

FRAMEWORK FINANCING AGREEMENT
(ARM: Sustainable Urban Development Investment Program)

Parties This Framework Financing Agreement ("FFA") dated 24 March 2011 is between the Republic of Armenia ("Armenia") and Asian Development Bank ("ADB").

MFF Investment Program Armenia has interest in improving urban infrastructures and services in urban areas of Armenia. An investment program has been prepared for the sector over the period of next 15 years. ADB and Government contributions are expected to amount to \$515 million between 2011 and 2020. A similar contribution to the sector is expected to come from other financiers including private sector.

The investment program will improve access to efficient, reliable, and sustainable urban infrastructures and services for about 2 million urban residents in Armenia. It will provide targeted assistance to towns and urban areas, urban operators and services providers focusing on financial, managerial, and technical performance.

The investment program will comprise the following parts:

Component I: Urban Infrastructure

1. Road construction and improvement including traffic management
2. Public transport network rehabilitation and extension
3. Multimodal facilities including interregional transport services
4. Urban infrastructures necessary to sustain economic development and tourism (economic, energy, information technology...)

Component II: Institutional Strengthening

Component III: Program Management and Capacity Building including engineering, capacity development and construction supervision and project management

Multi-Tranche Financing Facility The Multitranche Financing Facility (the Facility or MFF) is intended to finance projects under the investment program, provided that such projects comply with the criteria set out in Schedule 4 hereto and that understandings set out in this FFA are complied with.

The projects under the facility may include but not limited to: (i) construction, upgrading, and rehabilitation of urban infrastructures such as roads, bridges, public transport, multimodal facilities, interregional transport services, traffic management and parking; urban infrastructure and other generic urban development improvement which can stimulate economic development and tourism (ii) policy and institutional support to implement urban development plan and stimulate private sector involvement, and (iv) institutional support to implement efficient, reliable urban infrastructures and services, sustainable financing mechanism for investment and operation, improved financial management and revenue mobilization, and developing efficient accountable service providers.

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. At its sole discretion, exercised reasonably, ADB has the right

to deny any financing request made by Armenia, cancel the uncommitted portion of the Facility, and withdraw Armenia's right to request any financing tranche under the Facility. Financing tranches may be made available by ADB provided matters continue to be in accordance with the general understandings and expectations on which the Facility is based and which are laid out in this FFA.

This FFA does not constitute a legal obligation on the part of Armenia to request any financing. Armenia has the right not to request any financing under the Facility. Armenia also has the right at any time to cancel any uncommitted portion of the Facility. Armenia and ADB may exercise their respective rights to cancel the Facility or any committed portion thereof, and ADB may exercise its right to refuse a financing request, by giving written notice to such effect to the other parties. The written notice will provide an explanation for the cancellation or refusal and, in the case of a cancellation, specify the date on which the cancellation takes effect.

This FFA will enter into force upon notice from Armenia to ADB on the fulfillment of intergovernmental procedures for entering into force in accordance with Armenia's applicable legislation, but not later than effectiveness of the loan agreement for tranche 1 project.

Financing Plan The tentative financing plan for the investment program is summarized below.

Financing Source	Total (\$million)	Share (%) of Total
Asian Development Bank	400.00	42
Government	115.00	12
Other financiers ^a	445.00	46
Total	960.00	100.00

^aIncluding donors, development partners and private sector
Source: Asian Development Bank estimates.

Financing Terms ADB will provide loans to finance components under the investment program, as and when the latter are ready for financing, provided, Armenia is in compliance with the understandings hereunder, and the components are in line with those same understandings.

Each loan will constitute a tranche under the Facility. Each tranche may be financed under terms different from the financing terms of previous or subsequent tranches. The choice of financing terms will depend on the project, capital market conditions, and ADB's financing policies, all prevailing on the date of signing the legal agreement for such tranche. Tranches may be provided in sequence or simultaneously, and some may overlap in time with each other. There is no maximum or minimum size for a tranche. Interest, commitment charges or guarantee fees are not payable on the Facility. They are payable only on financing actually committed by ADB as a loan or guarantee. ADB rules on interest, commitment charges and

guarantee fees, which are in effect when the legal agreements are signed for a tranche, will apply with respect to such tranche.

Amount

The maximum financing amount available under the Facility is \$400 million. It will be provided in individual tranches from ADB's ordinary capital resources¹ and Special Funds resources², subject to the latter availability and allocation under ADB's applicable policies and procedures, from time to time.

Availability Period

The last date on which any disbursement under any tranche may be made will be 31 December 2021. The last Periodic Financing Request (PFR) is expected to be submitted no later than 31 December 2017.

Terms and Conditions

Armenia will cause the proceeds of each tranche to be applied to the financing of expenditures of the investment program, in accordance with the conditions set forth in this Agreement and the legal agreements for each tranche. The loan proceeds under the Facility will be used to finance urban infrastructures projects, for which eligibility and approval criteria are set out in Schedule 4 to this FFA.

Execution

The Executing Agency (EA) for the investment program will be Ministry of Economy under the authority of the Government Supervisory Board. The Implementing Agency, if necessary, will be proposed by the Government Supervisory Board and subject to satisfactory assessment by ADB³. The EA will execute the subprojects under the investment program in accordance with the principles set forth in Schedule 1 to this Agreement and the selection criteria set forth in Schedule 4 to this Agreement, as supplemented in the legal agreements for each loan.

Periodic Financing Requests

Armenia may request, and ADB may agree, to provide loans, under the facility to finance the investment program and its related subprojects upon the submission of a Periodic Financing Request (PFR). Each PFR should be submitted by Armenia. Armenia will make available to the applicable implementing agency the proceeds of the loan in accordance with the related PFR and the legal agreements for the tranche.

ADB will review the PFRs, and if found satisfactory, will prepare the related legal agreements.

The Project for which financing is requested under the PFR will be subject to

¹ Provisions of the Ordinary Operations Loan Regulations applicable to LIBOR-Based Loans Made from ADB's Ordinary Capital Resources, dated 1 July 2001, would apply to each such Loan, subject, to modifications, if any, that may be included under any Loan Agreement (said Ordinary Operations Loan Regulations, as so modified, being hereinafter called the OCR Loan Regulations).

² Provisions of the Special Operations Loan Regulations applicable to Loans Made by ADB from its Special Funds Resources, dated 1 January 2006, would apply to each such Loan, subject, to modifications, if any, that may be included under any Loan Agreement (said Special Operations Loan Regulations, as so modified, being hereinafter called the SF Loan Regulations and, collectively with the OCR Loan Regulations, the Loan Regulations).

³ For project implemented in Yerevan, IA will be the City of Yerevan

the selection criteria and approval process set out in Schedule 4 hereto, satisfactory due diligence, and preparation of relevant safeguards, fiduciary requirements and other documents. The Facility will be implemented in accordance with the general framework set out in Schedule 3 to this FFA and the Facility Administration Manual agreed between the parties.

Unless otherwise notified by Armenia in writing, PFR will be signed on behalf of Armenia by the Ministry of Finance.

General Implementation Framework.	The Facility will be implemented in accordance with the general framework set out in Schedule 3 hereto. Specific implementation details may be set out in the relevant legal agreements.
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Procedures	Each tranche to be provided under the Facility will be subject to the following procedures and undertakings:
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- (i) Armenia will have notified ADB of a forthcoming PFR at least 15 days in advance of the submission of the PFR;
- (ii) Armenia will have submitted a PFR in the format agreed with ADB;
- (iii) ADB may, in its sole discretion, decline to authorize the negotiation and execution of any legal document for a tranche; and
- (iv) Once ADB confirms acceptance of the PFR, the legal agreements will be negotiated and executed by the parties.

PFR information	The PFR will substantially be in an agreed format, and will contain the following details:
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- (i) Loan amount;
- (ii) Description of components to be financed;
- (iii) Appraisal reports for all constituent subprojects including environmental assessment report, resettlement plan, if any, and a due diligence report on safeguards implementation in the previous PFR;
- (iv) Cost estimates and financing plan for the proposed loan and the subprojects;
- (v) Implementation arrangements specific to the subprojects or components;
- (vi) Confirmation of the continuing validity of, and adherence to, the provisions of this Agreement;
- (vii) Confirmation of compliance with the provisions under previous Loan Agreement and Project Agreement, as appropriate; and
- (viii) Other information as may be required under the Facility Administration Manual as reasonably requested by ADB.

Safeguards	Attached as Schedule 5 to this Agreement, are the social and environmental safeguards frameworks that will be complied with during the implementation of the investment program.
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ADB safeguard policies in effect at the time ADB approves the provision of a financing tranche will be applied with respect to the subprojects financed under such tranches.

Procurement All goods and works to be financed under the Facility will be procured in accordance with ADB's Procurement Guidelines (2010, as amended from time to time).

Consulting Services All consulting services to be financed under the Facility will be procured in accordance with ADB's Guidelines on the Use of Consultants (2010, as amended from time to time).

Advance Contracting and Retroactive Financing Under each tranche, ADB may, subject to its policies and procedures, allow on request (a) advance contracting and (b) retroactive financing of eligible expenditures for up to 20% of the proposed individual loan, incurred prior to loan effectiveness but not earlier than 12 months before the date of signing of the related legal agreement. Armenia acknowledges that any approval of advance contracting and/or retroactive financing will not constitute a commitment by ADB to finance the related project.

Disbursements Disbursement for each tranche will be made in accordance with the conditions of disbursement in the relevant Loan Agreement and in accordance with ADB's Loan Disbursement Handbook (January 2007, as amended from time to time).

In projects where land acquisition and involuntary resettlement are required, no loan proceeds shall be disbursed for civil works until ADB has received the Armenia Government's certification, in form and substance satisfactory to ADB, that (i) the Government has allocated adequate funds for land acquisition to relevant project account, and (ii) all land and rights-of-way required for the civil works are free and clear from any and all rights or claims of third parties and any other encumbrances whatsoever.

Monitoring, Evaluation, and Reporting Arrangements Within 3 months of the effectiveness date of the loan agreement for each loan under the Facility, the EA will establish a Program Performance Monitoring System (PPMS) in form and substance acceptable to ADB. The PPMS will first select a set of performance monitoring indicators relating to physical implementation and institutional reform, and capacity building milestones including those in the Design and Monitoring Framework (DMF) (Schedule 2). The EA will establish baseline data for each of the selected indicators and will conduct annual surveys and update ADB on the progress against each indicator.

The EA will also prepare and submit consolidated quarterly progress reports in English for each loan on all aspects of project implementation within 30 days of the end of each quarter, the reports will give the details of overall implementation progress, problems encountered during the reporting period, measures taken or proposed to remedy these problems, and the proposed program of activities for the next quarter. The reports will also include a summary financial account for each implementation agency, expenditures to date, and a report on benefit monitoring. The reports will also include results

of internal monitoring of implementation of the resettlement plans prepared for the relevant subprojects. The EA will submit to ADB a project completion report within 3 months of physical completion of the subprojects financed under each loan, and a facility completion report within 3 months of the physical completion of each individual tranche. These reports will describe the details of implementation, costs, monitoring and evaluation results, problems encountered and action taken, and other information that ADB may request. With the second PFR, the EA will submit a compliance report confirming the continued validity and the adherence to provisions of FFA and preceding agreement on each component.

ADB will field review missions as required to discuss the progress of the investment program under each loan, any changes in the implementation arrangements, or remedial measures that are needed to achieve the overall objectives of specific subprojects and of overall investment program. In addition to regular reviews, including a midterm review for each loan, a detailed midterm review of the Facility will be done 3 years after the first loan takes effect. The midterm review for each loan under the facility will be done in accordance with the implementation period of each loan. The midterm reviews will evaluate in detail the scope of the facility and projects, implementation arrangements, any outstanding issues, environment and resettlement as well as other safeguard issues, achievement of scheduled targets, contract management progress, and other issues, as appropriate.

Representations and Warranties Schedule 6 hereto sets out the undertakings provided by Armenia in relation to the facility.

