

KYIV CITY MASTER PLAN

2001 - 2020

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2. PREREQUISITES AND STRATEGIC OBJECTIVES OF KYIV CITY FUTURE DEVELOPMENT

Kyiv City Development Concept determines the main problems, premises and strategic objects of future city development.

Key problems. For Kyiv and other regions of Ukraine, key problems are associated with disparity of economic development during the Soviet Union and the crisis condition of economy over the past decade. The key problems include:

- Production is highly energy and materials-intensive;
- High level of depreciation of the main production base;
- Backwardness of technological base in most of the sectors of economy that prevent from the use advanced technologies in most of these sectors;
- Lack of financing for businesses, basically, non-existent efficient financial, organizational, and information support of businesses at the state level;

To resolve these problems major changes need to be made to increase the share of the industry sectors that consume less energy and materials.

By quality of life, the population of Kyiv enjoys higher incomes than is the average for Ukraine, but it is lower than the UN standards for the countries of Central and Eastern Europe as of the end of 1990-s.

Ecological situation in Kyiv region is classified as complicated, and some territories the conditions approximate those classified as dangerous. An encouraging factor for metropolitan region is that the experts determine the appreciation of self-sufficiency and self clearance of its territory from major pollutants.

Over the past decade there is a trend of health deterioration of the population.

The **comparison** of Kyiv with other European capitals gives a reason for such conclusions. By the features of “metropolitan” (exceeding capital city level indicators compared to the national average) Kyiv is in one category with other capitals but at the basic components of the residents’ life, Kyiv remains behind the capitals level of European countries by the economic development level, population incomes, and life quality indicators.

Comparison data for Kyiv and other capitals became a foundation for decisions regarding the scale and goals of the city development in the future.

Based on the available natural resources and socio-economic potential of Kyiv City and Kyiv region there are specific factors and prerequisites (competitive advantages) for the future development of the city.

The main of them are as follows:

Geopolitical location. Kyiv and Kyiv region are located in the centre of Europe, at the crossroad of numerous international transportation routes: waterways, railways, auto and air routes. This creates favorable conditions for development of external and internal links with interested partners.

For Kyiv City and the entire metropolitan area an important factor that drives growth is the **capital factor**. It is widely known that capitals (except for the sole-function ones that were created to be political centers) in addition to management functions also accumulate economic production characterized by more progressive structure and latest technologies, intellectual potential, strong social infrastructure, impact of which goes beyond the capital, and financial flows. Consequently, other prerequisites being equal, the capital city is ahead of other cities.

The entry of Ukraine into the international political and economic spheres as full-fledged sovereign state, will facilitate the development of metropolitan functions of Kyiv and should be reflected on rates and proportions of its economic and social development.

Economic potential. Economic potential of Kyiv consists of diversified industry, construction industry, developed system of utilities infrastructure, transportation infrastructure, modern communications systems.

Recovery of Kyiv industrial potential started earlier than in the rest of Ukraine and its revival is more dynamic: industrial production volume in 2000 was at 99% compared with 1990 for Kyiv City, compared to 57% nation-wide, the same comparison to 1999 was 130% for Kyiv City vs. 112% nationwide.

Demographic and workforce potential. Within the metropolitan region there is concentrated 9% of the population of Ukraine, while the territory is 4.8% of the country total. It demonstrates high population density: population density is almost 154 people per sq km, which is 1,9 times higher than the average for Ukraine. In Kyiv, there is concentrated 5,4% of the population of Ukraine, also notable is the trend of improving the demographic situation.

The concentration of workforce in the metropolitan region (9,7% of the total for Ukraine) and in Kyiv (6,4% of Ukraine's total) exceeds the concentration of the population, indicating very high labor potential of the region.

Scientific potential. Kyiv – is one of the biggest scientific centers of Europe. Scientific researches are conducted in all major field of science that define modern and prospective development of the global economy and humanitarian sphere of humanity.

Investment attractiveness of the city is growing. After a long period of decline in 1991-1997, capital investments per capita in Kyiv grew during 1998-2000 by 2,2 times (in Ukraine – by 1,2 times) and were at UAH 904,9 that is the highest indicator among the regions of Ukraine.

Education potential. The city's scientific-educational establishments and professional-technical colleges ensure coverage of secondary education of all children of respective age, higher education to those interested in it, as well as professional training to all who need it.

Kyiv has an advanced and powerful high school system, the structure and training level of which fully meets the needs of dynamic national economic complex of the country and its capital.

Cultural potential includes the network of cultural establishments, the structure and capacity of which is comparable to other European capitals, and includes objects of cultural heritage that are regarded as the world's monuments of history, culture and architecture.

Land resources of the city allow for allocation of almost all forecasted construction volume within the existing boundaries through 2010-2012. There is a considerable reserve of premises that will meet the demand for office space from businesses during Phase 1 with no need for construction of additional premises. Industrial zones contain land reserves that can be condensed by 30-40%.

Recreational resources. Natural recreational resources of Kyiv and the metropolitan region are characterized by moderately warm climate that is suitable for resting in forests, thus creating conditions for short-and long-term treatment and rest of the population.

Significant place in recreational resources is occupied by woods and parks protection zone and the Dnipro River, recreational potential of which is growing due to large branching, woodiness and natural beaches. Small rivers also have recreational potential. Besides, there are many interesting sights of nature, architecture, history and culture, which can contribute to tourism development in the region.

Image. Kyiv - one of the most attractive cities in Ukraine in terms of prestige of residence, living conditions, cultural diversity and political events. The city is a distinct historical and cultural centre of Central and Eastern Europe with its unique historic monuments, culture and architecture, included in the honorable list of historical cities of the United Nations - all this makes Kyiv attractive for living, doing business and tourist visits.

The strategic long-term objective of Kyiv City development determined by the Concept is the creation of high qualified environment of population vital activity based on the sustainable city development under new social-economical conditions and the provision of fulfillment by Kyiv the functions of the capital of Ukraine.

The steady development of Kyiv City is determined as balanced operation of the city, continuous economic growth and satisfaction of the needs of the population concurrently with the improvement of urban environmental conditions and efficient utilization of all resources, including the natural resources, technological upgrade and restructuring of enterprises, improvement of social, production, transportation, engineering municipal infrastructure, improvement of living, rest, and health conditions, preservation and enrichment of natural landscapes and cultural heritage.

Realization of these directions of sustainable development of the city will be provided by achievement of required living conditions according to the global standards.

To achieve the strategic objectives, there will be introduced a system of key performance indicators of the future Kyiv development.

Economic development:

- Ensure sustainable development of the city economy, as the basis for increasing living conditions of the population, the complex city development;
- Develop market infrastructure, required to form and ensure efficient operation of the market economy both in Kyiv and in Ukraine;
- Strengthen capital functions and develop infrastructure for international activity;
- Efficiently utilize workforce; increase workforce;
- Rational management of natural resources;
- Restructure industrial complex: increase the share of knowledge-intensive industries; withdraw operation of hazardous industries, morally and physically obsolete technologies and fixed assets;
- Reorganize industrial production areas, create conditions for development of innovative businesses - techno-parks.

Development of social sphere:

- Increase housing construction volume to achieve international standards of housing and upgrade existing housing through its reconstruction, repair and modernization;
- Improve social infrastructure: develop a network of institutions and agencies preschool institutions, education, health, cultural, physical education and recreation, through regulatory indicators of social standards and equal access to social services of all segments of the city's population.

Planning and development of the city – formation of satisfying living environment by:

- Improvement of functional-planning organization of the city buildings (compression, ongoing regeneration, reconstruction, taking into account the prospective needs and current requirements);
- Formation of high-quality architectural constructions of the districts of the new development areas;
- Increasing utilization intensity of urban areas in general, including underground space;
- Preservation and reproduction of historical, architectural and natural complex of Kyiv.

Formation of engineering and transportation infrastructure:

- Advanced development of engineering and transportation infrastructure and giving the dominating role to ecological resources while its formatting to ecological and resource factors;
- Improvement and development of the major city streets and roads' network to ensure adequate quality and quantity of transportation links, increase network capacity, especially the throughput between the two banks of the Dnipro River;
- Take transit freight traffic outside of the city;
- Focus of public transportation in provision of urban passenger transit, accelerated development of the subway as the main kind of high-speed passenger transit in the city;
- Improvement of the provision level of centralized water supply system and sewage;
- Elimination of the deficit of heating in some areas of the city;
- Implementation of the effective systems of health and treatment of high disposal, recycling and disposal of solid waste.

Environmental protection:

- Ensure ecologically safe operation of all the elements of urban environment and the efficient use of land, water, recreational and other natural resources, creation of conditions for its renewal.

3. THE MAIN DIRECTIONS OF SOCIO-ECONOMIC CITY DEVELOPMENT

3.1. Population, workforce and their utilization.

According to the approved “Kyiv City Development Concept” that contains scenario forecasts of the development of demographic processes in Kyiv, there has been determined future population quantity:

	2010	2020
Present	2640	2650
Constant	2610	2620

The Concept determines a set of actions that will facilitate improvement of demographic situation in Kyiv and formation of optimal structure of labor resources.

Should they be implemented, it is expected that negative population growth will be overcome during 2001-2020: the gradual reduction of negative natural growth mainly by increasing birth levels, as well as reducing mortality and increasing life expectancy.

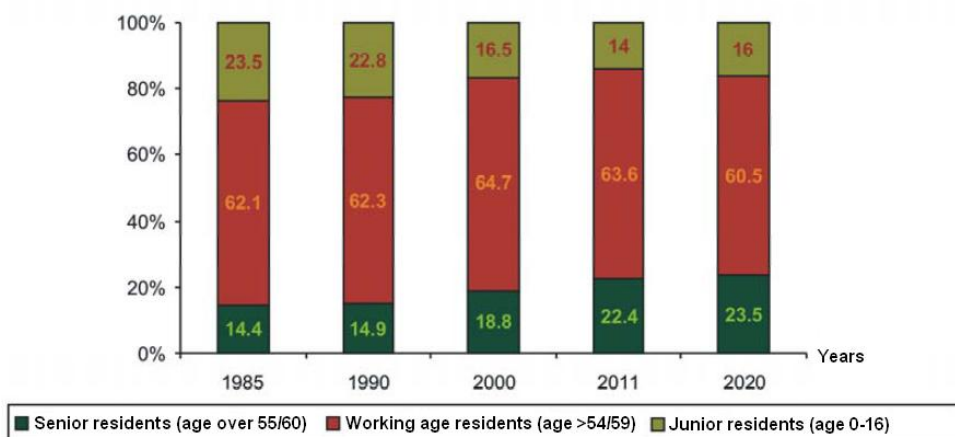
Future population growth is expected to be fueled by migration increase.

Expected age structure of the population is presented in Exhibit 3.1.

According to architectural-planning decision within the project of Kyiv there are included 28 suburban settlements with total population of 132,2 thousand, including urban settlements – 71,5 thousand, and rural – 60,7 thousand.

Boryspil – 7 thousand (villages Vyshenky, Gnidyn, Prolisky); Brovary – 4,1 thousand (villages Zazymje, Pogreby); Vyshgorod – 32,9 thousand (Vyshgorod, village Novi Petrivtsi, Osechyna), Kyiv-Svyatoshyn – 73,3 thousand (Vyshneve, Chabany, villages Gatne, Gorenka, Kryukivschyna, Lisnyky, Moschun, Novosilky, Petropavlivska Borschagivka, Sofijivska Borschagivka, Petrivske, Hodosiyivka, Hotiv); Obuhivskiy – 4,7 thousand (Kozyn, villages Novi Bezradychi, Pidgirtsi, Plyuty, Romankiv) and Kotsyubynske subordinated to Irpin municipality – 10,3 thousand.

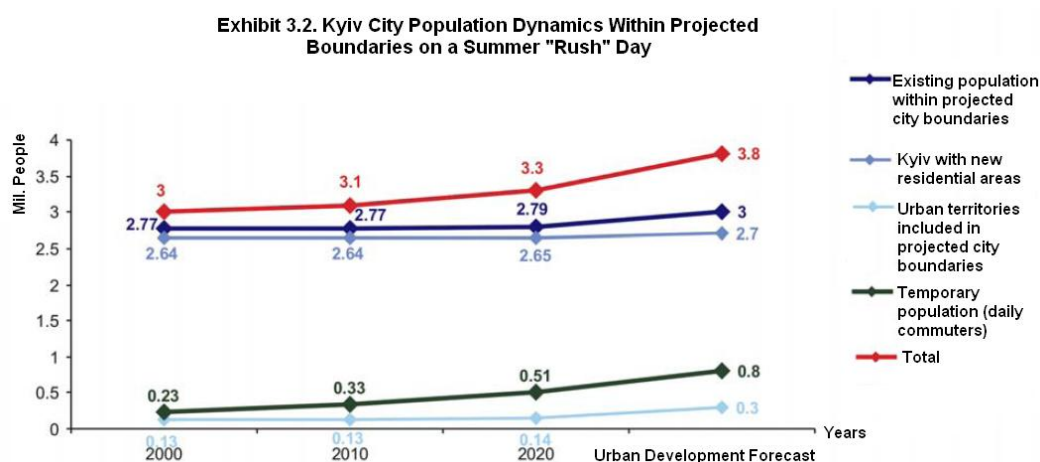
Exhibit 3.1. Structure of Kyiv City Population By Age Groups



Population quantity of urban settlements, included in the projected boundaries of Kyiv City over the planning period is determined given its dynamic over the previous years, availability, scope and priorities of economic sectors defined by the "Concept of National Economic Complex of Kyiv City and Its Suburbs", developed by the Council of Productive Forces of Ukraine of the National Academy of Sciences of Ukraine.

It has been determined that the population of these settlements as will increase by 3,5% (from 132,2 thousand in 2000 to 136,8 thousand in 2020).

Dynamics of population within projected Kyiv City boundaries is presented in Exhibit 3.2.



Number of residents during different phases of the planning period is listed by zones in Table 3.1.1.

Planning zones	At 01.01.2001	At 01.01.2011	At 01.01.2021
1	2	3	4
Planning zone 1			
<i>Kyiv village zones</i>	371,8	361,2	312,3
<i>Other urban settlements</i>	0	0	0
including:			
-rural locality	0	0	0
-urban settlements	0	0	0
Total within the project	371,8	361,2	312,3
Planning zone 2			
<i>Kyiv village zones</i>	394,4	352,6	406,2
<i>Other urban settlements</i>	19,7	19,7	19,4
including:			
-rural locality	16,3	16,3	15,9
-urban settlements	3,4	3,4	3,5
Total within the project	369,1	372,3	425,6
Planning zone 2a			

<i>Kyiv village zones</i>			
<i>Other urban settlements</i>			
including:			
-rural locality	2,3	2,2	2,0
-urban settlements (utv. Kozyn)	3,8	4,5	6,4
Total within the project			
Planning zone 3	6,1	6,7	116,5
<i>Kyiv village zones</i>			
<i>Other urban settlements</i>			
including:			
-rural locality			
-urban settlements	13,8	13,8	13,6
including:	42,3	43,3	45,0
Vyshneve			
utv. Kotsyubynske	32,0	33,0	35,0
Total within the project	10,3	10,3	10,0
Planning zone 4	554,5	522,6	472,2
<i>Kyiv village zones</i>			
<i>Other urban settlements</i>			
including:			
-rural locality			
-urban settlements	5,5	5,5	5,4
Total within the project	0	0	0
Planning zone 4a	462,9	468,2	419,5
<i>Kyiv village zones</i>			
<i>Other urban settlements</i>	0	0	75,7
including:	33,7	34,2	34,4
-rural locality			
-urban settlements (Vyshgorod)	11,7	11,7	11,4
	22,0		
1	2	3	4
Planning zone 5			
<i>Kyiv village zones</i>	674,2	637,0	550,0
<i>Other urban settlements</i>	4,1	4,1	3,9
including:			
-rural locality	4,1	4,1	3,9
-urban settlements	0	0	0
Total within the project	678,3	641,1	553,9
Planning zone 6			
<i>Kyiv village zones</i>	285,9	362,0	370,0

Other urban settlements	7,0	7,0	6,7
including:			
-rural locality	7,0	7,0	6,7
-urban settlements	0	0	0
Total within the project	292,9	369,0	376,7
TOTAL:			
Kyiv village zones	2637,1	2641,0	2650,0
Other urban settlements	132,2	134,3	136,8
including:			
-rural locality	60,7	60,6	58,9
-urban settlements	71,5	73,7	77,9
Total within the project	2769,3	2775,3	2786,8

Labor resources. The main factors that define the future city workforce are the following:

- Reduction of the people of working age as a result of the general trend of population aging;
- Reducing of pendulum migrants due to economic development of Kyiv region in general and the Kyiv suburbs in particular;
- involvement in a growing number of senior citizens (aged above working age) in economic activity.

