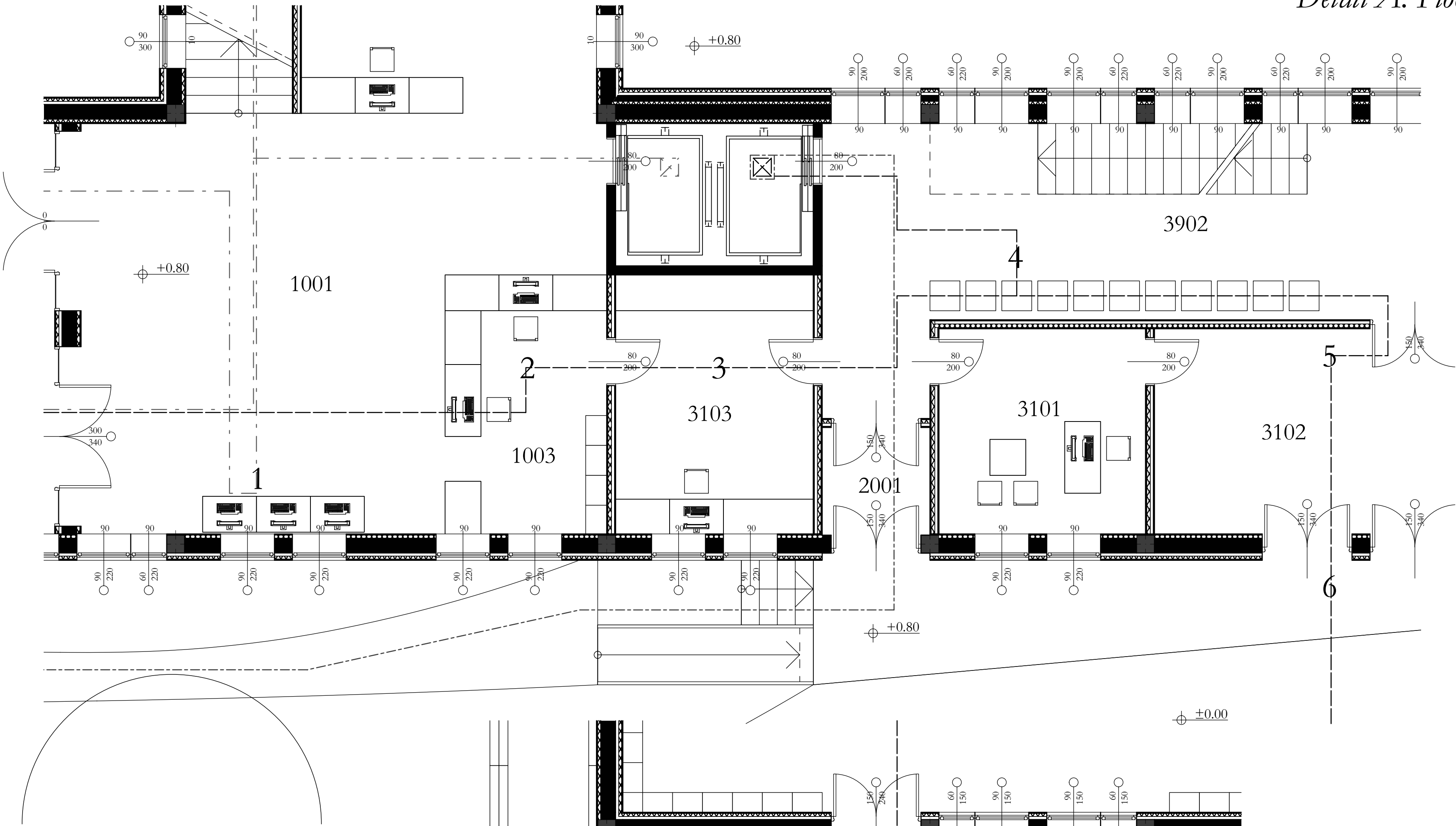

Detail A: Media flows, staff & users

1. Borrowing media
2. Returning media
3. Sorting the returned media
4. Pushing carts with sorted media