REPUBLIC OF ARMENIA

By 
Tigran Davtyan
Minister of Economy
Republic of Armenia

ASIAN DEVELOPMENT BANK

By _____
Juan Miranda
Director General
Central and West Asia Department

- SCHEDULE 1: FACILITY CONSTITUTENTS
- SCHEDULE 2: DESIGN AND MONITORING FRAMEWORK FOR THE FACILITY
- SCHEDULE 3: IMPLEMENTATION FRAMEWORK
- SCHEDULE 4: SELECTION CRITERIA AND APPROVAL PROCESS FOR SUBPROJECTS
- SCHEDULE 5: SAFEGUARD REQUIREMENT AND SOCIAL DEVELOPMENT POLICES
- SCHEDULE 6: UNDERTAKINGS

SCHEDULE 1
(ARM: Sustainable Urban Development Investment Program)

SUBSECTOR ROAD MAP AND INVESTMENT PLAN

A. Strategic Orientations

1. Urban areas are the pillars of economic growth and home to 2.1 million people, or 64% of the total population. They can be classified into four groups:¹ (i) Yerevan, the capital city; (ii) secondary cities such as Gyumri, Kapan, and Vanadzor; (iii) cities with industry and agro-processing potential such as Armavir, Artashat, Ashtarak and Ararat; and (iv) cities with high tourism potential such as Dilijan, Jermuk, Sevan, and Tsakhradzor. Together, these 12 cities generate almost 90% of the nation's gross domestic product; Yerevan with its 1.12 million inhabitants alone accounts for 60% of the national economy. Until the financial crisis in 2008, Armenia's landlocked economy enjoyed double-digit growth despite high transport and communication costs to the outside world. Since then, the economy has shrunk, and economic activity has become relatively more concentrated in Yerevan and, to a lesser extent, in Gyumri, Vanadzor, and Kapan.

2. The vision of the Government for urban development is to strengthen urban infrastructure sustainability in these four groups of cities.² It is therefore critical to keep Yerevan as the engine of national growth, the center of economic activity and knowledge, and the focal point for cultural change. At the same time, the development of other Armenian cities is imperative to achieve balanced growth at the national level. There is an urgent need to rehabilitate, upgrade and improve urban transport infrastructure in major cities and towns in Armenia, to provide more competitive platforms for economic growth and improve living standards. Armenian cities and towns are constrained by unequal local government capacity and a range of organizational gaps pertaining to infrastructure planning, project/program implementation and monitoring, integrated urban management, effective management and regulation of transport operators, and formulating revenue generation mechanisms in the transport sector. These priorities are fully consistent with those identified in ADB's country strategy and are in line ADB's focus on transport and urban infrastructure, regional cooperation and private sector development.

3. The Government has recently adopted a new Transport Strategy until 2020.³ The strategy aims to "promote integrated, efficient public transport, and to encourage a sustainable balance between public and private transport". This strategy covers road networks, public transport infrastructure, public transport operations, the metro system, fare integration, traffic management and parking. The Government already invested \$185 million during 2005–2010 largely for upgrading urban infrastructure Yerevan and mobilized private sector funding to improve transport infrastructure quality in the capital, but there is need for about \$960 billion of additional investments across the country by 2025 (i) to satisfy increasing demand and improve mobility conditions for all citizens; (ii) to improve tourist and inhabitant's quality of life and environment preservation; and (iii) to provide world-class infrastructure to favour private sector involvement and an friendly-business environment.

4. This sector road map dovetails seamlessly with: (i) the Yerevan city Masterplan approved in 2006 which is still the only existing transport policy in Yerevan; and (ii) specific strategic plans already elaborated for some secondary cities and cities with high economic and tourism

¹ This summary is based on ADB. 2009. *TA 7340 Yerevan Sustainable Urban Transport Project*. Manila; ADB. 2007. *Technical Assistance for Developing Strategic Urban Assessments for Selected Central and West Asia Developing Member Countries*. Manila. (TA 6423-REG).

² ADB. 2009. *RETA 6423 Developing Strategic Urban Assessments in Central and West Asia*, Manila; ADB, 2010, *TA 7340 Yerevan Sustainable Urban Transport Project*, Manila ADB

³ ADB. 2008. *TA4973-ARM "Armenia Transport Sector Development Strategy 2020"* Padeco - VGM Partners, Manila.

development potential. The roadmap also follows the three strategic elements developed by ADB⁴ for a sustainable urban transport model in its developing member countries: 'avoid', 'shift' and 'improve'.⁵ The objective will be, over the 25 year-period roadmap, to allocate as much investments for public and non-motorized transport as for urban roads, to finally be able to offer reliable alternative to car users and promote more sustainable urban mobility in Armenia.

B. A Vision for More Sustainable and Livable Cities in Armenia in 2025

5. Armenia has experienced turbulent conditions since independence. This has led to a wide range of problems in the urban transport subsector, both physical and non-physical. The physical challenges include: (i) dilapidated road networks, pedestrian pathways and traffic management systems across the country, (ii) poor quality of public transport infrastructure including metro and trolleybus in Yerevan and (iii) poor quality of public vehicle fleet and services across the country. The non-physical challenges include: (i) limited institutional capability to provide an integrated transport network; (ii) a deteriorating road safety record, (iii) weak risk management arrangements preventing private sector participation in any significant manner, and (iv) lack of passenger information and of an integrated fares system. The strategic vision of the project is to promote a sustainable, integrated, socially affordable and cost efficient urban transport system. To reach this vision, five main goals have been identified for the urban transport sector in Armenia:

- (i) **An efficient and integrated urban transport system to serve people's mobility.** Yerevan and Armenian cities' economy requires an efficient and modern public transport network to reduce congestion, increase reliability and safety, and to ensure passenger comfort. Essentially, the urban transport systems need to be redesigned to match growth aspirations as well as citizens' expectations. Achieving these objectives would necessitate: (i) formulating an effective strategy and implementation arrangements for transport planning and land use; (ii) continuous road improvement and maintenance; (iii) rehabilitation and improvement of public intercity transport systems; and (iv) integration of different modes to maximize investment impact and efficiency.
- (ii) **A sustainable system to improve the environment and quality of life and preserve it for future generations.** In order to benefit from the rich historical and cultural heritage in Armenia, a number of urban centers and locations across the country need to be rejuvenated with pedestrianized and greener areas which will improve the quality of life for residents and enhance the tourism potential. In parallel, efforts are also needed to reduce congestion in key corridors. Focus on creating a clean and green environment is also vital, through promoting energy-efficient transport solutions. Air pollution and greenhouse gas emissions are on the rise. Non motorized transport should be promoted with bicycle lanes, tree replanting on main avenues, and developing parks in urban areas across Armenia.
- (iii) **Modern and efficient urban infrastructure to attract investors and boost the economy.** The economy of the cities is dependent on a high quality transport network to promote economic clusters in Armenia, stimulate private investments, and attract people to move across locations. To achieve an integrated and sustainable urban transport system by 2025, the transit systems need to be revamped or established afresh. In Yerevan, the existing metro system will need to be extended and refurbished. A low floor light rail system, modern trolleybus vehicles, and a smartcard ticketing system could be considered. In secondary cities, tailored solutions will need

⁴ ADB. 2009. *Changing Course, A New Paradigm for Sustainable Urban Transport*. Manila; ADB. 2010. *Sustainable Transport Operation Plan*, Manila.

⁵ These refer to the necessity to reduce the need to travel, the requirement to encourage travelers to use sustainable modes rather than the private car and the need to use energy efficient and "green" vehicles and fuels.

to be developed to promote livability and generate sustainable economic opportunities.

- (iv) **Stronger private sector involvement in urban transport sector on the basis of an improved and secured framework for public private partnerships.** The legal and institutional framework will need to be strengthened to guarantee private sector involvement and stimulate public private partnerships. The Government is committed to exploring private sector involvement in all key investments. Scope for private sector participation will be investigated at project preparation, at construction stage and for operation (management contract, lease contract, performance based contract, concession). Appropriate risk sharing arrangements need to be designed, comprising cost recovery tariffs, ridership guarantees and tax and other incentives.
- (v) **Transport solutions for all.** An efficient public transport system should serve all citizens, particularly those who are constrained because of lack of resources, or due to age or physical handicaps. Ensuring their access to jobs, education, healthcare, and other amenities is critical. Integrated tariff arrangements (between different modes) and concessionary fares will be promoted to guarantee wide mobility for the poorest segments of the population. The development of transport systems across the cities should cater to the specific needs of women, with easier access to bus or metro in the case of Yerevan, and with reliable information about public transport services, parking and other municipal services through print and electronic media.

C. A Sequenced Urban Transport Development Plan

6. It is envisaged that the roadmap will be implemented in 3 phases:

- (i) Short term: with focus on urgent actions and investment targeting ready-projects.
- (ii) Medium term: designing actions and investments aimed at improving sustainability of the transport system.
- (iii) Long term: taking measures to strengthen planning and coordination of integrated transport services that are effectively anchored on, as well as promote, sustainable urban growth.

7. The immediate actions mainly include projects and measures already planned by the Government. These actions target largely Yerevan, with preliminary work to be initiated for secondary cities. This phase is characterized by low-cost quick-win measures improving the current service which pave the way for sustained transport solutions over the medium term:

- (i) Road network: In Yerevan, priority should be given to the construction of missing links of the West urban ring to divert through traffic away from the city center and open new areas for development.
- (ii) Public transport: In Yerevan, the existing public transport network should be restructured and rationalized, taking into account the emerging requirements and new developments in the city.
- (iii) Intermodality: Yerevan administration needs to introduce a tariff and ticketing system, facilitate greater inter-mode accessibility and disseminate to the public multimodal information in an effective manner.
- (iv) In secondary cities, the aim should be to prepare strategic masterplan to identify urban infrastructure needs and opportunities with the participating municipalities.

8. **Medium term actions:** This phase entails developing an integrated urban transport system across the country:

- (i) **Road network:** In all cities, already started or planned bypasses should be completed. Existing roads that need upgrading should be prioritized for support to improve safety. Specific attention is required to re-design congested or problematic main crossroads. New bridges need to be constructed in several cities to alleviate mobility constraints.
- (ii) **Public transport:** Restructuring of the existing public transport network should receive priority attention, with focus first on reorganization of minibuses services according to demand and new developments in the cities. In Yerevan, immediate priority will be for opening of new station entrances in the metro system, refurbishment of the main stations and renovation of the rolling stock.
- (iii) **Parking organization and management:** There is an urgent need to evolve clear parking policies in most cities and concessions need to be formulated to construct new parking lots.
- (iv) **Intermodality:** In all cities, coordination of the different public interregional transport services needs to be promoted. The ultimate goal should be to achieve physical integration of transport services with common bus stops and inter-change facilities, complemented by integrated fares and ticketing systems.
- (v) **Non motorized transport:** Across the country, new approaches will be needed – accompanied by appropriate facilities – to promote the use of pedestrian and other soft modes. The ultimate goal is to evolve a cleaner and greener environment, support recreational life quality improvements, and promote urban regeneration and tourism development.
- (vi) **Institutional:** A strong institutional anchor is required in most cities. In the case of Yerevan, the proposal will be to set up an integrated passenger transport authority. In other cities, city transport departments will be required. The transport authority will formulate Yerevan's policy, coordinate service provision, contract transport services, and oversee all infrastructure. The transport sector can benefit significantly from the introduction of management and lease contracts similar to the water sector, and from public private partnership arrangements. This needs to be supported by first a complete overhaul of the existing routes, and the tariff and ticketing systems. Second, it is also imperative to design efficient risk management and risk sharing arrangements between the public and private sectors.

9. **Long term development:** The ultimate long-term goal of the roadmap is to promote and sustain a robust increase in the quality of transportation and quality of life in the participating municipalities. For this to happen, a number of steps will be required:

- (i) **Road network:** In all cities, new roads need to be designed and constructed connecting neighborhoods around congested downtown areas to limit traffic congestion. Limited Traffic Zones may be pursued in some parts of city centers under an integrated traffic management system
- (ii) **Public transport:** In all cities, there is need to upgrade the entire public transport system including interchange facilities with new, attractive and clean public transport solutions on the main corridors of demand. In Yerevan, extension of the metro to the densest areas and development of fast, attractive, modern and environment friendly transit solutions will be required to support economic and urban development.
- (iii) **Parking organization:** In all cities, creation of safe parking lots can be pursued to encourage people to leave their car and use public transport or walking zones. In

Yerevan, "Park & Ride" facilities need to be created at the extremities of the metro lines along with the introduction of a new parking management system.