Hence, the city workforce is estimated at 1,93 million in 2010 (compared to 1,9227 million in 2000), and at 1,9 million people in 2020.

Employment. It is expected that total employment across all spheres of economic activity will grow by 115,7 thousand (8,8%), including: in the sectors of economy - by 228,3 thousand (20,3%), while the number of employees is estimated to decline in other spheres of economic activity by 2,5 times: from 187,6 thousand in 2000 to 75 thousand in 2020.

Transformation of employment sphere is expected in the direction to eventually reflect the labor structure of a socially-oriented market economy.

Development of market-based economy and growth of its capacity will facilitate formation of distributed structure of the labor market, which will be more varied and will include new forms of workforce utilization, the emergence of alternative employment opportunities that will significantly reduce the unemployment rate to its minimum level. (Temporary unemployment is explained by the conscious choice not to work at the time, or by the fact that the candidate is looking for a job that better meets his/her expectations.)

In this regard, the following changes in employment structure will occur: the share of employees engaged in the following industries will grow: science and scientific services, financing and lending, all aspects of population services.

In general, the share of those employed in the areas that are critical for the city development will drop from 48,7% in 2000 to 47,6% in 2020; while the share of those employed in the services sector will grow from 51,3% to 52,4% (of total workforce). See Exhibits 3.3, 3.4.

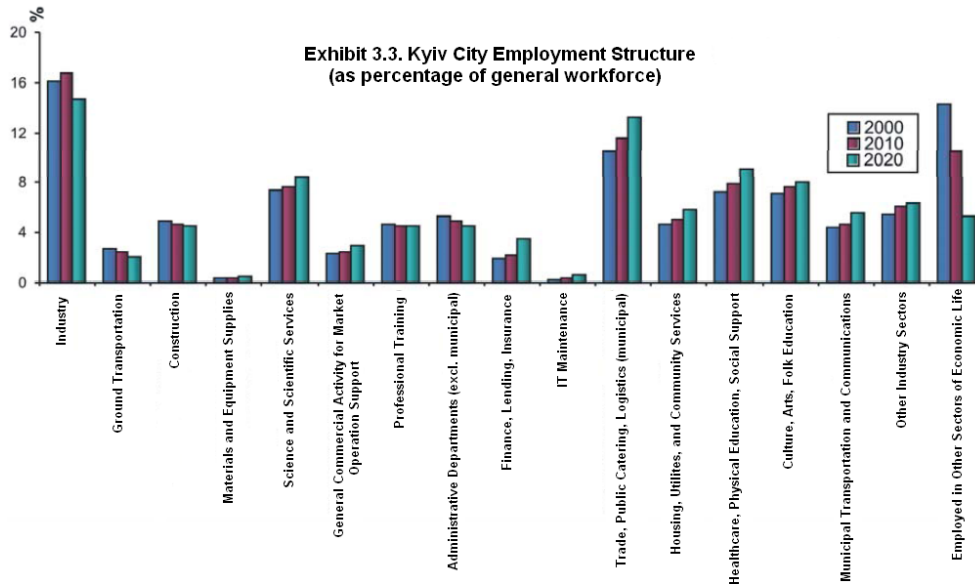
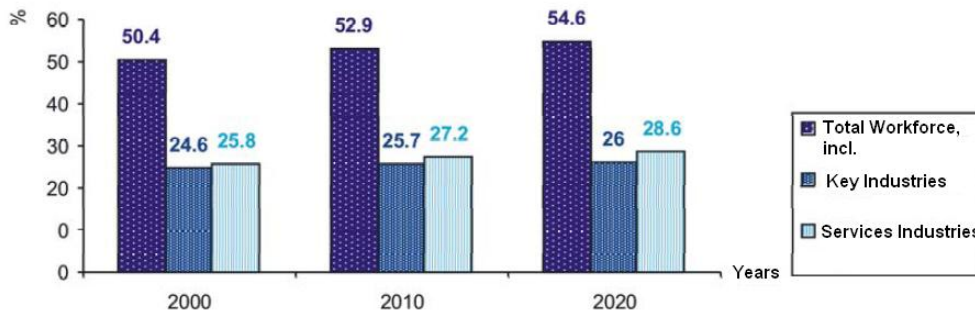


Exhibit 3.4. General Workforce Structure of Kyiv City Population (as percentage of total population)



In the settlements, included in projected Kyiv City boundaries there are currently employed in all spheres of economic activity 57,6 thousand people (70,9% of the total workforce), of which 30,8 thousand (53,5%) work within the boundaries of respective settlements, and 26,8 thousand (46,5%) – work outside of the boundaries of the respective settlements (mainly, in Kyiv).

It is expected to increase total workforce to 62,4 thousand (7,7%), including those employed within the settlements - to 34,0 thousand (10,7 %), outside the settlements - to 28,5 thousand (6,1%).

Based on the fact that in urban settlements now there is formed its own city-forming base, which has all the prerequisites for further development, expected increase in employment in this group of sectors with 14,1 thousand in 2000 to 15,1 thousand in 2020 (at 7%).

However, the presence of a strong labor market in Kyiv, within 1-1,5 hour availability, development of its structure, determines the advanced development, both urban and rural settlements, economy industries of social orientation, which meet the population needs directly by place of residence. Consequently, the number of employed in service industries will grow from 16,6 thousand in 2000 to 18,9 thousand in 2020, which represents growth of 13,8% over the last year.

3.2. Economy

The Concept of Kyiv City development makes provisions for the growth of the city's economy as the foundation for improving the residents' quality of life, development of the social infrastructure and municipal infrastructure.

Long-term economic growth will rely on modernization and structural reform of the industrial base, reduction of energy and resources consumption and the increase of competitiveness. An important

factor that would affect the transformation of the city economy is the growth of small and medium-sized businesses as the most flexible sector of economy.

GDP growth will be the main indicator of economic growth.

[Skipped 4 paragraphs with overview of historic GDP/economic growth.]

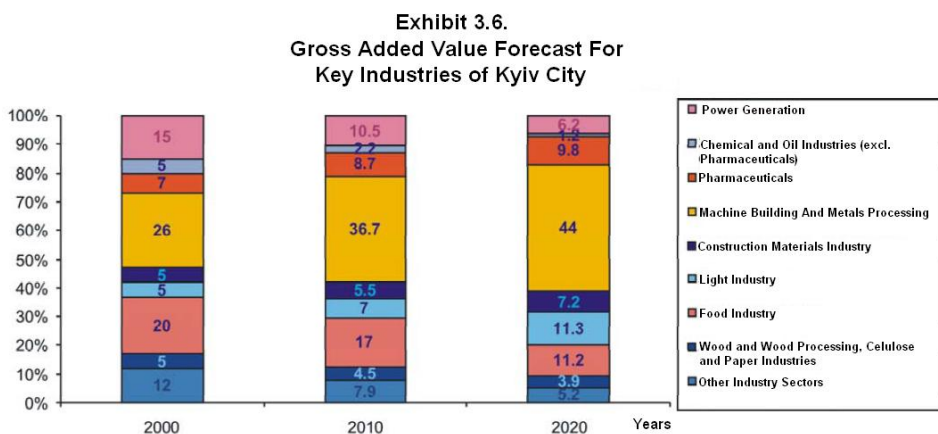
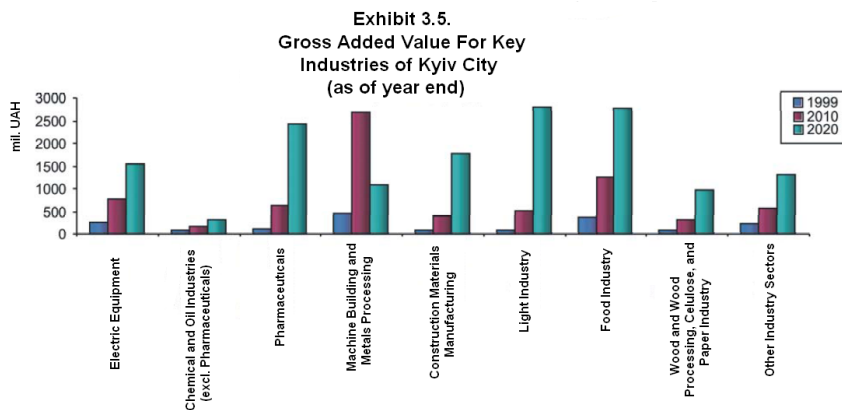
Industry focus will shift from industrial manufacturing to innovation-driven, resource-efficient production and will include:

- Increased specialization of the city enterprises on high-technology, ecologically safe production processes that would be based on the scientific potential of the city;
- Resumed manufacturing of military use products on industrial enterprises with concurrent conversion of a certain share of their manufacturing capacity to civil use;
- Creation of export-oriented industrial manufacturing by creating incentives for competitive producers;
- Organization of import-replacement products' production to reduce dependency of the city economy on foreign supplies.

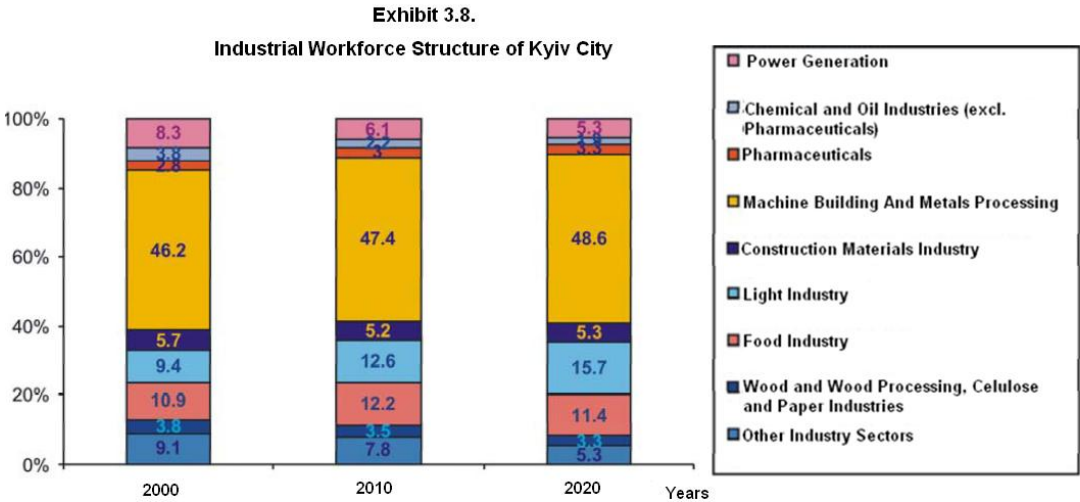
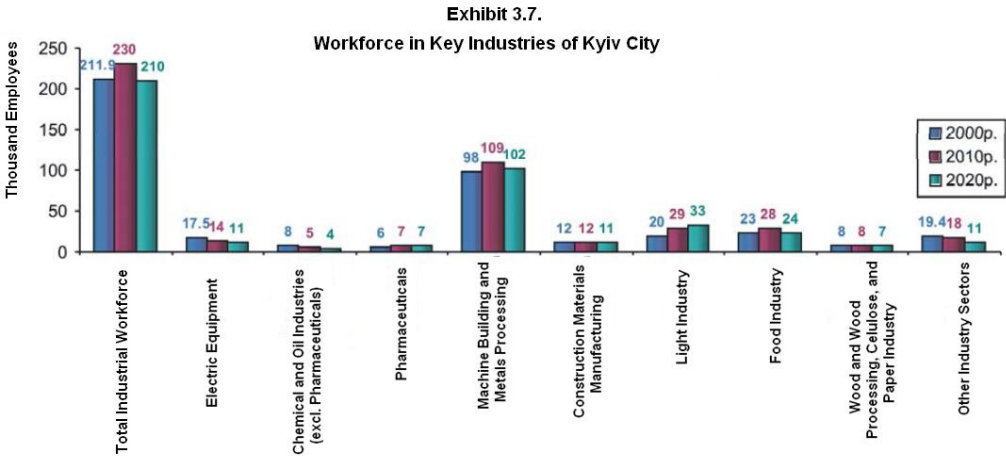
Social focus of industrial development will strengthen as well to include production of consumer goods, including household appliances, elements of cultural and home use.

Given implementation of the measures described above, it can be expected that industry will ensure socio-economic infrastructure quality improvement in Kyiv. It is expected that industrial growth will average 13,5-14,0% during the first phase of the planned period (2001-2010), while during the second phase (2011-2020) growth rate will slightly decline to 12-13% per year and will be driven mostly by service industries.

Industrial GDP growth forecast is presented in Exhibits 3.5 and 3.6.



Structural changes in industrial output will be reflected on employment numbers across the industry sectors. On average, industrial workforce will remain quite stable – estimated growth by 2020 will be 8-9%.



Scientific Potential. Further development of will be based on fundamental science and applied scientific and technical development that will ensure that the city and the country are globally competitive.

[Skipped 4 paragraphs about the importance of bridging science and industry.]

It is planned to develop new highly efficient forms of scientific and technical parks (technoparks), technopolises, and business incubators. It is planned to allocate 400 hectares of land for these organizations, including 120 hectares within city borders and 280 hectares in the suburban area.

Workforce training. Development of Kyiv City economy as well as economy of other regions of Ukraine requires increased demand for highly skilled employees. This will ensure further development of public and private higher educational institutions.

[Skipped 1 paragraph about the adaptation of college/university training programs to economy needs.]

Total number of students will grow 26%, including growth of 4% for full-time students and 4,3% for evening classes students. (See Table 3.2.4.) Total number of students of Level III-IV institutions of higher education will increase by 25%, primarily fueled by growth in the number of full-time students.

Table 3.2.4. CUMULATIVE GROWTH RATE FOR TERTIARY EDUCATIONAL INSTITUTIONS FOR THE PERIOD OF 2001-2020.

Indicator	2001	2010	2020
1	2	3	4
Number of Students (thousand), incl.:	282,8	315,0	358,0
- Full-time students	183,8	205,0	229,0
- Employed students	51,8	53,0	55,0
- Territory, hectares	755,3	1 000,0	1 341,0

[Skipped 1 paragraph about the increased importance of vocational training.]

Construction Industry. In the future, there will be significant changes in the structure of construction industry. As a result of these changes, production cycles will become shorter, and make it less energy and resource-intensive.

The main objectives of construction industry development in Kyiv are the following:

- Creation of high-technology production lines that would ensure continuous scientific and technical progress;
- Timely and complete implementation of long-term urban development programs...

[Skipped 1 paragraph about general development of construction materials industry.]

Capital construction efficiency growth will be achieved by such intensive factors as:

- Technical retooling and broad-scale implementation of new technologies and techniques;
- Increased use of efficient materials and constructions;
- Comprehensive automation of construction works.

These tasks will be executed by more efficient use of capital investments mainly targeting reconstruction and technical retooling of the industry enterprises, reduction of the share of construction works within capital investments, compressing construction cycles, and completion of unfinished buildings.

Given implementation of the above-mentioned measures, average annual growth of gross added value will be at 4-5%, while the workforce pool will stabilize at the current level of 65 thousand people.

Construction enterprises, warehouses, and vehicle stations (a total of over 400 sites) occupy a total area of over 800 hectares, of which about 155 hectares is reserve land, that would allow to concentrate the existing developed areas by as much as 20%.

Should there be the need for additional sites for construction industry enterprises within city boundaries, there is an opportunity to use the territories of the industrial and utilities zones during their restructuring that will affect 3 thousand hectares (45% of total area). Moreover, it is planned to allocate construction industry facilities within new industrial district of Kyiv.

The strategic goal of **transportation sector** development is to ensure timely, complete, and high-quality services to meet the needs of population and industrial sector for transportation services.

