

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

**O. M. BEKETOV NATIONAL UNIVERSITY
of URBAN ECONOMY in KHARKIV**

METHODOLOGICAL GUIDELINES

for practical and independent work
on the discipline

**“ARCHITECTURAL DESIGN:
CAFÉ FOR 75–100 SEATS”**

*(for second-year full-time foreigner students first (bachelor's) level of
higher education specialty 191 – Architecture and town planning)*



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INTRODUCTION

The methodological guidelines provide the material necessary to perform practical tasks and tasks for independent work of students in the study of the discipline “Architectural design: Café for 75–100 places”.

The purpose of these guidelines is to acquaint students with the peculiarities of the formation of catering establishment objects (café).

In the methodical guidelines the theoretical information on designing of café is considered, regularities of their formation are considered, the typological characteristic is resulted, and features of formation of an art image of it are considered.

The interior concepts, wall colors, table, and chair design, lighting, music, all of these give cafe a personality which will dictate how people perceive and spend in your cafe.

The location of a cafe, preliminary analysis of the territory, master plan of cafe are described. Classification of catering establishment objects, regulatory requirements, list of catering facilities for catering establishments of different types and classes are described. Functional and planning decisions of café premises and general principles of design.

Different cafe and restaurant floor plans, cafe interior design plans, detailed restaurant layouts and plans for the small cafes and large restaurants with few halls, with an open area, including banquet hall plans, etc. are shown.

The composition of the premises of catering establishments to be taken depending on the type of establishments, the form of service, as well as, depending on the established class of the establishment, the list of additional services that require special premises or areas are given in the guidelines.

1 PRELIMINARY ANALYSIS OF SITE

1.1 Site selection for preliminary analysis of the design area

In view of the popularity of catering establishment, the design of cafes is a popular service today. Design of the café taking into account the infrastructure and location of neighboring buildings, safety standards and sanitary norms, economic factors. In addition, it is necessary to take into account the expected maximum number of visitors (75–100 visitors).

The location of a cafe is the bridge between your target market and your concept. Some experts feel that as long as the restaurant is located in the “right” area of a city, with a strong economic base, the actual site does not matter as much – that unique food and beverage offerings and good service will attract customers, even to a less obvious location. Others are not so optimistic. For the time being, let us agree that, at the very least, the restaurant’s concept and location must fit each other. This also means that, as certain things about the location change, the concept must often change to adapt.

When choosing site for new construction the most difficult and atypical task for most is the problem of finding a suitable plot of lot for the construction of a cafe. The advantages of this approach include the fact that to find a plot of land that meets all needs, as soon as possible. Preliminary analysis of the territory provides an opportunity for detailed assessment and accurate analysis of data on the site proposed for the construction of the cafe. It is important to understand that there is usually free land for construction, but to determine the right place for specific customer requests is not always easy. It is necessary to take into account all possible risks associated with favorable and unfavorable location of the site.

Here are the main points to consider when choosing a site for a cafe:

- remoteness of the site from a large infrastructure facility (city, district center);
- location of the site (suburban area, village, cottage town);
- size and geographical location of the site;
- surrounding infrastructure;
- presence or absence of communications;
- ecological situation (presence of natural areas, reservoirs, etc.);
- population of the selected region (status of neighboring residents, etc.).

An example of a selected area in the central part of Kharkiv is shown in Figure 1.1.

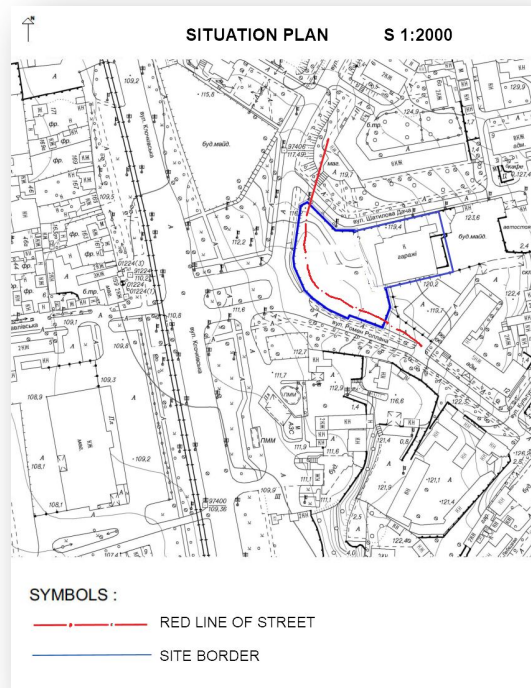


Figure 1.1 – Location of projected area (situation plan of site)

Red line of the street – a line on the map that denotes the part of the site that is forbidden for building, adjacent to the street. The size of line from street border restriction is determined by the presence and capacity of engineering networks, passing along the street or laid down in the city development plan.

1.2 Regulatory requirements for the design of catering establishment

Food businesses consist of two functional groups of premises:

- intended to serve visitors;
- intended for the production of culinary products.

Accordingly, the value of catering establishment is characterized by capacity (the number of seats in the dining room) and productivity (the number of dishes produced in the shift).

Cafe – a catering establishment with a wide range of simple dishes, confectionery and beverages, which uses self-service or waiter service. Note. There are specialized cafes: cafe-confectionery, cafe-ice cream and others [1].

Coffee shop – a type of cafe with a wide range of coffee.

Cafe-bar – a type of cafe, which includes a bar, the trading hall of which is adjacent to the trading hall of the cafe or bar located in the trading hall of the café.

Cafe-bakery – a type of cafe, the hallmark of which is the production and sale of bakery and flour confectionery on site.

Cafeteria is a self-service catering establishment with an assortment of simple meals and drinks, the trade hall of which is equipped with trade and technological equipment intended for food distribution.

Snack bar – a self-service catering establishment, where the range of hot and cold snacks, simple dishes, designed for fast customer service.

The number of places for seasonal expansion, as well as the number of meals take away type or the supply of catering and catering establishments can be placed.

The number of seats for general cafes is from 50 to 200.

And for specialized cafes (children's, confectionery, ice cream, etc.) the number of seats can be from 25 to 100.

Different the number of places for seasonal expansion, as well as the number of take away food or the supply of catering and catering establishments can be placed.

The cafe area should include driveways, sidewalks, artificial lighting and landscaping. Elements of the site should be accessible to people with disabilities in accordance with the requirements of DBN B.2.2-17. Catering establishments must be located at least 6 m from the red line. The distance to residential, public and industrial buildings should be taken into account firebreaks. Public catering establishments are located taking into account the uniform location of the network of enterprises in residential areas, but with their concentration in places of mass flow of consumers, on major urban highways. Domestic kitchens, culinary shops – close to residential buildings. Everyday catering establishments should have a service radius of 400-500 m, less frequent use of 1500 m [2, 3].

1.3 Urban and landscape analysis of the projected area

As a rule, the urban planning analysis begins with revealing of an arrangement of a site of designing concerning the settlement. Whether the site is located in a city, urban type settlement, village, or even outside the settlements, depends on both its standardized size and the functional purpose and composition of the premises of the object.

Next, you should analyze the location of the site (Fig. 1.2) in a functional zone of the settlement and the consistency of its planned functional purpose with urban planning documentation (with the master plan of the settlement and with the scheme of its functional zoning). In fact, at this stage of the analysis, the question of the fundamental possibility of construction of the object in this area is resolved.

Assignment “**Situation plan**” (Fig. 1.2) should be performed on the A3 format in scale 1: 2000. For this drawing, it is necessary:

- select a portion of the topographic survey of the area;
- download the file to a computer at a scale of 1: 2000;

- indicate the border of the projected area with a red line of street;
- at the bottom side of the drawing show the necessary symbols;
- above the scheme write the title of drawing;
- fill in title block.

Assignment “**Urban planning analysis**” (Fig. 1.3) should be performed on the A3 format in scale 1: 2000. For this drawing, it is necessary:

- on the selected topographic survey of the territory, indicate the border of the projected area with a red line;
- show the storeys of buildings with different tones of the same color;
- at the bottom side of the drawing show the necessary symbols;
- above the scheme write the title of drawing;
- fill in title block.

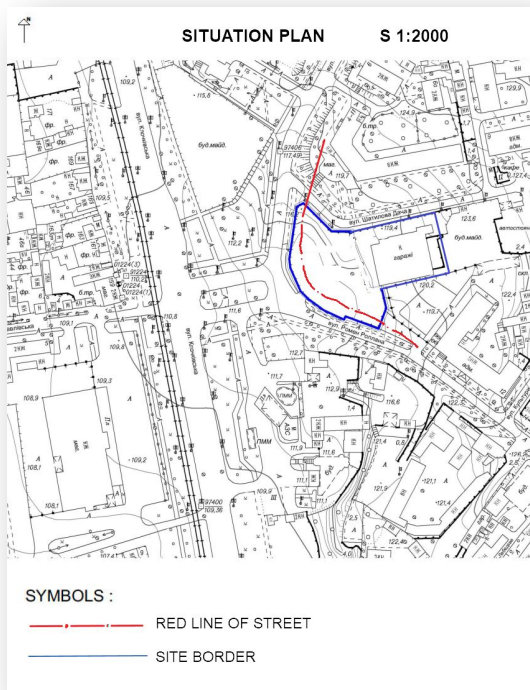


Figure 1.2 – Situation plan

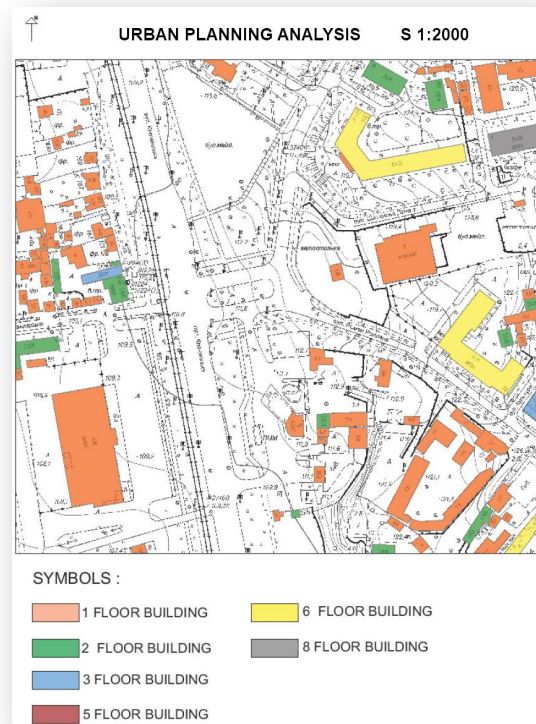


Figure 1.3 – Urban planning analysis

1.4 Functional zoning and analysis of transport and pedestrian accessibility of projected area

When the main characteristics of the projected object are determined, it is possible to perform a functional typological analysis in parallel with the town-planning one. In the process of the actual urban analysis it is time to consider directly the site and its immediate surroundings. It is necessary to clarify the boundaries of the site, the nature of the terrain, the orientation of the site relative to the sides of the

world, the presence or absence of greenery, reservoirs, utilities and transport communications, the direction of prevailing winds and more.

