４．質問表回答

４－１　建設局

[Letterhead of Large-Scale Construction Department of the Mayor's office of Bishkek City]

February 24, 2011
Outgoing # MM08-16/286

Bishkek City Development Agency

Basic Information about Large-Scale Construction Department

Large-Scale Construction Department at the Mayor's office of Bishkek City hereby provides the information below following the questionnaire developed by JICA study team.

Point (3) Planning and Development of Road Network in Bishkek City and point (6) Modernization/maintenance of Roads

The main element of the road network planning and development strategies is master plan of Bishkek City, *Major Directions of Transport System Development in Bishkek until 2025* developed by Kyrgyz Scientific & Research Town Planning & Design Institute and the Law of the Kyrgyz Republic *On Automobile Roads* that sets forth economic, legal basics and road management principles, types and legal regime of automobile roads, territories and adjacent facilities, rights, obligations and responsibilities of owners, agencies supervising the roads and users. The Law further regulates interaction of road bodies of the Ministry of Transport and Communication of the KR with state and local authorities. There are also *Rules of use of automobile roads, road facilities and bodies thereof in the territory of the KR*, as well as *Regulation on the procedure of construction (reconstruction) works, repairs of engineering networks and facilities and restoration of improvement elements in municipal territory of Bishkek City*.

Total length of roads is 1374, 4 km, of them 722,0 km are roads with bituminous concrete surfacing, and 651,90 km are roads with ravel surfacing.

By categories of roads:

- Highways with bituminous concrete surfacing – 232,95 km
- Roads of local importance with bituminous concrete surfacing – 488,65 km
- Roads of local importance with gravel surfacing, of them 534,7 km of roads in residential blocks, including:
- with bituminous concrete surfacing – 61,6 km;
- with gravel surfacing – 473, 1 km.

These calculations have been made following the inventory data held in 2005 by *Kyrgyzdortransproekt* State Design Institute (SDI).

Due to lack of funds mainly highways with intensive passenger and traffic flow are currently maintained and rehabilitated.

Point (8) Logistics (procurement, construction and surveillance services)
Point 8(1) Mainly private contractors such as *Tekhnotop* Limited Liability Company (LLC), *Grantstar* LLC, Su-4 Open Joint-Stock Company, *Mostdorstroi* LLC, *Bishkekasfaltervice* Small Enterprise, and etc. engage in road construction in Bishkek City.

Point 8(2), *Kyrgyzdortransproekt* SDI

Point 8(5) 4 large ferroconcrete factory operate in Bishkek City.

Point 8(6) 2 bituminous concrete factories operate in Bishkek City; 2 in Sokuluk village and 1 in Kant.

Point 8(7) Yes.

Point 8(8) Yes.

Point 8(9) All procurement procedures for road construction and maintenance are organized by Large-Scale Construction Department at the Mayor's office of Bishkek City based on tender documents filed by the procuring organization.

Annex: 6 pages

Head M. Miyarov

Executor:
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Main Directions of Transport System Development in Bishkek City till 2025

1. General Information about Existing Transport Infrastructure of Bishkek City

Bishkek is the largest transport hub integrating international, national, regional, municipal and local functions.

External transport communication of the city is carried out by railway, aviation and automobile transport.

The main railway branch line, *Lugovaya – Bishkek*, connects the city with Kazakhstan and Uzbekistan and via *Arys* and *Chu* stations with European part of Russia, Southern Ural and Siberia. The major passenger and cargo flows go through this direction. Another railway branch line, *Bishkek – Balykchy* provides communication of the city with eastern parts of Chui province and with Issyk-Kul lake area.

Three stations, *Bishkek – I*, *Bishkek – II*, *Alamedin* located in the city are within Bishkek rail center. *Bishkek* – I and *Alamedin* are cargo stations of I class having developed infrastructure on formation and de-formation of trains, whereas *Bishkek – II* is a station of III class predominantly for passengers with railway terminal and specialized passenger platforms.

Major facilities of aviation transport include *Manas* airport located at a 30-km distance to the North-West of Bishkek City.

Bishkek is also a large automobile transportation center. 14 roads along which bus routes of suburban and long-distance communication, meet in Bishkek.

Highway of international importance (ЭМ-01) passes from West to North-East connecting Tashkent – Bishkek – Almaty. The highway goes through Bishkek City, notably *Chui* Avenue, *Jibek-Jolu* Avenue and *Kurmandjan Datka* Street. There is another international highway (ЭМ – 02), connecting Bishkek, Karabalta, Osh, Irkeshtam and border with China. International highway (ЭМ-07), Bishkek – Balykchy - Torugart approaches the city from East connecting the city with recreational area of Issyk-Kul lake, Tian-Shan hollow and border with China. This highway continues within the boundaries of the city through *Jibek Jolu* Avenue. The highway (ЭМ – 09), Bishkek – *Manas* airport approaches the city from North-West, continuation of which is the road, M-004, *Manas* airport – *Kamyshanovka*, having an exit to Kazakhstan. This road continues within the boundaries of Bishkek through *Fuchika* Street.

Bishkek (west) bus terminal, *Alamedin* (east) bus terminal, Osh automobile station and *Ak-Jol* automobile station operate in the city to serve suburban and inter-city transportation.

Detailed characteristics of the roads approaching the city, inter-city and suburban transport routes, as well as description of railway transport can be found in the book, *Comprehensive Evaluation of Current Status of Bishkek City*.

Intra-city passenger transportation in Bishkek are offered through the existing transport and communication network that includes the following types of mass passenger transportation: buses, trolley-buses, individual transport (taxi, cars in state, municipal, private and other ownership). The volume of passenger transportation by all types of municipal transport is over 250 mln. passengers per year.

Comparative review of the transportation operations by all types of municipal transport for 2004 is presented in Table 1 below.

Table 1

#	Type of municipal transport	Passengers transported, mln. people	Transport operations	
			mln. passenger km.	By type of transport, %
1.	Trolley-bus	47,92	196,5	12,5
2.	Bus	4,44	18,2	1,5
3.	Mini-bus	206,1	1360,26	86
	Total	258,46	1574,96	100

Thus, within the structure of surface passenger transportation the share of trolley-bus is 12,5% of total volume of transport operations, bus – 1,5% and mini-bus – 86%.

Length of the surface transport network (by axis of streets) is as follows: trolley-bus – 244,5 km, bus – 37,75 km, mini-bus – 1264,66 km.

Upon substantial structural transformations caused by transition to market relations and denationalization today automobile transport includes over 800 large-, medium- and small transport organizations. The largest transport organizations and enterprises are represented in Table 2.

Table 2

#	**Transport company**	**Address**
1.	Bishkek automobile transport company of state concern, *Kyrgyz-Tamak-Ash*	Klubnyi lane, 14
2.	State company, Chui Enterprise of Bus Terminals and Auto Stations	Chimkentskaya street, 1
3.	Kyrgyz Railway Department	Tolstoy street, 83

#	**Transport company**	**Address**
4.	Automobile transport joint-stock company of open type, *Aman jol*	Gorky street, VPZ
5.	Joint-stock company, *Argymak*	Bach street, 1
6.	Motor transport base 2901, Ministry of transport of the Kyrgyz Republic (motor transport base 2901, Bishkek PTO)	Sadygalieva street, 2
7.	Open joint-stock company, Bishkek cargo transportation company	Tolstoy street, 19
8.	Joint-stock company of open type, Motor transport company # 6	Eastern industrial zone
9.	Open transport & commercial joint-stock company, *Ak-jol*	Vasilievsky highway
10.	Joint-stock company, *Kubat* (Bishkek cargo transportation company # 4)	Isanova street, 1
11.	Joint-stock company of open type, *Trans-Soyuz-Asia*	Sadygalieva street, 5
12.	Kyrgyz transport & forwarding association of international transportation, *Kyrgyzintrans*	Isanova street, 42
13.	Joint-stock company of open type, *Kyrgyzjol*	Isanova street, 42a
14.	Joint-stock company of open type, *Avtouchkombinat*	Gorky street, 2
15.	Joint-stock company of open type, *BARZ*	Sadygalieva street, 1
16.	Joint-stock company of open type, *ATP Ala-Archa*	Nekrasova street, 16
17.	Joint-stock company of open type, *Kok-Jar*	Alma-Atinskaya street, 2
18.	Joint-stock company of open type, *Salam*	Mederova street, 44
19.	Bishkek trolley-bus department, utilities company	Moscovskaya street, 237
20.	Chui specialized mobile mechanized base	Bagishsky lane, 78
21.	Automobile company, Financial Department of the President's office	Frunze street, 421
22.	Motor pool of special automobile transport, Department of State Veterinary under the Ministry of Agriculture and Water Economy of the KR	Jibek-Jolu avenue, 96
23.	Cooperative of parking lots # 6 and # 12 of Lenin district council of the Association of motor vehicles drivers	Aeroportovaya street, 1
24.	Joint-company of open type, *Ak-Joltoi*	Alma-Atinskaya street, 2a
25.	Closed joint-stock company, Kyrgyzavtoservis	Gorky street, 38
26.	Fleet of the Ministry of Interior of the KR	Orozbekova street, 283
27.	Enterprise of joint-stock company, *Kyrgyzavtoservis*, *Avtoservis* # 2 Bishkek station	Gorky street, 38a
28.	Motor pool of Health Department of the Mayor's office of Bishkek City	Gorky street, 1
29.	Motor pool of Kyrgyz Scientific & Research Irrigation Institute	Dushanbinskaya street 4a
30.	*Vesotra – Kyrgyz*, Limited Liability Company	Tolstoy street, 210
31.	*Ak-jol Firm*, Limited Liability Company	Chimkentskaya street, 1
32.	Diagnostic station at the State Automobile Inspection, Ministry of Interior of the KR	Cholpon-Atinskaya street, 1a
33.	*SAVavtoclinic* Israeli Limited Liability Company	Tolstoy street, 148
34.	*UAZ-servis*, closed joint-stock company	Den Syapoin street, 231a

#	**Transport company**	**Address**
35.	*Evi-Avtoservis*, Limited Liability Company	Tolstoy street, 19
36.	Transport branch of *Kyrgyzzhilkommunsoyuz*	Naberezhnaya street, 18
37.	*International cargo transport company N7*, Limited Liability Company	Mesarosha street, 76
38.	*Liga*, Bishkek agency of transport companies, Limited Liability Company	Kurmanjam-Datka street, 326
39.	Directorate on Technical Development of Customs Infrastructure in the Northern Zone at the State Customs Service	Sovetskaya street, 4a
40.	Transport & forwarding enterprise of the National Academy of Science of the KR	Mederova street, 100
41.	Bishkek transport & forwarding enterprise at the Kyrgyz Transport-Forwarding Association	Eastern industrial zone
42.	Bishkek Passenger Vehicle Fleet # 3, public utility enterprise	Alma-Atinskaya street, 4
43.	Sverdlov district council, branch of the Union of motor vehicle drivers of the KR	Chui avenue, 32
44.	Department on garages and parking lots of the Mayor's office of Bishkek city	Moscovskaya street, 15
45.	Bishkek passenger vehicles pool	Kustanaiskaya street, 121
46.	State enterprise on servicing air traffic of the KR, *Kyrgyzaeronavigatsiya*	*Manas* airport
47.	*Manas* International Airport, joint-stock company of open type	*Manas* airport
48.	*Kyrgyzstan aba joldoru*, national airlines, joint-stock company of open type	*Manas* airport

Motor vehicles fleet is continuously developing in the capital: by mid of 2006 there were 92185 motor vehicles the majority of which, i.e. 76860 were owned by individuals. In 2005 motor vehicles fleet of the capital comprised 89607 and 74629 automobiles, i.e. increase by over 2 500 motor vehicles in one year.

Table 3

Dynamics of Changes in Number of Phone Stations in Bishkek City. Breakdown by years

Year	Number of phone stations, units	Population of the City, thous.people	Level of automobilization, vehicles per 1000 citizens
1970	16005	380	42,1
1980	50492	542,5	70,3
1990	68542	627	125,0
2000	78805	768	102,5
2005	89607	798,5	112,2
2006	92185	818,5	112,6

Total length of street & road network of Bishkek exceeds 1110 km, including238,75 km. of arterial highway (of municipal and district importance). Data about the length with breakdown by residential complexes and micro-districts and downtown of the city are presented in Table 4 below.

Table 4

Length of arterial and Bishkek City roads in the beginning of 2005

Location	Total length, km	Including length by importance of a road, km				
		Arterial			Local	
		Of municipal importance	Of district importance	Freight traffic	Residential streets	Passages
Downtown of the City	813.7	94.60	74.05	56.50	535.30	53.25
Passages in micro-districts	21.50					21.50
Altyn - Beshik Residential community	9.00				8.30	0.70
Chon-Aryk village	13.35		3.90		7.95	1.50
Uchkun residential community	8.00				7.40	0.60
Ak-Orgo residential community	66.00		5.30		59.50	1.20
Kirgizia – 1 residential community	7.50				7.30	0.20
Archa-Beshik residential community	130.00		4.40		24.60	1.00
Aska-Tash residential community	3.00				2.45	0.55
Kelechek residential community	10.50				10.50	
Ak-Bosogo residential	43.80				43.80	

Location	Total length, km	Including length by importance of a road, km				
		Arterial			Local	
		Of municipal importance	Of district importance	Freight traffic	Residential streets	Passages
community						
Ak-Tilek residential community	6.30				5.35	0.95
Orto-Sai village	7.95				6.60	1.35
Bakai-Ata residential community	8.25				5.30	2.95
Enesai residential community	9.70				7.70	2.00
Kolmo residential community	16.00				16.00	
Kasym residential community	4.20				4.20	
Salam-Alik residential community	3.20				3.00	0.20
Krasnyi stroitel residential community	20.50				18.30	2.20
Yntymak residential community	18.05				18.05	
Kok-Jar residential community	30.50				29.00	1.50
Ala Too residential community	38.42				29.01	9.41
Orok residential community	6.50				2.37	4.13
Dordoi residential community	14.67				11.29	3.38
Kara-Jigach residential	22.35				14.57	7.78

Location	Total length, km	Including length by importance of a road, km				
		Arterial			Local	
		Of municipal importance	Of district importance	Freight traffic	Residential streets	Passages
community						
Kalys-Ordo residential community	17.68				14.15	3.53
Total in the city	1,350.62	94.60	87.65	56.50	991.99	119.88
		238.75			1,111.87	

A system of automobile service of Bishkek includes garages and parking lots for permanent and temporary parking of over 32 800 car/places, 49 gas stations and 17 large technical maintenance stations, including 185 service points. More detailed information about the structure of automobile services can be fond in the book, *Comprehensive Evaluation of Current Status of Bishkek City.*

4. Development of Automobile Transport System

To evaluate perspectives of development of automobile transport system and service networks of the cities the level of automobilization, i.e. number of cars per 1000 citizens, is applied. Having analyzed the status of the transport structure, perspectives of territorial development, economic tendencies, increase of a number of cars owned by individuals, the level of automobilization of 200 cars per 1000 citizens for the estimated period under projected population number, 1200 000 citizens has been calculated for the master plan. The level of automobilization of general vehicles fleet is 240 vehicles per 1000 citizens. Accordingly, estimated fleet of cars constitutes 240 000 cars, whereas fleet of vehicles is 288 000 automobiles.

A number of vehicles parked in garages located in a specially allocated territories and in premises and facilities, by the end of estimated period will amount 240 000 cars and 288 000 vehicles. Gradual reconstruction (via construction of multi-storey on-ground and underground garages) of a number of the existing place of permanent parking of individually owned vehicles that are currently incompliant with nature protection and environmental requirements is recommended. The master plan also proposes location of the projected 240 000 automobiles as follows:

- 30% - in private sector;

- 30% - in one-storey garages;
- 20% - in two-storey garages;
- 20% - in multi-storey garages.

The master plan also stipulates for construction of 8 multi-storey garage for season storage of vehicles located n industrial and utilities areas.

Location of large parking places of temporary storage is planned based on the following principles of organizing thereof: underground and on-ground multi-storey garages – parking places as well as within the premises an facilities, including use of underground area are recommended to be used in the downtown of the city. Pursuant to the developed design 168 000 of cars will have temporary parking places, notably:

- 35 % - in residential areas;
- 35% - in industrial, utilities and storage areas;
- 10% - in municipal and specialized centers;
- 20% - in recreational areas.

It is also recommended to organize temporary parking places for non-municipal vehicles on the major highways approaching the city, at bus and railway stations, in business, trade ad industrial areas, public centers of residential areas.

A number of gas stations must reach up to 60 stations with at least 5 fuel-filling columns each of total area up to 12 ha.

Capacity of the automobile service network must be increased up to 1440 working points of total area up to 144 ha via construction of new technical maintenance stations and reconstruction of the existing stations, development of service points at gas stations, taxi parks and automobile companies.

5. Development of Street – Road Network

The master plan of Bishkek City till 2025 stipulates for a comprehensive program of actions and proposals on development of the transport structure and street-road network that would ensure necessary guarantees and conditions for transition to efficient operation of all municipal systems for the estimated period. All these proposals and actions have been developed based on the current built-over land and outlined master plan for new territories' development.

All actions and proposals regarding design are strictly regulated by the effective construction norms and rules (SNiP), guidelines on municipal streets and roads design, as well as state sector-specific standards (GOST) and additional design documentation developed during the previous stages of design and construction.

To ensure efficient interaction of municipal systems and creation of conditions for comfortable living both in the downtown and other districts of the city, technical parameters and qualitative indicators of street-road network will be improved.

The master plan defines major areas of formation and development of street – road network and transport structure, i.e. allocation of necessary areas for location of all necessary transport facilities and further construction works both in the short- and long-term.

Development of street-road network is stipulated based on functional purpose of streets and roads (Please, refer to Table 9), intensity of transport, bicycle and pedestrian traffic, architecture and design organization of territories and nature of built premises.

Table 9

Categories of roads and streets	Major purpose of roads and streets
Main streets of city-wide importance, of continuous movement	Transport communication among residential, industrial areas and public centers in the largest and large cities, as well as with other main streets, municipal and offsite automobile roads; ensuring transport traffic by major areas at various levels
Main streets of city-wide importance with regulated traffic	Transport communication among residential, industrial areas and downtown of the city, centers of planned districts; exits to the main streets and roads and offsite automobile roads; crossing with main streets and roads as a rule at one level
Main transport & pedestrian streets of district importance	Transport and pedestrian communication among residential areas, as well as between residential and industrial areas, public centers, exits to other main streets
Main pedestrian & transport streets of district importance	Pedestrian and transport communication (mainly public passenger transport) within the boundaries of the planned district

Annex 1. Program of Transport Events for Implementation of Master Plan of Bishkek City Development Till 2025

##	Indicators	Unit of measurement	Original year	2010	2025
1.	**Length of lines of public passenger transport, total**	**Double-track km**	**1546,91**	**1062,33**	**768,80**
1.1.	Light metro	Double-track km	-	-	14,80
1.2.	Urban electric train	Double-track km	-	-	14,00
1.3.	Trolley-bus	Double-track km	244,50	280,00	370,00
1.4.	Bus	Double-track km	37,75	150,00	220,00
1.5.	Mini-bus	Double-track km	1264,66	632,33	150,00
2.	**Length of main streets and roads, total**	**km**	**208,75**	**243,31**	**614,81**
2.1.	Main streets of city-wide importance of continuous movement	km	-	17,10	102,98
2.2.	Main streets of city-wide importance with regulated traffic	km	94,60	102,82	152,71
2.3.	Main streets of district importance	km	114,15	123,39	359,12
3.	**Density of street-road network, total**	**km/km^2**	**1,33**	**1,47**	**2,42**
3.1.	Main streets of city-wide importance	km/km^2	0,60	0,72	1,01
3.2.	Main streets of district importance	km/km^2	0,73	0,74	1,41
4.	**Transport inter-change and over/under passes at various levels**	**units**	**12**	**17**	**61**

8 – 10 Specification of Rod Croassroads Design
Design Firm “Gorproekt”

Design
Construction of crossroads and traffic lights in Bishkek City
Intergelpo Street – Dimitrova Street – Moscovskaya Street

Stage: Working draft
Set: T, PN
Code: 52/SB-2008
Customer: CMOU Traffic Policy Department Ministry of Interior of the Kyrgyz Republic

Director, “Gorproekt” design firm, LLC O. Sultanov
Chief engineer of the design G. Barashkina
Bishkek 2008

Project Outline:

T Traffic Area
PN power supply networks
E estimates

Chief engineer of the design G. Barashkina

General Data		
Page	Data	Comments
1.1	General Data	
1.2.	Sheet of major sets of working drawings	
	Sheet of major set of drawings	
1.3.	Letter of Traffic Police of the Ministry of Interior of the Kyrgyz Republic # 20 – 2/2538 dated November 24, 2008	
1.4 – 1.8.	Consolidated sheet of construction and assembly works	

Working drawings _____

Have been developed pursuant to the existing norms and rules, including explosion hazard and fire safety requirements

Chief engineer of the design [signature] G. Barashkina

Sheet of major sets of working drawings		
Abbreviation	Description	Comments
T	Traffic area	Volume 1, book 1
PN	Power supply networks	Volume 1, book 1
E	Estimates	Volume 1, book 2

Sheet of major set of drawings of _____		
Page	Description	Comments
2	Master plan	
3	Plan of surface (patchwork)	
4	Scheme of traffic lights installation Road marking	

Design was developed pursuant to construction norms regarding explosion hazard and fire safety rules.

Chief engineer of the design [signature] G. Barashkina

Scope of Works Sheet

#	Type of works	Unit of measurement	Quantity	Comments
1	2	3	4	5
	1. Disassembling works			
1.1.	Breaking of concrete curb at the roadway, BP 100.30.15 brand, by jackhammers; manual loading of debris in dump trucks; transportation to the dump for 10 km. distance	Running meters Cub. m.	300 13	
1.2.	Dismantling of facing ferroconcrete title of 5x50x45 cm; manual loading in dump trucks and transportation to the dump for 10 km distance	Units Running meters	740 185	

#	Type of works	Unit of measurement	Quantity	Comments
1.3.	Dismantling of asbestos cement pipes, 0.3 m diameter	Units Running meters	1 14	
	2. Recovery works			
2.1.	Installation of tray under the road base:			
2.1.1.	Excavation works, soil III.gr, 0.4m., loading in dump truck, transportation to the dump for 10 km distance	Cub.m.	270	
	= 1.95 thous.m.			
2.1.2.	Planning of tray, manual surface wit soil III gr.	Sq.m.	660	
2.1.3.	Compaction of non-cohesive soil by pneumo puddling with watering	Cub.m.	200	
	Works on reinforcing			
2.1.4.	Reinforcing of water channels with assembled ferroconcrete channel blocks, including	Running meters	258	
	Б-3-1 brand	units	12	
		Running meters	6	
	Б-3-2 brand	units	84	
		Running meters	252	
2.1.5.	Hydro-isolation of external surface of the bottom and walls of tray with bitumen, two layers	Sq.m.	335	
2.1.6.	Installation of base for tray from sandy gravel; depth of the layer 0.1m	Cubic m.	16	
2.1.7.	Making joints and connections of trays with artificial constructions monolithic, concrete of B-15 brand	Cubic m.	4.2	
	3. Road base			
	A. Roadway (expansion of roadway/traffic area)			
3.1.	Sub-soil layers – sandy gravel of 70-120 mm fraction – 20mm	Sq.m.	257	
3.2.	Base made of sandy gravel with optimal granular composition of 40-70 mm	Sq.m.	257	

#	Type of works	Unit of measurement	Quantity	Comments
	fraction – 0.15m.			
3.3.	Installation of concrete curbs on the concrete base of B-15 brand			
	БР 100.30.18	Running meter	240	
	БК10.100.30.18	Running meter	64	
3.4.	Low layer of surface – coarse bituminous concrete – 0.05m Bitumen pouring – 0.6 l/m	Sq.m.	257	
3.5.	Upper layer of surface – fine bituminous concrete – 0.04m Bitumen pouring – 0.6 l/m	Sq.m.	257	
3.6.	Patchwork repair of the roadway surface	Sq.m.	1328	
3.7.	Making road borders of sandy gravel of 0-40mm fraction, depth – 0.15m.	Sq.m.	152	
	B. Pavements and sidewalks			
3.8.	Installation of curb of БР100.20.8. over sandy gravel base	Running meter	40	On sidewalks
3.9.	Formation of base of sandy gravel of 0-40 mm fraction, depth of the layer – 0.1m	Sq.m.	50	On sidewalks
3.10.	Surfacing made of hot fine mixture, depth of the layer – 0.03m.	Sq.m.	50	On sidewalks
3.11.	Making road borders of sandy gravel of 0-40mm. fraction with depth of the layer – 0.13m.	Sq.m.	10	
3.12.	Patchwork repair of pavements	Sq.m.	180	
	4. Artificial facilities			
4.1.	Laying concrete rectangular form pipes, 0.5 x 0.5m			
	Road	Units	1	
		Running meter	17	
	Pedestrian	Units	3	
		Running meter	9	
4.2.	Laying asbestos cement pipes			
	Diameter 0.3m	Units	2	
		Running meter	6	
	Diameter 0.4m	Units	1	

#	Type of works	Unit of measurement	Quantity	Comments
		Running meter	3	
4.3.	Laying shower/rain-collection grids	units	4	
	5. Road setting			
	A. Road marking – nitro epoxy enamel			
5.1.	Continuous line, type 1.1, width 0.1m Type 1.3, width 0.1x2	km km	0.43 0.16	
5.2.	Dash lines of 0.1m. width under correlation of dash and interval Type 1.5, 1:3 Type 1.6, 3:1	 km km	 0.17 0.07	
5.3.	Other types of horizontal marking: (stop line, pedestrian crossings, marking 1.18)	m	54	
	B. Traffic Signs			
5.4.	Priority signs			
	Type 2.1	Units	2	
	CKM-1.35 stand on concrete foundation	Units	2	
	Type 2.5	Units	2	
	CKM-1.35 stand on concrete foundation	Units	2	
5.5.	Prohibiting signs			
	Type 3.24	Units	1	
	CKM-1.35 stand on concrete foundation	Units	1	
	Type 3.27	Units	1	
	CKM-1.35 stand on concrete foundation	Units	1	
	Type 3.18.1	Units	-	
	CKM-1.35 stand on concrete foundation	Units	-	
5.6.	Informative signs			
	Type 5.6	Units	-	
	CKM-1.35 stand on concrete foundation	Units	-	
	Type 5.16.1,2	Units	4	
	CKM-1.35 stand on concrete foundation	Units	4	
	Type 5.33	Units	4	
	CKM-1.35 stand on concrete foundation	Units	4	
	Type 5.8.1	Units	-	
	CKM-1.35 stand on concrete foundation	Units	-	

#	Type of works	Unit of measurement	Quantity	Comments
5.7.	Warning signs			
	Type 1.21	Units	1	
	CKM-1.35 stand on concrete foundation	Units	1	
5.8.	Mandatory signs			
	Type 4.1.6.	Units	-	
	CKM-1.35 stand on concrete foundation	Units	-	
6.	Installation of transport traffic lights	Units	8	
7.	Installation of pedestrian traffic lights	Units	8	
8	Breast rail	Units	400	

[Letterhead of the Chief Department for Traffic Safety of the Ministry of Interior of the Kyrgyz Republic]
Dated November [ILLEGIBLE NUMBER], 2001
Outgoing # 20-2/2538

TO: Director of Gorproekt LLC
Sultanov S.I.

CDTS MI of the Kyrgyz Republic has reviewed the design of costruction works at Moscovskaya street from Fuchika street to Intergelp street. We consider it necessary to install traffic lights at crossroad of Moscosvksya and Intergelpo streets and revise the road signs at the above crossroads making Intergelpo street to be the main street.

Head [signature] B.Borbiev

BRIEF REPORT
ON ACTIVITIES AIMED AT ENSURING TRAFFIC SAFETY AND PUBLIC ORDER
UNDERTAKEN BY DEPARTMENT FOR TRAFFIC SAFETY AT CHIEF DEPARTMENT OF INTERIOR OF BISHKEK CITY
(DTS CDI)

for 12 months of 2010 and January, 2011

During 2010 DTS CDI of Bishkek City carried out activities aimed at ensuring traffic safety, improvement of road and transport discipline and culture of behavior of road users. Comprehensive, organizational and preventive activities aimed at decrease of road accidents rate and severity of consequences thereof were undertaken.

During the reporting period personnel of DTS organized and conducted 99 (72) + 37,5% of prophylactic events under various coded names, such as, “Bus” (11), “Driving” (7), ”Pedestrian” (10), “Tax” (4), “Patent” (4), “Digging out” (1), “Billboard” (6), “Working off” (3), “Passenger transport” (11), “Toning” (11), “School. Children” (8), “Public order” (8), “Arsenal” (5), “Auto search – bone-setter” (2) and “Search” (1), “Attention! Children” (2), “Good morning, school” (1), “Extremist” (1), “Bill board – unauthorized trade” (1).

Targeted prophylactic events aimed at decrease of road accidents and enhancement of public order are carried out on a weekly basis jointly with other services of CDI.

For the purpose of decrease of accident risk 11,021 (3837) + 187.2% prophylactic talks were undertaken, including 971 (562) + 72.7% with school students and 1,235 (897) + 37.6% - with drivers of transport companies, of them 757 (362) + 109.1% - with drivers of buses and mini-buses, 4,635 (1,406) + 229.6% - with owners of individual vehicles; and 4,180 (972) + 330.0% - with pedestrians.

Accidents risks and problems of traffic safety in the territory of Bishkek City have been regularly covered by mass media means. From the beginning of the year 37 (450) radio programs and 104 (322) TV reports were produced and broadcasted, as well as 78 (385) materials and information were published in periodicals.

During 12 months of the current year 992 (989) accidents were registered, during which 103 (105) individuals died and 1,056 (1,043) individuals got injured. A number of car accidents comparing with 2009 increased by 3 cases or by (+0.3%); a number of individuals died in car accidents decreased by (-1.9%) and a number of injured increased by (+1.2%).

In 2010 total number of car accidents that involved children is at the level of 2009, 0.0%. At the same time a number of children died in car accidents increased by 44.4% 13 (9) whereas a number of children injured during car accidents decreased by -1.0%, 188 (190).

Analysis of car accidents registered in Bishkek during 2010 comparing with 2009 demonstrates as follows: (breakdown by districts)

District	Number of car accidents		Number of individuals died		Number of individuals injured	
	2009	2010	2009	2010	2009	2010
Pervomaysky	307	310 (31.3%)	28	18	324	319
Sverdlovsky	239	251 (25.4%)	21	22	255	275
Oktyabrsky	194	193 (19.5%)	20	24	212	222
Leninsky	251	238 (24.0%)	36	39	256	240
Total	989	992	105	103	1,043	1,056

Accidents involving children: breakdown by districts

District	Number of car accidents		Number of individuals died		Number of individuals injured	
	2009	2010	2009	2010	2009	2010
Pervomaysky	57	48 (26.1%)	1	2	60	47
Sverdlovsky	46	40 (21.8%)	2	4	44	42
Oktyabrsky	31	41 (22.3%)	1	3	32	42
Leninsky	50	55 (29.9%)	5	4	54	57
Total	184	184 (0.0%)	9	13 + 44.4%	190	188 - 1.0%

Breakdown by types and time of accidents

Type of accident	Accident	Died	Injured	Time of accident	Accident	Died	Injured
Automobile-pedestrian accident	616	61	596	00.00-06.59	185	43	210
Car crash	258	13	333	07.00-09.59	106	10	115

Type of accident	Accident	Died	Injured	Time of accident	Accident	Died	Injured
Automobile – bicyclist accident	9	2	7	10.00-13.59	174	6	181
				14.00-16.59	145	10	151
	55	23	65	17.00-19.59	184	15	195
	18	-	19	20.00-22.59	147	14	150
Other	36	4	36	23.00-24.00	51	5	54

Breakdown by days of week

Day of week	Accident	Died	Injured
Monday	136	13	144
Tuesday	134	8	145
Wednesday	139	10	146
Thursday	151	20	156
Friday	147	7	151
Saturday	140	21	158
Sunday	145	24	156

Streets of Bishkek with high accident rate for 12 months of 2010

Street name	Accident	Died	Injured
Den Syopin ave.	102	16	112
Chui ave.	87	10	100
Jibek-Jolu ave.	80	7	82
L.Tolstoy street	65	4	70
Sovetskaya street	63	10	83
Alma-Atinskaya street	32	4	40
Other streets	563	52	569

Accident rate is the highest on Thursday (151 accidents, 25.3% of total number of accidents, including 20 died and 156 injured individuals), followed by Sunday (145 accidents, 14.7% of total number of accidents, including 24 died and 156 injured individuals).

The street with the highest accident rate is Dan Syaopin ave. with 102 accidents (10.3% of total number of accidents, including 16 died and 112 injured individuals).

During 12 months of 2010 drivers of public transport committed 135 (112) accidents (13.6% of total number of accidents, including 18(8) died and 157 (115) injured individuals), of them:

- 91 accidents caused by drivers of public transport; as a result 14 individuals died and 105 individuals got injured, including 13 children (3 died and 11 injured);
- 44 accidents with involvement of [MISSING TEXT IN RUSSIAN]; as a result 4 individuals died and 52 got injured. Children in 7 accidents received various injuries of different severity rate during these accidents.

Major reasons for accidents caused by drivers are:

- automobile-pedestrian accident – 616 cases or 62.1% of total number of accidents;
- crash – 258 cases or 22.1% of total number of accidents;
- head-on crash – 55 cases or 5.6% of total number of accidents.

Other types of accidents (automobile-bicyclist accident, collision with non-moving vehicle, and etc) constitute only 63 accidents, which is -6.4% of total number of accidents.

During the reporting period 817 accidents (81.9% of total number of accidents) caused by the drivers were registered. 78 individuals died and 990 individuals got injured during these accidents. 181 accidents (18.2% of total number of accidents) caused by pedestrians were registered resulting in death of 16 individuals and injuries among 174 persons.

During the reporting period 10,475 (10,184) reports about accidents were made to front office of DTS CDI of Bishkek City. 4,032 (5,261) reports were confirmed and 6,443 (4,923) reports were not confirmed.

992-103-1056 (989-105-1043) accidents were registered and 3,042 (5,343) were not registered.