- (iv) Institutional: All cities need to move to performance-based contracts for delivering urban transport services. Regardless of the modality (e.g. management or lease contracts or concessions), such contracts would have clear service delivery benchmarks.

D. Overview of Main Roadmap Interventions

10. The investment program will develop a fully integrated multimodal urban transport system in Yerevan, in main secondary cities and in the cities with high economic or touristic development potential in line with world-class practices. In addition, the investment program focuses on better organized, managed, operated and maintained urban transport network. As Yerevan, represents almost 60% of urban population and concentrates primarily all major urban transport issues, the interventions have been presented per type of cities.

1. Yerevan

11. **Road network.** In the short term, the main objective is to complete the road based missing links of the western urban ring in Yerevan with certain other transport measures in the Kentron district. The three road projects, at a cost of \$60 million, will help to divert through-traffic around the city centre. The economic benefits to the travelling public and to freight traffic will be further increased when the missing gap of the western bypass in the north-west of Yerevan is completed. In the medium term, another section of the western bypass between Vahagni and Zoravar Andranik will be constructed. The introduction of a road traffic management system and upgrading of urban roads and footways will improve the quality of the urban infrastructure. In the long term, Limited Traffic Zones could be introduced in Kentron particularly between Abovyan Street, the opera and Vernissage. Entrances to the zone areas will be marked with traffic signs and will grant access to residents, employees, emergency vehicles and hotel vehicles and delivery. Additional traffic management solutions will be introduced including an integrated transport control centre and interlinked traffic signals to permit efficient public transport and pedestrian crossings.

12. **Parking.** It is recommended that a two tier parking zone covering most of Kentron be developed, which would prevent parking along bus routes and permit parking along other streets but at a charge, to be paid by paper ticket or through mobile telephony. In the medium term, a parking concession will be designed to contract out the services to the private sector in Kentron. Besides, the Municipality will enforce measures such as the prevention of on-street parking and introduce charging for the remaining on-street parking. In the long term, along with the metro refurbishment, "Park & Ride" facilities at the extremities of the metro lines will be introduced to encourage people to leave their car and use public transport or walking zones for their trip to the centre. As much as possible, these parking facilities will be developed around office and commercial buildings, linked to interchanges, and jointly developed with private investors.

13. **Rail-based system.** In the short term, improvements to the metro will focus on the construction of a second entrance for the busiest Yerevan metro station at Yeritasardakan. This station, located near the Opera, the main shopping and commercial area of Abovyan Street and Sayat Nova Avenue, will generate an additional 15,000 passengers per day. In the medium term, it is suggested to extend the metro network from Barekamutyun to Achapnyak station on Halabian Street and Norashen station on Mazmanian Street. In addition funding will be allocated for emergency repairs to escalators and for the installation of real time information on top of the EBRD loan provided in 2010.⁶ In the long term, the new development of "Yerevan New City" and

⁶ A loan of €15 million has been provided jointly by EBRD, EIB and European Commission (European Neighborhood Investment Facility) to finance urgent investment backlogs of the metro infrastructure

the private programs planned in the Western part of the city may justify the implementation of a modern segregated light rail line between Malatia-Sebastia, Noragyugh and the city centre, continuing along Marshal Bagramian Avenue to run along Komitas Avenue. This initial light rail line with modern, low floor rolling stock could be the first stage of a larger network linking suburbs such as Davitashen, Achapnyak, Shengavit and Erebuni both radially to the city centre and tangentially. In 2025, the Municipality will have to reassess the model to identify patterns and the impacts of the new developments. Based on the results, an extension of metro or the light rail network will be investigated.

14. **Trolleybus.** The trolleybus has been confirmed as one of the necessary components of the Yerevan public transport system for three reasons: (i) it is the cleanest system in terms of emission, noise, comfort and consumption; (ii) it is the most appropriate solution with enough capacity, considering Yerevan topography and the steep routes, to serve the densely populated apartment districts in the north and north east of the city centre (Kanaker-Zeytun, and Avan); and (iii) it can easily share infrastructures with bus or LRT (segregated lanes, equipments, substations, depot or workshop). In the short term, emergency funding will be allocated to avoid the system collapse, as the trolleybus network would stop operations within three years without any new investment. This emergency funding is intended to purchase a number of new substations and feed cabling together with some new switches, crossings and contact wire to install back reliability and quality. First to benefit will be the busy trolleybus services to Shengavit and Erebuni, that use wide multilane avenues together with further investment in the trolleybus infrastructure. This would lead to a demonstration corridor between Kentron and Shengavit using upgraded trolleybus routes 1 and 2 which would penetrate the city centre better. This would also showcase best practices such as improvements to bus stops and passenger information including real time displays at bus shelters. In the medium term, it is proposed that the trolleybus system is retained and renovated as the core strategic bus network. This will allow further infrastructure refurbishment (particularly substations) and for partial fleet replacement. This enables the busiest corridors to be operated by quiet electric vehicles which will have positive benefits in the city of Yerevan which experiences a noisy and polluted roadscape. In the long term, the steep hills in the north east of the city could require certain radial routes to be operated by a renovated trolleybus system – to Kanaker, Avan and Nor Nork. The secondary cities of Gyumri and Vanadzor are also likely to reach the critical size for adopting the trolleybus mode as backbone of a new reorganized and rationalized public transport network.

15. **Bus.** The bus strategy includes two key principles: (i) a restructuring of the routes with the core radial network and feeders connecting the city center; and (ii) the removal of all minibus routes duplicating the bus routes. Also, a network of bus lanes will be implemented across Yerevan with specific green painted marking on major avenue (Arshakuniats Avenue between Kentron and Shengavit) to prevent other road traffic from using the bus lane. In the medium term, the Municipality will offer specific arrangement (loans, guarantees) to the private sector bus companies to enable them to operate medium and large sized buses instead of minibuses where appropriate on selected routes. This will incorporate quality thresholds that will protect this investment and ensure that they are properly maintained and driven by professionally trained drivers. A new upgraded low-floor bus service from Zvartnots airport to the city centre allowing extra luggage space would ensure that tourists and employees could easily reach the airport at all times of the day and night. In the long term, segregated lanes will be implemented on all busy routes to increase the average speed of vehicles to 25 kilometers per hour with branded shelters and information signs.

16. **Minibus.** It is essential that the existing minibus system should be redefined and reorganized in the short term. The legal framework governing bus and minibus contracts needs to be strengthened to include clear parameters on contract conditions such as comfort, quality of service, and bonus/penalty for service. Once this is done, re-tendered contracts could begin to include such parameters. This, together with grants made available to private sector companies

to assist with the purchase of larger and better quality buses will ensure that a strategic network of large bus services will serve core routes with a secondary network and minor routes covering residential areas being served by minibuses. Minibuses would be retained in the districts fulfilling a vital role in penetrating smaller roads and residential areas unsuitable for bigger buses. In the medium term, an integrated ticketing system should include the microbus network. The taxi system is working as an additional minibus network and it is recommended to relocate and reorganize taxi stands to improve visibility and ease of access.

17. **Non-motorized transport.** In the short term, the objective will be mainly to renovate existing pedestrian footways and rearrange bus platforms and sidewalks to improve accessibility to board the buses and trolleybuses. Also, all new urban renewal projects should include facilities to promote the use of pedestrian and other soft modes. In the midterm, green areas should be redeveloped with bicycle lanes for instance at Vernissage and on the Kentron green ring. In the long term, the creation of traffic calming zones in touristic areas of the city center will be developed to improve the quality of life and enhance cultural heritage. It might include pedestrianization of Abovyan Street and promotion of soft modes, and replanting of trees particularly around archeological sites, Yerevan Lake and on the slopes overlooking the city.

18. **Intermodality and interchange.** In the short term, station and stops located on the same site should carry the same name, to improve accessibility and directions between the different locations. In the midterm, interchange facilities will be upgraded and redesigned jointly with private commercial and office developments to guarantee full physical integration of the different public transport services. In the long term, this will be combined with Park and Ride facilities (See Parking).

19. **Ticketing and fares.** The existing fare levels are too low for urban transport services to be operated viably and the current method of concessionary travel for segments of the population or for transport modes should be revised as it does not serve the city's needs well. In the short term, fares should be revised to improve sustainability of the different networks and similar treatment should be observed for concessionary travel. In the medium term, an integrated ticketing system should be implemented between metro, trolleybus and bus offering free transfers on the whole network. This will be associated with an expanded ticket product range and relevant marketing campaign. It is intended that the ticketing system will be an off vehicle cashless system that will be sold by either ticket machines or agents (shops or newsagents). It is envisaged that a flat fare system will be maintained in the first instance until full public acceptance is secured.⁷ This will provide accurate accounts of operations, both financially and statistically, and accurate reimbursements for concessionary fares by company and mode. In the long term, a state of the art electronic smartcard ticketing system, which could be called "Noah or Ararat Card", and mobile telephony ticketing will be used and will be extended to microbus. This will be linked together with electronic passenger information. In addition, it is recommended that the monthly payments to Yerevantrans be reformed and be reallocated to finance upgrading or investments such as passenger information or scheduling.

20. **Information, communication and signage.** In the short term, it is necessary to harmonize communication on public transport to create an intermodal website providing maps, routes, timetables, fares and accessibility information. A public transport Hotline could also be set up to inform and provide direct information to persons without internet access. A branded image for public transport (with logo, typography, and color) should be introduced and signage displayed in all stations, stops and stands. Stations should show main signs and station names in Armenian, Cyrillic and Roman scripts. Totems, signs with maps and timetables should be

⁷ Options for magnetic stored ticket system or contactless smartcard system will be discussed. Given the high use of modern technology such as mobile phones in Yerevan a smartcard system would be preferred as this could also be used for other purposes such as taxis or even parking.

introduced to easily locate stops and provide information to people waiting.⁸ In the medium and long term, real time passenger information displays will be introduced in the metro and at major bus and trolleybus stops.

2. Secondary Cities

21. The Government aims to revitalize the secondary cities of Gyumri, Vanadzor and Kapan which are the three gateways of Armenia and consolidate the emergence of economic clusters.⁹ There have been no major urban infrastructure investments over the two last decades in these industrial cities, and hence greater attention is required now.¹⁰

22. In Gyumri, the Government aims to establish two industrial clusters, one promoting information technology and the other for jewelry.¹¹ This initiative is replicable in Vanadzor and Kapan. In Vanadzor, the cluster focus will be on fine chemical, research, pharmacy and new biotechnology. Kapan has always been a key engine of growth for Armenia, being primarily a copper mining city. The city cluster will have to be developed around the mining industry, but it should also promote horizontal integration with research centers to achieve process and quality improvements. Being the gateway for Iran, the city could also take advantage of its vicinity for specific and targeted tourism packages.

3. Cities with High Economic Development Potential

23. Armavir, Artashat, Ashtarak and Ararat are industrial cities surrounded by pockets of agricultural activities. Ararat has two major factories for cement and gold, and accommodates various companies mainly in the agro-industry and in building materials.

24. Through the investment program, the Government will support the establishment of an agro-industrial cluster aimed at promoting wine production and food-processing. The Government also aims to link the 4 cities to the North South highway or the Zvartnots International Airport. This will stimulate private sector involvement and attract international investors particularly from agro-industry and logistics sectors.

4. Cities with High Tourism Development Potential

25. Jermuk, Dilijan and Tsakhkadzor are touristic cities where resorts are under renovation or construction. Dilijan for instance is a green city situated in Dilijan National Park¹² and stands among the most favorite touristic destinations in the country. The centre has been preserved and maintained as an old town while mountain recreational activities have been developed. The city has numerous international standard hotels and the government of Armenia is considering a new plan to turn Dilijan into a financial centre for the region. In all these cities, lack of investment in urban infrastructure obstructs the potential for economic development and impedes attractiveness for investors.

26. The investment program will gradually support the Government in its intention to enhance and open up urban areas in these cities as well as around Lake Sevan.¹³ An incentive package will be formulated to attract private investors. Improvement in urban services delivery and

⁸ Private partnership between Municipality and mobile companies (Orange, Vivacell) with sponsorship of bus shelters.

⁹ Armenia Development Agency. 2010. Business opportunities by sector.

¹⁰ In Gyumri, traditional industrial activities are building materials, textile manufacturing and food industries.