External connections, both transport and pedestrian, play an important role in the operation of the facility. Every object (catering establishment, residential, public and industrial) needs a parking lot of standard capacity and ‘attracts’ traffic and pedestrian ways, sometimes quite significant. Therefore, before designing an object on a specific site, it is necessary to imagine, at least in general terms, where the parking lot will be located and whether the adjacent street and road network will withstand the traffic and pedestrian flow of high intensity (Fig. 1.4).

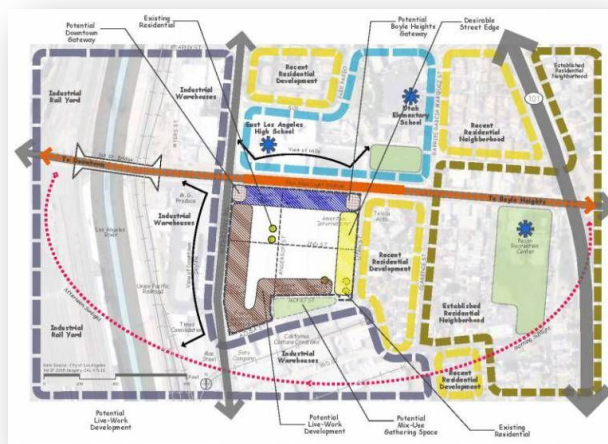


Figure 1.4 – Functional and traffic analysis

Assignment “**Functional planning analysis**” (Fig. 1.5) should be performed on the A3 format in scale 1: 2000. For this drawing, it is necessary to do:

- on the selected topographic survey of the territory, indicate the border of the projected area with a red line;
- show on the selected topographic survey in different colors the functional zones of the city territory, for example: complex living and municipal building zone; commercial zone; agricultural zone; sport zone; recreation zone; natural landscape zone and others;

- at the bottom of the drawing show the necessary symbols;
- above the scheme write the title;
- fill the title block

Assignment “**Transport and pedestrian accessibility analysis**” (Fig. 1.6) is performed on the A3 format. For the drawing, it is necessary to do:

- select a topographic survey of the territory scale 1: 2000;
- indicate the border line of the projected area;

- show territory with public transport stations and road categories: high way, major street, minor street, one way street and sidewalks;
- show symbols;
- write the name of the drawing and the title block.

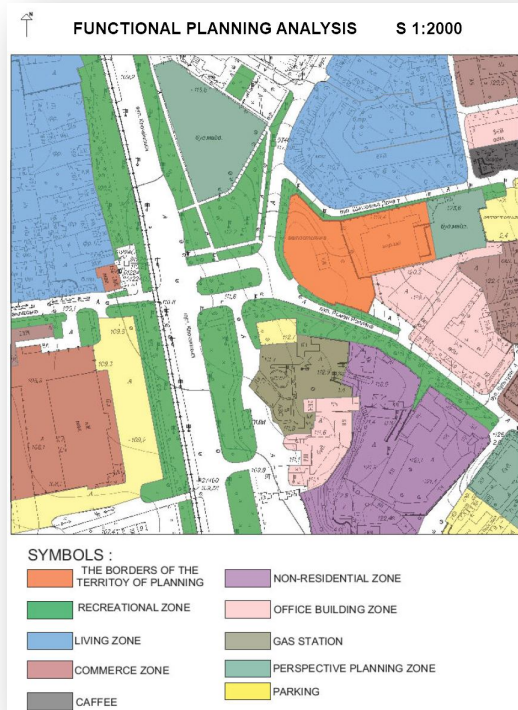


Figure 1.5 – Functional planning analysis of site

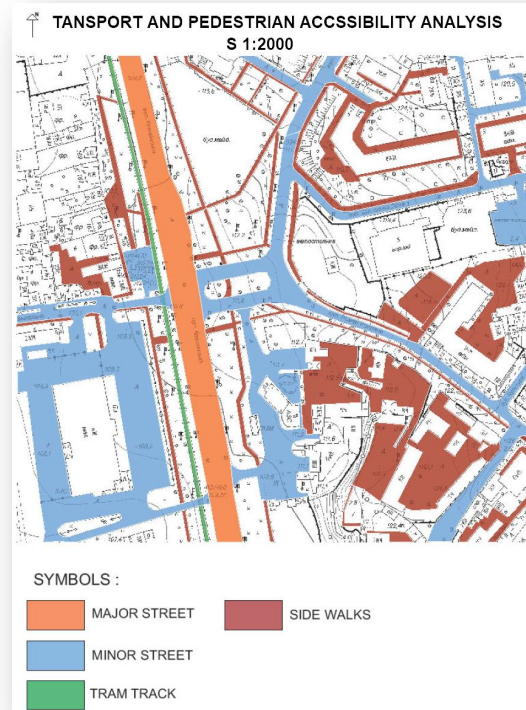


Figure 1.6 – Transport and pedestrian accessibility analysis of site

1.5 Implementation of the master plan

Seasonal expansion areas located on the side of the roadway must be protected from accidental motor vehicle accidents.

The distance from the windows and doors of the premises of the catering establishments to the sites with the bin should be at least 20 m. Food waste disposal sites must have their own garbage collection and storage system. There should be driveways, sidewalks, artificial lighting and landscaping at the food business area.

The initial idea of the master plan is designed in the form of a sketch. It will show the contour of the café building and the location of functional areas around of it. Interrelations between zones are developed and the direction of the basic movement between zones and communication with premises of the house is specified.

Assignment “**Master plan functional scheme**” (Fig. 1.7) is performed on the A3 format. A site zoning on the preliminary design of master plan should be provided on the land lot, with the following:

- areas for visitors, if necessary, with a platform for seasonal outdoor seating;
- production area, which may include a space with driveways for trucks;
- loading area adjacent to a group of warehouses of food;
- garbage cans place;
- rest area for staff;
- parking for individual vehicles.

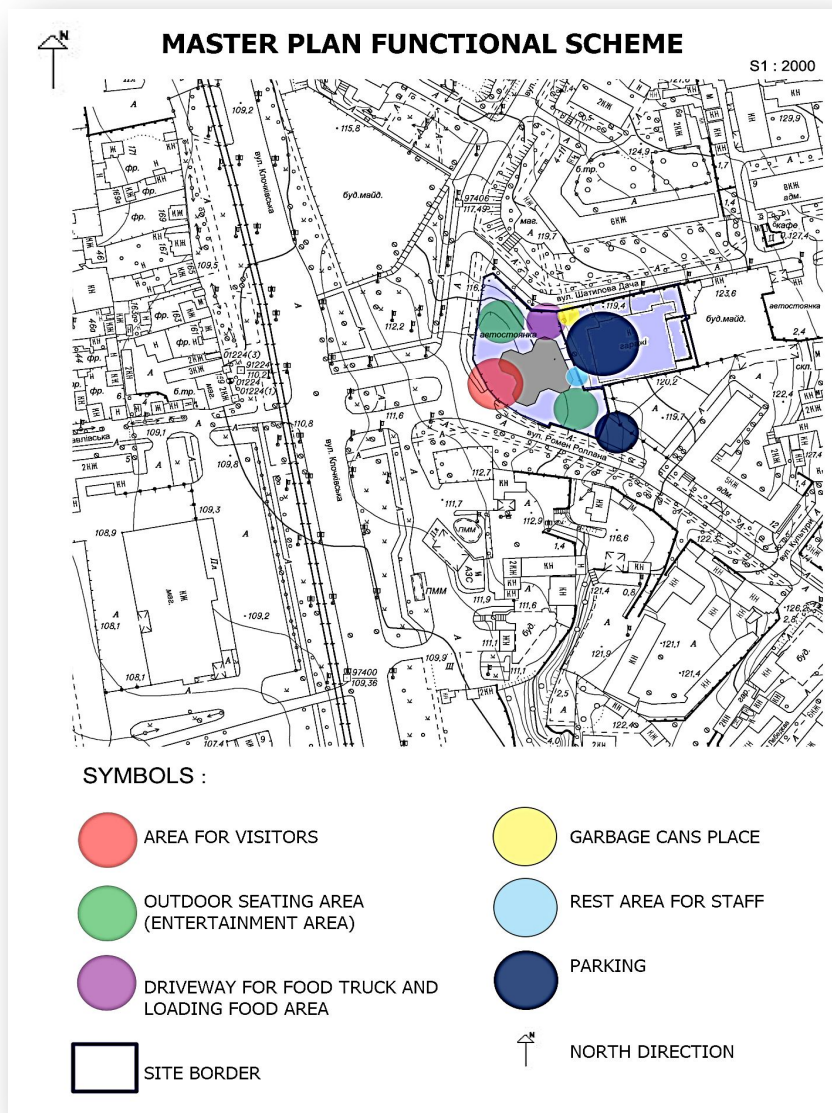


Figure 1.7 – Master plan functional scheme

Site elements should be accessible to people with disabilities:

- open stairs and ramps on the site must ensure safety and ease of movement;

– fences, handrails and fixtures shall also be used for the movement of individual wheelchairs;

– paving materials and their texture used in the movement of people should prevent slipping, etc.

Assignment “**Master plan**” of café (Fig. 1.8) should be performed on the A3 format in scale 1: 200. For the drawing, it is necessary to do:

– design a master plan using different colors: place the cafe building, a parking area on the projected territory, show driveways and sidewalks, how landscaping, garbage containers, benches and other elements of beatification;

– write numbers of existing objects;

– in the free space of the drawing write: explication (list the numbered objects) and symbols;

– above the master plan write the title and drawing scale;

– fill in the title block.