Analysis of traffic rules violations and car accidents involving passenger transport during 12 months of 2010 and January, 2011 in the territory of Bishkek City

			Number of accidents				Traffic rules violations
#	Company	Number of vehicles	Accidents 2010 /January, 2011, not registered	Accidents 2010 /January, 2011	Persons died, 2010 /January, 2011	Persons injured, 2010 /January, 2011	For 12 months, 2010/January, 2011
1	Avtomig	72	3/1	2	0	2	51/2
2	Agynai-trans	44	2				20/2
3	Akadem Service	84	7	2	1	3	39
4	Ak-Joltoi	231	9/5	3/1	1/0	16/1	276/18
5	Ak-niet-trans	54	1	1	0	1	5/1
6	Adilet-trans-Manas	56					14
7	Avto-janr		1/1				12/2
8	Airos Trans	55	1				20/2
9	Arkhat Trans		1	1	0	1	2
10	Ak Jol						5
11	Ata-Jol	42	2	1	0	1	17/1
12	Ayid Service	48					2/4
13	Baizak Aska	48	3	1/1	0/1	1/0	47/5
14	Bek-Too	63	1	1	0	1	34/6
15	Bomond group	51	2				6/4
16	BTU	86	25/8	8/1	1/0	7/1	12
17	Bura	48					1
18	Besto	39	1	1	0	1	22/5
19	BUEL	13	3				2/4
20	BATP		/3				6/11
21	BGATP	39	34				229/9
22	BPATP	366	/5	23/4	4/0	21/4	/6
23	Bus service	9					4
24	Batyr Khan Murager	272	6/1	1	0	3	83/17
25	Belinda						4
26	Veteran	8					5
27	Votochnyi express	141	5/3	2	0	2	79/7
28	Vancouver						
29	Geron	33					11/3
30	Dordoi bis	47					7
31	Dordoi-Trans	83	2		0	3	46/1
32	Ulma-Trans	24					
33	Jasada-Trans	24					21/7
34	Jir-Trans	121					1/1
35	Kulatai	86	4	1	0	2	36/4
36	Kuyun	187	4/2	6/1	1/0	7/1	213/23
37	Kut Kosun	50					18/4
38	Kudaibergen						8/3
39	Kut Jol		1				1/3
40	Liga	492	18/2	6/1	1/0	7/1	213/23
41	Manas-Trans	47	1				60/11
42	Meikin	152	5	3	1	3	103/7
43	Mande						12
44	San-Tash joldar servis	42					2/1
45	Sovet Brigada	109	2/2				61/4
46	Sable	23					2/1

			Number of accidents				Traffic rules violations
#	Company	Number of vehicles	Accidents 2010 /January, 2011, not registered	Accidents 2010 /January, 2011	Persons died, 2010 /January, 2011	Persons injured, 2010 /January, 2011	For 12 months, 2010/January, 2011
47	Stells	34	/2	1	0	1	13/2
48	Transgroup communication	170	5	7	1	6	114/12
49	Uzar West	20					10
50	Ulanbek Trans	21	2				8
51	Elada Plus	121	1/1	1	1	0	109/14
52	Express-Profi-Trans	28					16
53	Elek	151	4	1	0	1	77/6
54	Eleman Trans	43					26/5
55	Yuram	77	2	2	0	2	34/1
56	Ulma Trans	21		1	0	1	9/5
57	Trans soyuz	1	/1				
58	Chui Trans						15/3
59	Yaglokhor	58	2	3	1	4	34/3
60	Union plus	20	2				
61	Ellada-plus		1	4	0	4	
62	Archinai-trans			2	0	2	
63	Ala-Bel			2	1	1	
64	Jumadyl			1	0	1	
65	Others		9	1	1	1	145/26
66	Total		171/37	91/9	14/1	105/8	2,381/285

Under OTN: During control over technical condition of AMTS in Bishkek City
116 (105) – 4% of comprehensive inspections, including 24 (17) in passenger companies and 306 (255) – 8.8% of control inspections of technical condition of vehicles, including 61 (29) in passenger companies. 5,020 (7,916) vehicles were inspected. As a result 1,579 (2,219) motor vehicles that were operated with technical breakdown condition that threaten traffic safety; 503 (456) motor vehicles were prohibited to operate until the identified malfunctions are eliminated.

41 (48) reprimands and 394 (351) warnings regarding elimination of the identified deficiencies in AMTS maintenance were issued in the name of managers of automobile companies. Administrative measures in the form of fines for the total amount of 65,200 (50,100 Som) were imposed on 131 (108) managers of the companies.

PASSENGER TRANSPORT

Currently 48 automobile companies providing regular passenger transportation services on 151 routes are registered in Bishkek City. Of them Bishkek Trolley-Bus Department servicing 7 routes and Bishkek Passenger Transportation Company (BPATP) servicing 22

routes fall under the category of municipal transport companies. The remaining 122 routes are serviced by 46 companies of various forms of ownership.

For the purpose of liquidation of arbitrary routes of mini-buses, identification of traffic rules violations and improvement of transport discipline raids such as “Bus”, “Passenger Transport” have been regularly carried out.

16 detailed reports, including recommendations regarding regulation of passenger transport and deficiencies identified during the raids were communicated to the Mayor’s office of Bishkek City (outgoing ##: w/n dated May 9, 2010; 16/10 – 3155 dated May 12, 2010; 16/10 – 3220 dated May 13, 2010; 16/10 – 3391 dated May 19, 2010; 16/10 – 3505 dated May 20, 2010; 16/10 – 3620 dated May 21, 210; 16/010 – 3505 dated May 20, 2010; 16/10 – 3981 dated June 7, 2010; 16/10 – 1557 dated June 25, 2010; 16/10 – 5156 dated September 6, 2010; 16/10 – 5367 dated September 23, 2010; 16/10 – 5348 dated September 24, 2010; 16/10 – 5567 dated September 30, 2010).

Head
Police lieutenant colonel Y. Sarkulov

Re: JICA Questionnaire

DTS CDI of Bishkek City having reviewed the questionnaire developed by JICA on comprehensive development of municipal transport in Bishkek City with respect to point 3 "Planning and Development of Road Network in Bishkek City" and for the purpose of relieving traffic, presents hereby the following proposals on reconstruction and capital/large-scale construction of roads.

Total length of municipal roads is 1369,90 km; pavements comprise 1827 km.

1. To relieve the traffic at Chui avenues it is proposed to resurface Frunze street starting from Karpinsky street till Lermontov street and construct bridge across Alamedin river; construct bridge across Alamedin river thus connecting Moscovskaya street with Vostok – 5 micro-district.
2. To relieve the traffic at Den Syaopin street it is proposed to extend Profsoyuznaya street starting from Fuchika street till the western border of the city and Jamgyrshynova street.
3. It is proposed to extend Kievskaya street and Bokonbaeva street till Fuchika street.
4. It is proposed to organize one-way movement along Bokonbaeva street and Chui avenue westward starting from Ibraimova street till Fuchika street; and along Kievskaya street eastward on the area above.
5. It is proposed to carry out capital repairs of Ryskulov street, including expansion of traffic area.
6. It is proposed to extend the following streets, including construction and repair works: Akhunbaeva street and Masalieva street (Southern highway) from Bach street westward till the borders of Bishkek city; L.Tolstoy street from Ibraimov street till the borders of the city eastward; A.Tokombaev street till Shabda batyr street.
7. It is proposed to extend Bach street across railroad crossing in the north direction to Tovarnaya street.

The above activities will to some extend allow relieving traffic flows in the streets of the city. In general despite objective and subjective factors influencing on traffic safety and improvement of traffic-carrying capacity of streets …. [INCOMPLETE SENTENCE IN RUSSIAN]

Traffic areas constructed and reconstructed during the past century have insufficient capacity to carry increased traffic flow (annual growth of motor vehicle fleet of Bishkek City is 18-20

000 vehicles), especially at the main streets of the city Currently transport movement is difficult at the following sections of the city streets:

1. Crossing of Fuchika street and Den Syaopin street; movement is complicated along Den Syaopin street at the section from Fuchika street till Interelpo street in both ways;
2. Crossing of Fuchika street and Moscovskaya street; movement is complicated along Moscovskaya street at the section from Nekrasova street till Fuchika street in the western direction;
3. Along Kurmanjan-Datka street at the section from Salieva street till M.Jalil street, both ways;
4. Along Jibel Jolu street from Kurmanjan-Datka street till Budennyi street, both ways;
5. Along Jibek Jolu street from Chimkentskaya street till Fuchika street, both ways;
6. At crossing of L.Tolstoy street and Molodaya Gvardia boulevard in all directions;
7. At crossing of Chapaeva street and L. Tolstoy street in all directions.
8. At crossing of L.Tolstoy street and Kulieva street in all directions;
9. At crossing of Yu.Abdrakhmanov street and K.Bayalinov street, along Yu.Abdrakhmanov street, both ways;
10. Along Jibek-Jolu street at the bridge across Alamedin river due to insufficient width of the bridge the traffic area is narrowed;
11. At crossing of Akhunbaeva street and Jukeeva Pudovkina street, along Akhunbaeva street, both ways;
12. Along Suerkulov street at the section from Sayakbai Karalaev street till Baitik Batyr street due to insufficient width of the traffic area the movement of transport is difficult, both ways;
13. At Baitik Batyra street opposite to micro-district 10 pedestrian crossing is difficult despite 2 underground passages as the latter are in insanitary condition.

To implement Plan of Activities on Ensuring Traffic Safety in the Kyrgyz Republic for 2009-2011 approved by Resolution of the Government of the Kyrgyz Republic # 712 dated December 25, 2008. Clause 27 of the Resolution stipulates for modernization the Automated Traffic Management System, equipping it with the modern software, replacement of traffic lights regulation equipment, the existing (lamp) traffic lights with energy-saving LED traffic lights, as well as equipping the traffic lights with various sensors, countdown panels for permitting signal, additional sound devices for blind pedestrians and pedestrians with poor eyesight, which are to be assembled at the DTS CDI Ministry of Interior of the Kyrgyz Republic. Funding for the above is needed: to equip one traffic light with countdown panel on average 250 000 – 300 000 Som are required.

There is also a need to consider the issue related to reconstruction of Automated Traffic Management System and introduction of video surveillance and recording of traffic rules violations on the basis of the existing central point regulating traffic lights at SMOU CDI MI, including reconstruction of the central point.

DTS CDI Bishkek City

Construction, Mounting and Operations Department

20 Gorkogo Street, Bishkek, 720031.
Fax: 53 45 36 (Reception)
Phone: 53 10 84
Email: smeumvd_75@mail.ru

AGENCY FOR DEVELOPMENT
OF BISHKEK CITY

Construction, Mounting and Operations Department (CMOD) of the Traffic Police Department of the Ministry of Interior of the Kyrgyz Republic (TPD of the KR's MI), hereby, submits the data for the Questionnaire of the Japanese International Cooperation Agency (JICA).

Sincerely,

Director

Militia Colonel **A. Karavai**

2.1 Organizational Chart of CMOD of TPD of the KR's MI.

1. Structure of the CMOD of TPD of the KR's MI (Attachment No.1).
2. Staff by units and sites.
   - Administrative and Managerial Staff – 6 people;
   - Financial and Economic Department – 5 people;
   - Technical staff – 9 people;
   - Site No.1 for servicing traffic lights facilities (Automated Traffic Control System) – 34 people
   - Site No.2 for construction of traffic lights facilities, road marking and installation of road signs – 17 people.
   - Site No. 3 of optional equipment.
   - Site No.4 Mechanization – 11 people.

Total staff – 88 people.

3. Traffic lights facilities and Automated Traffic Control System do not meet technical requirements of new generation modern equipment. 80% of traffic lights facilities were installed in the 70ies and 80ies of the last century. Full modernization is needed.

2.2. Annual Budget.

2005 – KGS 6 800.0 thousand.

2006 – KGS 6 800.0 thousand.

2007 – KGS 10 000.0 thousand.

2008 – KGS 17 200.0 thousand.

2009 – KGS 25 986.0 thousand.

2010 – KGS 28 162.0 thousand.

2.3 Main Roles and Duties of CMOD of TPD of the KR's MI.

CMOD of Traffic Police Department of the KR's Ministry of Interior a state enterprise created with the right of economic operation of the government-owned traffic engineering. The CMOD is funded through a representative of the Client of Bishkek Mayor's Office.

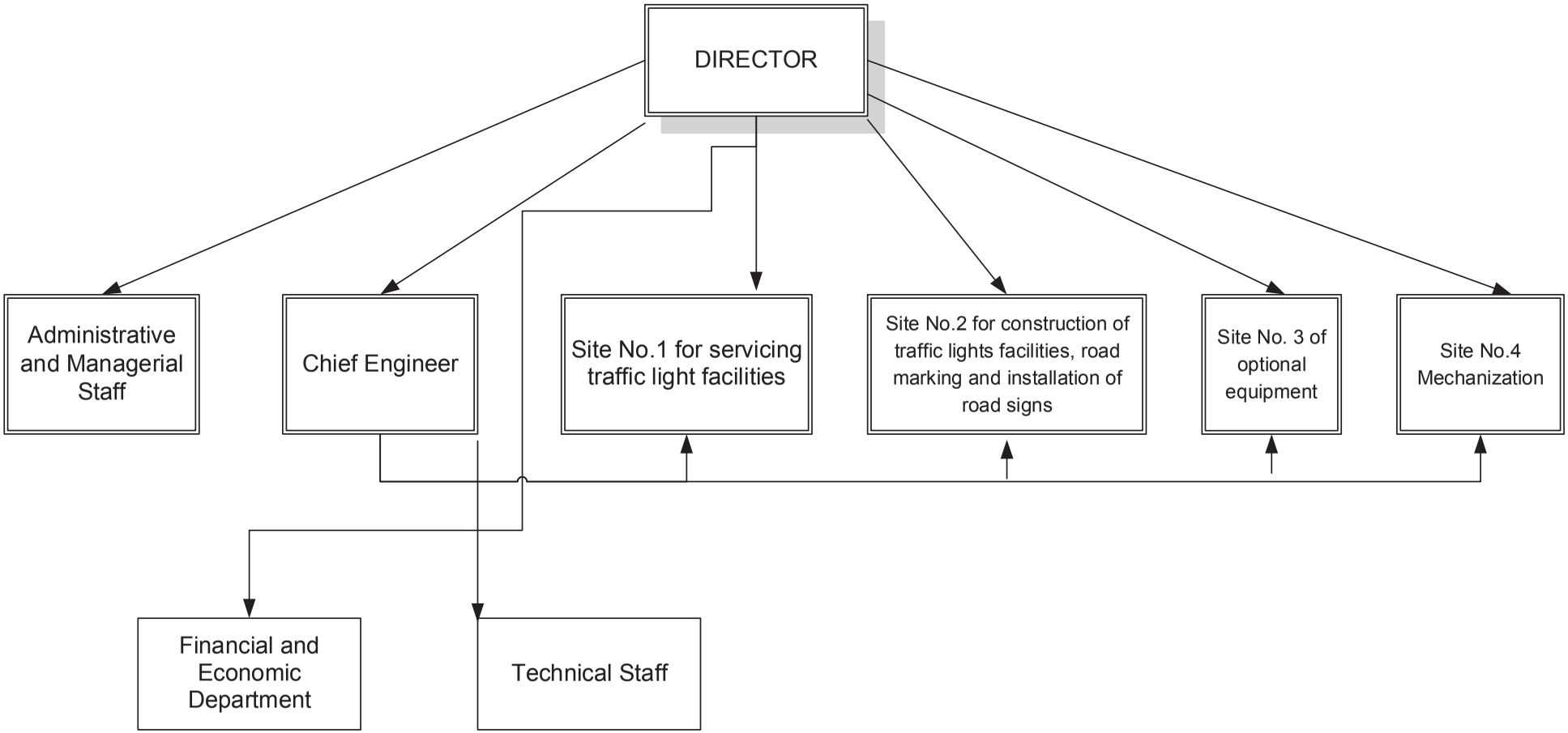
Under Decree No.16 of Bishkek Mayor's Office, dated January 25, 2008, Traffic Police Unit of Bishkek City of the Chief Interior Directorate (TPU) (Chief Department of Traffic Safety of Bishkek City Chief Interior Directorate) was authorized as a representative of the Client of Bishkek Mayor's Office in the area of construction and operation of traffic management facilities. The CMOD of TPD of the KR's MI is a Contractor. The structure and staffing of CMOD is approved by the Ministry of Interior of the Kyrgyz Republic. The number of workers depends on the scope of works performed.

8.3. Suppliers of Traffic Lights Facilities:

- No local suppliers of equipment for CMOD are available;
- Road signs and metallic structures for traffic lights facilities are produced on the production territory of CMOD, with the use of its technical capacities;
- Traffic lights and road controllers are supplied under a direct contract with manufacturing plants of the Russian Federation.

Structure of CMOD of the Traffic Policy of the KR's Ministry of Interior

Attachment No. 1



4.3. Modernization Plan

Investment Project

"Upgrade of Automated Traffic Control System and traffic lights facilities (equipping with LED traffic lights, environmental sensors, vehicle detector, countdown light panel for permissive/restrictive signal, additional sound associated devices), modern software and technical reequipping of control centers of ATCS with communication channels, hardware for communication with peripheral facilities, and setting up radio channel in Bishkek City".

November 17, 2010 Bishkek City

No.	Required Data	Description
1. DATA ON PROJECT INITIATOR		
1	*Project Initiator*	Bishkek Mayor's Office. Construction, Mounting and Operations Department (CMOD) of the TPD of the Ministry of Interior of the Kyrgyz Republic is a state self-financing enterprise created with the right to operate the government property and perform business and economic activities. The right to own, use, and dispose of the government property is exercised by the CMOD on an independent basis, within the limits set by Article 230 of the Civil Code of the Kyrgyz Republic. CMOD is a legal entity, a separate accounting entity, holding settlement and other bank accounts and possessing a separate property, including government property attached to it with the right for economic operation. COMD has its own property acquired from the funds received due to performance of contracted works and cash funds received from the Representative of the Client, Bishkek Mayor's Office. CMOD has its seal with picture of state emblem, stamps, and forms. CMOD may take independent decisions on economic issues, sale of goods and services, labor remuneration, and distribution of net profit. Calculation of costs of services is approved by the State Anti-Monopoly Committee of the Kyrgyz Republic. The sources of formation of the CMOD's property are as follows:

No.	Required Data	Description
		- Property and funds transferred to CMOD by Bishkek Mayor's Office; - Income from production and business activities; - Other earnings not prohibited by the legislation of the Kyrgyz Republic.
2.	*Founders*	The Ministry of Interior of the Kyrgyz Republic. CMOD of TPD of the KR's MI is a state self-financing enterprise, directly subordinated to the Ministry of Interior of the Kyrgyz Republic. CMOD acts in accordance with the Civil Code of the Kyrgyz Republic and other normative documents and legal acts and the Regulation on CMOD of TPD of the KR's MI.
3.	*De facto address*	Location of CMOD of TPD of the KR's MI: 20 Gorkogo Street, Bishkek, 720031. Contact numbers: Director of CMOD – 53 10 84 Chief Engineer – 53 45 17 Reception/fax – 53 45 36 Email: smeumvd_75@mail.ru
4.	*Person authorized to present the Project*	Director of CMOD of TPD of the KR's MI – Alexandr Sergeevich Karavai. Mr. Karavai has been working at CMOD from February 6, 2009. From 1990 he had worked at the Traffic Police Unit. He holds two diplomas. He speaks Russian. Chief Engineer of CMOD – Viktor Nikolaevich Soldatov. Mr. Soldatov has been working at CMOD from January 10, 1994. He has higher education degree. He speaks Russian. Contact numbers: Director of CMOD – 53 10 84 Chief Engineer – 53 45 17 Reception/fax – 53 45 36 Email: smeumvd_75@mail.ru
5.	*Activity of an Initiator*	CMOD performs the following activities: - Render services on adoption, installation and operation of traffic engineering in Bishkek City, coordinated by the Traffic Police Unit in Bishkek City and by the Traffic Police Department in the Republic. The respective prices, design specifications and estimates, and rates are approved by the State Anti-Monopoly Committee.

No.	Required Data	Description
2. PROJECT INFORMATION		
1.	*Project Title*	"Upgrade of Automated Traffic Control System and traffic lights facilities (equipping with LED traffic lights, environmental sensors, vehicle detector, countdown light panel for permissive/restrictive signal, additional sound associated devices), modern software and technical reequipping of control centers of ATCS with communication channels, hardware for communication with peripheral facilities, setting up radio channel in Bishkek City".
2.	*Sector*	Infrastructure
3.	*Place of Implementation*	Bishkek City
4.	*Summary*	**BACKGROUND** **On Determination of Strategy and Aggregated Cost of construction of Information Automated Traffic Control System in Bishkek City** **1. Type of a system proposed for adoption?** - Municipal **2. List of major system functions proposed for adoption?** - Possibility to manage the system under control mode, - Availability of automated coordinated control mode, - Availability of video surveillance system, *Number of crossings equipped with video surveillance system – 150 crossings, Number and type (color, rotational, Zoom, number of frames per second) is to be determined during the project drafting, 24-hours operation, 12-16 cameras on a crossing.* - Level of control *Plans for coordination estimated in real time (adaptive control technique).* **3. Proposed structure (composition) of ATCS CC:** - Availability of a building for ATCS CC – *available*;

No.	Required Data	Description
		- Availability of traffic control panel for duty officer of Traffic Police – not available. - Distance between CC and working place of duty officer of Traffic Police – *80 meters*. - Availability of symbolic circuit? *Not available. To include two units of symbolic circuit with plasma screen. Sizes are to be determined during design process.* **4. Peripheral traffic engineering** – *controllers*, - Number of operating traffic lights facilities *– 193 units;* - Proposed level (scope) for reconstruction of operating traffic lights – *164 units, including 150 traffic lights facilities to be connected with ATCS system*. - Type of applied vehicle detectors - *video detectors,* - Type of traffic lights facilities in place – *LED*. **5. Communication System.** - Availability of telephone lines – available, 10% ready for operation; - Possibility for laying (renting) additional communication cables – available; - Possibility for use of wireless communication (WiFi). **6. Scope of the 1st stage proposed for introduction** – 30-50 traffic lights **7. Timeframe for introduction** – project drafting in 2011, construction period is to de determined during engineering process.
5.	*Current status*	Business-plan
6.	*Pledge*	
7.	*Sales market*	
8.	*Regional and world competitors*	Not available.
9.	*Evaluation of local resources*	Equipment and materials are not produced in Kyrgyzstan.

No.	Required Data	Description
10.	*Availability of key personnel to implement the Project*	Installation and dismantling for the purpose of ATCS upgrade will be performed by experts and workers of CMOD of TPD of the KR's MI, who have proven expertise with this system.
11.	*Investment partner*	
12.	*Risks*	Untimely supply of equipment and materials
3. FUNDING INFORMATION		
1.	*Total investments to implement the Project*	USD 12.0 million is required to implement the Project "Upgrade of Automated Traffic Control System".
2.	*Project's Profitability*	- Improvement of environment in Bishkek City - Decrease of traffic accidents - Decrease of injury rate and death rate of people.
3.	*Participation of Project Initiator (cash funds, assets)*	Financing from CMOD's own sources for the Project implementation is not anticipated.
4.	*Required funding (in US dollars).*	USD 12.0 million.
5.	*Target use of proposed investments*	- Drafting feasibility study for ATCS Project - Development of Work Project for ATCS - Construction of ATCS system - Equipment and materials for construction of ATCS.
6.	*Financial condition of an Initiator*	Copies of documents attached.
7.	*Tax payments over 3 years (in USD thousand)*	

Year	Tax payments (in USD thousand) (exchange rate as of November 17, 2010 is 46,79 KGS/1 USD)	Social Fund deductions (in USD thousand) (exchange rate as of November 17, 2010 is 46,79 KGS/1 USD)
2007	70,2	34,4
2008	80,9	98,3
2009	113,9	64,2
Total	265,0	196,9

8.	*Number of created jobs*	Today, CMOD's number of employees is 72 people. Implementation of this Project would increase the number of jobs by 18 people.

Director A. Karavai

Executor:

Chief Engineer of CMOD

Salatov V.N.

Phone 53 45 17

5.2 Statistical Data (location and types of traffic lights)

ITEMISED LIST OF TRAFFIC CONTROL DEVICES, MAINTAINED BY CMOD OF TPD of the KR's MI (in BISHKEK city)

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	06.1975		Zhibek Zholu - Manasa	Local	Lamp	УК	УК-2	8					4			
2	04.1971		Zhibek Zholu – T.Moldo	Local	Lamp	УК	УК-2	8	8				6	6		
3	03.1987		Zhibek Zholu – Kommunarov	Local	Lamp	УК	УК-2	8					5			
4	12.1976		Zhibek Zholu – Abdrakhmanova Yu.	Local	Lamp	УК	УК-2	8	6				6	2		
5	08.1978		Zhibek Zholu – Shopokova	Local	Lamp	УК	УК-2	8	2				6			
6	07.1978		Zhibek Zholu – Ibraimova	Local	Lamp	УК	УК-2	8					6			
7	11.1985		Chui Ave. – Suyumbaeva	Regulated	Lamp	БКТ	БКТ-7	8					4			
8	06.1968		Zhibek Zholu – A.Atinskaya	Local	Lamp	УК	УК-2	8	8				4			
9	02.1975		Frunze – Manasa	Local	LED	БКТ	ДКЛ-2	8	8				4	4		
10	09.1980		Frunze – Isanova	Local	Lamp	УК	УК-2	8					4			
11	03.1976		Frunze – T.Moldo	Local	Lamp	УК	УК-2	8					4			
12	09.1970		Frunze – Abdrakhmanova Yu.	Regulated	Lamp	БКТ	БКТ-7	8					4			
13	12.1979		Frunze – Shopokova	Local	Lamp	БКТ	БКТ-7	8					4			

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
14	03.1985		Frunze – Turusbekova	Local	Lamp	УК	УК-2	8					4			
15	08.1977		Chui Ave. – Beishenalieva	Regulated	Lamp	БКТ	РТС-Д	8	8				4	2		
16	04.1972		Chui Ave. – M. Gvardiya	Regulated	Lamp	БКТ	РТС-Д	21	8				8			
17	03.1977		Chui Ave. – Manasa	Regulated	LED	УК	УК-2	8					4			
18	11.1976		Chui Ave. – Isanova	Regulated	LED	УК	УК-2	8					4			
19	05.1979		Chui Ave. – T.Moldo	Regulated	LED	УК	УК-2	8					4			
20	01.1977		Chui Ave. – Abdrakhmanova Yu.	Regulated	LED	БКТ	ДКЛ-4	8					4			
21	04.1978		Chui Ave. – Shopokova	Regulated	Lamp	БКТ	БКТ-7	8	8				4	1		
22	05.1972		Chui Ave. – Ibraimova	Regulated	Lamp	БКТ	БКТ-7	8					7			
23	07.1976		Chui Ave. – Gogolya	Regulated	Lamp	БКТ	БКТ-7	8					2	2		
24	05.1986		Yunusalieva – Microdistrict # 5	Regulated	Lamp	УК	УК-2	7	1				3	1		
25	07.1977		Chui Ave. – A.Atinskaya	Regulated	Lamp	БКТ	БКТ-7	11					6			
26	04.1986		Chui Ave. – Pavlova	Regulated	Lamp	БКТ	РТС-Д	6	2				4	2		
27	09.1977		Kievskaya – M.Gvardiya	Regulated	Lamp	БКТ	БКТ-7	12					8			
28	03.1989		Kievskaya – Turusbekova	Regulated	Lamp	БКТ	БКТ-7	12					4			
29	04.1978		Kievskaya – Manasa	Regulated	LED	БКТ	Cascade	8	8				4	1		

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
30	11.1976		Kievskaya – T.Moldo	Regulated	Lamp	БКТ	БКТ-7	8					4			
31	04.1990		Kievskaya – Umetalieva	Regulated	Lamp	БКТ	БКТ-7	8					4			
32	05.1971		Kievskaya – Abdrakhmanova Yu.	Regulated	Lamp	БКТ	БКТ-7	8					4			
33	11.1976		Toktogula – Beishenalieva	Regulated	Lamp	БКТ	БКТ-7	6					4			
34	06.1976		Toktogula – M.Gvardiya Ave.	Regulated	Lamp	БКТ	БКТ-7	8	10				8	2		
35	04.1985		Toktogula – Tynystanova	Regulated	Lamp	БКТ	БКТ-7	7					4			
36	05.1973		Toktogula – Manasa	Regulated	LED	БКТ	РТС-Д	6	8				4			
37	01.1978		Toktogula – T.Moldo	Regulated	Lamp	БКТ	БКТ-7	6					4			
38	01.1990		Baitik Baatyra – Phizpribory	Regulated	Lamp	БКТ	БКТ-7	6	2				4			
39	04.1977		Toktogula – Abdrakhmanova Yu.	Regulated	Lamp	БКТ	БКТ-7	7	4				4			
40	10.1978		Toktogula – Ibraimova	Regulated	Lamp	БКТ	БКТ-7	12					6			
41	12.1975		Moskovskaya – Beishenalieva	Regulated	Lamp	БКТ	БКТ-7	8					4			
42	02.1975		Moskovskaya – M.Gvardiya Ave.	Regulated	Lamp	БКТ	БКТ-7	10					8			
43	05.1981		Moskovskaya – Umetalieva	Regulated	Lamp	БКТ	БКТ-7	8					4			
44	09.1978		Moskovskaya – Manasa	Regulated	LED	БКТ	ДКЛ-2	8	16				4	2		
45	05.1977		Moskovskaya – T.Moldo	Regulated	Lamp	БКТ	БКТ-7	6					4			

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
46	02.1978		Moskovskaya – Erkindik	Regulated	Lamp	БКТ	БКТ-7	12					8			
47	05.1977		Abdrakhmanova Yu. – Moskovskaya	Regulated	LED	БКТ	БКТ-7	8					4			
48	06.1970		Moskovskaya – Ibraimova	Regulated	Lamp	БКТ	БКТ-7	12					5			
49	10.1976		M.Gorkogo – Baitik Batyra	Regulated	Lamp	БКТ	БКТ-7	8					4			
50	04.1976		Baitik Batyra – Mederova	Regulated	Lamp	БКТ	БКТ-7	8					4			
51	06.1976		Akhunbaeva – Moldybaeva	Regulated	Lamp	БКТ	БКТ-7	13	3	2			7			
52	1975		Akhunbaeva – Dushanbinskaya	Regulated	Lamp	БКТ	БКТ-7	8					4			
53	08.1976		Akhunbaeva – Mira Ave.	Regulated	LED	УК	УК-2	8					4			
54	03.1978		Mira Ave. – Gagarina	Regulated	LED	БКТ	РТС-Д	6					3			
55	03.1970		Gorkogo – Mira Ave.	Regulated	LED	БКТ	РТС-Д	6		5			3			
56	01.1980		Gorkogo – Panfilova	Regulated	Lamp	БКТ	БКТ-7	8		2			4			
57	02.1975		M.Gorkogo – Zh.Pudovkina	Regulated	Lamp	БКТ	БКТ-7	7					4		1	
58	12.1970		M.Gorkogo – Yunusalieva	Regulated	Lamp	БКТ	БКТ-7	6		2			4			
59	04.1976		Gorkogo – A.Atinskaya	Regulated	Lamp	БКТ	БКТ-7	10		8			6			
60	06.1978		Yunusalieva – Mederova	Regulated	Lamp	БКТ	БКТ-7	8					4			
61	07.1978		Yunusalieva – Akhunbaeva	Regulated	Lamp	БКТ	БКТ-7	8					4			

# pp	In-service date	Reconst ruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
62	01.1976		Zh.Pudovkina – Akhunbaeva	Regulated	Lamp	БКТ	БКТ-7	8					4			
63	09.1976		Baitik Batyra – Akhunbaeva	Regulated	LED	БКТ	БКТ-7	8					4			
64	03.1980		Akhunbaeva – Abaya (Kremlevskaya)	Regulated	Lamp	БКТ	БКТ-7	7					4			
65	02.1979		Moskovskaya – Kulieva	Regulated	Lamp	БКТ	БКТ-7	8					4			
66	09.1981		Moskovskaya – Isanova	Regulated	Lamp	БКТ	БКТ-7	8					4			
67	11.1980		Moskovskaya – Logvinenko	Regulated	Lamp	БКТ	БКТ-7	8					4			
68	09.1976		Abdrakhmanova Yu. – Bokonbaeva	Regulated	Lamp	БКТ	БКТ-7	8					4			
69	03.1985		Zhubek Zholu – Budennogo	Local	Lamp	УК	УК-2	6	1				4			
70	11.1981		M.Gorkogo – Elebaeva	Regulated	Lamp	БКТ	БКТ-7	8					4		1	
71	07.1985		Zh.Pudovkina – Kulatova	Regulated	Lamp	УК	УК-2	9					6			
72	09.1985		Akhunbaeva – Karalaeva	Regulated	Lamp	БКТ	БКТ-7	8					4			
73	11.1988		Chui Ave. – Lermontova	Regulated	Lamp	УК	УК-2	8		2			6	2		
74	01.1977		Salieva – A.Atinskaya	Local	Lamp	УК	УК-2	8					4			
75	07.1978		M.Gorkogo – Exit road of CMOD	Regulated	Lamp	УК	УК-2	5					2			
76	09.1978		Mira Ave. – Sovetskaya (VDNH)	Regulated	Lamp	УК	УК-2	8		3			3			
77	27.01.91		Den Syao Pina – Kyzyl Asker	Local	Lamp	УК	УК-2	8	1				2	1		

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
78	05.1985		Suerkulova – Zh.Pudovkina	Regulated	Lamp	БКТ	БКТ-7	7	5				6	2		
79	02.1977		Yunusalieva – Suerkulova	Regulated	Lamp	БКТ	БКТ-7	8					4			
80	12.1976		Zhibek Zholu – Lermontova	Local	Lamp	УК	УК-2	8	1				3	2		
81	11.1976		Zhibek Zholu – Fuchika	Local	Lamp	БКТ	РТС-Д	7					3			
82	12.1979		Chui Ave. – Tynystanova	Regulated	LED	БКТ	БКТ-7	8					4			
83	05.1978		Chui Ave. – Fuchika	Regulated	Lamp	БКТ	РТС-Д	8					5			
84	04.1979		L.Tolstogo – Logvinenko	Local	Lamp	УК	УК-2	8		1			4			
85	02.1976		Tolstogo – M.Gvardiya Ave.	Local	Lamp	УК	УК-2	6		3			4			
86	01.1977		Tolstogo – Nekrasova	Local	Lamp	УК	УК-2	8					4			
87	11.1979		Moskovskaya – Gogolya	Local	Lamp	УК	УК-2	8	8				4			
88	10.1983		Auezova – Market	Local	Lamp	УК	УК-2	4	2				2	2		
89	10.1979		Akhunabeva – Molodezhnaya (Kashka-Suu)	Regulated	Lamp	БКТ	БКТ-7	4	2				2	1		
90	07.1978		Den Syao Pina – 8th March	Local	Lamp	УК	УК-2	4					3			
91	11.1976		Mira Ave. – Slavyanskaya	Regulated	LED	УК	УК-2	4	2				2	2		
92	02.1977		Den Syao Pina – Primorskaya	Local	Lamp	УК	УК-2	8					4			
93	04.1973		Den Syao Pina – Sadygalieva	Local	Lamp	УК	УК-2	8					4			