- Development of Kyiv railroad node is projected to include the expanded international transportation corridor needs of Ukraine. The volume of cargo turnover of the railroad will increase by 2,1 times, passenger turnover – by 1,8 times.
- The concept of development and operation of the National network of transportation corridors in Ukraine in the area of Kyiv district contains provisions for creation of five large transportation and warehousing centers to service cargo shipments by trucks, railroad, and river transportation, of which four are located in the suburban zone and one – in the projected future boundaries of Kyiv City (the area of Hodosijivka district).
- Development of the water transportation center in Kyiv should integrate the requirements for a modern river transportation node that will be part of the European international transportation corridors;
- International transportation corridor #7 (water) as well as #3 and #9 (ground) pass through Kyiv and will facilitate the increase of cargo throughput through Kyiv City. River transportation throughput will grow 3,8 times, passenger turnover – 5 times;
- Development of Kyiv air transportation center over the planning period is determined by the socio-political, economic, and cultural potential of Ukraine and the capital City of Kyiv. It is expected that both cargo and transportation throughput will increase significantly;
- Passenger turnover at Kyiv airports will increase by 5,6 times, cargo turnover – by almost 19 times;
- Construction of new bus stations is planned. The volume of passenger turnover will increase by 4,2 times;
- It is estimated that municipal transit will develop further to achieve passenger turnover growth of 1,4 times by the end of the planning period;
- Communication network of Kyiv City will develop in three functional spheres: as an integral part of the city residents' life; as a mechanism of state governance; as a component of international telecommunication networks development;
- In the long run, upgrade of all means of communications is planned: upgrade of the city telephone system functionality quality; reconstruction and upgrade of the intercity telephone and telegraph interconnection; radio broadcasting network; development of cable television;
- Implementation of the forecasted industry development elements of communications industry will strengthen its role as a backbone of post-industrial economic development;
- In general, across transportation and communications industries, there is forecasted growth of gross added value by 4,4 times; the number of employees in these industries will grow from 99,3 thousand in 2000 to 110,0 thousand in 2020. Employment at ground transportation enterprises will decline by 6,0 thousand from 36,3 thousand to 30,3 thousand; while growth of 17 thousand will be recorded in the electric transportation and auto transportation will increase by 17 thousand from 63 thousand to 80 thousand;

Finance and credit institutions. Efficiency of further activities of the finance and credit companies largely depend on the level of the entire socio-economic sphere not only in Kyiv, but all over Ukraine.

Ownership relations reform and economic restructuring facilitate formation of Ukrainian stock market and further development of the banking system.

Given the fact that Kyiv is the capital of Ukraine and has all the prerequisites for further development of these industries, it is planned to create a strong financial center in the city as an equal and integral part of the global financial system.

Given this trend, the number of employees in these institutions will grow: by 2010 – to 30 thousand; by 2020 – to 50 thousand. Their share of workforce will grow to 3,5% (compared to 1,9% in 2000). In the future, financial sector will be one of the fundamental industries for the city.

Administrative and economic management. Economy of Kyiv City – the capital of Ukraine – is distinctive for its management function. The total number of employees in the national public, corporate, and non-profit management bodies has grown 1,5 times over the past 10 years to 69,9 thousand that reflects the increased role of Kyiv as the capital of an independent state as well as changed in political and social spheres.

The structure of workforce distribution within this category has also changed. The share of employees in the public sector has grown from 47,4% in 1985 to 64% in 2000; the share of employees in the cooperatives and non-profit organizations has increased from 6,9% to 8,0%; the share of employees in the corporate sector has dropped significantly from 45,8% to 28,0%.

1999-2000 saw the beginning of administrative reform in Ukraine that will go on for an extended period of time.

Administrative reform has the goal of implementing a dynamic mechanism of institutional changes and functional restructuring of state power, including such spheres as optimization of existing structure and operation of the management bodies, separation of power, taking some of the regulatory functions and bodies away from the state power.

Given the fact that most of the new public institutions, political and social organizations, diplomatic establishments were located in the professional administrative facilities, additional territory required for their expansion in the future is estimated at 90-100 hectares.

To develop the **centers of business activity**, including small business, in the spheres of finance, innovation, scientific and research as well as other types of activity, there have been determined territories of 260 hectares within the city community centers and multifunction zones.

3.3. Residential housing, transformation of existing housing stock

According to the Concept of Kyiv City development until 2020, it is planned to build additional 26,0 million sq. m. of housing, including:

in 2001-2010 - 11,02 mil sq.m.;

in 2011-2020 - 14,98 mil sq.m.

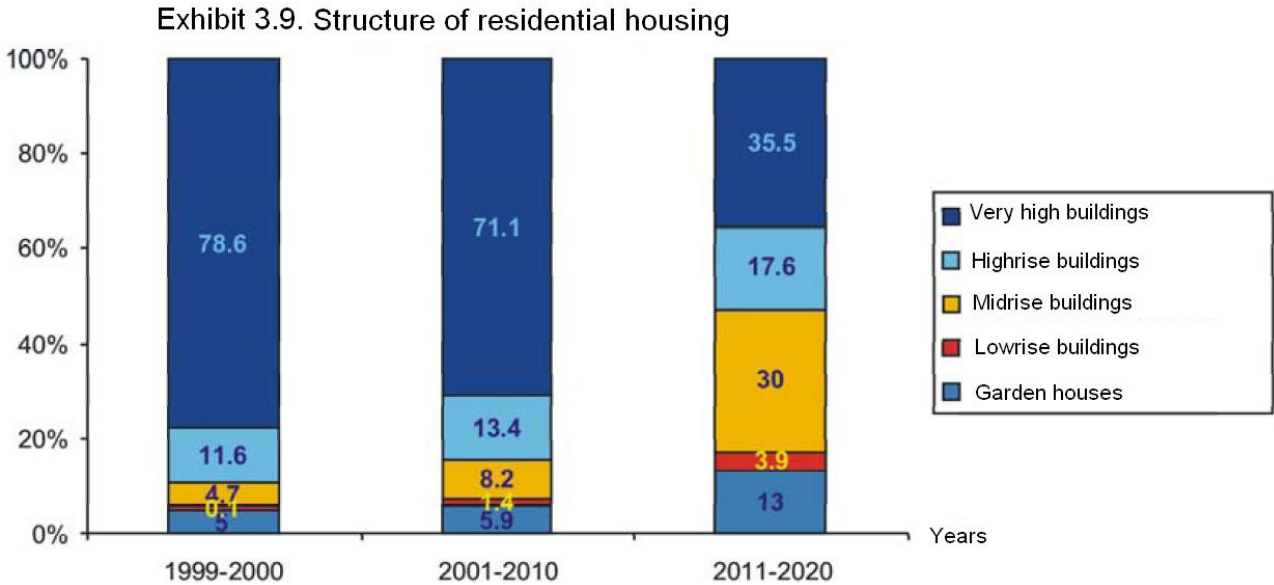
Following this schedule, housing stock will increase by 1,5 times by the end of the planning period to 70,74 mil. sq. m. (incl. normal reduction of stock by 4,12 mil. sq. m. for various reasons), including 57,86 mil. sq. m. by 2010.

Housing space per person will grow from 18,7 sq. m. to 22,2 sq. m. in 2010 to 27,0 sq. m. in 2020.

Structure of housing construction by height is determined based on the key trends set by the Concept, and includes architectural and planning organization of the city territory in general, and in separate residential districts specifically, as a share of total stock.

- | | |
|---|--------|
| - Gardening and single-family housing (1-3 stories) | - 10%; |
| - Low-rise multifamily and townhouses (1-3 stories) | - 3%; |
| - Mid-rise (4-8 stories) | - 21%; |
| - High-rise (9 stories and up) | - 66%. |

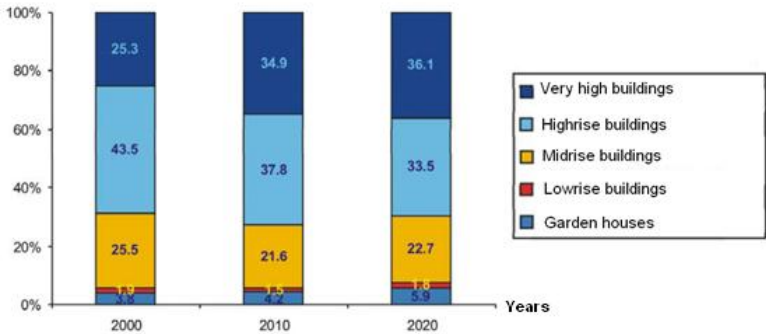
The structure of residential construction on various phases of the planning period is presented in Exhibit 3.9.



New construction will bring 278,8 new apartments on line, of which 261,9 thousand in multi-family houses, 16,9 thousand – single-family houses. Average size of an apartment during the planning period will increase to 140-160 sq. m. in single-family residences, and to 80-96 sq.m. in multi-family residences (compared to the average of 75 sq.m. over the recent years).

The structure of residential construction in residential districts of Kyiv over the planning period is presented in Exhibit 3.10.

Exhibit 3.10. Kyiv housing stock structure



Estimated volume of new housing construction in other urban areas that are included in projected boundaries of Kyiv City is 1,23 mil. sq. m. of gross area (incl. 0,44 mil. sq. m. by 2010). Consequently, housing stock of these urban areas will grow from 22,1 to 30,3 sq. m. per person by 2020, incl. growth from 27 to 36 sq. m. in rural areas, and from 18 to 26 sq.m. in urban areas.

Housing stock within projected Kyiv City boundaries will reach 75,0 mil. sq. m. of gross area. Total number of apartments and single-family houses will reach 1 185 thousand.

Housing construction planning will be done according to the city territory development decisions specified by the Concept.

Estimated construction (totaling 26,0 mil. sq. m. of gross area) will be located on the territory of 6 existing planning zones of the city, including 2 new housing areas: Gatnivskiyi and Chajka, as well as two new ones: 2a (residential district Hodosiyivskiyi), and 4a (residential district Vyshgorodskiyi) – table 3.3.1.

#	Name of residential blocks, micro-districts, and residential districts	Planned for development in 2001-2020			including					
		Total	Garden	Other	In 2001-2010			In 2011-2020		
					Total	Garden	Other	Total	Garden	Other
1	2-20 Staronavodnytska St. (Phase 2)	109,0	0,0	109,0	109,0	0,0	109,0	0,0	0,0	0,0
2	32-36 Schorsa St.	194,9	0,0	194,9	84,9	0,0	84,9	110,0	0,0	110,0
3	Kikvidze – Pidvysotskogo St.	157,9	0,0	157,9	157,9	0,0	157,9	0,0	0,0	0,0
4	Zolotoustivska - Chornovola, total	171,7	0,0	171,7	159,4	0,0	159,4	12,3	0,0	12,3
	Incl. Quarter 1	19,6	0,0	19,6	19,6	0,0	19,6	0,0	0,0	0,0
	Quarter 1a	55,3	0,0	55,3	55,3	0,0	55,3	0,0	0,0	0,0
	Quarter 2	33,1	0,0	33,1	33,1	0,0	33,1	0,0	0,0	0,0
	Quarter 3	12,3	0,0	12,3	0,0	0,0	0,0	12,3	0,0	12,3
	Quarter 5	13,8	0,0	13,8	13,8	0,0	13,8	0,0	0,0	0,0
	Quarter 4	34,4	0,0	34,4	34,4	0,0	34,4	0,0	0,0	0,0
	Incl. Quarter 6	3,2	0,0	3,2	3,2	0,0	3,2	0,0	0,0	0,0
5	Gonchary - Kozhumiaky	74,7	13,8	60,9	74,7	13,8	60,9	0,0	0,0	0,0
6	Petrivska St. area	36,9	0,0	36,9	16,9	0,0	16,9	20,0	0,0	20,0
7	Panfilovtsiv St. (concentration)	8,9	8,9	0,0	6,0	6,0	0,0	2,9	2,9	0,0
8	Michurina St. (reconstruction and concentration)	9,9	9,9	0,0	6,6	6,6	0,0	3,3	3,3	0,0
9	Zvirynetska St. (reconstruction and concentration)	15,1	15,1	0,0	7,7	7,7	0,0	7,4	7,4	0,0
10	Chorna Gora (reconstruction and concentration)	12,5	2,5	10,0	11,0	1,0	10,0	1,5	1,5	0,0
	Individual land plots	1000,0	0,0	1000,0	766,4	0,0	766,4	233,6	0,0	233,6
	Add-ons during reconstruction	668,8	0,0	668,8	165,2	0,0	165,2	503,6	0,0	503,6
	Total for Planning Zone 1	2460,3	50,2	2410,1	1565,7	35,1	1530,6	894,6	15,1	879,5
	Planning zone 2									
11	Saperno-Slobidska St., 1 st district	147,1	0,0	147,1	147,1	0,0	147,1	0,0	0,0	0,0
12	Nauky Ave., 3 rd district	50,0	0,0	50,0	0,0	0,0	0,0	50,0	0,0	50,0
13	Motorny Lane	54,2	0,0	54,2	44,5	0,0	44,5	9,7	0,0	9,7
14	Lomonosova, total	477,0	13,6	463,4	369,0	13,6	355,4	108,0	0,0	108,0
	Incl. 1 st district	127,5	0,0	127,5	127,5	0,0	127,5	0,0	0,0	0,0
	1 st -a district	45,0	0,0	45,0	45,0	0,0	45,0	0,0	0,0	0,0
	3 rd district	160,0	0,0	160,0	160,0	0,0	160,0	0,0	0,0	0,0
	4-5 th district	18,1	13,6	4,5	18,1	13,6	4,5	0,0	0,0	0,0
	8 th district	126,4	0,0	126,4	18,4	0,0	18,4	108,0	0,0	108,0
15	Kibtsentr, 2 nd district	95,5	0,0	95,5	95,5	0,0	95,5	0,0	0,0	0,0
16	Teremky-III	600,0	0,0	600,0	200,0	0,0	200,0	400,0	0,0	400,0
17	Metrologichna	80,0	20,0	60,0	40,0	10,0	30,0	40,0	10,0	30,0
18	Narodnogo Opolchennya, total	162,3	0,0	162,3	113,3	0,0	113,3	49,0	0,0	49,0
	Incl. Phase 2	66,6	0,0	66,6	66,6	0,0	66,6	0,0	0,0	0,0
	Phase 3	46,7	0,0	46,7	46,7	0,0	46,7	0,0	0,0	0,0
	Phase 4	49,0	0,0	49,0	0,0	0,0	0,0	49,0	0,0	49,0
19	Batyeva Gora (reconstruction and concentration)	42,1	12,1	30,0	34,5	4,5	30,0	7,6	7,6	0,0
20	Oleksandrivska Slobidka (reconstruction and concentration)	31,2	21,2	10,0	10,4	10,4	0,0	20,8	10,8	10,0
	Incl. 1 (South)	20,6	10,6	10,0	5,2	5,2	0,0	15,4	5,4	10,0
	2 (North)	10,6	10,6	0,0	5,2	5,2	0,0	5,4	5,4	0,0
21	Sovky (concentration)	15,3	15,3	0,0	7,2	7,2	0,0	8,1	8,1	0,0
22	Zhulyany village (concentration)	94,2	94,2	0,0	38,0	38,0	0,0	56,2	56,2	0,0
23	Shyrma (reconstruction and concentration)	33,8	23,8	10,0	20,0	10,0	10,0	13,8	13,8	0,0