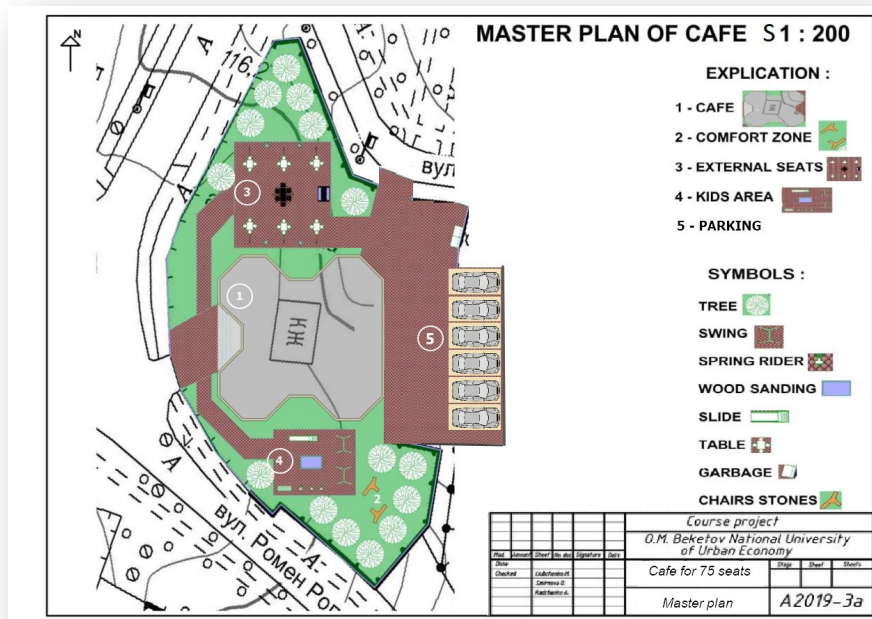


Figure 1.8 – Master plan (student project)

Calculation of the number of parking spaces in parking lots for cafe are accepted for the task of design, but not less than required by regulations (restaurants and cafes of urban significance – 10–15 parking spaces for 100 seats in the hall, other restaurants and cafes – 8–12 parking spaces for 100 seats in hall). Parking spaces for personal transport of the disabled should be calculated in accordance with the state building codes of Ukraine.

2 FUNCTIONAL PLANNING AND SPATIAL SOLUTION OF CAFE FOR 75–100 SEATS

2.1 Functional and planning solution of the cafe for 75–100 seats

Functional and planning decisions of café premises should provide for a flow-through technological process, exclude counter-flows of raw materials, semi-finished and finished products, used and clean utensils, and exclude the intersection of traffic routes of visitors and staff. The intersection of fresh raw materials and waste containers should be excluded, as well as the combined storage of raw materials, which may be a local source of bacterial contamination (meat and vegetables).

For low-mobility visitors, devices and measures should be provided for unobstructed access and convenient use of the premises by this category of visitors: ramps at the entrances to the house; proper doors and vestibules; devices for vertical lifting in buildings with height more than one floor (in the absence of passenger elevators); devices and appliances for disabled people.

Visitors' rooms are divided into two functional subgroups:

- dining hall with a stage, lobby, etc.;
- ancillary facilities (lobby, dressing room, toilets, artistic, additional service facilities, etc.).

The premises for the production of culinary products are divided into three functional subgroups:

- the main production premises;
- storages;
- office.

The height of the floor of the food business (floor to floor), with the exception of the height of the technical floor, should be not less than 3,3 m.

Separate entrances and stairs for visitors and staff should be provided in the buildings of catering companies.

In the halls, main production and administrative premises it is recommended to have natural lighting (side, upper) [1].

Rooms for visitors. The list of catering facilities for catering establishments of different types and classes should be taken from Table 2.1.

Table 2.1 – List of premises for visitor service

Room for visitors	Types of food businesses								
	Class						Café	Dining Room	Snack Bar
	Restaurants			Bars					
	luxé	higher	first	luxé	higher	first			
The lobby, hall	+	+	*	+ ¹⁾	+ ^{1)*}	*	+ ²⁾	*	*
Dining room	+	+	+	+	+	+	+	+	+
Bandstand and dance floor	+	+	*	+	+	*	+ ²⁾	*	*
Artistic, storage room for musical instruments	+ ⁴⁾	+ ⁴⁾	*	*	*	*	+ ²⁾	*	*
Range of jukeboxes, sound and reproduction equipment and more	*	*	+	+	+	+	+ ²⁾	*	*
Banquet hall, separate offices	+	+	+	*	*	*	*	*	*
Distribution	*	*	*	*	*	+ ³⁾	*	+	+
Premises for leisure activities ⁵⁾	+	+	*	+	+	*	+	*	*
Waiting area (lobby)	+	+	+	+ ¹⁾	+ ¹⁾	+ ¹⁾	+ ⁶⁾	+	*
Wardrobe	+	+	+	+ ¹⁾	+ ^{1)D}	+ ¹⁾	+ ⁶⁾	+ ⁷⁾	*
Women's dressing room near wardrobe	+	+	+	+ ¹⁾	+ ¹⁾	*	+ ⁶⁾	*	*
Restroom	+	+	+	+	+	+	+ ⁷⁾	+ ⁷⁾	*
Room before restroom	+	+	+	+	+	*	+ ⁷⁾	*	*
Smoking room	+	+	*	+	+	*	+	*	*
A visitor lounge and a doctor's office	*	*	*	*	*	*	*	+ ⁸⁾	*
Games room	*	*	*	*	*	*	+ ⁹⁾	*	*
Facilities for additional services	+	+	+	+	+	*	+	+	*
Cooking department	+	+	+	*	*	*	*	+	*

¹⁾ only when operating autonomously;

²⁾ set by the design task; with the exception of the influence of negative factors of physical, chemical and biological nature;

³⁾ bar service at the bar;

⁴⁾ in halls with 200 seats or more;

⁵⁾ the type of leisure activities, the composition and the area of the premises are determined by the design task;

⁶⁾ in the catering establishments of the cafe type, where the visitors are not served by waiters, the presence of the premises is optional;

⁷⁾ for food enterprises with a capacity of more than 50 places;

⁸⁾ for dining rooms with diet food;

⁹⁾ for children's cafes.

Note. + – availability is required

* – room availability is optional

Ancillary facilities. The ancillary premises include a lobby with a wardrobe, restrooms, lounges etc.

The number of places in the wardrobe for visitors should be 10% higher than the capacity of the hall. The length of the hangers is determined by the calculation of six clothes hooks per 1 line meters of hangers.

Table 2.2 Minimum required direct production area (m²)

Types of food businesses and their capacity	Forms of production		
	semi-finished products with a high degree of readiness	semi-finished products	on raw materials
1 Restaurants (excluding national cuisines)			
a) 50 seats	100	125	140
b) for 100 places	189	200	211
c) further place more than 100	0,67	0,73	0,78
2 Dining rooms public			
a) 50 seats	70	78	95
b) to a further place more than 50	0,5	0,6	0,62
3 Cafes, snack bars, cafes for young people, cafes, milkshakes, cafes for children *)			
a) 50 seats	57/75	58/76	-
b) to a further place more than 50 to 200	0,44/0,66	0,5/0,72	-
c) 200 seats	120/172	132/184	-
d) to further place more than 200	0,29/0,38	0,3/0,39	-
4 Coffee machines			
a) for 75 places	66	66	-
b) to a further place more than 75	0,4	0,4	-
5 Ice cream			
a) 50 seats	40	40	-
b) to a further place more than 50	0,26	0,26	-
6 Confectioneries			
a) 50 seats	79	79	-
b) to a further place more than 50	0,84	0,84	-
7 Cheesecakes, dumplings, donuts, sausages **)			
a) 50 seats	-	26	-
b) to a further place more than 50	-	0,32	-

*) In the numerator – in self-service, in the denominator – to serve waiters.

***) Areas are given for the production and living group of premises

Entrances to visitor restrooms should be provided from the lobby. Restrooms should be designed separately for men and women. The number of restrooms in each of them should be taken at least: for the total number of seats in the halls up to 300 - one toilet for every 60 seats, more than 300 – additionally one toilet for every further 100 seats.

If there are more than 100 seats in the halls, a special cabin for wheelchair visitors is additionally provided.

The premises of the production group of premises shall be accepted in accordance with table 4. The minimum size of the production area should normally be at least 7 m². Production group of premises, it is recommended to place in a single functional zone.

Basic layout of café that includes primary spaces is shown on Figure 2.1.

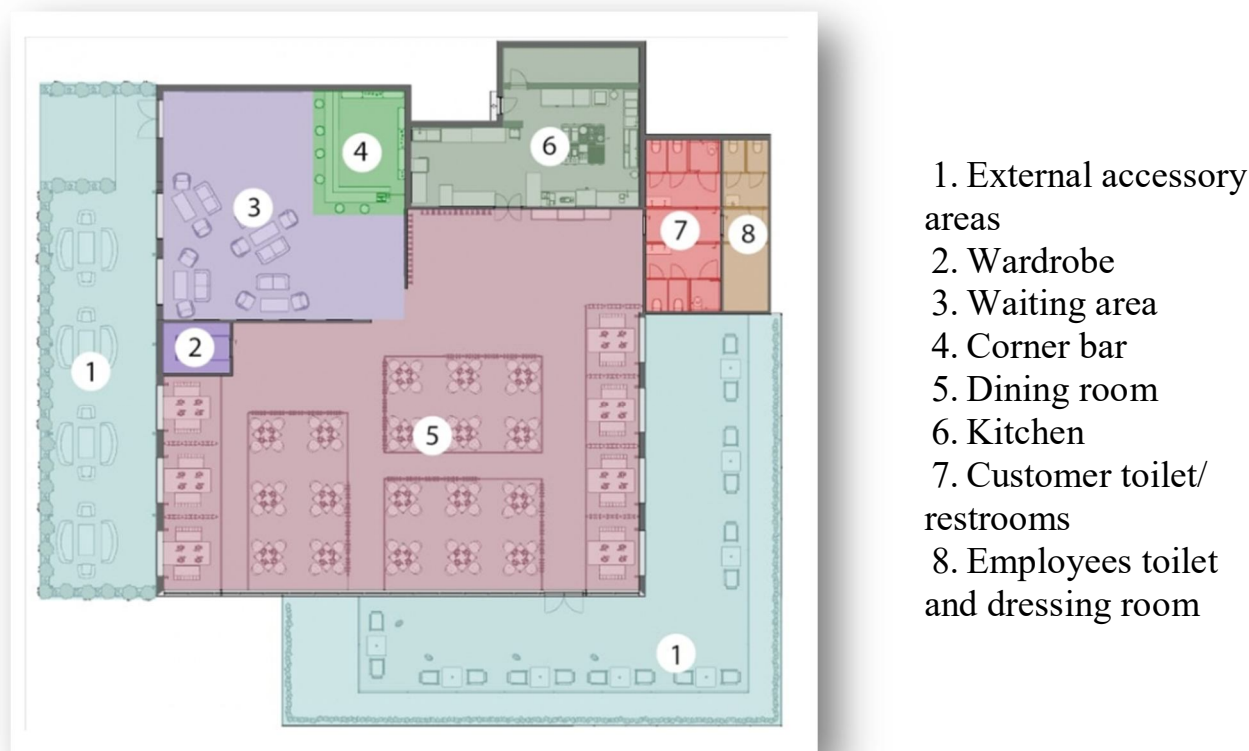


Figure 2.1 – Functional layout of cafe primary spaces

The most important functional zones and premises of cafe are follow described.

