

General recommendations and requirements

1. Requirements to the Project territory:

- 1.1 The public school territory should be hedged with a fence of no less than a 1,5 m height. Along the border it is necessary to be a green plant path, the width of which should be no less than 1,5 m along the boundary and from the street side – no less than 6 m;
- 1.2 On the plot of the public school the following functional zones should be allocated: teaching-common, recreational (sporting and resting areas) and economic area;
- 1.3 In the teaching-common area distance between the longest facades of the buildings should be no less than 12 meters. This distance reduction is acceptable according to the requirements of the insolation and illumination norms;
- 1.4 In the recreational zone, the territory of which is 400 m², per student, should be intended an area no less than 5m²;
- 1.5 The Sports zone should be away from the buildings at a distance no less than 25 meters. Sports-training Square (Standard Dimensions: 9X18m, 14x26m, 20x40m) must have a solid cover;
- 1.6 The recreation zone should be away from sport and economic zones, having a playground and resting place, which should be placed close to the entrance of the building separately for the students of each level;
- 1.7 Economic zone will be located on the side of entrances of the power supply unit and other economic storage blocks in a distance of no less than 35 m from the building having an independent entrance from the street;
- 1.8 On the territory of the Economic zone it is permissible to locate engineering buildings (sanitary facilities, fire pool, boiler, water-pressure tanks, garbage pails and etc.), which must have solid covers;
- 1.9 There will be arranged a special square made of concrete for garbage containers, which should be located far from the windows and entrance of the power supply block at a distance no less than of 25 meters;
- 1.10 The Economic zone should be provided with an independent entrance for automobiles;
- 1.11 For the settlements, where the central sewage system does not exist, the block of sanitary facilities should be located on the school territory as a separate building;
- 1.12 For the Fire trucks it should be easy of access up to the buildings located on the Project territory.

2. Requirements to the buildings:

- 2.1 Public school facilities are divided into: educational (study-teaching), sports-training, cultural-educational and for general purpose (power supply block, administrative-economic, supporting facilities, a doctor's cabinet and others);

2.2 The building of the public school should be no more than 3 storied – taking into account the requirements of seismic and fire norms;

2.3 It should be taken into consideration appropriate conditions for persons with special needs (including a lift or elevator, sanitary facilities, etc.);

2.4 The entire territory of the buildings of the Educational block per student should be no less than 4.0m²;

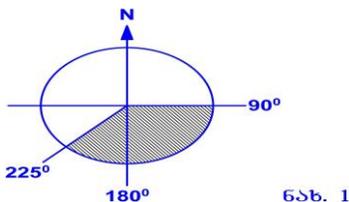
2.5 The classroom space per student should be no less than 2,0 m²;

2.6 While designing, it should be taken into consideration separate educational sections for the I-VI, VII-IX and X-XII, classes with independent recreation zones and sanitary facilities, as for the I-VI classes (even for I-II classes), they should be located in isolation with an independent entrance, hall, open wardrobe and sanitary facilities;

2.7 main entrance area should be intended of 0.1 m² per student; open wardrobe, including the main hall, per student should be 0.08 m²;

2.8 Educational facilities should not be located near the buildings, which are the source of noise or specific odor (smell) (workshops, sports and assembly halls, power supply block, etc.);

2.9 The School Educational facilities should be located in the south, it's possible to take the orientation to the east, south-east and the south-west, namely: from the east (90°) to the south-west (225°) within the sector, the specialized cabinets and drawing classrooms are exceptional for which it is recommended the north, it's possible to take the orientation to the north-east and the northwest; See over here 1



2.10 It is unallowable to locate the Educational facilities (classrooms, cabinets, laboratories, etc.) in the basement and semi-basement of the building;

2.11 It is necessary to protect the spaces of the Educational and Public facilities from excessive insolation;

2.12 The height of the Educational facilities from the floor to the ceiling should be no less than 3.0 meters;

2.13 The height of the window sill of the Educational facilities should be no less than 0,9 meter;

2.14 While planning the parameters of the students working zone in the educational areas, it should be taken into consideration the angle of vision, which for the student of Primary level from

the blackboard up to outside place of the first row must no less than 45 ° and for the student of Secondary and Intermediate levels- no less than 35 °;

2.15 The number of students in the classroom should be determined according to the project designation;

2.16 It is impermissible to arrange cloakrooms in the educational and or recreational zones;

2.17 The recreational area per student is estimated no less than 0.75 m²,

2.18 The walls between the classrooms should satisfy sound isolation norms;

2.19 The hallways near the studding area should be no less than 2m (the minimum width of the hallways should not be reduced, even at the cost of the colony), it is necessary to illuminate them by the natural light. In the administrative block the width of the hallway is allowed by the same principle no less than 1.5m. It is not permitted to place stairs in the hallways designated for evacuation;