¹¹ USAID. 2008. Gyumri Technopark Strategic road map and Business Plan Prepared, Kevin Thompstone, Opportunities to develop in IT, engineering, jewelry, apparel and textile production and fashion design

¹² Armenia has two National Parks: Dilijan and Sevan, established respectively in 2002 and 1978; Dilijan National Park offers forest landscapes, rich biodiversity, medicinal mineral water springs, natural and cultural monuments; Sevan National Park in Armenia was established protect Lake Sevan and the surrounding areas.

¹³ The competitiveness foundation of Armenia (<http://www.cf.am/>) identified tourism, education and healthcare as sectors with unexplored potential of development. Master plans for tourism product development and investment projects are currently being developed for the Lake Sevan Loop.

infrastructure will create significant externalities in terms of enhancing the attractiveness of the cities for domestic and international tourism. A cable car service has opened in October 2010 in Jermuk as part of investment for tourism support.

E. Policy, Institutional and Financing Reforms

27. A dynamic policy framework is essential to mobilize public as well as private sector resources to meet the large investment requirements. Along with, robust institutional arrangements are necessary to ensure quality of service delivery.

28. The policy and institutional framework is relatively well developed for Yerevan, while considerable work is needed on those fronts in Armenian's secondary cities. This includes but is not limited to: clear long-term vision, clarity of institutional mandates, integrated city and transport sector development strategies, and coordination in investment decisions that would ensure effective spending.

1. Institutional Change Options

29. Yerevan is poised to create a Transport Authority¹⁴ under the Municipality organizing all modes of transport in the city and managing all aspects of transportation: traffic management, road maintenance, public transport services, non motorized transport and parking. It could enable a global vision and coherent actions in order to promote an integrated public transport system. As outlined earlier, the approach in secondary cities would be to create a dedicated transport department/division within the municipality to carry out similar functions. The MFF will support Yerevan as well as the secondary cities in this important endeavor.

2. Financial Opportunities

30. Different financing modalities need to be investigated to meet the large investment requirements as well as ensure adequate operations and maintenance of the infrastructure assets. Cost recovery of investments is clearly an essential first step, and in this regard tolls on main highways or user fee for urban parking and other facilities could be pursued. Efficient risk sharing arrangements need to be structured to attract public private partnerships.

3. Monitoring

31. Effective monitoring requires regular and systematic collection of data on specified indicators to assess progress and achievement of objectives. Monitoring systems per se should be structured to (i) analyze services and measure operators' performance as per contractual parameters, (ii) determine the amount of operating subsidies to ensure broad-based service provision in public transport, (iii) propose alternative solutions to limit road congestion; (iv) help to decide on incentives; and (v) direct on the future organization of the public transport market (e.g. benchmarking among different operators, tendering decisions, etc.)

4. Capacity Building through Assistance and Training

32. To effectively implement the proposed roadmap, Yerevan and other municipalities will require assistance and training. Specifically, support will be required for engineering, project management and supervision to execute the investment program to international standards.

33. To strengthen the transport sector stakeholders in the country, continuous capacity building will be needed including: (i) professional tours and visits to comparable jurisdictions that have successfully revamped their urban transport systems; (ii) a twinning with relevant municipalities to provide benchmark and good practices for implementation; and (iii) the

¹⁴ This type of an organizational structure is found in most western and developed countries and is called "Verkehrsverbund" in Germany, Passenger Transport Authority (PTA) in UK, "Autorité Organisatrice des Transports Urbains" (AOTU) in France, Land Transport authority (LTA) in Singapore, metropolitan Bureau of Transportation in Tokyo or Road and Transport Authority (RTA) in Dubai. There are usually headed by Mayor or Vice Mayor.

development of specific tools, including professional documentation, studies and software to better assess transportation trends, take into consideration the emerging urban development requirements, and help the authorities to anticipate the future needs and prioritize focus areas.

F. Investment Plan

Table 1: Sector Investment Plan

Subsector Investment Requirements to 2025 - US\$ Millions		2011-2013	2013-2016	2016-2025	Total
Yerevan and selected cities	A. Urban infrastructure				
	-Road and other urban infrastructures improvements	53.7	149.8	186.7	390.2
	-Accessibility, Traffic Management Improvements and parking	8.3	23.1	28.8	60.2
	-Public and Regional Transport Improvements and Investments	16.4	45.8	57.1	119.4
	-Metro and mass transit solution construction and renovation	37.7	105.2	131.1	274.0
	B. Institutional Strengthening	3.8	10.5	13.1	27.4
	C. Program Management and Capacity Building	12.2	34.1	42.5	88.9
	Total Investment US\$ Million	132.3	368.5	459.3	960.0

Note: Total may not add up because of rounding

Source: Mott Macdonald, ADB

SCHEDULE 2
(ARM: Sustainable Urban Development Investment Program)

DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved urban environment, local economy and enhanced private sector within urban areas	By 2022: Air pollution due to urban transport declines by 5% compared to 90% baseline in 2009. Contribution of secondary cities to gross domestic product increases to at least 35% (baseline 2009: 30%) Private investment in urban transport sector in Armenia increases at least by 10% compared to 2009 Accidents decline by at least 10% (baseline 2008: 407 fatalities and 3,125 injured) Government operational subsidy for public transport declines by at least 10% compared to 64% in 2009	Report of multiple Indicators from Municipal departments, companies and Non-governmental organizations Statistical surveys (Ministry of Natural Protection, Ministry of Transport and Telecommunications, Yerevan municipality, Yerevantrans or other agencies)	Assumptions The government pursues strategy of growth Appropriate environmental framework in place Political and economic stability. Risk Economy vulnerability to exogenous shocks.
Outcome Efficient, reliable and affordable urban infrastructures and services provided in Armenian cities	By 2020: Travel time from South to North Yerevan decreases by 40% compared to 45 minutes in 2009 National public transport modal split is maintained at 21% (2008) Share of women using urban transport services increases by at least 5% from 8.3 million in 2008 because of better security Citizens benefit from construction employment opportunities (at least 1000 jobs offered)	Non-governmental organization, International and national transport associations repost and database Metro and trolleybus companies, Yerevan Trans Municipality Transport statistics or other agencies as appropriate Statistical Yearbook of Armenia	Assumptions Political will for efficient Program implementation Prompt decision-making & counterpart funds release Risks Political debate shifting urban transport focus Slowdown of business environment undermined private sector appetite
Outputs Urban infrastructure extended, rehabilitated and improved in urban areas	By 2016: Completion of urban infrastructure: -5.3km of road links constructed by Yerevan municipality; -at least 1 multiple levels intersection upgraded by Yerevan municipality; -at least 2 footbridges implemented by Yerevan municipality; -at least 1 km of urban street including sidewalks improved by Yerevan municipality. Urban road link detailed design for Tranche 2 endorsed by Yerevan municipality Road and bus improvement design endorsed by Yerevan municipality and applicable body for secondary city By 2018: Completion of urban infrastructure: -new underground Metro entrance opened by Yerevan municipality -6.1km of road link constructed by Yerevan municipality; -5km of segregated structure for priority	Project progress reports Yerevan urban transport master plan published Participating City website and communication materials Municipal transport statistics Yerevantrans, Metro Company, Yerevan bus company annual reports Yerevan municipality reports Surveys conducted by the Yerevan municipality	Assumptions Yerevan municipality and other IAs have capacity to undertake safeguards policy Capacity development carried out in Yerevan municipality and other cities Risks Rising energy costs increase operation cost and tariff increases not supported by consumers Ministry of Economy, Yerevan municipality and other cities

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
	<p>trolleybus and bus constructed by Yerevan municipality;</p> <ul style="list-style-type: none"> -at least 3 km of segregated structure for priority bus transit implemented by one secondary city; -at least 5 intermodal facilities for intercity bus services by Yerevan municipality/other cities; -at least 10 km of urban roads with sidewalks improved or created in secondary cities; -at least 1 pedestrian area constructed by Yerevan municipality <p>A mass transit extension design endorsed by Yerevan municipality</p> <p>Urban and interregional transport network reorganization plans endorsed by two secondary cities</p> <p>One private company contracted for public transport operation or multimodal facilities management by Yerevan Municipality</p> <p>By 2020:</p> <p>Completion of urban infrastructure:</p> <ul style="list-style-type: none"> -at least 10 km of urban roads upgrade or creation -at least 3 pedestrian areas constructed by secondary cities -at least 10 km of metro infrastructure upgraded by Yerevan municipality and Metro company -at least 1 multimodal interchange upgraded by Yerevan municipality <p>A fleet of electric/CNG minibus introduced by Yerevan municipality</p> <p>Yerevan municipality contracted/constructed one mass transit solution -Light Rail or metro extension</p> <p>Two metro stations upgraded with specific structures to address women and disabled needs</p>		<p>experiencing obstacles for institutional change and implementation of reforms.</p>
<p>Appropriate institutional capacity strengthened in Yerevan and secondary cities</p>	<p>Institutional capacity strengthening:</p> <ul style="list-style-type: none"> -a transport committee set up by Yerevan municipality by end 2011 -a multimodal transport website operational by Yerevan municipality by mid- 2016 <p>By 2016:</p> <p>Transport reform initiated:</p> <ul style="list-style-type: none"> -microbus reorganization and tendering reform implemented by Yerevan municipality -integrated ticketing system implemented by Yerevan municipality -transport planning and monitoring processes established by Yerevan municipality and by secondary cities -Yerevan public transport network restructured -Public Service Contracts prepared by Yerevan municipality -Urban transport plan endorsed in 2 cities <p>By 2018:</p>	<p>Ministry Of Economy and cities website and municipal organization chart</p> <p>IAs project progress reports</p>	<p>Assumptions</p> <p>Yerevan municipality, Ministry Of Economy and other cities receptive to reform agenda and to strategic planning</p> <p>Institutional reforms implemented</p> <p>Continued political will to manage program implementation</p> <p>Risk</p> <p>Interdepartmental coordination and support is not forthcoming</p> <p>Divergence between</p>

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks								
	<p>Institutional strengthening in Yerevan municipality:</p> <ul style="list-style-type: none">-new urban transport financing and PPP framework prepared-at least 2 public service contracts awarded by Yerevan municipality-transport authority set up by Yerevan municipality <p>Institutional strengthening in secondary cities:</p> <ul style="list-style-type: none">-strategic urban infrastructure plan prepared by 4 secondary cities-bus and minibus network reformed by 2 cities-transport authority model adopted by 2 cities-public service contract introduced by 2 cities		central government and municipal authorities on policy reform								
Establishment of skilled and experienced program Implementation Units in Yerevan and Armenia	<p>By 2016:</p> <p>At least 15 staff with 30% women trained on technical aspects, financial management, procurement and safeguards</p> <p>Design and due diligence documents for the planned civil works duly prepared by Yerevan municipality, IAs and Ministry of Economy</p> <p>By 2018:</p> <p>Safeguards staff hired in Yerevan municipality and other IAs</p> <p>At least 15 staff with 30% women trained on PPP in transport operation and management (concession, management and lease contracts)</p>	Yerevan municipality and Ministry of Economy annual report and communication IAs project progress reports	<p>Assumptions</p> <p>Urban authorities are giving priority to the urban transport project and provide means to carry out the missions</p> <p>Risks</p> <p>Political issues shift urban transport priority</p>								
<p>Activities with Milestones</p> <p>1. Construction, improvement and rehabilitation of urban transport infrastructure</p> <p>Detailed design completed by month 12 (IAs, Ministry of Economy)</p> <p>Timely LARPs implementation before contract awards (IAs, Ministry of Economy)</p> <p>Goods procured and delivered by December 2018 (IAs manufacturer, contractor).</p> <p>Urban infrastructure constructed by December 2019 (IAs, contractors)</p> <p>Equipment for performance monitoring and improvement procured by July 2012 (IAs)</p> <p>Urban and interregional transport facilities constructed by Jan 2019 (IAs)</p> <p>2. Institutional Capacity Development Plan</p> <p>Multimodal committee set-up at the municipal level by Month 12 (Yerevan municipality, Operators)</p> <p>Creation of a Transport Authority by month 84 (Yerevan municipality, Government)</p> <p>New regulatory framework implemented by month 24 (Government, IAs)</p> <p>Sex-disaggregated passenger databases developed and follow-on surveys between month 12 and 96 (Yerevan municipality, IAs, Operators)</p> <p>3. Program Management Facility</p> <p>Consultants and safeguards specialist recruited by month 8 (IAs)</p> <p>Training plan developed and carried out between month 12 and 48 (IAs) with at least 30% of women participants (Yerevan municipality, Yerevan Trans, Operators)</p> <p>Office rehabilitation & equipment procured and delivered by month 36 (Yerevan municipality, IAs)</p> <p>Tranche II: to be approved by end of 2013</p> <p>Tranche III: to be approved by end of 2014</p> <p>Tranche IV: to be approved by end of 2015</p> <p>Tranche V: to be approved by end of 2016</p> <p>Tranche VI (if required): to be approved by end of 2016</p>			<p>Inputs</p> <p>ADB: \$400 million</p> <table><tr><th>Item</th><th>Amount (\$ million)</th></tr><tr><td>T1</td><td>48.64 (ADF)</td></tr></table> <p>Government: \$115 million</p> <table><tr><th>Item</th><th>Amount (\$ million)</th></tr><tr><td>T1</td><td>11.41</td></tr></table>	Item	Amount (\$ million)	T1	48.64 (ADF)	Item	Amount (\$ million)	T1	11.41
Item	Amount (\$ million)										
T1	48.64 (ADF)										
Item	Amount (\$ million)										
T1	11.41										

Source: Asian Development Bank.

