



Completion Report

Project Number: 39676
Grant Numbers: 0084-KGZ(SF) and 0085-TAJ(SF)
Loan Numbers: 2667-KGZ(SF) and 2359-TAJ(SF)
September 2014

Kyrgyz Republic and Tajikistan: CAREC Regional Road Corridor Improvement Project

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Asian Development Bank

CURRENCY EQUIVALENTS

KYRGYZ REPUBLIC

	Currency Unit	–	som (Som)		
				At Appraisal	At Appraisal
				(Grant 0084)	(Loan 2667)
				(1 September 2007)	(30 August 2010)
Som1.00	=	\$0.026		\$0.021	
\$1.00	=	Som37.81		Som46.65	
					At Project
					Completion
					(30 September 2013)
					\$0.020
					Som48.71

TAJKISTAN

	Currency Unit	–	Tajik somoni (TJS)		
				At Appraisal	At Project Completion
				(1 September 2007)	(30 September 2013)
TJS1.00	=	\$0.2905		\$0.2097	
\$1.00	=	TJS3.4418		TJS4.7679	

ABBREVIATIONS

AADT	–	annual average daily traffic
ADB	–	Asian Development Bank
CAREC	–	Central Asia Regional Economic Cooperation
CBA	–	cross-border agreement
CWRD	–	Central and West Asia Department
EIRR	–	economic internal rate of return
GDP	–	gross domestic product
ICB	–	international competitive bidding
IEE	–	initial environment examination
IPIG	–	Investment Projects Implementation Group
MOT	–	Ministry of Transport
MOTC	–	Ministry of Transport and Communications
PBM	–	performance-based maintenance
PCR	–	project completion review
PIU	–	project implementation unit
PRC	–	People's Republic of China
QCBS	–	quality- and cost-based selection
SDR	–	special drawing right
TA	–	technical assistance
VOC	–	vehicle operating cost

NOTES

- (i) The fiscal year (FY) of the government and its agencies ends on 31 December. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2009 ends on 31 December 2009.
- (ii) In this report, "\$" refers to US dollars.

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BASIC DATA
Grant No. 0084-KGZ(SF) and Loan No. 2667-KGZ(SF)

A. Grant and Loan Identification

1.	Country	Kyrgyz Republic
2.	Grant Number	0084-KGZ(SF)
	Loan Number	2667-KGZ(SF) (Supplementary)
3.	Project Title	CAREC Regional Road Corridor Improvement Project
4.	Recipient and Borrower	Kyrgyz Republic
5.	Executing Agency	Ministry of Transport and Communications
6.	Amount of Grant	\$25.60 million
	Amount of Loan	SDR15.19 million (\$23.00 million equivalent)
7.	Project Completion Report Number	REG:1475

B. Grant and Loan Data

B.1 Grant Data (Grant 0084-KGZ[SF])

1.	Appraisal	
	– Date Started	15 July 2007
	– Date Completed	31 July 2007
2.	Grant Negotiations	
	– Date Started	19 September 2007
	– Date Completed	20 September 2007
3.	Date of Board Approval	24 October 2007
4.	Date of Grant Agreement	31 October 2007
5.	Date of Grant Effectiveness	
	– In Grant Agreement	60 days after the date of the Grant Agreement (30 December 2007)
	– Actual	6 February 2008
	– Number of Extensions	1
6.	Closing Date	
	– In Grant Agreement	30 September 2013
	– Actual	30 September 2013
	– Number of Extensions	0
7.	Disbursements	
	a. Dates	

Initial Disbursement	Final Disbursement	Time Interval
4 August 2008	24 February 2014	67 months
Effective Date	Original Closing Date	Time Interval
6 February 2008	30 September 2013	68 months

b. Amount (\$ million)

Category	Original Allocation	Last Revised Allocation ^a	Amount Increased/ (Canceled)	Amount Disbursed	Undisbursed Balance ^b
Works	20.00	23.39	3.39	23.37	0.01
Consulting Services	2.6	2.21	-0.39	2.16	0.06
Unallocated	3.0	0.00	-3.00	0.00	0.00
Total	25.60	25.60	0.00	25.53	0.07

^a The last revision of the grant allocation was made on 6 August 2012.^b Canceled at the grant account closing on 28 February 2014.**B.2 Loan Data (Loan 2667-KGZ[SF])**

1.	Appraisal	
	– Date Started	15 July 2007
	– Date Completed	31 July 2007
2.	Loan Negotiations	
	– Date Started	17 August 2010
	– Date Completed	18 August 2010
3.	Date of Board Approval	21 September 2010
4.	Date of Loan Agreement	5 November 2010
5.	Date of Loan Effectiveness	
	– In Loan Agreement	60 days after the date of the Loan Agreement (4 January 2011)
	– Actual	19 April 2011
	– Number of Extensions	2
6.	Closing Date	
	– In Loan Agreement	30 September 2013
	– Actual	30 September 2013
	– Number of Extensions	0
7.	Terms of Loan	
	– Interest Rate	1% per year during grace period and 1.5% per year thereafter
	– Commitment Charges	0
	– Maturity (number of years)	32 years
	– Grace Period (number of years)	8 years
	– Front-end Fee	0
8.	Disbursements	
	a. Dates	
	Initial Disbursement	Final Disbursement
	26 July 2011	18 February 2014
	Effective Date	Original Closing Date
	19 April 2011	30 September 2013
		Time Interval
		31 months
		Time Interval
		29 months

b. Amount (SDR million)

Category	Original Allocation	Last Revised Allocation ^a	Amount Increased/ (Canceled)	Amount Disbursed	Undisbursed Balance ^b
Works	13.41	14.15	0.74	14.05	0.10
Consulting Services	1.32	0.58	-0.74	0.46	0.12
Interest Charge	0.46	0.46	0.00	0.20	0.26
Total	15.19	15.19	0.00	14.71	0.48
\$ Equivalent	23.68	23.68	0.00	22.95	0.74

^a The last revision of the loan allocated was made on 6 August 2012.

^b The undisbursed balance was canceled at the loan account closing on 28 February 2014.

9. Local Costs (Financed), Grant 0084-KGZ(SF): Not applicable.
Local Costs (Financed), Loan 2667-KGZ(SF): Not applicable.

C. Project Data

1. Financing Plan (\$ million)

Cost	Appraisal Estimate	Supplementary Financing	Total Estimate	Actual ^a
Implementation Costs				
Recipient/Borrower-Financed	13.90	9.00	22.90	16.31
ADB Grant Financed (Grant 0084)	25.60	0.00	25.60	25.53
ADB Loan Financed (Loan 2667)	0.00	22.30	22.60	22.64
Total	39.50	31.30	70.80	64.48
Financing Charges				
Borrower Financed	0.00	0.00	0.00	0.00
ADB Financed	0.00	0.70	0.70	0.31
Total	0.00	0.70	0.70	0.31

ADB = Asian Development Bank.

^a As of 28 February 2014.

2. Cost Breakdown by Project Component (\$ million)

Component	Appraisal Estimate	Supplementary Financing	Total Estimate	Actual ^a
A. Base Costs				
1. Civil Works				
a. Road Corridor Improvement	20.00	20.30	40.30	47.86
b. Border Infrastructure Improvement	0.60	0.00	0.60	3.40 ^b
2. Performance-Based Maintenance	4.00	0.00	4.00	0.00
3. Consulting Services for Implementation				
a. Project Supervision, Monitoring, and Evaluation	1.60	1.00	2.60	1.95
b. External Financial Audit	0.10	0.00	0.10	0.07
c. Project Management	0.30	1.00	1.30	0.73
d. Institutional Support for Road Maintenance	0.60	0.00	0.60	0.21
4. Taxes and Duties	6.60	3.50	10.10	10.26
Total Base Costs (A)	33.80	25.80	59.60	64.48
B. Contingencies				
a. Physical Contingency	3.00	1.00	4.00	0.00
b. Price Contingency	2.70	4.50	7.20	0.00
Total Contingencies (B)	5.70	5.50	11.20	0.00
C. Interest During Construction	0.00	0.70	0.70	0.31
Total Project Cost (A+B+C)	39.50	32.00	71.50	64.79

^a As of 28 February 2014.

