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Report No: PAD1626

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT PAPER

ON A PROPOSED ADDITIONAL LOAN

IN THE AMOUNT OF US$140 MILLION

TO THE REPUBLIC OF AZERBAIJAN

AND RESTRUCTURING

FOR A

THIRD HIGHWAY PROJECT

Transport & ICT Global Practice
Europe and Central Asia

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 1, 2016)

Currency Unit	=	Azerbaijani Manat
AZN 1	=	US$0.63
US$1	=	AZN 1.60

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AF	Additional Financing
ARS	Azeryolservis OJSC
AZN	Azerbaijani Manat
CO2	Carbon Dioxide
CPF	Country Partnership Framework
DA	Designated Account
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
FY	Fiscal Year
GRS	Grievance Redress Service
HDM-4	Highway Development and Management Model
IBRD	International Bank for Restructuring and Development
IDA	International Development Association
IDB	Islamic Development Bank
IFI	International Financing Institutions
IFR	Interim Un-audited Financial Reports
IP	Implementation Progress
MMU	Motorway Management Unit
NPV	Net Present Value
PAD	Project Appraisal Document
PDO	Project Development Objective
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
RMU	Regional Motorway Maintenance Units
RPF	Resettlement Policy Framework
VAT	Value Added Tax
WBG	World Bank Group

Vice President:	Cyril E. Muller
Country Director:	Mercy Miyang Tembon
Country Manager:	Larisa Leshchenko
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REPUBLIC OF AZERBAIJAN
THIRD HIGHWAY PROJECT - ADDITIONAL FINANCING

Contents

ADDITIONAL FINANCING DATA SHEET

Azerbaijan

Azerbaijan Highway 3 Additional Financing

EUROPE AND CENTRAL ASIA

TRANSPORT & ICT GLOBAL PRACTICE

Basic Information – Parent			
Parent Project ID:	P118023	Original EA Category:	A - Full Assessment
Current Closing Date:	30-Sep-2016		

Basic Information – Additional Financing (AF)			
Project ID:	P156377	Additional Financing Type (from AUS):	Scale Up
Regional Vice President:	Cyril E Muller	Proposed EA Category:	
Country Director:	Mercy Miyang Tembon	Expected Effectiveness Date:	28-June-2016
Senior Global Practice Director:	Pierre Guislain	Expected Closing Date:	31-Dec-2019
Practice Manager/Manager:	Juan Gaviria	Report No:	PAD1626
Team Leader(s):	Elizabeth C. Wang/Nijat Valiyev		

Borrower				
Organization Name	Contact	Title	Telephone	Email
Ministry of Finance	Mardanov	Head of Department	994124044640	m.mardanov@maliyye.gov.az

Project Financing Data - Parent (Third Highway Project-P118023) (in USD Million)							
Key Dates							
Project	Ln/Cr/TF	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P118023	IBRD-78890	Effective	25-May-2010	11-Aug-2010	08-Nov-2010	31-Mar-2015	30-Sep-2016
P118023	IDA-47230	Effective	25-May-2010	11-Aug-2010	08-Nov-2010	31-Mar-2015	30-Sep-2016

Disbursements (as of February 23, 2016)									
Project	Ln/Cr/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed

P118023	IBRD-78890	Effective	USD	171.60	171.60	0.00	132.25	39.35	77.07
P118023	IDA-47230	Effective	USD	70.00	70.00	0.00	0.00	64.60	

Project Financing Data - Additional Financing Azerbaijan Highway 3 Additional Financing (P156377)(in USD Million)

[X] Loan [ ] Grant [ ] IDA Grant

[ ] Credit [ ] Guarantee [ ] Other

Total Project Cost: 155.50 Total Bank Financing: 140.00

Financing Gap: 0.00

Financing Source – Additional Financing (AF)	Amount
Borrower	15.50
International Bank for Reconstruction and Development	140.00
Total	155.50

Policy Waivers

Does the project depart from the CAS in content or in other significant respects?	No

Explanation

Does the project require any policy waiver(s)?	Yes

Explanation

The Additional Financing is processed under OP10.00 which requires the Implementation Status Report (ISR) ratings including the Development Objective and the Implementation Progress ratings to have been consistently rated as Moderately Satisfactory or better over the most recent 12 months. The Development Objective rating meets this criteria but the Implementation Progress rating does not as it was upgraded to Moderately Satisfactory in June 2015.

Has the waiver(s) been endorsed or approved by Bank Management?	Yes

Explanation

The waiver of the 12 month of well-performance has been endorsed by the Bank Management based on the improvements in the implementation progress.

Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Elizabeth C. Wang	Team Leader (ADM Responsible)	Senior Financial Officer		GTI03

Nijat Valiyev	Team Leader	Senior Infrastructure Specialist		GTI03
Andres Mac Gaul	Procurement Specialist	Senior Procurement Specialist		GGO03
Tural Jamalov	Financial Management Specialist	Financial Management Specialist		GGO21
Angela Nyawira Khaminwa	Safeguards Specialist	Senior Social Development Specialist		GSU03
Funda Canli	Team Member	Program Assistant		GTI03
Giang Thanh Huong Le	Team Member	Program Assistant		GTI03
Gulana Enar Hajiyeva	Safeguards Specialist	Senior Environmental Specialist		GEN03
Jimena Garrote	Team Member	Senior Counsel		LEGLE
Lela Shatirishvili	Safeguards Specialist	Consultant		GSURR
Sadig Aliyev	Team Member	Infrastructure Specialist		GTI03
Vusala Mamed Asadova	Team Member	Senior Program Assistant		ECCAZ

Extended Team

Name	Title	Location

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Azerbaijan	Salyan	Salyan		X	
Azerbaijan	Baku	Alat			
Azerbaijan	Shamakhi	Shamakhi			
Azerbaijan	Shamakhi	Shamakhi			
Azerbaijan	Baku	Baku			
Azerbaijan	Baku	Baku			
Azerbaijan	Absheron	Absheron			
Azerbaijan	Qobustan	Qobustan			

Institutional Data

Parent (Third Highway Project-P118023)

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Topics

[ ] Climate Change

[ ] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Rural and Inter-Urban Roads and Highways	95		
Transportation	General transportation sector	3		
Public Administration, Law, and Justice	Public administration-Transportation	2		
Total		100		

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Financial and private sector development	Infrastructure services for private sector development	28
Public sector governance	Administrative and civil service reform	70
Social dev/gender/inclusion	Other social development	1
Environment and natural resources management	Environmental policies and institutions	1
Total		100

Additional Financing Azerbaijan Highway 3 Additional Financing (P156377)

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Topics

[ ] Climate Change

[ ] Fragile, Conflict & Violence

[x] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Rural and Inter-Urban Roads and Highways	60		
Public Administration, Law, and Justice	Public administration-Transportation	40		

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Trade and integration	Other trade and integration	60
Financial and private sector development	State-owned enterprise restructuring and privatization	40
Total		100

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required

I. Introduction

1. This Project Paper seeks the approval of the Executive Directors to provide an additional loan in the amount of US$ 140 million to the Republic of Azerbaijan and restructure the Third Highway Project (Loan/Credit no. IBRD-78890/IDA-47230) in response to the letters received from the Government dated June 17, 2015 and February 1, 2016. The proposed Additional Financing (AF) Loan would finance the scaling up and restructuring of the Third Highway Project through financing for remaining works to upgrade the M4 road from Baku to Shamakhi to the Category 1 motorway standards, including expansion to four lanes of km 13.3- km15 and km 91-km107 and pavement strengthening works for existing lanes between km 15-km 91. The AF would also support the modernization of motorway management and maintenance through financing technical assistance and one-time capital investment for establishment of regional motorway maintenance units.

2. The Project Development Objective (PDO) will remain the same as in the original project. The Results Framework and Monitoring Indicators have been revised to reflect the additional road sections to be constructed and rehabilitated and the deepening of institutional reform. There are no changes to the implementation arrangements. The proposed Third Highway Project AF and restructuring are being requested for scaling up an existing project and increase its development effectiveness, as described in OP 10.00, and to extend loan/credit closing date on the original project[1] to be co-terminus with the Additional Financing. The preparation of the AF proceeded after RVP approval of the waiver requiring at least 12 months of Moderately Satisfactory or better performance. As of March 2016[2], the Third Highway Project's Progress towards Achievement of Project Development Objectives (PDO) has been Moderately Satisfactory for thirty-five months and Implementation Progress (IP) has been Moderately Satisfactory for ten months.

II. Background and Rationale for Additional Financing and Restructuring.

3. Country and Sector Context. Although Azerbaijan has made notable progress in economic growth and poverty reduction over the past decade, the economic situation has become more unstable due to falling oil prices. Economic growth averaged 10.5 percent per year during the period 2005-2015. Growth declined in 2011 to nearly zero but rebounded to 5.8 percent in 2013 and 2.8 percent in 2014. As crude oil and oil products accounted for about 90 percent of the country's goods exports, the government's fiscal position has deteriorated significantly. In December 2015, the Central Bank devalued the Manat a second time and announced adopting a floating exchange rate. The deterioration in fiscal trends implied decrease in public investment by 20 percent and overall budget by 17 percent. In 2016 fiscal consolidation is expected to continue, the budget is currently being revised with the reference price for oil at $25 per barrel as opposed to the previous price of $50 per barrel. Poverty incidence declined from 49 percent in the early 2001 to around 5 percent in 2014 and consumption of goods and services by households in the bottom 40 percent grew by over 2 percent per annum between 2007 and 2012, twice the rate of the top 60 percent. Improvements in living standards were accompanied by an expansion of the middle class from just over 4 percent to about 29 percent of the population. In spite of this considerable

[1] Loan/Credit no. IBRD-78890/IDA-47230 in total amount of US$241.6 million

[2] The proposed AF will be seeking Board Approval in March 2016 when the IP rating would have been Moderately Satisfactory for about ten months.

progress, a sizeable share of the population who have moved out of poverty remains vulnerable and could fall into poverty should economic conditions deteriorate.