SCHEDULE 3
(ARM: Sustainable Urban Development Investment Program)

IMPLEMENTATION FRAMEWORK

1. Unless modified and amended in loan or project agreements under the facility, the investment program will be implemented as follows.

A. Implementation Arrangements

2. The executing agency for the investment program will be the Ministry of Economy (MOE).

3. Government supervisory board, chaired by Prime minister, will provide overall policy direction and guidance for the investment program. The committee members will include the Ministry of Economy (MOE); the Ministry of Finance (MOF); the Ministry of Transport and Communications (MOTC); the Ministry of Territorial Administration (MOTA), involved municipalities and other relevant ministries, and state agencies. The committee will provide overall guidance on legislative, institutional, and regulatory reforms and will review investment program performance.

4. The duties of the Executing Agency (EA) and the Implementing Agencies (IA) as appropriate will include:

- (i) provision of strategic guidance on and overseeing the implementation of the investment program
- (ii) preparation of the periodic financing requests (PFRs) for submission to ADB;
- (iii) procurement of consulting services, works, and goods,
- (iv) managing the loan proceeds and processing disbursements;
- (v) supervising local institutional reform and capacity development activities.
- (vi) overseeing the implementation of the institutional strengthening and capacity development action plan;
- (vii) preparation of the annual budget estimates for activities under the investment program;
- (viii) recruitment of additional staff and consultants to prepare and manage the program; and
- (ix) approval of the subprojects, acquiring land and ensuring compliance with ADB's safeguards policy.

5. The IA will usually comprise technical, social and environment, and administrative specialists, with relevant transport expertise. It should include as appropriate: a transport engineer, an environment specialist, a social safeguards specialist, a monitoring and evaluation specialist, an interpreter/translator, and a management information system specialist. Supported by consultants financed under the MFF, the Program team will be responsible for day-to-day implementation of the subprojects and particularly for:

- (i) selecting and appraising subprojects;
- (ii) undertaking feasibility studies and due diligence of the subprojects;
- (iii) coordinating the activities of consultants and contractors;
- (iv) supervising the construction;
- (v) monitoring and evaluating the implementation progress and impact
- (vi) coordinating resettlement activities and guiding safeguards compliance;
- (vii) monitoring the social, gender and environmental impact of the program;

- (viii) coordinating with government agencies; and
- (ix) consolidating and preparing periodic reports for the investment program.

B. Approval Procedure for Tranches

6. For the subprojects that will be included in the latter PFRs, the selection and approval are set forth in Schedule 4 to this FFA.

C. Monitoring and Evaluation

7. After review of the quarterly progress reports, ADB will field review missions as required to discuss the progress of the investment program under each loan, any changes in the implementation arrangements, or remedial measures that are needed to achieve the overall objectives of specific subprojects and of overall investment program.

8. In addition to regular reviews, including a midterm review for each loan, a detailed midterm review of the investment program will be done 3 years after the effectiveness of the loan for the first tranche. The midterm review for each loan will be done in accordance with the implementation period of each loan. Such midterm reviews will evaluate in detail the project activities, implementation arrangements, any outstanding issues, environment and resettlement as well as other safeguard issues, achievement of scheduled targets, contract management progress, and other issues, as appropriate. The midterm review for the investment program will focus on: (i) performance of the components under the investment program; and (ii) any changes to implementation arrangements or remedial measures needed to be undertaken toward achieving the objectives of the investment program.

9. The ADB review missions will be undertaken jointly with EA and IA.

SCHEDULE 4
(ARM: Sustainable Urban Development Investment Program)

SELECTION CRITERIA AND APPROVAL PROCESS

A. SELECTION CRITERIA

1. The Asian Development Bank (ADB) will only finance projects and/or subprojects that (i) are part of the Investment Program and/or achieving the objectives of the Urban Infrastructure sector roadmap as described in Schedule 1 of the Framework Financing Agreement (FFA), (ii) adhere to the implementation arrangements set forth in Schedule 3 of the FFA, (iii) fully comply with the social dimensions and safeguard frameworks in Schedule 5 of the FFA, and (iv) meet the eligibility requirements set forth in this appendix.

1. Selection of Participating Municipalities

2. All towns and municipalities above 15,000 inhabitants are eligible in Armenia, unless the city has recognized tourism and/or economic development potential, or otherwise agreed with ADB. For subprojects to be financed under Component 1 of the Investment Program, the participating municipalities should have prepared a proper and sound urban strategy or at least an urban subsector roadmap in line with the Country Social Economical Development Priorities. This strategy or roadmap includes (i) city socio-demo economical assessment, (ii) urban infrastructures assessment, (iii) demand and needs assessment; (iv) with urban and economic developments; (v) strategic orientations, and (vi) an action or business plan with short, medium and long term targets.

2. Selection of Subprojects

3. In selecting the subprojects, the following general criteria should be followed:
- (i) Cities of more than 15,000 inhabitants, or with recognized tourism and/or economic development potential, unless otherwise agreed with ADB.
 - (ii) The subproject deals with (i) urban infrastructures¹ stimulating economic development and tourism; (ii) urban services management, or (iii) intermodal measures to improve connections between cities or regions, and urban management improvements.
 - (iii) The subproject has a proven consumer demand analysis, is likely to trigger positive externalities in terms of social impact, economic and tourism development and economic regeneration; is technically sound, and its feasibility assessment meets the engineering, financial, economic, environmental, and social requirements of Armenia and ADB; and
 - (iv) The subproject has been granted government approvals and endorsements and has been allocated sufficient counterpart funding to make the land available, implement the subproject as scheduled and operate and maintain such project/subproject facilities upon completion.
 - (v) The subproject does not involve prohibited investment activity under appendix 5 of the 2009 Safeguard Policy Statement.

¹ Construction, extension, upgrading, or rehabilitation of urban infrastructures, including, without limitation, roads, urban waterfronts and greens areas, public transport, traffic management, parking and multimodal facilities, interregional transport services, urban regeneration, water supply, sanitation, pumps, energy efficiency and heating system, waste management treatment, landfill, information technology and other social and economic facilities.

4. For subprojects added in the course of the MFF, due to an updating of the Government's Investment Plan, all relevant clearances should be sought prior to submission of the PFRs to ADB.

3. Appraisal of Subprojects

5. When appraising the subprojects, following general criteria should be followed:
- (i) The feasibility study shows that the subproject meets ADB's technical, economic, financial, and institutional requirements;
 - (ii) The economic viability of the subproject should have been demonstrated by an economic analysis undertaken in accordance with ADB's *Guidelines for the Economic Analysis of Projects* (1997).
 - (iii) The financial sustainability of the subproject should have been demonstrated through a financial analysis and financial management assessment undertaken in accordance with Chapters 3, 4, and 5 of ADB's *Handbook for Borrowers on the Financial Management and Analysis of Projects* (2006).
 - (iv) For a subproject with land acquisition and resettlement impact, a resettlement plan should be prepared, in accordance with the Land Acquisition and Resettlement Framework of the investment program (incorporated by reference in Schedule 5 to this FFA);
 - (v) An initial environment examination (IEE) or an environment impact assessment (EIA) as applicable should have been undertaken for the subproject with sufficient mitigation measures and budget for managing potential negative environmental impacts, in accordance with the Environment Assessment and Review Framework of the Investment Program (incorporated by reference in Schedule 5 to this FFA); and
 - (vi) The implementation arrangements, institutional strengthening and capacity development plan for the subproject have been prepared.

B. APPROVAL PROCESS

6. Approval procedures for projects proposed for financing under the MFF will follow the required review and approval processes in Armenia as supplemented by the requirements attached to Schedule 5 of this FFA. For the Tranche 1 subprojects proposed for financing under this MFF, all necessary approvals in Armenia have been obtained prior to the contract awards. The following process will be followed when preparing and submitting a periodic financing request:

- (i) EA, or IA if applicable, reviews and screens the subproject proposals to confirm their compliance with eligibility criteria, and has them reviewed and endorsed by the Yerevan Municipality and the supervisory board;
- (ii) EA, or IA if applicable, with the support from the Program Management Facility, ensures implementation and appraisal of the feasibility and due diligence studies for the subprojects;
- (iii) EA, or IA if applicable, prepares the periodic financing request (PFR) based on the subproject feasibility and due diligence reports;
- (iv) Supervisory Board with the assistance of the EA and IA review and endorse the subproject feasibility and due diligence reports as well as the corresponding PFR;
- (v) EA, or IA if applicable, submits, through the Government, the endorsed PFR together with subproject feasibility and due diligence reports for ADB's approval.

- (vi) Subject to satisfactory compliance with the selection criteria and approval procedures, and in compliance with ADB's relevant policies, ADB will approve the proposals of the projects.
- (vii) EA, or IA if applicable, will proceed with procurement exercise in accordance with ADB's Procurement Guidelines and Guidelines on the Use of Consultants_(2010, as amended from time to time).

7. The Government of Armenia, EA, or IA if applicable, and ADB will maintain contact through periodic ADB review missions and semi-annual progress reports, and in so doing may affect advanced consultation on PFRs prior to submission to ADB.

SCHEDULE 5
(ARM: Sustainable Urban Development Investment Program)

ENVIRONMENT AND SOCIAL SAFEGUARDS

1. Armenia will ensure that all the requirements prescribed in this Schedule and the following safeguard frameworks and plans that have been prepared with respect to the multitranche financing facility (MFF) and the first tranche, and of which ADB has been provided full copies, and which are deemed incorporated herein by reference, are complied with during the processing and implementation of the Projects financed under the Facility:
 - (i) environmental assessment and review framework (EARF) approved on 24 September 2010,
 - (ii) land acquisition and resettlement framework (LARF) approved on 24 September 2010,
 - (iii) environmental management plan (EMP), and
 - (iv) land acquisition and resettlement plan (LARP) for the first tranche approved on 24 September 2010.
2. The frameworks cover the Facility-specific information and requirements in accordance with ADB's safeguard policies: (i) the general anticipated impacts of the components or subprojects likely to be financed under the MFF on the environment, involuntary resettlement, and indigenous peoples; (ii) the safeguard criteria that are to be used in selecting components, subprojects; (iii) the requirements and procedure that will be followed for screening and categorization, impact assessments, development of management plans, public consultation and information disclosure (including the 120-day disclosure rule, if required), and monitoring and reporting; and (iv) the institutional arrangements (including budget and capacity requirements) and the client's and ADB's responsibilities and authorities for the preparation, review and clearance of safeguard documents.
3. Prior to the preparation of each PFR, the applicability and relevance of each Safeguard framework for environmental assessment, involuntary resettlement, and indigenous people will be reviewed and updated to ensure relevance and consistency with applicable country legal frameworks and ADB's Safeguard Policy Statement (2009, as amended from time to time).
4. In all cases, for each new PFR preparation, the Executing Agency (EA), or implementing agency (IA) if applicable, will review ongoing subprojects under the Facility to check on the status of compliance with the safeguards plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the projects included in the tranche being processed. In any case if major noncompliance is discovered in the course of the review of ongoing subprojects, a corrective action plan will be prepared and submitted to ADB.
5. In addition, all ADB Safeguards Policies in effect as of the date the financing of a subproject is prepared or provided under the Facility will apply to such subproject. In the event there is a discrepancy between the laws and regulations of Armenia and ADB's Safeguards Policies, then ADB's Safeguards Policies shall prevail.