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
94	11.1981		M.Gvardiya Ave. – Ryskulova	Local	Lamp	УК	УК-2	14					7			
95	12.1985		M.Gvardiya Ave. – Baialinova	Local	Lamp	УК	УК-2	6		3			3			
96	1972		T.Moldo – Scherbakova	Local	Lamp	УК	УК-2	8	2				4	2		
97	1970		T.Moldo – Baialinova	Local	Lamp	УК	УК-2	8					4			
98	05.1983		Fuchika – Fuel station	Local	Lamp	БКТ	РТС-Д	8					4			
99	05.1977		Chapaeva – Gagarina	Local	Lamp	УК	УК-2	8					4			
100	01.1989		A.Atinskaya – Mendeleeva	Local	Lamp	УК	УК-2	5	2				6			
101	03.1979		Yunusalieva – Suvanberdieva	Regulated	Lamp	БКТ	БКТ-7	8					4			
102	09.1982		Kievskaya – Tynystanova	Regulated	Lamp	БКТ	БКТ-7	8					4			
103	02.1980		Lermontova – Salieva	Local	Lamp	УК	УК-2	8					3	1		
104	08.1983		Salieva – Auezova	Local	Lamp	УК	УК-2	8					4			
105	08.1985		Baitik Batyra – Suerkulova	Regulated	Lamp	БКТ	БКТ-7	8					4			
106	04.1980		Salieva – Ch.Atinskaya	Local	Lamp	УК	УК-2	8					4			
107	06.1980		Bakinskaya – Scherbakova	Local	Lamp	УК	УК-2	6					4			
108	02.1990		M.Gorkogo – Ch.Atinskaya	Local	Lamp	УК	УК-2	12					8			
109	08.1980		Aini – Ordzhonikidze	Local	Lamp	УК	УК-2	1								

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
110	12.1990		Chui Ave. – “Raduga” shop	Local	Lamp	УК	УК-2	3	4				4			
111	10.1980		Toktogula – Logvinenko	Regulated	Lamp	БКТ	БКТ-7	6					4			
112	03.1987		Zhibek Zholu – M.Gvardiya Ave.	Local	Lamp	УК	УК-2	11		2			8			
113	01.1981		M.Gorkogo – Fatianova	Regulated	Lamp	БКТ	БКТ-7	8					4			
114	03.1981		Kievskaya – Logvinenko	Regulated	Lamp	БКТ	БКТ-7	8					4			
115	03.1981	12.2008	Moskovskaya – Fuchika	Local	Lamp	УК	УК-2	9	6	2			4			
116	05.1981		Den Syao Pina – P.Lumumby	Local	Lamp	УК	УК-2	8		1			4			
117	07.1981		Zhibek Zholu – Isanova	Local	Lamp	УК	УК-2	8					4			
118	1989		Zhibek Zholu – Turusbekova	Local	Lamp	УК	УК-2	8					2	2		
119	03.1989		Baitik Batyra – Tokombaeva	Regulated	Lamp	БКТ	БКТ-7	8	6				8	3		
120	02.1982		M.Gvardiya – Uritskogo	Local	Lamp	УК	УК-2	4	2				4			
121	1982		M.Gvardiya Ave. – Botalieva	Local	Lamp	УК	УК-2	8					4			
122	12.1982		Chapaeva – Aini	Local	Lamp	УК	УК-2	8					4			
123	09.1983		Frunze – Luschikhina	Local	Lamp	УК	УК-2	8					4			
124	05.1983		Aini – Mira Ave.	Regulated	LED	БКТ	РТС-Д	8					4			
125	06.1984		Den Syao Pina – Shush-Tyube	Local	Lamp	УК	УК-2	4	2				3			

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
126	10.1984		Abdrakhmanova Yu. – Baialinova	Local	Lamp	УК	УК-2	8					3			
127	1983		Fuchika – Lenskaya	Local	Lamp	БКТ	РТС-Д	6					3			
128	02.1985		Zhibek Zholu – Orozbekova	Local	Lamp	УК	УК-2	8					6			
129	01.1986		Chui Ave. – Turusbekova	Regulated	Lamp	БКТ	РТС-Д	8					4			
130	02.1986		Kolbaeva – Ch.Atinskaya	Local	Lamp	УК	УК-2	8					4	1		
131	02.1986		Bokonbaeva – Manasa	Regulated	LED	БКТ	РТС-Д	8					4			
132	07.1986		Frunze – Tynystanova	Local	Lamp	БКТ	БКТ-7	8					4			
133	08.1986		Frunze – Gogolya	Local	Lamp	УК	УК-2	8					4			
134	09.1986		Suyunbaeva – Zhumabek	Local	Lamp	УК	УК-2	8					4			
135	11.1986		Bokonbaeva – Ibraimova	Regulated	Lamp	БКТ	БКТ-7	10					6			
136	01.1987		Bakinskaya – Fere	Local	Lamp	УК	УК-2	8					4			
137	01.1987		Abdrakhmanova Yu. – Kurenkeeva	Local	Lamp	УК	УК-2	8					3			
138	03.1987		Moldybaeva – Pedestrian crossing	Local	Lamp	УК	УК-2	4	1				4			
139	04.1987		A.Atinskaya – M.Dzhalilya	Local	Lamp	УК	УК-2	12					4			
140	04.1987		Kievaksya – Beishenalieva	Regulated	Lamp	БКТ	БКТ-7	6	2				4			
141	06.1987		Nekrasova – Nogina	Local	Lamp	УК	УК-2	8					4			

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
142	07.1987		Nekrasova – Gagarina	Local	Lamp	УК	УК-2	8					3			
143	07.1987		Kolbaeva – Lermontova	Local	Lamp	УК	УК-2	10					4			
144	07.1987		Chui Ave. – Umetalieva	Regulated	Lamp	БКТ	РТС-Д	8					4			
145	11.1987		Bokonbaeva – Erkindik	Local	Lamp	БКТ	БКТ-7	12					8			
146	12.1987		Frunze – Ibraimova	Local	Lamp	БКТ	БКТ-7	8					6			
147	01.1988		Microdistrict “Asanbai” – Tokombaeva	Local	Lamp	БКТ	БКТ-7	6					6			
148	01.1988		Toktogula – Turusbekova	Regulated	Lamp	БКТ	БКТ-7	6					4			
149	06.1987		Baitik Batyra – Kulatova	Regulated	Lamp	БКТ	БКТ-7	7	2				4			
150	03.1988		Yunusalieva – Microdistrict # 6	Local	Lamp	УК	УК-2	8	4				7	1		
151	05.1988		Frunze – Erkindik	Local	Lamp	БКТ	БКТ-7	12					8			
152	07.1988		Kievskaya – Erkindik	Regulated	Lamp	БКТ	БКТ-7	12					8			
153	09.1988	09.2009	Bokonbaeva – Logvinenko	Regulated	Lamp	УК	УК-2	8					4			
154	12.1989		Zhibek Zholu – Osmonkula	Local	Lamp	УК	УК-2	8	2	1			7			
155	12.1989		Zhibek Zholu – Boarding school	Local	Lamp	УК	УК-2	4	2				4			
156	07.1990		Akhunbaeva – Chapaeva	Local	Lamp	УК	УК-2	8					4			
157	10.1990		A.Atinskaya – Microdistrict “Kok-Dzhar”	Local	Lamp	УК	УК-2	4	4				4	1		

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
158	07.1990		Toktogula – Umetalieva	Regulated	Lamp	УК	УК-2	7					4			
159	06.1991		Den Syao Pina – Intergelpo	Local	Lamp	УК	УК-2	6	4				5			
160	01.1993		Zhibek Zholu – Western bus station	Local	Lamp	УК	УК-2	6		1			2			
161	08.1998		Orozbekova – Frunze	Local	Lamp	УК	УК-2	8					4			
162	08.1998		Kievskaya – Panfilova	Regulated	Lamp	БКТ	БКТ-7	8					4			
163	04.1999		Bakinskaya – Aul	Local	Lamp	УК	УК-2	9					5			
164	10.2002		Akhunbaeva – Nekrasova	Local	Lamp	УК	УК-2	8					4			
165	01.05.2007		Aitieva – Kuttubaeva	Local	LED	БКТ	ДКЛ-3	8	8				4	3		
166	01.05.2007		Toktogula – Isanova	Regulated	LED	БКТ	ДКЛ-3	6	8				4			
167	01.05.2007		L.Tolstogo – Krivonosova	Local	LED	БКТ	ДКЛ-3	8	8				4	2		
168	01.05.2007		Bakinskaya – Dorozhnaya	Local	LED	БКТ	ДКЛ-3	6	6				4	6		
169	01.06.2008		Kievskaya – Ibraimova	Regulated	LED	БКТ	ДКЛ-3	7	10				6	8		
170	01.06.2008		Moskovskaya – Turusbekova	Local	LED	БКТ	ДКЛ-3	8	8				4	4		
171	01.06.2008		Toktogula – Erkindik	Regulated	LED	БКТ	ДКЛ-3	6	12				6	4		
172	01.06.2008		Zhukeeva-Pudovkina – Mederova	Local	LED	БКТ	ДКЛ-3	6	8				3	2		1
173	01.07.2008		Kievskaya – Isanova	Local	LED	БКТ	ДК	8	8				4	4		

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
174	01.11.2008		Baha – Gagarina	Local	LED	БКТ	ДК	8	4				6			
175	01.11.2008		Moskovskaya – Shopokova	Local	LED	БКТ	ДК	8	8				4	4		
176	23.12.2008		Baha – Southern highway	Regulated	LED	БКТ	ДК	8	12				6	11		
177	19.12.2008		Intergelpo – Dimitrova	Local	Lamp	УК	УК-2	8	8				4			5
178	12.11.2009		Gagarina – Muromskaya	Local	LED	УК	УК-2	8	2				2		2	
179	03.12.2009		Abdymomunova – Tynystanova	Local	LED	БКТ	ДКЛ-3	8	8				4	3	1	
180	01.10.2009		Chapaeva – L.Tolstogo	Local	LED	БКТ	ДКЛ-3	6	6				4	4		
181	03.12.2009		M.Gvardiya – Frunze	Local	LED	БКТ	ДКЛ-3	12	16				8	8		
182	07.10.2009		Bokonbaeva – Hospital (RCH)	Local	LED	БКТ	ДКЛ-3	8	8		4		4	1		
183	26.10.2009		Zh.Zholu – Suyumbaeva (Karpinskogo)	Local	LED	БКТ	ДКЛ-3	8	12				6	7		
184	12.11.2009		Manasa – Southern highway	Regulated	LED	БКТ	ДКЛ-3	8	12		8	8	6	8		
185	17.09.2010		Panfilova – Moskovskaya	Local	LED	БКТ	ДКЛ-4	6	8				4	6		
186	17.09.2010		Panfilova – Toktogula	Local	LED	БКТ	ДКЛ-4	4	8				4	5		
187	06.10.2010		Panfilova – Bokonbaeva	Local	LED	БКТ	ДКЛ-4	6	8				4	7	1	
188	00.10.2010		Panfilova – L.Tolstogo	Local	LED	БКТ	ДКЛ-4	6	8				4	4	2	
189	07.10.2010		Kulatova – Panfilova	Local	LED	БКТ	ДКЛ-4	6	8				4	4	1	

# pp	In-service date	Reconstruction date	Name of Facility	Type of traffic lights facility	Type of traffic light	Type of controller	Controller	Vehicle actuated traffic light	Pedestrian traffic light	Additional section	Transport [TOOB]	Pedestrian [TOOB]	Transport base	Pedestrian base	Supporting block for transport	Hinged transport
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
190	00.10.2010		Shabdan Baatyra – Mederova	Regulated	LED	БКТ	ДКЛ-4	8	2				7	2	1	
191	00.12.2010		Den Syao Pina – Messarosha	Local	LED	БКТ	КДУ	6	6				4	6		
192	00.12.2010		Lva Tolstogo – Baha	Local	LED	БКТ	КДУ	6	6				3	6	1	
193	00.12.2010		Mederova – Abaya	Local	LED	БКТ	КДУ	8	8				3	8	1	
							193	1499	411	38	12	8	846	175	12	6

TOTAL

Head of ADMS Osipov S.V.

16. Chui Avenue – Alma-Atinskaya Street

17. Frunze Street – Manasa Prospect

18. Frunze Street – Isanova Street

19. Frunze Street – T.Moldo Street

20. Frunze Street – Abdrahmanova Street

21. Frunze Street – Turusbekova Street

22. Frunze Street – Shopokova Street

23. Yunusalieva Street – 5 microrayon

24. Kievskaya Street – M.Gvardii Boulevard

25. Kievskaya Street - Manasa Prospect

26. Kievskaya Street - T.Moldo Street

27. Kievskaya Street - Abdrahmanova Street

28. Toktogul Street - M.Gvardii Boulevard

29. Toktogul Street - Manasa Prospect

30. B.Baatyra Street – Fizpribory

31. Toktogul Street – Ibraimova Street

32. Moskovskaya Street – Manasa Prospect

33. B.Baatyra Street – Gorkogo Street

34. B.Baatyra Street – Mederova Street

35. Mira Avenue – Ahunbaeva Street

36. Mira Avenue – Gagarina Street

37. Mira Avenue – Gorkogo Street

38. Gorkogo Street – Yunusalieva Street

39. Gorkogo Street – Almaatinskaya Street

40. Yunusalieva Street – Ahunbaeva Street

41. B.Baatyra Street - Ahunbaeva Street

42. Mira Avenue - Sovetskaya Street (VDNH)

43. D.Syopina Avenue – Kyzyl Asker

44. D.Syaopina Avenue – Sydygalieva Street

45. D.Syaopina Avenue – P. Lumumby Street

46. D.Syaopina Avenue – Intergelpo Street

47. Fuchika Street – AZS

48. Gorkogo Street – Cholpon-Atinskaya Street

49. J.Jolu Avenue – M.Gvardii Boulevard

50. Manasa Avenue – Bokonbaeva Street

51. Yunusalieva Street – 6 micro rayon

52. J.Jolu Avenue – Zapadnyi autovokzal (Western Bus Station)

53. Manasa Avenue – Southern Highway

54. Kievskaya Street – Ibraimova Street.

Traffic Police Unit of Chief Department of Traffic Safety of Bishkek City Chief Interior Department

Demographic Data on Bishkek city

The total area of the city is 17613 ha.

The total number of streets and lanes is 1,404 (1,088 streets, 316 lanes), boulevards – 2, avenues – 4.
The length of streets and lanes is 1,278 km.

Traffic lights are installed at 193 crossroads. There is still a need to install traffic lights at 40 crossroads.

Road marking is laid on 10,362 square meters. Apart from this, there is a need to mark over 40,000 square meters.

There are 8,346 pieces of traffic signs. It is necessary to restore 4,206 pieces.

There are 14 subways, amongst which [ILLEGILBLE TEXT IN RUSSIAN due to poor hard copy] are functioning (Chui Ave. – Manas Ave., Chui Ave. – B.Baatyra str., Beishenalieva str. – Toktogula str., Zh.Zholu Ave. – Western Bus Station, Manas Ave. – State Register, B.Baatyra str. – across the 8th microdistrict, B. Baatyra str. – across micro-district # [ILLEGILBLE TEXT IN RUSSIAN due to poor hard copy]).

There are 1,827 km of sidewalks.

The lighting is available at 642, 55 km area. The quantity of lighting points/street lamps is [ILLEGILBLE TEXT IN RUSSIAN due to poor hard copy], amongst which 22,732 are in working condition.

There are 2,100 running meters of pedestrian barriers, over 4,000 running meters are[ILLEGILBLE TEXT IN RUSSIAN due to poor hard copy].

Following the analysis for 12 months of 2010 year, most of accidents happen at the streets outlined below:

- D. Syaopina Ave. (102-16-112),
- Chui Ave. (87-10-100),
- Zh.Zholu Ave. (80-7-82),
- L.Tolstogo str. (65-4-70),
- Sovetskaya str. (63-10-83),

- Alma-Atinskaya str. (32-4-40).

At present time, 46 automobile companies, offering regular passenger transportation on 149 routes, are registered in Bishkek city; Bishkek Trolley-bus Department, operating on 7 routes, and Bishkek Passenger Motor Company, carrying passengers on 17 routes fall under the category of municipal transport companies. The remaining 125 routes are served by companies of various forms of ownership.

For the purpose of control over road traffic and detection of violations, decrease of accident rate, for efficient fight with criminal and terrorist threats, video recording of offenders, general control over the public order in the capital there is an urgent need to develop video surveillance/control system.

Video points equipped with recording of speed rate violations:

1. D.Syaopina Ave. between Sydygalieva str. and Alykulova str.
2. Zh.Zholu Ave. – Lermontova str.
3. Gorkogo str. – "Karazhigach" residential area
4. Akhunbaeva str. – Alma-Atinskaya str.
5. Fuchika str. – "Dinamo" sport complex
6. Mir Ave. – Kirghizia-1
7. M.Gandi str. – Botalieva
8. Rysmendieva str. – Orto-Sai village
9. K.Datka str. – Bishkek Chui Channel
10. Elebesova str. - MChK

Video points equipped with recording of rules of passing of crossroads and stops violations:

1. Abdrakhmanova str. – Kievskaya str.
2. B.Baatyra str. – Akhunbaeva str.
3. B.Baatyra str. – Gorkogo str.
4. Mir Ave. – Akhunbaeva str.
5. Manas Ave. – Kievskaya str.
6. Chui Ave. – Beishenalieva str.
7. Zh.Zholu Ave. – K.Datka str.
8. Gorkogo str. – B.Baatyra str.
9. Chu Ave. – Suyumbaeva str.
10. Mir Ave. – Gorkogo str.

There is a need to equip the most busy crossroads with video surveillance cameras:

1. Zh.Zholu ave. – Manas ave.
2. Zh.Zholu ave. – T.Moldo str.
3. Zh.Zholu ave. – Kommunarov str.
4. Zh.Zholu ave. – Abdrakhmanov str.
5. Zh.Zholu ave. – Shopokov str.
6. Zh.Zholu ave. – Ibraimov str.
7. Zh.Zholu ave. – Alma-Atinskaya str.
8. Chui ave. – M.Gvardiya blvd.
9. Chui ave. – Manas ave.
10. Chui ave. – Beishenalieva str.
11. Chui ave. – Isanova str.
12. Chui ave. – T.Moldo str.
13. Chui ave. – Ibraimov str.
14. Chui ave. – Gogolya str.
15. Chui ave. – Pavlova str.

INFORMATION OF THE PUBLIC TRANSPORTATION DEPARTMENT OF BISHKEK CITY MAYOR'S OFFICE

In response to Questionnaire, point 4 "Public Transportation Planning and Development"

Point 4-1

In accordance with Decree No. 205 of Bishkek City Mayor's Office dated May 15, 2008 "On Formation of Public Transportation Department of Bishkek City Mayor's Office" an organization named "Public Transportation Department of Bishkek City Mayor's Office (PTD)" was formed by the way of reorganization based on legal succession.

PTD is authorized with an absolute right to form a route network in Bishkek City. The PTD activity has become a budget-based. Under Decree No. 205 of Bishkek City Mayor's Office dated May 15, 2008 "On Formation of Public Transportation Department of Bishkek City Mayor's Office" to replenish the municipal budget the rental payment of municipal micro bus and bus routes was introduced in Bishkek City (except for municipal enterprises). The monthly rental payment for some routes is as follows:

Category 1 – KGS 983;

Category 2 – KGS 578;

Category 3 – KGS 347.

Fulfillment of the strategic goals in the transportation area includes the following:

- Development of priority transportations for the citizens (public transport);
- Creation of favorable environment to attract investments, including investments into new transportation sectors and solution of transportation issues;
- Ensuring sustainable small and medium business development with attraction into the transportation area;
- Improvement of transportation management system focused at further reduction of administrative barriers to the transport sector development;
- Improvement of professional skills of transport officials and managers;
- Development of a competitive environment;
- Solution of some environmental issues;

- Streamlining of regulatory framework having an impact on development of public transportation

Point 4.2

Total number of vehicles of the public passenger transport and private companies-carriers is as follows:

Including enterprises:

BCPTE – 462 units BTD – 161 units

Total: public transport – 623 units.

Private companies have 2835 units available (planned operation of 2336 micro buses). Two companies, namely, Arhat Trans and Union Plast, have 24 units.

Passenger transportations in Bishkek City are performed by:

- Public passenger enterprise – Bishkek Trolleybus Department (BTD);

Daily, 76-80 trolleybuses (including 21 units of new energy saving, low-floor buses, manufactured in Belarus) operate on 7 routes (Route Nos. 4, 8, 9, 10, 11, 14, 17) and planned operation should be 87 units (total number of operational trolleybuses is 161 units, including 60 units in disrepair and pending retirement due to expired service life). Restoration and repair of these trolleybuses due to a long service life and complete deterioration of metal constructions is not possible.

Public passenger enterprise: Bishkek City Passenger Transportation Enterprise (BCPTE).

Daily, 220-250 new medium capacity buses, manufactured in China, operate in the city (planned operation of 396 units on 22 routes (Routes Nos. 3, 4, 5, 6, 7, 8, 9, 10, 18, 19, 21, 22, 29, 33, 35, 37, 38, 39, 42, 46, 48, 28). Total number of buses is 462, including 457 new buses purchased in 2008-2010, manufactured in China, and large-capacity buses – 4 units of Liaz and Man).

Public bus and trolleybus routes service pensioners and privileged population.

Point 4.3

** Creation of uniform Central Traffic Control Service and allocation of land for construction and equipping Central Traffic Control Service (CTCS).

Today, there are 36 Central Traffic Control Service in Bishkek City to coordinate operation of public transportations, including:

- PTD controls operation with the help of 28 CTCSs;
- BTD controls operation through 8 CTCSs.

According to monitoring of condition of Central Traffic Control Service and adjacent areas dedicated for maneuvering, parking of buses and trolleybuses, it was found out that kiosks, temporary pavilions, cafes and service centers are located on adjacent areas of many Central Traffic Control Services. They prevent buses turning, parking, provision of safety and possibility for free maneuvering of buses at terminals.

Central Traffic Control Services are poorly equipped and available equipment does not meet the modern requirements. There are other issues to be addressed. But the most critical issue is land allocation for construction of CTCS.

* Under the framework of the Program “Renewed Capital” for 2009-2012 (Step Three: from July 1, 2010 to December 31, 2010) 161 (105) more passenger buses were purchased. However, to ensure continuous and comfortable transportation of the Capital’s citizens, it is necessary to buy 500 buses more with larger capacity, or 700 medium capacity buses and 100 trolleybuses to restore all bus and trolleybus municipal routes and completely dislocate over 1800 micro buses from the center of the City (first transport block limited by streets Chui, Manas, Abdrahmanova and Gorkogo).

Point 4.4

Planning issues:

Over 10 thousand taxis and 150 thousand transport vehicles run in the City (in fact, micro buses take 1,5% - 2% in total amount of vehicles). Today, over 35 legal entities of different organizational and legal forms carry out passenger transportations by taxicabs in Bishkek City. In total, they operate over 2000 cars. At the same time, a lot of illegal private passenger carriers operate on the streets of the City. As a result, municipal budget receive less taxes and

taxi service market has a chaotic nature. There is a need to improve the regulatory framework for the public transportation system. The authorities of the state and municipal governance bodies for **public** passenger transport (including **taxicabs**) to issue licenses and perform control over this activity should be clearly stated.

The topical issues is taxicab parking (so-called “kerbing” taxis), when they virtually block access to bus stops for municipal public transport.

Deputy Head of Unit for Routes Planning

PTD of Bishkek Mayor’s Office M. Balbaev

REFERENCE NOTE
ON QUANTITY OF LLC COMPANIES ENGAGED IN PASSENGER TRANSPORTATION IN BISHKEK CITY FOR 2011

#	Business name (LLC)	Full name of manager	Number of routes	Number of fleet/rolling stock	Routes/ Nos
1	“Kuyun”	Nurmukanmetov E.	6	240	118, 215, 251, 263, 264, 269
2	“Ulma-Trans”	Dospaev A.	1	20	228
3	“Ata-Zhol”	Kuttubaev Zh.	1	46	203
4	“Sovet-Brigady”	Kuttubaev Zh.	2	117	193, 192
5	“Airus-Trans”	Mambetov M.	2	55	134, 285
6	“Baizak-Aska”	Askarov K.	1	53	258
7	“Zhazada-Trans”	Moldobacherov O.	3	53	254, 299, 250
8	“Ak-Niet-Trans”	Konulkulov E.	1	52	166
9	“Yuram”	Abdulov M.	2	80	152, 227
10	“Geroi”	Burtseva L.	1	33	281
11	“Akademtransservic e”	Bakeev A.	3	87	217, 243, 266
12	“Batyr-Khan-Murager”	Kabardov I.	10	287	154, 275, 100, 128, 131, 144, 101, 110, 160, 132
13	“Avtomig”	Matisakov E.	3	85	104, 121, 210
14	“Bek-Too”	Sulaimanov D.	2	82	240, 146
15	“Vostochnyi Express”	Belaia S.	4	152	162, 202, 204, 211
16	“Liga”	Matisakov B.	16	518	102, 129, 133, 139, 143, 155, 159, 161, 170, 174, 176, 196, 200, 212, 150, 179
17	“Ellada-Plus”	Almambekov A.	5	170	122, 216, 236, 195, 222
18	“Dordoi-Bis”	Ismailov A.	2	44	233, 234
19	“Transgroupcommu nication”	Abdyzhalilov U.	5	170	122, 216, 236, 195, 222
20	“Yaglakhar”	Vasiliev A.	2	64	151, 175
21	“Meikin”	Kudaibergenov M.	5	172	138, 184, 188, 220, 271
22	“Stele”	Kulakov S.	2	27	219, 108
23	“AIID-service”	Alymbaev O.	1	47	164
24	“Ak-Zholtoi”	Zhusupov K.	10	264	107, 127, 147, 163, 169, 173, 111, 112, 113, 114
25	“Kulatai”	Adzhimatov Ch.	2	87	103, 118
26	“Union-Plast”	Voronova O.	1	20	199
27	“BGATP”	Shadyev S.	1	37	177
28	“Besto”	Koichubaev A.	1	40	238
29	“Bomond-Group”	Abdygulova L.	1	51	148
30	“Maaniker-Trans”	Anarkulov S.	1	12	262

#	Business name (LLC)	Full name of manager	Number of routes	Number of fleet/rolling stock	Routes/ Nos
31	“Elek”	Iminov D.	4	154	106, 123, 137, 172
32	“Expressprofitrans”	Kydyrbaev M.	1	33	167
33	“Buel”	Umetaliev K.	1	13	260
34	“Trans-Manas-Service”	Uzenov A.	2	73	286, 214
35	“Elaman-Trans”	Ismanov K.	1	43	224
36	“Dordoi-Trans”	Musaev D.	4	89	191, 226, 252, 117
37	“Ulanbek-Trans”	Usubaliev R.	1	21	257
38	“Veteran”	Volkodav S.	1	7	298
39	“Santash-Zholdor-Service”	Zhanaliev K.	2	46	295, 265
40	“Kut-Konsun”	Koichubaev A.	2	53	223, 273
41	“Uzar-vest”	Avdrasilov A.		27	145
42	“Bus-Service”	Sevastianov V.		16	225
43	“Arkhat-Trans”	Kim B.		9	14
44	“Ak-Zhol-Sapar”	Ibraimov		11	261
45	“Argymak-Trans-Co”	Temirov Sh.		22	270
46	“Service-Taxi”	Baigaziev M.		29	180
47	BTD		7	86	4, 8, 9, 10, 11, 14, 17
48	BPTC		22	366	1, 3, 4, 5, 6, 7, 8, 9, 18, 19, 21, 22, 28, 29, 33, 35, 37, 38, 39, 42, 46, 48

TOTAL:

Companies (LLC)	Number of routes	Number of minibuses
46	122	3841
2 (municipal)	29	452

Head of DTS of the CDI Bishkek city
Police Lieutenant Colonel **Y. Sarkulov**

GENERAL INFORMATION ABOUT BISHKEK TROLLEY-BUS DEPARTMENT (BTD)

Legal Structure, Owners of Company, Relations with the City

Bishkek Trolley-bus Department (BTD) is the largest enterprise of the capital providing passenger transportation services. It's share within the total passenger turnover in Bishkek city is on average 40%.

Geographical coverage of trolley-bus network is less than the bus network. Nevertheless, comparing with the second large operator in the transportation market, i.e. automobile enterprise, technical condition of the BTD fleet is better and the frequency of traffic at services routes is higher, which influences on the passenger turnover.

There are large areas of trolley-bus and bus routes in the downtown and along the main streets' routes. Yet the trolley-bus network of Bishkek city has advantageous strategic location for its preservation as the basis of high-quality network of public transportation on the major transport routes of the city.

The scale of the BTD network and its share in the passenger transportation market means that this network represents critical component of the whole system of public transport of Bishkek City.

Till present time BTD preserves the status of a state enterprise and is public utility company, which carries out its economic activities pursuant to the legislation of the KR and its charter. The company is an independent legal entity, has settlement accounts in a bank, round seal, stamp, letterheads and other attributes of a legal entity. The founders of BTD are Department of Passenger Transport of the Mayor's office of Bishkek City.

The major type of BTD's activities is passenger transportation on 7 routes located along the main streets of Bishkek City where the demand in municipal and public transport is the highest. Each route is served by on average 10-11 trolley-buses; the length of the route is 10-12 km; maximum length of routes is 18,1 km.; average operational speed is 17 km per hour.

Production base of BTD includes 107 units of rolling stocks, including 101 units of passenger transport and 6 instructional and special trolley-buses. Average age of the rolling stock is 14 years.

Trolley-bus is electric, environmental-friendly type of passenger transportation. Not only ecological and social life of the city, but also health, mood and financial welfare of million of our citizens with average income depend on operation of BTD. Out o 107 units of the rolling stock the operation life of over 70% of trolley-buses has expired. In 2009 the Mayor's office of Bishkek City procured 21 new trolley-buses from the Republic of Belarus, yet it is not sufficient. There is a need to raise funds for upgrade of the fleet with new trolley-buses as out of 101 units of the rolling stock only 85090 units are operating, comprising 80-85% of total number of trolley-buses.

Purpose and main functions of 5 major structural sub-divisions

5 major sub-divisions operate at BTD, notably:

- Depot # 1;
- TRM;
- Power facility;
- Garage;
- Administration.

Depot # 1 is located at Moscovskaya Street, 237. Premise of administration, garage and part of TRM are located in the territory of Depot # 1. Depot # 1 includes the following structural sub-divisions:

- Unit of technical exploitation of the rolling stock (UTERS);
- Rolling stock exploitation service (RSES);
- Chief mechanics unit (CMU).

A number of rolling stock pursuant to the inventory is 107 units. An area for parking trolley-buses at Moscovskaya Street has been equipped for extension of the Depot's territory.

UTERS carries out prophylactic inspection on a daily basis, as well as preventive repair works # 1, and urgent replacement of aggregates, repairs of body and equipment of a trolley-bus if such works are required in excess of the scope of inspection and repair works # 1, i.e. repairs upon request.

Technical inspection # 1 and # 2 (TO-1 and TO-2) are carried out pursuant to the inspection schedule. TO-1 is carried out on the 8th day of exploitation, whereas TO-2 – in 7,000-9,000 km traveled (mileage). RSES organizes servicing of trolley-buses by brigades of drivers and conductors. The service supervises work of drivers and conductors. It assigns brigades to trolley-buses; controls over correct use of working time of drivers and conductors, work

regime, correct alternation of shifts and granting days off. It develops schedules, work orders for drivers and conductors, maintains time-sheets. Every day RSES sends 85-90 trolley-buses for the line every day which serve such routes as 4, 8, 9, 10, 11, 14, 17 and transport on average 63,700 passengers per day. Of all existing routes the route # 4 is serviced by conductors.

CMU carries out capital and current repairs of the equipment, heating and power facilities, water supply and drainage systems. It organizes work on servicing compressor and transformation sub-stations. It also develops and submits reports on power and water supply operations.

2. Utilities service consists of 19 transforming traction sub-stations with installed capacity of 46,000 kWt. Traction sub-stations are designed for decreasing the tension down to 550 V and transforming the alternating current into direct current. Length of contact networks is 210 km one-way and 143.8 km of underground cable networks. Ground contact networks bear 6,378 pylons of them 2,168 units are round and metal, 1,133 units are metal latticed and 3,077 units are metal and concrete.

3. TRM is divided into aggregate area and planned repairs workshop. Due to lack of own base aggregate area is located in the territory of Depot # 1 and planned repairs workshop is located in the territory of Depot # 2.

Current repairs are conducted at 60,000 km. traveled (mileage). For this purpose the trolley-bus is taken out of operation for 8 days.

Repair of aggregates and units (all types of electric engines, compressors, etc.) is carried out at the aggregate area.

Current repair works and capital repairs of body equipment are also carried out at the planned repairs area. On average 52 trolley-buses are subject to current repairs every year.

4. Autogarage

Inventory number of specialized motor transport is 53, of them:

- 11 buses (PAZ, RAF) for transportation of drivers of trolley-buses and conductors from the night shifts and for the 1st morning shift, which starts at 05.00am.
- 40 specialized vehicles (elevated work platforms, AP-7, AP-17, autocranes and other vehicles with special aggregates) which serve contact & cable networks of utilities service.

- 2 tractive vehicles (ZIL – 131 and MAZ – 500) for toing trolley-buses from the line in case of serious technical malfunctions of trolley-buses.

5. Administration

Administration consists of the head of BTD, Chief engineer, deputy head for operations and general issues.

Head of BTD, Mr. Militsky Gennadyi Alexeevich supervises observance of qualitative and quantitative indicators, is responsible for safety of property, funds, material values, staff and financial discipline, recruitment. Senior accountant, heads of units (accounting, HR, planning, head of defense HQ) report to the head of BTD.

Chief engineer, Mr. Aidarov Kanybek Sharshenbaevich is the first deputy head of BTD and supervises work of heads of workshops, is responsible for technical condition of the fleet and other fixed assets.

Deputy Head for Operations and General Issues, Mr. Propadimov Pavel Alexandrovich, supervises work of heads of traffic units (traffic service, fee collection unit, traffic safety unit, logistics and autogarage), is responsible for material and technical supplies of the BTD and technical condition of specialized vehicles of auto garage.

Services Provided and Number of Passengers Serviced

The major type of activities of the BTD is passenger transportation services.

On average daily volume of passenger transportation is 63,700 passengers, which is 23,200,000 passengers per year.

Currently average number of employees of the BTD is 658 (for 2010), of them:
- 188 drivers of trolley-buses;
- 17 conductors;
- 150 repair workers;
- 105 office employee (heads and specialists);
- 198 of other categories (workers of the garage, OGM, persons on duty at technical sub-stations, cleaners, etc.).

2) Information about tariff system

a) Categories of tickets and tariffs

- tariff per 1 passenger is 5 Som;
- season ticket (bus, trolley-bus) is 325 Som per month;
- season ticket for trolley-bus is 225 Som per month;
- season ticket for school students is 150 Som.

Source of income is revenues from transportation of passengers and reimbursements received for rendering transportation services for categories of citizens of the city enjoying preferential tariff rate or free-of-charge transportation services.

3) Planning and Development Strategy of Public Transport System

Pursuant to the inventory a number of the fleet is 107 units, of them 101 are passenger vehicles, comprising 70% of the rolling stock with the expired service life. Nevertheless 85-90 trolley-buses operate on relevant routes every day.