^b The government arranged financing for this component through technical assistance from the People's Republic of China in the amount of CNY21 million (about \$3.4 million equivalent).

3. Project Schedule

Item	Appraisal Estimate	Actual
Civil Works		
Road Improvement (Procurement)		
Procurement	Q4 2007–Q2 2008	Q1 2008–Q4 2008
Implementation	Q3 2008–Q4 2010	Q4 2008–Q4 2012
Performance-Based Maintenance		
Procurement	Q2 2008–Q2 2009	Not available
Implementation	Q2 2009–Q1 2013	Not available
Border Infrastructure Improvement		
Procurement	Q4 2008–Q2 2009	Q3 2009–Q3 2010
Implementation	Q3 2009–Q2 2013	Q3 2009–Q3 2010
Consulting Services		
Supervision, Monitoring, and Evaluation	Q2 2008–Q4 2011	Q2 2008–Q1 2012
Financial Audit	Q1 2008–Q2 2013	Q1 2010–Q4 2013
Project Management	Q1 2008–Q2 2013	Q1 2008–Q4 2013
Institutional Support for Road Maintenance	Q1 2008–Q2 2013	Q4 2008–Q3 2013

4. Project Performance Report Ratings

Implementation Period	Project Ratings	
	Development Objectives	Implementation Progress
From 30 November 2007 to 30 July 2010	Satisfactory	Satisfactory
From 31 July to 31 August 2010	Satisfactory	Highly Satisfactory
From 1 September to 31 December 2010	Satisfactory	Satisfactory
From 1 January 2011 to 31 December 2013	On Track ^a	

^a On 1 January 2011, the Project Performance Report system was replaced with eOperations.

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Fact-finding for Grant 0084	3–27 April 2007	8	175	c, e, f, m, l, p, p, t
Pre-appraisal ^a	12–22 July 2007	5	55	c, f, i, p, t
Inception mission ^b	30 January–14 February 2008	3	45	o, p, t
Review 1 ^b	17 November–2 December 2008	1	25	t
Review 2 ^b	3–10 June 2009	2	16	p, t
Review 3 ^b	16–25 July 2009	2	24	p, t
Review 4 ^b	30 September–15 October 2009	3	48	a, p, t
Fact-finding for Loan 2667	27 January–10 February 2010	2	28	p, t
Review 5 ^b	29 November–11 December 2010	4	52	a, p, s, t
Review 6 ^b	7–15 February 2011	3	27	p, s, t
Midterm Review	1–11 November 2011	3	30	a, n, p
Review 7 ^b	21–31 May 2012	3	33	e, p, t
Review 8	29 October–15 November 2012	3	48	a, p, r
Review 9	11–18 November 2013	2	16	p, t
Completion Review	5–20 December 2013	3	24	a, n, p

a = analyst, c = counsel, e = environment specialist, f = financial specialist, i = investment specialist, m = economist, n = consultant, o = operation officer, p = project implementation officer, r = portfolio management specialist, s = social specialist, t = transport specialist.

^a Pre-appraisal mission was upgraded to appraisal.

^b Mission combined with other projects in the project area.

BASIC DATA
Grant No. 0085-TAJ(SF) and Loan No. 2359-TAJ(SF)

A. Grant and Loan Identification

1.	Country	Republic of Tajikistan
2.	Grant Number	0085-TAJ(SF)
	Loan Number	2359-TAJ(SF)
3.	Project Title	CAREC Regional Road Corridor Improvement Project
4.	Recipient and Borrower	Republic of Tajikistan
5.	Executing Agency	Ministry of Transport
6.	Amount of Grant	\$12.5 million
	Amount of Loan	SDR26,453,000 (\$40.9 million equivalent)
7.	Project Completion Report Number	REG: 1475

B. Grant and Loan Data

1.	Appraisal	
	– Date Started	15 July 2007
	– Date Completed	31 July 2007
2.	Grant and Loan Negotiations	
	– Date Started	17 September 2007
	– Date Completed	18 September 2007
3.	Date of Board Approval	24 October 2007
4.	Date of Financial Agreement	3 November 2007
5.	Date of Effectiveness	
	– In Financing Agreement	60 days after the date of the Financing Agreement (2 February 2008)
	– Actual	21 December 2007
	– Number of Extensions	0
6.	Closing Date	
	– In Financing Agreement	30 September 2013
	– Actual	30 September 2013
	– Number of Extensions	0
7.	Terms of Loan	
	– Interest Rate	1% per year during grace period and 1.5% per year thereafter
	– Commitment Charges	0
	– Maturity (number of years)	32 years
	– Grace Period (number of years)	8 years
	– Front-end Fee	0
8.	Disbursements (Grant 0085-TAJ[SF])	

a. Dates of the Grant

Initial Disbursement	Final Disbursement	Time Interval
05 September 2008	25 March 2014	67 months
Effective Date	Original Closing Date	Time Interval
21 December 2007	30 September 2013	69 months

b. Amount of the Grant (\$ million)

Category	Original Allocation	Last Revised Allocation^a	Amount Increased/ (Canceled)	Amount Disbursed	Undisbursed Balance^b
Works	9.80	10.07	0.27	10.07	0.00
Consulting Services	2.70	2.43	-0.27	2.39	0.04
Total	12.50	12.50	0.00	12.46	0.04

^a The last grant reallocation was made on 27 September 2013.

^b The undisbursed balance was canceled at the grant account closing on 28 February 2014.

c. Dates of the Loan (Loan 2359-TAJ[SF])

Initial Disbursement	Final Disbursement	Time Interval
24 November 2008	06 December 2013	60 months
Effective Date	Original Closing Date	Time Interval
21 December 2007	30 September 2013	69 months

d. Amount of the Loan (SDR million)

Category	Original Allocation	Last Revised Allocation	Amount Increased/ (Canceled)	Amount Disbursed	Undisbursed Balance
Works	22.57	26.19	3.62	26.19	0.00
Interest Charge	0.26	0.26	0.00	0.26	0.00
Unallocated	3.62	0.00	-3.62	0.00	0.00
Total	26.45	26.45	0.00	26.45	0.00
\$ Equivalent	40.87	40.87	0.00	40.87	0.00

9. Local Costs (Financed), Grant 0085-TAJ(SF): Not applicable.
Local Costs (Financed), Loan 2359-TAJ(SF): Not applicable.

C. Project Data

1. Financing Plan (\$ million)

Cost	Appraisal Estimate	Actual^a
Implementation Costs		
Recipient/Borrower-Financed	23.10	17.40
ADB Grant-Financed (Grant 0085)	12.50	12.50
ADB Loan-Financed (Loan 2359)	40.50	40.50
Total	76.10	70.40
Financial Charges		
Recipient/Borrower-Financed	0.00	0.00
ADB-Financed	0.40	0.40
Total	0.40	0.40

ADB = Asian Development Bank.

^a As of 28 February 2014.

2. Cost Breakdown by Project Component (\$ million)

Component	Appraisal Estimate	Actual^a
A. Base Costs		
1. Civil Works		
a. Road Corridor Improvement	44.70	55.80
b. Border Infrastructure Improvement	0.40	0.30
2. Land Acquisition and Resettlement	0.10	0.20
3. Performance-Based Maintenance	4.00	0.80
4. Consulting Services for Implementation		
a. Project Supervision, Monitoring, and Evaluation	2.00	1.90
b. External Financial Audit	0.10	0.10
c. Project Management	0.30	0.30
d. Institutional Support for Road Maintenance	0.60	0.40
5. Taxes and Duties	12.90	10.60
Total Base Costs (A)	65.10	70.40
B. Contingencies		
a. Physical Contingency	6.00	0.00
b. Price Contingency	5.00	0.00
Total Contingencies (B)	11.00	0.00
C. Interest During Construction	0.40	0.40
Total Project Cost (A+B+C)	76.50	70.80

^a As of 28 February 2014.