4. In view of the above, the Government's priority to stimulate non-oil growth is now more important than ever. The sharp drop in oil price has brought to the fore the Government's need to accelerate and implement reforms and initiatives that move the country to a post-oil growth scenario. It has also meant that the Government requires more support from the International Financial Institutions (IFIs), including the World Bank, to complete the road investment activities it has already started and modernize the sector institutions and improve the efficiency of public spending in the sector.

5. Roads are the dominant transport mode in Azerbaijan accounting for 60 percent of freight and 90 percent of passenger transportation[3]. The Government has invested a total of about AZN10 billion into upgrading the road and urban transport infrastructure from 2005 to 2015[4]. Total lending from IFIs including the World Bank, EBRD, ADB and IDB between 2005 and 2014 amounted to AZN2.7 billion. The World Bank supported Azerbaijan's road investment program through the Highway Project, Second Highway Project and Third Highway Project, which totaled about US$1 billion in lending. The biggest share of these investments has been made to rehabilitate and upgrade the main road network. While the Government's program also includes regional and local roads, the Government's priority under the current financial situation is to complete reconstruction of the magistral (M) road network, including M4 Baku-Shamakhi road.

6. One of the key Government's objectives is to improve the sustainability of road sector investments and efficiency of maintenance expenditures. A new organizational structure of the ARS approved in June 2015 established a new management and maintenance scheme for the motorways and consolidated a number of small local maintenance units.[5] The new structure separated management and maintenance of motorways from the rest of the road network which is well-aligned with the Bank's recommendations and the findings of an important technical assistance implemented under the Third Highway Project. A Motorways Maintenance Unit has been established at ARS headquarters to oversee management and maintenance of the motorways network (about 1600km). In addition, seven new state-owned Regional Motorway Maintenance Units (RMU) have been established as state-owned companies to execute maintenance of motorways based on corridor approach and service-level standards (see Annex 2A). The AF will provide technical assistance and one-time capital investment to help the RMUs to become functioning entities capable of fulfilling their mandate.

7. The Original Project and Its Performance. The Third Highway Project was approved by the Board on May 25, 2010 and became effective on November 8, 2010. The Project Development Objective is "to contribute to more efficient and safer Baku-Shamakhi and Yenikend-Shorsulu roads and higher quality road services as part of the general network upgrading

[3] The road network under the responsibility of the state owned road agency, Azeryolservis OJSC (ARS), consists of magistral (M) roads (1,654 km), republic (R) roads (1,795 km) and local (Y) roads (9,867 km).
[4] This includes investments into Baku urban road transport infrastructure.
[5] Order of the Ministry of Transport dated June 18, 2015 on "Improvement of the Organization and Operations of Azeryolservis OJSC"

to motorway standard, and to improve the management of the nascent motorway network." The Project was restructured in October 2013[6]. The parent project mainly finances civil works. Component 1 upgrades a 77 km section of the M4 Baku-Shamakhi and a 48 km section of the M3 Yenikend-Shorsulu roads into a four-lane motorway. Component 2 supports institutional development at ARS, especially for the management of the motorway network. Component 3 finances project management.

8. The progress towards achievement of PDO and overall Implementation Progress under the original Project are currently rated Moderately Satisfactory[7]. Disbursements under the Project have reached US$ 132.3 million (55%) out of total US$ 241.6 million Loan/Credit proceeds. All project funds are committed. Civil works are ongoing both on M4 Baku-Shamakhi road and M3 Alat-Masalli road. Land acquisition cases were substantially resolved [8]. The implementation of the technical assistance under the Project on modernization of motorway operations and maintenance has been satisfactorily completed. The Ministry of Transport of Azerbaijan has recently issued a decree to support motorway management and maintenance reform which has been a core objective of the policy dialogue in the road sector between the Government of Azerbaijan and the Bank over the past five years. The Government has adopted the recommendations of the study funded under the Third Highway Project whereby the motorway network will be managed by a motorway management unit and the maintenance of motorway will be on a corridor basis. The Government has requested to support the implementation of this reform within AF.

9. Rationale for Additional Financing. The proposed AF mostly supports scaling up of activities initiated under the original project to ensure full completion of the M4 Baku-Shamakhi corridor and support of motorway maintenance reform to ensure sustainability of road investments. The AF also supports restructuring of the original Project to extend its closing date from September 30, 2016 to December 31, 2019, to be co-terminus with the closing date of the Additional Financing. Finally, the AF helps to cover some cost-overrun under the original project due to changes in the design of M4 Baku-Shamakhi road.

10. Various options were considered to respond to the Government's request including: (i) *Preparation of a new project.* The proposed additional civil works are very closely related to the ongoing activities; therefore, splitting construction works into two projects was not justifiable due to technical complexities and higher costs involved; (ii) *Reallocation of funds within the original project.* All funds under the project have been committed therefore reallocation is not possible; (iii) *Financing from state budget or other IFIs.* Considering the current fiscal situation as a result of low oil prices, the state budget has acute deficits. Other IFIs are upgrading different motorway

[6] The restructuring revised the Project Development Objective, adjusted the project scope and co-financing arrangements, revised the related Monitoring Indicators and extended the Closing Date.

[7] The rating for Implementation Progress was upgraded from Moderately Unsatisfactory to Moderately Satisfactory on June 11, 2015 after civil works progressed once government experts on designs completed their review and pending land acquisitions were substantially resolved. The Borrower is in compliance with key loan/credit covenants, the performance of the Project Implementation Unit (PIU) is satisfactory and financial audits are on time and unqualified.

[8] The Third Highway Project, required acquisition of 230 private lands and 9 private structures along the Baku-Shamakhi road. The acquisition of most land and structures have been completed and affected people have received cash compensation for their properties which was estimated based on principles set in the RAP. Currently there is only one pending case in which the compensation amount transferred to the affected persons account has not been accepted by the affected person and the case is being reviewed in the court.

corridors and the Government's expressed priority is for the Bank to finance the completion of the M4 motorway; (iv) *Proposed Additional Financing.* The proposed additional road construction and maintenance activities represent a logical continuation of ongoing Project activities. Considering the above options and constraints, the recommendation is that the proposed AF is the most appropriate instrument. The AF will ensure smooth and efficient scale-up of the ongoing construction works and provide comprehensive response for implementation of an important institutional reform.

11. Alignment with the CPF and Twin Goals. The AF is fully aligned with the World Bank Country Partnership Framework (CPF) for Azerbaijan for FY15-20 by supporting two of the three pillars, namely "*Economic Competitiveness*" through improving connectivity for businesses and households and "*Sustainability and Resilience*" through building capacity for public resource management. The maintenance reform is fundamental and is seen as a major milestone in modernizing the road sector by both the Government and the Bank. As stated in the Azerbaijan Country Partnership Framework approved in July 2015, "*development of proper maintenance systems for the transport corridors will be at the core of the new WBG interventions".* The AF also supports the government's strategic program "Azerbaijan – 2020: The Vision of the Future", which provides the transport sector with objective of improving road connectivity through the main transport corridors.

12. The proposed AF is well aligned with the World Bank's corporate agenda of reducing poverty and enhancing shared prosperity. The project supports the development of the mountainous Shirvan region which has one of the lowest per capita incomes in the country. The project regions have high agriculture, industry, and tourism potential. The Government considers development of agriculture and tourism to be important for accelerating and expanding non-oil sector growth and jobs creation. Main project beneficiaries will include road users who would have reduced travel time and vehicle operating costs, enhanced connectivity to public amenities and services, and improved road safety. Benefits would also accrue to local population, who will experience positive outcomes in income, consumption, health and education. The mobility and accessibility gains resulting from the project can hence become a powerful tool for promoting growth, alleviating poverty, boosting the incomes of the bottom 40 percent, and enhancing social inclusion.

III. Proposed Changes

13. The AF does not involve a change in the project development objective (PDO), which remains the same. The current PDO was revised during the Project restructuring in 2014, when reconstruction of a road segment M3 Yenikend – Shorsulu was included in the Project scope and reflected in the PDO. The key activities under the proposed AF include additional works to complete upgrading of the M4 Baku-Shamakhi road, support for implementation of motorway maintenance reforms and cover some cost-overrun under the original Project. In particular, the AF involves the following three components:

14. Component 1: Motorway Improvement (US$103.4 mln, excl. VAT, including IBRD financing US$93.1 mln) The Component involves works to upgrade the Baku-Shamakhi section of M4 road to the Category 1 motorway standards, including (i) expansion of new road sections

between km 13.3- km15 and km 91- km107 to four lanes, as well as (ii) some additional civil works under the ongoing contracts resulting from the required design changes, including the pavement strengthening for existing lanes between km 15 - km 91. The Component will also finance technical supervision of civil works. Detailed description of the Component activities and their technical aspects is provided in the Annex 2.

15. Component 2: Institutional Development and Support for Motorway Maintenance Reform (US$20 million, excluding VAT, including IBRD financing of US$18 mln) The Component includes three sub-components. Sub-component 1 is the preparation of a study to explore options for an effective management and operation of the Azerbaijan's motorway. Subcomponent 1 has been completed under the original project. Sub-component 2 involves: (i) technical assistance for establishment and capacity building of Motorways Management Unit (MMU) and Regional Motorway Maintenance Units (RMUs), including trainings. Sub-component 3 includes (i) civil works for rehabilitation and construction of RMUs offices and depots, and (ii) provision of essential maintenance equipment for the newly established regional motorway maintenance units. Sub-component 3 will primarily focus on maintenance arrangements for recently upgraded motorway sections. ARS will give priority to rehabilitation and use of existing facilities for establishment of offices and depots of the RMUs. Detailed description of the Component activities and their technical aspects is provided in the Annexes 2 and 2A.

16. Component 3: Project Management and Institutional Support (US$3 million, excluding VAT, including IBRD financing of US$2.7 mln) The Component will finance costs related to project implementation, advisory for implementation of projects by ARS, updating road database, road user satisfaction survey, project audits and project monitoring and evaluation.