If new trolley-buses are procured, the BTD has area for parking the fleet of up to 250 vehicles. There are also functioning repairs shops, 19 transforming traction sub-stations, length of trolley line (single track) is 210 km, capacity of the trolley lines allows servicing 18 routes with up to 185-190 vehicles/trolley-buses per line.

4) Revenues and Expenditures for the Last 10 Years and Routes' Characteristics are attached.

5) Distribution of passenger trolley-buses by year of manufacture

Service life	Number of trolley-buses	Period of manufacture
2 years	21	2009
9 years	9	2003
10 years	24	2001
From 11 to 15 years	30	From January 1, 1993 till January 1, 1997
From 16 to 20 years	21	From January 1, 1988 till January 1, 1993
From 20 years and over	2	From January 1, 1978 till January 1, 1988
Total	107	

Head of BTD [signature] Militsky G.

Factual Revenues and Expenditures for the Last 10 Years

Bishkek Trolley-bus Department

#	Indicators	Unit	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1.	Passenger inventory		224	220	204	199	199	198	197	142	161	161
2.	Average operations rate per day		157	153	133	119	106	97	85	62	71	79
3.	Number		1255	1244	1119	959	888	834	689	581	639	658
4.	Average wage		1844	1939	1868	2154	2672	3224	3351	4875	6498	7244
	Revenues – drivers and conductors		51407.7	49169.0	34694.8	30355.0	29109.7	26166.3	20987.6	31718.9	39955.0	48330
	Season tickets		19413.7	7734.3	4762.9	4248.3	3447.0	2371.6	1617.6	2075.5	2189.9	4070.4
			22152.7	34982.9	27671.9	35359.7	35700.5	29965.2	32300.0	46489.6	48400.0	57350
5.	Sub-total from passenger transportation services		92974.1	91886.2	67129.6	69963.0	68257.2	58503.1	54905.2	80284.0	90544.9	109750.4
	b) other income		1935.8	2490.2	2105.3	3457.0	2690.6	2848.4	3896.2	2850.4	3525.4	3708.3
	Total income		94909.9	94376.4	69234.9	73420.0	70947.8	61351.5	58801.4	83134.4	94070.3	113458.7
	Expenditures: wage		25191.6	26166.2	22296.3	24053.6	25858.3	29000.1	25379.6	30710.1	50001.7	57201.7
	Social Fund		7259.5	6514.0	5525.9	5964.5	6035.3	6032.1	5158.6	5773.8	9342.6	9742.6
	Fuel		5978.4	5035.4	6067.3	409.1	4340.2	4158.4	2878.2	3398.3	3835.6	4798.3
	Materials		20602.6	12700.0	7645.0	6603.4	6379.9	8807.1	6494.3	9125.7	10910.9	13026
	Tires depreciation		6015.6	3421.2	2519.6	2911.4	2657.1	2292.9	2031.2	3118.0	2247.8	2941.2
	Tear and wear		3775.5	20701.4	18446.4	15309.1	14187.5	13606.0	10590.3	8274.4	15167.6	39227.8
	General expenses		8231.2	7585.3	8143.7	1800.9	3714.0	3908.1	3803.1	5193.4	2349.6	2885.7
	Power		23228.6	22908.0	19341.1	17786.6	16750.9	15315.3	12350.9	11174.6	13127.5	19276.8
	Taxes		756.7	754.5	699.2	587.3	2677.4	1996.1	1901.4	2714.9	2357.3	2271.8
6.	Sub-total from passenger transportation services		101039.7	105786.0	90684.5	79095.9	83100.6	85116.1	70587.6	79483.2	109340.6	151371.9
	Other expenditures		1757.8	2709.7	1735.1	1901.7	3929.2	2566.5	2904.8	3754.2	1694.3	3327.4
	Sub-total expenditures		102797.5	108495.7	92419.6	80997.6	87029.8	87682.6	73492.4	83237.4	111034.9	154699.3
7.	Total from passenger transportation		59147.6	49937.8	39854.2	47919.1	41580.4	38651.0	21953.4	14903.9	18926.7	23242.3
8.	Prime cost per 1 passenger		1.71	2.12	2.28	1.65	2.00	2.20	3.22	5.33	5.78	6.51

Head of BTD Militsky G.

Approved by trade-union committee of BTD

Head of BTD, Militsky G.

Characteristics of trolley-bus routes based on daily schedule
From December 1, 2010

Bishkek City September 2, 2008

ACT

The Commission consisting of Assistant Director for Operations of Bishkek Passenger Transportation Company (BPTC), Kravtsova L.E., head of BPTC operations unit, Japarkulov M., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Zherebtsov V.V. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **circular route # 48: Western bus station – Eastern bus station – Western bus station.**

Measurements have been made at office car, Mercedes, plate number B4700BI equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from the Western bus station via Eastern bus station to the Western bus station is 18.2 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Western bus station	-	17.	Karven club	9.4
2.	Molodaya Gvardia	0.8	18	Komfort	10.2
3.	Kalyk Akiev	1.7	19.	Erkindik boulevard	11.2
4.	Isanov	2.3	20.	Republican hospital	12.1
5.	The church	2.7	21.	Togolok Moldo	13.0
6.	Panfilov	3.2	22.	Manas	13.3
7.	Erkindik boulevard	3.5	23.	Shevchenko	13.8
8.	Goin trade center	4.0	24.	Kalyk Akiev	14.3
9.	Issyk-Kul cinema	4.7	25.	Maternity house # 2	14.7
10.	Eastern bus station	5.3	26.	Osh market	14.8
11.	Alamedin market	6.1	27.	Besh sary	15.0
12.	Polyclinic	6.7	28.	Pavlov	16.0
13.	Sverdlov district administration	7.5	29.	Furniture factory	17.2
14.	Vostok-5	8.0	30.	Kommunarov	17.7
15.	Naberezhnaya	8.6	31.	Western bus station	18.2
16.	Tysyacha melochei	9.0			

Note: Zero run: BPTC – Chui avenue – Alma-Atinskaya street – 1.7 km
Number of traffic lights – 32; time spent for traffic survey – 45 minutes; L of turn – 18.2 km

Director Assistant of BPTC	[signature]	Kravtsova L.
Head of Operations Unit, BPTC	[signature]	Japarkulov M.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.
Driver	[signature]	Zherebtsov V.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City
[signature] L.V.Polyak
Date: 2010
Seal

0010
February 9, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2010
Seal

TRAFFIC PLAN

ROUTE # 48

Western bus station – Eastern bus station

Stops:

1. Western bus station	13. Eastern bus station	25. Ibraimov street	37. Kalyk Akiev street
2. Molodaya Gvardia boulevard	14. STO	26. School	38. Molodaya Gvardia boulevard
3. Kalyk Akiev street	15. Alamedin district administration	27. Railway station	39. Osh market
4. Isanov street	16. Polyclinic	28. Erkindik boulevard	40. Beer factory
5. Kalyk Akiev street	17. Ogonbaev street	29. Panfilov street	41. Maternity house # 2
6. Turusbekov street	18. Sverdlov district administration	30. Medical school	42. Fuchika park
7. The church	19. Vostok – 5	31. Republican hospital	43. Furniture factory
8. Panfilov street	20. Naberezhnaya street	32. Cardiology	44. Kommunarov street
9. Erkindik boulevard	21. Police station	33. Toktogul street	45. Cinema studio
10. GOIN	22. Avtogid	34. Isanov street	
11. Issyk-Kul cinema	23. The mosque	35. Manas avenue	
12. Suyunbaev street	24. Komfort	36. Turusbekov street	

[SCHEME]

A operations – 12 vehicles
L of turn – 1[UNCLEAR], 2 km
t turn – 45 minutes
И Traffic intensity – 4 minutes
Volume of operations – 24 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City April 3, 2009

ACT

The Commission consisting of head of BPTC operations unit, Strizhov V.G., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 46: Enesai residential area – Chon-Aryk village.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BA equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Enesai residential area to Chon-Aryk village – 20.5 km, Chon-Aryk village to Enesai residential area – 20.5 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Enesai residential area	-	17.	Kok-Jar micro-district	9.6
2.	School	0.7	18	Ulan micro-district	10.4
3.	STO [car repairs]	1.0	19.	Akhunbaev street	10.8
4.	MTF	1.7	20.	Koibagarov street	11.1
5.	Rechka [river] Fuel station	2.5	21.	Micro-district # 4	11.3
6.	Shoro	3.1	22.	Polyclinic	11.7
7.	HPS – 2	3.4	23.	Ortosai market	12.2
8.	Stocking factory	4.2	24.	Zhukeev-Pudovkin street	12.7
9.	Repairs factory	4.8	25.	Baitik Batyr street	13.2
10.	Jibek-Jolu	5.2	26.	Micro-district # 9	13.6
11.	Alamedin market	5.5	27.	Micro-district # 10	14.1
12.	School	6.0	28.	Orto Sai village	16.8
13.	Chui avenue	6.9	29.	Ala-Archa area	17.4
14.	Madina market	7.3	30.	Mir avenue	17.9
15.	Ainur factory	8.3	31.	KDP (Control unit) (Control unit)	19.0
16.	Dasmia restaurant	9.0	32.	Kojobergenov street	19.9
			33.	50 let Pobedy street	20.5

Note: Zero run: BPTC – Enesai residential area – 9.0km; BPTC – Chon Aryk village 9.5km; Number of traffic lights – 16; time spent for traffic survey – 53 minutes; L of turn – 41 km

Head of Operations Unit, BPTC	[signature]	Strizhov V.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date [UNCLEAR] 8, 2010
Seal

[UNCLEAR]
September 9, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2008

TRAFFIC PLAN
ROUTE # 46

Ene Sai residential area – Chon-Aryk village

Stops:

1. Ene – Sai residential area
2. MTF
3. Spetsmontazh
4. HPS -2
5. Alamedin market
6. Polyclinic
7. Vostok – 5
8. Madina trade center
9. Ainur factory
10. Dasmia
11. Kok-Jar micro-district
12. Ulan micro-district
13. Koibagarov street
14. Micro-district # 4
15. Orto-Sai market
16. BishkekSyut
17. Maternity House # 4
18. Micro-district # 9
19. Micro-district # 10
20. Orto-Sai village
21. Semetei street
22. Kojobergenov street
23. 50 let Pobedy street

[SCHEME]

A operations – 18 vehicles
L of turn – 41 km
t turn – 126 minutes
И traffic intensity – 6 minutes
Volume of operations – 20 km per hour
Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Bishkek City January 20, 2009

ACT

The Commission consisting of head of BPTC operations unit, Japarkulov M., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 42: Micro-district # 12. Naberezhnaya street – Ala-Too residential area.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Micro-district # 12. Naberezhnaya street to Ala-Too residential area – 24.8 km, Ala-Too residential area to Micro-district # 12. Naberezhnaya street – 24.8 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Micro-district # 12. Naberezhnaya street	-	1.	KDP (Control unit) Ala-Too	-
2.	Micro-district # 6	1.8 -	2.	Turn to Kirov street	2.3 – 2.3
3.	Tokombaev turn	1.5 – 3.3	3.	Turn to Den Syaopin	1.1 – 3.4
4.	Baitik Batyr steet	1.3 – 4.6	4.	Turn to Kirkomstrom	1.3 – 4.7
5.	Fizpribory [Physical instruments factory]	2.3 – 6.9	5.	Kyzyl Asker	2.8 – 7.5
6.	Mossovet (Moscovskaya & Sovetskaya crossroad)	2.4 – 9.3	6.	Osh market	1.0 – 8.5
7.	Voentorg shop	2.3 – 11.6	7.	Voentorg shop	2.8 – 11.3
8.	Osh market	1.9 – 13.5	8.	Mossovet (Moscovskaya & Sovetskaya crossroad)	1.9 – 13.2
9.	Kyzyl-Asker	2.8 – 16.3	9.	Fizpribory [Physical instruments factory]	2.3 – 15.5
10.	Turn to Kirkomstrom	1.0 – 17.3	10.	Micro-district # 10	2.4 – 17.9
11.	Kirova street	2.8 – 20.1	11.	Turn to Tokombaev street	2.3 – 20.2
12.	Turn to Ala-Too	1.3 – 21.4	12.	Micro-district # 6	1.3 – 21.5
13.	KDP (Control unit) Ala-Too	1.1 – 22.5	13.	Micro-district Asanbai	1.5 – 23.0
14.		2.3 – 24.8	14.	Miro-district # 12. Naberezhnaya street	1.8 – 24.8

Note: Zero run: BPTC – Micro-district # 12. Naberezhnaya street – 6.5 km; BPTC – Ala-Too residential area 18.0 km; Number of traffic lights – 33; time spent for traffic survey – 170 minutes; L of turn – 49.6 km

Head of Operations Unit, BPTC [signature] Japarkulov M.
Senior traffic controller, Operations Unit, BPTC [signature] Kydyrgycheva G
Driver [signature] Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2009
Seal

[UNCLEAR]
September 9, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2009
Seal

TRAFFIC PLAN

ROUTE # 42

Ala-Too residential area – Miro-district # 12 (Naberezhnaya street)

[SCHEME]

Stops	
1. Ala-Too residential area	22. Zenit
2. Kidergarten	23. Mossovet
3. Kirov street	24. Yubileinaya
4. Kirkomstrom	25. Gorky street
5. Plodobaza	26. Mederov street
6. Sydygaliev street	27. Fizpribory
7. Kudaibergen	28. Zhantoshev street
8. Depovskaya	29. TB hospital
9. Kyzyl-Asker	30. Physical Training Institute
10. Raznoprom	31. Micro-district # 3
11. Railway gate	32. Orto-Sai market
12. Setun	33. Micro-district # 5
13. Pavlov street	34. Micro-district # 7
14. Kyal	35. Micro-district # 6
15. Zavodskaya	36. Karalaev street
16. Academy of Science	37. Micro-district # 11
17. Philarmonic society	38. Asanabai
18. Voentorg	39. Narodnyi
19. Voentorg	40. Upper Asanbai
20. Agroprom	41. Micro-district # 12
21. Erkindik boulevard	42. Micro-district # 12 (Naberezhnaya street)

A operations – 18 vehicles

L of turn – 41 km

t turn – 126 minutes

И traffic intensity – 6 minutes

Volume of operations – 20 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City December 15, 2010

ACT

The Commission consisting of head of BPTC operations unit, Mysyraimov U., deputy head of BPTC operations unit, Anarbaev S., Senior traffic controller of the BPTC Seitkazieva M. have hereby executed this act for documenting distance measurement with names of stops at **route # 39: Micro-district # 10 - Kirkomstrom.**

Measurements have been made at office car, VAZ 21074, plate number 6925 BB equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from KDP (Control unit) Micro-district # 10 to Kirkomstrom – 17.2 km, from Kirkomstrom to KDP (Control unit) Micro-district # 10 – 17.2km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Kirkomstrom KDP (Control unit)		1.	Micro-district # 10	
2.	Kirkomstrom	0.1	2.	Baitik Batyr street	0.3
3.	School # 42	0.5	3.	Tokombaev street	0.8
4.	Plodobaza (Fruit & vegetable storage) (Akun micro-district)	0.9	4.	Micro-district # 7	1.2
5.	Sadygaliev street	1.5	5.	Micro-district # 8	1.5
6.	Dayikan-Dordoi market	1.8	6.	Orto-Sai market	1.8
7.	Kyrgyz temir	2.6	7.	Maternity house # 4	2.3
8.	Timber warehouse	3.5	8.	Medical Center of Kyrgyz State Medical Academy	2.8
9.	Customs	4.0	9.	School	3.1
10.	Kyrgyz-Russian Academy	4.3	10.	Kyrgyz State University of Construction & Architecture	3.5
11.	Bath-house	4.7	11.	School # 61	4.2
12.	Pishpek	5.2	12.	Chatyr-Kul (Sayakat hotel)	4.7
13.	Factory	5.6	13.	Automobile college	5.2
14.	Bach street	5.9	14.	Champaign & Vine Factory	5.9
15.	Batken Komfort market	6.5	15.	Botanic garden	6.5
16.	Bakaev (Chapaev) street	6.8	16.	Vegas	7.0
17.	Factory named after Lenin	7.7	17.	Narodnyi supermarket (Sabina café)	7.5
18.	OREMI factory	8.2	18.	Construction college (Komet)	8.0
19.	Infectious diseases hospital	8.7	19.	Infectious diseases hospital	8.5
20.	Construction college	9.1	20.	OREMI	9.0
21.	Kulatov street	9.7	21.	Factory named after Lenin	9.5
22.	Vegas	10.2	22.	Bakaev (Chapaev) street	10.4
23.	Botanic garden	10.7	23.	Nekrasov street	10.7
24.	Champaign & Vine Factory	11.3	24.	School	11.2
25.	Automobile college	12.0	25.	Factory	11.6
26.	Chatyr-Kul (Sayakat hotel)	12.5	26.	Pishpek	12.0
27.	School # 61	13.0	27.	Bath-house	12.5
28.	Kyrgyz State University of Construction & Architecture	13.7	28.	Kyrgyz-Russian Academy	12.9

#	Name of stops	Distance, km	#	Name of stops	Distance, km
29.	School # 62	14.1	29.	Customs (T.Frunze)	13.3
30.	Medical Center of Kyrgyz Medical Academy	14.4	30.	Timber warehouse	13.8
31.	Maternity House # 4	14.9	31.	Kyrgyz temir	14.6
32.	Orto-Sai market	15.4	32.	Dyikan-Dordoi market	15.2
33.	Micro-district # 8	15.7	33.	Sadygaliev street	15.7
34.	Micro-district # 7	16.0	34.	Plodobaza (Fruit & vegetable storage)	16.1
35.	Tokombaev street	16.4	35.	School # 42	16.8
36.	Baitik Batyr street	16.9	36.	Kirkomstrom KDP (Control unit)	17.1
37.	Micro-district # 10	17.2	37.	Konechnaya	17.2

Note: Zero run: BPTC – Micro-district # 10 – 6.5km; BPTC – Kirkomstrom – 13km; L of turn – 34.4km; BPTC/1 – 10 micro-district # 10 – 13.9 km; BPTC/1 – Kirkomstrom – 3.9km; Number of traffic lights – 15.

Head of Operations Unit, BPTC	[signature]	Myrsyraimov U.
Deputy head of Operations Unit	[sigature]	Anabaev S.
Senior traffic controller, Operations Unit, BPTC	[signature]	Seitkazieva M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Department of the Chief Interior Department of Bishkek City [signature] Sarkulov Y. Date: 2010 Seal	# 0128 December 12, 2010	ENDORSED Head Municipal Transport Department Mayor's office of Bishkek City [signature] Baibolotov Sh. Date: 2010 Seal

TRAFFIC PLAN

ROUTE # 39

Kirkomstrom – Micro-district # 10

[SCHEME]

Stops	
1. Kirkomstrom	22. Chatyr-Kyl cinema
2. School	23. School # 61
3. Plodobaza (Fruit & Vegetable Enterprise)	24. Kyrgyz State University of Construction and Architecture
4. Sadygaliev street	25. School # 60
5. Kyrgyz temir	26. Kyrgyz State Medical Academy
6. Timber warehouse	27. Maternity house # 4
7. Customs	28. Orto-Sai market
8. Railway hospital	29. Micro-district # 8
9. Bath-house	30. Micro-district # 7
10. Pishpek station	31. Tokombaev street
11. Bach street	32. Baitik-Batyr street
12. Batken market	33. Micro-district # 10
13. Flour factory	
14. Maternity house # 2	
15. Kalyk Akiev street	
16. Shevchenko street	
17. Manas avenue	
18. Bokonbaev street	
19. State Register	
20. Champaign & Vine Factory	
21. Automobile college	

A operations – 20 vehicles

L of turn – 34.4 km

t turn – 120 minutes

И traffic intensity – 5 minutes

Volume of operations – 17 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City February 27, 2010

ACT

We, the acting head of BPTC operations unit, Mysyraimov U., Senior traffic controller of the BPTC Seitkazieva M., driver Alimov Kh. have hereby executed this act for documenting distance measurement with names of stops at **route # 38: Micro-district "Alamedin" – bock 110.**

Measurements have been made at office car, VAZ, plate number 1079 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from KDP (Control unit) Micro-district "Alamedin – 1" to block 110 – 18.0 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Alamedin – 1 KDP (Control unit)	-	1.	Block 110	
2.	A u reki [Near the river] café	0.6	2.	Taldysui street	0.4
3.	Bystrotok [Water channel]	1.1	3.	Frunze – 1	1.1
4.	Polyclinic # 5	1.5	4.	Military town	1.8
5.	Sports School	2.1	5.	Kudaibergen market	2.5
6.	Kindergarten	2.6	6.	Volkov street	3.0
7.	Lermontov street	3.0	7.	Vlasov street	3.3
8.	HPS	3.5	8.	Depovskaya street	4.0
9.	Mezhevaya street	4.2	9.	Shkolnaya street	4.6
10.	KKSK (worsted clothing manufacture)	4.9	10.	Kyzyl-Asker street	5.1
11.	Sverdlov district administration	5.2	11.	Raznoprom	5.8
12.	Vostok-5	5.6	12.	Railway gate	6.4
13.	Naberezhnaya street	5.9	13.	Setun	6.8
14.	Tysyacha melochei trade center	6.6	14.	Beishenaliev street	7.3
15.	Central Department Store (ZUM)	7.1	15.	Academy of Science	8.1
16.	Ala-Too cinema	7.5	16.	Philharmonic society	8.9
17.	Russia cinema	8.6	17.	Russia cinema	9.6
18.	Philharmonic society	9.3	18.	Sovetskaya street	10.7
19.	Academy of Science	9.9	19.	Central Department Store [ZUM]	11.2
20.	Beishenaliev street	10.4	20.	Tysyacha melochei trade center	11.6
21.	Pavlov street	11.0	21.	Naberezhnaya street	12.0
22.	Railway gate	11.6	22.	Slavic University	12.3
23.	Raznoprom	12.2	23.	Vostok-5	12.5
24.	Kyzyl-Asker	13.0	24.	KKSK (worsted clothing manufacture)	13.2
25.	Shkolnaya street	13.4	25.	Mezhevaya street	13.9
26.	Depovskaya street	13.8	26.	HPS	4.6
27.	Volkov street	14.7	27.	KED/Lermontov street	15.0
28.	Kudaibergen market	15.1	28.	Kindergarten	15.4
29.	School	15.4	29.	Sports school	15.9
30.	Military town	15.9	30.	Polyclinic # 5	16.5

#	Name of stops	Distance, km	#	Name of stops	Distance, km
31.	Frunze – 1	17.0	31.	Bystrotok [Water channel]	17.0
32.	Taldysui street	17.6	32.	A u reki [Near the river] café	17.5
33.	Block 110	18.0	33.	Alamedin – 1 Control unit	18.0

Note: L of turn – 36.0 km; zero run from BPTC to Alamedin – 1 Control unit – 6.9 km; from BPTC to Last stop block 110 – 13 km.

Acting Head of Operations Unit, BPTC	[signature]	Myrsyraimov U.
Senior traffic controller, Operations Unit, BPTC	[signature]	Seitkazieva M.
Driver	[signature]	Kh.Alimov

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Department of the Chief Interior Department of Bishkek City
[signature] Sarkulov Y.
Date: 2010
Seal

0073
September 24, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Baibolotov Sh.
Date: 2010
Seal

TRAFFIC PLAN

ROUTE # 38

Micro-district "Alamedin" – bock 110

[SCHEME]

Stops	
1. Alamedin – 1 micro-district	22. Chatyr-Kyl cinema
2. Taldy-Sui street	23. School # 61
3. Taldy-Sui lane	24. Kyrgyz State University of Construction and Architecture
4. Frunze – 1	17. Detskyi mir [World of kids]
5. Military town	18. Russia cinema
6. School	19. Fighters of the Revolution cinema
7. Kudaibergen market	20. Central Department Store [ZUM]
8. Volkov street	21. 1000 melochei trade center
9. Depovskaya street	22. Naberezhnaya street
10. Shkolnaya street	23. Vostok – 5
11. Kyzyl-Asker	24. KKSK (worsted clothing manufacture)
12. Raznoprom	25. HPS
13. Railway gate	26. HPS – 2 (upon request)
14. Setun plant	27. Lermontov street
15. Osh market	28. Kolbaev street
16. Academy of Science	29. Sports school
	30. Polyclinic
	31. Bystrotok [Water channel]
	32. A u reki [Near the river] café
	33. Alamedin – 1

A operations – 22 vehicles
L of turn – 36 km
t turn – 112 minutes
И traffic intensity – 5 minutes
Volume of operations – 19 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

ACT

The Commission consisting of head of BPTC operations unit, Myrsyraimov U., deputy head of BPTC operations unit, Anarbaev S., Senior traffic controller of the BPTC Seitkazieva M. have hereby executed this act for documenting distance measurement with names of stops at **route # 21: Ak-Bosogo residential area – Uchkun residential area.**

Measurements have been made at office car, VAZ 21074, plate number 6925 BB equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Ak-Bosogo residential area Control unit to Uchkun residential area – 17.2 km, from Uchkun residential area to Ak-Bosogo residential area Control unit – 17.2km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	BChK (Big Chui channel)		1.	Uchkun residential area	
2.	School	0.3	2.	Chymyndyk	0.5
3.	Chui – 2	0.6	3.	Azat corporation	1.3
4.	Adilet salon	0.9	4.	Chui avenue	1.6
5.	Village council	1.2	5.	Construction workers town	2.0
6.	Personal services facility	1.4	6.	Power engineers town	2.3
7.	MChK (Small Chui channel)	1.7	7.	Lenin street	2.8
8.	Zapadnyi lane	2.8	8.	Velikyi dvornik	3.1
9.	Saadaev street	3.3	9.	Bystrotok [Water channel]	3.5
10.	Vitebskaya street	3.6	10.	Chui district power station, Severelektro	4.1
11.	Fere	3.9	11.	Personal services facility	4.4
12.	Scherbakov street	4.3	12.	Ak-Bula	4.8
13.	Musorgsky street	4.6	13.	District administration/School	5.3
14.	Dzerzhinsky boulevard	5.1	14.	Saliev street	5.5
15.	Shkolnaya street	5.55	15.	Lermontov street	5.7
16.	Vasiliev street	6.1	16.	Factory	6.2
17.	Bayalinov street	6.8	17.	Guard regiment	6.9
18.	GOIN trade center	7.5	18.	Jibek Jolu avenue	7.5
19.	Circus	8.2	19.	Alamedin market	7.8
20.	Central Department Store (ZUM)	9.1	20.	Polyclinic	8.3
21.	1000 melochei trade center	9.5	21.	Ogonbaev street	8.7
22.	Naberezhnaya street	9.8	22.	Karavan-Sarai	9.1
23.	Polyclinic # 5	10.1	23.	Vostok – 5	9.6
24.	Vostok-5	10.4	24.	Polyclibic # 5	9.9
25.	Karavan-Sarai	10.9	25.	Naberezhnaya street	10.2
26.	Ogonbaev street	11.3	26.	1000 melochei trade center	10.5
27.	Polyclinic	11.7	27.	Central Department Store (ZUM)	10.9
28.	Alamedin market	12.2	28.	Circus	11.8
29.	Jibek Jolu	12.5	29.	GOIN trade center	12.5
30.	Guard regiment	13.1	30.	Bayalinov street	13.2
31.	Factory	13.8	31.	Vasiliev street	13.9
32.	Lermontov street	14.3	32.	Shkolnaya street	14.55
33.	Saliev street	14.5	33.	Dzerzhinsky boulevard	14.9

#	Name of stops	Distance, km	#	Name of stops	Distance, km
34.	District administration/School	14.7	34.	Musorgsky street	15.4
35.	Ak-Bula	15.2	35.	Scherbakov street	15.7
36.	Personal services facility	15.6	36.	Fere	16.1
37.	Chui district power station, Severelektro	15.9	37.	Vitebskaya street	16.4
38.	Bystrotok [Water channel]	16.5	38.	Saadaev street	16.7
39.	Velikyi Dvornik	16.9	39.	Zapadnyi lane	17.2
40.	Lenin street	17.2	40.	MChK (Small Chui Channel)	18.3
41.	Power engineers town	17.7	41.	Personal services facility	18.7
42.	Construction workers town	18.0	42.	Village council	18.9
43.	Chui avenue	18.4	43.	Adilet salon	199.2
44.	Azat corporation	18.7	44.	Chui-2	19.4
45.	Chymyndyk	19.5	45.	School	19.7
46.	Uchkun residential area	20.0	46.	BChK (Big Chui Channel)	20.0

Note: Zero run: BPTC – Ak-Bosogo residential area – 13.1km; BPTC – Uchkun residential area – 6.4km; L of turn – 40km; [UNCLEAR TEXT] - Ak-Bosogo residential area - 16.7KM; BPTC/1 - Uchkun residential area - 18.1KM; Number of traffic lights – 2[UNCLEAR TEXT].

Head of Operations Unit, BPTC [signature] Myrsyraimov U.
Deputy head of Operations Unit [sigature] Anabaev S.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Department of the Chief Interior Department of Bishkek City
[signature] Sarkulov Y.
Date: 2010
Seal

0112
December 3, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Baibolotov Sh.
Date: 2010
Seal

TRAFFIC PLAN
ROUTE # 21
Ak-Bosogo residential area – Uchkun residential area

[SCHEME]

#	**Name of stops**
1.	BChK (Big Chui channel)
2.	School
3.	Chui – 2
4.	Adilet salon
5.	Village council
6.	Personal services facility
7.	MChK (Small Chui channel)
8.	Zapadnyi lane
9.	Saadaev street
10.	Vitebskaya street
11.	Fere
12.	Scherbakov street
13.	Musorgsky street
14.	Dzerzhinsky boulevard
15.	Shkolnaya street
16.	Vasiliev street
17.	Bayalinov street
18.	GOIN trade center
19.	Circus
20.	Central Department Store (ZUM)
21.	1000 melochei trade center
22.	Naberezhnaya street
23.	Polyclinic # 5
24.	Vostok-5
25.	Karavan-Sarai
26.	Ogonbaev street
27.	Polyclinic
28.	Alamedin market
29.	Jibek Jolu
30.	Guard regiment
31.	Factory
32.	Lermontov street
33.	Saliev street
34.	District administration/School
35.	Ak-Bula
36.	Personal services facility
37.	Chui district power station, Severelektro

#	**Name of stops**
38.	Bystrotok [Water channel]
39.	Velikyi Dvornik
40.	Lenin street
41.	Power engineers town
42.	Construction workers town
43.	Chui avenue
44.	Azat corporation
45.	Chymyndyk
46.	Uchkun residential area

A operations – 19 vehicles
L of turn – 40 km
t turn – 142 minutes
И traffic intensity – 7 minutes
Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City April 9, 2009

ACT

The Commission consisting of head of BPTC operations unit, Japarkulov M., Senior traffic controller of the BPTC Kydyrgycheva G.K., driver Kh. Alimov have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 22: Dyikan market – Dordoi market.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Dyikan market to Dordoi market – 13.2 km; from Dordoi market to Dyikan market – 13.8km, including the following stops:

#	Name of stops	Distance, km		#	Name of stops	Distance, km	
		In ascending order	Between stops			In ascending order	Between stops
1.	Dyikan market	-	-	1.	Dordoi Control unit	-	-
2.	Setun plant	2.2	2.2	2.	TB hospital	2.7	2.7
3.	Leningradskaya street	4.6	2.4	3.	Shkolnaya street	4.7	2.0
4.	Togolok Moldo street	6.5	1.9	4.	Togolok Moldo street	7.2	2.5
5.	Shkolnaya street	9.0	2.5	5.	Molodaya Gvardia boulevard	9.2	2.0
6.	TB hospital	11.0	2.0	6.	Pavlov street	11.8	2.6
7.	Dordoi Control unit	13.2	2.2	7.	Dyikan market	13.8	2.0

Note: zero runs from BPTC to Dyikan market – 10.0km; from BPTC to Setun plant – 8.3km; From BPTC – Dordoi Control unit – 11.5km.; Number of traffic lights – 21; time spent for traffic survey – 85 minutes; L of turn – 26.4km.