5. Sorting new media & periodicals
6. Receiving new media & periodicals
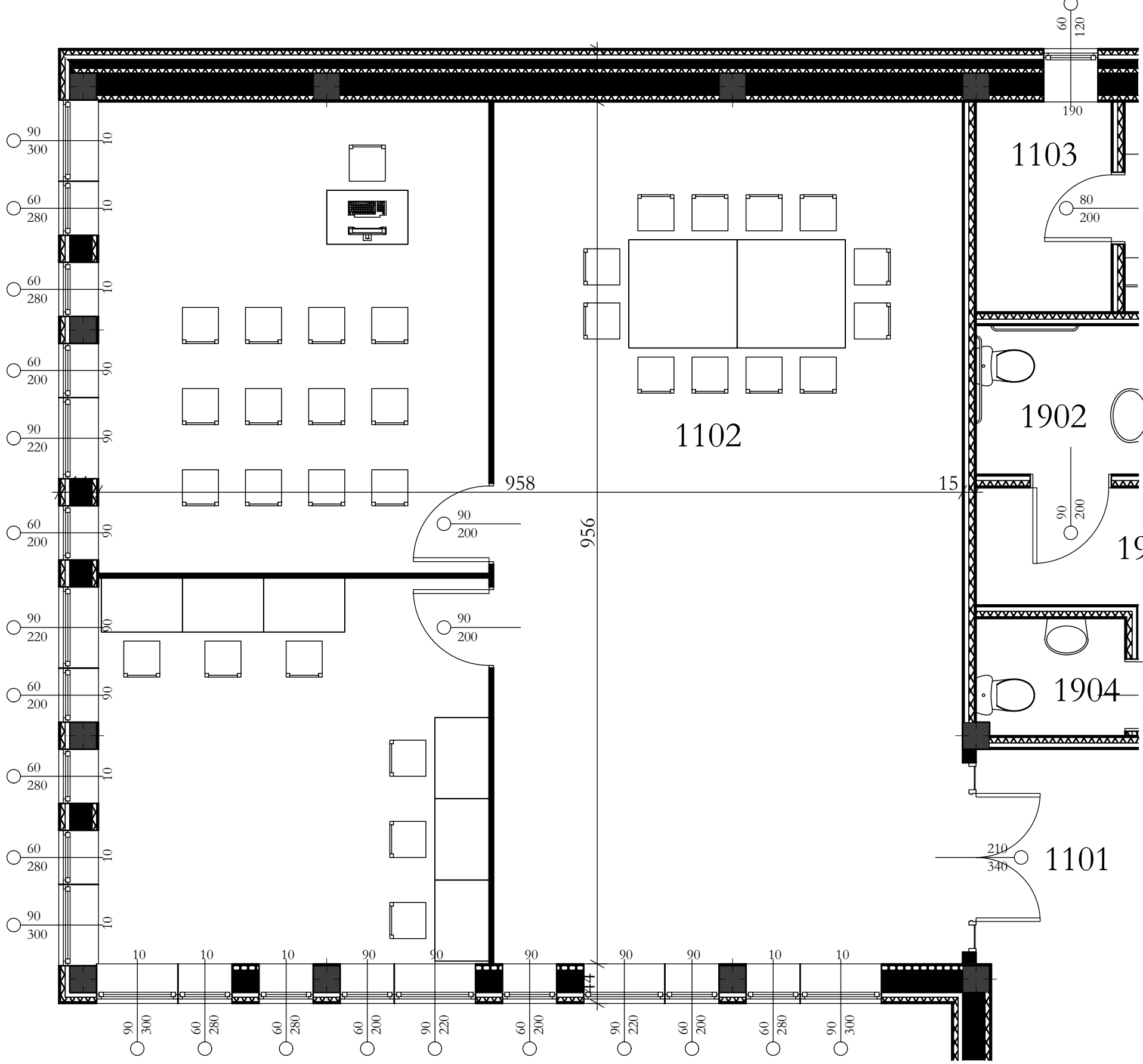7. Pushing carts with old periodicals
8. Depository of media