17. The tentative cost estimates and financing plan for the Additional Financing activities are shown below in Table 1.

Table1: Estimated Project Costs for the Additional Financing

(US$ million)

Component	IBRD	Government	Total Cost (excluding VAT)[9]
Component 1: Motorway Improvement	93.1	10.3	103.4
Component 2: Institutional Development and Support for Motorway Maintenance Reform	18	2	20
Component 3: Project Management and Institutional Support	2.7	0.3	3
Contingency	25.8	2.9	28.7
Front-end-fee[10]	0.4	0.0	0.4
Total	140	15.5	155.5

18. As part of the project restructuring, it is proposed to: (i) revise the Results Framework and Monitoring Indicators to align with the expanded scope of the Additional Financing; (ii) extend

[9] Identifiable taxes are about US$28.0 million and total project cost including taxes is $US 183.5 million.
[10] The Front-end Fee represents 25 basis points of the Loan amount.

the closing dates for the original loan and credit to December 31, 2019 to align the closing dates of the existing loan/credit with the closing date of the AF loan; (iii) amend the existing loan/credit agreements to allow use of funds for additional activities.

19. In the Results Framework, three project monitoring indicators have been revised to account for additional kilometers of roads to be upgraded under the Additional Financing. The newly introduced PDO level indicator relates to the length of motorways network maintained by the Regional Maintenance Units (RMUs) under service level parameters. Two intermediate indicators have been deleted as they are no longer relevant. Three new intermediate indicators include: (i) improvement in road users satisfaction in project area, (ii) annual maintenance plan developed by the Motorway Management Unit (MMU) using road data base, and (iii) rolling three year budget prepared by MMU for each RMU.

Summary of Proposed Changes	
The Additional Financing will scale up the Third Highway Project by providing funds to upgrade the M4 Baku-Shamakhi road to first category motorway standard and support the implementation of maintenance reforms for the M roads. Project Component 1: Motorway Improvement. The Additional Financing (AF) will finance remaining works to upgrade km 13.3 to km 107 of M4 to first category motorway. Km 13.3 to km 15 and km 91 to km 107 will be new construction and km 15 to km 91 will be rehabilitation of existing lanes. Project Component 2: Institutional Development and Support for Motorway Maintenance Reform. The Additional Financing will support the capital investment to establish the seven RMUs including construction/rehabilitation of main offices and depots and purchase of equipment and also provide technical assistance for the MMU and the RMUs. The Additional Financing will also restructure the original project by extending the closing date of the loan and credit to December 31, 2019 to align with the closing date of the AF loan. The Results Framework and Monitoring Indicators will be updated to reflect the expanded scope.	
Change in Implementing Agency	Yes [ ] No [X]
Change in Project's Development Objectives	Yes [ ] No [X]
Change in Results Framework	Yes [X] No [ ]
Change in Safeguard Policies Triggered	Yes [ ] No [X]
Change of EA category	Yes [ ] No [X]
Other Changes to Safeguards	Yes [ ] No [X]
Change in Legal Covenants	Yes [ ] No [X]
Change in Loan Closing Date(s)	Yes [X] No [ ]
Cancellations Proposed	Yes [ ] No [X]

Change in Disbursement Arrangements	Yes [X] No [ ]
Reallocation between Disbursement Categories	Yes [ ] No [X]
Change in Disbursement Estimates	Yes [X] No [ ]
Change to Components and Cost	Yes [X] No [ ]
Change in Institutional Arrangements	Yes [ ] No [X]
Change in Financial Management	Yes [ ] No [X]
Change in Procurement	Yes [ ] No [X]
Change in Implementation Schedule	Yes [X] No [ ]
Other Change(s)	Yes [ ] No [X]

Development Objective/Results	
Project's Development Objectives	
Original PDO	
The Project Development Objective is "to contribute to more efficient and safer Baku-Shamakhi road and higher quality road services as part of the upgrading to motorway standards, and to improve the management of the nascent motorway network."	
Current PDO	
"To contribute to more efficient and safer Baku-Shamakhi and Yenikend-Shorsulu roads and higher quality road services as part of the general network upgrading to motorway standard, and to improve the management of the nascent motorway network."	
Change in Results Framework	
Explanation:	
The Results Framework and Monitoring has been revised to reflect the scale up of project activities. There is one new PDO indicator: Regional Maintenance Units (RMUs) maintain 500 km of M roads under service level parameters. Three indicators have been revised to account for additional kilometers of roads to be upgraded under the Additional Financing. There are three new intermediate indicators: (i) Improvement in Road Users Satisfaction in Project Area with disaggregated gender information; (ii) Annual maintenance plan developed by the Motorway Management Unit (MMU) using road data base; (iii) Rolling 2 year budget prepared by MMU for each RMU. Two intermediate indicators are deleted: (i) "Percentage of safety audits conducted on road accidents recorded during construction stage of Baku-Shamakhi road" given the difficulties in collecting data by the implementing agency as it is beyond their area of responsibility, and (ii) "Development of a pilot	

Motorway Management Unit (MMU") because the MMU is no longer a pilot but an integral part of ARS' operations and thus the indicator is no longer relevant.

Compliance

Covenants - Additional Financing (Azerbaijan Highway 3 Additional Financing - P156377)

Source of Funds	Finance Agreement Reference	Description of Covenants	Date Due	Recurrent	Frequency	Action
IBRD	Section I.1 of Schedule 2 of the Loan Agreement	All the Borrower's obligations referred to in Section I of Schedule 2 to the Original Loan Agreement shall apply to the execution of the Project		☐		New
IBRD	Section I.2 of Schedule 2 of the Loan Agreement	Without limitations upon the provisions of paragraph 1 of this Section, prior to the carrying out of any activities to be financed with the proceeds of the Loan, the Borrower shall: (a) amend the Subsidiary Agreement, and (b) update the Operational Manual, including updated RPF, EMF, Regional Environmental Review and EIA(s), both for purposes of this Loan and in a manner satisfactory to the Bank.		☐		New

Conditions

Source Of Fund	Name	Type
IBRD	Operations Manual	Effectiveness

Description of Condition

The Additional Conditions of Effectiveness: (a) The Subsidiary Agreement has been amended in a manner acceptable to the Bank; and (b) The Operational Manual has been updated in a manner acceptable to the Bank.

Risk

Risk Category	Rating (H, S, M, L)
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate

4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Moderate
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
OVERALL	Substantial

Finance

Loan Closing Date - Additional Financing (Azerbaijan Highway 3 Additional Financing - P156377)

Source of Funds	**Proposed Additional Financing Loan Closing Date**
International Bank for Reconstruction and Development	31-Dec-2019

Loan Closing Date(s) - Parent (Third Highway Project - P118023)

Explanation:

The loan and credit closing dates of the parent project will be extended to December 31, 2019 to align these closing dates with the closing date of the AF loan as the loans and credit will be financing the same project activities.

Ln/Cr/ TF	**Status**	**Original Closing Date**	**Current Closing Date**	**Proposed Closing Date**	**Previous Closing Date(s)**
IBRD-78890	Effective	31-Mar-2015	30-Sep-2016	31-Dec-2019	30-Sep-2016
IDA-47230	Effective	31-Mar-2015	30-Sep-2016	31-Dec-2019	31-Mar-2015, 30-Sep-2016

Change in Disbursement Estimates (including all sources of Financing)

Explanation:

The change in disbursement estimates is due to scope of work and related additional financing

Expected Disbursements (in USD Million)(including all Sources of Financing)

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Annual	5.00	5.00	25.00	65.00	70.00	70.00	70.00	60.00	11.60	0.00
Cumulative	5.00	10.00	35.00	100.00	170.00	240.00	310.00	370.00	381.60	0.00

Allocations - Additional Financing (Azerbaijan Highway 3 Additional Financing - P156377)

Source of Fund	**Currency**	**Category of Expenditure**	**Allocation**	**Disbursement %(Type Total)**
			Proposed	**Proposed**
IBRD	USD	Goods, works, consultants' services, non-consulting services, training and	139,650,000.00	90.00

		incremental operating costs under the Project		
IBRD	USD	Front-end fee	350,000.00	100.00
		Total:	140,000,000.00	

Components

Change to Components and Cost

Explanation:

The Additional Financing will finance a scale up of the existing project components and cover some cost-overrun under the original project due to changes in the design of road.

Current Component Name	Proposed Component Name	Current Cost (US$M)	Proposed Cost (US$M)	Action
Component 1: Upgrading a 77 km section of M4 Baku-Shamakhi and 48 km section of M3 Yenikend-Shorsulu roads into a four-lane motorway.	Component 1: Motorway Improvement, including upgrading a 94 km section of M4 Baku-Shamakhi and 48 km section of M3 Yenikend-Shorsulu roads into a four-lane motorway.	316.00	448.10	Revised
Component 2: Institutional development (management and financing Azerbaijan Motorways; institutional development of the ARS)	Component 2: Institutional Development and Support for Motorway Maintenance Reform (management and financing Azerbaijan Motorways; institutional development of the ARS)	5.00	25.00	Revised
Component 3: Project Management including technical assistance and financing additional costs for project implementation.	Component 3: Project Management and Institutional Support including technical assistance and financing additional costs for project implementation.	1.00	4.00	Revised
	Total:	322.00	477.10	

Other Change(s)