2.20 It is desirable to arrange the principal's cabinet and Teacher's room (with their sanitary facilities and wardrobes) on the first floor next to each other;

2.21 The sports hall should be placed on the first floor of the building in a specially constructed or separately built space. For the specific schools, the sports halls should be according to the given project;

2.22 It is compulsory to place the sports hall in isolation from the Educational (study–training) facilities. It is necessary to arrange the evacuation exit directly outside. Entering the the sports hall and dressing rooms should be possible in isolation;

2.23 The dimension of the Sports hall: 10X19m, 15X27 m, 22X42 m. Height is no less than 6 meters up to the top of the overlapping construction;

2.24 At the gym there should be existed sports equipment block; as for the dressing rooms for boys and girls, they must be arranged separately, besides that, sanitary facility and a shower room; Instructor's room (with sanitary facility and shower room, as well);

2.25 Entrance from the dressing room should be arranged directly to the sports hall (gym) or through a special hall;

2.26 Sanitary facility should not be placed close or in front of the entrance of the building;

2.27 There should be existed a supporting facility for inventory and disinfection solutions with a trap and tap 2 m²;

2.28 It should be taken into consideration the requirements concerning the power supply unit for the public school's power supply block;

2.29 The research units should have a direct connection with the appropriate laboratories and the should be placed on the side of the classroom blackboard;

2.30 Between the natural science laboratory and research units must be inbuilt a vent having the possibility of working on both sides;

2.31 The width of the recreation facilities in the building must be no less than 3 meters;

2.32 Sanitary facilities should be placed for the students according to sex, directly with the recreational zone and entering should be with the help of a permanent ventilating tambour;

2.33 For sanitary facilities it is required natural lighting, which must be protected from the direct sunbeams;

2.34 It must be estimated for the students: for every 30 boys 1 toilet can and 1 water basin and 1 urinal;

For every 40 girls- 1 toilet can and 1 water basin;

for teachers:

For 20 men -1 toilet can and 1 water basin; for 10 women 1 toilet can and 2 water basins;

- Sizes of the sanitary facilities: 0.9X1.2 m;

- Size of the space required for a wash basin: 0.70X1.10 m;

- Shower cabin dimensions: 0.9X0.9 m;

- Size of the space required for a urinals: 0.70X1.10 m.

3. Requirements for equipment:

3.1 Sizes of the students desks should be: width 45-50 cm; Length 60-70 cm;

3.2 The desks can be positioned in 2, 3, 4, 5 or 6 rows during the frontal form of teaching.

3.3 Each student should have a comfortable workplace at the desk in accordance with his body height, sight and hearing;

3.4 A distance among the rows of the desks in the study rooms should be arranged as in the following:

1. Among the rows of the desks –no less than 0.60 m;

2. Outside along the wall and among the rows of the desks - 0.50-0.70 m;

3. Inside along the wall or among the closets and the row of the desks along the wall - no less than 0.50-0.70 m;

4. Between the last row of the desks and the back wall-no less than 0.70 m;

5. Between the last row of the desks and the outside back wall- no less than 1 m;

6. From the demonstrative desk to the bottom of the blackboard -no less than 1 m;

7. From the first desk to the blackboard - no less than 2 m;
8. The longest distance from the last desk to the blackboard can be 8.60 m;
- 3.5 In the natural science cabinet should be arranged the special sample desks with the modern equipment. It must be supplied with water, electricity, sewage system;
- 3.6 At the students desks in the natural science cabinet should be arranged water, electricity, sewage system;
- 3.7 The rooms for study-teaching of the foreign languages must be arranged according to special requirements, i.e. by the modern technologies;
- 3.8 The Boiler is intended to be placed near the power supply block and gym (sports training hall).

4. Evacuation ways:

- 4.1 The evacuation exit must be arranged on the ground floor from all the stairs;
- 4.2 The number of steps of the stairs, between the landings must be no less than 3 and no more than 16. In the frame of the border of the first floor for one-stepped stairs it is allowed no more than 18 steps;
- 4.3 The Independent stairs on the first floor, which connect the basement and plinth floors with the hallway, hall or main hall, in the process of evacuation, should not be taken into consideration;
- 4.4 On the evacuation ways the staircases (spiral type) and steps for running up are not permitted;
- 4.5 The stairs, being separated from other spaces with the door, must possess the natural lightning;
- 4.6 One of the exits of the school facilities may be arranged directly in the main hall, wardrobe or hall across the open stairs;
- 4.7 The width of one step of the stairs should be no less than 1.3 m. and no more than 2m;
- 4.8 The size of a step of the stairs must be: 0.15X0.30 m.