— — — · Media flows
— — — Users
— · · — Staff
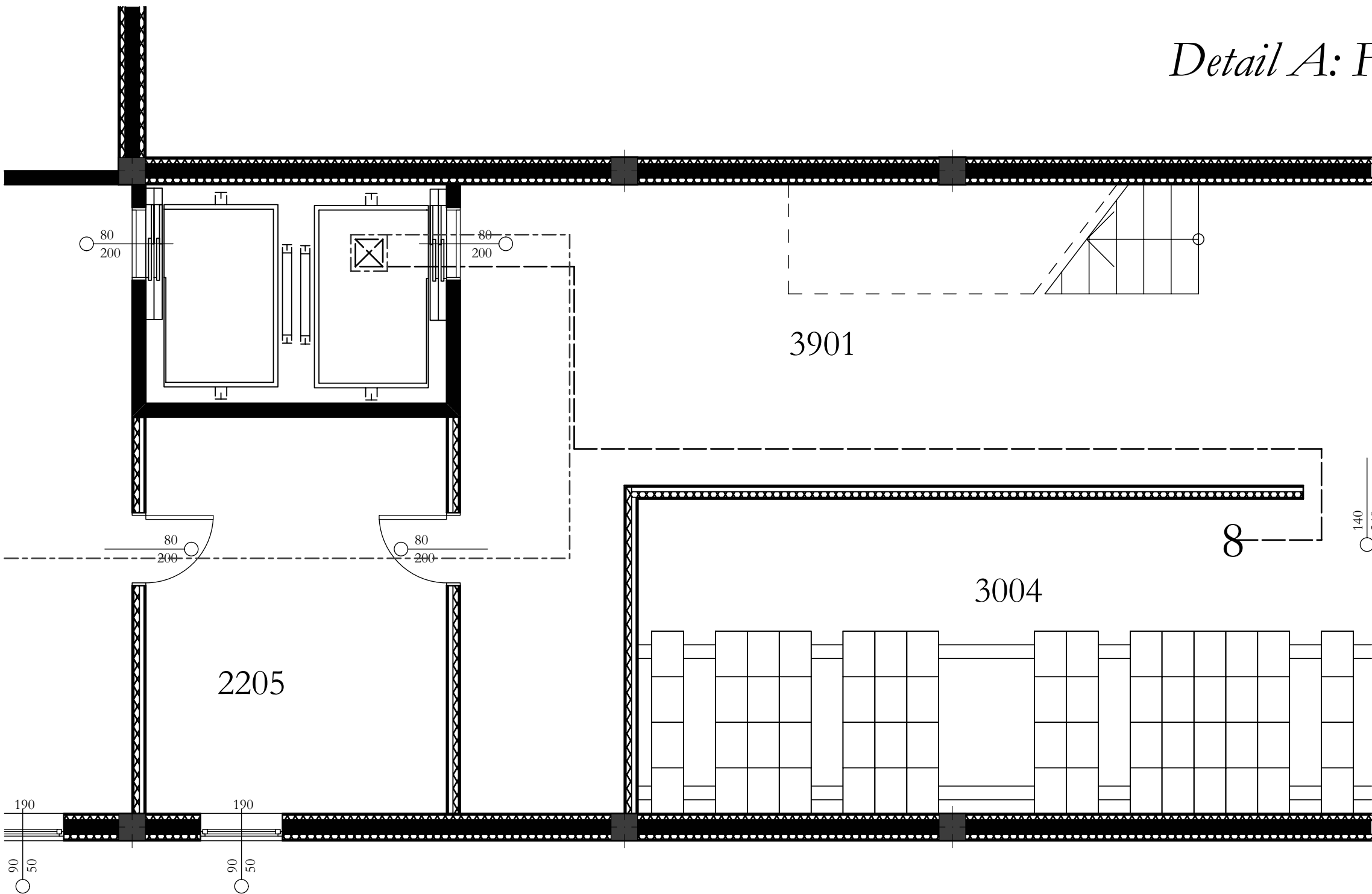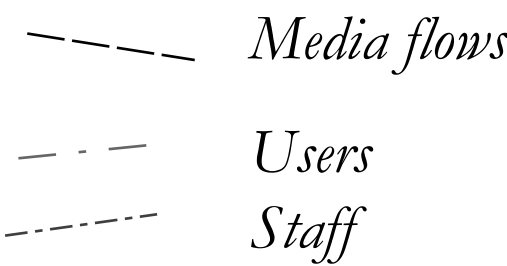
Detail A: Floor -1
1:50