#	Name of residential blocks, micro-districts, and residential districts	Planned for development in 2001-2020			including					
					In 2001-2010			In 2011-2020		
		Total	Garden	Other	Total	Garden	Other	Total	Garden	Other
24	Demiyivka (reconstruction and concentration)	18,0	18,0	0,0	8,2	8,2	0,0	9,8	9,8	0,0
25	Mysholovka (reconstruction and concentration)	28,0	18,0	10,0	18,2	8,2	10,0	9,8	9,8	0,0
26	Korchuvate (reconstruction and concentration)	6,4	6,4	0,0	4,1	4,1	0,0	2,3	2,3	0,0
27	Pyrogiv village (reconstruction and concentration)	23,3	23,3	0,0	10,5	10,5	0,0	12,8	12,8	0,0
28	Chapaevka village (reconstruction and concentration)	101,6	101,6	0,0	44,2	44,2	0,0	57,4	57,4	0,0
29	Gatnivskiyi	2300,0	0,0	2300,0	0,0	0,0	0,0	2300,0	0,0	2300,0
30	Michurynets GC (modernization)	18,0	18,0	0,0	18,0	18,0	0,0	0,0	0,0	0,0
31	Avtomobilist GC (modernization)	1,5	1,5	0,0	1,5	1,5	0,0	0,0	0,0	0,0
32	Gayeve St. GC (modernization)	1,5	1,5	0,0	1,5	1,5	0,0	0,0	0,0	0,0
	Individual land plots	547,7	0,0	547,7	426,3	0,0	426,3	121,4	0,0	121,4
	Add-ons during reconstruction	341,2	0,0	341,2	35,7	0,0	35,7	305,5	0,0	305,5
	Total for Planning Zone 1	5269,9	388,5	4881,4	1687,7	189,9	1497,8	3582,2	198,6	3383,6
	Planning zone 2a									
33	Hodosiyivskiyi	3060,0	600,0	2460,0	0,0	0,0	0,0	3060,0	600,0	2460,0
	Total for Planning Zone 2a	3060,0	600,0	2460,0	0,0	0,0	0,0	3060,0	600,0	2460,0
	Planning Zone 3									
34	Lebedeva-Kumacha block	116,6	0,0	116,6	116,6	0,0	116,6	0,0	0,0	0,0
35	34-42 Lipse Ave.	32,3	0,0	32,3	32,3	0,0	32,3	0,0	0,0	0,0
36	Vidradnenskyi Ave.	50,2	0,0	50,2	0,0	0,0	0,0	50,2	0,0	50,2
37	Karavayevi Dachi (concentration)	15,4	15,4	0,0	7,0	7,0	0,0	8,4	8,4	0,0
38	Svyatoshyn, total	163,9	3,4	160,5	162,1	1,6	160,5	1,8	1,8	0,0
	Incl. 1 district	74,0	0,0	74,0	74,0	0,0	74,0	0,0	0,0	0,0
	2 district	78,5	0,0	78,5	78,5	0,0	78,5	0,0	0,0	0,0
	3 district (reconstruction and concentration)	11,4	3,4	8,0	9,6	1,6	8,0	1,8	1,8	0,0
39	Bilychi, total	134,1	8,3	125,8	129,8	4,0	125,8	4,3	4,3	0,0
	Incl. 8 district	14,7	0,0	14,7	14,7	0,0	14,7	0,0	0,0	0,0
	13 district	27,1	0,0	27,1	27,1	0,0	27,1	0,0	0,0	0,0
	13a district (reconstruction and concentration)	29,1	2,1	27,0	28,1	1,1	27,0	1,0	1,0	0,0
	16 district (reconstruction and concentration)	21,6	1,5	20,1	20,8	0,7	20,1	0,8	0,8	0,0
	17 district (reconstruction and concentration)	41,6	4,7	36,9	39,1	2,2	36,9	2,5	2,5	0,0
40	Novobilychi (reconstruction and concentration)	54,0	11,9	42,1	48,0	5,9	42,1	6,0	6,0	0,0
41	Vidpochynku St. (military base)	66,3	0,0	66,3	0,0	0,0	0,0	66,3	0,0	66,3
42	Pivdena Borschagivka (reconstruction and concentration)	60,9	10,9	50,0	35,6	5,0	30,6	25,3	5,9	19,4
43	Tankova St. – Ryzka St. district	111,4	3,6	107,8	0,0	0,0	0,0	111,4	3,6	107,8
44	Ryzka St. (reconstruction and concentration)	11,3	1,3	10,0	0,5	0,5	0,0	10,8	0,8	10,0
45	Nyvky (reconstruction and concentration)	18,4	18,4	0,0	8,3	8,3	0,0	10,1	10,1	0,0
46	Katerynivka village (reconstruction and concentration)	7,2	7,2	0,0	4,0	4,0	0,0	3,2	3,2	0,0
47	Zhovtneve village (concentration)	4,4	4,4	0,0	2,6	2,6	0,0	1,8	1,8	0,0

#	Name of residential blocks, micro-districts, and residential districts	Planned for development in 2001-2020			including					
		Total	Garden	Other	In 2001-2010			In 2011-2020		
					Total	Garden	Other	Total	Garden	Other
67	Vyshgorodskyyi	2120,0	180,0	1940,0	0,0	0,0	0,0	2120,0	180,0	1940,0
	Total for Planning Zone 4a	2120,0	180,0	1940,0	0,0	0,0	0,0	2120,0	180,0	1940,0
	Planning Zone 5									
68	Vygurivschyna - Troyeschyna, total	779,9	0,0	779,9	779,9	0,0	779,9	0,0	0,0	0,0
	Incl. 2 district	101,6	0,0	101,6	101,6	0,0	101,6	0,0	0,0	0,0
	11 district	19,5	0,0	19,5	19,5	0,0	19,5	0,0	0,0	0,0
	13 district	26,2	0,0	26,2	26,2	0,0	26,2	0,0	0,0	0,0
	20 district	188,0	0,0	188,0	188,0	0,0	188,0	0,0	0,0	0,0
	21 district	67,6	0,0	67,6	67,6	0,0	67,6	0,0	0,0	0,0
	22 district	18,2	0,0	18,2	18,2	0,0	18,2	0,0	0,0	0,0
	24 district	255,4	0,0	255,4	255,4	0,0	255,4	0,0	0,0	0,0
	26 district	43,4	0,0	43,4	43,4	0,0	43,4	0,0	0,0	0,0
	26a district	60,0	0,0	60,0	60,0	0,0	60,0	0,0	0,0	0,0
69	Troyeschyna village (concentration)	14,6	14,6	0,0	6,0	6,0	0,0	8,6	8,6	0,0
70	Left Bank - Center	78,7	0,0	78,7	78,7	0,0	78,7	0,0	0,0	0,0
71	Left Bank, total	400,0	0,0	400,0	0,0	0,0	0,0	400,0	0,0	400,0
	Incl. 9 district	150,0	0,0	150,0	0,0	0,0	0,0	150,0	0,0	150,0
	9a district	250,0	0,0	250,0	0,0	0,0	0,0	250,0	0,0	250,0
72	Stara Darnytsya, total	130,5	2,2	128,3	82,2	0,9	81,3	48,3	1,3	47,0
	Incl. 1 st district (reconstruction and concentration)	104,1	0,8	103,3	66,7	0,4	66,3	37,4	0,4	37,0
	2 nd district (reconstruction and concentration)	26,4	1,4	25,0	15,5	0,5	15,0	10,9	0,9	10,0
73	DVRZ district (reconstruction and concentration)	104,0	8,6	95,4	98,4	3,0	95,4	5,6	5,6	0,0
74	21 Verhovnoyi Rady Ave.	46,2	0,0	46,2	46,2	0,0	46,2	0,0	0,0	0,0
75	Bykivnya (reconstruction and concentration)	8,9	8,9	0,0	3,7	3,7	0,0	5,2	5,2	0,0
76	Rusanivski GC (reconstruction)	300,0	0,0	300,0	0,0	0,0	0,0	300,0	0,0	300,0
77	Voskresenski GC (reconstruction)	160,0	0,0	160,0	160,0	0,0	160,0	0,0	0,0	0,0
	Individual land plots	271,0	0,0	271,0	212,6	0,0	212,6	58,4	0,0	58,4
	Add-ons during reconstruction	251,0	0,0	251,0	57,7	0,0	57,7	193,3	0,0	193,3
	Total for Planning Zone 5	2544,8	34,3	2510,5	1525,4	13,6	1511,8	1019,4	20,7	998,7
	Planning Zone 6									
78	Nova Darnytsya, total	321,2	0,0	321,2	201,2	0,0	201,2	120,0	0,0	120,0
	Incl. 1 st district	75,7	0,0	75,7	75,7	0,0	75,7	0,0	0,0	0,0
	3 rd district	68,7	0,0	68,7	68,7	0,0	68,7	0,0	0,0	0,0
	5 th district	156,8	0,0	156,8	56,8	0,0	56,8	100,0	0,0	100,0
	10 th district	20,0	0,0	20,0	0,0	0,0	0,0	20,0	0,0	20,0
79	Kharkivskyyi, 4 th district (reconstruction and concentration)	11,4	11,4	0,0	7,8	7,8	0,0	3,6	3,6	0,0
80	Poznyaky – West, total	976,8	0,0	976,8	776,8	0,0	776,8	200,0	0,0	200,0
	Incl. 2 nd district	254,4	0,0	254,4	154,4	0,0	154,4	100,0	0,0	100,0
	3 rd district	165,9	0,0	165,9	65,9	0,0	65,9	100,0	0,0	100,0
	8 th district	286,0	0,0	286,0	286,0	0,0	286,0	0,0	0,0	0,0
	9 th district	115,0	0,0	115,0	115,0	0,0	115,0	0,0	0,0	0,0

#	Name of residential blocks, micro-districts, and residential districts	Planned for development in 2001-2020			including					
		Total	Garden	Other	In 2001-2010			In 2011-2020		
					Total	Garden	Other	Total	Garden	Other
	10 th district	105,1	0,0	105,1	105,1	0,0	105,1	0,0	0,0	0,0
	10a, b district	50,4	0,0	50,4	50,4	0,0	50,4	0,0	0,0	0,0
81	Poznyaky-East, total	536,3	0,0	536,3	536,3	0,0	536,3	0,0	0,0	0,0
	Incl. 4 th district	200,4	0,0	200,4	200,4	0,0	200,4	0,0	0,0	0,0
	5-5a district	138,3	0,0	138,3	138,3	0,0	138,3	0,0	0,0	0,0
	6a district	82,2	0,0	82,2	82,2	0,0	82,2	0,0	0,0	0,0
	7 th district	115,4	0,0	115,4	115,4	0,0	115,4	0,0	0,0	0,0
82	Osokorky-North, total	1110,1	0,0	1110,1	1110,1	0,0	1110,1	0,0	0,0	0,0
	Incl. 5 th -8 th district	405,0	0,0	405,0	405,0	0,0	405,0	0,0	0,0	0,0
	6 th district	261,9	0,0	261,9	261,9	0,0	261,9	0,0	0,0	0,0
	7 th district	27,0	0,0	27,0	27,0	0,0	27,0	0,0	0,0	0,0
	9a district	27,0	0,0	27,0	27,0	0,0	27,0	0,0	0,0	0,0
	11 th district	109,2	0,0	109,2	109,2	0,0	109,2	0,0	0,0	0,0
	12 th district	280,0	0,0	280,0	280,0	0,0	280,0	0,0	0,0	0,0
83	Osokorky-Center	1215,0	208,0	1007,0	240,0	70,0	170,0	975,0	138,0	837,0
84	Osokorky-South	400,0	0,0	400,0	0,0	0,0	0,0	400,0	0,0	400,0
85	Bortnychi-Upper Side (reconstruction and concentration)	101,8	29,7	72,1	46,7	13,6	33,1	55,1	16,1	39,0
86	Bortnychi – Lower Side (reconstruction and concentration)	64,6	46,9	17,7	4,0	4,0	0,0	60,6	42,9	17,7
	Individual land plots	81,0	0,0	81,0	72,3	0,0	72,3	8,7	0,0	8,7
	Add-ons during reconstruction	15,0	0,0	15,0	1,5	0,0	1,5	13,5	0,0	13,5
	Total for Planning Zone 6	4833,2	296,0	4537,2	2996,7	95,4	2901,3	1836,5	200,6	1635,9
	TOTAL for Master Plan	26000,0	2600,0	23400,0	11020,0	655,0	10365,0	14980,0	1945,0	13035,0
	%%	100%	10%	90%	100%	6%	94%	100%	13%	87%
	Incl. Residential districts	20438,0	2109,7	18328,3	8136,6	446,7	7689,9	12301,4	1663,0	10638,4
	Gardening communities	1275,3	490,3	785,0	593,3	208,3	385,0	682,0	282,0	400,0
	Individual land plots	2486,7	0,0	2486,7	1921,3	0,0	1921,3	565,4	0,0	565,4
	Add-ons during reconstruction	1800,0	0,0	1800,0	368,8	0,0	368,8	1431,2	0,0	1431,2
	Incl. 5-storey buildings of industrial house-building	770,0	0,0	770,0	152,0	0,0	152,0	618,0	0,0	618,0
	Other buildings, including add-ons of attic floors	1030,0	0,0	1030,0	216,8	0,0	216,8	813,2	0,0	813,2

3.4. Development of social infrastructure

[Skipped 3 paragraphs with general statements about the need for improvement social conditions and social infrastructure.]

Development of city infrastructure should focus on creation of city-wide centers along with favorable conditions for construction of industrial and market infrastructure.

Development of municipal network that ensures comprehensive development of micro-districts and residential districts should align with concurrent development of the service providers based on existing sufficiency standards.

The capacity of most institutions and service companies is insufficient to ensure adequate level of services to the city's residents.

Additional requirements for social services facilities over the two phases (2010 and 2020) is as follows:

- Local network – for permanent residents of residential districts of Kyiv City (2 620 thousand residents);
- City network – for permanent residents of residential districts of Kyiv City within the projected boundaries (2 756,4 thousand).

The requirements for kindergartens and schools are defined by DBN 360-92* and are based on the number of children in each age group.

The projections take into consideration gradual increase of newborn in the city, accounts for growth of the number of children of various age groups resulting from migration. The coverage of schools is satisfactory – 100% of children of 1-10th grades are covered, as well as 85% of children of 11-12th grades. Pre-school establishments will cover 68% of children in 2010; 75% of children in 2020 (compared to 63% in 2000). See Table 3.4.1.

It should be noted that norms are being reviewed every 5-7 years to account for ongoing demographic processes and the adjusted demographic forecast.

Table 3.4.1. NORMS OF EDUCATION INSTITUTIONS SUFFICIENCY FOR KYIV CITY POPULATION

		(spots per 100 residents)	
#	Educational institution	2010	2020
1.	Full-time pre-school establishments		
	Average norm for entire city	27	36
	Including:		
	- new districts	34	45
	- developed districts	25	33
2.	Schools (primary, secondary, high)		
	Average norm for entire city	108	126
	Including:		
	- new districts	135	158
	- developed districts	98	115

It is estimated that all segments of services will require additional capacity to meet existing norms.

Educational institutions. Additional requirement for pre-school establishments is 31,5 thousand spots, and for schools – 110,6 thousand spots; and is primarily apparent in mid-high-rise residential districts.

Over the planning period, about 14 thousand spots at kindergartens (18,2% of existing capacity) will be eliminated in the developed districts, along with 80,7 thousand spots at secondary schools (27% of existing capacity) due to decreasing numbers of children, smaller classes, and introduction of new functions for the educational facilities: extracurricular further studies, sports and cultural entertainment functions.

Educational facilities that will be vacated will be used for extracurricular children development and social services organizations.

Additional demand for **retail space** will be 444,4 thousand sq. m., including 149 thousand sq. m. of local retail facilities and 295,3 thousand sq. m. of city-wide retail facilities. The facilities will be distributed across the city taking into consideration population density in respective districts.

Additional demand for **public catering** will be 64 thousand spots given the low level of public catering facilities availability. Of those, 8,4 thousand spots will be targeting local communities and 55,6 thousand spots targeting general population of the city.

Over the planning period, construction of the new public catering facilities is planned with the focus on city-wide centers and entertainment zones.

Additional demand for **market space** is 54,2 thousand sq. m. About 30 thousand sq. m. of existing markets will be shut down for non-compliance with existing standards and urban development norms. During the initial phase, there will be built pavilions from light frames, that will later be replaced by multifunction trade centers and sites for seasonal trade and fairs.

Additional demand for **community services organizations** is 16,7 thousand jobs, including 2,9 thousand jobs at local community level and 13,8 thousand jobs at city-wide level. It is planned to ensure fast development of this sector that has suffered decline during the 1990-s, and is currently beginning to recover. There will be encouraged development of both large community services organizations that provide multiple services as well as small local service providers.

Additional demand for communal services is very high and exceeds existing capacity by 32 times for self-service Laundromats, 20 times for laundry factories, 11 times for self-service dry-cleaners, and almost 8 times for dry-cleaner factories.

The network of public bathhouses has decreased 3,5 times over the past decade since they were not considered profitable given existing market conditions. Development of these services over the next 20 years will ensure 50% capacity sufficiency.