Kitchen. In most restaurant floor plans, the kitchen takes up about 25-40% of building space. This might seem like a lot for a space, but it is important for cafe floor plan. Do not shortchange this area (Fig. 2.2).

Restrooms. If you can place restrooms near kitchen area (tying into nearby plumbing and waterlines). Depending on the size of your space to add a staff-only restroom and changing area, too.

Visitor space areas should be taken in Table 2.3.

Table 2.3 – Minimum required areas of premises for visitor group (m²)

Food businesses	Group of visitor rooms			
	Self-catering establishment		Waiters catering establishment	
	Total	Including hall with distribution	Total	Including hall with distribution
1 Restaurants:				
a) 50 seats	-	-	163	141
b) 75 seats (estimated area)	-	-	175	135
c) 100 places (estimated area)	-	-	254	180
d) further place more than 100	-	-	2,2	1,8
2 Cafés, snack bars, cafes for young people, cafes for children				
a) 50 seats (estimated area)	96	60	91	70
b) to a further place more than 50 to 200	1,96	1,6	1,75	1,4
c) 200 seats (estimated area)	390	320	353	280
d) to further place more than 200	1,91	1,6	1,75	1,4
3 Coffee machines:				
a) 75 seats (estimated area)	168	150	-	-
b) to a further place more than 75	2,08	2,0	-	-
4 Ice Cream Cafes:				
a) 50 seats (estimated area)	96	70	-	-
b) to a further place more than 50	1,68	1,4	-	-
5 Confectioneries:				
a) 50 seats (estimated area)	100	80	-	-
b) to a further place more than 50	1,84	1,6	-	-
6 Beer bars:				
a) 50 seats (estimated area)	106	80	96	70
b) to a further place more than 50	1,88	1,6	1,68	1,4
7 Specialty eateries:				
a) 50 seats (estimated area)	100	80	-	-
b) to a further place more than 50	1,8	1,6	-	-
7 Fast food services companies:				
a) 50 seats (estimated area)	84	70	-	-
b) to a further place more than 50	1,64	1,4	-	-
8 Public Dining Rooms:				
a) 50 seats (estimated area)	118	90	-	-
b) to a further place more than 50	2,12	1,8	-	-

Note 1. To determine the areas of groups of premises of catering establishments less than the specified capacity, the same normative indicator is used, but on the principle of subtraction.

Note 2. For the cafeteria hall with a distribution room, the number of seats 8, 12 and 16, respectively (m²) – 18, 22 and 28 [1].

The hall of a café or restaurant can be divided into zones by partitions (fixed or sliding), provided that evacuation routes from each zone are separated.

The width of the passage in the halls should be taken not less than indicated in Table 2.3.

Restaurants and dance venues should be provided at holiday food establishments.

When determining the area of the dance floor should be taken from the norm of the area for a couple of – 0,15-0,2 m² at the rate of 50-70% of the total number of seats in the hall.

Table 2.3 – Dance floor sizes

Passages in the hall	Width in m (not less)			
	Restaurant Bar	Cafe	Dining Room	Snack Bar
Main	1,5	1,2	1,35	1,2 (1,6) ^{*)}
Extra: to distribute visitor flows	1,2	1,0	1,2	1,0 (1,1) ^{*)}
to approach individual places	0,6	0,4	0,6	0,4 (0,8) ^{*)}

*) In the brackets indicate the width of the aisles between the tables intended for standing food.

Note 1. The width of the passage is determined between the backs of the chairs (at a distance from the back of the chair to the edge of the table 0.5 m), between the free sides (corners) of the tables.

Ancillary facilities. The ancillary premises include a lobby with a wardrobe, restrooms, lounges etc.

The number of places in the wardrobe for visitors should be 10% higher than the capacity of the hall. The length of the hangers is determined by the calculation of six clothes hooks per 1 line meters of hangers.

Entrances to visitor restrooms should be provided from the lobby. Restrooms should be designed separately for men and women. The number of restrooms in each of them should be taken at least: for the total number of seats in the halls up to 300 -

one toilet for every 60 seats, more than 300 - additionally one toilet for every further 100 seats.

In the men's toilets, there should be one urinal per toilet.

If there are more than 100 seats in the halls, a special cabin for wheelchair visitors is additionally provided.

The premises of the production group of premises shall be accepted in accordance with table 4.

The minimum size of the production area should normally be at least 7 m².

Production group of premises, it is recommended to place in a single functional zone.

2.2 Spatial solution of the cafe for 75–100 seats

Design features of café include following aspects:

- accommodation;
- designer concept;
- layout of halls and bar counters;
- designing a kitchen of café;
- location of special equipment;
- ventilation arrangement.

The entrance has multiple functions: it is the first place that the customer meets, and therefore it is essential that the first impact is positive and let the “concept” of the room filter through. It also plays the role of filter between the outside and the dining room.

The entrance is the space where you can design a waiting room, the bar corner and the cash desk. From this environment it is also possible to provide access to the cloakroom and toilet facilities.

With reference to some European hygiene regulations for public premises, it is possible to identify the minimum size measures of the room:

- minimum height: 2,70 m;
- minimum volume: 25 m³;
- direct natural ventilation equal to 1/10 of the walking surface of the room;
- insufficient direct natural ventilation can be integrated or replaced with an adequate air conditioning system;
- direct natural lighting equal to 1/10 of the walking surface of the room that can be integrated or replaced with artificial lighting.

For the generic volume it is necessary to consider the standard sizes of tables and seats. Square tables as the most common type in restaurants and, more generally, standard dimensions are:

- for tables $0,80 \times 0,0$ m or $0,90 \times 0,90$ m;
- for chairs $0,40 \times 0,40$ m;
- minimum spacing between tables $0,30/0,40$ m.

In this case you will have a footprint of approximately $1,20 \text{ m}^2$ per seat.

It is a standard measure. Much also depends on the type of venue that you want to design. In fact, for a gourmet café plan it is common to have a minimum size of $2,00 \text{ m}^2$.

Restrooms in a café project it is mandatory to provide toilets for the public, but also:

- one toilet for the staff with an anteroom that separates the two areas. This space can also be used as a dressing room if it meets the minimum dimensions

- dressing room with: an area equal to not less than 1.50 m^2 for each employee average height not less than $2,40$ m; natural ventilation or, in case of windowless baths, suitable air exchange devices; adequate heating; walls covered with waterproof material and easily washable up to a minimum height of $2,00$ m; individual double-compartment cabinets must be placed for storage; separate storage for work clothes and personal ones.

- one toilet for the public per every 60 m^2 of the total facility surface, with the following characteristics: 1 m^2 minimum area; average height not less than $2,40$ m and equipped with a window for direct natural ventilation, that is not less than $0,50 \text{ m}^2$ (if the room is windowless, it must necessarily be equipped with mechanical ventilation); anteroom with a minimum surface area of 1 m^2 , average height not less than $2,10$ m; the door accessing the outside must be equipped with automatic door closer, and with outward opening; floors and walls must be covered up to 2 m height with waterproof materials, easily washable and disinfectable (if necessary make the necessary distinctions for the bathroom for disabled people with measures regulated by the relating specific regulations) [4].

Ancillary spaces support the functions of the primary areas and increase the quality of the service. They are fundamental, however not all restaurants provide spaces such as cloakrooms and external areas (Fig. 2.3, 2.4, 2.5).

For a cloakrooms design it is necessary to consider the classic dimensions of the cabinets with $0,60$ m depth modules. In addition, it is useful to add some extra space such as $0,90 \times 0,90$ m in width to allow customers to comfortably move.

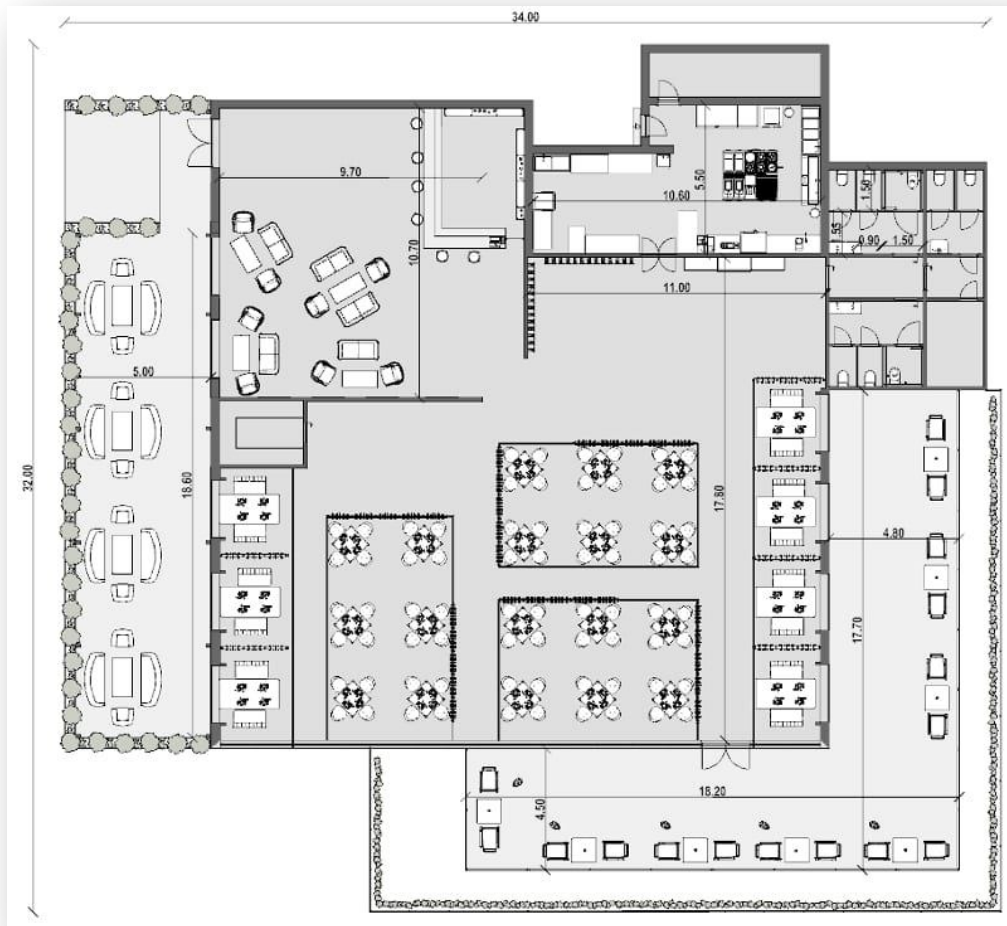


Figure 2.3 – Example 1 of café spatial solution



Figure 2.4 – Example 2 of café spatial solution



Figure 2.5 – Example 3 of café spatial solution

Having an external environment available, its design will depend on the function it is intended to assign: aperitif area, smoking area, relaxation area.