Change in Implementation Schedule	
Explanation:	
Implementation of Additional Financing activities related to construction of additional road sections and motorway maintenance and operation reforms will require extension of the project closing date to December 31, 2019 and changes in the implementation schedule.	
Appraisal Summary	
Economic and Financial Analysis	
Explanation:	
An economic analysis was completed for the Additional Financing for the entire segment of the M4 road that is being upgraded under the original project and the Additional Financing. A discount rate of 6 percent was adopted for this project in line with World Bank guidance. The evaluation period is 20 years. The overall Economic Internal Rate of Return (EIRR) of the project is a satisfactory 13.5 percent, the total Net Present Value (NPV), at 6 percent discount rate, is US$ 128.90 million, and the overall Benefit Cost Ratio is 2.3. The original project has an EIRR of 14.5. The change is insignificant and is due to slight changes in costs and in traffic volume.	
Technical Analysis	
Explanation:	
The two new road sections that are covered under the AF are: (i) km 13.3 to km 15 and (ii) km 91 to km 107. For km 13.3 to km15: the design addressed many of the constraints common to widening roads in urban environments such as relocating many utility lines, providing access to local residents and minimizing impacts on road side businesses. A typical cross section was agreed which will provide a four lane dual carriage with an additional service road on each side of the new dual carriageway for local access. For km 91 to km 107: This section has problems with slope stability. An extensive geotechnical investigation was completed under the Third Highway Project and the results analyzed. Practical and sustainable solutions have now been identified using a combination of horizontal drainage, stabilizing piles, reducing slope angles and the installation of benches. The existing alignment will be used.	
Social Analysis	
Explanation:	
The original project triggered OP 4.12 (Involuntary Resettlement). Involuntary resettlement impacts are anticipated under the Additional Financing (on new road sections km 13.3- km15 and km 91- km 107). For section km 13.3- km15, which is densely populated, ARS is making efforts to eliminate the need for land by adjusting design. For section km 91- km 107 some roadside businesses may be impacted. In anticipation of these impacts, the RPF prepared for the parent project was updated by ARS. However, efforts are being made to avoid or minimize the need for land acquisition and resettlement during the detailed design for these sections.	
Environmental Analysis	
Explanation:	
The environment category of the original project and Additional Financing is A. The incremental environmental impacts associated with the additional works proposed to be supported by the Additional Financing have been considered and addressed by Environmental Assessment and Management Plan for the new section km 13.3 – 15, and Supplemental Environmental Assessment Reports (and Management Plans), prepared for sections km 15 – 45, 45 – 91 and 91 – 107 respectively. Those incremental impacts	

are mainly associated with the need to handle the greater volume of extracted construction materials and additional earthworks, and the need to manage greater volumes of construction wastes. The environmental studies identified additional mitigation measures to be implemented in addition to those specified in the EIAs/EMPs for the original project as well as suggested additional measures for the institutional strengthening. Other activities to be supported under AF, which are expected to have environmental implications are those under sub-component 2.3 including (i) civil works for rehabilitation and construction of RMUs offices and depots, and (ii) provision of essential maintenance equipment for the newly established regional motorway maintenance units. Since no exact location, destination and design details have been identified until now, the framework type provisions have been developed by the client to address related environmental concerns. Specifically, the client prepared an Addendum to the Regional Environmental Review of 2009 which has been serving as an umbrella document for the original project, which envisages preparation of environmental safeguard documentation for sub-component 2.3 activities as part of the detailed design. The latter shall inform environmental studies on the scope, location and nature of civil works and supplied equipment. Should the reconstruction activities be minor, the EMP checklist, as per the template provided by the Addendum, is considered sufficient to duly address environmental aspects. In case of more significant interventions, the site specific EA and EMP will also be done. All site-specific EMPs will be subject to local consultations and disclosure, as they get ready.
Risk
Explanation: While the implementation risk of the original project was 'moderate', the overall implementation risk after the Additional Financing is 'substantial' because of the (i) increased macroeconomic risks due to low oil prices and resulting fiscal and monetary constraints and (ii) insufficient capacity of the road agency to implement Component 2 of the Project for road maintenance reforms. The re-ordering of maintenance practices from quantity and input-based arrangement to a service level, output-based contractual arrangement will require a new outlook and some level of technical know-how. The capacity risk will be partially mitigated through comprehensive technical assistance provided by the Project. Implementation of road maintenance reforms and commitment of the road agency to the reforms, however, will improve outlook for road maintenance and reduce risks for project sustainability. The civil works activities financed by the Project have overall moderate risks.

IV. Appraisal Summary

20. Economic Analysis. The economic analysis of roads to be widened or strengthened under the project is based on current road characteristics, estimated traffic volumes and forecasts, savings in vehicle operating costs and time costs for users, and economic project costs. The cost benefit analysis was performed using the Highway Development and Management Model (HDM-4) that computes road deterioration, CO2 emissions, annual road agency and users' costs, and net benefits for each project alternative over the evaluation period. A discount rate of 6 percent was adopted for this project in line with World Bank guidance. The evaluation period is 20 years. The overall Economic Internal Rate of Return (EIRR) of the project is a satisfactory 13.5 percent, the total Net Present Value (NPV), at 6 percent discount rate, is US$ 128.90 million, and the overall Benefit Cost Ratio is 2.3. Sensitivity analysis tested robustness of results of economic evaluation against changes in construction costs and projected road user benefits. Switching values analysis shows that if construction costs increase by 265 percent the overall project EIRR becomes 6 percent. The table below summarizes the results of the economic analysis and detailed information is provided in Annex 3.

Table 1: Economic Evaluation Results

Road No	EIRR (%)	NPV (US$ M)	B/C Ratio
1	18.1%	13.58	2.6
2	8.6%	10.75	1.4
3	15.6%	26.35	3.4
4	12.8%	16.43	2.5
5	15.1%	61.79	2.3
Total	13.5%	128.90	2.3

21. Public Sector Financing and World Bank Added Value. Public sector financing is the appropriate vehicle for financing the widening and pavement strengthening of the proposed roads because the construction costs cannot be recovered through tariffs or with private sector financing. Public investment in road infrastructure is desirable because it is a way the government plays a key role in the country's development by handling a range of issues that can only be accomplished or implemented through government actions, such as axle weight controls and road safety regulations. The Bank's financing is justified because of the project's economic benefits and because the investments complement the road works financed by the original project. The Bank's involvement in the road sector is justified because of the value added it brings beyond financing in areas such as: construction quality control, sustainability of road maintenance, transport planning, environmental risk management, safeguards, procurement, and financial management.

22. **Technical.** Civil works under the AF mainly include four-laning of M4 Sections km13.3 – km15 and km 91- km 107 as well as pavement strengthening works for the existing road lanes at km 15 - km91. While the works are not technically complex, the section km 91-107 faces particular problems with slope stability. Parts of the existing road have been damaged by landslides and the AF seeks to mitigate this risk. An extensive geotechnical investigation financed under the parent project was completed earlier this year and the results analyzed. Practical and sustainable solutions have now been identified using a combination of horizontal drainage, stabilizing piles, reducing slope angles and the installation of benches. These solutions are now being incorporated into a detailed design for this road section.

23. **Financial Management.** The proposed AF would not require changes in the financial management arrangements. Financial Management (FM) functions under the proposed AF, including flow of funds, staffing, accounting, reporting and auditing, will remain under the responsibility of the PIU at the ARS, as under the parent Project. FM arrangements of the parent Project have been reviewed periodically as part of project supervision and have been found satisfactory. The last implementation support mission, including FM review was held in June 2015. Sound internal control procedures are in place. The client is in compliance with the financial management covenants: Interim Un-audited Financial Reports (IFRs) have been submitted on a regular and timely basis and the Project audit reports have been received by the due date and the auditor has given an unqualified opinion on the project financial statements with no serious internal control issues in the management letters. The overall FM risk for the Project remains Moderate.

24. **Disbursement.** The proposed AF would follow the flow of funds and disbursement arrangements established under the parent project, i.e., reimbursement, direct payment, advances, and special commitments including the use of Statement of Expenditure procedures. A separate Designated Account (DA) for IBRD funds under the AF Loan would be opened in a commercial bank on terms and conditions acceptable to IBRD. It was agreed to set the Ceiling of Advances to the DA at US$10 million, so as to ensure quick and efficient disbursements for the proposed Additional Financing.

25. **Procurement.** The proposed AF would follow the procurement arrangements established under the original loan. The PIU will continue handling procurement with the support of an international consultant. As in the original loan, the procurement will be limited to a few, high value contracts, which will be subject to Bank prior review and various consultancy contracts. The version of the applicable Procurement and Consultant Guidelines will be updated from those published in May 2004 and revised in October 2006 to those published in January 2011 and revised in July 2014.

26. The implementing agency has developed a procurement plan for activities to be financed by AF. The key large cost items in the procurement plan include two major civil works contracts for upgrading sections km13.3-15 and km 91-107 of M4 Baku-Shamakhi highway, several works contracts for construction/rehabilitation of depots and offices for RMUs and subunits, and several goods contracts for supply of large road maintenance equipment items for RMUs. Works contracts estimated to cost US$10,000,000 equivalent and more and Goods contracts estimated to cost US$1,000,000 equivalent and more, will be procured through ICB. Works contracts estimated to cost less than US$10,000,000 and Goods contracts estimated to cost less than US$1,000,000 equivalent, will be procured through NCB.

27. **Social Safeguards.** The original loan triggered OP 4.12 (Involuntary Resettlement). There are no changes to the safeguards policies in the Additional Financing. Involuntary resettlement impacts are anticipated under the Additional Financing on new road sections km 13.3-km 15 and km 91- km 107. For section km 13.3 - km15, which is densely populated, ARS is making efforts to eliminate need for land by adjusting design, but nevertheless impacts may emerge. For section km 91- km 107 some roadside business may be impacted. Efforts are also being made to avoid or minimize the need for land acquisition and resettlement in the detailed design for this section. In anticipation of the possible impacts, the RPF prepared for the original loan was updated by ARS to include potential impacts under the Additional Financing and to reflect changes in legislation in 2010. Consultations took place at the rayon level in Absheron and Shamakhi on October 23, 2015. The updated RPF was disclosed in-country and Bank's Operational Portal on November 24, 2015.

28. **Citizen engagement and grievance redress mechanism.** The project seeks to strengthen the capacity of ARS/MMU to engage with road users. The project design includes support to develop a communication strategy, to strengthen ARS/MMU capacity to engage with beneficiaries, and to develop tools to facilitate engagement with users (such as a website, a telephone/SMS hotline), community consultations, and a series of road users' satisfaction surveys. In addition, the project will finance the preparation of a grievance redress mechanism.

29. **Social Inclusion and Gender.** During stakeholders' consultations, the views and opinions of different categories of road users were collected and analyzed. As elsewhere in the world, men and women in the project area have different travel and transport needs and face different constraints in terms of access to transport. Overall, women tend to have more complex trip patterns and perceptions of mobility and accessibility, which stem from their roles in the society. These aspects were not considered in the earlier road transport projects in Azerbaijan. The AF design pay particular attention to ensuring accessibility and response to groups at risk of marginalization for example women and the disabled. Examples of how social inclusion will be realized include: (i) the development of the communication strategy will identify groups at risk of marginalization in relation to the project and it will identify the ways in which these groups are most likely to obtain and provide information in an effort to inform the implementation of the strategy. (ii) The data from the road users' satisfaction survey will be disaggregated by gender in an effort to identify any differences between men and women in road usage and safety.