3. Project Schedule

Item	Appraisal Estimate	Actual ^a
Road Improvement		
Procurement	Q3 2007–Q1 2008	Q4 2007–Q3 2008
Implementation	Q1 2008–Q3 2010	Q3 2008–Q3 2011
Performance-Based Maintenance		
Procurement	Q2 2008–Q4 2008	Q3 2012–Q2 2013
Implementation	Q4 2008–Q1 2013	Q3 2013–Q3 2016
Border Infrastructure Improvement		
Procurement	Q1 2008–Q4 2008	Q3 2008–Q2 2009
Implementation	Q1 2009–Q3 2010	Q3 2009–Q4 2010
Consulting Services		
Supervision, Monitoring, and Evaluation		
Procurement	Q3 2007–Q4 2007	Q4 2007–Q2 2008
Implementation	Q1 2008–Q4 2011	Q2 2008–Q3 2013
Institutional Support for Road Maintenance		
Procurement	Q4 2007–Q4 2007	Q4 2008–Q1 2012
Implementation	Q1 2008–Q1 2013	Q2 2009–Q3 2013

^a As of 28 February 2014.

4. Project Performance Report Ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From 30 October 2007 to 30 April 2010	Satisfactory	Satisfactory
From 1 May to 31 May 2010	Satisfactory	Highly Satisfactory
From 1 June to 31 December 2010	Satisfactory	Satisfactory
From 1 January 2011 to 31 December 2013		On Track ^a

^a Starting from 2011, the performance of ADB-financed projects is monitored and rated using the eOperations—the integrated project management information system, which automates ADB business process workflows.

D. Data on Asian Development Bank Missions

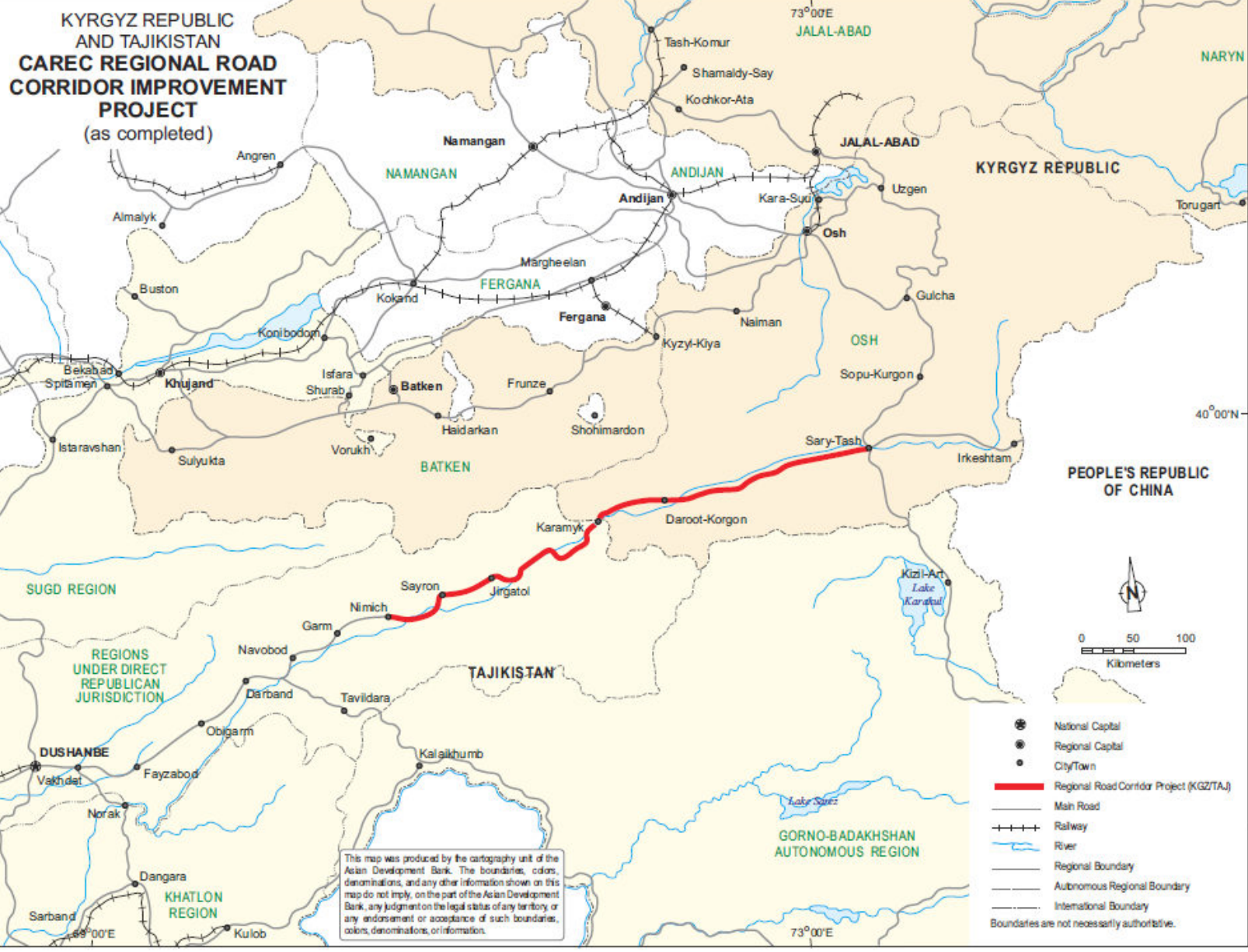
Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Fact-finding ^a	3–27 April 2007	8	175	c, e, f, i, m, p, p, t
Pre-appraisal ^b	12–22 July 2007	5	55	c, f, i, p, t
Inception ^a	30 January–14 February 2008	3	45	o, p, t
Review ^a	17 November–2 December 2008	6	90	a, a, e, s, s, t
Review ^a	1–6 June 2009	2	12	f, s
Review ^a	27–29 July 2009	1	3	s
Review ^a	2–8 February 2010	1	7	f
Review ^a	17–21 May 2010	1	5	f
Review ^a	13–29 August 2010	8	128	a, c, e, f, p, s, s, t
Consultation ^a	17–23 February 2011	4	28	a, d, p, t
Midterm Review	26–30 December 2011	2	10	a, p
Review	15–20 October 2012	2	12	a, p

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members
Review	15–30 September 2013	2	32	a, p
Completion Review	27 March–12 April 2014	3	45	a, n, p

a = analyst, c = counsel, d = director, e = environment specialist, f = financial specialist, i = investment specialist, m = economist, n = consultant, o = operation officer, p = project implementation officer, s = social specialist, t = transport specialist.

^a Mission combined with other missions in the project area.

^b Pre-appraisal mission was upgraded to appraisal.



I. PROJECT DESCRIPTION

1. In October 2007, at the request of the governments of the Kyrgyz Republic and the Republic of Tajikistan, the Asian Development Bank (ADB) approved (i) a grant of \$25.6 million for the Kyrgyz Republic and (ii) a grant of \$12.5 million and a loan of SDR26.5 million (\$40.9 million equivalent) for Tajikistan for the Central Asia Regional Economic Cooperation (CAREC) Regional Road Corridor Improvement Project.¹ The project was designed to improve the performance of transport corridors and regional connectivity across the Central Asian countries and the People's Republic of China (PRC). The expected project impact was to foster regional trade and cooperation among the countries connected by the corridor and other Central Asian countries. The expected project outcome was to increase regional traffic and trade, as well as improve access to markets and social services for people living along the corridor.