2.3 Implementation of café floor plans and elevations

As a set of drawings, plans may be also called as the ‘two-dimensional diagrams’. They are usually used for describing some particular place or for a purpose of communicating some definite building instructions.

In order to capture all the geometric features of a building, different café and restaurant floor plans, café interior design plans, detailed restaurant layouts and plans for the small cafés and large restaurants with few halls, with an open area or not, including banquet hall plans, etc., can be created in concept drawing for either orientation or presentation purpose. The final goal of any plan is either to portray an existing place or object or to convey some particular information in order to allow the builders to realize some particular design.

The term “plan” itself is known to be casually referring to a single sheet, view or a drawing in a set of plans.

To make a building plan, it is important to mention the dimensions between the walls in order to specify both the room sizes as well as the wall lengths. You can also include the details of the fixtures on it, such as water heaters, sinks, furnaces, etc.

Any working drawing is known to be one of the types of a technical drawing being a part of the documentation needed for building some architecture product. To

make a floor plan which is a drawing that is widely created for a purpose of scaling in order to show a view from above.

Floor plans, such as the ones of a cafe or a restaurant, may also include the notes that can be referred to the builders in order to specify some particular construction method by using the symbols for electrical items. Such design symbols are a part of the solution.

The title block is placed in bottom right corner of the drawing sheet (Fig. 2.6). Fill in of title block example is shown in Figure 2.7.

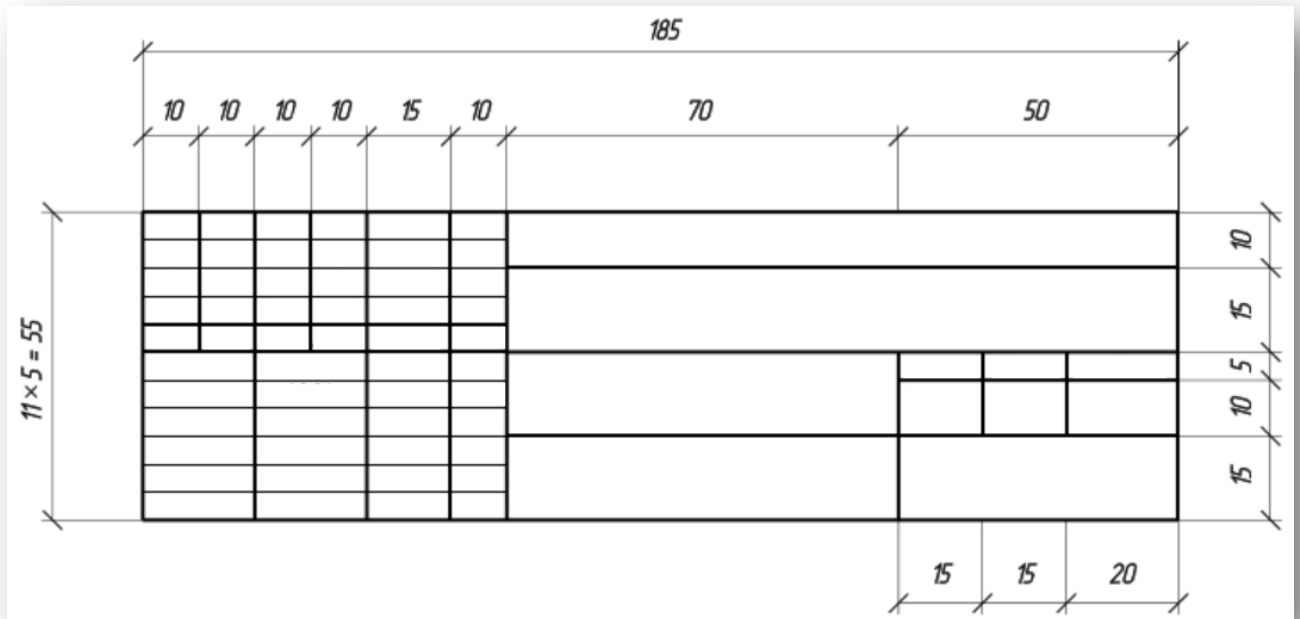


Figure 2.6 – Title block dimensions for floor plan drawings

						<i>Course project</i>		
						<i>O.M. Beketov National University of Urban Economy</i>		
<i>Mod.</i>	<i>Amount</i>	<i>Sheet</i>	<i>No. doc.</i>	<i>Signature</i>	<i>Date</i>			
<i>Done</i>							<i>Stage</i>	<i>Sheet</i>
<i>Checked</i>						<i>Cafe for 75 seats</i>		<i>Sheets</i>
						<i>1-st floor plan</i>		<i>A2019-3a</i>

Figure 2.7 – Fill in title block of floor plan drawing

Typically, the outside walls are drawn first, to lay the plan out on the sheet, then the internal walls, then windows, doors, stairs, lifts, ramps, and so on, are added.

An arrow is used to indicate the upward direction of stairs and ramps. It is usual for a faint dotted line to be drawn around stairs (or other openings) where they are open at ceiling level.

Premises of café should be clearly labelled with number in the center of each room. The correct symbols should be added for elements such as; appliances, fixed furniture, fittings and so on. Stages of building plan drawing are shown in Figure 2.8.

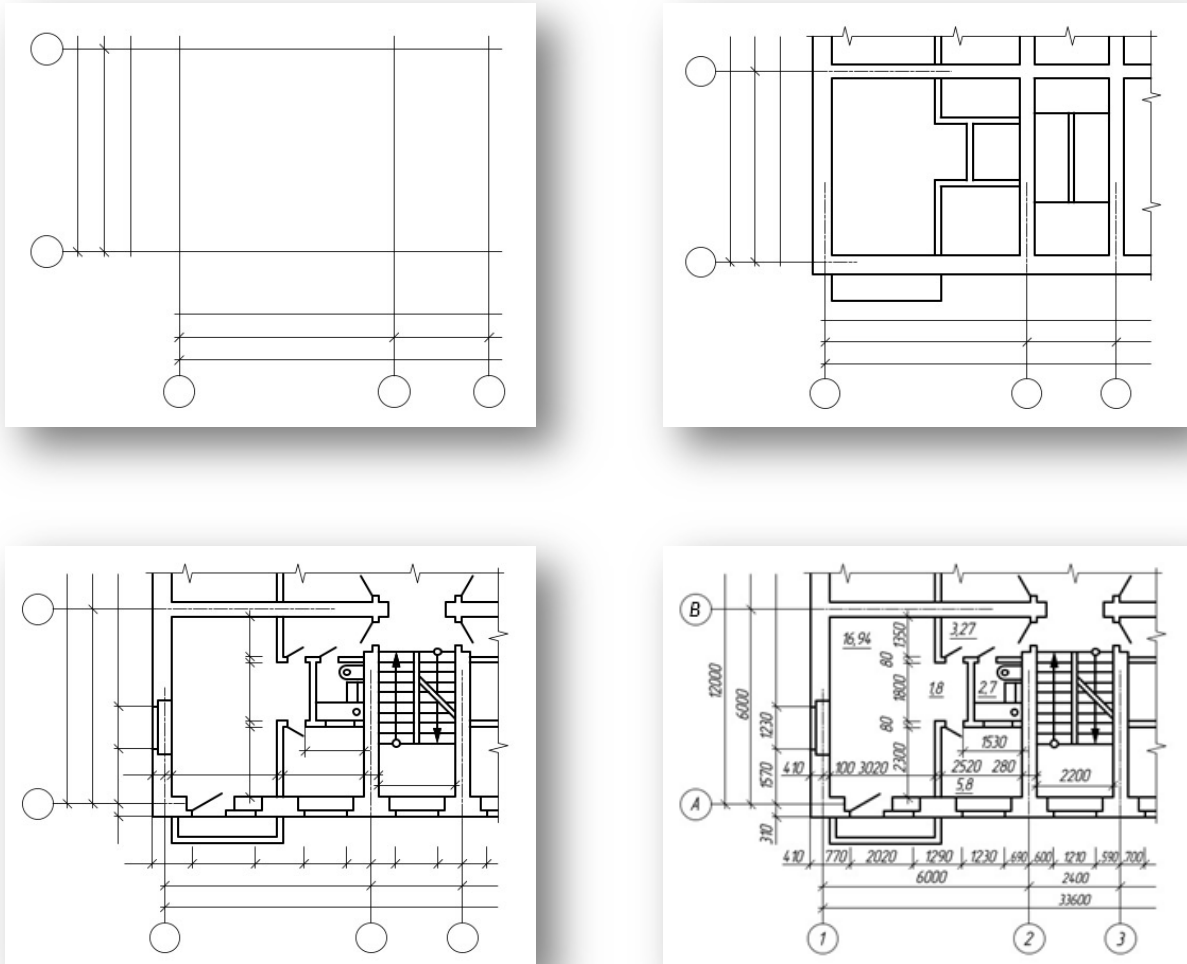


Figure 2.8 – Drawing stages of floor plan

Elevation refers to an orthographic projection of the exterior (or sometimes the interior) faces of a building, that is a two-dimensional drawing of the building's façades. As buildings are rarely simple rectangular shapes in plan, an elevation drawing is a first angle projection that shows all parts of the building as seen from a particular direction with the perspective flattened. Generally, elevations are produced for four directional views, for example, north, south, east, west.

Simple elevation drawings might show:

- the outline of a building;
- openings such as doors and windows;

- roofing;
- projections such as eaves and pipes;
- level datum such as finished ground level and floor positions;
- key dimensions such as lengths between first and last axes and heights level marks;
- exterior features such as decks, porches and steps;
- any portion of the foundation that may be visible;
- exterior wall and roof finishes.

Elevations are usually performed in scale 1:100 or 1:200. The elevation drawings are shown in Figure 2.9.