Head of Operations Unit, BPTC	[signature]	Strizhov V.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City [signature] Satarov T. Date: 2009 Seal	# 0087 August 28, 2009	ENDORSED Head Municipal Transport Department Mayor's office of Bishkek City [signature] Malabaev A. Date: 2009 Seal

TRAFFIC PLAN

ROUTE # 22

Dyikan market – Osh market – Dordoi market

[SCHEME]

Stops	
1. Moscovskaya street	12. Scherbakova street
2. Polyclinic	13. Saadaev street
3. Lenin district administration	14. Livestock market
4. KYAL	15. Trade Center
5. Zavodskaya street	16. Ala-Archa
6. Academy of Science	17. Sovetsky lane
7. Philharmonic society	18. Aula street
8. Russia cinema	19. Dordoi
9. Spartak	20. Energosbyt
10. The church	21. Isanov street
11. Leningradskaya street	22. Kyrgyz State National University

A operations – 12 vehicles

L of turn – 26.4 km

t turn – 85 minutes

И traffic intensity – 7 minutes

Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Department of the Chief Interior Department of Bishkek City
[signature] Sarkulov Y.
Date: 2010
Seal

0114
December 3, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Baibolotov Sh.
Date: 2010
Seal

TRAFFIC PLAN

ROUTE # 28

Kolmo residential area – Kok-Jar residential area

[SCHEME]

Stops

1. Kolmo	11. Timiryazeva street	21. Oktyabrksy district administration	31. Kok-Jar residential area
2. Berakol street	12. Kyrgyz State National University	22. Concrete products plant	32. Dasmia
3. Trade center	13. Philharmonic society	23. K.Marx street	33. Chulochka/Stocking factory
4. Shop	14. Isanov street	24. Naberezhnaya street	34. Municipal Traffic Police
5. Molodaya Gvardia boulevard	15. Karavan Trade Center	25. Kok-Jar	35. Yunusaliev street
6. Bayat	16. Republican hospital	26. Upper Kok-Jar	36. Concrete products plant
7. BChK (Big Chui Channel)	17. Medical college	27. Ulan	37. Vefa Trade Center
8. Uritsky street	18. Construction college	28. Circular road	38. School # 29
9. Jibek-Jolu avenue	19. Panfilov street	29. Sports club	39. Railroad crossing
10. Shevchenko street	20. Agricultural Institute	30. Bekdan complex	40. Ministry of Defense

A operations – 16 vehicles

L of turn – 22.2 km

t turn – 110 minutes

И traffic intensity – 6 minutes

Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Police Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2009
Seal

00114
October 29, 2009

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2009
Seal

TRAFFIC PLAN
ROUTE # 29
Jal Micro-district - Reemtsma

[SCHEME]

Stops

1. Archa-Beshik	13. Dushanbinskaya street	25. Naberezhnaya street	37. Power engineers town
2. Krivonosov street	14. Ata-Turk park	26. Vostok – 5	38. Construction workers town
3. Termechikov street	15. Bishkek City Telephone Station	27. District administration	39. Chui avenue
4. Bach street	16. Medical Academy	28. KKSK (worsted clothing manufacture)	40. Azat corporation
5. Tynaliev street	17. Baitik Batyr street	29.HPS	41. Uchkun residential area
6. Upper Jal	18. Physical instruments factory	30. Chui avenue	42. Metal base
7. Middle Jal	19. Mederov street	31. Narodnyi supermarket	43. Vtorchermet
8. Lower Jal	20. Yug [South]-2	32. Boarding school	44. Rukhi-Muras residential area
9. Middle Jal	21. Bokonbaev street	33. Polyclinic	45. Tunguch
10. Children polyclinic	22. Mossovet [Moscovskaya & Sovetskaya crossroads]	34. Bystrotok [Water Channel]	46. Automobile base
11. Chapaev street	23. Central Department Store (ZUM)	35. Velikyi Dvornik	47. University
12. Polytechnic Institute	24. 1000 melochei Trade`Center	36. Lenin street	48. Reemstma

A operations – 27 vehicles
L of turn – 48.6 km
t turn – 186 minutes
И traffic intensity – 8 minutes
Volume of operations – 16 km per hour
Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City April 9, 2009

ACT

The Commission consisting of acting head of BPTC operations unit, Strizhov V.G., driver Kh. Alimov have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 33: Micro-district # 12 - Dyikan market – Dordoi market.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Micro-district # 12 to Dordoi market – 26.9 km; from Dordoi market to Micro-district # 12 – 26.9 km, including the following stops:

#	Name of stops	Distance, km		#	Name of stops	Distance, km	
		In ascending order	Between stops			In ascending order	Between stops
1.	Micro-district # 12	-	-	1.	Dordoi market	-	-
2.	Asanbai	0.5	0.5	2.	Aula street	1.3	1.3
3.	Micro-district # 10	3.0	2.5	3.	Sovetskaya street	2.2	0.9
4.	Akhunbaeva street	4.7	1.7	4.	Saadaev street	4.7	2.5
5.	Bishkek City Telephone Station	5.3	0.6	5.	Church	8.0	3.3
6.	Dushanbinskaya street	6.1	0.8	6.	Philharmonic	9.5	1.5
7.	Aini street	7.1	1.0	7.	Beishenaliev street	11.9	2.4
8.	ShVK	7.7	0.6	8.	Dyikan market	13.2	1.3
9.	Bokonbaeva street	9.3	1.6	9.	Beishenaliev street	15.4	2.2
10.	Kievskaya street	10.2	0.9	10.	Kalyk Akiev street	15.9	0.5
11.	Kalyk Akiev street	11.0	0.8	11.	Kievskaya street	16.7	0.8
12.	Beishenaliev street	11.5	0.5	12.	Bokonbaeva street	17.6	0.9
13.	Dyikan market	13.7	2.2	13.	ShVK	19.2	1.6
14.	Beishenalieva street	15.0	1.3	14.	Aini street	19.8	0.6
15.	Philharmonic	17.4	2.4	15.	Dushanbinskaya street	20.8	1.0
16.	Church	18.9	1.5	16.	Bishkek City Telephone Station	21.6	0.8
17.	Saadaev street	22.2	3.3	17.	Sovetskaya street	22.2	0.6
18.	Sovetskyi lane	24.7	2.5	18.	Micro-district # 10	23.9	1.7
19.	Aula street	25.6	0.9	19.	Asanbai mico-district	26.4	2.5
20.	Dordoi market	26.9	1.3	20.	Micro-district # 12	26.9	0.5

Note: zero runs from BPTC to Dyikan market – 10.0km; from BPTC to Dordoi Control unit – 11.5 km; from BPTC – Micro-district # 12 – 7 km. Number of traffic lights – 25; time spent for traffic survey – 95 minutes; L of turn – 53.8 km.

Acting Head of Operations Unit, BPTC	[signature]	Strizhov V.
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Police Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2009
Seal

00115
October 29, 2009

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2009
Seal

TRAFFIC PLAN

ROUTE # 33

Dyikan market – Micro-district # 12

[SCHEME]

Stops

1. Dyikan market	7. Mayor's office of Bishkek	13. Mossovet	19. Kyrgyz State Medical Academy	25. Micro-district # 7
2. Moscovskaya street	8. Isanov street	14. Yubileinaya street	20. Children hospital # 3	26. Sukhe-Bator street
3. Beer factory	9. Voentorg	15. Gorky street	21. Micro-district # 9	27. Park
4. Osh market	10. Agroprom	16. Mederov street	22. Micro-district # 10	28. Asanbai
5. Kievskaya street	11. Leon	17. Physical instrument institute	23. Micro-distance # 8	29. Upper Asanbai
6. October cinema	12. Zenit	18. Jantoshova street	24. Zhukeeva-Pudovkin street	30. Church
				31. Micro-district # 12

A operations – 10 vehicles
L of turn – 27.4 km
t turn – 114 minutes
И traffic intensity – 11 minutes
Volume of operations – 15 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City September 2, 2008

ACT

The Commission consisting of assistant director of BPTC operations unit, Kravtsov L.E., head of operations unit, Japarkulov M.I., senior traffic controller of the operations unit, Kydyrgycheva G.K., driver Zherebtsov V.V. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **circular route # 35: Western bus station – Eastern bus station – Western bus station**

Measurements have been made at office car, Mercedes, plate number B 4700BI equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Western bus station through Eastern bus station to Western bus station – 18.2km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Western bus station	-	19.	1000 melochei trade center	9.3
2.	Kommunarov	0.9	20.	Naberezhnaya street	9.7
3.	Furniture factory	1.2	21.	Kyrgyz-Russian Slavic University	9.9
4.	District administration	2.0	22.	Vostok-5	10.2
5.	Kyal	2.5	23.	Sverdlov district administration	10.7
6.	Osh market	2.8	24.	Polyclinic	11.4
7.	Beer factory	3.2	25.	Alamedin market	12.0
8.	Maternity house	3.3	26.	Jibek Jolu	12.2
9.	Kalyk Akiev street	3.8	27.	Eastern bus station	12.8
10.	Shevchenko	4.2	28.	Issyk-Kul cinema	13.4
11.	Manas	4.8	29.	Goin trade center	14.1
12.	Togolok Moldo	5.0	30.	Erkindik boulevard	14.6
13.	Republican hospital	5.6	31.	Panfilov street	14.9
14.	Railway station	6.9	32.	Church	15.4
15.	School	7.1	33.	Isanov street	15.8
16.	Maternity house	8.0	34.	Kalyk Akiev street	16.4
17.	Komfort	8.3	35.	Tazalyk	17.2
18.	Karven club	8.9	36.	Western bus station	18.2

Note: zero runs from BPTC – Chui avenue – Shabdan Batyr street – 1.7km. Number of traffic lights – 32; time spent for traffic survey – 45 minutes; L of turn – 18.2 km.

Assistant Director of BPTC	[signature]	Kravtsova .E.
Head of Operations Unit, BPTC	[signature]	Japarkulov M.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.
Driver	[signature]	Zerebtsov V.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City
[signature] Polyak L.B.
Date: 2010
Seal

0011
February 9, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2010
Seal

TRAFFIC PLAN

ROUTE # 35

Western bus station – Railway station – Eastern bus-station

[SCHEME]

Stops

1. Western bus station	8. Kalyk Akiev street	5. Komfort	22. Polyclinic	29. Panfilov street
2. Kommunarova street	9. Turusbekov street	16. Mosque	23. Alamedin market	30. Church
3. Furniture factory	10. Manas avene	17.Karven club	24. STO car repairs	31. Isaov street
4. Setun plant	11. Republican hospital	18. 1000 melochei trade center	25. Eastern bus station	32. Kalyk Akiev street
5. Kyal	12. School	19. Naberezhnaya street	26. Issyk-Kul cinema	33. Railroad gate
6. Osh market	1. Railway station	20. Vostok-5	27. GOIN	
7. Maternity house # 2	14. Bokonbaev street	21. KKSL (worsted clothing manufacture)	28. Erkindik boulevard	

A operations – 12 vehicles
L of turn – 18.2 km
t turn – 45 minutes
И traffic intensity – 4 minutes
Volume of operations – 24 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Safety Department of the Chief Interior Department of Bishkek City
[signature] Sarkulov
Date: 2010
Seal

0124
December 14, 2010

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Baibolotov Sh.
Date: 2010
Seal

TRAFFIC PLAN

ROUTE # 37

Chon-Aryk village (Kariernaya stop) – Glass factory – Leather factory

[SCHEME]

Stops

1. Shnos gas station	7. market	13. Zavodskaya street	19. Lyceum	25. Marat shop
2. BNK gas station	8. gas station	14. School	20. Amantur car repairs	26. Avtotrust car repairs
3. Said shop	9. Aka-Archa market	15. Narodnyi supermarket	21. Ajar shop	27. Secret shop
4. Akhunbaev street	10. Beer factory	16. gas station	22. Estakada car repairs	28. Terminal trolley-bus stop
5. Niko shop	11. Osh market	17. Ulan shop	23. Drugstore	29. Glass factory
6. Gagarin street	12. RSK bank	18. The mosque	24. Inguz shop	30. Aula street
				31. Leather factory

A operations – 16 vehicles
L of turn – 42.7 km
t turn – 150 minutes
И traffic intensity – 9 minutes
Volume of operations – 17 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City November 25, 2008

ACT

The Commission consisting of head of BPTC operations unit, Japarkulov M., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 4: Jil. gorodok residential area – Ak-Orgoo residential area.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Ak-Orgoo residential area to Jil. gorodok residential area – 23 km, Jil. gorodok residential area to Ak-Orgoo residential area – 23 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Jil. Gorodok	-	1.	Ak-Orgoo konechnaya	-
2.	Sary Chelekskaya street	0.7	2.	Azhar street	0.8
3.	Brick factory	1.4	3.	Institute of agriculture	2.0
4.	Ala Archa	2.1	4.	Municipal hospital # 4	3.4
5.	Leather factory	4.3	5.	Nekrasova street – Bathhouse	5.6
6.	TB hospital	5.7	6.	State register	8.9
7.	DOSAAF	6.5	7.	Voentorg	10.4
8.	Touristic base	7.3	8.	ZUM	12.0
9.	GOIN trade center	9.9	9.	GOIN trade center	13.1
10.	ZUM	11.0	10.	Touristic base	15.7
11.	Voentorg	12.6	11.	DOSAAF	16.5
12.	State register	14.1	12.	TB hospital	17.3
13.	Nekrasova street – Bathhouse	17.4	13.	Leather factory	18.7
14.	Municipal hospital # 4	19.6	14.	Ala Archa	20.9
15.	Institute of agriculture	21.0	15.	Brick factory	21.6
16.	Azhar street	22.2	16.	Sary Chelekskaya street	22.3
17.	Ak Orgoo (konechnaya)	23.0	17.	Jil. Gorodok konechnaya	23.0

Note: Zero run: BPTC – Ak Orgoo residential area – 12.0 km, BPTC – Jil. gorodok – 14.0 km

Number of traffic lights – 34; time spent for traffic survey – 135 minutes; L turn – 46 km

Head of Operations Unit	[signature]	Japarkulov M.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Police Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2008
Seal

000356
December 23, 2008

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2008
Seal

TRAFFIC PLAN

ROUTE # 4

Ak Orgo residential area – Jil. gorodok

Stops:

24. Ak Orgo residential area
25. Ashar street
26. Institute of agriculture
27. Academy of arts
28. Municipal hospital
29. Repina street
30. Bach street
31. Rabochiy gorodok
32. Chapaeva street
33. Aini street
34. Detskiy mir
35. Bishkek state university
36. ShVK
37. State register
38. Bokonbaeva street
39. Kievskaya street
40. Voentorg
41. Agroprom
42. Erkindik boulevard
43. Rubin
44. ZUM
45. Circus
46. GOIN
47. Kurenkeeva street
48. Baialinova street
49. Bishkek Chui Channel

[SCHEME]

50. Shkolnaya street
51. Touristic base
52. Vitebskaya street
53. TB hospital
54. Sovetskiy lane
55. Ala-Archa 1
56. Ala-Archa 2
57. Kelechek
58. Red constructor
59. Jil. Gorodok
60. Koshoi-Ata
61. 3rd red constructor
62. Bukharskaya street
63. Krivorozhskaya street
64. Nurekskaya street
65. Adyrskaya street
66. Oberon market

A operations – 22 vehicles
L turn – 46 km
t turn – 135 minutes
И traffic intensity – 6 minutes
Volume of operations – 20 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City June 18, 2009

ACT

The Commission consisting of head of BPTC operations unit, Strizhov V.G., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 5: Micro-district # 12 (Naberezhnaya) – Maevka village.**

Measurements have been made at office car, VAZ 21074, plate number 1079 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from micro-district # 12 "Naberezhnaya" to Maevka village – 20.2 km, Maevka village to micro-district # 12 "Naberezhnaya" – 20.2 km, including the following stops:

#	Name of stops	Distance, km, ascending	#	Name of stops	Distance between stops, km, ascending
1.	Naberezhnaya	- // -	1.	Maevka-Konechnaya	- // -
2.	Micro-district # 12	0.8	2.	Mill	0.7
3.	Micro-district # 11	1.6	3.	Club	1.4
4.	The church	1.9	4.	Vinogradnaya street	1.6
5.	Asanbai	2.2	5.	Mozhaiskaya street	2.2
6.	Kuttubaeva street	2.5	6.	M. Gvardiya	2.7
7.	Micro-district # 11	2.8	7.	Tulenberdieva street	3.6
8.	Micro-district # 6	3.4	8.	Belinskogo street	4.1
9.	Suhe-Batora street	3.7	9.	Zima street	4.4
10.	Crossing	4.0	10.	Scherbakova street	4.8
11.	Polyclinic	4.2	11.	Vasilieva street	5.1
12.	Pyatachok	4.6	12.	Leningradskaya street	6.0
13.	Micro-district # 5	5.1	13.	Kurenkeeva street	6.6
14.	Ortosaiskiy market	5.4	14.	The church	7.0
15.	Micro-district # 4	6	15.	T. Moldo street	7.6
16.	Zhigulevskaya street	6.9	16.	Panfilova street	8.0
17.	Skryabina street	7.4	17.	Zh. Zholu street	8.3
18.	Druzhba street	7.7	18.	Circus	8.7
19.	ZhBI	7.9	19.	ZUM	9.3
20.	Tash-rabat	8.4	20.	Kievskaya street	10.0
21.	Kulatova street	8.6	21.	Mossovet	10.3
22.	Sovetskaya street	8.9	22.	Yubileinaya street	11.3
23.	Bokombaeva street	9.9	23.	Elebaeva street	11.6
24.	Mossovet	10.2	24.	Tash-rabat	11.8
25.	ZUM	10.9	25.	ZhBI	12.3
26.	Circus	11.5	26.	Druzhba street	12.5
27.	Zh. Zholu street	11.9	27.	Skryabina street	12.8
28.	Panfilova street	12.2	28.	Zhigulevskaya street	13.3

#	Name of stops	Distance, km, ascending	#	Name of stops	Distance between stops, km, ascending
29.	T. Moldo street	12.6	29.	Micro-district # 4	14.2
30.	The church	13.2	30.	Ortosaiskiy market	14.8
31.	Kurenkeeva street	13.6	31.	Micro-district # 5	15.1
32.	Leningradskaya street	14.2	32.	Pyatachok	15.6
33.	Vasilieva street	15.1	33.	Polyclinic	16.0
34.	Scherbakova street	15.4	34.	Crossing	16.2
35.	Zima street	15.8	35.	Suhe-Batora	16.5
36.	Belinskogo street	16.1	36.	Micro-district # 6	16.8
37.	Tulenberdieva street	16.6	37.	Micro-district # 11	17.4
38.	M.Gvardiya	17.5	38.	Kuttubaeva street	17.7
39.	Mozhaiskaya street	18	39.	Asanbai	18
40.	Vinogradnaya street	18.6	40.	The church	18.3
41.	Club	18.8	41.	Micro-district # 11	18.6
42.	Mill	19.5	42.	Micro-district # 12	19.4
43.	Maevka (Konechnaya)	20.2	43.	Naberezhnaya	20.2

Note: Zero run: BPTC – Micro-district # 12 – 7.5km; BPTC – Maevka village – 18.8km; Number of traffic lights – 25; time spent for traffic survey – 156 minutes; L turn – 40.4 km

Head of Operations Unit, BPTC	[signature]	Strizhov V.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Police Unit of the Chief Interior Department of Bishkek City [signature] Satarov T. Date: 2009 Seal	# 0089 August 28, 2009	ENDORSED Head Municipal Transport Department Mayor's office of Bishkek City [signature] Malabaev A. Date: 2009 Seal

TRAFFIC PLAN

ROUTE # 5

Micro-district # 12 (Naberezhnaya) – Maevka village

Stops:

1. Micro-district # 12
2. Trade center
3. The church
4. Asanbai
5. Kuttubaeva street
6. Micro-district # 11
7. Micro-district # 6
8. Suhe-Batora street
9. Crossing
10. Polyclinic
11. Pyatachok
12. Micro-district # 5
13. Orto-Sai market
14. Micro-district # 4
15. Zhigulevskaya street
16. Skryabina street
17. Druzhba street
18. ЖБИ [concrete goods factory]
19. Tash Rabat
20. Kulatova street
21. South-2
22. Yubileinaya [SCHEME]
23. Bokombaeva street
24. Mossovet
25. ZUM
26. Circus

27. Zh. Zholu street
28. Panfilova street
29. T. Moldo street
30. The church
31. Kurenkeeva street
32. Baialinova street
33. Vasilieva street
34. Scherbakova street
35. Prof. Zimy street
36. Manas avenue
37. Tuleberdieva street
38. M. Gvardiya
39. Mozhaiskaya street
40. Vinogradnaya street
41. Club
42. Mill
43. Maevka

A operations – 18 vehicles
L turn – 41 km
t turn – 126 minutes
И traffic intensity – 6 minutes
Volume of operations – 20 km per hour

Note: 1. Traffic plan is not valid without work schedule, time-schedule and note by narcologist service on medical examination.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City [UNCLEAR]

ACT

The Commission consisting of head of BPTC operations unit, Strizhov V.G., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 8: Chon-Aryk village – Nooruz Novo-Pokrovka village.**

Measurements have been made at office car, VAZ 21074, plate number 1079 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from "Kariernaya" stop, Chon-Aryk village to micro-district "Nooruz", Novo-Pokrovka village – 28 km, including the following stops:

#	Name of stops	Distance, km, ascending	#	Name of stops	Distance between stops, km, ascending
1.	Kariernaya	- // -	31.	Circus	14.1
2.	Chon-Aryk	0.5	32.	Zhibek-Zholu street	14.5
3.	Micro-district "Tilek"	1.0	33.	GOIN	14.6
4.	50 let Pobedy street	1.4	34.	Ibraimova street	15.1
5.	50 let Pobedy	1.5	35.	Narodnyi	15.8
6.	Notary public	1.7	36.	Eastern bus station	16.1
7.	Monument	2.4	37.	Alamedinskiy market	16.8
8.	Manas street	2.8	38.	Alamedinskiy District Traffic Police Unit	17.3
9.	Flamingo park	3.1	39.	Notary public	17.7
10.	"Issyk-Kul" hotel	3.4	40.	Lermontova street	18.1
11.	St. Art	3.9	41.	Diyar café	18.7
12.	"Tsar's village"	4.3	42.	Vostochnaya	19.4
13.	"Rakhat" café	4.9	43.		20.0
14.	USA Embassy	5.6	44.	Selpo	20.3
15.	Residential complex	5.9	45.	Sadovaya / TB hospital	20.9
16.	Park of "Lovers"	6.2	46.	Auezova street	21.4
17.	Embassy of Kazakhstan	6.4	47.	Severnaya	21.8
18.	"Aeroflot" agency	7.0	48.	Yubileinaya	22.5
19.	Polytechnic university	7.5	49.	Kanykei department store	22.9
20.	"Aini"	8.0	50.	Gorkogo street	23.7
21.	ShVK	8.6	51.	Lenina street	24.4
22.	Manasa / Gorkogo	9.1	52.	School	24.7
23.	"Vegas" restaurant	9.7	53.	Factory	25.6
24.	Panfilova street	10.2	54.	Krupskaya street	26.1
25.	Gymnasium # 29	10.6	55.	Krupskaya lane	26.4
26.	Yubileinaya	11.6	56.	The church	26.9
27.	Bokonbaeva street	12.5	57.	School	27.4
28.	Mossovet	12.9	58.	Nooruz	27.7
29.	Toktogula street	13.2	59.	Konechnaya	28
30.	ZUM	13.6			

Note: Zero run: from BPTC to "Kariernaya" – 13.4km; from BPTC to "Kanykei" store – 16km; time spent for traffic survey – 68 minutes; L turn – 56 km

Head of Operations Unit, BPTC	[signature]	Strizhov V.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City [signature] Sarkulov Y. Date: 2010 Seal	# 0129 December 29, 2010	ENDORSED Head of Municipal Transport Department Mayor's office of Bishkek City [signature] Baibolotov Sh. Date: 2010 Seal

TRAFFIC PLAN

ROUTE # 8

Kariernaya – Novo-Pokrovka, BPTC

Stops:

1. Kariernaya
2. Chon-Aryk
3. "Tilek" shop
4. 50 let Pobedy
5. Notary public
6. Monument
7. Flamingo park
8. "Issyk-Kul" hotel
9. St. "ART"
10. Tsar's village
11. Rakhat café
12. US Embassy
13. Residential complex
14. Park of "Lovers"
15. Embassy of Kazakhstan
16. Gshliesser M. street
17. Aeroflot agency
18. Polytechnic university
19. Aini
20. ShVK
21. Gorkogo street
22. "Vegas" restaurant
23. Panfilova street
24. Gymnasium # 29

[SCHEME]

25. Yubileinaya
26. Bokonbaeva street

27. Mossovet
28. ZUM
29. Circus
30. GOIN
31. Ibraimova street
32. Nardonyi store
33. Eastern bus station
34. Alamedin market
35. Selsovet
36. Lermontova street
37. Sports boarding school
38. Polyclinic # 5
39. Cholpon-Atinskaya street
40. Salieva street
41. Auezova street
42. Hospital
43. Kanykei store

A operations – 18 vehicles
L turn – 56 km
t turn – 132 minutes
И traffic intensity – 7-8 minutes
Volume of operations – 45 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination;
2. Traffic plan from Kozhobergenova street to "Kariernaya" stop is valid during spring-summer and autumn period.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City August 26, 2009

ACT

The Commission consisting of head of BPTC operations unit, Strizhov V.G., Senior traffic controller of the BPTC operations unit, Kydyrgycheva G.K., driver Alimov Kh. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 18: КДП [control unit] Maevka – Selektsionnoe village.**

Measurements have been made at office car, VAZ 21074, plate number 1079 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Maevka village to residential area of Selektsionnoe village – 17.4 km, residential area of Selektsionnoe village to Maevka village – 17.4 km, including the following stops:

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
1.	КДП [Control unit] Maevka	- // -	1.	Konechnaya Road and operations department-1	- \ -
2.	Mill	0.6	2.	HES	1.2
3.	Club	1.7	3.	Selektsiya	2.4
4.	Vinogradnaya street	1.7	4.	Store	2.7
5.	Mozhaiskogo street	2.2	5.	School	3.1
6.	Botalieva street	2.7	6.	Center	3.4
7.	Bayat market	3.1	7.	Café	3.7
8.	Vasilieva street	3.3	8.	The mosque	4.1
9.	Bishkek Chui Channel	3.7	9.	Arka	4.4
10.	Baialinova street	4.3	10.	Bishkek heating enterprise (heat network)	4.8
11.	Zhibek Zholu street	4.8	11.	Kara Archa fuel station	5.1
12.	Frunze street	5.3	12.	Municipal hospital # 4	5.6
13.	School	5.7	13.	Malikova street	6.2
14.	Beishenalieva street	6.0	14.	Gagarina street	6.4
15.	Oshskiy market	6.3	15.	Hippodrome	7.1
16.	Maternity house # 2	6.9	16.	L.Tolstogo street	7.4
17.	Bokonbaeva street	7.5	17.	Factory	8.2
18.	Old town	8.0	18.	Bach street	8.5
19.	Batken-Comfort	8.3	19.	Batken – Comfort	9.1
20.	Bach street	8.9	20.	Old town	9.5
21.	Factory	9.2	21.	Bokonbaeva street	9.9
22.	Pishpek	9.5	22.	Maternity house # 2	10.5
23.	Hippodrome	10.3	23.	Oshskiy market	11.1
24.	Gagarina street	11.0	24.	Beishenalieva street	11.4

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
25.	Malikova street	11.2	25.	Bishkek Financial Economical Academy	11.7
26.	Municipal hospital # 4	11.8	26.	Frunze street	12.1
27.	Kara-Archa fuel station	12.9	27.	Zhibek Zholu street	12.7
28.	Bishkek heating enterprise (heat network)	12.6	28.	Baialinova street	13.2
29.	Arka	13		Bishkek Chui channel	13.7
30.	The mosque	13.3		Vasilieva street	14.1
31.	Café	13.7		Bayat market	14.3
32.	Center	14.0		Botalieva street	14.7
33.	School	14.3		Mozhaiskogo street	15.2
34.	Store	14.7		Vinogradnaya street	15.7
35.	Selektsiya	15		Club	16.0
36.	HES	16.2		Mill	16.8
37.	Road and operations department-1	17.4		КДП [Control unit] Maevka	17.4

Note: Zero run: BPTC – Maevka village – 13.4km; BPTC – Selektsionnoe village – 14.4km; Number of traffic lights – 15; time spent for traffic survey – 60 minutes; L turn – 34.8 km

Head of Operations Unit, BPTC	[signature]	Strizhov V.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Police Unit of the Chief Interior Department of Bishkek City [signature] Satarov T. Date: 2009 Seal	# 0081 August 28, 2009	ENDORSED Head Municipal Transport Department Mayor's office of Bishkek City [signature] Malabaev A. Date: 2009 Seal

TRAFFIC PLAN

ROUTE # 18

KDP Maevka – Selektsionnoe village

Stops:

1. КДП [Control unit] Maevka
2. Club
3. Kolmo
4. Botalieva street
5. Bayat market
6. Uridskogo street
7. Kurenkeeva street
8. Frunze street
9. Chui avenue – M. Gvardiya avenue
10. Kievskaya street
11. Oshkiy market
12. Toktogula street
13. Flour mill
14. Confectionary plant
15. Market
16. Lux shop
17. Bathhouse
18. Kupyanskaya street
19. Colony
20. Municipal hospital # 4
21. Kara-Archa fuel station
22. Tea-house
23. The mosque
24. Garage
25. School
26. Selektsiya
27. Selektsiya

[SCHEME]

A operations – 14 vehicles
L turn – 34.8 km
t turn – 120 minutes
И traffic intensity – 8-9 minutes
Volume of operations – 17 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Head of Unit for Networks, Routes and OOK Planning [signature] [UNCLEAR]

Bishkek City December 28, 2010

ACT

The Commission consisting of head of BPTC operations unit, Myrsyraimov U., Deputy chief of operations unit, Anarbaev S., Senior traffic controller, Seitkazieva M. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 19: Archa-Beshik residential area – Zhenish residential area.**

Measurements have been made at office car, VAZ 21074, plate number 6925 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Archa-Beshik residential area to Zhenish residential area – 15.7 km, Zhenish residential area to Archa-Beshik residential area – 15.7 km, including the following stops:

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
1.	КДП [Control unit]	-		Zhenish-11	
2.	Krivonosova street	0.7		Zhenish-10	0.2
3.	Termechikova street	1.3		Biral	0.6
4.	Archa-Beshik III	1.6		Store	0.8
5.	Bach street – Archa Beshik	2.0		Kerme-Too	1.2
6.	Southern highway	2.4		Gagarina street	1.8
7.	Upper Dzhal 2	3.0		Prigorodnoe	2.3
8.	Upper Dzhal	3.4		School	2.6
9.	Suvorovskoe academy	3.8	1.	Bishkek Chui channel	2.9
2.	Lower Dzhal	4.1	2.	Skandinavskiy lane	3.3
3.	Children's polyclinic	4.5	3.	Lazo	3.8
4.	Bakaeva street	5.1	4.	Lenskaya street	4.2
5.	Aini street	5.5	5.	Overhaul factory	4.8
6.	Gagarina street	6.0	6.	Furniture factory	5.2
7.	Dostoevskogo street	6.4	7.	Pavlova street	5.8
8.	Fuel station	6.7	8.	Besh-Sary	6.3
9.	Bridge	7.0	9.	Oshskiy market	6.8
10.	TsAS	7.5	10.	Maternity house # 2	7.1
11.	L. Tolstogo street	7.7	11.	Bokonbaeva street	7.5
12.	Bokonbaeva street	8.2	12.	L. Tolstogo street	8.0
13.	Oshskiy market	8.6	13.	TsAS	8.2
14.	Besh-Sary	9.4	14.	Café	8.5
15.	Pavlova street	9.9	15.	Fuel station	9.0
16.	Furniture factory	10.5	16.	Dostoevskogo street	9.3
17.	Overhaul factory	10.9	17.	Gagarina street	9.7
18.	Lenskaya street	11.5	18.	Aini street	10.2
19.	Lazo	11.9	19.	Bakaeva street	10.6

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
20.	Skandinavskiy lane	12.4	20.	Children's polyclinic	11.2
21.	Bishkek Chui channel	12.8	21.	Lower Dzhal	11.6
22.	School	13.1	22.	Suvorovskiy academy	11.9
23.	Prigorodnoe	13.4	23.	Upper Dzhal	12.3
24.	Gagarina street	13.9	24.	Upper Dzhal II	13.3
25.	Kerme-Too	14.5	25.	Bach street	13.7
26.	Store	14.9	26.	Archa-Beshik II	14.1
27.	Biral	15.1	27.	Termechikova street	14.4
28.	Zhenish-10	15.5	28.	Krivonosova street	15.0
29.	Zhenish-11	15.7	29.	КДП [Control unit]	15.7

Note: Zero run: BPTC – Archa-Beshik residential area – 12.6 km; BPTC – Zhenish residential area - 13.8 km; BPTC 1 – Archa-Beshik residential area – 12.6 km; BPTC 1 – Zhenish residential area – 9 km. Number of traffic lights – 15; time spent for traffic survey – 60 minutes; L turn – 31.4 km

Head of Operations Unit, BPTC	[signature]	Myrsyraimov U.
Deputy chief, Operations Unit, BPTC	[signature]	Anarbaev S.
Senior traffic controller, Operations Unit, BPTC	[signature]	Seitkazieva M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Police Unit of the Chief Interior Department of Bishkek City [signature] Satarov T. Date: 2009 Seal	# 0090 August 28, 2009	ENDORSED Head Municipal Transport Department Mayor's office of Bishkek City [signature] Malabaev A. Date: 2009 Seal

TRAFFIC PLAN

ROUTE # 19

Archa-Beshik residential area – Prigorodnoe

[SCHEME]

Stops:

1. Archa-Beshik
2. Archa-Beshik 2
3. School
4. Archa-Beshik 3
5. Bach street
6. Upper Dzhal
7. Upper Dzhal 2
8. Middle Dzhal
9. Suvorovskiy academy
10. Lower Dzhal
11. Children's polyclinic
12. Bakaeva street
13. Aini street
14. Gagarina street
15. Dostoevskogo street
16. Fuel station
17. Bridge
18. TsAS
19. L.Tolstogo street
20. Bokombaeva street
21. Maternity house # 2
22. Beer factory

23. Beishenalieva street
24. Pavlova street
25. Furniture factory
26. Overhaul factory
27. Lenskaya street
28. LAZO
29. Skandinavskiy lane
30. Bishkek Chui channel
31. Mill
32. Prigorodnoe
33. Konechnaya

A operations – 10 vehicles
L turn – 314 km
t turn – 120 minutes
И traffic intensity – 12 minutes
Volume of operations – 16 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

Bishkek City October 27, 2008

ACT

The Commission consisting of head of BPTC operations unit, Japarkulov M., Senior traffic controller of the BPTC, Kydyrgycheva G.K., driver have hereby executed this act for documenting distance measurement with names of stops at **route # 9: Micro-district # 12 – Azamat car market.**

Measurements have been made at office car, VAZ 21074, plate number 0022 BC equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Micro-district # 12 to Azamat car market – 24 km, from Azamat car market to Micro-district # 12 – 24 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Micro-district # 12	-	14.	BUTN	6.0
2.	Micro-district Asanbai	0.7	15.	Dushanbinskaya street	6.8
3.	Micro-district Asanbai	1.1	16.	Politech	7.3
4.	Oktyabrskiy social security department	1.5	17.	Aini street	7.8
5.	Monte Carlo casino	1.8	18.	ShVK	8.4
6.	Micro-district # 6	2.5	19.	State register	9.1
7.	Pyatachok	3.0	20.	Bokonbaeva street	10.0
8.	Micro-district # 5	3.2	21.	Philharmonic society	10.7
9.	Orto-Sai market	3.4	22.	Academy of Science	11.7
10.	Micro-district # 4	3.8	23.	Oshskiy market	12.5
11.	Micro-district # 3	4.1	24.	Kyzyl Asker	14.6
12.	Physical academy	7.8	25.	Sadygalieva street	16.3
13.	Medical academy	5.6	26.	Zarya	20.0
			27.	Azamat car market	24.0

Note: Zero run: BPTC – Micro-district # 12 – 7.5km; BPTC – V. Antonovka village – 19km; Number of traffic lights – 15; time spent for traffic survey – 170 minutes; L turn – 48 km

Head of Operations Unit, BPTC	[signature]	Japarkulov M.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.
Driver	[signature]	Alimov Kh.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Police Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2008
Seal

00329
October 27, 2008

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Baibolotov Sh.
Date: 2008
Seal

TRAFFIC PLAN

ROUTE # 9

Azamat car market (V. Antonovka village) – Micro-district # 12

[SCHEME]

Stops	
1. School	
2. Nurlan market	
3. Plodobaza (Fruit & Vegetable Enterprise)	
4. Sadygaliev street	
5. Depovskaya	
6. Shkolnaya street	
7. Kyzyl Asker	
8. Raznoprom	
9. Gate crossing	
10. Setun' factory	
11. Oshskiy market	
12. Academy of science	
13. Philharmonic society	
14. Medical center	
15. Bokonbaeva street	
16. State register	
17. ShVK	
18. Baichechekei shop	26. Micro-district # 5
19. Politech	27. Micro-district # 7
20. Dushanbinskaya street	28. Micro-district # 6
21. BUTN	29. Kindergarten
22. Medical academy	30. Oktyabrskiy social security department
23. TB institute	31. Trade center
24. Fizkulturnyi	32. Asanbai
25. Micro-district # 3	33. Micro-district # 12

A operations – 24 vehicles

L turn – 48 km

t turn – 170 minutes

И traffic intensity – 7-8 minutes

Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Kurmanov M.