2. At appraisal, the project's planned outputs were (i) 263 kilometers (km) of improved two-lane road from Sary-Tash to the Kyrgyz Republic–Tajik border at Karamyk (about 142 km), and from the border at Karamyk to Nimich in Tajikistan (about 121 km); (ii) improved infrastructure and facilities at the Kyrgyz Republic–PRC border crossing (at Irkeshtam) and the Kyrgyz Republic–Tajikistan at border crossing (Karamyk); (iii) greater sustainability and capacity of the road subsectors in both countries through outsourcing maintenance operations to the private sector; and (iv) a cross-border agreement (CBA) between the Kyrgyz Republic, the PRC, and Tajikistan.

3. In 2010, the scope the Kyrgyz Republic's portion of the first project output was changed by extending the length of the asphalt surfacing from the planned length of 30 km to the entire length of 136 km, owing to unexpected increases in traffic volumes along the project road and its adjoining areas; the cost of the extension was estimated at \$32 million. At the request of the Government of the Kyrgyz Republic, ADB provided supplementary financing in the form of a loan of SDR15.2 million (\$23 million equivalent) in October 2010,² and the Government of the Kyrgyz Republic provided counterpart financing of \$9 million.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

4. The project road is a section of CAREC corridor 3, running from the PRC through Irkeshtam at the PRC–Kyrgyz Republic border and Karamyk at the Kyrgyz Republic–Tajikistan border toward several Central and South Asian countries, including Afghanistan and Pakistan to the south and Uzbekistan to the west.³ More broadly, the project road is part of the Asian highway network that connects the ocean ports of Iran and Pakistan in South Asia, through Afghanistan, to the PRC, Central Asia, and the Russian Federation.⁴ At appraisal, the road condition was poor and the border-crossing facilities and procedures were outdated and inefficient, which obstructed international traffic and trade. To help the two countries overcome these obstacles and enable the smooth movement of people and goods through the region,

¹ ADB. 2007. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan, Asian Development Fund Grant, and Technical Assistance Grant to the Kyrgyz Republic and Republic of Tajikistan for CAREC Regional Road Corridor Improvement Project*. Manila.

² ADB. 2010. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan to the Kyrgyz Republic for CAREC Regional Road Corridor Improvement Project*. Manila.

³ ADB. 2007. *CAREC (Central Asia Regional Economic Cooperation) Transport and Trade Facilitation Strategy*; and ADB. 2014. *CAREC Transport and Trade Facilitation Strategy 2020*. Manila.

⁴ The project road is a part of the corridor. The corridor is the most direct link from the PRC to Central and South Asia with total length of 1,395 km.

ADB provided technical assistance (TA) in 2006 to prepare the project.⁵ To enhance the project's benefits, particularly the component facilitating a CBA between the three countries, regional TA⁶ was provided with the project.

5. The project is relevant to both governments' objectives and sector road maps and policies, and to ADB's country partnership strategies for the Kyrgyz Republic⁷ and for Tajikistan,⁸ at both appraisal and completion. In the country partnership strategy of the Kyrgyz Republic, ADB confirms that it will continue to focus investments on infrastructure development, mainly in transport and energy, and commits to provide necessary assistance in promoting regional cooperation in line with CAREC's relevant policies and strategies. At completion, the 250-km road section (136 km in the Kyrgyz Republic and 114 km in Tajikistan) had been rehabilitated (paras. 6 and 7), cross-border infrastructures had been rehabilitated and become operational (paras. 9 and 10), and the CBA had been agreed and become effective between the Kyrgyz Republic and Tajikistan (para. 13). The project framework appears in Appendix 1.

B. Project Outputs

1. Output A: Road Improvement

6. **Kyrgyz Republic.** At completion, a 136-km section of road from Karamyk to Sary-Tash was rehabilitated in accordance with the national technical requirement.⁹ During implementation, two main modifications were made to the road design:¹⁰

- (i) To incorporate an improvement in alignment, the planned length of 142 km was reduced to 136 km, according to the detailed design.
- (ii) To meet the requirements of increased traffic, the asphalt surfacing was extended from the planned length of 30 km to the entire length of 136 km.

7. **Tajikistan.** At completion, a 114-km section from Nimich to Karamyk had been rehabilitated through the two civil work packages.¹¹ During implementation, two major changes were made in the civil works:

- (i) A realignment of the project road was introduced at Sayron, which shortened the distance by 7 km, from 121 km at appraisal to 114 km at completion, according to the detailed design.
- (ii) To accommodate unexpected growth in traffic volumes along the project road, the original single 6-cm base asphalt surfacing layer in Tajikistan was changed to

⁵ ADB. 2006. *Regional Technical Assistance for Maintenance of Regional Road Transport Corridors Project*. Manila.

⁶ ADB. 2007. *Technical Assistance for Cross-Border Agreement among the Kyrgyz Republic, the People's Republic of China, and Tajikistan*. Manila (TA 6415-REG, approved on 24 October 2007 financed by ADB).

⁷ Ministry of Transport and Communications of Kyrgyz Republic. 2007. *Road Sector Development Strategy for 2007–2010*. Bishkek; ADB. 2007. *Kyrgyz Republic. Joint Country Support Strategy 2007–2010*. Manila; and ADB. 2013. *Country Partnership Strategy: Kyrgyz Republic (2013–2017)*. Manila.

⁸ Government of Tajikistan. 2007. *National Development Strategy for the Republic of Tajikistan for the Period to 2015*. Dushanbe; and ADB. 2010. *Country Partnership Strategy: Tajikistan (2010–2014)*. Manila.

⁹ The project road was designed as per the national standard's Category IV, i.e., two lanes of a 7 meter carriage way and a 1.5 meter soft shoulder each side, with asphalt concrete surface and the international roughness index not exceeding 3.5 meter per km.

¹⁰ The civil works included the following: pavement of 10 cm two-layer asphalt concrete, constructing seven new bridges, reconstructing 4 existing bridges, replacement of 214 culverts, and installation of river protection embankments and road safety facilities.

¹¹ The civil works included strengthening of sub-base; pavement; installing slope and riverbank protections, and safety facilities; and constructing/rehabilitation of 8 bridges and replacement of concrete causeways.

two-layer asphalt surfacing. The design change was made for the Nimich–Sayron section at first, and then with additional financing was made for the remaining section.¹²

8. Construction supervision consultants performed quality control for all civil works in both countries. No quality-related problem was found during the defect liability periods. ADB's project completion review (PCR) mission, conducted in December 2013 for the Kyrgyz Republic component and in April 2014 for the Tajikistan component, also confirmed that the project roads offered smooth driving, and that safety and environmental protection facilities had been installed.

2. Output B: Border Infrastructure

9. **Kyrgyz Republic.** As identified at appraisal, the Irkeshtam border-crossing point at the Kyrgyz Republic–PRC border needed better infrastructure and facilities to handle growing cross-border traffic and facilitate speedy border crossings. The government implemented this output using TA from the PRC in the amount of CNY21 million (equivalent to \$3.4 million). At completion in August 2010, all the facilities had been rehabilitated and were well-equipped for necessary functions related to inspection, quarantine, and data processing pertaining to movement of cargo, and associated buildings had been constructed, such as a new customs hall and office and a large waiting area for vehicles.

10. **Tajikistan.** As anticipated at appraisal, the border infrastructure at Karamyk was improved under a different ADB-financed project.¹³ Two entry check points, administrative buildings, examination equipment, and lifeline facilities were installed.