5. Natural lighting:

- 5.1 In the school facilities it is required directly natural lighting, if necessary it must be protected from the direct sunbeams;
- 5.2 The space of the open window should provide the level of the natural lightning for conducting the study-teaching process;
- 5.3 For more than 7 meters in depth educational facilities, it is necessary the natural lightning on both sides, one of which is allowed to be secondary;

5.4 Despite the type of lightning (side, upper or combined) in the school facilities, the main source of the light should be provided from the left side;

5.5 It is not permissible to place the classroom blackboard on the side of the light source.

6. Sanitary and technical equipment:

6.1 The school building should be equipped with central heating, cold and hot water and sewerage;

6.2 It is desirable to place the heating radiators under the windows;

6.3 In connection with the educational facilities it should be taken into consideration the existence of the natural ventilation with a single shift in an hour. The rest of the air volume is removed from the recreation and sanitary facilities zones and the cabin of the natural science laboratory;

6.4 The independent ventilation systems should be intended for classroom facilities, laboratories, assembly hall, sports hall, power supply and medical aid station.

7. Cold and hot water supply:

7.1 Cold water supply should be arranged for a wash basin in each classroom of I-VI classes, particularly, in the drawing and fine arts cabinet; at laboratory desks of the laboratory, in the sanitary space and recreational facilities with drinking fountains;

7.2 Cold and hot water supply should be arranged in the teachers' cabinet for a wash basin in it, besides that, in the doctor's cabinet, as well, in the laboratory, sanitary facilities and economic services blocks, shower-rooms and technical equipment in the power supply block.

8. Artificial lightning and Technical equipment:

8.1 Artificial lightning is permissible in the kitchen and refrigerators, sanitary facilities of the kitchen staff and shower rooms, hallways of the cafeteria, assembly hall, technical equipment in the power supply block, etc.

8.2 The outside lights should be designed on the entire territory.

9. Weak Electricity:

9.1 The school building should be provided with a telephone system;

9.2 It should be arranged: TV, computer, internet networks, electronic-call system.

10. Gas supply:

10.1 In case of absence of electric appliances, gas supply is permissible;

10.2 Arrangement of gas is not permitted in the cellars and on the plinth floors.

11. special need persons requirements:

11.1. The quality of the design decision for the shifting of the special need persons in the schools is achieved by the following requirements:

11.1 Accessibility to the point of service:

I. It should be considered the urban infrastructure requirements on the school territory for uninterrupted and convenient movement of the persons with limited physical capacities;

II. The building must be constructed at least with one ground entrance for the persons with limited physical ability;

III. The door openings should not have a doorstep.

IV. In case of necessity, the difference of the levels is permissible no more than 2,5 cm;

V. The width of the communication line should be no less than 1,5 m in case of one-sided movement with a wheelchair, in case of oncoming movement- no less than 1,8 m;

VI. In case of more than 2,5 m of the steps of the stairs, it should be taken into consideration the additional dividing handrails;

VII. The width of the ramp in case of one-sided movement should be no less than 1,0 m, of both sided-no less than 1,8 m;

VIII. Maximum height of one of the ramps should be no more than 0.8 m, in case of bending down-no more than 8%;

IX. The width of the platform should be no less than 1 m of the stairs' step or the width of the ramp on the horizontal section;

X. For the persons with special needs it should be considered a elevator (near the hall or close to it);

XI. For a wheelchair the space of the elevator cabin inside should be no less than -1,1 m; depth -1,5 m; width of the door opening -0.9m (according to standards).

11.2 Security:

I. The entrance platforms should be protected from atmospheric sediments;

II. The ways of shifting the persons with special needs inside the building (dimensions, bending down, openings, eaves) should be designed according to the requirements of the evacuation ways and also the emergency conditions;

III. The sizes of the steps of all the stairs should be - 0.15X0.30m, besides that, the sizes of the outer stairs should be of the same geometric accuracy (according to the sizes of the steps depth and height);

11.3 Comfort:

I. On each floor it should be planned two or three places for rest, among them for the persons with wheelchairs;

II. It should be intended the sanitary facilities with the internal measurements: width - 1.65 m; depth - 1,8 m; The door of the sanitary facilities should be open outside;

all the evacuation doors with the width of no less 1 m should be open from the inside out.