A. Environment

6. The EA, or IA if applicable, shall ensure that each subproject financed under the Facility are developed, conducted, implemented and maintained in accordance with all applicable laws and regulations of Armenia and ADB's Safeguard Policy Statement (2009).

7. The EA, or IA if applicable, shall ensure that a relevant environmental impact assessment (EIA) or initial environmental examination (IEE) (as applicable) is prepared for each subproject financed under the Facility in accordance with all applicable laws of Armenia and ADB's Environment Policy embedded in ADB's Safeguard Policy Statement (2009), and that all EIA or IEEs are approved by ADB and Armenia's Ministry of Nature Protection and are adhered to during design, construction and operation phases of such subprojects.

8. The EA, or IA if applicable, shall ensure that the EMP is implemented. All recommendations of the EMP are incorporated in the bidding documents, civil works contracts and consultant's contracts to ensure compliance.

9. The EA, or IA if applicable, shall: (i) monitor the implementation of EMPs by the contractor; (ii) ensure that civil works and consulting services contracts include specific provisions for EMPs' preparation, implementation and monitoring, (iii) ensure that mitigation measures in EMPs are adequately implemented by the contractors, and (iv) provide adequate budgetary allocation for this activity. The EA, or IA if applicable, shall also ensure timely submission of semi-annual monitoring reports on EMPs implementation to ADB on a subproject during program implementation.

10. No civil works contract shall be awarded until the corresponding IEE or EIA as may be applicable to subproject financed under the Facility has been approved by ADB.

B. Land Acquisition and Resettlement

11. The EA, or IA if applicable, shall ensure that land and rights-of-way required by the subprojects are made available free and clear from any and all rights and claims of third parties and any other encumbrances whatsoever in a timely manner and that the provisions of the LARPs are implemented in conformity with (i) all applicable laws and regulations of Armenia, (ii) ADB's Safeguard Policy Statement (2009) on Involuntary Resettlement, and the agreed LARF.

- (i) LARF shall be reviewed, if necessary updated, and submitted for ADB approval at least annually and at the beginning of the preparation of each tranche under the Facility. A LARP consistent with the reviewed and updated LARF shall be prepared for each subproject proposed for financing under the Facility.
- (ii) The review and update of LARF and preparation of a LARP for each subsequent subproject consistent with the LARF shall be a condition for such subproject appraisal.
- (iii) Preparation of an updated LARP for each subproject based on the final design or equivalent and consistent with the LARF shall be a condition for approval of the award of relevant civil works contract(s).
- (iv) Completion of the implementation of the LARP shall be a condition for the commencement of civil works. The EA, or IA if applicable, shall incorporate this condition in the civil works contract(s).

12. As per the ADB's Safeguard Policy Statement (2009) on Involuntary Resettlement, the following shall be required:

SCHEDULE 6
(ARM: Sustainable Urban Development Investment Program)

UNDERTAKINGS

In addition to such undertakings as ADB will reasonably require in legal agreements for individual tranches under the Facility, Armenia undertakes that with the assistance of ADB, it will ensure that:

- (i) **Urban sector policy and sector management:** (i) ADB is kept informed of Armenia's policies and programs related to the urban sector and economic development that will materially affect the economic viability of each project, subproject, or component financed under the Facility. (ii) Best efforts are used to sustain and strengthen urban sector particularly with the creation of Urban Transport Authority in Yerevan, and other relevant sector-oriented agencies in other urban areas. (iii) Developing the human resources, technical, managerial and administrative capacity in the urban subsector to achieve greater efficiency in planning, developing and operating the infrastructure financed under the Investment Program is of high priority.
- (ii) **Counterpart funding and resources:** (i) Financial, technical and human resources shown in the Investment Program and Tranche 1 financing plans, and the implementation arrangements will be provided on a timely basis; (ii) Adequate funds to sustainably maintain the project throughout its service life will be allocated as well as capital investment subsidies, when fully cost recovery is not feasible; and (iii) Financial, human and technical resources to implement the urban subsector plan will be made available.
- (iii) **Construction quality:** (i) Subprojects under the Investment Program are compliant with the international standards and relevant international agreements to which Armenia is a contracting party; (ii) Sound contract management and quality control procedures are performed in accordance with internationally acceptable standards; and (iii) Completed works comply with the design drawings, construction specifications and other documents stipulated in the bidding documents.
- (iv) **Land acquisition and resettlement:** (i) In the event that any land acquisition or resettlement becomes necessary, appropriate land acquisition and resettlement plans (LARPs) will be prepared in accordance with the national laws and regulations, the resettlement framework and the ADB's *Safeguard Policy Statement* (2009) in consultation with the affected people; (ii) All LARPs are disclosed to the public and submitted to ADB for approval; (iii) All land and right-of-way required for the project implementation are made available in a timely manner, (iv) Land acquisition and resettlement are carried out promptly and efficiently following the LARPs agreed with ADB and monitored, evaluated, and reported to ADB as required in the LARPs; and (v) Any civil works will be commenced only after the required land has been acquired and affected households have been compensated at full replacement cost.
- (v) **Environment:** (i) Projects under the investment program are designed, carried out, maintained, and monitored in compliance with (a) all applicable environmental laws and regulations of Armenia; (b) ADB's *Safeguard Policy Statement* (2009); (c)

environmental assessments (IEEs/EIAs) prepared for each individual project; and (d) EMPs, including the mitigation measures and monitoring requirements arising from the implementation of the IEEs/EIAs. (ii) Civil works contractors' specifications include requirements to comply with the environmental mitigation measures contained in the IEEs/EIAs and EMPs. (iii) Civil works contractors are supervised to ensure compliance with the requirements of the IEEs/EIAs and EMPs.

- (vi) **Local consultation and gender:** (i) Gender Action Plan agreed under the MFF is implemented; (ii) all local consultations to address safety, social, and cultural issues during implementation of the investment program are carried out as recommended in the summary poverty reduction and social strategy; (iii) men and women are given equal employment opportunities directly, or indirectly, arising from the Investment Program and without any differentiation of wages for equal work; and (iv) mechanisms for maximizing local employment benefits will be included in the bidding documents.
- (vii) **Health risks and prevention:** all civil works contracts will include a requirement to conduct an information and education campaign on sexually transmitted diseases and HIV/AIDS for construction workers as part of the health and safety program at campsites during the construction period.
- (viii) **Anticorruption; transparency and good governance:** EA will follow ADB's *Anticorruption Policy* (1998, as amended to date) and acknowledge that ADB, consistent with its commitment to good governance, accountability and transparency, reserves the right to undertake directly, or through its agents, investigation of any alleged corrupt, fraudulent, collusive or coercive practices related to the project and cooperate with such investigation and extend all necessary assistance including access to all relevant books and records, and engaging independent experts who may be needed for satisfactory completion of such investigations. All contracts financed by ADB under the investment program include provisions specifying the right of ADB to audit and examine the records and accounts of the implementing agency and all contractors, suppliers, consultants, and other service providers as they relate to the MFF. Additional measures to improve governance, accountability, and transparency under the MFF, include (i) independent external auditing of contracts, project accounts, and financial statements; (ii) publications on all procurement-related matters by the Executing or Implementing Agency as applicable, and (iii) timely disclosure of information on selection of consultants and contractors through local newspapers.

FORM OF PERIODIC FINANCING REQUEST

Date :
 To : Asian Development Bank
 6 ADB Avenue
 Mandaluyong City, Metro Manila
 ATTENTION : Director General, Central and West Asia Department
 Fax No. []

Dear Director General:

Sustainable Urban Development Investment Program - Periodic Financing Request (PFR) # 1

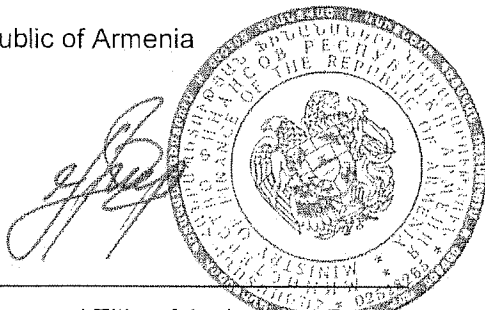
Please refer to the Framework Financing Agreement (FFA) for Sustainable Urban Development Investment Program dated 24 March 2011 between Asian Development Bank (ADB) and the Republic of Armenia (the Borrower). Expressions defined in the FFA shall have the same meanings herein.

Pursuant to the provisions of the FFA, the Borrower requests ADB to process this PFR for the first tranche of the Facility, in the form of a loan from its Special Funds resources. The proposed financing amounts, terms, conditions, and financing plan are specified in Attachment A hereto. Description of the Project for which financing is hereby requested are set out in Annexes 1 - 3 of Attachment A hereto.

It is our understanding that Articles of Agreement of ADB are designed to ensure that the proceeds of any loan are used only for the purposes for which the loan was granted. Recognizing this, the Borrower certifies that it wishes ADB to process the said PFR for the purposes of carrying out a part of the Sustainable Urban Development Investment Program in accordance with the provisions of the FFA, the loan and project agreements, and supplementary documents to be agreed between ADB and the Borrower.

We understand that this representation will be relied upon by ADB in approving the PFR and in approving future account arrangements and the placement of funds advanced thereto.

By: Republic of Armenia



[Full Name and Title of Authorized Representative]

Vache Gabrielyan

Minister of Finance

**Investment
Program
Description**

The Project proposed for financing under this Periodic Financing Request will comprise the following parts:

- A. Urban Infrastructure
 - (i) Argavand Highway–Shirak St road (West);
 - (ii) Artashat Highway–Shirak St. and St. Tamanciner section road (South-West).
- B. Institutional Strengthening to strengthen institutional framework and urban transport organization, increase coordination, monitoring and financing of urban transport subsector; and
- C. Program Management and Capacity Building and consulting services for subproject preparation, construction supervision, audit, social and environmental assessments, and institutional capacity development in the urban transport sector.

Details are in Annex 1.

**Cost Estimates and
Financing Plan**

The total cost of the Tranche 1 Project is estimated at \$60.05 million, inclusive of taxes, duties, land acquisition and resettlement, and interest and other charges on the loan during construction. The detailed cost estimates and financing plan are provided in Annex 2.

The financing plan for the Investment Program is summarized below.

Financing Source	Total (\$million)	Share (%) of Total
Asian Development Bank	48.64	81.00%
Government	11.41	19.00%
Total	60.05	100%

Source: Asian Development Bank estimates.

**Loan Amount and
Terms**

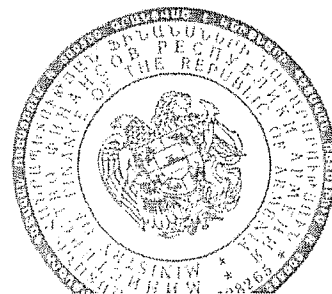
The first tranche of the MFF is proposed as a loan of \$48.64 million equivalent from the ADB's Special Funds resources, with a 32-year term, including a grace period of 8 years, an interest charge of 1.0% per annum during the grace period and 1.5% per annum thereafter, and such other terms and conditions set forth in the loan and project agreements for tranche 1.

**Period of
Loan/Guarantee
Utilization**

The Tranche 1 project is expected to be completed by 31 December 2015. No disbursements from the loan account will be requested or made later than 30 June 2016 or such other date as may from time to time be agreed between ADB and the Borrower.

**Advance
contracting**

Advance contracting is requested for works, good and consulting services.