3. Output C: Road Maintenance

11. **Kyrgyz Republic.** To enhance road sector sustainability, the project was intended to introduce outsourcing of road maintenance activities to private companies. It was anticipated that the project would introduce performance-based maintenance (PBM) contracts on a pilot basis and also improve institutional capacity in the road sector. The government was to finance civil works under pilot contracts, while ADB was to finance related consulting services. During implementation, supervision consultants and several individual consultants were recruited and completed the following tasks: (i) a survey and assessment of road maintenance practices in the country; (ii) training on various aspects of PBM contracting and activities; (iii) institutional support of PBM through the framing of a strategy for private participation in the road sector; and (iv) development of a bidding document for PBM contracts, for review by the government. However, the award of government-funded pilot contracts was delayed. The implementation of the PBM pilot contract is now included in the next ADB-financed project,¹⁴ for the 100-km section from Kara-Balta to kilometer marker (Km) 161 of the Bishkek–Osh road corridor.

12. **Tajikistan.** At appraisal, this component was to be implemented in two stages. In the first, supervision consultants were to train private sector contractors. In the second, individual

¹² ADB. 2013. *Report and Recommendation of the President to the Board of Directors on the Proposed Asian Development Fund Grant, to Republic of Tajikistan for CAREC Corridors 3 and 5 Enhancement Project*. Manila.

¹³ ADB. 2012. *Project Completion Report: Regional Customs Modernization and Infrastructure Development Project*. Manila.

¹⁴ ADB. 2013. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan and Grant to the Kyrgyz Republic: Central Asia Regional Economic Cooperation Corridor 3 (Bishkek–Osh Road) Improvement Project, Phase 4*. Manila.

consultants were to be recruited to assist the executing agency in (i) introducing institutional reforms; (ii) developing a program for road maintenance privatization and outsourcing; and (iii) designing, preparing, and administering performance- and/or output-based contracts. As such, the project was to introduce PBM contracts on a pilot basis. During implementation, the supervision consultants and the PBM consultants provided substantial training to the Ministry of Transport (MOT) staff and private contractors. The PBM consultants prepared PBM bidding documents and specifications. Two projects were selected for the pilot: Lot 1, from Nurobod to Nimich (Km 140–213); and Lot 2, from Vahdat to Obi-Garm (Km 20–96). In May 2013, both PBM contracts were awarded with the same commencement date (1 July 2013) and implementation periods of three years. At the government's request, ADB approved the procurement of a vehicle and some computer equipment to enable appropriate supervision of PBM contracts. The PCR mission noted that the PBM contracts were being implemented smoothly with intensive supervision of the MOT's regional road maintenance unit.

4. Output D: Cross-Border Agreement

13. The CBA component was implemented through regional TA¹⁵ from ADB associated with the project, in coordination with the Kyrgyz State Customs Service,¹⁶ Tajikistan's Customs Service, and relevant international and national agencies. Details are set forth in para. 27.

C. Project Costs

14. The total project cost, including the supplementary loan, was estimated at \$71.5 million for the Kyrgyz Republic¹⁷ and \$76.5 million for Tajikistan.¹⁸ At completion, the actual total cost was \$64.79 million for the Kyrgyz Republic, about 9.4% lower than the estimate, and \$70.8 million for Tajikistan, about 7.5% lower than the estimate. Actual government financing was \$16.31 million for the Kyrgyz Republic and \$17.40 million for Tajikistan. The lower cost of the Kyrgyz Republic project was due to (i) delay and cancelation of the PBM pilot-testing contract (para. 11); (ii) fewer consulting services required; and (iii) lower financial charges. In contrast, cost increases occurred in the border infrastructure improvement component at Irkeshtam, which was not clearly defined and designed at appraisal. During implementation, it was redesigned and financed by a grant from the PRC (para. 9). The reasons for the cost savings in the Tajikistan project were (i) efficient use of consulting services with fewer inputs, and (ii) limited use of the PBM component owing to delays in its progress. Appendix 2 compares the project costs at appraisal and at completion in detail.

D. Disbursements

15. **Kyrgyz Republic.** The ADB grant was approved on 24 October 2007, was signed on 31 October 2007, and became effective on 6 February 2008.¹⁹ The ADB supplementary loan

¹⁵ ADB. 2007. *Technical Assistance for Cross-Border Agreement among the Kyrgyz Republic, the People's Republic of China, and Tajikistan*. Manila (TA 6415-REG, approved on 24 October 2007).

¹⁶ The State Customs Committee was eventually renamed the State Customs Service.

¹⁷ Under the financing plan, the project was to be financed by the ADB grant of \$25.6 million (65% of the project cost) and by government financing of \$13.9 million (35%). With the supplementary loan of SDR15.2 million (\$23.7 million equivalent) and government financing of \$9.0 million, the financing shares were revised to 68% from ADB and 32% from the government.

¹⁸ The project was financed by the ADB grant of \$12.5 million (16.3% of the project cost), the ADB loan of \$40.9 million (53.5%), and government financing of \$23.1 million (30.2%).

¹⁹ In the Kyrgyz Republic, parliamentary elections and the government's reformation caused ADB to extend the grant effectiveness from 31 December 2007 to 15 February 2008. For the same reasons, it extended the effectiveness of the supplementary loan from 4 January to 19 April 2011.

was approved on 21 September 2010, was signed on 5 November 2010, and became effective on 19 April 2011. The grant and loan were closed on 30 September 2013 as planned, and the financial accounts were closed on 28 February 2014 with a total disbursement of \$25.53 million for the grant and SDR14.71 million (equivalent to \$22.95 million) for the supplementary loan. Subsequently, the undisbursed amounts of \$70,287.37 for the grant and SDR477,382.34 for the supplementary loan were canceled.

16. **Tajikistan.** The financial agreement for the ADB grant and loan was approved on 24 October 2007, was signed on 3 November 2007, and became effective on 21 December 2007.²⁰ The grant and loan were closed on 30 September 2013 as planned, and the loan account was closed on 6 December 2013 with the disbursement of \$40,870,040. The grant account was closed on 25 March 2014 with the disbursement of \$12,458,596. The undisbursed amount of \$41,404 under the grant was canceled.

17. All disbursements for the grants and loans were carried out in accordance with ADB's *Loan Disbursement Handbook* (January 2007, as amended from time to time), mainly for civil works contractors and construction supervision consultants. To expedite disbursement for expenditures not exceeding \$50,000 per individual claim, the executing agencies created and used project imprest accounts and applied the statement of expenditures procedure for liquidating and replenishing their respective imprest accounts for eligible expenditures.²¹ The annual disbursements of the grant and loan proceeds are outlined in Appendix 3.

E. Project Schedule

18. **Kyrgyz Republic.** At appraisal, the project was expected to be implemented from January 2008 to March 2013, and the implementation of the civil works component was planned from April 2008 to October 2010. The civil works contract was signed on 6 August 2008, and the contractor started the site activities by the end of February 2009.²² The contract was completed on 18 October 2012, including the additional works financed under the supplementary financing and despite the civil disorder in 2010, which interrupted progress and the delivery of supplies of bitumen and diesel from outside the country.²³ The one-year defects liability period ended on 17 October 2013.

19. **Tajikistan.** A detailed implementation plan, which included a resource tracking system, was developed and applied. All civil works contracts (two packages) were awarded on 29 August 2008, with completion expected in May 2011. The civil works were substantially completed in December 2010 for the Nimich–Sayron section and in August 2011 for the Sayron–Karamyk section. Major reasons for the 3-month delay on the latter were the heavy rains in May 2009 and the late mobilization of both contractors. The defects liability periods ended in December 2011 for the Nimich–Sayron section and in August 2013 for the Sayron–

²⁰ Financial Agreement (Special Operation). *CAREC Regional Road Corridor Improvement Project between Republic of Tajikistan and Asian Development Bank*. Loan No. 2359-TAJ(SF) and Grant No. 0085-TAJ(SF), dated 3 November 2007.

²¹ For the Kyrgyz Republic, the imprest account turnover ratio is 2.3. This indicates that the imprest funds were used efficiently, as procedure requires that at least twice the amount of the funds advanced to the executing agency be liquidated each year. For Tajikistan, the executing agency confirmed that the imprest account and statement of expenditures procedure for the grant and loan were established but not used, as the executing agency preferred the direct payment procedure.