Additional demand for **healthcare institutions** constitutes 21,1 thousand beds for hospitals; 17,3 thousand visits per shift for clinics, 39,3 thousand sq. m. for drug stores, 122 ambulance cars. Over 2001-2020, capacity of existing hospitals will be reduced due to their decentralization, growth of private paid services and increase in clinic space per person, as well as closing of facilities that may no longer be used for healthcare purposes: 3,12 thousand beds (15,4% of existing stock) for hospitals; 4,0 thousand visits per shift (6,7% of total) for clinics; 3,4 thousand sq. m. (5,3% of total) for drug stores.

Additional demand for cultural and arts organizations is as follows: theatres – 8,0 thousand seats; concert halls – 4,5 thousand seats; multifunction sports and entertainment halls – 6,5 thousand seats; circuses – 7,6 thousand seats; movie theatres – 12,9 thousand seats; public libraries – 6,5 million units of stock; clubs – 59,8 thousand visitors per night; local cultural and amateur entertainment and development organizations – 118,5 thousand sq. m.

With regard to the movie theatres, clubs, and recreation centers, their network is currently shrinking as the demand for their services is declining. During the first phase (2001-2010), there are provisions for construction of clubs for 350 seats. There are no provisions for construction of movie theatres during the first phase.

Given high demand for circus facilities (3,8 times existing capacity), low volume of planned construction during the first phase (1000 seats), and high capital requirements, it is considered unrealistic to meet standard sufficiency requirements for these facilities.

Since cultural and amateur entertainment and development organizations is a relatively new phenomena that emerged in Kyiv at the end of 1980-s (DBN 360-92 – issued in 1992), they were built only over the past 12-14 years, the level of sufficiency of the city with these institutions is very low (28% and 5% respectively). Unmet demand for these institutions is too high to be met over the planning period. In the future, development of these facilities is planned starting from the new residential districts and in existing high-rise residential districts. Within developed areas, it is feasible to turn existing buildings into cultural and amateur entertainment and development facilities.

Unmet demand for **sports facilities** is as follows: public used gyms and halls – 160,6 thousand sq. m., covered and open-air pools – 104,9 thousand sq. m. of water surface. Given increasing demand for the services of these organizations, it is expected that their supply will be ensured by private investments and sponsor support.

Additional demand for **social services organizations** is 8,3 thousand spots. Focus of Kyiv City authorities on social protection sets goals to fully meet social facilities needs of the various categories of residents that need support. With that in mind, the following construction is planned:

- Nursing homes for the elderly, war and labor veterans (age above 60) – 2,2 thousand spots;
- Nursing homes for adults with physical disabilities (age over 18) – 2,17 thousand spots;
- Psycho-neurological asylum – 1,64 thousand spots;
- Asylum homes for intellectually dull children – 1,36 thousand spots. In addition, 0,9 thousand spots will be made available at vacated pre-school facilities.

Additional need for **credit / financial institutions and telecommunication companies** is 35,5 thousand sq. m. and 75,7 thousand sq. m. respectively. Existing norms determine the requirements for the branches of Oschadnyi Bank (State Savings Bank) that forms the core of the banking system. Currently, the availability of these branches stands at 80% of the volume stipulated by the norms. Since these institutions provide services used on a daily basis, in the future they will be allocated in residential districts. It is expected that branch network development of state and private banks will fully meet the existing norms.

The same principle will be used for development of telecommunication services companies.

Additional need for **housing utilities companies** is as follows: fire stations – 49 fire engines; housing utilities organizations – 36 objects; hotels – 49 thousand beds; public toilets – 1,58 thousand stalls.

Construction volume over the planning period is estimated to meet public demand.

4. TERRITORY DEVELOPMENT

Demand for territories to locate all the planned construction objects over the planning period is 30,1 thousand hectares, including:

- Residential housing (including public catering, public landscaping, roads and streets network) - 9,3 thousand hectares;
- Industrial and utilities construction - 2,0 thousand hectares;
- Open-air markets and civic construction - 1,6 thousand hectares;
- Recreation territories - 13,5 thousand hectares;
- Transportation and roads and streets network - 3,0 thousand hectares;
- Engineering preparation of territories - 0,7 thousand hectares.

Requirement for recreational areas is 4,25 thousand hectares, and mass public rest areas - 73,8 thousand hectares.

As of 01.01.2001, territory of Kyiv City is 83,6 thousand hectares, of which 23,9 thousand hectares (28,6%) – residential areas, 59,7 thousand hectares (71,4%) – non-residential areas, including:

- Civil development – 0,5 thousand hectares (0,6%);
- Green zones (including woods) - 36,7 thousand hectares (43,9%);
- Roads and streets network - 1,0 thousand hectares (1,3%);
- Industrial and utilities territories - 5,5 thousand hectares (6,6%);
- Transportation territories and constructions - 1,8 thousand hectares (2,1%);
- Agricultural land - 4,6 thousand hectares (5,5%);
- Recreational areas - 2,8 thousand hectares (3,3%);
- Other territories - 6,8 thousand hectares (8,2%).

Analysis of land use shows that current city boundaries contain 7,2 thousand hectares of land that may be used for further urban development, including:

- Reconstruction and concentration of existing residential development - 1,0 thousand hectares;
- Landscaping (by transforming of green zones and recreation territories) – 1,4 thousand hectares;
- Industrial / utilities and transportation territories – 1,1 thousand hectares;
- Agricultural territories – 0,7 thousand hectares;
- Territories of gardening communities and country homes – 0,5 thousand hectares;
- Special use zones – 0,6 thousand hectares;
- Vacant territories – 1,9 thousand hectares.

Comparison of required territories and available internal reserves implies that expansion beyond current borders of the city is required to fully meet the needs of the city.

Given the stated above need for allocation of all planned construction and organization of mass rest areas, the territory of Kyiv would need to expand by 59,8 thousand hectares.

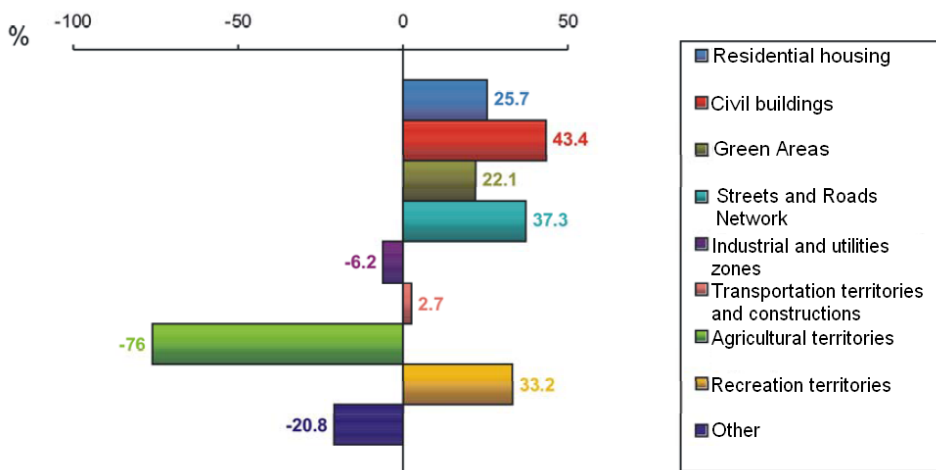
Functional use of the territories within the projected Kyiv City boundaries will be advanced in the following main directions.

- Organization of comprehensive residential and industrial districts – 3,6 thousand hectares, including: residential – 2,9 thousand hectares; industrial and utilities – 0,7 thousand hectares;
- Allocation of transportation objects and construction of roads and streets network – 1,1 thousand hectares;
- Development of recreation network (allocation of sanatorium, recreation, rest and tourism objects) – 3,3 thousand hectares;
- Landscaped territories and water reserves - 24,1 thousand hectares
- Organization of protection and green areas – river banks, along engineering and transportation corridors, around industrial and utilities objects – 10,5 thousand hectares (using agricultural territories, special purpose land, and vacant land);

Existing urban areas within Kyiv City suburban zone will retain their status and territory of 13,2 thousand hectares along with surrounding agricultural land - 3,9 thousand hectares.

Transformation of the territory of Kyiv City within the projected boundaries according to the functional use of the territory is presented in Exhibit 4.1.

Exhibit 4.1. Growth (decline) of Kyiv City zones by functional use



10. TRANSPORTATION AND STREET-ROAD NETWORK

Measures to develop above-ground transportation include:

Railroad transportation:

- Build a railroad connection between Myronivsky to Korostensky railroads;
- Reconstruct a transportation node in the area of Kyiv-Moskovskiy station as well as construction of other railroads on the intercept between Kyiv-Moskovskiy Station and Pidgirtsy Station.;
- Build major commuter stations Syrets and Darnytsya;
- Close cargo stations Kyiv-Tovarniy and Kyiv-Dniprovskiy;
- Organize city passenger transit by railroad with reconstruction of Kyiv-Vyshgorod line; equip railroad constructions; open new stations and city routes.

Bus transportation:

- Build three bus stations in peripheral areas of the city: Teremky, Kharkivskiy, Novobilychi;
- Close down Central Bus Station on Moskovska Square as well as bus stations Podil, Pivdenna, and Dachna;
- Build parking lots along major highways entering the city, by subway stations.

River transportation:

- Build a new cargo river port in the area of the town of Ukrainka;
- Close cargo parts of the port and harbor on Podil.

Air transportation:

- Reconstruct and build runways and terminals in Boryspil and Kyiv airports;
- Progress towards construction of one more airport – Roslavychi;

Development of municipal transportation and street/road network of Kyiv City includes:

Subway:

- Total length of subway lines will increase by 61,1 km and reach 112,7 km.
- It is planned to extend Svyatoshyno-Brovary line to Akademika Palladina Ave.; Kurenivsko-Chervonoarmiyska line – to Teremky, with a branch to a new bus stations; Syrets-Pechersk line – to Radyanska Ukraina Ave. and to Zaliznychna Station.
- Construction of two new lines is planned: Podilsko-Voskresenska (from Solomyanska Square to Bratyslavska St. and Livoberezhna ground-level line Troyeschyna – Osokorky;
- Construction of additional exits is planned at Darnytsya, Vokzalna, Universytet subway stations, as well as construction of exits on Lvivska Brama and Telychka stations.

Tram:

- Planned reconstruction of the fast tram line Peremogy Square – Borschagivka.

- Planned construction of 9,4 km. of new tram rails and removal of 18,5 km. of existing tram rails, including on Patona Bridge, Vozzyednannya Ave., Gagarina Ave., and Naberezhne Hwy.

Trolley Bus:

- Trolley bus lines will grow by 156,2 km to 310,5 km.
- Planned construction new lines going to Bilychi, Troyeschyna, Poznyaky, Osokorky, Gatne, along Perova Ave., Vozzyednannya Ave., Gagarina Ave., Chervonozoryanyi Ave. etc.

Bus:

- Bus lines will increase by 155 km to 640 km.
- Planned introduction of express routes on major highways.

Streets and roads:

Development of road and street network includes upgrade of ground level highways and major intersections given Kyiv urban development plans and development of international transportation corridors. The number of vehicles will double by the end of the planning period to reach 889,3 thousand vehicles, including 827 thousand cars.

Total length of inner-city highways and roads will grow by 356,2 km to 976,2 km.

The most important construction and reconstruction objects include:

- Ground level connection between Kyiv-Kharkiv and Kyiv-Kovel highways that would include a bridge across the Dnipro River in the area of Koncha-Zaspa;
- Podilskiy bridge across the Dnipro River;
- City downtown ring roads throughways: continuation of Chornovola St. to Frunze St.; Zhylyanska St., Korolenkivska St., Bozhenka St., Zaliznychne Hwy, new road across the territory of Kyiv-Tovarnyi railroad station;
- Patona bridge; Vozzyednannya Ave., Gagarina Ave.;
- Multi-level transportation intersections in the most jammed areas, including Kharkivska, Poshtova, Moskovska, Leningradska Squares, intersection of Artema and Chornovola Streets; Polyarna and Bogatyrska Streets; Pravdy Ave. and Vyshgorodska St.; Naddniproyske Hwy and Lisogirska St.; Naddniproyske Hwy and Nauky Ave.; Ring Road (Kiltseva Doroga) and Kreysera "Avrora" St.; Akademika Palladina Ave. and Stetsenka St. etc.

12. CONSTRUCTION PHASE 1

Construction Phase 1 is developed for the period of 2001-2010 and includes proposals regarding the volume and location of residential and civil construction, measures to develop engineering and transportation infrastructure (city-wide and those that ensure development of new districts), green construction and environmental protection.

These projects are discussed in detail in Volume 18 of the Master Plan Background Note (Poyasnyuvalna Zapyska).

Project decisions until 2010 take into consideration proposals and comments of the various departments of Kyiv City State Administration (KCSA), district state administrations in Kyiv City, and municipal organizations regarding the issues outlined above after their hearing and review in July-August 2001.

12.1. Residential construction

The volume of residential construction over 2001-2010 will total 11 million sq.m. of gross buildable area, including 5,1 million sq.m. in 2001-2005, and 5,9 million sq.m. in 2006-2010. Of that volume, 59% will be built on the right bank and 41% - on the left bank of the city. The entire list of districts that would include residential buildings indicating the volume of planned construction is presented in Table 12.1.1.

Currently, development of the largest residential districts – Obolon, Vygurivschyna-Troeschyna, Poznyaky-East, Osokorky-North is finishing completion. Construction of new districts is starting, the largest ones being Osokorky-Center, Teremky-III, Kibtsentr (2nd residential district), Zamkovetska St. (1st and 2nd residential districts), Pravdy Ave., Troyanda district, Metrologichna St., Saperno-Slobidska St. (1st residential district).

Rezoning and high-rise development of Nyvky and Voskresensky “gardening communities”.

Almost 78% (8,5 million sq.m.) of all residential construction is located in residential districts and blocks, 17% (1,9 million sq.m.) – on individual land plots, 2% (0,2 million sq.m.) – reconstruction of existing gardening communities into residential houses with homestead land, 3% (0,4 million sq.m.) – unfinished construction and add-ons to existing buildings during their reconstruction.

41,6% (4,6 million sq.m.) of the total residential construction volume is located on the territories that require engineering preparation – hydraulic fill, land filling etc.

Of the lands used for residential construction, the following territories have the largest share (% of all lands):

- Residential districts and blocks under construction (45,0%);
- Residential territories that are subject to reconstruction and further concentration (24,6%);
- Vacant land (10,3%);
- Agricultural land (10,8%);
- Territories of collective orchards (5,4%);
- Industrial, utility, warehouse, and special use territories (3,9%);

This section includes the residential construction program in Kyiv city for 2002-2004 that features an exhaustive list of residential buildings that indicate their series of project type, number of floors, gross apartments area and the name of developer. Total gross area of apartments included in the program is 3 054 thousand sq.m.