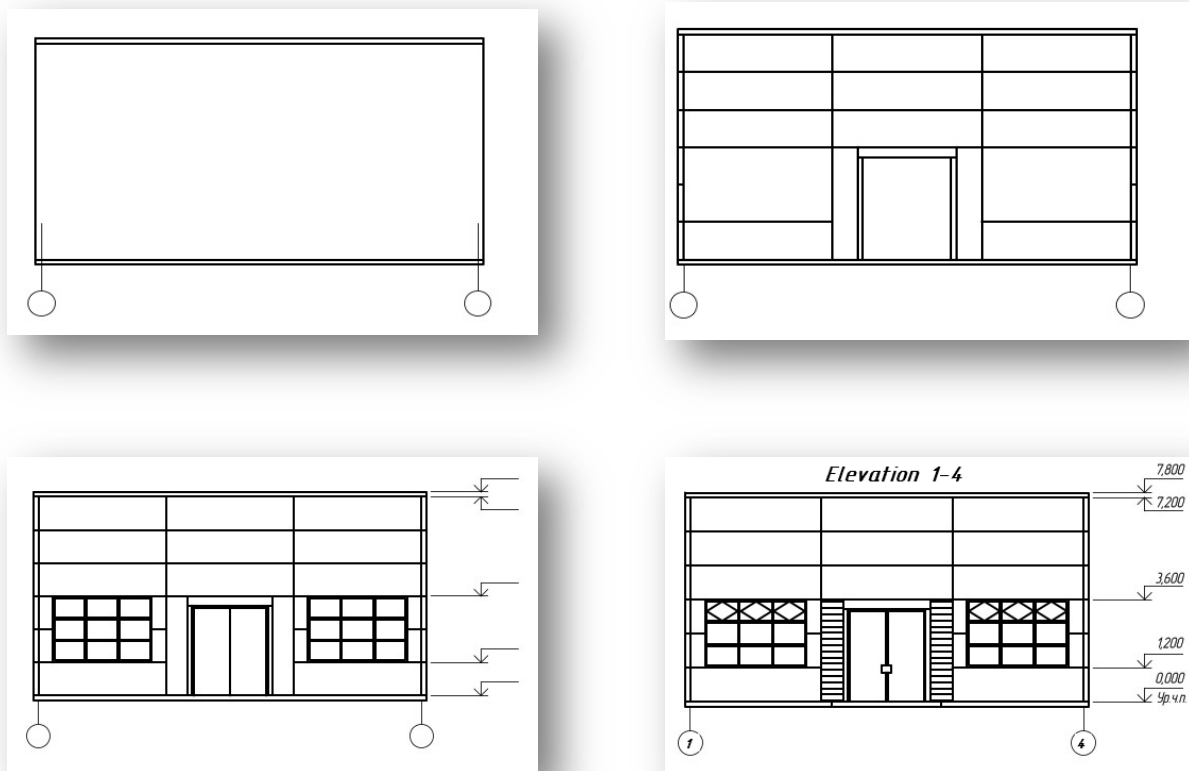


Figure 2.9 – Drawing stages of elevation

Section drawing shows a view of a structure as though it had been sliced in half or cut along another imaginary plane. This can be useful as it gives a view through the spaces and surrounding structures (typically across a vertical plane) that can reveal the relationships between the different parts of the buildings that might not be apparent on plan drawings.

For buildings, this can be useful as it gives a view through the spaces and surrounding structures (typically across a vertical plane) that can reveal the relationships between the different parts of the buildings that might not be apparent

on plan drawings. Plan drawings are in fact a type of section, but they cut through the building on a horizontal rather than vertical plane.

The direction of the plane through which the section is cut is often represented on plan drawings and elevations by a line of long and short dashes, called a section plane. If there are a number of sections, the line may have letters at each end indicating the name of the section drawing and an arrow showing the direction that the view takes.

The section drawings are shown in Figure 2.10.

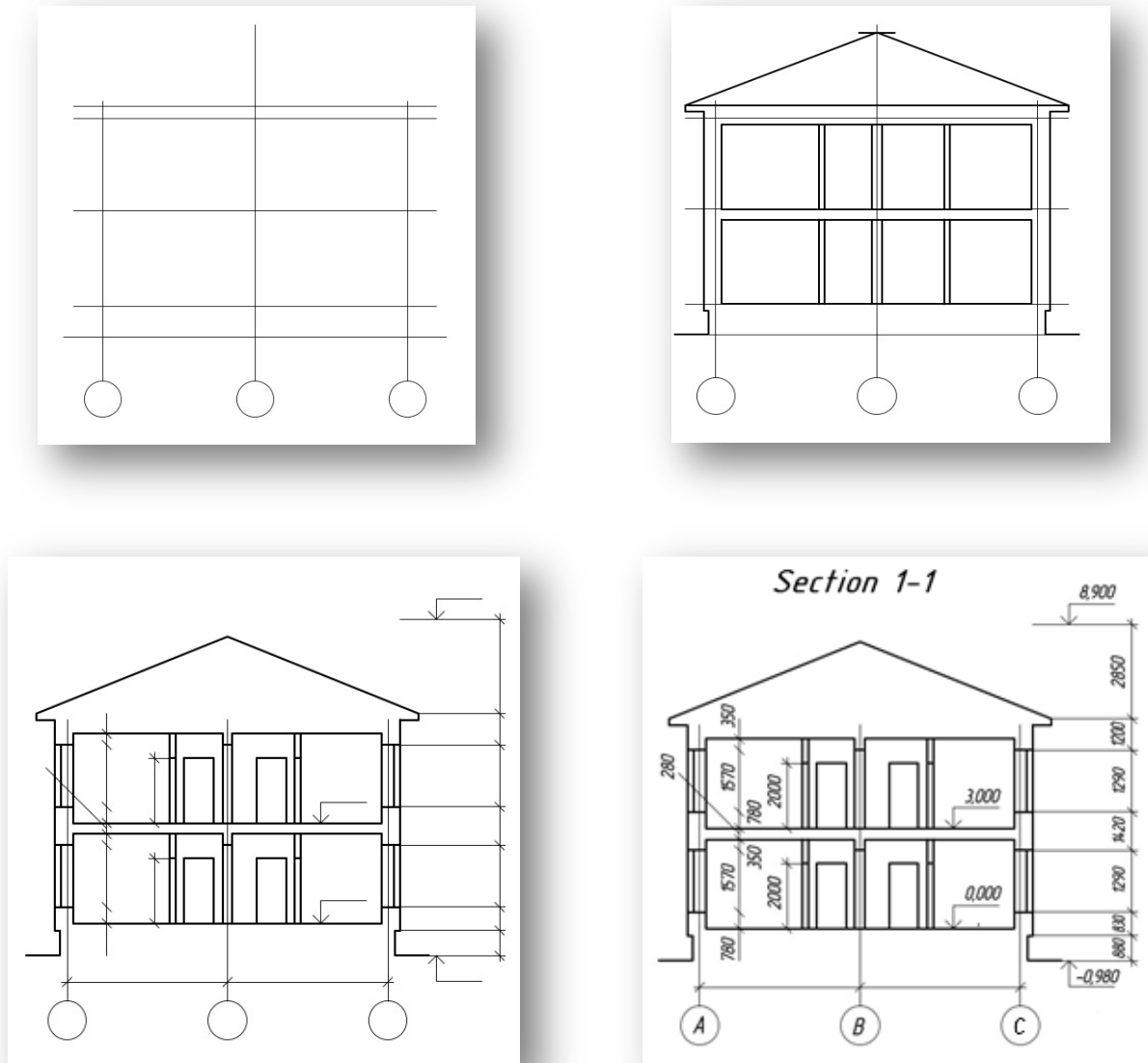


Figure 2.10 – Drawing stages of section

The section line can take an indirect route through a building if this helps show the most important features or junctions in the building, as illustrated on the drawing below. Shading, cross hatching or other fill styles and / or thicker lines can be used to indicate parts of the structure that have been cut through, such as walls, roofs and

floors. The scale of a section drawing will depend on the size of the building being drawn and the level of detail that needs to be shown. Sections may show the entire building, or may focus on a particular component, junction or assembly. In this case they can be similar to assembly drawings but differ in that they don't usually include details of the actually assembly process.

Different types of cross hatching can be used to differentiate between different types of component on detailed sectional drawings. Standards exist for hatching that should be used on some common materials, for example, double diagonal lines indicate brickwork, a wave indicates insulation and so on [5].

Example of floor plan of individual residential building drawing is shown in Figure 2.11. Example of elevation of individual residential building drawing is shown in Figure 2.12.

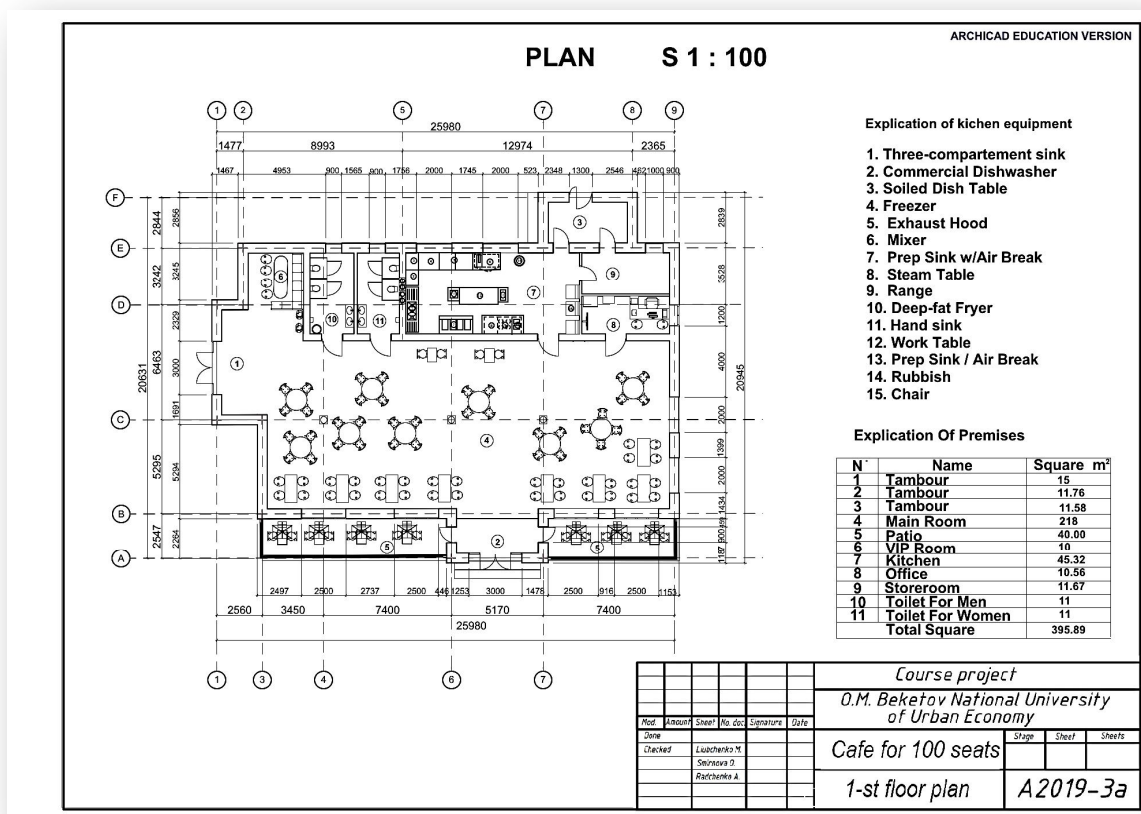


Figure 2.11 – 1-st floor plan (student project)