²² The physical work is generally carried out between April and November owing to winter snowfall.

²³ Following protests on 6–7 April 2010 the government was ousted from power, which led to a long period of political instability. On 11–14 June 2010, an ethnic conflict broke out in the south. The project site was located about 200 km from the places of rioting; however, the rioting affected the bitumen and diesel supply routes.

Karamyk section. The road maintenance component experienced substantial delays owing to the executing agency's insufficient experience with and knowledge of procurement. To help the executing agency prepare bidding documents for use in engaging contractors, an international consultant was engaged in January 2012. The consultant performed well in assisting the executing agency in the timely award of the contracts and startup of the pilot activities. These contracts are to be implemented in three years and completed in 2016, with government financing.

20. The appraised and actual project schedules are compared in Appendix 4. The chronology of major events appears in Appendix 5.

F. Implementation Arrangements

21. **Kyrgyz Republic.** The Ministry of Transport and Communications (MOTC) was the executing agency for the road improvement and PBM components, and the State Customs Service was responsible for executing the border infrastructure component. Under the MOTC, a project implementation unit (PIU) was established for (i) monitoring day-to-day implementation progress, (ii) preparing withdrawal applications, (iii) preparing progress reports, and (iv) maintaining and auditing project financial accounts. The PIU, renamed to the Investment Projects Implementation Group (IPIG) in 2010, was staffed by 30 personnel qualified in project planning, engineering, procurement, civil works contract management, financial management, and safeguards-related monitoring and documentation.²⁴ The IPIG now implements all ADB-funded projects in the country. During project implementation, the IPIG received technical support from the construction supervision consultants.

22. **Tajikistan.** The MOT was the executing agency for the road improvement and PBM components, and the Customs Service was responsible for executing the CBA component. Under the MOT, a PIU was established in 2001 for functions similar to those of the PIU in the Kyrgyz Republic, except that the Road Department was responsible for implementing the PBM component. To strengthen project implementation capacity, the PIU and the Road Department received support from consultants.

23. Appendix 6 contains the institutional framework for the project implementation.

G. Conditions and Covenants

24. **Kyrgyz Republic.** Most of the covenants defined in the financial agreements were complied with. The government established and executed a well-functioning institutional framework with its staff and the consultants to carry out all the tasks of project implementation, including procurement, financial management, quality control under the civil works component, safeguards monitoring and management, and benefit monitoring. The government consistently provided adequate counterpart funds for the project in as timely a manner as possible. To audit the project accounts each year, the government engaged external auditors and submitted annual audit reports to ADB. All the reports and the unqualified audit opinions were found acceptable. The PBM pilot contracts could not be awarded despite the completion of all other related activities (para. 11), and the PBM midterm review was canceled, which resulted in partial compliance with the two related covenants. The state fiscal allocation to road improvement and maintenance increased substantially over the period (2007–2013), although the actual rate of

²⁴ During implementation, the IPIG adopted an accrual accounting system supported with standardized accounting software, which was in line with the national accounting standard. In addition, the project provided substantial training to the IPIG staff and related personnel.

increase in fiscal allocation (10%) was below the target allocation rate of the national budget (17%). The government has not yet restructured the road maintenance system or introduced user charges.

25. **Tajikistan.** Most of the project covenants stipulated in the loan and grant agreement were complied with during implementation through the government's proactive involvement, particularly in procurement, financial management, quality control, and safeguards management and monitoring. The government provided the required counterpart funding regularly. Financial audit reports and unqualified audit opinions were submitted on time, and all were found acceptable. No major issues were reported or observed in compliance with the environmental and resettlement covenants. The state fiscal allocation to road improvement and maintenance has increased substantially, by an average of 17% per year during the period. However, the PBM pilot-testing, which was underway during the PCR mission, encountered delays; and the final project performance monitoring system report was not submitted to ADB.

26. The compliance status of the grants and the loans with the covenants appears in Appendix 7.

H. Associated Technical Assistance

27. Regional TA with a cost of \$500,000 was approved in October 2008 to help prepare a CBA between the PRC, the Kyrgyz Republic, and Tajikistan to facilitate smooth regional trade and traffic. The TA was to be implemented over 24 months using consulting services of 24 person-months of international experts and 10 person-months of national experts. Despite an initial delay in recruiting international consultants, the TA was implemented smoothly. It began on 12 February 2009 and ended on 31 December 2009. A TA completion report, prepared in March 2010, rated the TA *successful*.²⁵ A draft CBA was prepared in line with major international conventions, and international best practices and related CAREC initiatives were considered appropriately. To avoid overlaps with similar regional initiatives under the Shanghai Cooperation Organization, the PRC proposed to postpone its participation. The Kyrgyz Republic and Tajikistan signed the CBA on 2 December 2010, and it became effective on 28 June 2011. ADB facilitated an action plan in December 2010, which addressed (i) regulatory measures, (ii) organization of a management and procedure system, (iii) capacity building, infrastructure, facilities, and equipment; and (iv) institutional support. Afghanistan expressed its interest in joining the agreement, and its accession is under way.

I. Consultant Recruitment and Procurement

28. All the consultant recruitments and procurements of works were conducted in compliance with ADB's Guidelines on the Use of Consultants (2007, as amended from time to time) and ADB's Procurement Guidelines (2007, as amended from time to time). The packages were procured as designed at appraisal, except for the PBM component.

29. **Kyrgyz Republic.** At appraisal, 430 person-months of consulting services were envisaged for support and supervision of PBM activities, including 380 (59 of international consultants and 321 of national ones) for construction supervision, monitoring, and project management, and 50 (25 of international consultants and 25 of national ones) for supporting and supervising PBM activities. The recruitment for the supervision consultant, which started on

²⁵ ADB. 2010. *Technical Assistance Completion Report: Cross-Border Agreement Among the People's Republic of China, the Kyrgyz Republic, and Tajikistan*. Manila.

15 February 2008, used the quality- and cost-based selection (QCBS) procedure. The contract was signed on 6 May 2008, with a planned completion date of 23 January 2012. Owing to changes in project scope, which involved extending the length of the asphalt pavement by 106 km, the contract with the international supervision consultant was extended with the additional cost financed by the supplementary loan. At completion, 261 person-months of consulting services (68 of international consultants and 193 of national ones) had been provided for construction supervision, monitoring, and project management. The financial audit consultants, recruited through consultants' qualifications selection method, conducted annual auditing of project accounts from 2009 to 2013,²⁶ including the project accounts for the supplementary loan.²⁷ For the PBM component, two experts were engaged in 2008, but the MOTC terminated their contracts owing to poor performance; in February 2013, a new international PBM implementation expert was recruited, based on ADB guidelines for recruiting individual consultants, to complete the remaining work.

30. During implementation, ADB and the MOTC agreed to consolidate the three packages into one for reasons of efficiency. The procurement started in March 2008, using the international competitive bidding procedure, and the contract was awarded on 6 August 2008. The civil works contract also covered the newly added section for pavement, financed by the supplementary loan.

31. **Tajikistan.** At appraisal, 633 person-months (65 of international consultants and 568 of national ones) were envisaged for project supervision, monitoring, and management, and 50 person-months (25 of international consultants and 25 of national ones) were envisaged for supporting the PBM activities. The construction supervision consultant was selected through the QCBS procedure, and the contract was awarded on 22 May 2008. Owing to additional consultancy input (7 person-months of international consultants) for ensuring quality assurance during the defects liability period, the consultancy service contract period was extended until 30 September 2013. At completion, 222 person-months of consulting services (72 person-months for international experts and 150 for national ones) had been provided for construction supervision, monitoring, and project management. For the fiscal years of 2008 to 2013, financial auditors were recruited annually through the least cost selection procedure. For tendering the PBM contracts and training the MOT personnel, two individual international experts were recruited in 2008. Because of some disputes with the MOT, the implementation specialist stopped work, and the institutional specialist did not mobilize despite signing a contract. A third individual consultant was recruited in 2012 and performed his tasks according to the requirements of his contract. For implementing the PBM component, 66 person-months of consulting services (12 international consultants and 54 national ones) were provided.