DISTRIBUTION OF RESIDENTIAL HOUSING ACROSS

KYIV CITY DISTRICTS IN 2001-2010

(thousand sq.m. of gross buildable area)

#	Location	Gross Area According to			Including:					
		2001-2010 Master Plan			2001-2005			2006-2010		
		Total	Individual	Other	Total	Individual	Other	Total	Individual	Other
1	2	3	4	5	6	7	8	9	10	11
	Planning Zone 1									
1	2-20 Staronavodnytska St. (Phase 2)	109,0	0,0	109,0	88,2	0,0	88,2	20,8	0,0	20,8
2	32-36 Schorsa St. area	84,9	0,0	84,3	34,9	0,0	34,9	50,0	0,0	50,0
3	Kikvidze-Pidvysotskogo	157,9	0,0	157,4	22,4	0,0	22,4	135,5	0,0	135,5
4	Zolotoustivska – Chornovola, total	159,4	0,0	159,4	88,8	0,0	88,8	70,6	0,0	70,6
	Incl. Quarter 1	19,6	0,0	19,6	0,0	0,0	0,0	19,6	0,0	19,6
	Quarter 1a	55,3	0,0	55,3	27,8	0,0	27,8	27,5	0,0	27,5
	Quarter 2	33,1	0,0	33,1	33,1	0,0	33,1	0,0	0,0	0,0
	Quarter 5	13,8	0,0	13,8	13,8	0,0	13,8	0,0	0,0	0,0
	Quarter 4	34,4	0,0	34,4	14,1	0,0	14,1	20,3	0,0	20,3
	Quarter 6	3,2	0,0	3,2	0,0	0,0	0,0	3,2	0,0	3,2
5	Gonchary - Kozhумыky	74,7	13,8	60,4	38,2	5,2	33,0	36,5	8,6	27,9
6	Petrivska St. area	16,9	0,0	16,4	0,0	0,0	0,0	16,9	0,0	16,9
7	Panfilovtsiv St. (concentration)	6,0	6,0	0,0	2,8	2,8	0,0	3,2	3,2	0,0
8	Michurina St. (reconstruction and concentration)	6,6	6,6	0,0	3,1	3,1	0,0	3,5	3,5	0,0
9	Zvirynetska St. (reconstruction and concentration)	7,7	7,7	0,0	3,6	3,6	0,0	4,1	4,1	0,0
10	Chorna Gora (reconstruction and concentration)	11,0	1,0	10,0	0,4	0,4	0,0	10,6	0,6	10,0
	Individual land plots	766,4	0,0	766,4	457,0	0,0	457,0	309,4	0,0	309,4
	Add-ons during reconstruction	165,2	0,0	165,2	46,0	0,0	46,0	119,2	0,0	119,2
	Total for Planning Zone 1	1565,7	35,1	1530,6	785,4	15,1	770,3	780,3	20,0	760,3
	Planning Zone 2									
11	Saperno-Slobidska St., 1 st district	147,1	0,0	147,1	56,2	0,0	56,2	90,9	0,0	90,9
13	Motornyi Lane	44,5	0,0	44,3	22,9	0,0	22,9	21,6	0,0	21,6
1.4	Lomonosova, total	369,0	13,6	355,4	42,9	0,0	42,9	326,1	13,6	312,5
	Incl. 1 st district	127,5	0,0	127,5	42,9	0,0	42,9	84,6	0,0	84,6
	1 st -a district	45,0	0,0	45,0	0,0	0,0	0,0	45,0	0,0	45,0
	3 rd district	160,0	0,0	160,0	0,0	0,0	0,0	160,0	0,0	160,0
	4-5 th district	18,1	13,6	4,5	0,0	0,0	0,0	18,1	13,6	4,5
	8 th district	18,4	0,0	18,4	0,0	0,0	0,0	18,4	0,0	18,4
15	Kibtsentr, 2 nd district	95,5	0,0	95,5	0,0	0,0	0,0	95,5	0,0	95,5
16	Teremky-III	200,0	0,0	200,0	0,0	0,0	0,0	200,0	0,0	200,0
17	Metrologichna	40,0	10,0	30,0	0,0	0,0	0,0	40,0	10,0	30,0
18	Narodnogo Opolchennya, total	113,3	0,0	113,3	76,1	0,0	76,1	37,2	0,0	37,2
	Incl. Phase 2	66,6	0,0	66,6	29,4	0,0	29,4	37,2	0,0	37,2
	Phase 3	46,7	0,0	46,1	46,7	0,0	46,7	0,0	0,0	0,0
19	Batyeva Gora (reconstruction and concentration)	34,5	4,5	30,0	1,8	1,8	0,0	32,7	2,7	30,0
20	Oleksandrivska Slobidka (reconstruction and concentration)	10,4	10,4	0,0	6,0	6,0	0,0	4,4	4,4	0,0
	Incl. 1 (South)	5,2	5,2	0,0	3,0	3,0	0,0	2,2	2,2	0,0
	2 (North)	5,2	5,2	0,0	3,0	3,0	0,0	2,2	2,2	0,0
21	Sovky (concentration)	7,2	7,2	0,0	3,5	3,5	0,0	3,7	3,7	0,0
22	Zhulyany village (concentration)	38,0	38,0	0,0	15,2	15,2	0,0	22,8	22,8	0,0
23	Shyrma (reconstruction and concentration)	20,0	10,0	10,0	4,6	4,6	0,0	15,4	5,4	0,0
24	Demiyivka (reconstruction and concentration)	8,2	8,2	0,0	3,5	3,5	0,0	4,7	4,7	10,0
25	Mysholovka (reconstruction and concentration)	18,2	8,2	10,0	3,5	3,5	0,0	14,7	4,7	0,0
26	Korchuvate (reconstruction and concentration)	4,1	4,1	0,0	1,6	1,6	0,0	2,5	2,5	10,0
27	Pyrogiv village (reconstruction and concentration)	10,5	10,5	0,0	4,7	4,7	0,0	5,8	5,8	0,0

#	Location	Gross Area According to 2001-2010 Master Plan			Including:					
		Total	Individual	Other	2001-2005			2006-2010		
					Total	Individual	Other	Total	Individual	Other
28	Chapaevka village (reconstruction and concentration)	44,2	44,2	0,0	17,4	17,4	0,0	26,8	26,8	0,0
30	Michurynets Station (modernization)	18,0	18,0	0,0	18,0	18,0	0,0	0,0	0,0	0,0
31	Avtomobilist Station (modernization)	1,5	1,5	0,0	1,5	1,5	0,0	0,0	0,0	0,0
32	Gayeva St. Station (modernization)	1,5	1,5	0,0	1,5	1,5	0,0	0,0	0,0	0,0
	Individual land plots	426,3	0,0	426,3	260,1	0,0	260,1	166,2	0,0	166,2
	Add-ons during reconstruction	35,7	0,0	35,7	4,8	0,0	4,8	30,9	0,0	30,9
	Total for Planning Zone 2	1687,7	189,9	1497,8	545,8	82,8	463,0	1141,9	107,1	1034,8
	Planning Zone 3									
34	Lebedeva-Kumacha block	116,6	0,0	116,6	66,5	0,0	66,5	50,1	0,0	50,1
35	34-42 Lepse Ave.	32,3	0,0	32,3	21,1	0,0	21,1	11,2	0,0	11,2
37	Karavayevi Dachi (concentration)	7,0	7,0	0,0	3,4	3,4	0,0	3,6	3,6	0,0
38	Svyatoshyn, total	162,1	1,6	160,5	120,6	0,4	120,2	41,5	1,2	40,3
	Incl. 1 district	74,0	0,0	74,0	74,0	0,0	74,0	0,0	0,0	0,0
	2 district	78,5	0,0	78,5	38,2	0,0	38,2	40,3	0,0	40,3
	3 district (reconstruction and concentration)	9,6	1,6	8,0	8,4	0,4	8,0	1,2	1,2	0,0
39	Bilychi, total	129,8	4,0	125,8	80,2	1,5	78,7	49,6	2,5	47,1
	Incl. 8 district	14,7	0,0	14,7	14,7	0,0	14,7	0,0	0,0	0,0
	13 district	27,1	0,0	27,1	27,1	0,0	27,1	0,0	0,0	0,0
	1 3a district (reconstruction and concentration)	28,1	1,1	27,0	0,3	0,3	0,0	27,8	0,8	27,0
	16 district (reconstruction and concentration)	20,8	0,7	20,1	0,2	0,2	0,0	20,6	0,5	20,1
	17 district (reconstruction and concentration)	39,1	2,2	36,9	37,9	1,0	36,9	1,2	1,2	0,0
40	Novobilychi (reconstruction and concentration)	48,0	5,9	42,1	27,0	2,9	24,1	21,0	3,0	18,0
42	Pivdenna Borschagivka (reconstruction and concentration)	35,6	5,0	30,6	33,1	2,5	30,6	2,5	2,5	0,0
44	Ryzka St. (reconstruction and concentration)	0,5	0,5	0,0	0,2	0,2	0,0	0,3	0,3	0,0
45	Nyvky (reconstruction and concentration)	8,3	8,3	0,0	3,7	3,7	0,0	4,6	4,6	0,0
46	Katerynivka village (reconstruction and concentration)	4,0	4,0	0,0	1,9	1,9	0,0	2,1	2,1	0,0
47	Zhovtneve village (concentration)	2,6	2,6	0,0	1,4	1,4	0,0	1,2	1,2	0,0
48	Peremoga village (reconstruction and concentration)	43,8	5,1	38,7	41,3	2,6	38,7	2,5	2,5	0,0
49	Zhytomyrske Hwy, 15 km	38,1	38,1	0,0	12,9	12,9	0,0	25,2	25,2	0,0
51	Nyvky Gardening Community (reconstruction)	75,0	0,0	75,0	0,0	0,0	0,0	75,0	0,0	75,0
52	Berkivtsi Left Gardening Community (modernization)	142,5	142,5	0,0	52,5	52,5	0,0	90,0	90,0	0,0
53	Svyazyst Gardening Community (modernization)	44,8	44,8	0,0	20,0	20,0	0,0	24,8	24,8	0,0
	Individual land plots	351,3	0,0	351,3	213,0	0,0	213,0	138,3	0,0	138,3
	Add-ons during reconstruction	75,1	0,0	75,1	14,7	0,0	14,7	60,4	0,0	60,4
	Total for Planning Zone 3	1317,4	269,4	1048,1	713,5	105,9	607,6	603,9	163,5	440,4
	Planning Zone 4									
54	Obolon, total	548,6	6,4	542,2	318,5	6,4	312,1	230,1	0,0	230,1
	Incl. 3rd district	307,8	6,4	301,4	114,6	6,4	108,2	193,2	0,0	193,2
	36 th district	92,9	0,0	92,9	92,9	0,0	92,9	0,0	0,0	0,0
	Other districts	147,9	0,0	147,9	111,0	0,0	111,0	36,9	0,0	36,9
55	Obolon tract	15,1	15,1	0,0	0,0	0,0	0,0	15,1	15,1	0,0
56	2 Vyshgorodska-Avtovozovska	63,3	0,0	63,3	49,0	0,0	49,0	14,3	0,0	14,3
57	Zamkovetska, 1 and 2 district	200,0	0,0	200,0	0,0	0,0	0,0	200,0	0,0	200,0
58	Pravdy Ave., total	525,0	0,0	525,0	0,0	0,0	0,0	525,0	0,0	525,0
	Incl. Plot 4	75,0	0,0	75,0	0,0	0,0	0,0	75,0	0,0	75,0
	Plot 5	100,0	0,0	100,0	0,0	0,0	0,0	100,0	0,0	100,0
	Plot 6	50,0	0,0	50,0	0,0	0,0	0,0	50,0	0,0	50,0
	Plot 7	300,0	0,0	300,0	0,0	0,0	0,0	300,0	0,0	300,0
59	Vynogradar, total	69,0	0,0	69,0	69,0	0,0	69,0	0,0	0,0	0,0
	Incl. 1 m/p	7,7	0,0	7,7	7,7	0,0	7,7	0,0	0,0	0,0
	2 m/p	41,3	0,0	41,3	41,3	0,0	41,3	0,0	0,0	0,0
	4 m/p	20,0	0,0	20,0	20,0	0,0	20,0	0,0	0,0	0,0
60	"Troyanda" district	150,0	0,0	150,0	0,0	0,0	0,0	150,0	0,0	150,0

#	Location	Gross Area According to 2001-2010 Master Plan			Including:					
		Total	Individual	Other	2001-2005			2006-2010		
					Total	Individual	Other	Total	Individual	Other
61	Shevchenko village (reconstruction and concentration)	23,7	8,7	15,0	4,2	4,2	0,0	19,5	4,5	15,0
62	Zamkovetska St. – Belitska St. - Gomelska St. (reconstruction and concentration)	21,2	11,2	10,0	5,6	5,6	0,0	15,6	5,6	10,0
63	Petropavlivska St. – Teligy St. (reconstruction and concentration)	17,4	7,4	10,0	3,5	3,5	0,0	13,9	3,9	10,0
64	Olzhycha St. – Kotovskogo St. (reconstruction and concentration)	17,8	2,8	15,0	1,7	1,7	0,0	16,1	1,1	15,0
65	Nyvky Gardening Community (reconstruction)	150,0	0,0	150,0	0,0	0,0	0,0	150,0	0,0	150,0
	Individual land plots	92,4	0,0	92,4	55,5	0,0	55,5	36,9	0,0	36,9
	Add-ons during reconstruction	33,6	0,0	33,6	8,1	0,0	8,1	25,5	0,0	25,5
	Total for Planning Zone 4	1927,1	51,6	1875,5	515,1	21,4	493,7	1412,0	30,2	1381,8
	Planning Zone 5									
68	Vyurivshchyna - Troyeschyna, total	779,9	0,0	779,5	651,9	0,0	651,9	128,0	0,0	128,0
	Incl. 2 m/p	101,6	0,0	101,6	101,6	0,0	101,6	0,0	0,0	0,0
	11 m/p	19,5	0,0	19,5	19,5	0,0	19,5	0,0	0,0	0,0
	13 m/p	26,2	0,0	26,2	26,2	0,0	26,2	0,0	0,0	0,0
	20 m/p	188,0	0,0	188,0	60,0	0,0	60,0	128,0	0,0	128,0
	21 m/p	67,6	0,0	67,6	67,6	0,0	67,6	0,0	0,0	0,0
	22 m/p	18,2	0,0	18,2	18,2	0,0	18,2	0,0	0,0	0,0
	24 m/p	255,4	0,0	255,^	255,4	0,0	255,4	0,0	0,0	0,0
	26 m/p	43,4	0,0	43,3	43,4	0,0	43,4	0,0	0,0	0,0
	26a m/p	60,0	0,0	60,0	60,0	0,0	60,0	0,0	0,0	0,0
69	Troyeschyna village (concentration)	6,0	6,0	0,0	2,4	2,4	0,0	3,6	3,6	0,0
70	Left Bank - Center	78,7	0,0	78,1	78,7	0,0	78,7	0,0	0,0	0,0
72	Stara Darnytsya, total	82,2	0,9	81,3	42,7	0,4	42,3	39,5	0,5	39,0
	Incl. 1 st district (reconstruction and concentration)	66,7	0,4	66,3	42,5	0,2	42,3	24,2	0,2	24,0
	2 nd district (reconstruction and concentration)	15,5	0,5	15,0	0,2	0,2	0,0	15,3	0,3	15,0
73	DVRZ district (reconstruction and concentration)	98,4	3,0	95,4	80,1	1,2	78,9	18,3	1,8	16,5
74	21 Verhovnoyi Rady Ave.	46,2	0,0	46,2	46,2	0,0	46,2	0,0	0,0	0,0
75	Bykivnya (reconstruction and concentration)	3,7	3,7	0,0	1,5	1,5	0,0	2,2	2,2	0,0
77	Voskresenski Gardening Community (reconstruction)	160,0	0,0	160,0	0,0	0,0	0,0	160,0	0,0	160,0
	Individual land plots	212,6	0,0	212,6	125,1	0,0	125,1	87,5	0,0	87,5
	Add-ons during reconstruction	57,7	0,0	57,7	14,4	0,0	14,4	43,3	0,0	43,3
	Total for Planning Zone 5	1525,4	13,6	1511,8	1043,0	5,5	1037,5	482,4	8,1	474,3
	Planning Zone 6									
78	Nova Darnytsya, total	201,2	0,0	201,2	82,7	0,0	82,7	118,5	0,0	118,5
	Incl. 1 st district	75,7	0,0	75,7	75,7	0,0	75,7	0,0	0,0	0,0
	3 rd district	68,7	0,0	68,7	0,0	0,0	0,0	68,7	0,0	68,7
	5 th district	56,8	0,0	56,8	7,0	0,0	7,0	49,8	0,0	49,8
79	Kharkivskiyi, 4 th district (reconstruction and concentration)	7,8	7,8	0,0	3,2	3,2	0,0	4,6	0,0	0,0
80	Poznyaky – West, total	776,8	0,0	776,8	489,5	0,0	489,5	287,3	0,0	287,3
	Incl. 2 nd district	154,4	0,0	154,4	38,0	0,0	38,0	116,4	0,0	116,4
	3 rd district	65,9	0,0	65,9	0,0	0,0	0,0	65,9	0,0	65,9
	8 th district	286,0	0,0	286,0	286,0	0,0	286,0	0,0	0,0	0,0
	9 th district	115,0	0,0	115,0	115,0	0,0	115,0	0,0	0,0	0,0
	10 th district	105,1	0,0	105,1	50,5	0,0	50,5	54,6	0,0	54,6
	10a, b district	50,4	0,0	50,4	0,0	0,0	0,0	50,4	0,0	50,4
81	Poznyaky-East, total	536,3	0,0	536,3	461,0	0,0	461,0	75,3	0,0	75,3
	Incl. 4 th district	200,4	0,0	200,4	200,4	0,0	200,4	0,0	0,0	0,0
	5-5a district	138,3	0,0	138,3	138,3	0,0	138,3	0,0	0,0	0,0
	6a district	82,2	0,0	82,2	39,6	0,0	39,6	42,6	0,0	42,6
	7 th district	115,4	0,0	115,4	82,7	0,0	82,7	32,7	0,0	32,7
82	Osokorky-North, total	1110,1	0,0	1110,1	407,3	0,0	407,3	702,8	0,0	702,8
	Incl. 5 th -8 th district	405,0	0,0	405,0	0,0	0,0	0,0	405,0	0,0	405,0
	6 th district	261,9	0,0	261,9	44,1	0,0	44,1	217,8	0,0	217,8
	7 th district	27,0	0,0	27,0	27,0	0,0	27,0	0,0	0,0	0,0