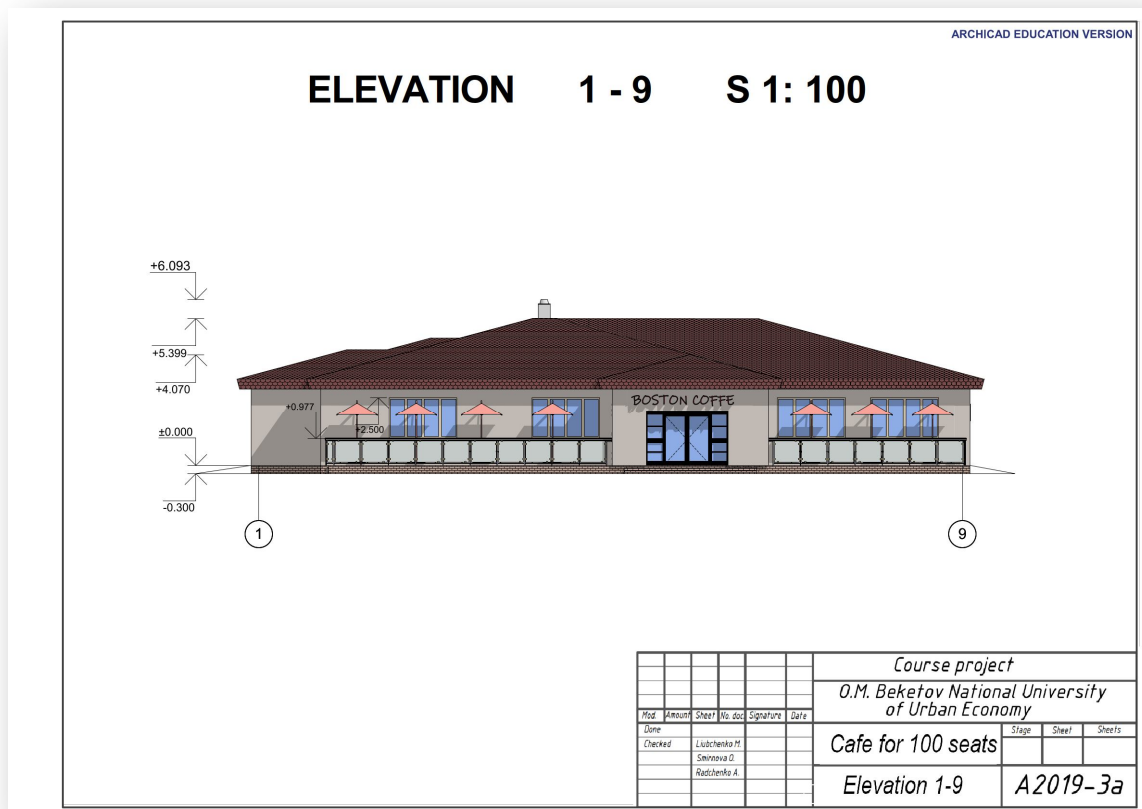


Figure 2.12 – Elevation 1-9 (student project)

Assignment **“Floor plan”** should be performed on the A3 format sheets in scale 1: 100. To perform of drawing it is necessary to do:

- draw coordination axes and bearing walls with reference to the coordination axes, partitions;
- show windows and doors with opening;
- draw a stairs (if the building has several floors);
- write the required dimensions in mm;
- show the arrangement of furniture in the premises;
- show plumbing equipment;
- write the premises numbers;
- in the free space of the drawing write: explication of the premises (list the numbered premises) and explication of kitchen equipment.
- above the plan write the title, drawing scale, fill in the title block.

3 INTERIOR AND EXTERIOR DESIGN OF CAFE

3.1 Café interior design concept

People often go to their favorite cafe whenever they feel bored at home. Today, a cafe is the best place for friends and family. Besides the special menu, a cafe also has a beautiful interior design. Even the small cafe can be turned into the prettiest one with current interior designs. The design is not only good to see but also comfortable for all guests.

These days, people do not just go out to eat – they go out to get the full experience. Anyone can cook good food in their home kitchens, which is why the café and restaurant industry pulls no stops in designing beautiful and attractive interiors to keep the guests coming back. A good café interior design can be the one fine difference that ends up setting you apart from the competitors.

A good lighting design is the cynosure of any brilliant design, but its significance increases two-fold when designing specifically for cafe. The lighting design for such spaces is much more nuanced than the general lighting of any commercial or residential interiors. It creates an unconsciously positive mood and stimulates the appetite for the customers(Fig. 3.1).

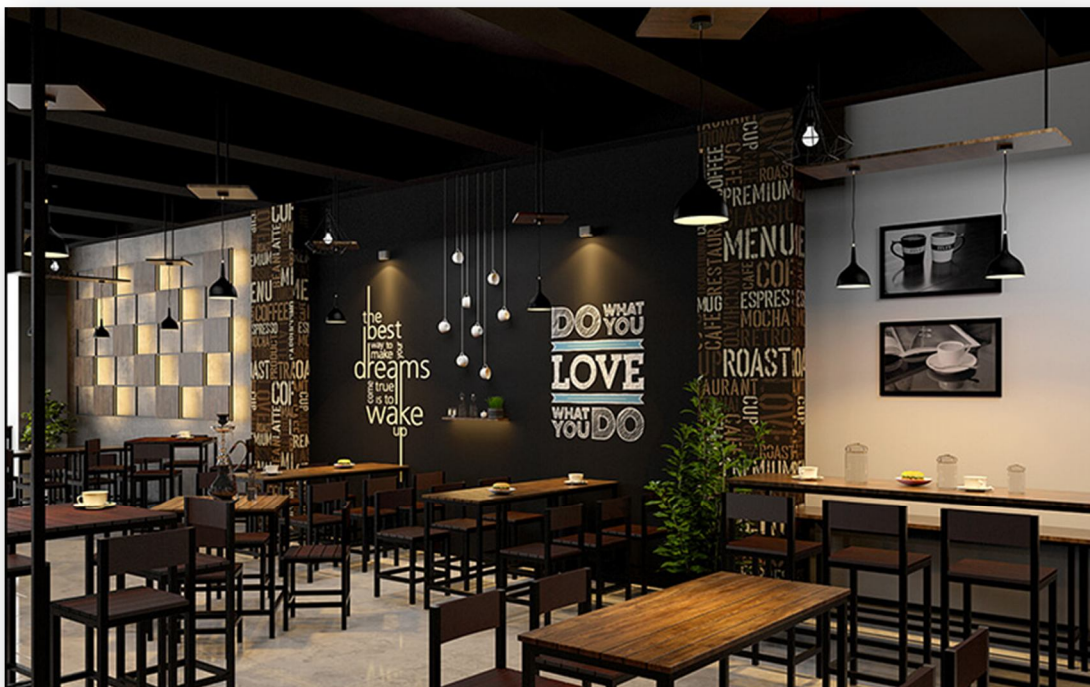


Figure 3.1 – Lighting design concept

The lighting for a café interior is supposed to be bright and breezy in order to promote a friendly vibe throughout the space. However, there also needs to be an ambient balance to the space, which is created through accent lighting and decorative fixtures.

The combination of natural light with café interior design is not stringent, but it can definitely enhance the overall look of the environment. Not only does it reinforce a well-ventilated, atmospheric outlook, it also makes the interior seem refreshing and spacious. The breezy addition to the ambiance is always welcome in casual public spaces like cafes (Fig. 3.2).

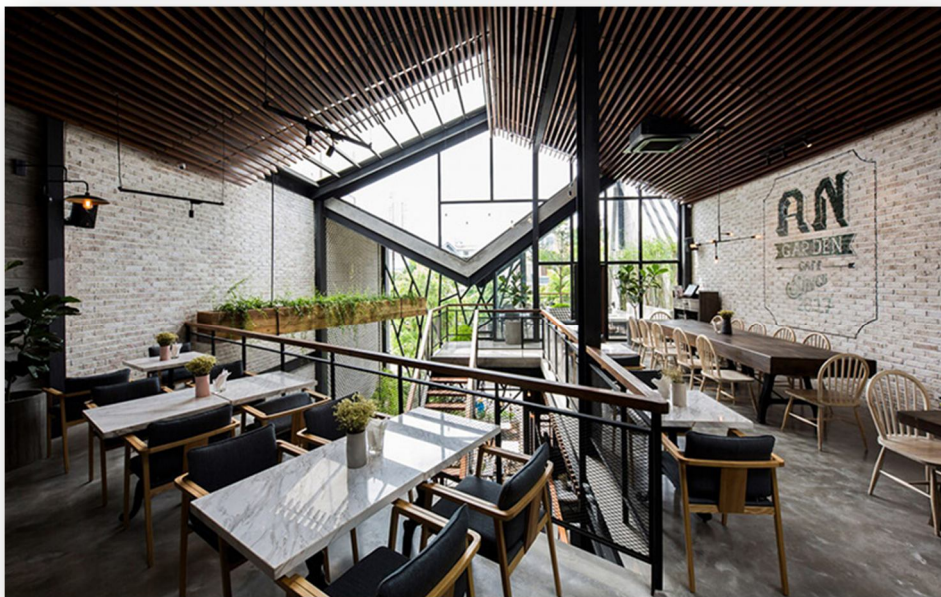


Figure 3.2 – Combination of natural light with café interior design

Any interior aesthetic is the basic representation of its combined color and material schemes. A nice combination of both can enhance the visuals of your space. A bad one can make your space seem bland or even boring. Since a café needs to have beautiful visuals. It is extremely important to choose the right colors and complement that further with the right materials.

Since cafés are a thematic representation of coffee houses, the main color scheme is rooted in dark, earthy hues. But that is definitely not a universal application. In the context of colors, style and materials, café interiors can be divided into 4 categories.

The grab-and-go café. The color and material palate of these cafes is very stringent to the ‘logo’ palate. The material articulation is always very contemporary to enforce a modern vibe.

The hangout café. These kind of cafes are very strict on individuality. These cafés are just the tiniest bit upscale but the overall ambiance is very casual. The layout of these cafes is slightly wider with an option for larger sitting arrangements.

They strive to be one of a kind and need a standout color come material palate. The best combination for such cafés is always a partially vivid color scheme that is toned down by an earthy material palate. A fine balance between the two need to be struck.