32. For efficient procurement in the road improvement component, ADB and the MOT agreed to reduce the number of contract packages from three to two, which included the contracts for the Sayron–Karamyk and Nimich–Sayron sections. The procurement began in March 2008, using an international competitive bidding procedure, and the contracts were awarded on 28 August 2008. For the PBM component, the government-funded pilot-testing packages were procured in accordance with the national procurement laws, as agreed between ADB and the government. Two three-year contracts were awarded to the national consultants

²⁶ In December 2008, ADB and government agreed to change the method for recruiting auditors to consultants' qualifications selection instead of QCBS, as recommended by the Guidelines on the Use of Consultants by ADB and its Borrowers, since the contract amount was less than \$200,000, and it is more appropriate where a simplified approach is fundamental.

²⁷ The RRP for the supplementary loan recommended engaging the same auditing firm used for the grant.

on 25 May 2013.²⁸ The project contract packages and costs are summarized in Appendix 8.

J. Performance of Consultants and Contractors

33. **Kyrgyz Republic.** The supervision consultant encountered two problems: (i) because the original team leader did not perform well, changes in leadership were made twice, and (ii) most of the other experts were also replaced during the initial stage of the contract. The main reason for these replacements was that a subconsulting firm misrepresented its capabilities at recruitment. This resulted in the sanctioning of one company and one individual for three years. Another firm and two individuals were also sanctioned for presenting individuals' resumes without their knowledge. Subsequently, the consultant improved its performance, delivering well-organized oversight and completion of all tasks according to the agreed terms of reference. The performance of the financial audit consultant was satisfactory to both the executing agency and ADB. The audit firm first audited the project accounts for 2008–2010. With ADB approval, the same firm was selected to audit the 2011–2013 project accounts. The audit reports and audited project financial statements were submitted on time, and ADB found them to be acceptable. For the PBM component, the MOTC recruited two individual consultants. The implementation expert prepared incomplete reports during March–May 2009, and the institutional expert failed to visit the country on the agreed schedule. Both contracts were terminated. The third PBM expert worked intermittently for 4 person-months and, by the end of his assignment, submitted a good-quality draft bidding document for the PBM contracting.

34. The performance of the civil works contractor was satisfactory especially considering the political instability in 2010, the occasional delays with counterpart fund payments, and the challenging geological conditions. Civil works began on 1 December 2008, and the contractor was scheduled to hand over the site to the MOTC on 23 May 2011. During implementation, the contractor conducted the required activities related to health and safety for workers,²⁹ control of material quality, safeguards management, and road safety during construction. The contractor's work progress was generally satisfactory, except during the social disorder in 2010. The overall work quality was also acceptable. The contractor completed all the tasks, including the additional works, on 18 October 2012 and handed over the project road to the MOTC in October 2013.

35. **Tajikistan.** The performance of the supervision consultants was satisfactory. The team leader (senior resident engineer) was assisted by a deputy resident engineer and a group of experts, and the team executed all the assigned tasks with efficiency and quality. However, the project benefit monitoring and evaluation was not carried out professionally, and the final report was not submitted to ADB. The performance of the three individual PBM consultants varied. The contract with the first expert was terminated because of disputes with the MOT. The second expert did not report to the MOT, which resulted in the termination of his contract. The third expert's performance was satisfactory, as he delivered the required outputs at an acceptable level, including draft bidding documents for tendering; technical trainings in PBM pilot testing to government officials; and assistance to pre-bid workshop, tendering, and contract management, with total inputs of 11.8 person-months from February 2012 to September 2013.

36. The performance of the civil work contractors was satisfactory. The civil works progressed generally on schedule, except in mid-2009 when heavy rains affected construction. The contractors implemented the environmental and social action plans according to the

²⁸ The packages were financed entirely by the government.

²⁹ The contractor conducted HIV/AIDS awareness campaigns for workers at their sites, and local health officials provided technical support as a part of their community awareness and prevention program.

contract, mobilized their resources on time, and completed all the tasks with acceptable quality. The contractors substantially completed the civil works for the Nimich–Sayron section in December 2010 and for the Karamyk–Sayron section in August 2011. The government's inspection report confirmed that all standards and specification were met.

K. Performance of the Recipient/Borrower and the Executing Agency

37. **Kyrgyz Republic.** The performance of the recipient/borrower and the executing agencies was *satisfactory*. The assessment of the capacity of the MOTC and the State Customs Service at appraisal was reasonably accurate. The government established an adequate organizational framework for efficient project management. The MOTC exercised close coordination and regular monitoring of project progress. The MOTC also provided the counterpart funds, in close coordination with the government, in as timely a manner as possible. The IPIG, with assistance from the consultants, prepared monthly and quarterly progress reports on time and facilitated project implementation smoothly. The project financial accounts and statements were audited regularly by external chartered auditors acceptable to ADB, and the audit reports were submitted to ADB in a timely manner. The State Customs Service duly realized the border infrastructure component as the executing agency.

38. **Tajikistan.** The performance of the recipient/borrower and the executing agencies was *satisfactory*. Under the MOT's supervision and with robust support from the consultants, the PIU successfully implemented the project, with consistent monitoring of project progress, timely remedial actions, professional bookkeeping and preparation of progress reports, timely auditing of the project account, and full compliance with safeguards requirements as specified in the financing agreement.³⁰ All the project financial accounts and statements submitted were acceptable to ADB. The government provided the required counterpart funds for project implementation, generally on a timely basis. The State Customs Service successfully executed the border infrastructure and CBA components.

L. Performance of the Asian Development Bank

39. Overall, the performance of ADB was *satisfactory*. Originally, the project was administered and supervised from ADB headquarters, with active assistance from the ADB resident missions in the Kyrgyz Republic and Tajikistan. About three years after project approval, responsibility for overall project administration was transferred to the Kyrgyz Republic Resident Mission, on 22 February 2011, and to the Tajikistan Resident Mission, on 23 February 2011, for implementation of the country components. The transfer further enhanced the relationship between the executing agencies and ADB, and strengthened project monitoring and administration. During implementation, ADB conducted 10 project review missions in each country, including inception missions in 2008 and midterm review missions in 2011. ADB provided substantial guidance and timely support to the governments and the executing agencies in all aspects of project implementation, such as approving advance procurement actions; reviewing procurement, disbursement, and safeguards documents and evaluation reports in a timely fashion; consistently identifying project implementation issues and assisting in their expeditious resolution; and responding to government requests in a timely fashion. All these efforts helped the governments complete the project on time, with quality and efficiency.

³⁰ The PIU, established in October 2001 for the ADB-financed Road Rehabilitation Project, remained responsible for project management and implementation.

III. EVALUATION OF PERFORMANCE

A. Relevance

40. The project is *highly relevant* to the governments' objectives and policies, as well as ADB's country strategies, both during appraisal and at project completion. The project objective of improving regional connectivity among the neighboring countries, including the PRC, is aligned with (i) both governments' transport sector strategies, which prioritize improvements to national and international transport links as a critical means of increasing trade, bolstering economic growth, and alleviating poverty;³¹ (ii) ADB's earlier and current country partnership strategies (para. 5); and (iii) ongoing initiatives related to facilitation of transport and trade. Furthermore, the governments have prioritized (i) the rehabilitation of road infrastructure, and (ii) the development of an efficient road transport industry through more private sector provision of transport services, greater reliance on cost recovery to finance road maintenance, and rehabilitation of critical parts of the road network and transport services, including the development of international road corridors to facilitate international trade.