30. **Environment.** The incremental environmental impacts associated with the additional works proposed to be supported by the Additional Financing, including a newly added section km 13.3 –km15 of the Baku-Shamakhi road, have been considered and addressed by Environmental Assessment and Management Plan for the new section km 13.3 – km 15, and Supplemental Environmental Assessment Reports (and Management Plans), prepared for sections km 15 – km 45, km 45 – km 91 and km 91 – km 107 respectively. Those incremental impacts are mainly associated with the need to handle the greater volume of extracted construction materials and additional earthworks, and the need to manage greater volumes of construction wastes. The environmental studies identified additional mitigation measures to be implemented in addition to those specified in the EIAs/EMPs for the original project as well as suggested additional measures for the institutional strengthening. The Regional Environmental Review (2009), a framework document for the parent Project, has also been amended to set a procedure for addressing anticipated environmental impacts of the road maintenance facilities rehabilitation, which envisages preparation of site-specific EMPs for each location as part of respective design package, and suggest a template to follow.

31. All newly prepared environmental reports have been duly disclosed in the public consultation meetings held by the client on October 23, 2015 in selected locations of the project area (Shamakhi and Absheron). The final documents have been posted on the client's official web-site and Bank's Operational Portal on November 18, 2015.

32. **Risks.** The overall risk to the PDO and implementation of the Project will increase from Moderate to Substantial after the approval of the Additional Financing. The risk profile of the Project will change because of the (i) increased macroeconomic risks due to low oil prices and resulting fiscal and monetary constraints and (ii) insufficient capacity of the road agency to implement Component 2 of the Project for road maintenance reforms. The re-ordering of maintenance practices from quantity and input-based arrangement to a service level, output-based contractual arrangement will require a new outlook and some level of technical know-how. The capacity risk will be partially mitigated through comprehensive technical assistance provided by the Project. Implementation of road maintenance reforms and commitment of the road agency to the reforms, however, will improve outlook for road maintenance and reduce risks for project sustainability. The civil works activities financed by the Project have overall moderate risks. While

the works for km 91 to km 107 involve some slope stability issues, the technical challenges are mitigated by the comprehensive geotechnical survey and feasibility studies that have been completed. The Project will be implemented by ARS, an organization well familiar with Bank's operations.

V. World Bank Grievance Redress

33. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Revised Results Framework and Monitoring Indicators

Project Name:	Azerbaijan Highway 3 Additional Financing (P156377)			Project Stage:	Additional Financing	Status:	DRAFT
Team Leader(s):	Elizabeth C. Wang / Nijat Valiyev	Requesting Unit:	ECCU3	Created by:	Elizabeth C. Wang on 20-Sep-2015		
Product Line:	IBRD/IDA	Responsible Unit:	GTI03	Modified by:	Funda Canli on 12-Nov-2015		
Country:	Azerbaijan	Approval FY:	2016				
Region:	EUROPE AND CENTRAL ASIA	Lending Instrument:	Investment Project Financing				
Parent Project ID:	P118023	Parent Project Name:	Third Highway Project (P118023)				

Project Development Objectives
Original Project Development Objective
The Project Development Objective is "to contribute to a more efficient and safer Baku-Shamakhi road and higher quality road services as part of the upgrading to motorway standards, and to improve the management of the nascent motorway network."
Current Project Development Objective
"To contribute to a more efficient and safer Baku-Shamakhi and Yenikend-Shorsulu roads and higher quality road services as part of the general network upgrading to motorway standard, and to improve the management of the nascent motorway network."
Proposed Project Development Objective - Additional Financing (AF)
"To contribute to more efficient and safer Baku-Shamakhi and Yenikend-Shorsulu roads and higher quality road services as part of the general network upgrading to motorway standard, and to improve the management of the nascent motorway network."

Results	
Core sector indicators are considered: Yes	Results reporting level: Project Level

Project Development Objective Indicators							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target
Revised	Efficiency: Reduction in road user costs from Baku to Shamakhi	☐	Percentage	Value	100.00	100.00	80.00
				Date	25-May-2010	21-May-2015	31-Dec-2019
				Comment			
Revised	Efficiency: Reduction in road user costs from Yenikend to Shorsulu	☐	Percentage	Value	100.00	100.00	80.00
				Date	15-Jan-2014	21-May-2015	31-Dec-2019
				Comment			
Revised	Safety: Reduction of personal injury per 100-million vehicle-km along the Baku-Shamakhi road.	☐	Percentage	Value	100.00	100.00	70.00
				Date	25-May-2010	21-May-2015	31-Dec-2019
				Comment			
Revised	Safety: Reduction of personal injury per 100-million vehicle-km along the Yenikend-Shorsulu road.	☐	Percentage	Value	100.00	100.00	70.00
				Date	15-Jan-2014	21-May-2015	31-Dec-2019
				Comment			
Revised	Quality: Percentage of M roads in good and fair condition as a share of total M roads of the network	☒	Percentage	Value	55.00	61.00	75.00
				Date	15-Jan-2014	21-May-2015	31-Dec-2019
				Comment			
New	RMUs to maintain 500km of M roads under service level parameters	☐	Kilometers	Value	0.00		500.00
				Date	01-May-2016		31-Dec-2019
				Comment	The RMUs are established but not functioning		
Intermediate Results Indicators							
Status	Indicator Name	Core	Unit of Measure		Baseline	Actual(Current)	End Target

Revised	Number of km upgraded for Baku-Shamakhi road	☐	Kilometers	Value	0.00	25.00	94.00
				Date	15-Jan-2014	21-May-2015	31-Dec-2019
				Comment			
Revised	Number of km upgraded for Yenikend-Shorsulu road	☐	Kilometers	Value	0.00	0.00	48.00
				Date	15-Jan-2014	21-May-2015	31-Dec-2017
				Comment			
Revised	Roads constructed, non-rural	☒	Kilometers	Value	0.00	25.00	142.00
				Date	25-May-2010	21-May-2015	31-Dec-2019
				Comment			
Marked for Deletion	Percentage of safety audits conducted on road accidents recorded during construction stage of Baku-Shamakhi.	☐	Percentage	Value	0.00	80.00	80.00
				Date	25-May-2010	21-May-2015	31-Dec-2019
				Comment			
Revised	Safety audits on detailed design.	☐	Text	Value	No	No	Yes
				Date	25-May-2010	21-May-2015	31-Dec-2018
				Comment			
Revised	Safety audits on construction completion.	☐	Text	Value	No	No	Yes
				Date	25-May-2010	21-May-2015	31-Dec-2019
				Comment			
No Change	Design of a Motorway Guidelines.	☐	Text	Value	No	Yes	Yes
				Date	25-May-2010	21-May-2015	30-Sep-2016
				Comment			
No Change	Development of motorways management and maintenance strategy	☐	Text	Value	No	Yes	Yes
				Date	15-Jan-2014	21-May-2015	30-Sep-2016
				Comment			

Marked for Deletion	Development of a pilot Motorway Management Unit.	☐	Text	Value	No	Yes	Yes
				Date	25-May-2010	21-May-2015	30-Sep-2016
				Comment			
New	Improvement in Road Users Satisfaction in Project Area with disaggregated gender information	☐	Percentage	Value	20.00		75.00
				Date	01-May-2016		31-Dec-2019
				Comment	Baseline Survey to be conducted at Effectiveness		
New	Annual maintenance plan developed by MMU using road data base.	☐	Kilometers	Value	0.00		500.00
				Date	01-May-2016		31-Dec-2019
				Comment			
New	Rolling 2 year budget prepared by MMU for RMUs	☐	Text	Value	No		Yes
				Date	01-May-2016		31-Dec-2019
				Comment			MMU to prepare 2 year budget for each RMU

Annex 2: Detailed Project Description

1. **Component 1: Motorway Improvement (US$103.4 mln, excluding VAT, including IBRD financing of US$93.1 mln)** The Component involves works to upgrade the Baku-Shamakhi section of M4 road to the Category 1 motorway standards, including (i) expansion of new road sections between km 13.3- km15 and km 91- km107 to four lanes, as well as (ii) some additional civil works under the ongoing contracts resulting from the required design changes, including the pavement strengthening for existing lanes between km 15 - km 91.

2. The Third Highway Project is currently upgrading some sections of the M4 corridor between Baku and Shamakhi to a dual carriageway highway. One section of the road (km 0 - 13.3) was upgraded earlier, within the WB financed Second Highway Project. The overall status of the M4 Baku-Shamakhi upgrade is provided below:

km 0 to km 13.3	Dualing is completed within the Second Highway Project
km 13.3 – km 15.0	Under design for AF
km 15.0 – km 44.6	Under construction within the Third Highway Project
km 44.6 – km 67.5	Under construction within the Third Highway Project
km 67.5 – km 91.0	Under construction within the Third Highway Project
km 91.0 – 107.0	Under design for AF

3. Sections of the M4 highway between km13.3 to 15 and km 91 to 107 are the new road sections to be financed by the proposed additional financing. ARS is currently preparing the design and procurement packages for these road sections and anticipates commencing the civil works in 2016. More detailed technical aspects of four-laning of the M4 road sections km13.3-15 and km 91-107 are provided below.