Retroactive Financing	Retroactive financing is requested for works, goods consulting services, not exceeding the amount of \$9.73 million (20% of the loan amount), incurred before loan effectiveness, but not earlier than 12 months before the signing of the legal agreement.
Implementation Arrangements	<p>The Ministry of Economy (MOE) will be the executing agency and the City of Yerevan (Yerevan) will be the Implementing Agency. Program will be monitored by the Government supervisory board to ensure full support at the policy level from the involved ministries. Yerevan will oversee the progress of the investment program, look after the procurement and manage the loan disbursement.</p> <p>Yerevan will handle date-to-date implementation of the program and would be responsible for (i) organizing procurement; (ii) supervising and monitoring program implementation; (iii) providing any counterpart assistance as required; and (iii) implementing environmental and social safeguards plans.</p>
Procurement and Consulting Services	All works and goods to be financed under the Facility will be procured in accordance with ADB's <i>Procurement Guidelines</i> (2010, as amended from time to time). All consulting services to be financed under the Facility will be procured in accordance with ADB's <i>Guidelines on the Use of Consultants</i> (2010, as amended from time to time). The Procurement Plan is attached as Annex 3.
Readiness of the Investment Program for Implementation	The Project in this loan has been appraised by the EA and the IA. The EA and the IA have prepared the designs and the necessary safeguards requirements. Tender documents for the first Project will be ready to tender within twelve months of loan effectiveness. IA will prepare the detailed terms of references (TORs) upon termination of the technical assistance and the request for proposal for the selection of the consultants as well.
Safeguards	Please see attached (i) Environmental Assessment Review Framework, (ii) Initial Environmental Examination, (iii) Land Acquisition and Resettlement Framework; and (iv) Land Acquisition and Resettlement Plan.



I. PROJECT DESCRIPTION

A. Impact and Outcome

1. Impact

- Improved urban environment, local economy and enhanced private sector involvement within urban areas

2. Outcome

- improved efficiency, reliability and affordability of urban transport infrastructures and services in Yerevan

B. Outputs

1. Component A: Urban infrastructure

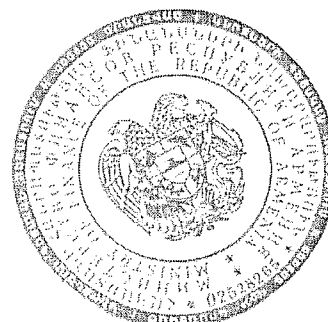
- (i) Argavand Highway–Shirak St road (West)
- (ii) Artashat Highway–Shirak St. and St. Tamanciner section road (South-West)

2. Component B: Institutional strengthening

- (i) Strengthened Institutional and monitoring management capacity of Yerevan and urban transport service providers
- (ii) Multimodal coordination and management committee set up
- (iii) Development of multimodal transport system (including tariff, ticketing, information, signage, urban transport website, accessibility, traffic model, and action plan) with an implementation action plan
- (iv) Set-up monitoring unit to evaluate impacts of the program including financial evaluation of the action plan

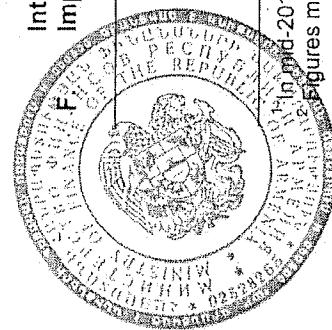
3. Part C: Project Management and capacity building

- (i) Consulting services for program management, engineering and supervision recruited for each project to be implemented, preparation of subsequent tranches, and advisory services for audit, safeguard monitoring and program evaluation
- (ii) Strengthening of Yerevan departments and units to oversee properly the Investment Program implementation with training program (transport planning and modeling, project, procurement, financial and safeguards management) organized for Yerevan and other urban transport providers and public awareness campaigns
- (iii) Equipment, software, traffic model, reference documents and awareness



DETAILED COST ESTIMATES AND FINANCING PLAN¹

		(\$ million) ²				ADB		Government	
		Total Cost		ADF		ADF		National Government	
Item		Amount	Category	Amount	Category	Amount	Category	Amount	Category
A. Urban Infrastructure									
1	Investment Program								
	Base cost	34.59		34.59	100.00	0.00		0.00	0.00
	Taxes and duties	9.01		0.00	0.00	9.01		100.00	100.00
	Subtotal (A)	43.60		34.59	100.00	9.01		20.67	20.67
B. Institutional Strengthening									
1	Base cost	0.85		0.85	100.00	0.00		0.00	0.00
2	Taxes and duties	0.19		0.00	0.00	0.19		100.00	100.00
	Subtotal (B)	1.04		0.85	81.97	0.19		18.03	18.03
C. Program Management and Capacity Building									
1	Base cost	2.90		2.90	100.00	0.00		0.00	0.00
2	Taxes and duties	0.64		0.00	0.00	0.64		100.00	100.00
	Subtotal (C)	3.54		2.90	81.97	0.64		18.03	18.03
D. Resettlement									
1	Land acquisition	1.57		0.00	0.00	1.57		100.00	100.00
2	Resettlement cost	4.80		4.80	100.00	0.00		0.00	0.00
	Subtotal (D)	6.37		4.80	75.34	1.57		24.66	24.66
E. Contingencies									
1	Physical	4.47		4.47	100.00	0.00		0.00	0.00
2	Price	0.00		0.00	0.00	0.00		0.00	0.00
	Subtotal (E)	4.47		4.47	100.00	0.00		0.00	0.00
F. Interest Charges During Implementation									
		1.02		1.02	100	0.00		0.00	0.00
Total		60.05		48.64	81.00	11.41		19.00	19.00



in mid-2010 prices.

Figures may not add up because of rounding

PROCUREMENT PLAN

Country: Armenia Program Name: Sustainable Urban Development Investment Program Executing Agency: Ministry of Economy Date of first Procurement Plan: May 2010	Name of Borrower: Government of Armenia Loan Amount: \$48.64 million Date of Approval: Loan approval scheduled on 31 March 2011 Date of this Procurement Plan: 2 March 2011
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A. Project Procurement Thresholds

B. Procurement of Goods, Works and Consulting Services

- All procurement of goods and works will be undertaken in accordance with ADB's *Procurement Guidelines*¹
- The procedures to be followed for national competitive bidding shall be those set forth in the Law of Armenia, with the clarifications and modifications described in Section E below as required for compliance with the ADB's Procurement Guidelines (2010, as amended from time to time).
- All consultants {and nongovernment organizations (NGOs) if appropriate} will be recruited according to ADB's *Guidelines on the Use of Consultants*.² The terms of reference for all consulting services are detailed in Section D below

C. Process Thresholds and Review Requirement

1. Project Procurement Thresholds

1. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works, and consulting services.

Table I-1: Project Procurement Thresholds

Procurement of Goods and Works	
Method	Threshold
International Competitive Bidding (ICB) for Works ¹	> \$1,000,000
International Competitive Bidding for Goods ¹	> \$500,000
National Competitive Bidding (NCB) for Works ¹	Beneath that stated for ICB, Works
National Competitive Bidding for Goods ¹	Beneath that stated for ICB, Goods
Shopping for Works	Below \$100,000
Shopping for Goods	Below \$100,000
Direct contracting for works and goods	<= \$10,000

⁽¹⁾ Refer to Para. 3 of PAI 3.04 National Competitive Bidding)

¹ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

² Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at <http://www.adb.org/documents/handbooks/project-implementation/>

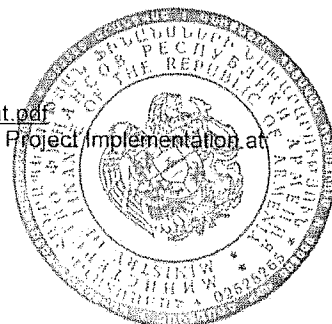


Table I-2: Procurement Threshold- Consulting Services

Procurement of Consulting services	
Method	Threshold
Quality Cost Based Selection (QCBS)	Full Technical Proposal >\$500,000 Simplified Technical Proposal (<=\$500,000 but >\$100,000)
Quality based selection (QBS)	< = \$500,000 and > \$100,000
Fixed Budget Selection (FBS)	< = \$500,000 and > \$100,000
Single Source Section (SSS)	< = \$500,000 and > \$100,000
Consultant qualification selection (CQS)	< = \$200,000 and > \$100,000
Least Cost Selection (LCS)	< = \$100,000

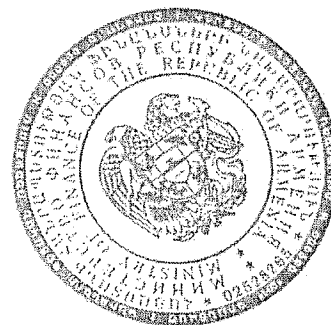
2. ADB Prior or Post Review

2. Except as ADB may otherwise agree, the following prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Table I-3: Procurement Review Requirement

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	ADB SBD
ICB Goods	Prior	ADB SBD
NCB Works	Prior and Post	ADB SBD (prior followed by post) Usage subject to review of the borrower's public procurement laws and regulations. Prior review applies to the procurement of the first NCB contract by the project management unit. If first contract procured satisfactorily, thereafter post review.
NCB Goods	Prior and Post	
Shopping for Works and Goods	Post	ADB SBD
Direct contracting for Works and Goods	Post	ADB SBD
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	QCBS 80:20 or 90:10 RFP
Quality-Based Selection (QBS)	Prior	RFP
Other Selection Methods: Consultants Qualifications (CQS), Least-Cost Selection (LCS), Fixed Budget (FBS), and Single Source (SSS)	Prior	RFP
Recruitment of Individual Consultants		
Individual Consultants	Prior	Bio data Applied in accordance with Section 2.34, <i>Guidelines on the Use of Consultants</i> (2010, as amended from time to time)

ADB = Asian Development Bank, ICB = international competitive bidding, NCB = national competitive bidding, RFP = request for proposals, SBD = standard bidding documents.



D. Tentative Procurement Plan (Tranche 1)

1. Goods and Works Contracts Estimated to Cost More Than \$1 Million

3. The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Table I-4: Civil Works

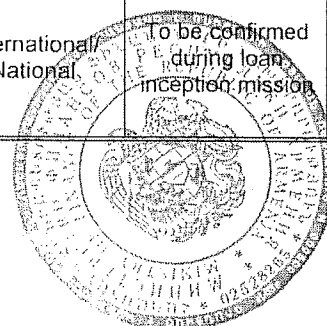
General Description	Contract Value (cumulative \$Million)	Procurement Method and prequalification	Estimated Number of Contracts	Advertisement Date (quarter/year)	Comments
Argavand Highway–Shirak St (West)	\$23.16	1	ICB (includes prequalification)	—	Might be procured as an Turn-key/EPC contract if market is favorable. TBC during EPCM
Artashat Highway–Shirak St. and St. Tamanciner section (South-West)	\$18.35	1	ICB (includes prequalification)	—	Might be procured as an Turn-key/EPC contract if market is favorable. TBC during EPCM

2. Consulting Services Contracts Estimated to Cost More Than \$100,000

4. The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Table I-5: Consultants

General Description	Contract Value (cumulative)	Procurement or Recruitment Method	Estimated Number of Contracts	Advertisement Date (quarter/year)	International or National Assignment	Comments
Engineering, procurement, project management and supervision	\$4.15	QCBS	2	II-2011	International	To be confirmed during loan inception mission
Preparation of Tranche 2 projects	\$2.14	QCBS/ QBS/ FBS/CQS/LCS/ CQS/SSS	3	II-2011	International/ National	To be confirmed during loan inception mission
Advisory services for audit, safeguard monitoring and program evaluation	\$0.50	QCBS/ QBS/ FBS/CQS/LCS/ CQS/SSS/ ADB procedures for recruitment of individual consultants	Multiple	II-2011	International/ National	To be confirmed during loan inception mission
Training on project management, procurement, financial and safeguards management	\$0.39	QCBS/ QBS/ FBS/CQS/LCS/ CQS	4	II-2011	International/ National	To be confirmed during loan inception mission
PIU incremental administration	\$0.40	ADB procedures for recruitment of individual consultants	multiple	II-2011	International/ National	To be confirmed during loan inception mission
Tariff and ticketing system, accessibility and multimodal information and transport reorganization	\$0.22	QCBS/ QBS/ FBS/CQS	multiple	I-2012	International/ National	To be confirmed during loan inception mission



3. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000

5. The following table groups smaller-value goods, works and consulting services contracts for which procurement activity is either ongoing or expected to commence within the next 18 months.