#	Location	Gross Area According to 2001-2010 Master Plan			Including:					
		Total	Individual	Other	2001-2005			2006-2010		
					Total	Individual	Other	Total	Individual	Other
	9a district	27,0	0,0	27,0	27,0	0,0	27,0	0,0	0,0	0,0
	11 th district	109,2	0,0	109,2	109,2	0,0	109,2	0,0	0,0	0,0
	12 th district	280,0	0,0	280,0	200,0	0,0	200,0	80,0	0,0	80,0
83	Osokorky-Center	240,0	70,0	170,0	0,0	0,0	0,0	240,0	70,0	170,0
85	Bortnychi-Upper Side (reconstruction and concentration)	46,7	13,6	33,1	15,2	6,1	9,1	31,5	7,5	24,0
86	Bortnychi – Lower Side (reconstruction and concentration)	4,0	4,0	0,0	0,0	0,0	0,0	4,0	4,0	0,0
	Individual land plots	72,3	0,0	72,3	42,3	0,0	42,3	30,0	0,0	30,0
	Add-ons during reconstruction	1,5	0,0	1,5	0,0	0,0	0,0	1,5	0,0	1,5
	Total for Planning Zone 6	2996,7	95,4	2901,3	1501,2	93	1491,9	1495,5	86,1	1409,4
	TOTAL FOR MASTER PLAN	11020,0	655,0	10365,0	5104,0	240,0	4864,0	5916,0	415,0	5501,0
	%%	100%	6%	94%	100%	5%	95%	100%	7%	93%
	Incl.									
	Residential districts	8136,6	446,7	7689,9	3769,5	146,5	3623,0	4367,1	300,2	4066,9
	Gardening	593,3	208,3	385,0	93,5	93,5	0,0	499,8	114,8	385,0
	Individual land plots	1921,3	0,0	1921,3	1153,0	0,0	1153,0	768,3	0,0	768,3
	Add-ons during reconstruction	368,8	0,0	368,8	88,0	0,0	88,0	280,8	0,0	280,8
	Incl.									
	5-storey buildings of industrial house-building	152,0	0,0	152,0	30,5	0,0	30,5	121,5	0,0	121,5
	Other buildings, including add-ons of attic floors	216,8	0,0	216,8	57,5	0,0	57,5	159,3	0,0	159,3

KCSA is the largest ordering party of construction during this period that accounts for 70,4% of total volume of construction; other ordering parties will account for 23,6% of total volume of residential development.

The structure of KCSA orders is based on the volume of construction allocated per district and specific land plots and is distributed as follows: Kyivmiskbud holding company – 42,6% of total construction volume; DGO Zhytlo-Invest – 25,7%; UKB – 16%; district state administrations in Kyiv – 12%; other structural units – 3,7%.

12.5. Transportation and road/street network

Ground level transportation. Development of Kyiv railroad network will be founded on the principles of taking cargo transportation outside of the developed urban area, closing cargo transportation along with northern railroad semi-circle, and its use for municipal and commuter trains.

Among the key projects are construction of the second track of Kyiv-Moskovskiyi Station – Podgirtsy Station (17,4 km.), construction of ground level railroad tracks between Pidgirtsy Station and Vasylykiv-1 Station (20,0 km.), reconstruction of the northern semi-circle and Kyiv – Vyshgorod line for launching of municipal passenger transportation construction of the new commuter rail station Syrets.

Construction of the new bus stations Teremky and Kharkivskiyi is planned.

Beginning of construction of the new river port in the area of Ukrayinka town will be the key milestone in the development of river transportation. The new port's throughput would allow to take the 2nd cargo district of the municipal port out of the city. Reconstruction of the river station is planned as well.

Kyiv air node upgrade includes construction of the passenger terminal with throughput of 600 passengers per hour and reconstruction of the existing air terminal at “Kyiv” airport. Major reconstruction of “Boryspil” airport is planned as well.

Municipal public transportation. There are plans to further develop the existing three **subway** lines and build two new lines: Podilsko-Voskresenska (initial construction of the central part of the subway line – between “Vokzalna”, “Ploscha Peremohy”, and “Glybochytska” stations) and Troyeschyna-Osokorky line (from “Vulytsya Myloslavska” to “Livoberezhna” stations).

Extension of the existing lines in the following directions: extension of Svyatoshynsko-Brovarska line in Western direction from “Svyatoshyn” Station to “Prospekt Peremohy” Station (3,3 km); extension of Kurenivsko-Chervonoarmiyska line in Southern direction from “Lybidska” Station to “Vystavkovyi Tsentr” Station (6,1 km); extension of Syretsko-Pecherska line in both directions from “Kharkivska Ploscha” Station on the left bank to “Vynogradar” Station on the right bank (8,1 km).

There is planned reconstruction of the **fast tram** line from Peremogy Square to Ring Road, as well as construction of the new tram connection between Vidradnyi and Pivdenna Borschagivka (4,9 km.) as well as removal of tram tracks (18,5 km.), incl. Y.Gagarina Ave., Vozzyednannya Ave., Patona Bridge, Naberezhne Hwy, Obolon, Dmytrivska St.

Trolley-bus network will undergo major development (59,9 km. will be built) along with the production basis: two depots (№1 on 139 Chervonoarmiyska St.; and №3 on 14 Narodnogo Opolchennya St.) will be rebuilt; new depot for 200 cars will be built in the municipal zone of Troyeschyna residential district.

ENTERPRISES THAT ARE PROPOSED FOR RESTRUCTURING

#	Enterprise Name	Address	Justification of Measures	Residential Housing Within Sanitary Zone, thousand sq.m. of GBA
1	2	3	4	5
1	VO Radykal	Desnyanskyi district, 61 Chervonotkatska St.	The enterprise runs level I-II hazardous processes	19,8
2	VAT Himvolokno	Desnyanskyi district, 1 Magnitogorska St.	The enterprise runs level I-II hazardous processes	17,6
3	VAT Domobudivnyi Kombinat #3, ZBV Plant-1	Shevchenkivskyi district, 103 Vidradnenskyi Ave.	Residential housing is located within the sanitary zone of the enterprise. Technical upgrade is proposed to reduce the sanitary zone.	13,8
4	Podilskyi BMiK Plant	Podilskyi district, 36 Frunze St.	Residential housing is located within the sanitary zone of the enterprise. Technical upgrade is proposed to reduce the sanitary zone.	4,0
5	VAT Korchuvatskyi Kombinat BMiK, Plants #7,9,13	Golosiivskyi district, Chervonopraporna St.	Development of residential zone at adjacent territories, reconstruction and development of transportation highways. It is proposed to have multi-purpose use of the enterprise' territory without preservation of the current function.	-
6	Cement Plant	Golosiivskyi district, 26 Chervonopraporna St.	Manufacturing of Class II products. Residential housing is located within the sanitary zone of the enterprise. It is proposed to have multi-purpose use of the enterprise' territory without preservation of the current function.	1,65
7	AT Farmak	Obolonskyi district, 4 Chernomorska St.	The enterprise runs Level I hazardous processes	-
8	VAT Kyivskiy Zavod RiAP	Obolonskyi district, 5 Korabelna St. 16 Chervonyh Kozakiv Ave.	The enterprise runs Level I hazardous processes	-
	Total:			56,85
Comment. * - to be completed after 2010.				

ENTERPRISES AND INDIVIDUAL MANUFACTURING FACILITIES THAT ARE PROPOSED FOR RELOCATION OUTSIDE OF THE RESIDENTIAL ZONE OR LIQUIDATION

#	Enterprise Name	Address	Justification of Measures	Released area, ha	Residential Housing Within Sanitary Zone, thousand sq.m. of GBA
1	2	3	4	5	6
1	AT "Kyiv Meat Plant", liquidation of cattle slaughter shop	Darnytskyi district, 5 Zroshuvalna St.	The enterprise runs level I hazardous processes	-	17,0
2	Asphalt and concrete shop of JC "Kyivmistbudindustriya"	Dniproviskyi district, 12 Berezneva St.	Residential housing is located within the sanitary zone of the enterprise.	-	11,3
3	Workshop #1 of DOSSAF	Dniproviskyi district, 23A Lobachevskogo St.	Enterprise is located within a residential zone.	0,3	6,68
4	Kyiv Plant of Welding Equipment	Solomyanskyi district, 24 Polyova St.	Enterprise is located within a residential zone.	2,5	11,0
5	Bans and confectionery plant, workshop #8	Golosiyivskyi district, 57 Lva Tolstogo St.	Enterprise is located within a residential zone.	0,42	0,95
6	VAT "Golosiivskyi BMiK Plant"	Golosiyivskyi district, 13 Golosiivska St.	Enterprise is located within a residential zone.	9,6	7,82
7	VAT "Kyivskyi Decorative Glass Plant", liquidation of crystal production	Golosiyivskyi district, 119 Chervonozoryanyi Ave.	Residential housing is located within the sanitary zone of the enterprise.	-	18,0
8	Kyiv Plant "IMPULS"	Golosiyivskyi district, 5A Demiyivska St.	Enterprise is located within a residential zone.	0,72	Secondary school
9	VAT "Kyiv Toys Mechanic Plant named after Vatutin"	Golosiyivskyi district, 19 Volodymyro-Lybidska St.	Enterprise is located within a residential zone.	0,6	-
10	Kyiv Carbon Dioxide Plant	Golosiyivskyi district, 17 Volodymyro-Lybidska St.	Enterprise is located within a residential zone.	0,5	-
11	VAT "Kyiv Toys Mechanic Plant named after Vatutin"	Golosiyivskyi district, 87 Bozhenka St.	Enterprise is located within a residential zone.	0,42	-
12	VAT "Harchomash"	Golosiyivskyi district, 60 40-Richchya Zhovtnya Ave.	Enterprise is located within a residential zone.	3,6	9,32
13	VO Plant "Arsenal", liquidation of molding production	Pecherskyi district, 8 Moskovska St.	Enterprise is located within a residential zone.	-	215
14	NVO "Bilshovyk", liquidation of molding production	Solomyanskyi district, 57/2 Peremogy Ave.	Residential construction is located within the sanitary zone of the enterprise.	-	29,2
15	Petrovskogo Plant, liquidation of molding production	Shevchenkivskyi district, 10 Starokyivska St.	Residential construction is located within the sanitary zone of molding operations.	-	52,0
16	AT Astarta-Center	Podilskyi district, 30/39 Schekavytska St.	Enterprise is located within a residential zone.	2,0	25,6
17	DOK-3, land plot on Yaroslavka St.	Podilskyi district, 55 Yaroslavka St.	Enterprise is located within a residential zone.	1,26	29,0
18	ZAO "Promaparatura" - Land plot - Land plot - Land plot	Podilskyi district: 1 Skovorody St. 55 Horyva St. 3 Olenivska St.	Enterprise is located within a residential zone.	0,25 0,91 0,44	7,8 10,5 7,0
19	ZAT "Kyiv Mlyn", Mill Plant #2	Podilskyi district, 21 Naberezhno-Hreschatytska St.	Enterprise is located within a residential zone.	0,48	15,1
20	Gas Equipment and Devices Plant "Ukrkomunmash"	Shevchenkivskyi district, 30 Sholudenska St.	Enterprise is located within a residential zone.	1,3	78,2
21	Plant "Leninska Kuznya", machine building site	Shevchenkivskyi district, 87 Zhylyanska St.	Enterprise is located in the area for prospective development of farming.	8,75	1,9
22	Auto Base #513 KVO	Shevchenkivskyi district, 90/1 Peremogy Ave.	Enterprise is located within a residential zone.	1,68	19,03
23	VAT "Analitrylad", optical production	Shevchenkivskyi district, 26 Peremogy Ave.	Enterprise is located within a residential zone.	0,64	0,4
24	Kyiv Meat Processing Plant, sausage workshop #2	Shevchenkivskyi district, 26 Pavlivska St.	Enterprise is located within a residential zone.	0,3	13,16
25	Kyiv Plant "Ukrkabel", land plot on Baggovutivska St.	Shevchenkivskyi district, 17-22 Bagovutivska St.	Enterprise is located within a residential zone.	5,25	8,5
26	VAT "Kyiv Yeast Plant"	Shevchenkivskyi district, 26 Glybochytyska St.	Enterprise is located in the area for prospective development of farming.	0,6	Embassy of Azerbaijan
27	VAT "Kyiv Yeast Plant"	Shevchenkivskyi district, 15 Glybochytyska St.	Enterprise is located within a residential zone.	1,75	4,51
28	Tram Depot	Shevchenkivskyi district, 7 Degtyarivska St.	Enterprise is located within a residential zone.	4,0	Secondary school
29	Tram Depot	Golosiyivskyi district, 54 Gorkogo St.	Enterprise is located in the area for prospective development of farming.	5,61	-
30	VAT "Gear Box Plant"	Solomyanskyi district, 154 Borschagivska St.	Residential housing is located within the sanitary zone of the enterprise.	4,38	18,7
31	Plant "Orlan-Trade"	Solomyanskyi district, 29 Zatonskogo St.	Enterprise is located within a residential zone.	3,75	2 kindergartens
32	Kyiv Research and Experiment Plant of Non-Standard Equipment"	Golosiyivskyi district, 3/5 Vasylya Yana St.	Residential housing is located within the sanitary zone of the enterprise.	2,4	10,8

33	Kyiv Experiment Plant "Stand"*	Golosiyivskiyi district, 14 Vasylkivska St.	Residential housing is located within the sanitary zone of the enterprise.	1,8	Kindergarten
34	VAT "Furniture Plant named after Bozhenko"*	Golosiyivskiyi district, 86/107 Bozhenka St.	Residential housing is located within the sanitary zone of the enterprise.	6,9	Kindergarten
35	Shoes Manufacturing Union "Kyiv"*	Pecherskyi district, 34 Sichnevogo Povstannya St.	Enterprise is located in the area for prospective development of farming.	7,0	-
36	VAT "UHL-MASh"*	Golosiyivskiyi district, 66/24 Bozhenka St.	Enterprise is located within a residential zone.	0,54	-
37	VAT KZMV "Metal Products Plant"*	Golosiyivskiyi district, 50 Gorkogo St.	Enterprise is located in the area for prospective development of farming.	2,5	-
38	Ship Repair and Ship Building Plant	Golosiyivskiyi district, Vodnykiv Island	Enterprise is located on water fund lands.	6,6	-
39	VAT "Asphalt and Concrete Plant" of Holding Company "Kyivmiskbud"	Golosiyivskiyi district, Ostriv Farm	Enterprise is located on water fund lands.	5,0	-
40	VAT "Darnytskyi BmiK Plant"	Dniprovskiyi district, 101 Sagajdaka St.	Enterprise is located on water fund lands.	24,0	-
	Total :			118,45	671,85
Comment. * - to be completed after 2010.					

Expansion of **bus** network will be mainly focused on new residential districts.