4. *Section km 13.3-15.* Between km 13.3 and km 15.0 the road passes through the village of Mushvigabad, a built up area with several side roads and many accesses to adjacent properties. A police station is located at km 13.85, and near km 15 a junction and over-bridge give access to a new residential complex. The design for expansion of this section, which is substantially complete, addressed many of the constraints common to widening roads in urban environments, such as relocating many utility lines, providing access to local residents and avoiding impacts on road side businesses. Various options were studied including some that deviated from normal design standards. The agreed typical cross section provides a four lane dual carriage with an additional service road on each side of the new dual carriageway for local access. To achieve this within the available corridor, the standard cross-section of the dual carriageway was reduced from 27.5m to 20.0m by reducing the median from 5.0m to 3.0m, reducing each hard-shoulder from 3.75m to 1.0m and using closed concrete channel drainage. Two new footbridges are provided for crossing the dual carriageway where the bus stops are located and improvements are made at the junction to the new residential complex to improve traffic movement and safety. The design includes for the protection or relocation of more than 4,600m of gas pipes, optical fiber cables, telephone and communication lines, water and sewage pipes, and electrical power lines.

5. *Section km 91 to km 107.* Section km 91 to km 107 is the last section before Shamakhi. It ends on the outskirts of the city where the existing single carriageway changes to an urban dual

carriageway. This section will be four-laned largely by adding a new carriageway parallel to the existing carriageway, thereby maintaining the present alignment except where geometric improvements are essential.

6. The section faces particular problems with slope stability. Parts of the existing road have been damaged by landslides and the new project seeks to mitigate this risk. An extensive geotechnical investigation was completed earlier this year and the results analyzed by specialists. Consultants prepared various options, including realignment, which were discussed with ARS. Practical and sustainable solutions have now been identified using a combination of horizontal drainage, stabilizing piles, reducing slope angles and the installation of benches. These solutions are now being incorporated into a detailed design for this road section. The technical design and draft bidding documents are expected to be completed in early 2016. The technical design will be reviewed by relevant Government agencies as part of the state expertise.

7. *Section km 15 to km 91.* The AF will finance also some additional civil works under the ongoing contracts for M4 section km 15-91 resulting from the required design changes. Civil works on these sections are currently progressing. During the course of these contracts, ARS has identified further works necessary for the successful completion of dualing. These mostly include strengthening sections of the existing road pavement which is being incorporated into the new dual carriageway, improving the specification of unbound pavement layers, and relocation of previously unidentified utilities. In total, an additional 20 km of the most severely affected parts of the existing carriageway will be strengthened to give the same condition, durability and design life as the newly constructed sections of the dual carriageway. The remaining lengths of the existing carriageway will just receive an overlay. The additional work has been quantified and formalized in Variation Orders. All time and cost changes have also been summarized in draft Amendments, one for each contract.

8. **Component 2: Institutional Development and Support for Motorway Maintenance Reform (US$ 20 mln, excluding VAT, including IBRD financing of US$18 mln)** The Component includes three sub-components. Sub-component 1 is the preparation of a study to explore options for an effective management and operation of the Azerbaijan's motorway. Subcomponent 1 has been completed under the parent project. Sub-component 2 involves (i) technical assistance for establishment and capacity building of Motorways Management Unit (MMU) and Regional Motorway Maintenance Units (RMUs), including trainings. Sub-component 3 includes (i) civil works for rehabilitation and construction of RMUs offices and depots, and (ii) provision of essential maintenance equipment for the newly established regional motorway maintenance units.

9. Sub-component 2: Technical Assistance. The AF will provide technical assistance for establishment of the new organizational structure for motorway maintenance and operation, which includes the MMU at ARS headquarters and seven new state-owned RMUs to be established as state-owned Limited Liability Companies. The proposed reforms of the motorway operation and maintenance system were designed under the major consultancy within the parent Third Highway Project. The reforms envisage corridor based motorway operation and maintenance by the new regional motorway maintenance units in accordance with service level requirements set by ARS represented by the Motorways Maintenance Division. These changes represent substantial and

important institutional change, which will require long-term routine support by international consultants both on institutional and technical aspects, to be financed by AF. In particular, the technical assistance will help the MMU to enhance its capacity with regard to operational responsibilities vis-à-vis the RMUs such as contract management, monitoring and evaluation of the service level obligations, planning and budget responsibilities to support ARS on the annual budget planning for the M roads in terms of routine and periodic maintenance, responsibilities for road protection and ensuring unobstructed and safe traffic at high speeds. The project will also provide technical assistance for establishment and capacity building of RMUs, including trainings for operation based on service level requirements, gradual introduction of performance based principles, as well as operation of new maintenance equipment. The Project Operational Manual will specify implementation arrangements and type of trainings to be provided for the RMUs. The Project Operational Manual will also define staffing and two-year rolling budget preparation requirements for RMUs. For detailed description of the Sub-component 2 see Annex 2A.

10. Sub-component 3: The sub-component will support the establishment of technical capacity of seven RMUs, which will be responsible for routine[11], winter and emergency maintenance of magistral roads. Each of these RMUs will cover about 200-300 km of main roads and will be established as a state owned entity performing maintenance and operations activities under supervision of ARS. The project will support these RMUs through (i) construction/rehabilitation of regional offices and depots and (ii) provision of essential road maintenance and operation equipment. Sub-component 3 will primarily focus on maintenance arrangements for recently upgraded motorway sections. ARS will give priority to rehabilitation and use of existing facilities for establishment of offices and depots of the RMUs.

11. At project mid-term, the progress and results under the component will be reviewed and the design adjusted per recommendations of the review.

12. **Component 3: Project Management and Institutional Support(US$3 mln, excluding VAT, including IBRD financing of US$2.7 mln)** The Component will finance costs related to project implementation, advisory for implementation of projects by ARS, updating road database, road user satisfaction survey, project audits and project monitoring and evaluation. The project implementation costs will cover salaries of PIU staff, support project management capacity of the PIU and ARS, including training and seminars, and project financial audits. The Component will also support further development of the existing road database, advisory for implementation of project by ARS, implementation of operational and financial audits of RMU activities, road user satisfaction surveys, etc. Finally, Component will finance activities related to monitoring of project implementation and evaluation of its impacts.

13. In addition there is also contingency amount of US$ 28.7 mln[12].

[11] The RMUs will not have periodic maintenance responsibilities under the Service Level Agreements. Periodic maintenance is already mostly outsourced. The ARS will manage the tendering for the periodic maintenance contracts. ARS's existing maintenance units and the regional units can compete for the periodic maintenance contracts along with private contractors.

[12] The upfront fee of US$0.4 million will be financed from the project loan but not included in the project component

Annex 2A: Implementation of the Proposed Motorways Maintenance Reforms

Background

1. The objective for the establishment of the Motorway Management Unit (MMU) at ARS and the Regional Motorways Maintenance units, as state-owned LLCs, (RMU) is to develop a modernized management and maintenance system for maintenance and management of motorway network. The MMU will be responsible for management and monitoring of routine and periodic maintenance of motorways. In addition, MMU is also expected to be involved in issues related to management of traffic, elimination of consequences of accidents, interaction with road users, management of transport area off the roadway such as rest areas, establishment of maintenance standards and monitoring of works and quality control.

2. The RMUs will be responsible for routine, winter and emergency maintenance works. Routine maintenance is a set of activities carried out on the highways in order to maintain viability and technical soundness of highway and traffic safety on them. The activities include the monitoring and supervision of highways and related structures, cleaning highways, maintenance of pavement, drainage, signalization, signage and winter maintenance of highways and related structures. Routine maintenance also includes minor repair works, such as occasional repair/construction works to improve localized elements of the roads to ensure safety and durability of the highways.

3. While project will finance capital costs related to establishment of RMUs, routine maintenance is considered operating expenses for a road network and should be funded out of ARS' annual maintenance budget (Road Fund). Periodic maintenance (or rehabilitation), however, should be considered as capital investment and RMUs are not expected to be responsible for periodic maintenance. The MMU will plan, contract and supervise the implementation of periodic maintenance to contractors. Periodic maintenance works are carried out according to the technical documentation that is the basis for competition. RMUs could compete for periodic works but care must be exercised such that private contractors and RMUs compete on an equal basis. The MMU can contract consultants for the supervision of both routine and periodic maintenance works. The Additional Financing will provide technical assistance to the MMU to develop its supervision capacity.

4. The development of a modern routine maintenance practice will take some time; it entails cultural change from traditional maintenance approach to modern Client and Service Provider Relations. The Additional Financing will support ARS in the introduction of the Service Level Agreement i.e. standard maintenance based on agreed service level requirements. The Service Level Agreement will specify measurable parameters and criteria for the evaluation of maintenance results achieved. The achievement of performance will be measured based on condition of highways and road users' satisfaction. Payments to the RMUs and the penalties for the lack of quality will depend on implementation of the service level obligations. Before involving the private sector in maintaining the highways, the client and service provider relationship must be first introduced. The AF will provide ARS/MMU with the technical assistance so it has the capacity to function as a client for road maintenance services. In order to function as

service providers, the AF will provide the RMUs with training to operate maintenance equipment, to maintain financial statements, and to adopt a performance based approach to maintenance.

A. Issues to Consider

5. *Lack of competition*. ARS/MMU and the RMUs are state owned entities. The service level agreement is direct contract between two public entities and payment for services will be negotiated. The proposed organizational structure should achieve some "internal pressure" to bring about an improvement in efficiency. However, without open competition, there will be limitations on the maximum efficiency on the quantity and quality of works. The proposed arrangement should be viewed as a transitional phase with the ultimate aim of private contracting for services.

6. *Difficulties in establishing costs*. Related to the lack of competition, and as there is no private routine maintenance, the market reference prices will be difficult to establish. The first task of the international consultant hired by the MMU is to establish Private Service Comparator "PSC" for the services to be contracted. As a basis for analysis, the consultant could take the current expenses for ARS maintenance services, estimate the market cost for materials, labor and indirect inputs and also take into consideration the routine maintenance costs in other countries to come up with a PSC. The PSC will be imperfect and will need to be adjusted annually based on experience.

7. *Accurate accounting for assets.* The RMUs will need offices, depots and equipment. Some of the offices/depots and equipment will be transferred from existing units and some will be new. The assets used by the RMUs could be accounted for in a number of ways. The assets can be considered as transferred into RMUs, their value appropriately assessed, accounted for and subject to depreciation and reflected in each RMU's financial statements. Alternately, these assets could be considered as leased by ARS/MMU to the RMU's which would pay "rent" for the use of the assets. The treatment of the assets will have an impact in later stage developments if and when private contracting is introduced and/or the RMUs are privatized.