Table I-6: Goods and Works < \$1 Million

General Description	Contract Value (cumulative)	Procurement Method and prequalification	Estimated Number of Contracts	Advertisement Date (quarter/year)	Comments
Tariff and ticketing system, accessibility and multimodal information and transport reorganization	\$0.90	Multiple	ICB/NCB and shopping (no prequalification)		To be refined during Loan inception
Equipment, softwares, traffic model, reference documents and awareness	\$0.40	Multiple	NCB and shopping (no prequalification)	—	To be refined during Loan inception

E. National Competitive Bidding (NCB)

1. General

6. The procedures to be followed for national competitive bidding shall be the open tender method (including the two-stage where appropriate) set forth in the Law on Procurements of 1 January 2005 with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the ADB, Procurement Guidelines ("Guidelines").

2. Eligibility

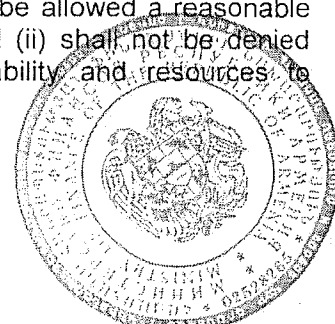
7. The eligibility of bidders shall be as defined under section I of the Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the Guidelines. Bidders must be nationals of member countries of ADB, and offered goods, services, and works must be produced in and supplied from member countries of ADB.

3. Prequalification

8. Normally, postqualification shall be used, unless prequalification is explicitly provided for in the Loan Agreement/Procurement Plan. Domestic and Foreign Contractors shall be allowed to participate in bid exercises using postqualification procedure. In case prequalification of contractors is stipulated in the Loan Agreement/Procurement Plan, domestic and foreign contractors shall be allowed to participate in the prequalification exercise.

4. Registration and Licensing

- (i) Bidding shall not be restricted to pre-registered/licensed firms.
- (ii) Where registration or licensing is required, bidders (i) shall be allowed a reasonable time to complete the registration or licensing process; and (ii) shall not be denied registration/licensing for reasons unrelated to their capability and resources to



- (iii) successfully perform the contract, which shall be verified through post-qualification.
- (iii) Foreign bidders shall not be precluded from bidding. If a registration or licensing process is required, a foreign bidder declared the lowest evaluated bidder shall be given a reasonable opportunity to register or to obtain a license.

5. Bidding Period

9. The minimum bidding period is twenty-eight (28) days prior to the deadline for the submission of bids.

6. Bidding Documents

10. Procuring entities should use standard bidding documents for the procurement of goods, works and services acceptable to (ADB).

7. Preferences

11. No domestic preference shall be given for domestic bidders and for domestically manufactured goods.

8. Advertising

12. Invitations to bid shall be advertised in at least one widely circulated national daily newspaper or freely accessible, nationally-known website allowing a minimum of twenty-eight (28) days for the preparation and submission of bids.

13. Bidding of NCB contracts estimated at US\$500,000 equivalent or more for goods and related services or US\$1,000,000 equivalent or more for civil works shall be advertised on ADB's website via the posting of the Procurement Plan.

9. Securities

- (i) Bid Security (tender security)

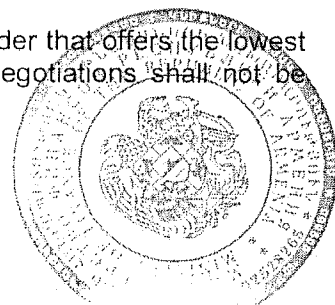
Where required, bid security shall be in the form of a bank guarantee from a reputable bank.

- (ii) Performance Security (contract execution security)

Performance security shall be provided within twenty-eight (28) days of the notification of contract award.

10. Bid Opening and Bid Evaluation

- (i) Bids shall be opened in public.
- (ii) No bid shall be declared invalid/rejected at the time of bid opening.
- (iii) Minutes/Record of Bid Opening shall be provided to all bidders.
- (iv) Evaluation of bids shall be made in strict adherence to the criteria declared in the bidding documents and contracts shall be awarded to the lowest evaluated bidder.
- (v) Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations.
- (vi) No bidder shall be rejected on the basis of a comparison with the employer's estimate and budget ceiling without ADB's prior concurrence.
- (vii) A contract shall be awarded to the technically responsive bidder that offers the lowest evaluated price, and meets the qualifying requirements. Negotiations shall not be permitted.



- (viii) Price verification shall not be applied.

11. Rejection of All Bids and Rebidding

14. Bids shall not be rejected and new bids solicited without ADB's prior concurrence. Bids shall not be declared invalid because of procedural delays on the part of executing agencies without prior ADB's approval.

12. Participation by Government-owned enterprises

15. Government-owned enterprises in the Republic of Armenia shall be eligible to participate as bidders only if they can establish that they are legally and financially autonomous, operate under commercial law and are not a dependent agency of the contracting authority/executing agency/implementing agency. Furthermore, they will be subject to the same bid and performance security requirements as other bidders.

13. Right to Inspect/Audit

16. A provision shall be included in all NCB works and goods contracts financed by ADB requiring suppliers and contractors to permit ADB to inspect their accounts and records and other documents relating to the bid submission and the performance of the contract, and to have them audited by auditors appointed by ADB.

14. Fraud and corruption

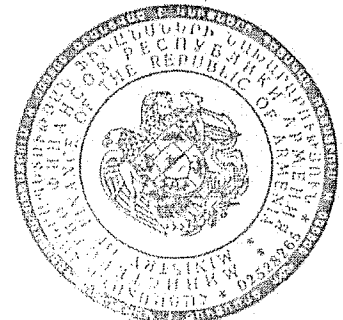
- (i) The Borrower shall reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question.
- (ii) The Bank (ADB) will declare a firm or individual ineligible, either indefinitely or for a stated period, to be awarded a contract financed by ADB, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, ADB-financed contract.

15. Joint Venture and Estimated Contract Prices

- (i) Joint venture partners shall be jointly and severally liable for their obligations.
- (ii) Estimated contract prices shall not be advertised.

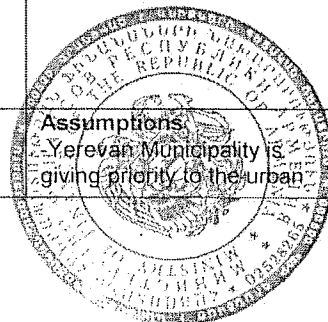
16. Disclosure of Decision on Contract Awards

17. At the same time that notification on award of contract is given to the successful bidder, the results of bid evaluation shall be published in a local newspaper, or a well-known freely accessible website identifying the bid and lot numbers and providing information on (i) name of each Bidder who submitted a Bid, (ii) bid prices as read out at bid opening; (iii) name of bidders whose bids were rejected and the reasons for their rejection, and (iv) name of the winning Bidder, and the price it offered, as well as duration and summary scope of the contract awarded. The executing agency/implementing agency/contracting authority shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids are not selected.



DESIGN AND MONITORING FRAMEWORK FOR TRANCHE 1

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Improved urban environment, local economy and enhanced private sector in Yerevan	By 2018, -Accidents reduced by at least 2% (baseline 2008: 221 fatalities and 1,702 injured) -Air pollution due to urban transport reduced by 2% compared to 90% of CO2 emission baseline in 2009. -Private investment in Yerevan urban transport sector increased by 4% compared to 2009	-Report of multiple Indicators from Municipal departments, companies and NGO -Statistical surveys (MOTC, MONP or other agencies) -Surveys by YM	Assumptions -The government pursues strategy of growth -Appropriate environmental framework in place -Political and economic stability. Risk - Economy vulnerability to exogenous shocks.
Outcome Efficient, reliable and affordable urban infrastructures and services provided in Yerevan	By 2016, -Travel time from South to North Yerevan decreased by 25% compared to 45 mn in 2009 -Bus and trolleybus commercial speed increased by 3km/h, baseline 2009: 14 km/h -Public transport ridership in Yerevan increased by 10% from 200 million pax in 2009 -Citizens enable to benefit from construction employment opportunities (300 jobs)	-NGO, International and national transport associations report and database -Operators, Municipality Transport statistics or other agencies as appropriate - IA Project progress reports	Assumptions -Political will for efficient Program implementation -Prompt decision-making & counterpart funds release Risks -Political debate shifting urban transport focus -Slowdown in business environment undermined private sector appetite
Outputs Urban infrastructure extended, rehabilitated and improved in Yerevan	By 2016, -Completion of urban infrastructure: <ul style="list-style-type: none"> • 5.3km of road links constructed by YM; • 1 multiple levels intersection upgraded by YM; • at least 2 footbridges implemented by YM; • 1 km of upgraded urban street including pavement by YM; -Endorsement of design and feasibility studies for Tranche 2 by YM or applicable body: <ul style="list-style-type: none"> • urban road link designed • road/bus improvement feasibility 	- IA Project progress reports -Municipal transport statistics -YM reports -Surveys conducted by the YM	Assumptions -YM has capacity to undertake safeguards policy Risks -Rising material costs.
Appropriate institutional capacity strengthened in Yerevan	By 2016, - YM and transport operators capacity strengthened: <ul style="list-style-type: none"> • -Multimodal coordination and management committee set up • -Multimodal transport system with action plan prepared and implemented (including tariff, ticketing, information, signage, urban transport website, accessibility, traffic model) -Monitoring unit to evaluate impacts of the program including financial evaluation of the action plan set-up in Yerevan	-YM website and municipal organization chart -YM project progress reports	Assumptions -YM receptive to reform agenda and to strategic planning -Continued political will to manage program implementation Risk -Interdepartmental coordination and support is not forthcoming
Establishment of skilled and efficient program	By 2016, -PIU is timely formed, and appropriately staffed and trained (with at least 25% women and at	- YM and MOE annual report and	Assumptions -Yerevan Municipality is giving priority to the urban



Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Implementation Unit in Yerevan	<p>least 5 staff beneficiaries trained) within YM and Yerevan trans</p> <ul style="list-style-type: none"> -Consultants are recruited on time by IA -Yearly contract awards and disbursement targets are achieved By IA -ADB Procedures and policy particularly for safeguards and Procurement are timely implemented and complied with by YM staff -Baseline data created and surveys undertaken with sex-segregated data by YM and operators 	<p>communication</p> <ul style="list-style-type: none"> -YM project progress reports 	<p>transport project and provide means to carry out the missions</p> <p>Risks</p> <ul style="list-style-type: none"> -Political issues shift urban transport priority

Activities with Milestones	Inputs				
1. Construction, improvement and rehabilitation of urban transport infrastructure	ADB: \$48.64 million				
<ul style="list-style-type: none">Detailed design completed by month 12 (YM, YDPIU)Timely land acquisition and implementation of resettlement plans before contractors contract awards by Yerevan Municipality (YM, YDPIU)Urban infrastructures constructed, commissioned, and made operational in phases between month 12 and month 36 (YM, YDPIU, contractors)	<table><tr><td>Item</td><td>Amount (\$ million)</td></tr><tr><td></td><td></td></tr></table>	Item	Amount (\$ million)		
Item	Amount (\$ million)				
2. Institutional Strengthening	Government: \$11.41 million				
<ul style="list-style-type: none">Multimodal committee set-up at the municipal level by Month 6 and action plan prepared by month 12 (YM, YT, Operators)Reform of bus and microbus tendering implemented by 2013Multimodal tariff and Ticketing system implemented by 2014Sex-disaggregated public transport passenger databases developed by month 24 (YM, YDPIU, YT Operators)Sex-disaggregated baseline survey conducted by month 6, and follow-up surveys continued until month 24 (YM, YDPIU, YT, Operators)	<table><tr><td>Item</td><td>Amount (\$ million)</td></tr><tr><td></td><td></td></tr></table>	Item	Amount (\$ million)		
Item	Amount (\$ million)				
3. Program Management and Capacity Building	Other financiers:				
<ul style="list-style-type: none">Safeguards specialist recruited by month 6 (YM, YDPIU)Consultants recruited by month 8 (YM, YDPIU, YT)Training plan developed by month 12 and conducted between month 12 and 36, with at least 30% of women participants (YM, YDPIU, YT, Operators)Office rehabilitation & equipment purchased by month 36 (YM, YDPIU)Support provided to the Program development, implementation and management for the whole duration of the Program (YM, YDPIU, YT).					

ADB = Asian Development Bank, GoA = Government of Armenia, MONP= Ministry of Natural Protection, MOTC= Ministry of Transport and Telecommunications, NGO = non-government organization, O&M = operation and maintenance, YDPIU = Yerevan Development Program Implementation Unit, YM = Yerevan Municipality
Source: Asian Development Bank