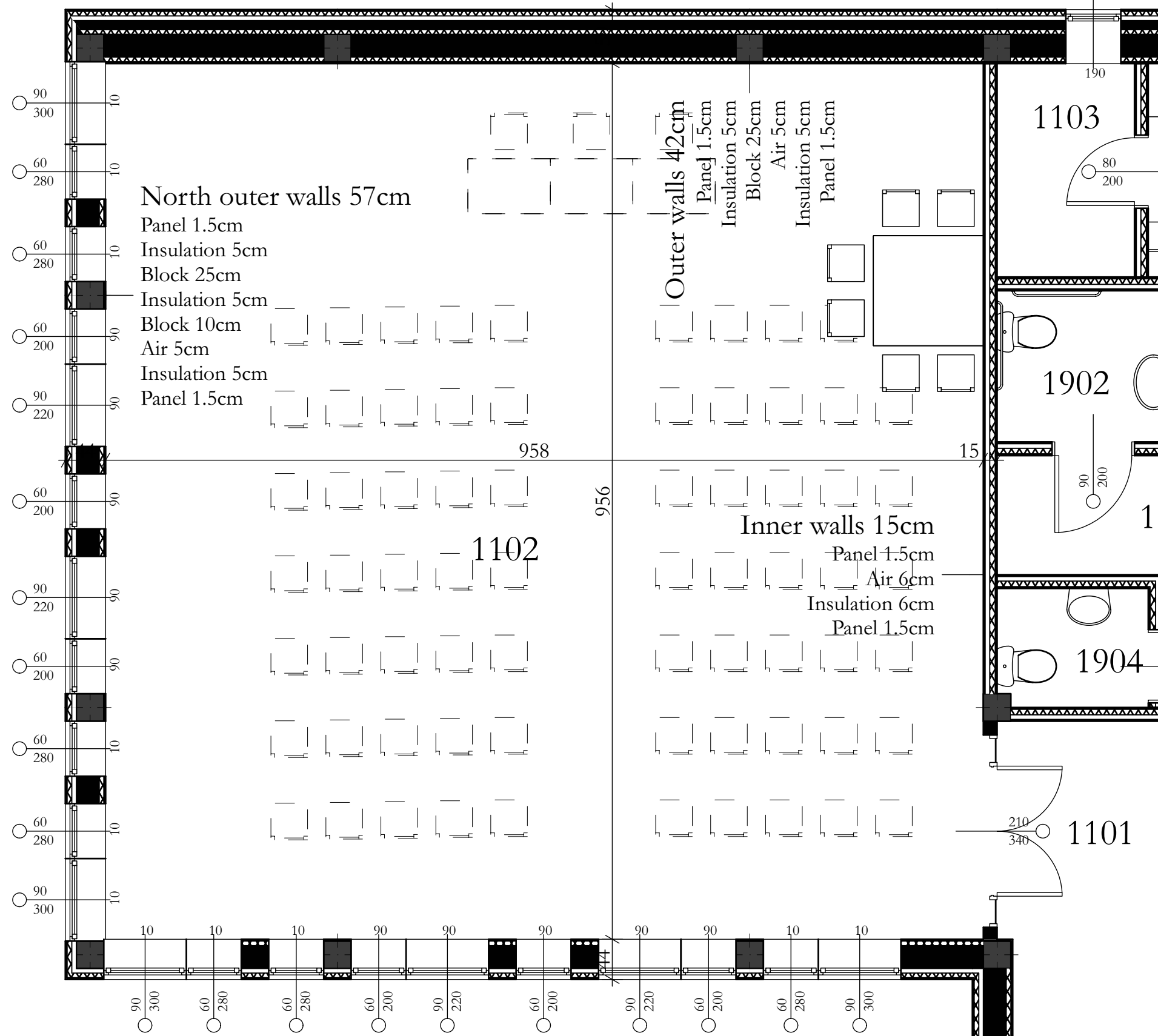*Detail A: Floor 0*
1:50

Detail A: Floor 1
1:50

Detail B: Floor 1
"Center" zone as workshop
1:50

Detail B: Floor 1
"Center" zone as exhibition/lecture hall or community meeting
1:50

3D
"Center" zone as lecture hall & children theater

Detail B: Floor 1
"Center" zone as children theater
1:50

North outer walls 57cm
Panel 1.5cm
Insulation 5cm
Block 25cm
Insulation 5cm
Block 10cm
Air 5cm
Insulation 5cm
Panel 1.5cm

Outer walls 42cm
Panel 1.5cm
Insulation 5cm
Block 25cm
Air 5cm
Insulation 5cm
Panel 1.5cm

Inner walls 15cm
Panel 1.5cm
Air 6cm
Insulation 6cm
Panel 1.5cm

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