8. *Importance of change management.* The establishment of RMUs is a major organizational change for ARS. While ARS' management is aware and committed to reform, the rank and file ARS staff has not been informed and know nothing of the details. Any organization change provokes resistance. Currently there is only a decision, but the actual change has not been initiated. The MMU will need to develop an internal and external communication strategy. The road users need to be encouraged to inform ARS of their expectation on road services.

B. Roadmap

9. *First steps in the establishment of functioning RMUs.* The Motorway Management Unit in ARS has been established with a Unit head and 3 ARS staff. This embryonic unit should be supported by an international maintenance consultant and other technical experts. The AF will support extensive capacity building and technical assistance such that MMU can effectively

manage the RMUs and be able supervise their work. In addition, the MMU will also begin to assume responsibility for traffic management, communication with road users, preparing periodic maintenance plan and other road management responsibilities. Currently, the MMCs are in name only and the proposed RMUs are implementing their existing responsibilities on roads under the existing regional approach. Once the legal status of the RMUs is established, the AF will provide technical assistance for their rapid transformation into functioning units.

10. *Define maintenance and minor repair program for each RMU for the next 2 years.* Given each RMU has extensive road segments under its management. The service level agreement could cover the entire road section under each RMU but be in Part A and Part B. For Part A, the road sections recently upgraded or in maintainable conditions could be maintained on a service level approach; while the roads under Part B be maintained according to its traditional methods. The objective is that roads under Part A will increase so that at the end of the Project, all designated roads will be maintained under modern, service level approach. It should be noted that MMU will prepare periodic maintenance plan which will be competitively tendered. The objective of the Bank support is to improve efficiency in maintenance and also to encourage private participation. Each RMU is free to submit its bid for periodic maintenance contract for roads under its or other RMUs' management.

11. *Selection of RMU staff.* There is general understanding that the RMU staff should be paid relatively better salary than ARS employees, but the labor force be kept lean. As each RMU is a state owned entity, its compensation is theoretically not limited by the civil service pay scale. MMU through its consultant would define the number and qualification of each RMU's work force. The staff will be competitively selected with preference for existing ARS employees. Given the RMUs are maintaining road corridors of substantial length, some of the workforce will be from towns along the road corridors. The regional maintenance depots will need to have basic housing facilities. To prevent overstaffing, the project will define a hiring ceiling based on staff per km of roads maintained.

12. *RMU's maintenance budget to be negotiated with the Ministry of Finance.* Until recently, the budgetary allocation by the Ministry of Finance for road maintenance through the Road Fund has been substantial. Maintenance funding increased from AZN 30 million in 2005 to AZN 222 million in 2013. However, because of low oil prices, the Government is consolidating state budget, which will also affect road maintenance budget. Defining the budget for each RMU is difficult as they are state-owned entities and the contract price is not competitively established. In countries with more advanced road maintenance practices in Europe, the average routine maintenance cost for motorways is about USD 7000-8000 per km. This is the routine maintenance budget. The periodic and other major repairs would be funded according to ARS' existing methodologies. In order for RMUs to be able to plan its activities, the Loan covenant is proposed that the ARS/MMU need to be informed by the Government of its RMU's budget on a rolling 2 year basis. To promote accountability and check service level performance, the AF will finance annual operational audit of each MMUs. The staff of the MMU will also be trained to perform operational audit and/or to supervise external consultant undertaking this task.

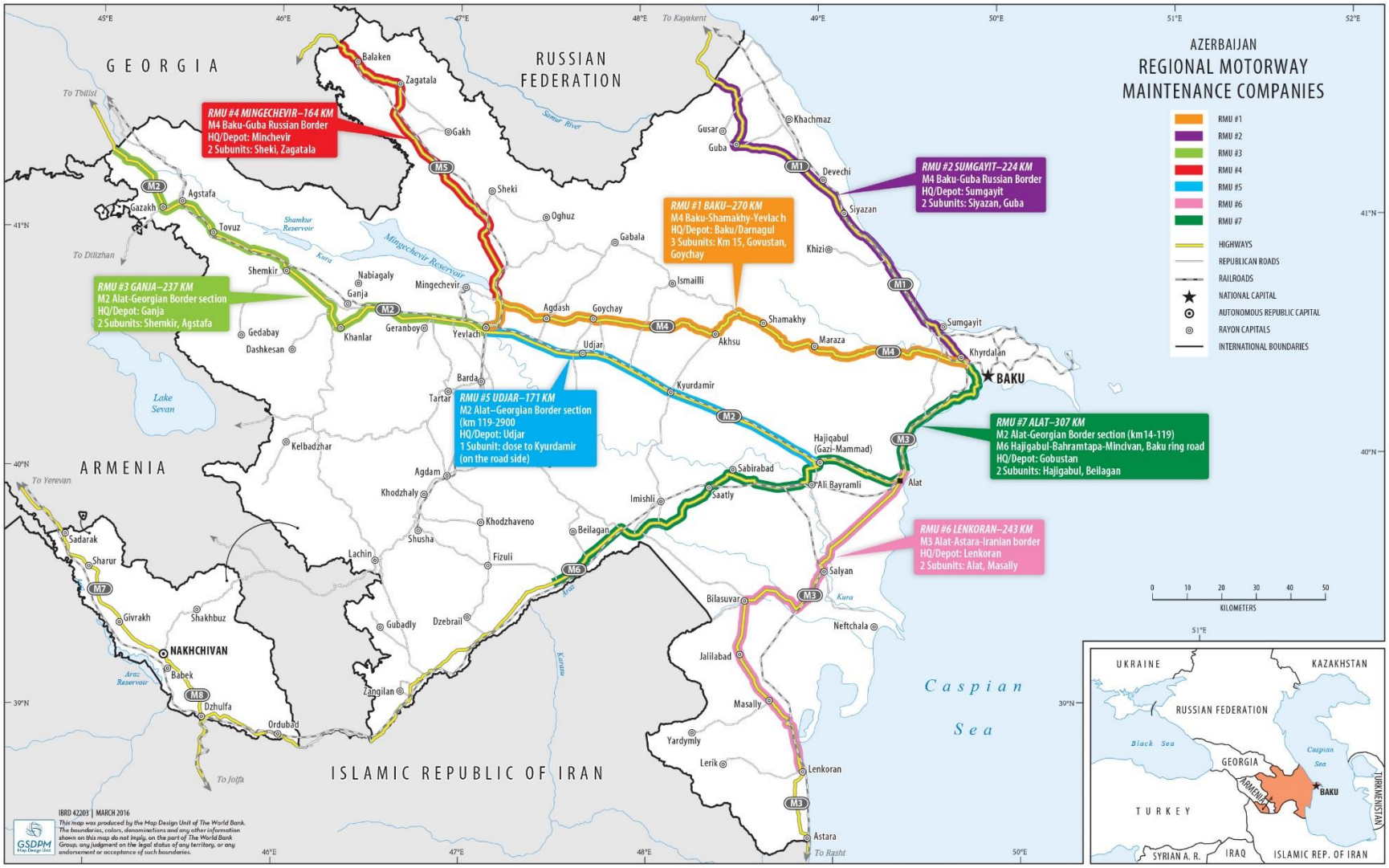
13. *Rehabilitation and construction of RMUs offices/depots and procurement of specialized maintenance equipment.* MMU is reviewing the conditions of proposed RMUs' head offices and

proposed depot sites. The conditions and level of needed rehabilitation vary. ARS will give priority to rehabilitation and use of existing facilities for establishment of offices and depots of the RMUs. The MMU through its consultants will prepare the detailed design and the AF will fund the rehabilitation and construction of RMUs headquarters. The current maintenance practice is rayon based. Under the corridor approach, each RMU will be responsible for a road corridor of about 200-300km (see Map 1) and the maintenance standards to strive for is 24/7. Therefore, each RMU would need depots for equipment and regional staff. The construction of depots will take some time and the purchase of equipment will be phased. The Project will finance procurement of essential road maintenance equipment focusing on large equipment items. In the initial stage of the implementation of the AF, the RMU staff will be trained to properly maintain the upgraded M roads with appropriate maintenance equipment. As more upgraded M roads become operational, the responsibilities of the RMUs will increase - supported by more staff and equipment.

14. *Communication Strategy*. The project will finance the development of a communication strategy to be implemented by ARS/MMU. The communication strategy will include an internal strategy to support the organizational change that will be faced by ARS. It will focus on informing staff on the reform process and its impact on staff work. In addition, it will attempt to preempt questions and concerns that staff may have. In addition, an external communication strategy will be developed. The external strategy will focus on the development of key messages (on highway maintenance, modernization, safety impacts, etc.) for road users and communities living adjacent to the roads. Methods for sharing information will include road signage, media announcements and community consultations. An important element of the communication strategy would be encouraging road users to inform ARS of their concerns, needs, and other feedback on highway road services and as such will be linked to the development of grievance and feedback mechanisms[13].

[13] See also paragraph 27 in the Project Paper.

Map 1: Regional Motorway Maintenance Companies



Annex 3: Economic and Financial Analysis

Introduction

34. The economic analysis of roads to be widened or strengthened under the project is based on current road characteristics, estimated traffic volumes and forecasts, savings in vehicle operating costs and time costs for users, and economic project costs. The cost benefit analysis was performed using the Highway Development and Management Model (HDM-4) that computes road deterioration, CO2 emissions, annual road agency and user's costs, and net benefits for each project alternative over the evaluation period.

Project Roads

35. The five project roads total about 94 km and are roads with good pavement condition with an average roughness of 1.7 IRI, m/km (Table 1). Due to the high traffic of the roads, roads 1 and 5 are two lane roads that require widening to four lanes and the other roads are four lane roads in need of pavement strengthening. Road 1 is on an urban environment with a speed limit of 60 km per hour, while the other roads are inter-urban roads with speed limits of 90 km per hour on two lane roads and 110 km per hour on four lane roads.