Bishkek City November 14, 2008

ACT

The Commission consisting of head of BPTC operations unit, Japarkulov M., Director of "Kyrgyzdortranstehnika" OJSC, Musaeva Z., Senior traffic controller of the BPTC, Kydyrgycheva G. have hereby executed this act for documenting distance measurement with names of stops at **route # 7: Dachi - Micro-district Alamedin-1.**

Measurements have been made at office car, Audi 100, plate number 2514 BA equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Dacha to micro-district Alamedin-1 – 21 km, from micro-district Alamedin-1 to Dacha – 21 km, including the following stops:

#	Name of stops	Distance, km	#	Name of stops	Distance, km
1.	Dachi	-	18.	Vostok-5	11.0
2.	Fuel station	1.3	19.	Alma-Atinskaya street	11.5
3.	Prigorodnoe village	2.1	20.	Madina market	11.9
4.	Dinamo stadium	3.2	21.	Ainur factory	12.8
5.	Lenskoe village	3.9	22.	Dasmiya restaurant	13.6
6.	Film studio	4.5	23.	Auto VAZ	14.0
7.	Komunarova street	5.0	24.	Dry-cleaner's	14.5
8.	Western bus station	5.3	25.	Kara Zhygach residential area	15.1
9.	Autobase	5.7	26.	Computer factory [ЭВМ]	15.9
10.	Chui avenue	6.6	27.	Lyceum	16.8
11.	Academy of Science	7.0	28.	Micro-district Tunguch-1	17.1
12.	Manas avenue	7.7	29.	Micro-district Tunguch-2	17.6
13.	Russia cinema	8.1	31.	Micro-district Uchkun	18.3
14.	Ala-Too square	9.3	32.	Railway –crossing	18.8
15.	Diagnostical center	9.8	33.	Azat Corporation	19.3
16.	Tysyacha melochei	10.2	34.	KDP Alamedin-1	21.0
17.	Naberezhnaya	10.5			

Note: Zero run: BPTC – Dachi – 14.3 km; BPTC – Micro-district Alamedin – 6.9km; Number of traffic lights – 24; time spent for traffic survey – 50 minutes; L turn – 42 km

Head of Operations Unit, BPTC	[signature]	Japarkulov M.
Director of "Kyrgyzdortranstehnika" OJSC	[signature]	Musaev Z.
Senior traffic controller, Operations Unit, BPTC	[signature]	Kydyrgycheva G.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED
Head of Traffic Police Unit of the Chief Interior Department of Bishkek City
[signature] Satarov T.
Date: 2008
Seal

00321
September 29, 2008

ENDORSED
Head
Municipal Transport Department
Mayor's office of Bishkek City
[signature] Malabaev A.
Date: 2008
Seal

TRAFFIC PLAN

ROUTE # 7

Alamedin-1 – Dachi

[SCHEME]

Stops	
1. Alamedin – 1	15. Naberezhnaya
2. Micro-district Uchkun	16. 1000 melochei
3. Tobacco processing plant	17. ZUM
4. Tunguch 2	18. Ala-Too cinema
5. Tunguch 1	19. Russia cinema
6. Republican State Automobile Inspectorate	20. Philharmonic society
7. Service station # 2	21. Academy of Science
8. Kara-Zhygach 2	22. State Teleradio Corporation
9. Kara-Zhygach 1	23. Fuel station
10. Tyan'-Shan'-Lada	24. Western bus station
11. Ainur factory	25. Komunarov street
12. Madina market	26. Prigorodnoe village
13. Sverdlovskiy district administration	27. PMK
14. Vostok-5	28. Dachi

A operations – 24 vehicles

L turn – 42 km

t turn – 100 minutes

Traffic intensity – 4-5 minutes

Volume of operations – 24 km per hour

Note: 1. Traffic plan is not valid without approval of Traffic Police for passenger transportation, note by narcologist service on medical examination

Acting Head of Unit for Networks, Routes and OOK Planning [signature] Kurmanov M.

Bishkek City December 15, 2010

ACT

The Commission consisting of head of BPTC operations unit, Myrsyraimov U., Deputy chief of operations unit, Anarbaev S., Senior traffic controller, Seitkazieva M. have hereby executed this act for documenting km. traveled (mileage) and distance measurement with names of stops at **route # 6: Ak-Ordo residential area – Kok Zhar residential area.**

Measurements have been made at office car, VAZ 21074, plate number 6925 BB equipped with functioning speedometer and standard tires. As a result of measurements the following has been identified: distance from Ak-Ordo residential area to Kok Zhar residential area –km, Kok Zhar residential area to Ak-Ordo residential area –km, including the following stops:

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
1.	Ak Ordo		1.	Kok Zhar	- \ -
2.	The mosque	0.8	2.	Bekdan complex	0.5
3.	Bakers factory	1.3	3.	Sports club	0.8
4.	Coca Cola	1.6	4.	Micro-district Ulan	1.3
5.	Flight academy	2.2	5.	Naberezhnaya	1.7
6.	Institute of agriculture	3.0	6.	Belorusskaya street	2.5
7.	Academy of Arts	3.3	7.	Koibagarova street	2.8
8.	School	3.6	8.	Micro-district 3 4	3.0
9.	Municipal hospital # 4	4.4	9.	Orto-Sai	3.5
10.	Malikova street	5.0	10.	Maternity house # 4	3.8
11.	Academy # 20	5.4	11.	Children's polyclinic # 3	4.2
12.	Bach street	5.8	12.	Kyrgyz State Medical Academy	4.8
13.	Nekrasova street – Bathhouse	6.7	13.	BUTN	5.2
14.	Bakaeva/Chapaeva	7.1	14.	Dushanbinskaya street	6.0
15.	Baichechekei	7.7	15.	Polytech	6.8
16.	Polytech	8.2	16.	Aini street	7.3
17.	Dushanbinskaya street	9.0	17.	Bakaeva/Chapaeva	7.9
18.	BUTN	9.8	18.	Nekrasova street – Bathhouse	8.3
19.	Kyrgyz State Medical Academy	10.2	19.	Bach street	9.2
20.	Chidren's polyclinic # 3	10.8	20.	Academy # 20	9.6
21.	Maternity house # 4	11.2	21.	Malikova street	10
22.	Orto-Sai	11.5	22.	Municipal hospital # 4	10.6

#	Name of stops	Distance, km, increasing	#	Name of stops	Distance between stops, km, increasing
23.	Micro-district # 4	12.0	23.	School	11.4
24.	School	12.2	24.	Academy of Arts	11.7
25.	Belorusskaya street	12.5	25.	Institute of agriculture	12.0
26.	Naberezhnaya	13.3	26.	Flight academy	12.8
27.	Micro-district Ulan	13.7	27.	Coca Cola	13.4
28.	Sports club	14.2	28.	Bakers factory	13.7
29.	Bekdan complex	14.5	29.	The mosque	14.2
30.	Kok Zhar	15.0	30.	Ak-Ordo	15.0

Note: Zero run: BPTC – Ak-Ordo residential area – 13.4 km; BPTC – Kok Zhar residential area - 3.5 km; BPTC 1 – Ak-Ordo residential area – 7.2 km; BPTC 1 – Kok Zhar residential area – 18.5 km. Number of traffic lights – 17; L turn – 30 km

Head of Operations Unit, BPTC	[signature]	Myrsyraimov U.
Deputy chief, Operations Unit, BPTC	[signature]	Anarbaev S.
Senior traffic controller, Operations Unit, BPTC	[signature]	Seitkazieva M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City [signature] Sarkulov Y. Date: January 17, 2011 Seal	# 004 January 17, 2011	ENDORSED Head of Municipal Transport Department Mayor's office of Bishkek City [signature] Baibolotov Sh. Date: 2011 Seal

TRAFFIC PLAN

ROUTE # 6

Ak-Ordo residential area – Kok Zhar residential area

Stops:

1. Ak-Ordo
2. Ak-Tilek shop
3. Bakers factory
4. Coca Cola
5. Academy
6. Institute of agriculture
7. Academy of Arts
8. School
9. Malikova street
10. Academy # 20
11. Bach street
12. Bathhouse

[SCHEME]

13. Bakaeva street
14. Aini street
15. Baichechekei
16. Polytech
17. Dushanbinskaya street
18. BUTN
19. KSMA
20. Children's hospital # 3
21. Maternity house # 4
22. Orto-Sai market
23. Micro-district # 4
24. Koibagarova street
25. Belorusskaya street

26. Naberezhnaya
27. Micro-district Ulan
28. Sports club
29. Bekdan complex
44. Kok Zhar residential area

A operations – 16 vehicles
L turn – 29.8 km
t turn – 110 minutes
И traffic intensity – 6 minutes
Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without work schedule, time-schedule and note by narcologist service on medical examination.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City [signature] Sarkulov Y. Date: January 17, 2011 Seal	# 004 January 17, 2011	ENDORSED Head of Municipal Transport Department Mayor's office of Bishkek City [signature] Baibolotov Sh. Date: 2011 Seal

TRAFFIC PLAN

ROUTE # 6

Ak-Ordo residential area – Kok Zhar residential area

Stops:

1. Ak-Ordo
2. Ak-Tilek shop
3. Bakers factory
4. Coca Cola
5. Academy
6. Institute of agriculture
7. Academy of Arts
8. School
9. Malikova street
10. Academy # 20
11. Bach street
12. Bathhouse [SCHEME]
13. Bakaeva street
14. Aini street
15. Baichechekei
16. Polytech
17. Dushanbinskaya street
18. BUTN
19. KSMA
20. Children's hospital # 3
21. Maternity house # 4
22. Orto-Sai market
23. Micro-district # 4
24. Koibagarova street
25. Belorusskaya street
26. Naberezhnaya

27. Micro-district Ulan
28. Sports club
29. Bekdan complex
30. Kok Zhar residential area

A operations – 16 vehicles
L turn – 29.8 km
t turn – 110 minutes
И traffic intensity – 6 minutes
Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without work schedule, time-schedule and note by narcologist service on medical examination.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Safety Unit of the Chief Interior Department of Bishkek City [signature] Sarkulov Y. Date: 2011 Seal	# 008 January 14, 2011	ENDORSED Head of Municipal Transport Department Mayor's office of Bishkek City [signature] Baibolotov Sh. Date: 2011 Seal

TRAFFIC PLAN
ROUTE # 10
Western bus station – Dordoi-Dyikan market

[SCHEME]

Stops:

1. Western bus station
2. Fuel station
3. Zhibek-Zholu street
4. School
5. Zavodskaya street
6. Pavlova street
7. Gate crossing
8. Kyzyl-Asker
9. Messarosha street
10. Dordoi-Dyikan market

A operations – 7 vehicles
L turn – 12.4 km
t turn – 50 minutes
И traffic intensity – 7 minutes
Volume of operations – 16 km per hour

Note: 1. Traffic plan is not valid without work schedule, time-schedule and note by narcologist service on medical examination.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

[Letterhead of Municipal Transport Department of the Mayor's office of Bishkek City]

APPROVED Head of Traffic Police Unit of the Chief Interior Department of Bishkek City [signature] Satarov T. Date: 2009 Seal	# 0088 August 28, 2009	ENDORSED Head of Municipal Transport Department Mayor's office of Bishkek City [signature] Malabaev A. Date: 2009 Seal

TRAFFIC PLAN

ROUTE # 3

Micro-district (Naberezhnaya) – Dordoi residential area

Stops:

1. Micro-district # 12 (Naberezhnaya)
2. Trade center
3. Upper Asanbai
4. Narodnyi
5. Asanbai
6. Micro-district # 11 [SCHEME]
7. Karalaeva street
8. Micro-district # 6
9. Crossing
10. Micro-district # 7
11. Micro-district # 5
12. Orto-Sai market
14. Kaibagarova street
15. Micro-district Ulan
16. Atlas
17. Micro-district Kok Zhar
18. Gorkogo street
19. Ainur factory
20. Madina
21. Karavan-Sarai
22. Polyclinic
23. Alamedin market
24. Zhibek-Zholu street
25. Eastern bus station
26. Yssyk-Kul cinema
27. GOIN

28. Abdrakhmanova street
29. Kurenkeeva street
30. Baialinova street
31. Bishkek Chui channel
32. Shkolnaya street
33. Touristic base
34. Vitebskaya street
35. TB hospital
36. Aula
37. Leather factory
38. Dordoi residential area

A operations – 24 vehicles
L turn – 45.2 km
t turn – 156 minutes
И traffic intensity – 7 minutes
Volume of operations – 18 km per hour

Note: 1. Traffic plan is not valid without work schedule, time-schedule and note by narcologist service on medical examination.

Head of Unit for Networks, Routes and OOK Planning [signature] Balbaev M.

PRELIMINARY SURVEY OF QUESTIONS ON ENVIRONMENTAL PROTECTION IN BISHKEK CITY

№	Questions	Information
1	2	3
1	Overview of environmental situation in Bishkek city	See Attachments on 9 pages.
1.1.	Are there any nature woodland parks in the Bishkek city?	No, there are no.
1.2.	Are there any wildlife preservations and ecologically important territories?	There is no Wildlife preservation in Bishkek city. As of today, we have 7 parks with total area 317,001 hectares. Irrigated area in Bishkek city is 7,045 hectares. According to “Plan of landscaping and irrigation of Frunze (former name of Bishkek) city till 2000”, norm of green areas was determined as 115м^2/person. But in view of certain circumstances this norm had not been achieved. Green areas on the residential territories amount 7,680 hectares or 64 m^2/person. Green areas for common use – parks, gardens, squares, and boulevards amount 2,520 hectares (by norm 21 m^2/man.). Among them 1,664 hectares – new construction, 856 hectares – existing construction, or 11 m^2/person. The large green areas in the southern part of Bishkek city, as well as in northwest and its north-eastern parts have been playing a big role in improvement of environmental situation in Bishkek city, and particularly its air basin. The most tangible and recreational impact exerts: ▪ "Southern Woodland"; ▪ Park named after M.K. Ata-Turk (former park "Friendship"); ▪ Botanic Garden named after Gareeva. Since these territories are mainly located in the zone of catabatic flows, it should be saved. Moreover, new forest planting in the south-western and south-eastern directions should be added closer to Issyk-Ata tectonic faults, in the areas not suitable for mass housing.

№	Questions	Information
1	2	3
1.3.	Are there any special-protected territories, which have cultural and historical importance?	No, there are no.
2.	Taking in account social and environmental impact.	See attachment Overview of environmental situation.
3.	Overview of related law.	
3.1.	Are there any laws, by-laws, regulations related to Protection of Environment, except the "Law on Environmental Protection" uploaded in the website of Agency?	Yes, there are. See at the website of State Agency on Environmental Protection and Forestry under the Government of the Kyrgyz Republic www.nature.kg
3.2.	Is there any State Program, such as National Environmental Policy, etc? If there, we would like to know about economic policy and legal base, goals and principles, strategy etc?	Yes, there is. The Concept of Ecological Security of the Kyrgyz Republic, approved by Presidential Degree, dated on November 22, 2007 PD №506. All the issues covered in the above-mentioned concept.
3.3.	Is there any National Strategy for Sustainable Development? Strategy for Sustainable Development, published by State Agency on Environmental Protection under the Government of the Kyrgyz Republic?	Yes, there is. To participate to the World Summit on Sustainable Development (Johannesburg, 2002) there were prepared "The concept of transition of the Kyrgyz Republic to sustainable development till 2010", "Assessment of the results achieved by the Kyrgyz Republic on the way sustainable development" and Agenda of Meeting for 21 Century (all of above-mentioned papers approved by the Government of the Kyrgyz Republic, dated on August 02, 2002, by №411-p).
3.4.	Is there any State Program for the implementation of National Action Plan for Environmental Protection? Plan for Implementation of housing and communal services, development and protection of environment in Bishkek city?	Yes, there is. There is a Concept of Bishkek city - the renewed capital of the Kyrgyz Republic, which represents the vision of existing problems of and prospects for development of Bishkek city in the long term to 2025, and also defines the contours of the first three-year stages of city development – Program "Renewed Capital" for the period of 2009 – 2012, where housing and communal service taken in account as well.
3.5.	Land Acquisition and Migration of Population Act. Land Acquisition from among territories of state purpose, etc? Land Acquisition from territories for road construction.	Constitution of the Kyrgyz Republic. Land Code of the Kyrgyz Republic. Dated on June 2, 1999, №45.

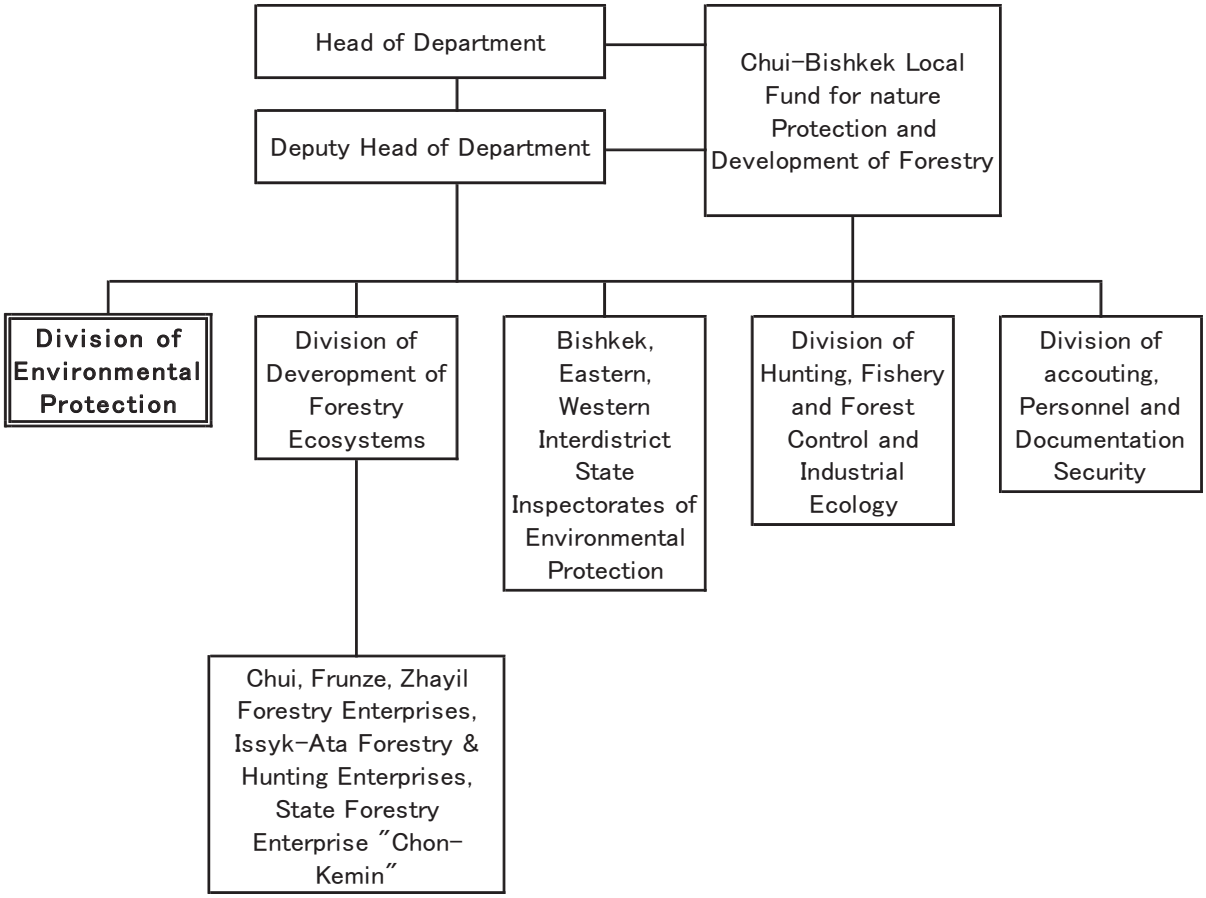
№	Questions	Information
1	2	3
3.6.	Environmental and Social Impact Account System.	The Environmental and Social Impact Account System is carried out in accordance with environmental legislation of Kyrgyzstan, as well as the number of by-laws and legal instruments, which is in force in Kyrgyzstan.
3.6.1.	Please tell about the procedure for implementation of EIA. Do you have some instructions, etc?	The procedure of EIA is written in the "Instructions on the procedure to assess the impact of proposed activities on the environment (EIA) in the Kyrgyz Republic, which was registrated in the Ministry of Justice of the Kyrgyz Republic on July 4, 1997. Index 386 approved by the Minister of Environmental Protection of the Kyrgyz Republic, Mr.Bokonbaev K, on June 27 1997.

3.7. The number of EIA in Bishkek city

Sector	2006	2007	2008	2009	2010
Agriculture	-	-	-	-	-
Water Management	-	-	-	-	-
Energy	-	-	-	-	-
Infrastructure	-	-	-	-	-
Land Development	-	-	-	-	-
Mining Industry	-	-	-	-	-
Tourism	-	-	-	-	-
Water Resources	-	-	-	-	-
Total	-	-	-	-	-

4. Organizational structure of responsible department in the environmental protection sphere:

Chui-Bishkek Territorial Department of Environmental Protection and Development of Forest Ecosystems, State Agency on Environmental Protection and Forestry under the Government of the Kyrgyz Republic


Head of Department
Deputy Head of Department
Chui-Bishkek Local Fund for nature Protection and Development of Forestry
Division of Environmental Protection
Division of Deveropment of Forestry Ecosystems
Bishkek, Eastern, Western Interdistrict State Inspectorates of Environmental Protection
Division of Hunting, Fishery and Forest Control and Industrial Ecology
Division of accouting, Personnel and Documentation Security
Chui, Frunze, Zhayil Forestry Enterprises, Issyk-Ata Forestry & Hunting Enterprises, State Forestry Enterprise "Chon-Kemin"

OVERVIEW OF ENVIRONMENTAL SITUATION IN BISHKEK CITY

Bishkek - the capital of the Kyrgyz Republic. It's political, economic, scientific, and cultural center of the republic, its main transport hub. The city is situated at the foot of the Kyrgyz Ala-Too in the center of the Chui valley at an altitude of 750 m above sea level. Bishkek lays in the plain formed by the confluence of the rivers cones Ala-Archa, Alamedin, etc.

The capital – Bishkek has a comparatively small area (17 hectares), with normal vital for bioclimatic conditions in which concentrated the bulk of the population and manufacturing and industrial enterprises, a large number of vehicles, Bishkek city is experiencing the maximum anthropogenic impact.

Changes in the environment caused by human economic activity are leading to significant changes in ecological systems and the transformed environment-forming components, or combinations thereof, and may be affected at every point of the city, speed up the deadweight loss of natural resources such as air, trees, topsoil, surface water and groundwater. Politics of business regulation in Bishkek should be based on a graded approach, while retaining the three priorities - health, occupational safety and environmental protection.

In accordance with Article 44 of the Law "On Environmental Protection", dated on June 16, 1999, № 53, and the "Regulation on state control over environmental protection, rational use of natural resources and environmental safety of the Kyrgyz Republic" approved by the Government of the Kyrgyz Republic on May 25, 2000, № 295. Chui-Bishkek Territorial Department of Environmental Protection and Development of Forest Ecosystems provides the public control and ensures compliance with environmental regulations, quality standards and environmental requirements, implementation plans and measures for environmental protection, reproduction and rational use of natural resources in Bishkek city.

1. Atmospheric air situation in Bishkek city

The main sources of air pollution in Bishkek are: transport, Bishkek Central Heating Station (CHS) and boiler JSC “Bishkekteplokommunenergo”, which accounted for 90% of emissions into the atmosphere, while 10% were toxic emissions from other industrial and commercial enterprises, such as steel, metal production and the private sector.

According to the state statistical reporting form "2 TP-Air pollutant emissions from stationary sources of pollution in Bishkek for 2010 amounted to 14.259 tons/year, including: Solid - 6.929 tons/year; gaseous and liquid - 7, 33 thousand tons/year.

For example, there are several large companies that perform emissions: from Bishkek city CHS, for 2010, emissions of pollutants made up 13.436 tons/year. At the moment, only 17 boilers are in working condition, from 24 existing boilers.

In 2010, 46 boilers of JSC “Bishkekteplokommunenergo" emissions of pollutants into the atmosphere amounted to 0.608 tons/year.
In fact, there was an environmentally dangerous situation in the capital, and the concentration of certain pollutants can be characterized as a zone of ecological disaster.

At the present time, motor vehicles have been increasing in Bishkek -146,000 units, and in 2009 the emission of harmful substances into the air from motor vehicles amounted to 87,694 tons/year, including the following: 72,810 tons of carbon monoxide (CO), hydrocarbons - 8,220 tons/year. The impact of transport is largely determined by the intensity of operations and technical condition, the development of certain types of transport services. More than a quarter of cars is been operated in excess of emission standards and opacity due to their deterioration, poor control at the output of the line, ineffective systems, technical control and maintenance. In the central part of the city, where we have heavy vehicular traffic, air pollution remained above the average values of the city, as a whole. Concentration of formaldehyde was observed with the exceedance to 7.7 times, nitrogen dioxide - up to 2 times, nitrogen oxide up to 3 times.

There was an increased level of hydrocarbons in the atmosphere of the city, which excesses allowable norms for 2-5 times, which pollutes an environment by toxic substances. And also burning of solid waste and abscised leaves makes air pollution and as a result it exudes furans and dioxins (persistent organic pollutants). State Sanitary-Epidemiological Inspectorate of Bishkek city, as a result of his research, reveals a direct correlation of increasing of respiratory diseases from the degree of air pollution.

Monitoring and air pollution control in Bishkek is made by Kyrgyz Hydro meteorological Agency under Ministry of Emergency Situations of the Kyrgyz Republic. There are 7 observation stations set up in the territory of Bishkek city, where we make the sample and chemical analysis in the content of harmful substances in the atmosphere and compare background concentrations in each district of the city, and the whole city as well.

Despite decreasing of volumes of industrial emissions, the level of air pollution in the city remains high. Background excess of atmospheric air composition from the average of the maximum permissible concentration (MPC) in Bishkek is the following substances: nitrogen dioxide (from 1.25 to 2 MPC) for formaldehyde (from 4.3 to 7.7 MPC).

The most polluted is the central part of the city, where MPC excesses as following: nitrogen dioxide (from 1.6 to 3 MPC), formaldehyde (from 4.7 to 8 MPC).

The radiation background in the city averages 16 to 19 mR / hour.

A physio-geographic and climatic condition in Bishkek, and the relative isolation of Chu valley, stimulates the emergence of intensive surface and elevated inversions, which leads to formation of high-capacity air pollution. As a result, the annual average content of such pollutants, as formaldehyde, nitrogen dioxide exceeded the permissible limits the whole city. For the remaining substances, according to data of Kyrgyz Hydro Meteorological, there is a slight decrease, its content in the air within or less than the MPC.

2. Situation with underground and surface waters in Bishkek city

In Bishkek, the drinking water supply and sanitation services in mostly centralized. There are 600 wells located in the territory of Bishkek, at the water intakes of "Bishkekvodokanal" and industrial plants, and only 245 of them operate actively.

From 1989 to 2007, based on the Resolutions of the Government of the Kyrgyz Republic and the Mayority Office of Bishkek, on the outskirts and in the adjacent area of the city were allocated plots for individual development: southern part of CHS-1 (Central Heating Station), CHS-2, "Ak-Ordo" new town, in the western city of Bishkek, "Prigorodnoe" village, near the "Manas" airport; "Ozernoe" village, on the street Auezov of Alamedin area, Voenno-Antonovka new town, Ak-Bata new town and others, totally is 55 new towns. The total area of new towns is 4,055.2 hectares.

There is contamination of groundwater, soil, air, in violation of all sanitary and environmental standards and requirements established by the legislation of the Kyrgyz Republic in the territories of new towns at the moment. There are no central sewerage system, septic tanks, discharge of new town's sewage is made in drains, on the terrain, water bodies (rivers, canals, etc.), which leads to pollution, both underground and surface waters.

Currently, treatment facilities of "Bishkekvodokanal" loaded for 70-75%, and when designed capacity is 380 thousand m3/day of wastewater at the actual workload of 260-280 thousand m3/day.

According to the letter Bishkek Main Architecture Department, T08/379, dated on April 17, 2009, by the instructions of Mayority Office, Kyrgyz Scientific Study Urban Institute, a draft

scheme of utilities has been developing, which funded stage-by-stage. The other project on the definition of Bishkek city limits will be finished soon. This project includes the newly built new towns. There is also reconstruction of the main water conduits of the Orto-Alyshsky water intake planned in Bishkek city.

Newly planned water conduit D = 1000 mm is calculated from the assumption of development of residential areas, in accordance with the decision of the Master Plan of Bishkek city.

In 2008, Large-Scaled Construction Department of Bishkek city implemented construction of sewerage in “Salam-Alik " new town with length of 275 meters, in the school of “Uchkun” new town with length of 726 meters, and the school in “Archa-Beshik” with length of 1,198 meters. Also it was received technical specifications for the construction of sewerage systems for schools, “Ak-Orgo”, “Ala-Too”, which project’s development is planned for 2009.

Discharges of industrial waste from 14 industrial enterprises with galvanic production (JSC “Avtomash-Radiator”, “Aynur” Plant, JSC “Electrotechnik”, OJSC Transnational Company “Dastan”, JSC “BMZ”, etc.); also from 98 car washing stations and storm water drainage from 94 stations are made in the municipal sewage network through local treatment facilities. Pretreatment facilities at the enterprises do not operate at full capacity, or do not work at all.

Increasing of spontaneous car washing stations is becoming an important problem, which do not have the local sewage treatment plants and water recycling systems, and as a consequence, contaminate the soil and underground surface of aquifer.

Control over condition of groundwater is made by the laboratory of Central State Sanitary and Epidemiological Inspectorate and by the Ministry of Natural Resources as well (geologists). Control of surface water is made by the laboratories of State Agency on Environmental Protection and Development of Forest Ecosystems and Kyrgyz Hydrometeorological Agency under Ministry of Emergency Situations of the Kyrgyz Republic.

There are no direct discharges of industrial wastewater into water bodies in Bishkek city. Harmful substances enter the rivers of “Alamedin” and “Ala-Archa” at the expense of draining of harmful substances from the road storm water runoff, deposition of pollutants from the atmosphere, littering of solid household wastes in the rivers passing through the bazaars and other densely populated areas. Due to above-mentioned reasons, we can see the

pollution of water bodies and excess of standard contents of maximum permissible concentration of water bodies.

According to the tests on surface water of "Alamedin" and "Ala-Archa" rivers, flowing on the territory of Bishkek city, which made on the laboratory of Kyrgyz Hydrometeorological Agency under the Ministry of Emergency Situations of the Kyrgyz Republic, we can observe the following non-compliance for the requirements of surface water bodies:

- There is excess of maximum permissible concentration (MPC) in "Alamedin" river:
  - Copper excesses 2 times in the upper and lower sides of Bishkek city;
  - Nitrogen nitrite excesses 1, 25-1, 65 times in the lower side of Bishkek city.
- There is an excess of maximum permissible concentration in the "Ala-Archa" river:
  - Nitrogen nitrite excesses 2 - 3.35 times (1 km from the border of the city).
  - Copper excesses 2 times in the upper and lower sides of the city.
    There is no excess of MPC in the content of petroleum products.

3. Use of land and vegetation resources.

There is a decreasing of land area observed in Bishkek, with increasing its population and the systematic exclusion of land to build houses, buildings and other need. Despite the prohibition on allocation of plots for construction in the parks, gardens and other green areas, we still can observe a practice of allocating plots in such territories.

Construction of living houses, buildings, without an environmental impact assessment (EIA) has led to the destruction of irrigation and drainage networks. In some cases, construction plots (for houses, restaurants, casinos and cafes) distributed without coordination with environmental authorities, without complying with the rules of construction near water bodies, on the lines of main irrigation canals, parks, squares. It entails the destruction of green space and as a consequence, degradation of habitat and urban environment.

There is a lack of land for burial of dead in the city and outside the city as well. Based on the instructions of the Government of the Kyrgyz Republic, dated on December 17, 1999, № S19-13/46 – Mayority Office of Bishkek together with the Bishkek Main Architecture Department identified three grounds:

- To the west of “Leninskoe” village, eastern part of Nijnyaya-Alaarcha reservoir, 500 hectares;
- A partial extension of the existing cemetery “Baitik", with 40 hectares;
- A partial extension of the existing south-western cemetery on the lands of Sokuluk region with territory of 50 hectares and Alamudun region, about 25 hectares.

In 2000, the Draft Decree of the Government of the Kyrgyz Republic was created by Bishkek Main Architecture Department with the proposed options for placement of city cemeteries and transferred to the State Administration of Chui oblast. In 2002, it was prepared an updated Draft Decree of the Government of Kyrgyz Republic "On land acquisition for the location of urban cemeteries in Chui oblast" with a cover letter on behalf of the Mayority Office of Bishkek city and submitted for consideration both to the Government and to the State Administration of Chui oblast, for coordination. However, there is no response received by this moment, and for this, Chui-Bishkek Territorial Department on Environmental Protection and Development of Forest Ecosystems on the request of Bishkek Main Architecture Department will assist in deciding of issue on the allocation of land for the placement of urban cemeteries.

The level of green areas in the territory of city has reached a catastrophic point - 28% for all categories of plantations, which is almost 2 times lower than the required 40-50%, which secures vital activity of the urban environment. Status of green space is directly linked with organized irrigation system. Irrigation networks inside of microdisticts, neighborhoods, parks, squares, etc., mostly had deteriorated with silt and rubbish or destroyed. As a result, some areas are excessively flooded, while others remain dry, which leads to the disappearance of vegetation cover, rot and drought greenery.

Total length of irrigation networks in the city is about 2000 km. From these, 90.2 km of main and feeder canals is managed by the manufacturing enterprise "Gorvodremkhoz”, 411 km - on the balance of the district amenity combine and green economy. About 1500 km of irrigation networks are not supported and a mostly in poor condition. There are 10 equipped wells for irrigation in the territory of the city. 4 of them are located in the Pervomaisky District, 4 in Lenin District, and 2 in Sverdlov District. Wells are used to supply water in watering pipeline (6 pcs.) and also directly to the public irrigation network, to fill street washer machines (3 pcs.).

In addition, trees are illegally cut down for fuel and building materials, and also we can observe uncontrolled cutting of trees for cottages, a cafe or near the building facades.

For example, the area of recreation "Karagachevaya Grove" declined from 1992 to 2008 for 27.92 hectares (Decree of the Government, № 501 dated on June 28, 2002 - 5,13 hectares, Decree of Mayority Office of Bishkek city, № 529 dated on June 25, 2005 - 6.55 ha, etc.).

Until now, an official act of acceptance-transmission of greenery and park land of "Karagachevaya Grove" had not been made, since all the green areas are the municipal property of the city and previously were on the balance of the abolished amenity combine of Sverdlov District. As of today, they are on the balance of new successor, Municipal Enterprise "Zelenstroy" of Bishkek city. A similar situation exists in other parks.

Lack of acceptance-transfer act led to the dual power in the park "Karagachevaya grove", where Municipal Enterprise "Zelenstroy" is still responsible for preservation of green plantations, and Department of Parks is responsible only for the land and operation the park, which led to disengagement of the assigned tasks.

In accordance of Law of Kyrgyz Republic "On Protection and Use of Flora", Article 11 "The procedure of using objects of fauna", land owners and permanent land users are at the same time permanent users of the objects of fauna and vegetation, growing on that lands.

During the last years, there were allocated plots for construction of individual houses, cafe, gasoline stations and mosques in the territories of parks and rest zones in Bishkek city. The green plantings on allocated plots for construction have been cut down.