The corporate café. The corporate café consists of individual indie coffee shops that thrive on unique and adventurous design themes. From retro and bohemian to shabby chic, they encompass all sorts of themes. The overall atmosphere is very stylish yet homely.

The color and material scheme of the corporate café needs to be decided according to the selected theme. Of course, you can always go for a generalized style. exuberant colors, plentiful textures and exposed materials is used.

The old-style café. This kind of a café has an antique old-style charm without a hint of modern or contemporary in sight. The ideal atmosphere is easy-going with a dash of homely. The overall ambiance is cozy and intimate with warm lighting accents in the mix.

The color come material scheme for the old-style café is very exclusive; multi-toned shades of brown with a lot of textures. The desired aesthetic for such cafes includes an exposed brick wall, a tall bookshelf, an earthy color scheme and simple pendent lights (Fig. 3.3).



Figure 3.3 – Old-style café design

The layout of a café is one of the most important aspects of the interior. You could either go for the simple table-chair style or design in booths – it all depends on the theme of your interior. However, there always needs to be a fine balance between the function, aesthetics and the layout, because this is how you create the majority of your café's ambiance.

By function, consider the aisle space – the space between each seating formation. It has to be wide enough for the servers to pass through easily, but not wide enough to hinder the aesthetics. If this space is too narrow, or even too wide, both the functionality and aesthetics would be compromised [6].

The first thing that you need to consider before planning your café interior design is your concept. What type of café do you want your establishment to make, what kind of café will you design, are you going to make a friendly neighborhood café, a mid-priced commercial café, a café near a university campus, or a high-end café on a posh street.

3.2 Visualization of the interior café premises

Interior 3D visualization is extremely valuable for Designers who want to get top-notch visual materials for striking design presentations.

3D modeling part of 3D visualization project is started with the creation of the room and basic forms – walls, floors, ceilings, and partitions based on the interior drawings. Then you should start modeling furniture objects. Such 3D models as tables, the bar counter, the menu board design is created. The other furniture models like chairs and 3D models of the café visitors can be taken from ArchiCAD database and arranged in accordance with your interior concept (Fig. 3.4).



Figure 3.4 – Interior visualization of café

affects the theme of the establishment, the location of the zones, the choice of colors and furniture.

3.3 Implementation of design café project

The exterior of café has to be particularly welcoming. If you scrimp on the elevation then the major commercial attraction would also dwindle. The café exterior must represent the interior at least partially. For this purpose, you should use tall windows that gives great view of your prime inside seating or even the food display. Invest in a glitzy logo and a welcoming header and try to emulate a bit of individualism to attract the desired guests (Fig. 3.6).



Figure 3.6– Visualization of café exterior (student project)

Assignment “**Album**” (Fig. 3.7). In the assignment, you need to compile all following drawings into an album.

This album should includes drawings:

- title sheet of the project with the name of the course, indicating your name, surname, group and all teachers;
- situational plan, scale 1:2000;
- urban planning analysis, scale 1:2000;
- functional planning analysis, scale 1: 2000;
- transport and pedestrian accessibility analysis, scale 1: 2000;
- scheme of master plan, scale 1: 2000;
- master plan, scale 1: 200;
- plans of the 1st and 2nd floor, scale 1: 100 or 1: 200;
- elevations, scale 1: 100 or 1: 200;
- 2-4 visualizations (interior and exterior);
- thumbnail image of the sheet A1 format of the project.

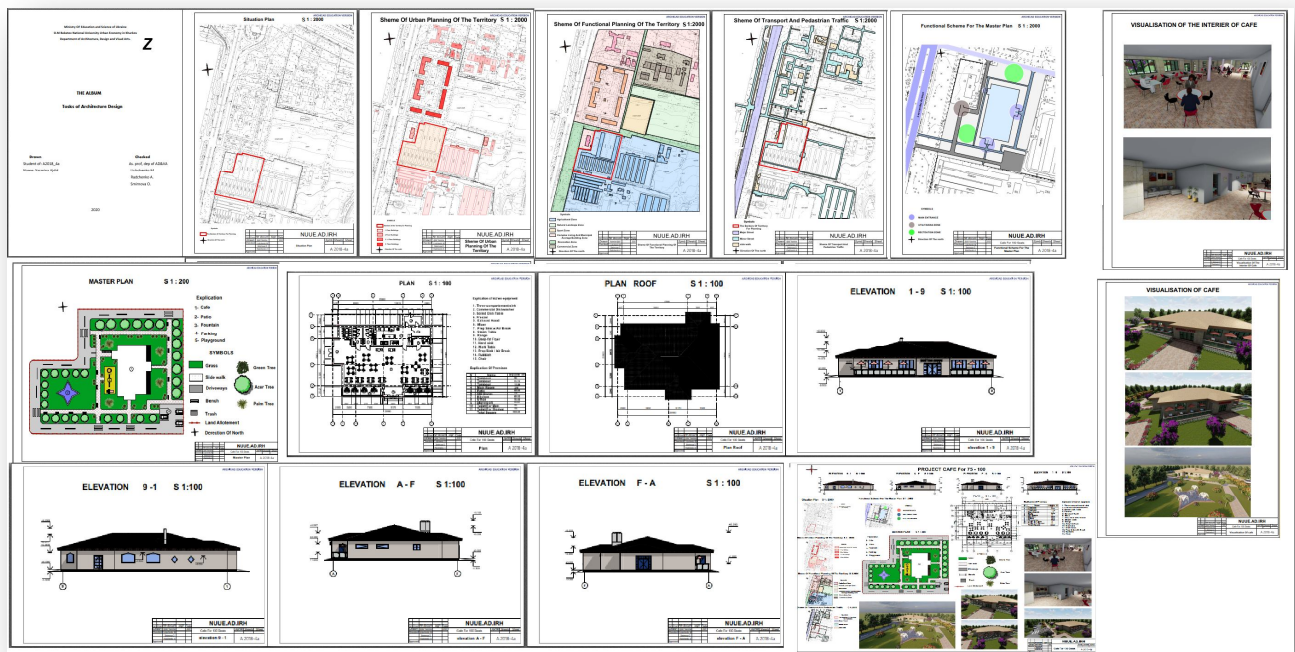


Figure 3.7 – Album of student café project

Assignment “Project of cafe for 75–100 seats”.

The assignment includes the following stages:

- perform visualization of the cafe with the environment from different points of view;
- complete the final design of the cafe project on A1 or A0 format: locate all images of drawings; make appropriate inscriptions and explications; write the necessary symbols; write a project title; fill in the title block (Fig. 3.8).

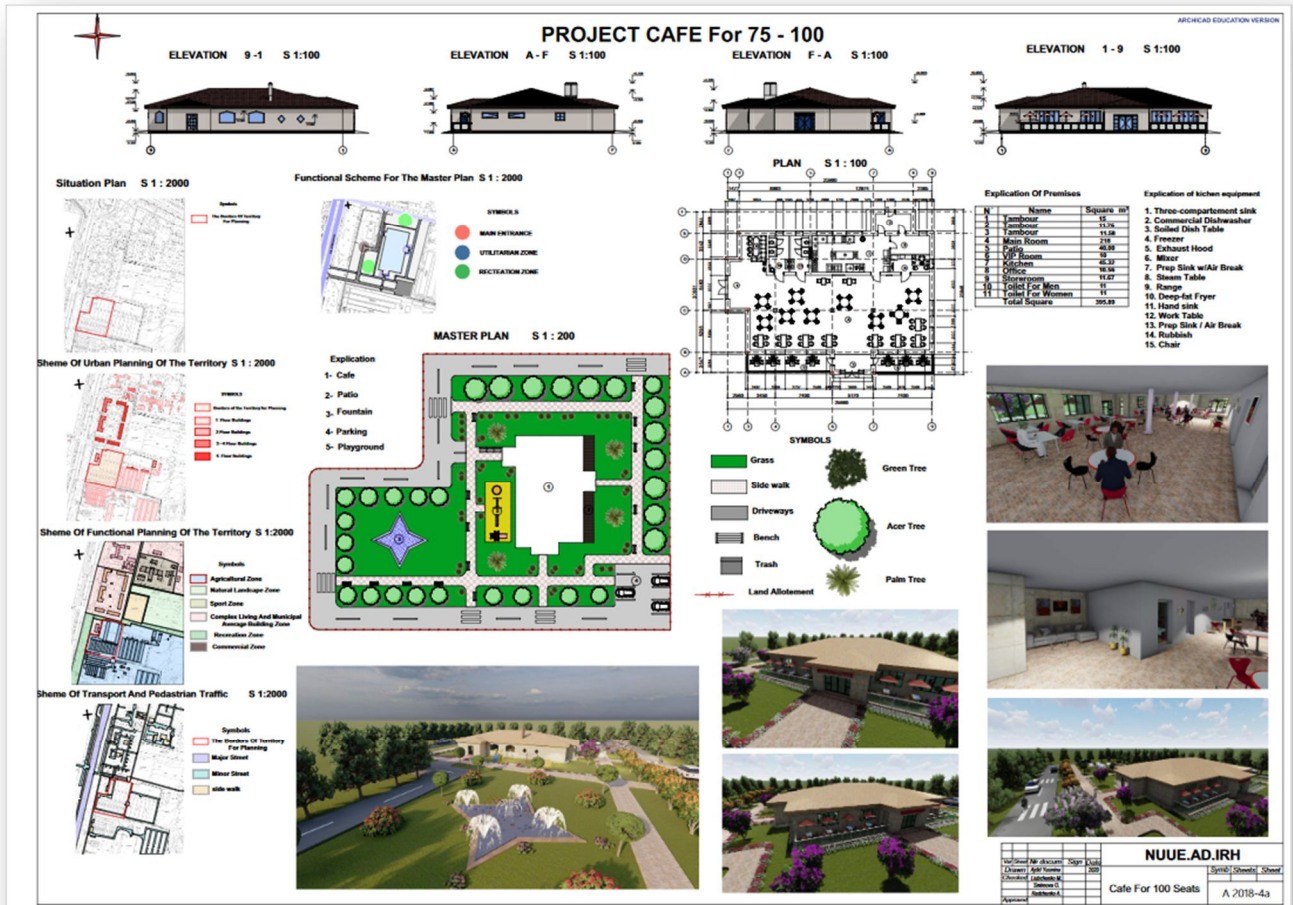


Figure 3.8 – Final design project

There are many more ideas that are original. Perhaps you will become the founder of a new style direction.

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Виробничо-практичне видання

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до практичної та самостійної роботи

з дисципліни

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*(для іноземних студентів другого курсу
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спеціальності 191 – Архітектура та містобудування)*

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