Development of street and road network will include construction and reconstruction of 190,2 sq.m. of highways, 19 major transportation intersections at different levels as well as 11 highways, including:

- Start of construction of external detour;
- Reconstruction of Kyiv-Kovel highway;
- Construction of Podilsky bridge across the Dnipro River;
- Reconstruction of the Paton Bridge, Vozzyednannya Ave., Gagarina Ave.;
- Reconstruction of Stetsenka – Schuseva – Melnykova Streets;
- Reconstruction of Frunze St. – Vyshgorodska St. – Minske Hwy;
- Extension of Vatutina Ave. to Kyiv-Chernigiv highway;
- Construction of multi-level transportation intersections on Kharkivska, Poshtova, Leningradska, Moskovska Squares, intersections of Artema and Chornovila Streets, Bogatyrska and Polyarna Streets, Vyshgorodska St. and Pravdy Ave.;
- Construction of highways on the intersection of Velyka Okruzhna Doroga (Ring Road) with railroad tracks Kyiv-Vyshgorod, Kyiv-Korosten, and Kyiv-Fastiv.

13. KEY PROPOSALS FOR DEVELOPMENT OF KYIV SUBURBAN AREAS

Suburban area of Kyiv City is the territory that has historically been and will remain the zone that has active systemic links to Kyiv City across all industry sectors; shares land, water, recreational areas and other resources with the city.

Kyiv City boundaries have been determined based on the level of intensity of these links, that are predominantly concentrated within one-hour driving distance to the city (60-80 km.)

The area of Kyiv City suburbs is 1334,4 thousand hectares (about 48% of the territory of Kyiv region). It includes six cities of regional subordination: Berezan, Boryspil (City Council), Brovary, Vasylkiv, Irpin (City Council), Fastiv; as well as 11 administrative districts: Baryshivskiy, Vasylkivskiy, Ivankivskiy (partially, excl. lands of Chornobyl district that currently have the exclusion area status), Kyievo-Svyatoshynskiy, Makarivskiy, Obuhivskiy, and Fastivskiy.

There is a total of 12 towns, 24 urban-type villages, and 575 villages in the suburban area of Kyiv City.

The population of the suburban area is 1045,8 thousand as of 01.01.2001, incl. 614,0 thousand urban, and 431,8 – rural (58,7% and 41,3% respectively). The share of Kyiv City suburban area population makes up 57,8% of total population of Kyiv region: 57,6% of urban population; and 58,0% of rural population.

Kyiv City and suburban area are regarded as one geographic socio-economic zone that will be developing on the principles of integral interdependence (functional and geographic) and complementarity of its individual components.

Until now, the key problem for their balanced development is unavailability of strategic development programs and administrative management mechanisms for their implementation.

Suburban area **economic development forecast** is based on the expectations of economic development of Kyiv City and Kyiv Region, developed by the Council for Research of Productive Forces of Academy of Sciences of Ukraine.

It is expected that creation of competitive regional economy, facilitation of balanced development of key industry sectors and social infrastructure, building on local characteristics with the goal of improving the living conditions of the population to European average. One of the most important spheres of suburban economic development is the structural innovation-driven reconstruction of economy, technological upgrade of all industry sectors and identification of industry sector priorities. Development priority is given to industries that are competitive in domestic and international markets.

Net added value is expected to grow 3,2 times by 2021, including growth of 2,9 times for goods, and 3,5 times for services.

The share of industry and agriculture output in net added value will decline, net added value in construction will rise. Also, the share of such industries and transportation and telecommunications, science and scientific services will rise. Hence, the number of workforce in material manufacturing will decline from 219,3 thousand in 2000 to 200,0 thousand in 2020. Respectively, the numbers will increase from 101,4 thousand to 135,0 thousand in non-manufacturing sphere.

Suburban population will continue to decline through 2020, but the rate of decline will be lower. Over the period, the population will decline by 61 thousand people (rural population will shrink by 80 thousand, while urban population will grow by 19 thousand) and will be at 985 thousand by the end of 2020. Population numbers are likely to rise slightly in the larger towns of the suburban area.

Table 13.1. presents population dynamics forecast for Kyiv City and major suburban towns, by milestone periods:

Table 13.1.

KYIV CITY SUBURBAN AREA POPULATION FORECAST

Administrative unit	Population as of 01.01 /thousand/					
	2001		2011		2021	
	Total	Incl.*	Total	Incl.*	Total	Incl.*
1	2	3	4	5	6	7
Suburban Area Total:	1045,8	132,2	1004,0	1343	985,0	136,8
Including:						
- Urban	614,0	71,5	623,0	73,7	633,2	77,9
- Rural	431,8	60,7	381,0	60,6	351,8	58,9
Towns of Regional Significance - Total	342,2	103	356,4	10,3	372,2	10,0
Including:						
- Urban	341,5	10,3	355,9	10,3	371,7	10,0
- Rural	0,7	-	0,5	-	0,5	-
Berezan (town)	16,0	.	16,6	-	17,2	-
Boryspil (City Council)	54,5	-	60,7	-	63,5	-
Including:						
- Urban	53,8	-	60,2	-	63,0	-
- Rural	0,7	-	0,5	-	0,5	-
Brovary	89,5	-	96,0	-	100,0	-
Vasylkiv	38,5	-	36,8	-	40,5	-
Irpin (City Council)	91,1	10,3	93,2	10,3	96,9	10,0
Including:						
City of Irpin	36,9	-	38,4	-	40,4	-
Bucha (urban-type village)	24,6	-	24,5	-	25,0	-
Vorzel (urban-type village)	8,6	-	8,8	-	9,3	-
Gostomel (urban-type village)	10,8	-	11,2	-	12,2	-
Kotsyubynske (urban-type village)	10,2	10,3	10,3	10,3	10,0	10,0
City of Fastiv	52,6	-	53,1	-	54,1	-
Administrative districts - Total	703,6		647,6		612,8	
1. Baryshivskiyi - Total	40,4	-	35,6	-	33,4	-
Including:						
- Urban	11,2	-	11,6	-	11,4	-
- Rural	29,2	-	24,0	-	22,0	-
2. Boryspilskiyi - Total	51,3	7,0	46,9	7,0	44,0	6,7
Including:						
- Urban	-	..	-	-	-	-
- Rural	51,3	7,0	46,9	7,0	44,0	6,7
3. Borodyanskyi - Total	55,3	.	51,4	-	48,5	~
Including:						
- Urban	33,5	-	32,6	-	31,5	-
- Rural	21,8	-	18,8	-	17,0	-
4. Brovarskiyi - Total	71,7	4,1	67,3	4,1	64,1	3,9
Including:						
- Urban	14,4	-	14,2	-	14,0	-
- Rural	57,3	4,1	53,1	4,1	50,1	3,9
5. Vasylkivskiyi - Total	67,0	-	63,1	-	60,4	-
Including:						
- Urban	24,5	-	23,5	-	23,0	-
- Rural	42,5	-	39,6	-	37,4	-
6. Vyshgorodskiyi - Total	72,0	32,9	66,9	33,4	63,8	33,7
Including:						
- Urban	28,2	22,0	28,0	22,5	27,3	23,0
- Rural	43,8	10,9	38,9	10,9	36,5	10,7
7. Ivankivskiyi - Total	37,0	-	33,9	-	33,2	-
Including:						
- Urban	11,3	-	11,3	-	11,4	-
- Rural	25,7	-	22,6	-	21,8	-
8. Kyievo-Svyatoshynskiyi - Total	151,8	73,3	136,0	74,2	128,6	75,4
Including:						
- Urban	72,7	35,4	69,2	36,4	67,6	38,5
- Rural	79,1	37,9	66,8	37,8	39,7	-

9. Makarivskiyi - Total	46,8	-	42,8	-	39,7	-
Including:						
- Urban	13,7	-	13,7	-	13,5	-
- Rural	33,1	-	29,1	-	26,2	-
10. Obuhivskiyi - Total	74,9	4,7	71,0	5,3	66,6	7,1
Including:						
- Urban	53,1	3,8	53,5	4,5	52,5	6,4
- Rural	21,8	0,9	17,5	0,8	14,1	0,7
11. Fastivskiyi – Total	35,4	-	32,7	-	30,5	-
Including:						
- Urban	9,9	-	9,5	-	9,3	-
- Rural	25,5	-	23,2	-	21,2	-
* - Including urban territories projected to be included in Kyiv City boundaries						

Planning organization of territory. Planned economic, social, engineering and transportation infrastructure as well as expansion of the capital functions of Kyiv agglomeration define the required transformations of Kyiv City territory as well as the territory of its suburbs.

Architectural and planning decisions of Kyiv City Master Plan provide for compact development of the city – creation of residential, manufacturing, and landscaped recreational districts thus integrating the territory of about 60 thousand hectares into the city boundaries, including 16,2 thousand hectares in Vyshgorod district; 13,5 thousand hectares in Kyevo-Svyatoshynskiyi district; 13,4 thousand hectares in Obuhivskiyi district; 12,9 thousand hectares in Boryspilskiyi district; 3,8 thousand hectares in Brovarskiyi district.

Allocation of the major manufacturing facilities to support the needs of the capital (transportation, utility, hi-tech industrial, recreation) is planned on the territories adjacent to the city. Urban development potential of the radial highways in Zhytomyr, Odesa, Vinnytsya, Kharkiv, Chernigiv directions will be significantly increased.

Planned construction of the south detour of Kyiv, that will connect these highways and reallocate the intensifying transportation flows at 10-20 km distance from existing city boundaries. Consequently, additional centers of urban development will be created thus providing favorable conditions for development of transportation and warehousing centers, auto service stations, retail centers etc.

Within immediate proximity to the planned communications network there will be developed sports, entertainment, and recreation centers.

Further urbanization of the territories adjacent to city borders is also affected by urban development plans of the cities of Brovary, Boryspil, Vyshgorod, Vyshneve, Boyarka, Glevaha, Irpin City Council since they constitute the elements of Kyiv industrial agglomeration.

The main goal of the planning decisions for reorganization of the suburban area is preservation of its ecological stability by:

- adherence to the regimes of comprehensive green area of Kyiv City and, foremost, the forest and parks belt;
- preservation and further development of the system of open and green areas as the elements of national ecologic network at national, regional, and local levels will be based on the principles of sustainability and consistency;
- increasing tolerance of the territory natural and landscape elements to the increasing urban development and recreation pressure by comprehensive development of local village residential networks, the territories of collective orchards and single-family housing, forests and meadows in recreational areas, geographic concentrations of recreational establishments;
- Granting nature reservation regimes to the elements of local ecosystem of the national scale: Golosiyivskiyi Forest, Dniprovski Islands, area between Dnipro and Desna rivers;

- Upgrading suburban territory management mechanisms by including its territory into the administrative geographic unit – the capital district; development and implementation of local development rules.

Development of recreation system will be undertaken on the basis of efficient utilization of territories suitable for medical treatment and rest of the residents of Kyiv and suburban areas. The comprehensive suburban territory assessment has identified 25 resort and recreation sites for a total of 190 thousand ha.

Resorts and recreation establishments will be able to welcome 134 thousand guests by the end of the planning period will, including 5,0 thousand sanatorium guests, 35,0 thousand long-stay family and kids guests, 90,0 thousand recreation camps; 4,0 resorts and tourist hotels.

The number of short-term guests is determined based on the territory of resort and recreation areas as well as permitted maximum landscape load, and constitutes 680 thousand guests.

The area of collective gardens will remain unchanged – at 14,2 thousand hectares.

Residential development in urban areas of the suburban zone is driven by the goal for residential housing sufficiency: 25,3 sq.m. per person in 2000, 30 sq. m. per person in 2010, and 35 sq.m. per person in 2020.

The emphasis in development of residential housing will be made on low-rise garden and single-family housing that will account for 70% of all new housing during the first phase (until 2010), 80% during the second phase (2011-2020).

Land requirements for residential housing is 3,6 thousand hectares over 2001-2010, and 4,5 thousand hectares for 2011-2020, including the available reserves within city boundaries (2,1 thousand hectares). Additional land requirements will be 1,5 thousand and 2,4 thousand hectares during Phases 1 and 2 respectively.

The strategy for Kyiv City suburban transportation infrastructure development is focused on providing reliable and comfortable transportation connection of suburban towns and villages with municipal infrastructure ensuring optimal use and complementarity of individual and public transportation, suburban and inter-city transportation systems.

The following key measures are planned within modernization and development of transportation infrastructure of the suburban zone:

Roads and transportation

- Reconstruction of existing transportation corridors within city boundaries (corridors #3, #9, Europe-Asia), construction of the new transportation corridor #3 (Kyiv-Vinnytsya section);
- Construction of external road detour of Kyiv City that would include construction of two bridges across the Dnipro River;
- Construction of the new highway going around Boryspil City and detours of Makariv and Irpin cities;
- Construction of alternative roads to existing ones in Zhytomyr and Chernigiv directions;
- Upgrade of bus network, development of specialized road services;
- Construction of bus stations in the towns of Obuhiv, Brovary, Bodyspil, Borodyanka, Irpin, Fastiv, Vyshgorod, Byshiv.

By 2020, the length of roads will increase from 4,245 km to 4,560 km, while road density will grow from 274 km/thousand sq.km. to 294 km/thousand sq.km.

The volume of transported passengers in one direction will grow 1,8 times by 2020. Population mobility using all modes of transportation will grow 1,9 times: from 60 to 112 trips per person per year.

The number of vehicles in suburban area will grow 1,2 times over the planning period. The growth will be particularly strong in cars segment with their total number growing from 127 thousand to 169 thousand, and the level of car ownership increasing from 122 to 200 cars per thousand residents.

Railroad transportation

- Modernization of Kyiv-Zhmerynka-Lviv section (corridors #3 and #9);
- Construction of the south detour from Kyiv-Korosten to Kyiv-Moscow line (including a bridge over the Dnipro River);
- Construction of Kyiv-Zhytomyr railroad tracks (part of the new transportation corridor #3) using European tracks;
- Building of the new sorting station on Kyiv-West, Kyiv-East stations, and development of Trypillya-Dniprovske station due to the new location of Kyiv cargo port.

By 2020, length of railroad tracks will grow from 354 km to 444 km, and tracks density will increase to 28,6 km/thousand sq.km.

Air transportation

- Further development of Boryspil International Airport;
- Completion of renovation works at Kyiv Airport to include reconstruction of facilities supporting short-range international and domestic flights, to gradually evolve into an airport for business travel also servicing private planes;
- Construction (in the long-term) of Roslavychi airport near Bugayivka village.

River transportation

- Construction of the new cargo river port in the area of Ukrayinka City, estuary of the Stugna River;
- Organization of new passenger lines to the districts of new residential development, collective gardening communities, recreation areas, development of excursion and entertainment tours.

It is planned to organize the network of transportation and warehousing centers on the major highways (5 centers).

It is planned to upgrade and develop **engineering equipment and engineering infrastructure** of suburban urban zone.

Development of water and sewage systems includes the following key components:

- Improve ecologic conditions of water resources by introducing water preservation technologies, reduction of water use per unit of production, upgrade of existing and construction of new systems for reverse and repeat water supply, utilization of the cleaned rainwater for industrial use, upgrade of the systems for limiting and monitoring of water use and quality;
- Modernize and develop municipal and village water and sewage systems – expansion of systems productivity based on the requirements (volume of rainwater), calculated in accordance to the rational norms;
- Increase the level of water preparation and cleaning of rainwater, implementation of modern cleaning technologies (enrichment) and decontamination;
- Upgrade water supply and distribution system along with water drain systems by building new and replacement of amortized waterways, collectors, reconstruction of pump stations, reservoirs and other constructions, install deep collectors and close some pump stations, zoning water supply systems;
- Develop technical water supply systems, liquidate water loss and repeat water contamination, introduce modern systems for localized sewage in gardening communities in compliance with respective sanitary planning and ecologic norms;

- Organization of reliable centralized water supply and sewage, first and foremost, for the settlements within Chernobyl Nuclear Power Plant high impact zone;
- Ensure that all housing has access to water supply and sewage systems.

Within the impact zone of Kyiv City municipal systems the following measures are planned:

- Stabilization and gradual reduction of drinking water supply to consumers in suburban area by building local underground water intakes;
- Construction of technical water pipes of Kyiv City including the needs of suburban settlements that do not have their own sources of technical water supply;

[The skipped sections deal with water supply and water wells drilling in suburban areas.]

[Also skipped are several paragraphs that deal with heat, gas, and electricity supply as well as communication lines that do infer any connection to allocation of the city/suburb zones, transportation, or roads.]