Almost all the parks are in a deplorable condition, because of a devil-may-care attitude to the green plantings; territories of many parks are cut down by apartment houses and other buildings which are not related to functions of parks, despite all parks have the status of especially protected natural territories. There are no well-arranged quays in Bishkek city at present, except the Kalinin quay, which has begun in 80th. There are gas stations, parking places, cafe and individual building of cottage type is appearing more and more in these territories. Forest parks and groves almost are completely given for individual and housing construction, and remained forest-park territories slowly die. Street landings are so degraded that pose physical threat to the life of the population.

The planted trees and shrubs territories carry out nature protection, recreational, sanitary-protective functions, being a component of territory of a natural complex and green fund of the city.

During the last years, the indicator of security of the population of the city with green plantings has sharply decreased. According the results of inventory of planted trees and green territories for general using, as of January 1, 2005, this category has 856 hectares or 11 m2/foreheads. At the present time, the area of gardening of the city territory makes only 550 hectares or 6 m2/foreheads, because 200 hectares of territory of parks and forest parks were seized for construction of living blocks. The level of the planted trees and shrub areas in the general balance of the city territory has made 28 % on all categories of plantings, that almost 2 times lower of necessary 40-50 %, for securing of sanitary-and-hygienic conditions of vital activity of the city environment (according to the data of Kyrgyz Scientific Research Institute on Town-Planning).

At present time, the situation with city gardening has improved. So, in 2009, Municipal Enterprise "Zelenstroi" (according to certificates of a pulling down of trees and bushes) has been cut down about 1,5 thousand trees and the paid regenerative cost, which has made almost 1 million soms (998442,98 soms). At the same time, there were trees planted in Bishkek in 2009 for 536590 soms, among it:

Deciduous breeds-1348 pieces;
Coniferous breeds - 4379 pieces;
Green hedge - 541450 pieces;
Flower sprouts - 632990.

In 2010, Municipal Enterprise "Zelenstroi" has planned following planting material:

- Flower sprouts (1 million pieces) for 8.537 million soms;
- A green hedge (1 million pieces) for 2 million soms;
- Deciduous breeds (5766 pieces) for 864900 soms;
- Coniferous breeds (3240 pieces) for 4 million 869 thousand soms.

In total is for 15 million 724 thousand soms.

There is no uniform structure of city green plantings, it is presented by scrappy stains in a city body, and due to it the city lost the kind and shape of one of the most beautiful and greenest cities on the Post-Soviet territory. Considering the above-stated, it is necessary to create the commission for carrying out of inventory and reception-transfer of land and green plantings of parks to the Directorate of Parks and Rest Zones of Bishkek city, and giving the State Certificate with the right of termless using of land.

As of today, there are 7 parks with total area of 317,001 hectares in the territory of Bishkek city. The irrigated area in Bishkek is 7045 hectares.

4. Placing of wastes.

Problems of garbage disposal, recycling, burial of household, toxic and medical wastes are crucial task, which is necessary to solve. Growth of the population, small and medium enterprises lead to increasing of waste, and chemical nature of above-mentioned becomes more difficult, and as a consequence, increases the risk of the population's health and environment.

Sources of waste formation are industrial enterprises, economic associations and communities. Most part of solid and housing waste and is formed in the 48 markets of Bishkek city. Besides, there are 143 spontaneous sales outlets (shops), which are also forming solid and housing waste.

Toxic production wastes are partially burned on boiler-houses (petroleum containing), partially used as a recycled resource for various manufactures, partially stored in the territories of industrial enterprises until decision of issues, related to construction of landfill, destruction, and processing of toxic industrial wastes for reuse.

According to the statistical data of "Toxic waste-2" for 2010, there are 0,300 thousand tons of a toxic waste 1 - IV categories of danger stored on the territories of Bishkek city industrial enterprises such as, Bishkek Concrete Plant, Transnational corporation "Dastan" JSC "Bishkek Machinery Plant", JSC "Electrotechnik", JSC "Ainur", JSC "Aalam and JSC "Factory of Drills", which should be placed on the landfill of a toxic waste, however all of it is still stored in territories of the enterprises. Therefore, at present time, there is an acute problem on allocation of a site and funds in order to build the landfill for processing and burial of a toxic industrial waste.

Solid waste is removed to Bishkek city dump, according to the contracts with community utilities of Bishkek city.

Bishkek landfill site was opened in 1979 and designed for 10 years to dump 3.3 million m3 of solid waste. As of today, there are more than 26 million m3 dumped in landfill site, which doesn't meet to environmental requirements and sanitary standards. Actual operation period of landfill, which is in force since 1972, exceeded the standard period for more than 10 times and it is a major source of epidemiological and environmental hazards.

Bishkek city dump receives 5,167 m3 of solid waste (1,033 tons/day) daily or 1.886 million m3 per year.

The territory of Bishkek city dump is characterized by close location of groundwater - a source of drinking water supply. Infiltration of liquid waste into aquifers can lead to outbreaks of infectious diseases. Wind flow spreads solid waste to the neighborhood, contaminating atmospheric air, soil and surface waterways. There is a process of contamination and intoxication of atmospheric air by products of smoldering, burning, decay and decomposition of wastes.

The territory of the landfill is not fenced; there is no running water, no disinfection, no disinfestations and no reclaiming of occupied land and environmental monitoring implemented there.

Samples of water (liquid wedges from land near the city authorized dump) are taken by Chui-Bishkek Territorial Department on Environmental Protection and Development of Forest Ecosystems in order to check water quality. The results were deplorable, because there was an excess of MPC for economy and community means, PH 8.22 - MPC (6.5-8.5), ammonia nitrogen 1,400.00 mg/litter - MPC (1.5), nitrite nitrogen, 3,600.00 mg/litter - MPC (1.0), nitrate nitrogen, 24.00 mg/litter - MPC (10.2); chlorides 7,385.00 mg/litter - MPC (350); sulfate 1,275.00 mg/litter - MPC (500).

This situation is specified by several reasons, which include: lack of strategy for management of solid waste, lack of system for separation and recycling of waste, lack of involvement by municipal services of private sector into the management of solid waste, and extremely low security of public services by specialized vehicles and containers.

Bishkek city authorized landfill operates with violations of all the rules: there is no design - regulatory, licensing documentation, lack of environmental passport, and solid waste is dumped without a permission, which violates environmental law.

The territory of the landfill is not fenced; there is no running water, no disinfection, no disinfestations and no reclaiming of occupied land and environmental monitoring implemented there. Potentially hazardous waste, used medical waste, luminescent lamps are placed without complying with special technologies. Checkpoint is equipped with scales up to 15 tons only, that’s’ why heavy vehicles are unloaded

without weighting, which leads to lack of disposed waste. There is an intensive building of houses by occupants around the city landfill, while sanitary-protective zone doesn't keep. As a consequence, we can see outbreaks of infectious diseases, since sanitary and environmental standards and requirements had not been kept.

Upon request of Chui-Bishkek Territorial Department on Environmental Protection and Development of Forest Ecosystems, № 03/2312 dated on December 24, 2008, Municipal Enterprise "Tazalyk" provided information on recycling and disposal of carcasses of dead animals. Combustion takes place in biothermal furnace by burning of tires, and furnace needs to be repaired.

In addition, the source of infection and contamination is a cattle cemetery, located in the residential area "Ala-Too." Area is not fenced; there is a free access of the population and livestock.

There is a package of measures to ensure the environmental safety of the Kyrgyz Republic for the period of 2010, approved by Government's Resolution, dated on June 13, 2008, № 294, specified priority areas for mid-term (between 2011 and 2015) and long-term periods (from 2016 to 2020). Mayor's Office of Bishkek city was requested to build waste recycling plant with estimated cost of 360 million soms (9 million USD). Mayor's Office of Bishkek city announced a tender by Order, dated on January 16, 2009, № 13-p "About the competition for the best investment project for construction waste recycling plant in Bishkek and a modern solid waste dump for the funds of investors".

First phase of mentioned tender was held in March 18, 2009 and 5 companies took part. They are LLC "Kyrgyz Alfa Group", Microcredit Company "Microfinance", LLC "Amal Group", LLC "Eco Green" and "Vanturra International ltd".

Actual problem of Bishkek city is a recycling of medical waste and in many countries this problem is considered as an essential element of the system of ecological security. In accordance with the Basel Convention, in 1992 it was identified 45 types of hazardous waste, and a clinical waste at first. World Health Organization classified medical waste as a hazardous waste. Classification of medical waste (MW) subdivides it into five categories, depending on the level of epidemiological, toxicological, and radiological hazards. The number of MW has a strong tendency to intensive growth.

According to the Center of the State Sanitary and Epidemiological Surveillance of Bishkek city, which controls 547 health facilities, including 28 hospitals and 224 outpatient clinics (public and private) and 234 pharmacies, there are 11,440 kg of solid waste and more than 1,280 liters of liquid medical waste formed in health facilities, including hazardous anatomical waste - 481.3 kg, used injection needles - 132 kg, intravenous sets - 74 kg, acute medical supplies - 64 kg, an extremely dangerous medical waste - more than 5 kg, specific waste 1,493 kg 1,128 litters. Basic place of destruction of medical waste in Bishkek are city authorized dump and municipal wastewater treatment plants. The situation in regions is similar. Such methods and situation doesn't solve the problem of safe disposal of medical waste and complicates the ecological situation in the Republic.

Rapid urbanization and the modern development of public health in the country strongly highlight the problem of waste disposal of health care institutions. It is necessary to create a centralized collection and disposal of hazardous medical waste, excluding secondary pollution of ecology by solid and chemical waste.

Criteria for surface water pollution assessment

Ingredients and indicators	Limiting indicator of hazard	Maximum allowable concentration, mg/l
1. Dissolved oxygen	Fisheries	Winter period – not less then 4.0 Summer period – not less then 6.0
2. BOD5	Fisheries	3.0
3. NH4	Toxicological	0.5N (NH4+)=0.39
4.NO3	Sanitary and toxicological	40N (NO3-)=9.0
5. NO2	Toxicological;	0.08N (NO2-)=0.02
6. Oil and oil products	Fisheries	0.05
7. Phenol	Fisheries	0.001
8. Synthetic surfactants	Toxicological	0.1
9. Iron (Fe 3+)	Organoleptic	0.5
10. Cooper (CU 2+)	Toxicological	0.001
11. Zinc (Zn 2+)	Toxicological	0.01
12. Fluorine	Toxicological	0.75
13. DDT	Toxicological	n/a
14. Calcium (cation)	Sanitary and toxicological	180.0
15. Magnesium	Sanitary and toxicological	40.0
16. Sulphates (anion)	Sanitary and toxicological	100.0
17. Chlorides (anion)	Sanitary and toxicological	300.0
18. Hexochlrane	Toxicological	n/a
19. Mineralisation	General requirements	1000.0
20. Chrome (3+)	Organoleptic	0.5
21. Crhome (6+)	Sanitary and toxicological	0.001

Note: “General list of maximum allowable concentrations and approximately safe impact of hazardous substances for water contained in fisheries ponds”, Moscow 1990

Water pollution — Alamedin river - 1 km upstream from Bishkek city

year	mg/l	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	pH			8.30					7.75			7.75	
	oxygen			10.51					8.99			11.58	
	BOD5			0.84					0.22			1.35	
	oil products			0.01					-			0.01	
	phenol			-					-			-	
	synthetic surfactants			-					-			-	
2010 r.	NH4			0.02					-			0.07	
	NO2			0.04					0.01			0.00	
	NO3			1.12					0.62			1.16	
	phosphorus			0.01					0.01			0.01	
	iron			0.05					0.23			0.03	
	cooper			0.00					0.00			-	
	zinc			-					0.00			-	
	pH		7.95			8.18						8.34	
	oxygen		8.94			8.62						9.72	
	BOD5		0.78			2.30						0.83	
	oil products		-			-						0.02	
	phenol		-			-						-	
	synthetic surfactants		-			-						-	
2009 r.	NH4		-			0.09						0.02	
	NO2		0.00			0.02						0.00	
	NO3		1.17			1.39						0.86	
	phosphorus		0.01			0.01						0.03	
	iron		0.05			0.06						0.01	
	cooper		-			-						-	
	zinc		-			0.00						-	
	pH		7.71			7.92			7.60			7.90	
	oxygen		11.50			8.32			9.20			11.69	
	BOD5		1.40			1.69			0.54			1.70	
	oil products		-			0.01			-			-	
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			-	
2008 r.	NH4		0.04			-			-			0.01	
	NO2		0.01			0.01			0.00			0.00	
	NO3		1.10			1.08			0.69			1.02	
	phosphorus		0.02			0.04			0.01			0.00	
	iron		0.06			0.03			0.32			0.01	
	cooper		-			-			-			-	
	zinc		-			-			-			0.00	
	pH		7.95			7.50			7.92			8.14	
	oxygen		12.46			9.33			9.85			10.72	
	BOD5		2.36			0.44			1.31			0.56	
	oil products		0.01			0.02			0.01			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			-	
2007 r.	NH4		0.03			0.05			0.02			0.01	
	NO2		0.01			-			0.01			0.01	
	NO3		1.18			0.89			0.59			0.93	
	phosphorus		0.01			0.01			0.00			0.02	
	iron		0.07			0.33			0.08			0.09	
	cooper		-			-			0.00			-	
	zinc		0.00			0.00			0.00			-	
	pH		7.95			7.85			8.30			7.97	
	oxygen		11.95			9.92			9.93			12.17	
	BOD5		1.19			0.86			0.49			1.82	
	oil products												
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			-	
2006 r.	NH4		0.04			0.06			-			-	
	NO2		-			-			0.01			0.01	
	NO3		1.21			1.08			0.79			1.25	
	phosphorus		0.01			0.02			-			0.01	
	iron		0.04			0.13			0.48			0.10	
	cooper		-			-			-			0.00	
	zinc		-			-			-			0.00	

Water pollution — Alamedin river - 2 km downstream from Bishkek city

year	mg/l	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	pH			8.55					8.00				7.95
	oxygen			10.51					8.99				11.58
	BOD5			0.77					0.67				1.19
	oil products			0.01					-				0.01
	phenol			-					-				-
	synthetic surfactants			-					-				0.01
2010 г.	NH4			0.02					-				0.09
	NO2			0.01					0.01				0.01
	NO3			2.11					1.75				1.63
	phosphorus			0.01					0.02				0.03
	iron			0.08					0.05				0.03
	cooper			0.00					0.00				0.00
	zinc			-					0.00				-
	pH		8.11			8.28						8.32	
	oxygen		8.71			9.23						9.19	
	BOD5		1.02			1.00						1.06	
	oil products		-			-						0.01	
	phenol		0.00			-						-	
	synthetic surfactants		0.01			0.02						0.01	
2009 г.	NH4		-			0.02						0.01	
	NO2		0.01			0.03						0.01	
	NO3		1.81			3.22						2.51	
	phosphorus		0.01			-						0.02	
	iron		0.04			0.03						0.02	
	cooper		-			-						-	
	zinc		-			-						-	
	pH		8.00			7.95			8.26			8.38	
	oxygen		10.80			8.03			8.73			11.11	
	BOD5		2.33			2.12			0.85			1.78	
	oil products		0.02			0.01			0.02			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		0.01			0.01			0.03			-	
2008 г.	NH4		0.16			-			-			0.01	
	NO2		0.02			0.03			0.01			0.01	
	NO3		1.77			1.68			1.75			1.96	
	phosphorus		0.04			0.01			0.04			0.00	
	iron		0.13			0.05			0.09			0.02	
	cooper		-			-			-			-	
	zinc		-			0.00			-			0.00	
	pH		8.25			7.93			8.53			8.18	
	oxygen		12.56			10.22			10.50			10.56	
	BOD5		2.26			1.51			1.67			0.80	
	oil products		0.01			0.02			0.01			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		0.02			-			0.01			0.05	
2007 г.	NH4		-			0.03			-			0.02	
	NO2		0.01			0.04			0.02			0.01	
	NO3		2.16			2.56			2.38			1.70	
	phosphorus		0.01			0.03			0.01			0.02	
	iron		0.06			0.04			0.03			0.10	
	cooper		-			0.00			0.00			-	
	zinc		0.00			0.01			-			0.00	
	pH		8.20			7.85			8.30			7.90	
	oxygen		12.44			8.56			9.93			12.17	
	BOD5		1.58			0.43			0.66			1.92	
	oil products												
	phenol		-			-			-			-	
	synthetic surfactants		0.01			0.02			0.02			-	
2006 г.	NH4		0.02			0.11			0.04			0.02	
	NO2		0.01			0.01			0.01			0.01	
	NO3		2.47			2.19			1.34			2.47	
	phosphorus		0.02			0.09			0.04			0.02	
	iron		0.05			0.10			0.45			0.05	
	cooper		-			0.00			-			-	
	zinc		0.00			0.00			-			0.00	

Water pollution Ala-Archa river - 4 km upstream from Bishkek city

year	mg/l	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	pH			8.25					7.65				7.85
	oxygen			10.51					9.14				12.00
	BOD5			1.00					0.52				1.31
	oil products			0.01					-				0.01
	phenol			-					-				-
	synthetic surfactants			-					-				-
2010 г.	NH4			0.01					-				0.03
	NO2			0.01					0.01				0.00
	NO3			0.87					0.99				1.00
	phosphorus			0.01					0.01				0.00
	iron			0.03					0.31				0.01
	cooper			0.00					0.00				0.00
	zinc			-					0.00				-
	pH		7.94			8.36						7.90	
	oxygen		9.25			8.31						9.84	
	BOD5		0.70			0.31						0.77	
	oil products		-			-						0.02	
	phenol		-			-						-	
	synthetic surfactants		-			-						-	
2009 г.	NH4		-			0.01						0.01	
	NO2		0.00			0.01						0.00	
	NO3		0.88			1.19						1.10	
	phosphorus		0.00			0.01						0.01	
	iron		0.03			0.18						0.02	
	cooper		-			-						0.00	
	zinc		0.00			0.00						-	
	pH		7.58			8.19			7.89			7.74	
	oxygen		11.50			7.43			8.43			12.35	
	BOD5		0.15			1.77			1.16			1.28	
	oil products		-			-			-			-	
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			-	
2008 г.	NH4		-			0.01			-			0.01	
	NO2		0.00			0.01			0.00			0.00	
	NO3		0.89			0.85			0.69			0.78	
	phosphorus		0.01			0.03			0.01			0.01	
	iron		0.02			0.09			0.09			0.02	
	cooper		-			-			0.00			0.00	
	zinc		0.00			-			-			-	
	pH		7.90			7.74			8.22			8.28	
	oxygen		11.81			9.60			8.97			11.36	
	BOD5		2.58			1.06			0.88			0.80	
	oil products		-			0.02			0.01			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			0.05	
2007 г.	NH4		-			0.02			0.01			0.03	
	NO2		0.00			-			0.01			0.01	
	NO3		1.13			0.86			0.59			0.85	
	phosphorus		0.01			0.00			0.00			0.01	
	iron		0.01			0.32			0.07			0.05	
	cooper		-			0.00			0.00			-	
	zinc		0.00			-			0.00			-	
	pH		7.75			7.75			8.05			7.72	
	oxygen		12.44			8.98			9.52			12.25	
	BOD5		1.18			0.69			0.41			2.49	
	oil products												
	phenol		-			-			-			-	
	synthetic surfactants		-			-			-			-	
2006 г.	NH4		0.04			0.02			0.08			-	
	NO2		-			-			-			0.00	
	NO3		1.08			0.95			1.15			1.08	
	phosphorus		0.01			0.02			-			0.01	
	iron		0.03			0.25			1.83			0.12	
	cooper		0.00			0.00			0.00			0.00	
	zinc		-			0.00			-			-	

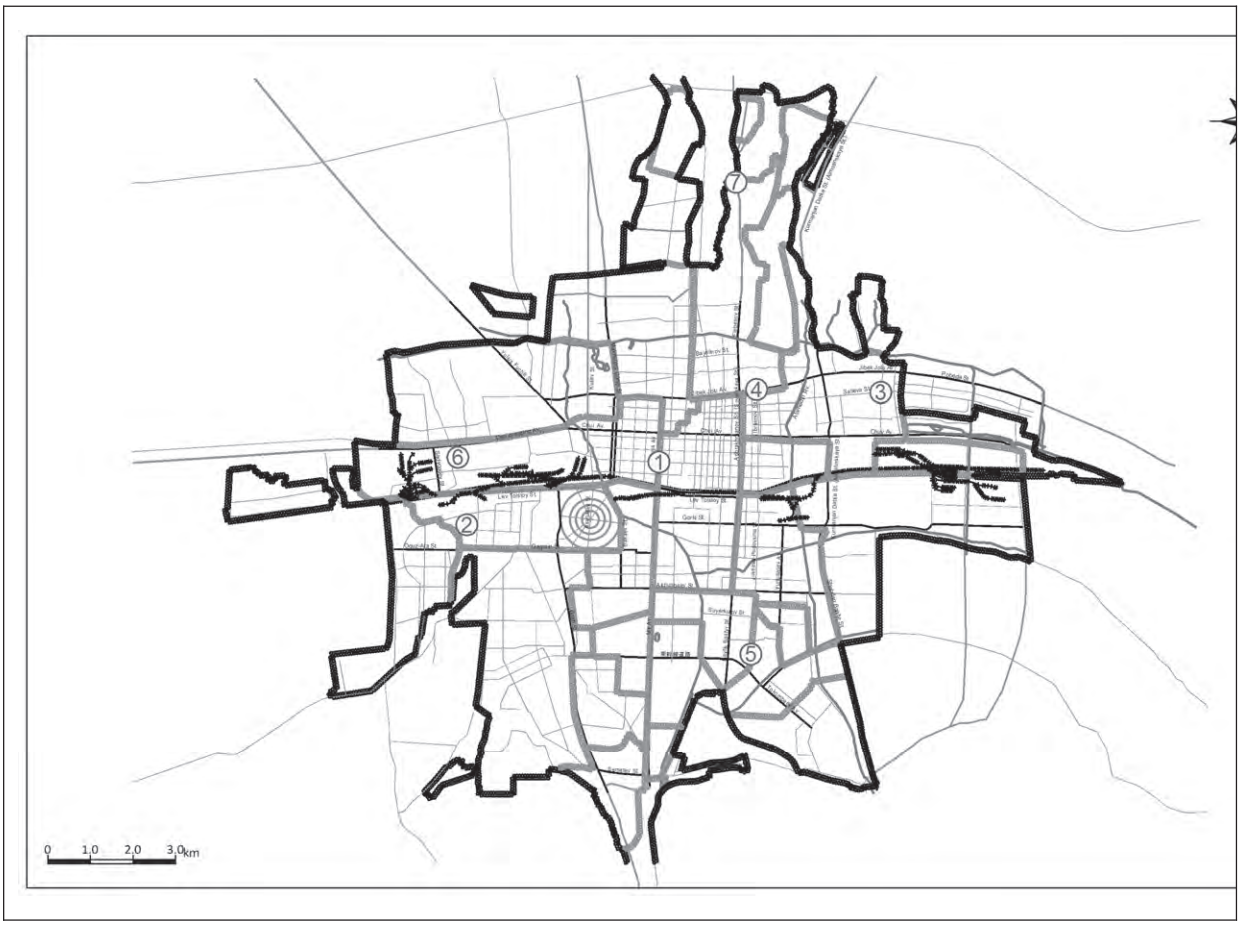
Water pollution Ala-Archa river - 1 km downstream from Bishkek

year	mg/l	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	pH			8.40					7.85				7.95
	oxygen			10.21					8.54				12.07
	BOD5			0.92					1.05				1.63
	oil products			0.01					-				0.01
	phenol			-					-				-
	synthetic surfactants			0.02					0.02				0.04
2010 г.	NH4			0.03					0.03				0.05
	NO2			0.01					0.01				0.02
	NO3			2.27					1.29				1.57
	phosphorus			0.02					0.01				0.03
	iron			0.03					0.09				0.02
	cooper			0.00					0.00				0.00
	zinc			0.00					0.00				-
	pH		8.23			8.15						8.07	
	oxygen		8.24			7.69						9.19	
	BOD5		1.18			1.77						0.25	
	oil products		-			0.01						0.01	
	phenol		-			-						-	
	synthetic surfactants		0.04			-						0.02	
2009 г.	NH4		-			0.07						0.08	
	NO2		0.01			0.07						0.04	
	NO3		2.03			2.44						2.37	
	phosphorus		0.02			0.10						0.04	
	iron		0.08			0.07						0.02	
	cooper		-			-						0.00	
	zinc		0.00			0.00						-	
	pH		7.89			8.38			8.03			8.27	
	oxygen		10.87			7.33			8.35			11.20	
	BOD5		2.80			3.60			2.47			1.31	
	oil products		0.01			-			0.01			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		0.01			0.01			0.01			0.01	
2008 г.	NH4		0.05			0.01			-			0.10	
	NO2		0.02			0.17			0.03			0.01	
	NO3		2.20			1.96			1.40			2.06	
	phosphorus		0.03			0.12			0.07			0.01	
	iron		0.06			0.03			0.54			0.54	
	cooper		-			-			-			0.00	
	zinc		0.00			-			-			0.00	
	pH		8.30			7.58			8.26			8.40	
	oxygen		11.38			8.53			8.62			10.72	
	BOD5		3.33			2.58			1.05			1.12	
	oil products		0.01			0.03			0.01			0.01	
	phenol		-			-			-			-	
	synthetic surfactants		0.02			0.03			0.01			0.09	
2007 г.	NH4		0.05			0.09			0.01			0.11	
	NO2		0.03			0.03			0.02			0.02	
	NO3		2.09			2.22			1.78			2.43	
	phosphorus		0.02			0.05			0.01			0.02	
	iron		0.03			0.26			0.06			0.06	
	cooper		-			0.00			0.00			-	
	zinc		0.03			0.00			-			-	
	pH		8.05			7.80			8.15			7.90	
	oxygen		12.34			8.73			9.19			12.26	
	BOD5		2.77			2.48			0.98			2.68	
	oil products												
	phenol		0.00			-			-			-	
	synthetic surfactants		0.02			0.04			0.08			-	
2006 г.	NH4		0.07			0.10			0.10			-	
	NO2		0.03			0.03			0.02			0.02	
	NO3		2.67			1.97			1.33			2.27	
	phosphorus		0.05			0.10			0.05			0.02	
	iron		0.07			0.09			1.66			0.06	
	cooper		0.00			0.00			-			0.00	
	zinc		0.00			0.01			0.00			0.00	

Maximum allowable concentrations (MAC)
for air

MAC	SO2	NO2	NO	HCOH	NH3
Q daily average (mg/m3)	0.050	0.04	0.06	0.003	0.04
Q maximum one-time (mg/m3)	0.500	0.085	0.40	0.035	0.20

Note: RD 52.04.186.89, Moscow, 1991
"Manual on Air Pollution Control"



気象観測所位置図

Кыргызстан

(1)

Air

Атмосферный воздух (1/2)

SO2 мг/м3 Jan Feb Критерии Mar Apr May Jun Jul Aug Sept Oct Nov Dec

Год	Max / Ave ~~Max/Min.~~ Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.012	0.011	0.014	0.013	0.013	0.020	0.010	0.010	0.014	0.006	0.004	0.002
	Average ~~Min.~~ Ср	0.003	0.002	0.003	0.004	0.003	0.003	0.002	0.003	0.002	0.002	0.002	0.002
2009	Max.	0.010	0.012	0.010	0.013	0.014	0.017	0.013	0.027	0.016	0.013	0.004	0.009
	Ave ~~Min.~~ Ср	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002
2008	Max.	–	–	0.012	0.016	0.032	0.017	0.020	0.013	0.012	0.012	0.012	0.013
	Ave ~~Min.~~ Ср	–	–	0.004	0.004	0.004	0.005	0.006	0.005	0.004	0.003	0.002	0.004
2007	Max.	0.019	0.010	0.013	0.013	0.014	0.023	0.014	0.021	0.017	0.024	0.019	–
	Ave ~~Min.~~ Ср	0.004	0.003	0.004	0.003	0.004	0.005	0.006	0.004	0.009	0.004	0.008	–
2006	Max.	0,016	0.010	0.031	0.013	0.023	0.031	0.024	0.027	0.033	0.035	0.013	0.016
	Ave ~~Min.~~ Средн.	0,006	0.004	0.005	0.004	0.004	0.006	0.006	0.007	0.010	0.006	0.003	0.005

NO Критерии

Год	~~Max/Min.~~ Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.66	0.46	0.57	0.46	0.44	0.34	0.47	0.45	0.32	0.33	0.47	0.45
	~~Min.~~ Ср	0.27	0.17	0.17	0.20	0.19	0.18	0.22	0.21	0.20	0.15	0.18	0.18
2009	Max.	0.67	0.48	0.39	0.41	0.32	0.35	0.37	0.41	0.39	0.44	0.47	0.55
	~~Min.~~ Ср	0.30	0.25	0.23	0.17	0.18	0.18	0.21	0,23	0.20	0.21	0.21	0.25
2008	Max.	–	–	0,36	0.39	0.50	0.57	0.40	0.38	0.44	0.52	1.28	0,73
	~~Min.~~ Ср	–	–	0.17	0.18	0.20	0.20	0.18	0.19	0.23	0.26	0.31	0.31
2007	Max.	0,59	0.46	0.26	0,48	0,26	0.36	0,37	0.37	0,36	0.42	0.29	–
	~~Min.~~ Ср	0.21	0.15	0.12	0.12	0.09	0.15	0.18	0.15	0.17	0.09	0.10	–
2006	Max.	0,63	0,46	0,40	0.46	0,48	0.38	0,48	0,43	0.54	0.48	0.46	0.56
	Min.	0,22	0,24	0.23	0.21	0.19	0.16	0.13	0.20	0.22	0.21	0.20	0.22

Air

Атмосферный воздух (2/2)

~~NH3~~ NO_2 Критерии

Год	Max/~~Min.~~ Ave ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.21	0.15	0.21	0.19	0.30	0.18	0.44	0.20	0.16	0.17	0.19	0.33
	Ave ~~Min.~~ ср	0.09	0.07	0.07	0.08	0.09	0.10	0.11	0.11	0.09	0.06	0.04	0.08
2009	Max.	0.25	0.16	0.18	0.14	0.14	0.24	0.27	0.57	0.29	0.22	0.13	0.22
	Ave ~~Min.~~ ср	0.12	0.09	0.11	0.07	0.08	0.09	0.12	0.13	0.10	0.09	0.06	0.08
2008	Max.	—	—	0.15	0.17	0.22	0.18	0.31	0.14	0.17	0.20	0.28	0.17
	Ave ~~Min.~~ ср	—	—	0.08	0.09	0.11	0.10	0.13	0.09	0.10	0.09	0.10	0.08
2007	Max.	0.27	0.14	0.13	0.30	0.11	0.27	0.22	0.25	0.15	0.12	0.14	
	Ave ~~Min.~~ ср	0.11	0.08	0.07	0.07	0.06	0.10	0.11	0.09	0.09	0.06	0.04	—
2006	Max.	0.23	0.22	0.21	0.16	0.19	0.25	0.13	0.16	0.14	0.18	0.20	0.21
	Ave ~~Min.~~ ср	0.10	0.09	0.08	0.10	0.09	0.07	0.07	0.08	0.07	0.06	0.09	0.10

HCOH Критерии

Год	Max/~~Min.~~ Ave ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.068	0.027	0.028	0.021	0.027	0.037	0.055	0.067	0.041	0.037	0.054	0.057
	Ave ~~Min.~~ ср	0.018	0.011	0.010	0.009	0.011	0.019	0.019	0.022	0.017	0.011	0.014	0.017
2009	Max.	0.065	0.046	0.036	0.036	0.044	0.049	0.040	0.049	0.057	0.048	0.061	0.038
	Ave ~~Min.~~ ср	0.017	0.012	0.015	0.010	0.020	0.019	0.017	0.015	0.023	0.017	0.014	0.014
2008	Max.	—	—	0.023	0.057	0.030	0.067	0.061	0.052	0.044	0.059	0.035	0.037
	Ave ~~Min.~~ ср.	—	—	0.010	0.012	0.016	0.027	0.032	0.030	0.022	0.019	0.011	0.012
2007	Max.	0.016	0.030	0.038	0.035	0.033	0.035	0.037	0.092	0.091	0.027	0.011	—
	Ave ~~Min.~~ ср	0.008	0.013	0.014	0.015	0.014	0.019	0.013	0.018	0.018	0.009	0.005	—
2006	Max.	0.032	0.027	0.037	0.063	0.037	0.082	0.033	0.044	0.059	0.050	0.039	0.037
	Ave ~~Min.~~ ср.	0.014	0.014	0.019	0.021	0.015	0.025	0.017	0.019	0.021	0.020	0.016	0.013

Атмосферный воздух (1/2)

(2)

SO2 мг/м3 mg/m³ Критерии

Год	Max/Min. ave	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.012	0.011	0.014	0.013	0.013	0.020	0.010	0.010	0.014	0.006	0.008	0.004
	Ave Min. ср	0.003	0.002	–	0.003	0.003	0.003	0.003	0.003	0.002	0.002	0.002	0.002
2009	Max.	0.009	0.009	0.010	–	–	0.010	0.013	0.018	0.017	0.016	0.004	0.009
	Ave Min. ср	0.003	0.003	0.003	–	–	0.001	0.003	0.003	0.003	0.002	0.002	0.002
2008	Max.	–	0.010	0.010	0.026	0.012	0.016	0.016	0.013	0.024	0.009	0.006	0.009
	Ave Min. ср	–	0.003	0.003	0.004	0.003	0.003	0.004	0.004	0.003	0.002	0.002	0.005
2007	Max.	0.009	0.007	0.011	0.013	0.010	0.013	0.015	0.023	0.011	0.020	–	0.013
	Ave Min. ср	0.003	0.003	0.004	0.003	0.003	0.003	0.004	0.006	0.004	0.005	–	0.005
2006	Max.	0.016	0.010	0.031	0.013	0.023	0.031	0.024	0.027	0.033	0.035	0.013	0.016
	Ave Min. ср	0.006	0.004	0.005	0.004	0.004	0.006	0.006	0.007	0.010	0.006	0.003	0.005

NO2 Критерии

Год	Max/Min. ave ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.13	0.09	–	0.13	0.11	0.07	0.15	0.12	0.07	0.12	0.09	0.07
	Ave Min. ср	0.04	0.04	–	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.04	0.03
2009	Max.	0.14	0.12	0.11	–	–	0.05	0.08	0.10	0.07	0.12	0.09	0.12
	Ave Min. ср	0.07	0.06	0.05	–	–	0.02	0.03	0.03	0.03	0.03	0.04	0.04
2008	Max.	–	0.10	0.09	0.06	0.10	0.09	0.13	0.09	0.09	0.08	0.11	0.13
	Ave Min. ср	–	0.06	0.04	0.02	0.04	0.03	0.04	0.04	0.03	0.04	0.05	0.08
2007	Max.	0.13	0.12	0.07	0.06	0.05	0.07	0.11	0.08	0.06	0.05	–	0.12
	Ave Min. ср	0.05	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	–	0.05
2006	Max.	0.18	0.13	0.11	0.10	0.12	0.10	0.08	0.08	0.08	0.08	–	0.14
	Ave Min. Ср.	0.05	0.04	0.03	0.03	0.04	0.02	0.02	0.02	0.02	0.03	–	0.06