Table 1: Project Roads Current Main Characteristics

Road No	Road Section Name	Existing Length (km)	Road Class	Speed Limit (km/hour)	Number of Lanes	Average Roughness (IRI)
1	km 13.3 to km 15	1.7	2	60	2	1.8
2	km 15 to km 45	30.0	1b	110	4	1.9
3	km 45 to km 67	22.9	1b	110	4	1.9
4	km 67 to km 91	23.5	1b	110	4	1.4
5	km 91 to km 107	16.0	2	90	2	1.6
Total		94.1				1.7

36. The average traffic of the project roads is 8,983 vehicles per day with 14 percent composed of trucks and buses (Table 2).

Table 2: Project Roads Average Annual Daily Traffic (vehicles per day)

Road No	Car	Minibus	Large Bus	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total
1	7,686	124	37	299	391	304	8,842
2	7,686	124	37	299	391	304	8,842
3	7,780	136	41	327	404	457	9,145
4	7,751	129	39	309	366	409	9,003
5	7,751	129	39	309	366	409	9,003
Average	7,736	129	39	310	384	385	8,983

Road User Costs

37. Vehicle operating costs for the main vehicle categories using Azerbaijan national roads was estimated based on the basic vehicle fleet characteristics and unit costs. Work and business travel time was valued at the full economic rate; non-work travel time was valued at 30 percent of the full rate. Work/business trips values assume an employee's value is equal to the wage rate plus other costs of employment-valued at about 22 percent of the wage rate, giving an estimated value of working time of US$ 4.27 per working hour. The economic analysis use typical unit road user costs (vehicle operating costs and travel time) for different roughness levels for a four lane road.

38. Estimated rates of traffic growth were based on real GDP forecasts from the World Bank from 2016 to 2020, which is 2.5 percent average annual growth during this period. The income elasticity of demand was considered to be 1.0 for goods transport and 1.2 for passenger transport (cars, minibuses, buses), as car ownership and demand for transport services is expected to grow substantially with rising per capita incomes.

Economic Evaluation Results

39. A discount rate of 6 percent was adopted for this project in line with World Bank guidance. The evaluation period is 20 years. The table below summarizes the results of the economic analysis. The overall Economic Internal Rate of Return (EIRR) of the project is a satisfactory 13.5 percent, the total Net Present Value (NPV) is US$ 128.90 million, and the overall Benefit Cost Ratio is 2.3.

Table 3: Economic Evaluation Results

Road No	EIRR (%)	NPV (US$ M)	B/C Ratio
1	18.1%	13.58	2.6
2	8.6%	10.75	1.4
3	15.6%	26.35	3.4
4	12.8%	16.43	2.5
5	15.1%	61.79	2.3
Total	13.5%	128.90	2.3

40. Sensitivity analysis tested robustness of results of economic evaluation against changes in construction costs and projected road user benefits. Construction costs were increased by 15 percent and road user benefits were decreased by 15 percent yielding an overall project EIRR of 10.9 percent, which confirms the economic justification of the project. The results are summarized below. Switching values analysis shows that if construction costs increase by 265 percent the overall project EIRR becomes 6 percent.

Table 4: EIRR Sensitivity Analysis Results

Road No	Base (%)	A:+15% (%)	B:-15% (%)	C:A&B (%)
1	18.1%	15.9%	16.2%	14.2%
2	8.6%	7.6%	7.7%	6.7%
3	15.6%	14.4%	14.6%	13.4%
4	12.8%	11.7%	11.9%	10.8%
5	15.1%	13.3%	13.6%	11.9%
Total	13.5%	12.1%	12.3%	10.9%

GHG Emissions

41. Carbon dioxide (CO2) emissions are estimated based on aggregated composition of traffic, existing travel conditions, and impacts from the project interventions.[14] The evaluation compares anticipated baseline without project emissions, when there are no project interventions, and with project scenario emissions. Baseline emissions are estimated from the existing traffic allowing for annual growth, while the project scenario accounts for changes in emission levels of the normal traffic due to improved ride quality and increase in travel speeds.

42. Table 8 presents a summary of the estimated CO2 emissions with and without the project in year 2017 and over the entire evaluation period (2016 to 2035). In year 2017, when the improvement road works are completed, the total CO2 emissions will increase from 137,548 tons without the project to 145,730 tons with the project (6 percent increase). Over the evaluation period, the total CO2 emissions will increase from 3,493,088 tons without the project to 3,914,915 tons with the project (12 percent increase). The CO2 emissions on road 1 will decrease with the project because traffic congestion will be reduced on the urban road brought by the widening of the road to four lanes and reducing roadside traffic disturbances. The CO2 emissions on roads 2, 3, and 4 will increase with the project due to the pavement strengthening works that will reduce the road deterioration over time increasing vehicle speeds and fuel consumption. The CO2 emissions on road 5 will increase with the project due to the increase in vehicle speeds and fuel consumption brought by the widening of the inter-urban road to four lanes.

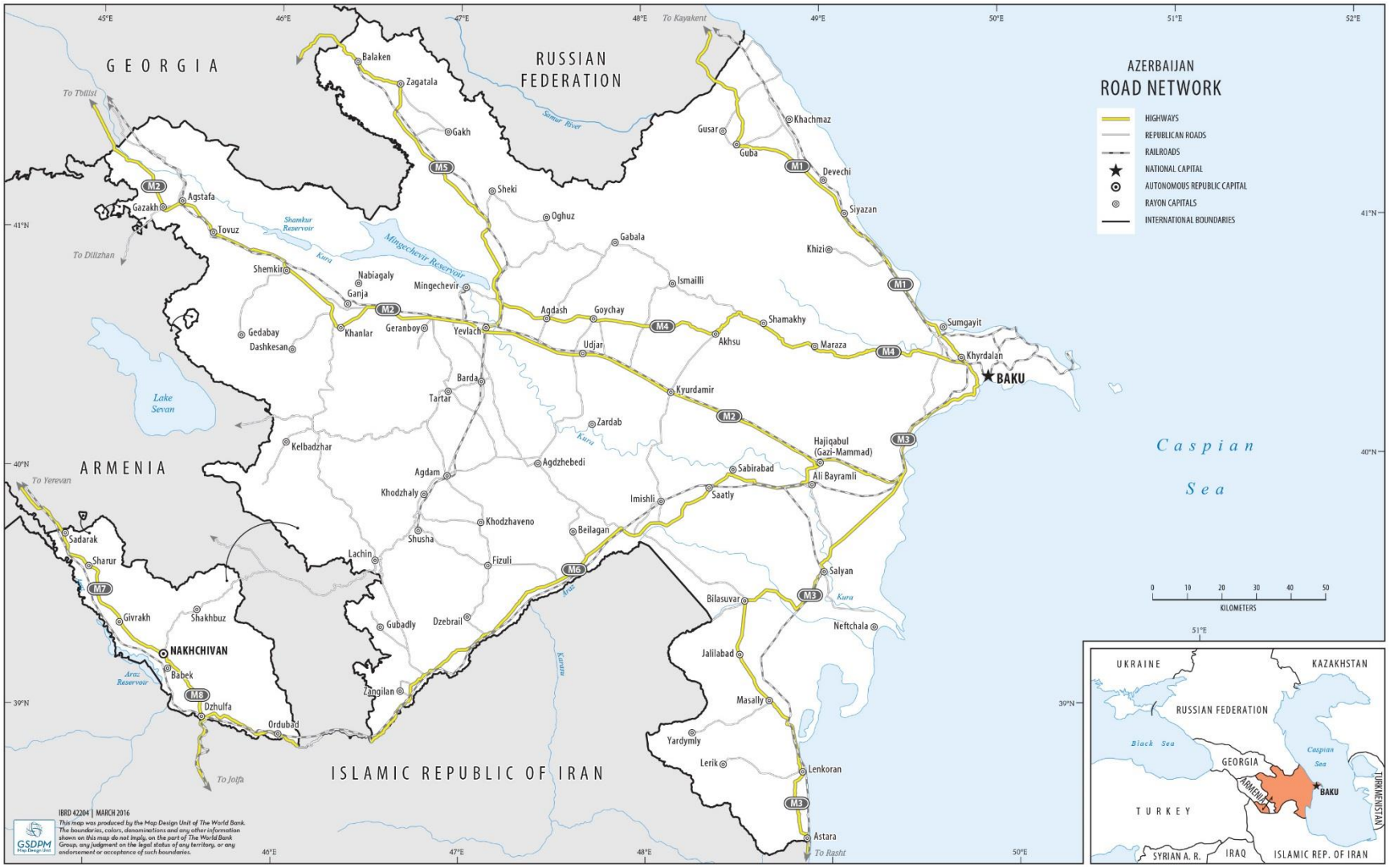
Table 5: CO2 Emissions

Scenario	Road	Year 2017	2016-2035 Evaluation Period
Without Project (tons)	1	1,989	56,777
	2	44,845	1,130,006
	3	37,470	918,523
	4	36,814	928,251
	5	16,431	459,530
	Total	137,548	3,493,088
With Project (tons)	1	1,724	46,794
	2	44,740	1,204,620
	3	37,378	1,005,849
	4	36,788	990,178

[14] Evaluation conducted on the principles of the Transportation Emissions Evaluation Model for Projects (TEEMP) developed by GEF, using the HDM-4 model.

	5	25,101	667,473
	Total	145,730	3,914,915
Change (percent)	1	-13%	-18%
	2	0%	7%
	3	0%	10%
	4	0%	7%
	5	53%	45%
	Total	6%	12%

Annex 4: Map


AZERBAIJAN
ROAD NETWORK
HIGHWAYS
REPUBLICAN ROADS
RAILROADS
NATIONAL CAPITAL
AUTONOMOUS REPUBLIC CAPITAL
RAYON CAPITALS
INTERNATIONAL BOUNDARIES
GEORGIA
RUSSIAN FEDERATION
ARMENIA
ISLAMIC REPUBLIC OF IRAN
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Saatly
Sabirabad
Hajiqabul (Gazi-Mammad)
Ali Bayramli
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Givrakh
Shakhbuz
Babek
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To Tbilisi
To Dilizhan
To Yerevan
To Jolfa
To Kayakent
To Rasht
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Mingechevir Reservoir
Araz Reservoir
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Kura
Araz
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