Air

Атмосферный воздух (2/2)

NH3

Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.05	0.05	–	0.05	0.06	0.06	0.04	0.08	0.08	0.04	0.04	0.05
	Ave Min. Ср	0.01	0.01	–	0.01	0.02	0.01	0.01	0.03	0.02	0.01	0.01	0.01
2009	Max.	0.06	0.04	0.05	–	–	0.04	0.04	0.06	0.08	0.08	0.07	0.05
	Ave Min. Ср	0.02	0.02	0.02	–	–	0.02	0.02	0.02	0.02	0.02	0.02	0.01
2008	Max.	–	0.05	0.03	0.13	0.08	0.06	0.11	0.14	0.07	0.09	0.04	0.04
	Ave Min. Ср	–	<0.01	0.01	0.01	0.02	0.02	0.02	0.04	0.01	0.01	0.01	0.01
2007	Max.	0.09	0.05	0.05	0.07	0.21	0.21	0.10	0.07	0.07	0.21	–	0.10
	Ave Min. Ср	0.02	0.02	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	–	0.02
2006	Max.	0,16	0.07	0.08	0.09	0.12	0.07	0.12	0.14	0.04	0.04	–	0.07
	Ave Min. Ср.	0.02	0.03	0.02	0.02	0.02	0.02	0.05	0.02	0.01	0.01		0.02

HCOH – n/a

Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

Атмосферный воздух (1/2)

(3)

SO2 µg/m³ mg/m³ Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.009	0.031	0.011	0.012	0.012	0.015	0.031	0.013	0.010	0.006	0.007	0.012
	Ave Min. Ср	0.002	0.004	0.002	0004	0.002	0.003	0.003	0.003	0.002	0.001	0.001	0.001
2009	Max.	0.007	0.012	0.009	0.006	0.007	0.006	0.010	0.010	0.012	0.014	0.012	0.012
	Ave Min. Ср	0.002	0.002	0.003	0.002	0.002	0.001	0.002	0.001	0.003	0.002	0.002	0.002
2008	Max.	0.006	0.008	0.008	0.049	0.013	0.016	0.014	0.016	0.009	0.007	0.006	0.009
	Ave Min. Ср	0.002	0.003	0.002	0.004	0.003	0.001	0.003	0.003	0.003	0.002	0.002	0.002
2007	Max.	0.007	0.009	0.011	0.018	0.010	0.007	0.010	0.019	0.015	0.012	0.014	0.009
	Ave Min. Ср	0.002	0.003	0.003	0.003	0.004	0.003	0.003	0.005	0.002	0.005	0.005	0.004
2006	Max.	0.013	0.008	0.016	0.014	0.017	0.032	0.021	0.012	0.019	0.011	0.009	0.013
	Ave Min. Ср	0.004	0.004	0.005	0.003	0.005	0.006	0.004	0.002	0.004	0.002	0.003	0.003

NO Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.10	0.06	0.09	0.09	0.06	0.06	0.04	0.15	0.11	0.08	0.13	0.11
	Ave Min. Ср	0.03	0.03	0.03	0.04	0.02	0.02	0.01	0.04	0.04	0.04	0.05	0.03
2009	Max.	0.11	0.08	0.11	0.07	0.08	0.07	0.07	0.11	0.11	0.09	0.11	0.08
	Ave Min. Ср	0.05	0.04	0.04	0.02	0.02	0.02	0.02	0.03	0.04	0.04	0.04	0.03
2008	Max.	0.11	0.08	0.11	0.07	0.13	0.08	0.08	0.06	0.09	0.11	0.14	0.09
	Ave Min. Ср	0.04	0.03	0.04	0.03	0.03	0.02	0.02	0.02	0.03	0.05	0.05	0.04
2007	Max.	0.20	0.13	0.10	0.08	0.08	0.10	0.07	0.13	0.10	0.09	0.08	0.06
	Ave Min. Ср	0.06	0.04	0.03	0.02	0.02	0.03	0.02	0.03	0.05	0.04	0.04	0.03
2006	Max.	0.06	0.07	0.11	0.08	0.11	0.08	0.21	0.16	0.10	0.08	0.11	0.15
	Ave Min. Ср	0.02	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.06

Ave

Атмосферный воздух (2/2)

~~NH3~~ NO2 Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.08	0.07	0.09	0.10	0.05	0.06	0.05	0.11	0.09	0.07	0.09	0.08
	Ave Min. Ср	0.03	0.03	0.03	0.05	0.02	0.03	0.02	0.03	0.05	0.03	0.03	0.02
2009	Max.	0.12	0.08	0.07	0.07	0.09	0.05	0.08	0.08	0.09	0.08	0.06	0.07
	Ave Min. Ср	0.05	0.04	0.04	0.03	0.03	0.02	0.03	0.03	0.04	0.03	0.03	0.02
2008	Max.	0.10	0.09	0.07	0.06	0.09	0.07	0.07	0.07	0.05	0.06	0.07	0.07
	Ave Min. Средн	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03
2007	Max.	0.14	0.12	0.06	0.07	0.06	0.09	0.06	0.08	0.09	0.07	0.07	0.07
	Ave Min. Ср	0.05	0.04	0.03	0.02	0.02	0.03	0.02	0.03	0.04	0.03	0.03	0.03
2006	Max.	0.06	0.07	0.09	0.09	0.13	0.10	0.07	0.07	0.08	0.08	0.08	0.14
	Ave Min. Ср	0.02	0.03	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.05

HCOH - n/a Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

air

Атмосферный воздух (1/2)

(4)

SO2 мг/м³ mg/m³ Критерии

Год	Max./Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.009	0.006	—	0.036	0.006	0.033	0.011	0.012	0.008	0.006	0.005	0.004
	Ave Min. Ср	0.002	0.001	—	0.002	0.002	0.003	0.001	0.003	0.002	0.002	0.002	0.001
2009	Max.	0.012	0.012	0.010	0.006	0.012	0.010	0.017	0.039	0.009	0.017	0.007	0.006
	Ave Min. ср	0.003	0.003	0.003	0.002	0.002	0.001	0.003	0.003	0.001	0.003	0.001	0.001
2008	Max.	0.009	0.009	0.023	0.024	0.020	0.020	0.023	0.024	0.012	0.010	0.007	0.009
	Ave Min. Ср	0.002	0.003	0.003	0.004	0.004	0.003	0.006	0.004	0.003	0.003	0.002	0.003
2007	Max.	0.018	0.009	0.014	0.019	0.020	0.012	0.015	0.021	0.021	0.013	0.028	0.046
	Ave Min. Ср	0.002	0.003	0.004	0.005	0.004	0.004	0.006	0.006	0.005	0.006	0.009	0.005
2006	Max.	0.060	0.010	0.028	0.014	0.020	0.037	0.027	0.014	0.021	0.021	0.011	0.012
	Ave Min. Ср	0.008	0.004	0.007	0.004	0.005	0.008	0.006	0.005	0.006	0.005	0.003	0.003

NO2 Критерии

Год	Max./Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.28	0.18	—	0.25	0.16	0.12	0.28	0.19	0.15	0.19	0.16	0.17
	Ave Min. Ср	0.11	0.10	—	0.11	0.09	0.07	0.09	0.09	0.08	0.08	0.08	0.08
2009	Max.	0.25	0.18	0.22	0.17	0.19	0.15	0.20	0.16	0.18	0.15	0.12	0.09
	Ave Min. Ср	0.12	0.10	0.10	0.07	0.08	0.08	0.09	0.08	0.08	0.06	0.07	0.06
2008	Max.	0.16	0.19	0.16	0.15	0.17	0.18	0.18	0.16	0.16	0.14	0.15	0.19
	Ave Min. Ср	0.10	0.10	0.08	0.08	0.09	0.09	0.10	0.09	0.08	0.08	0.09	0.09
2007	Max.	0.23	0.15	0.16	0.13	0.11	0.18	0.20	0.19	0.13	0.12	0.14	0.16
	Ave Min. Ср	0.12	0.07	0.08	0.06	0.05	0.07	0.09	0.08	0.08	0.06	0.06	0.08
2006	Max.	0.28	0.21	0.24	0.19	0.27	0.16	0.13	0.17	0.18	0.19	0.18	0.23
	Ave Min. Ср	0.13	0.10	0.08	0.11	0.09	0.06	0.06	0.07	0.08	0.08	0.10	0.12

Атмосферный воздух (2/2)

NH3 - mg/m3/m3 Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

HCOH Критерии

Год	Max/Min. Ave ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.059	0.030	—	0.033	0.053	0.042	0.069	0.077	0.065	0.044	0.050	0.068
	Ave Min. ср	0.020	0.015	—	0.015	0.017	0.030	0.025	0.033	0.028	0.022	0.028	0.023
2009	Max.	0.042	0.028	0.043	0.042	0.039	0.049	0.048	0.053	0.062	0.050	0.039	0.042
	Ave Min. ср	0.019	0.014	0.017	0.016	0.025	0.024	0.021	0.023	0.027	0.023	0.017	0.020
2008	Max.	0.055	0.017	0.024	0.026	0.044	0.054	0.082	0.070	0.072	0.075	0.039	0.039
	Ave Min. ср	0.015	0.006	0.010	0.012	0.016	0.026	0.038	0.032	0.030	0.028	0.015	0.019
2007	Max.	0.023	0.027	0.036	0.033	0.044	0.047	0.037	0.075	0.069	0.023	0.018	0.026
	Ave Min. ср	0.010	0.013	0.016	0.013	0.018	0.015	0.014	0.016	0.011	0.008	0.006	0.011
2006	Max.	0.044	0.034	0.032	0.041	0.053	0.105	0.060	0.041	0.044	0.072	0.039	0.040
	Ave Min. ср	0.014	0.013	0.015	0.020	0.018	0.028	0.019	0.020	0.020	0.022	0.017	0.015

Атмосферный воздух (1/2)

(5)

SO2 mg/m³ мг/м3 Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.007	0.009	0.029	0.009	0.010	0.007	0.005	0.010	0.010	0.004	0.004	0.006
	Ave Min. Ср	0.002	0.001	0.002	0.001	0.003	0.001	0.001	0.002	0.002	0.001	0.001	0.001
2009	Max.	0.009	0.006	0.012	0.006	0.013	0.021	0.013	0.011	0.010	0.010	0.009	0.006
	Ave Min. Ср	0.003	0.001	0.003	0.001	0.002	0.002	0.002	0.001	0.001	0.002	0.002	0.001
2008	Max.	0.011	0.013	0.010	0.032	0.025	0.009	0.016	0.014	0.028	0.021	0.008	0.009
	Ave Min. Ср.	0.004	0.003	0.002	0.005	0.004	0.002	0.001	0.004	0.003	0.003	0.002	0.002
2007	Max.	0.009	0.012	0.012	0.049	0.017	0.012	0.020	0.021	0.009	0.012	0.012	0.010
	Ave Min. Ср	0.002	0.002	0.003	0.003	0.004	0.003	0.006	0.005	0.001	0.004	0.004	0.003
2006	Max.	–	–	–	–	0.027	0.027	0.013	0.024	0.013	0.009	0.013	0.013
	Ave Min. Ср	–	–	–	–	0.004	0.005	0.003	0.002	0.003	0.003	0.003	0.003

NO2 Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.09	0.10	0.11	0.10	0.11	0.04	0.06	0.05	0.06	0.07	0.06	0.08
	Ave Min. Ср	0.03	0.02	0.03	0.05	0.04	0.01	0.01	0.01	0.02	0.02	0.02	0.04
2009	Max.	0.09	0.07	0.14	0.12	0.06	0.09	0.07	0.06	0.08	0.11	0.07	0.09
	Ave Min. Ср	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.02	0.03	0.03	0.03
2008	Max.	0.12	0.15	0.09	0.10	0.09	0.08	0.12	0.07	0.05	0.10	0.11	0.07
	Ave Min. Ср.	0.04	0.04	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.04	0.04	0.02
2007	Max.	0.13	0.08	0.07	0.07	0.06	0.06	0.10	0.05	0.06	0.10	0.04	0.11
	Ave Min. Ср	0.05	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.03
2006	Max.	–	–	–	–	0.15	0.15	0.07	0.06	0.09	0.08	0.09	0.12
	Ave Min. Ср	–	–	–	–	0,04	0.03	0.02	0.02	0.02	0.02	0.03	0.05

Атмосферный воздух (2/2)

NH3 - n/a Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

HCOH - n/a Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

Air

Атмосферный воздух (1/2)

(6)

SO2 mg/m³ Критерии

Год	Max/Min. Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.012	0.012	0.049	0.011	0.014	0.016	0.036	—	0.013	0.012	0.011	0.013
	Ave Min. Ср	0.003	0.002	0.003	0.003	0.004	0.002	0.003	—	0.002	0.003	0.002	0.002
2009	Max.	0.007	0.009	0.016	0.008	0.008	0.013	0.032	0.019	0.012	0.013	0.012	0.012
	Ave Min. Ср	0.003	0.002	0.003	0.002	0.001	0.001	0.002	0.003	0.002	0.002	0.003	0.002
2008	Max.	0.008	0.009	0.094	0.012	0.022	0.016	0.021	—	0.016	0.010	0.006	0.011
	Ave Min. Ср.	0.003	0.003	0.005	0.003	0.004	0.003	0.004	—	0.003	0.003	0.002	0.003
2007	Max.	0.009	0.012	0.013	0.013	0.011	0.019	0.014	0.015	0.011	0.013	0,033	0.033
	Ave Min. Ср	0.002	0.002	0.004	0.004	0.003	0.004	0.005	0.004	0.003	0.005	0.005	0.004
2006	Max.	0.014	0.015	0.013	0.009	0.012	—	—	0.019	0.016	0.017	—	0.009
	Ave Min. Ср	0.004	0.004	0.006	0.004	0.003	—	—	0.004	0.004	0.003	—	0.003

NO2 Критерии

Год	Max/Min. Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.29	0.18	0.27	0.26	0.22	0.12	0.25	—	0.19	0.24	0.16	0.18
	Ave Min. Ср	0.08	0.07	0.06	0.04	0.04	0.06	0.08	—	0.06	0.04	0.05	0.08
2009	Max.	0.24	0.20	0.12	0.15	0.12	0.14	0.18	0.20	0.22	0.12	0.12	0.22
	Ave Min. Ср	0.10	0.07	0.06	0.05	0.04	0.06	0.08	0.07	0.06	0.05	0.05	0.07
2008	Max.	0.14	0.18	0.18	0.17	0.19	0.14	0.20	—	0.14	0.14	0.19	0.25
	Ave Min. Ср	0.08	0.08	0.04	0.05	0.06	0.06	0.07	—	0.07	0.06	0.04	0.03
2007	Max.	0.21	0.12	0.17	0.09	0.08	0.13	0.23	0.15	0.13	0.10	0.15	0.17
	Ave Min. Ср	0.09	0.06	0.05	0.03	0.03	0.05	0.07	0.05	0.05	0.05	0 05	0.04
2006	Max.	0.16	0.19	0.17	0.09	0.10	—	—	0.10	0.11	0.10	—	0.18
	Ave Min. Ср	0.06	0.06	0.05	0.04	0.04	—	—	0.03	0.04	0.05	—	0.04

Атмосферный воздух (2/2)

NH3 Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0,08	0.05	0.05	0.06	0.10	0.07	0.06	—	0.09	0.06	0.06	0.05
	Ave Min. Ср	0.02	0.02	0.02	0.02	0,03	0.02	0.01	—	0.03	0.02	0.02	0.02
2009	Max.	0.06	0.06	0.06	0.11	—	0.07	0.06	0.07	0.08	0.12	0.09	0.10
	Ave Min. Ср	0.03	0.03	0.03	0.03	—	0,09	0.02	0.02	0.02	0.03	0.02	0.03
2008	Max.	0.06	0.07	0.07	0.09	0.09	0.08	0,14	—	0.09	0.08	0.06	0.08
	Ave Min. Ср	0.02	0.02	0.02	0.02	0.03	0.03	0.04	—	0.02	0.02	0.02	0.03
2007	Max.	0.10	0.09	0.07	0.07	0.09	0.29	0.14	0.08	0.07	0.10	0.08	0.08
	Ave Min. Ср	0.02	0.02	0.03	0.02	0.03	0.06	0.03	0.03	0.03	0.03	0.02	0.02
2006	Max.	0.10	0.12	0.14	0.11	0.20	—	—	0.07	0.08	0.10	—	0.06
	Ave Min. Ср	0.04	0.05	0.05	0.06	0.06	—	—	0.02	0.02	0.02	—	0.02

HCOH - н/а Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

Атмосферный воздух (1/2)

(7)

SO2 мг/м³ mg/m³ Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.009	0.042	0.007	0.013	0.010	0.012	0.019	0.010	0.011	0.010	0.009	0.005
	Ave Min. Ср	0.002	0.002	0.001	0.003	0.003	0.002	0.002	0.003	0.001	0.002	0.002	0.003
2009	Max.	0.012	0.011	0.008	0.006	0.010	0.009	0.013	0.014	0.011	0.005	0.018	0.009
	Ave Min. Ср	0.003	0.002	0.002	0.002	0.002	0.001	002	0.002	0.002	0.002	0.003	0.002
2008	Max.	0.042	0.009	0.048	0.017	0.016	0.010	0.014	0.013	0.011	0.012	0.009	0.009
	Ave Min. Ср	0.003	0.002	0.004	0.005	0.003	0.004	0.003	0.003	0.003	0.002	0.002	0.003
2007	Max.	0.012	0.008	0.010	0.010	0.010	0.017	0.015	0.017	0.022	0.034	0.043	0.017
	Ave Min. Ср	0.003	0.003	0.004	0.004	0.003	0.004	0.006	0.005	0.006	0.004	0.004	0.006
2006	Max.	0.013	0.009	0.013	0.010	0.020	0.032	0.023	0.017	0.014	0.016	0.009	—
	Ave Min. Ср	0.005	0.004	0.003	0.003	0.004	0.006	0.004	0.004	0.003	0.004	0.004	—

NO2 Критерии

Год	Max/Min. Ave Ср	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.	0.17	0.17	0.11	0.49	0.34	0.24	0.17	0.18	0.13	0.13	0.10	0.11
	Ave Min. Ср	0.06	0.07	0.05	0.07	0.09	0.07	0.09	0.08	0.07	0.07	0.05	0.06
2009	Max.	0.20	0.14	0.16	0.17	0.17	0.22	0.18	0.14	0.16	0.18	0.24	0.05
	Ave Min. Ср	0.09	0.08	0.08	0.07	0.07	0.09	0.08	0.08	0.07	0.05	0.05	0.05
2008	Max.	0.12	0.19	0.12	0.16	0.19	0.21	0.19	0.17	0.18	0.18	0.13	0.23
	Ave Min. Ср.	0.06	0.07	0.04	0.07	0.08	0.10	0.10	0.09	0.09	0.04	0.07	0.06
2007	Max.	0.49	0.12	0.14	0.10	0.12	0.18	0.21	0.18	0.17	0.14	0.12	0.19
	Ave Min. Ср	0.11	0.07	0.06	0.05	0.05	0.07	0.09	0.08	0.07	0.05	0.05	0.07
2006	Max.	0.19	0.11	0.14	0.17	0.16	0.57	0.21	0.16	0.23	0.19	0.18	—
	Ave Min. Ср	0.06	0.05	0.06	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.10	—

Air

Атмосферный воздух (2/2)

NH3 - n/a

Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

HCOH - n/a

Критерии

Год	Max/Min.	Январь	Февраль	Март	Апрель	Май	Июнь	Июль	Август	Сентябрь	Октябрь	Ноябрь	Декабрь
2010	Max.												
	Min.												
2009	Max.												
	Min.												
2008	Max.												
	Min.												
2007	Max.												
	Min.												
2006	Max.												
	Min.												

５．事業事前評価表

事業事前評価表（開発計画調査型技術協力）

作成日：平成 23 年 3 月 29 日

担当部署：経済基盤開発部都市・地域開発第一課

１．案件名
和文名称：ビシュケク市交通改善計画調査 英文名称：The Study on Improvement of Urban Transportation in Bishkek City
２．協力概要
（１）事業の目的 ① 2023 年を目標年次としたビシュケク市の簡易都市交通マスタープラン（M/P）[1]を策定する。 ② ビシュケク市における都市交通に係る実施体制強化及び能力向上を目的とする技術移転業務を実施する。 （２）調査期間 2011 年 6 月-2013 年 5 月（24 カ月） （３）総調査費用 2.4 億円 （４）協力相手先機関 ビシュケク市 （５）計画の対象（対象分野、対象規模等） 現在のビシュケク市の市域（167km^2）
３．協力の必要性・位置付け
（１）現状及び問題点 キルギスは中央アジアの北東部に位置し、20 万 km^2 の国土に 521 万の人口を有し、西はウズベキスタン、北はカザフスタン、南はタジキスタン及び中国と隣接する内陸国である。道路交通は、貨物及び旅客ともに 9 割以上のシェアを占める交通手段となっており、中央アジア地域ひいては南西アジア地域を結ぶ域内の重要な交通手段のみならず、地域住民の生活道路として重要な機能を果たしている。 同国の首都ビシュケク市は、約 125 万人の人口を擁しており、自動車の登録台数は 15 万台を越えている。市内の道路計画は 8～9 万台規模の交通量を想定して設計されており、現時点の交通量はほぼ倍増している。また、ソ連時代に導入された道路管制システムも残存するが老朽化しているため、既存信号機の適切な運用ができていないばかりか、現在の交通量、交通流動に対応可能な信号機は整備されていない。このような状況の中、現在、ビシュケク市では交通渋滞、交通事故の頻発(2010 年 1 月-11 月までの交通事故件数 3,767 件)、車の排気ガスによる大気汚染等が市街中心部を中心に深刻化している。 ビシュケク市内の公共交通は、トロリーバス、中型バス、ミニバス等があり、ビシュケク市は「Renovated Capital Program of Bishkek Development」を策定して、厳しい財政

[1] 本プロジェクトでは、対象分野を「公共交通計画」・「交通管制システム改善計画」・「交通流改善計画」に限定し、かつ目標年次を 10 年後として早急に対応が必要な課題へ取り組むこととする。(他のプロジェクトでは、道路計画や土地利用計画の見直しも M/P に含めて、かつ 20 年後を目標年次とするのが一般的)。このため、本プロジェクトにて提案する M/P の名称を「簡易都市交通 M/P」とする。なお、本プロジェクトでは M/P の策定に留まり、Feasibility Study(F/S)の実施はコンポーネントに含まれていない。

状況の中、一部の中型バスやトロリーバスの導入・更新等を実施している。また、中国が2008 年から中型バスの無償供与を開始している他、欧州復興開発銀行(EBRD)も「Bishkek Public Transportation Project」にてトロリーバスの供与及び、運行体制の強化を計画している等、他ドナーもビシュケク市の都市交通に対する支援を行っている。

しかしながら、ビシュケク市では1970 年代以降現在に至るまで交通量調査、交通需要予測調査等を実施してこなかったため、技術的な根拠データに基づいた長期的な交通計画が策定されておらず、このため当該分野への取り組みに係る優先順位付けがされていない。他方、増加を続けるビシュケク市の人口・車両保有台数を踏まえると、ビシュケク市の公共交通機関、道路網の双方ともに将来の交通需要に対応できないことは明らかである。これに対し、ビシュケク市は、将来の交通需要増大に対応できる都市交通 M/P を策定し、同M/P に基づいたハード・ソフト施策の優先順位付けを行った後、具体的な対策に早急に着手するという問題解決のプロセスの必要性・重要性を認識し、わが国に対し M/P の作成含む協力にかかる要請がなされるに至った。

（２）相手国政府国家政策上の位置づけ

ビシュケク市では、2025 年を目標年次とした都市計画である“Renovated Capital Program of Bishkek Development”を策定しており、本プロジェクトにて策定する簡易都市交通 M/P は同計画の下に位置づくものである。

（３）他国機関の関連事業との整合性

（ア）欧州復興開発銀行（EBRD）

EBRD の“Public Transport Project”では、公共交通の中でも特にトロリーバス支援を主要なコンポーネントとして、トロリーバスの供与、バスの乗客へのインタビュー調査、市政府とバス会社の契約形態の見直し等を実施予定。EBRD は JICA との連携策として、①交通量調査の結果の共有、②EBRD のトロリーバスの供与計画を簡易都市交通 M/P に反映することを検討している。

（イ）中国

中国は 2011 年よりビシュケク市南部の幹線道路 40km（Abdramkhmanov St.）整備を Loan（優遇借款）により支援予定であり、同事業についても JICA の簡易都市交通 M/P への反映が必要となる。また、ビシュケク市に対しては、中国がこれまでに 161 台の中型バスを供与済みであり、新たに中型バスの供与を計画する場合は、同様に簡易都市交通 M/P への反映が必要となることから、詳細計画策定調査時に情報共有を実施済みである。

（ウ）世界銀行(WB)

世界銀行はノボストロイカ（新興開発地区）の基礎インフラ整備支援のため、①47 地区中 7 地区で道路整備事業（アスファルト舗装、路面表示、標識の設置等）の実施、②38 地区にて住民生活向上事業（ごみ収集車の購入、公園整備、歩道整備）の実施、③各種申請事務の合理化（電子ドキュメントの開発等）である。本プロジェクトの交通量調査において

はノボストロイカを調査の対象範囲に取り込んでおり、また社会実験では市域の中心部を対象とするため、世界銀行プロジェクトとの調整は実施済みである。

(エ)国連開発計画(UNDP)

国連開発計画では、環境という観点からビシュケク市の都市問題に対応するプロジェクトを検討しており、同プロジェクトは①土地利用と公共交通を統合した開発計画戦略の策定、②公共交通の効率化に係るパイロット事業の実施、③持続可能な能力向上（法的枠組の策定、モニタリング等）の３分野からなる。詳細な事業計画は検討中の段階であるため、特に②については、本プロジェクトと対象事業・対象地域が調整できるよう、今後情報共有を継続する必要がある。

（４）わが国援助政策との関連、JICA 国別事業実施計画上の位置づけ

キルギスの国別援助計画では「経済成長のための基盤整備」が援助重点分野として掲げられており、その中で運輸インフラの整備を最優先課題としている。また、JICA では「運輸セクター技術能力向上プログラム」を策定して、当該分野における技術能力向上に資する協力を進めているため、本計画はわが国の援助方針にも合致している。

４．協力の枠組み

（１）調査項目

1）ビシュケク市の概要把握

（ア）ビシュケク市の都市計画M/Pの概要把握

（イ）都市交通に関係する法制度、規則の確認

（ウ）都市の社会経済状況、自然状況、土地利用現況の確認

（エ）関連する他ドナーのプロジェクト確認

2）交通量調査の実施

（ア）交通量調査の計画立案

（イ）交通量調査の実施

（ウ）交通量調査結果の解析・チェック

3）社会実験[2]の実施

（ア）取り組むべき交通計画上の課題の共有

（イ）対象施策についての関係機関の合意形成及び役割分担の整理

（ウ）社会実験に関する実施計画の策定及び必要な許認可の手続き

（エ）社会実験の実施及びモニタリング

（オ）社会実験の評価及び結果・教訓の整理

4）ビシュケク市の簡易都市交通M/P（目標年次：2023年）の策定

（ア）将来交通需要予測

（イ）ビシュケク市の交通計画上の課題抽出

（ウ）簡易都市交通M/Pの基本方針策定

[2] 社会実験とは、新たな制度や技術などの施策を導入する際、場所と期間を限定して試行するパイロット事業のことであり、その施策の有効性を検証したり問題を把握し、その施策の本格導入を判断するための材料とするもの。具体的には、バス停留所の設置、朝夕の交通量に応じた信号現示の調整やCCTV カメラの設置、レーンマーキング等を想定しているが、本格調査団がC/P 機関との協議を通じて決定する予定。

（エ）公共交通整備計画[3]の策定

（オ）交通管制システム改善計画[4]の策定

（カ）交通流改善計画[5]の策定

（キ）簡易都市交通M/Pで提案する各計画に係る環境社会配慮の実施(IEEレベル)

5）技術移転

（ア）各関係機関に対する交通量調査等に係る講義・OJTの実施

（イ）データベースの整備

（ウ）国別研修の実施

（２）アウトプット（成果）

① 2023 年を目標年次としたビシュケク市の簡易都市交通 M/P が策定される。

② 本プロジェクトによる技術移転を通じて、ビシュケク市における都市交通政策実施に係る能力が強化される。

（３）インプット（投入）：以下の投入による調査の実施

（ａ）コンサルタント（分野／人数）10 名　約 47M/M

① 総括/総合交通計画
② 都市計画/土地利用計画
③ 公共交通計画
④ 交通管制システム改善計画
⑤ 交差点改良計画
⑥ 交通量調査・解析
⑦ 環境社会配慮
⑧ 研修計画/キャパシティ・ディベロップメント
⑨ GIS
⑩ 業務調整/交通量調査・解析補助

（ｂ）その他

研修員受入れ

５．協力終了後に達成が期待される目標

（１）提案計画の活用目標

①簡易都市交通 M/P がビシュケク市により正式に採用される。

②本調査にて技術移転された C/P が社会実験で得た知見に基づき、適切な交通計画を計画立案及び継続実施できるようになる。

（２）活用による達成目標

ビシュケク市や他ドナーの支援により、簡易都市交通 M/P にて提案されるプロジェクトが事業化される。

６．外部要因

（１）協力相手国内の事情

政策的要因：キルギス側の都市計画及び都市交通にかかる政策が変化しない。

行政的要因：組織再編等により関係部局の所掌業務・人員体制・予算等が大きく変化しない。

経済的要因：経済状況の変化により提案事業実現に必要な財源が不足しない。

[3] 効率的な公共交通の路線網の提案や、必要に応じて、公共交通インフラ（バスの停留所等）の設置等の提案を想定。
[4] ビシュケク市における効率的な交通流動に資するための信号制御システムの提案、及びその運用方法に係る提提案を想定。
[5] レーンマーキング等ボトルネック解消施策のための施策提案を想定。

社会的要因：ビシュケク市周辺地域で深刻な政情不安が発生しない。

（２）関連プロジェクトの遅れ
特になし。

７．貧困・ジェンダー・環境等への配慮（注）

① 環境カテゴリ B
② カテゴリ分類の根拠
本事業は、「国際協力機構環境社会配慮ガイドライン」（2004 年 4 月制定）上、セクター特性、事業特性及び地域特性にかんがみて、環境への望ましくない影響が重大でないと判断されるため。
③ 環境許認可
キルギスの「環境保護法」(1999 年 6 月施行)は 12 項 59 条で構成され、環境保護、自然利用、経済活動に対する環境要求（EIA 含む）について規定している。M/P 段階における EIA の実施は不要だが、社会実験のうち交差点改良やバス停留所設置等については、必要に応じて本格調査の中で検討を行う。
④ 汚染対策
新しく公共交通の路線が計画される地区において騒音の影響が想定されるため、必要に応じて本格調査の中で検討を行う。
⑤ 自然環境面
事業対象地域は国立公園等の影響を受けやすい地域またはその周辺に該当せず、自然環境への望ましくない影響は最小限であると想定される。
⑥ 社会環境面
本プロジェクトは用地取得及び住民移転を伴わないものの、交通流改善計画にて提案される交差点改良事業では、植樹帯を一部撤去する可能性もあるため、必要に応じて本格調査の中で検討を行う。
⑦ その他・モニタリング
影響が懸念される項目については、ビシュケク市がモニタリングを行う。

８．過去の類似案件からの教訓の活用（注）

本プロジェクトの類似案件としては、「イスタンブール都市交通マスタープラン調査」（2007-2009 年）や「カンボジア国　プノンペン市都市交通改善プロジェクト」(2007-2009 年）がある。これらの案件から得られる教訓としては、①関係機関による横断的な協力体制構築の必要性、②マスタープランを先方の公的な計画等の一部として承認する重要性、③社会実験の実施に係る許認可等手続きの確認の重要性等が挙げられる。

これらの教訓を踏まえた本プロジェクトにおける対応は以下のとおり。

①Steering Committee 及び Working Group 等、関係機関の情報共有のための枠組みの構築、②詳細計画策定調査にて先方と合意した Minutes of Meeting にて、簡易都市交通 M/P が正式に承認されるために必要な手続きをビシュケク市が行う旨を確認、③社会実験の許認可に係る手続きを詳細計画策定調査にて確認・整理済み。

９．今後の評価計画

（１）事後評価に用いる指標
（ａ）活用の進捗度
① ビシュケク市により簡易都市交通 M/P が正式に承認される。
② 本プロジェクトにて技術移転された C/P が社会実験で得た知見に基づき、適切な交通計画を計画立案及び継続実施できるようになる。

（ｂ）活用による達成目標の指標
① ビシュケク市関係部局にて簡易都市交通 M/P に基づいて具体的な計画の事業化が検討される。
② プロジェクト終了後、本プロジェクトの C/P が交通量データベース、都市交通計画

を構築する。

（２）上記（ａ）及び（ｂ）を評価する方法及び時期
・必要に応じ、フォローアップ調査によるモニタリングを実施。
・必要に応じ、事後評価を実施。

（注）調査にあたっての配慮事項

収集リスト（■収集資料／専門家作成資料）

		プロジェクトID		調査団番号	
地域	中央アジア	調査団名又は 専門家氏名	ビシュケク市都市交通改善計画 詳細計画策定調査	調査の種類又は指導科目	詳細計画策定調査
国名	キルギス共和国	配属機関名		現地調査期間又は派遣期間	2011年2月12日～2011年3月11日

番号	資料の名称	形態（図書、ﾋﾞﾃﾞｵ、 地図、写真等）	収集資料	専門家 作成資料	JICA 作成資料	ﾃｷｽﾄ	発行機関
S-1	Population and Housing Census of the Kyrgyz Republic of 2009, Population of Kyrgyzstan, Book II (Part 1), Bishkek-2010	図書A4版 406頁（英語）	＊				National Stastical Committee of the Kyrgyz Republic
S-2	Population and Housing Census of the Kyrgyz Republic of 2009, Book III (in tables), Regions of Kyrbyzstan, Bishkek City, Bishkek-2010	図書A4版 188頁（英語）	＊				National Stastical Committee of the Kyrgyz Republic
S-3	Socio-Economic Situation of the Kyrgyz Republic 2010	図書A4版 196頁（露語）	＊				National Stastical Committee of the Kyrgyz Republic
S-4	Annual Statistical Data of the Kyrgyz Republic 2010	図書A4版 430頁（露語）	＊				National Stastical Committee of the Kyrgyz Republic
S-5	Criminal Codex of the Kyrgyz Republic	図書A5版 168頁（露語）	＊				Presidential Administration of the Kyrgyz Republic
S-6	Improvement of Traffic Management on the Road Network of Bishkek City, Bishkek 2010	図書A5版 22頁（露語）	＊				National Academy of the Kyrgyz Republic Institute of Mechanicla Engineering
S-7							
S-8							
S-9							
S-10							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