B. Effectiveness in Achieving Outcome

41. Overall, the project is rated *effective* in achieving its purposes and outcomes. Poor road conditions and inefficient border-crossing facilities and procedures had obstructed international traffic and trade in both countries. They made transport costs more expensive and accidents more frequent, and were therefore a major impediment to economic growth. With the implementation of the project, traffic on this section of CAREC corridor 3 will benefit significantly from savings in travel time and improved road safety. All project components were completed as envisaged at appraisal within the original project period. Project outcomes achieved in both countries are described in Appendix 1 and summarized in paragraphs 42 and 43.

42. **Kyrgyz Republic.** Upon project completion, the travel time between Sary-Tash and Karamyk had declined from 4 hours in 2009 to about 2 hours in 2013, as compared with the target of 2.5 hours by the end of 2012. Furthermore, the growth rate for traffic on the project road was remarkably high, averaging about 28% per year during the 2007–2013 period. Annual average daily traffic (AADT) reached 390 vehicles per day in 2013. However, this traffic level is lower than that forecast at appraisal stage (about 438 vehicles per day). Traffic accidents declined from 14 per 250 AADT in 2006 to 14 per 288 AADT in 2013. The overall student attendance rate rose from 92.1% in 2007 to 94.2% in 2013; the target is 99% by the end of 2015.

43. **Tajikistan.** Upon project completion, the travel time between Dushanbe and the Kyrgyz Republic–PRC border had declined from 13 hours in 2007 to about 6 hours in 2012; the target was 8 hours by the end of 2015. Furthermore, AADT on the project road increased by an average of 38% per year, from 250 vehicles in 2006 to 1,723 vehicles in 2012. Cross-border traffic was substantial, about 80 trucks and 200 passengers per day in 2012. This traffic growth was much higher than the appraisal estimate of an average of 8.3% per year for all vehicle types. Traffic accidents declined from 14 per 250 AADT in 2006 to 14 per 2,930 AADT in 2012. The overall student attendance rate increased from 94% in 2006 to 99% in 2012; the target is 99% by the end of 2015.

³¹ Government of the Kyrgyz Republic, Ministry of Transport and Communications. 2007. *Road Sector Development Strategy for 2007–2010*. Bishkek; and Government of Tajikistan. 2007. *National Development Strategy for the Republic of Tajikistan for the Period to 2015*. Dushanbe.

C. Efficiency in Achieving Outcome and Output

44. The project is rated *efficient* in view of the considerable growth in traffic and improvement in results reported in the economic reevaluation. The rehabilitation of 136 km from Karamyk to Sary-Tash in the Kyrgyz Republic and 114 km from Nimich to Karamyk in Tajikistan, together with the rehabilitation of border infrastructure at the Irkeshtam (Kyrgyz Republic) and Karamyk (Tajikistan) border-crossing points, and the CBA between the two countries, have significantly helped smooth the movement of people and goods through the region. It is expected that the introduction of PBM practices in the two countries will help sustain the road improvements. The rehabilitated road is facilitating socioeconomic development in the project area, and traffic has grown quickly. The economic costs and benefits were compared for the “with-project” and “without-project” cases. The economic benefits considered in the reevaluation were (i) operating cost savings for vehicles, and (ii) time cost savings for passengers. The economic internal rate of return (EIRR) for the Kyrgyz component was re-estimated at 13.7%. The EIRR for the Tajikistan component was re-estimated at 21.6%. The EIRR for the combined road project was re-estimated at 18.3%. Because the recalculated EIRR is still above the ADB recommended discount rate of 12%, the project was reconfirmed as economically viable. The sensitivity analysis results showed that the project is economically viable for all scenarios. The details of the economic reevaluation appear in Appendix 9.

D. Preliminary Assessment of Sustainability

45. The sustainability of the project is rated *less than likely* because more attention is required to two aspects of sustainability—road maintenance and road safety.

46. **Road maintenance.** In the Kyrgyz Republic, the state budget for road maintenance has grown steadily, thus complying with the respective project covenant. Furthermore, in accordance with the pilot PBM, the MOTC is developing a road asset management system, which will help in proper cost planning though this effort is at its initial stage. In Tajikistan, after the defect liability period, project road maintenance was delegated to the regional road maintenance units of the MOT. However, the overall funds allocated to maintain all roads to international standards are not sufficient, especially taking into account the increasing length of roads in the country. The government, with assistance from development partners, is now considering ways to increase the budget for recurrent maintenance costs and explore other sources of funds such as user charges or a higher fuel excise tax. In addition, the efficiency of road maintenance and funds utilization needs improvement.

47. **Road safety.** With the rapidly growing traffic and higher speeds resulting from better road conditions, road safety has been attracting more attention in both countries. Both governments acknowledge this issue and have begun to prepare road safety strategies, with assistance from development partners. They are considering such measures as installing adequate speed and accident control facilities, enforcing traffic laws on speeding and overloaded trucks, and conducting national road safety campaigns. In the Kyrgyz Republic, the MOTC implemented a traffic safety awareness program for school children in the project area.

E. Impact

48. Upon project completion, trade between the Kyrgyz Republic and Tajikistan had grown from \$26.7 million in 2006 to \$55.1 million in 2013, and trade between Tajikistan and the PRC

had grown from \$158.8 million in 2006 to \$2.0 billion in 2012. The PRC's share in Tajikistan's total imports had increased from 11% to 42%. In addition, Afghanistan's imports from the PRC had increased from \$110.7 million in 2006 to \$510.9 million in 2012 (from 0% to 5%) because of the improved road conditions in the project area. The improved border infrastructure and facilities at Irkeshtam as well as the CBA between the Kyrgyz Republic and Tajikistan had facilitated cross-border traffic for both passengers and freight. At the Karamyk border-crossing point on the Kyrgyz Republic side and at the Guliston point on the Tajikistan side, ADB has been financing reconstruction to eliminate customs obstructions in the corridor.³² In addition to boosting regional trade, the project has provided better access to markets, economic centers, and social services. The project provides opportunities for further economic, industrial, and commercial development, thereby expanding opportunities for business and employment.

49. **Environmental safeguards.** The environmental classification for the project was Category B, in accordance with ADB's Environment Policy (2002) and its Environmental Assessment Guidelines (2003).³³ An initial environmental examination concluded that the project was not expected to generate significant environmental impacts. During implementation, the consultants for construction supervision and the contractors complied with the environmental safeguard requirements stated in the grant and loan documents, and carried out regular environmental impact surveys and monitoring in both countries. Both governments ensured that all activities were performed in compliance with the principles and objectives of ecologically sustainable development. For both countries, consultants prepared five annual environmental reports that recorded all the environmental issues but indicated no significant negative environmental impacts during implementation. These reports were also posted on the ADB website. A post-construction environmental audit was conducted in March 2014, as a final environmental report had confirmed that the site cleanup and restoration were satisfactory.

50. **Resettlement safeguards.** The resettlement classification for the project was category C. In the Kyrgyz Republic, no relocation of households or acquisition of productive land was required. In Tajikistan, the project affected residential house (7 families), simple structured sheds (24 families), and trees (6 families). The local government took the primary responsibility for the consultation, implementation, and timely delivery of entitlements for resettlement. According to the monitoring reports and ADB's observations, the government made the arrangements necessary to compensate all affected people before work began and all resettlement activities were satisfactorily concluded by August 2011. The details of the land acquisition and resettlement appear in Appendix 10.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

51. Overall, the project is rated *successful* for both countries. The project was relevant to both governments' development objectives and to ADB's two country partnership strategies. The project's impact and outcome have mostly been achieved as anticipated at appraisal. The project improved the roads connecting the Kyrgyz Republic and Tajikistan, extending to the PRC, and those improvements have been contributing significantly to socioeconomic development and regional trade among the three countries. Furthermore, the project has helped enhance the capacity of the executing agencies. However, the award of government-funded

³² ADB. 2013. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan and Grants to the Kyrgyz Republic and the Republic of Tajikistan: Central Asia Regional Economic Cooperation Regional Improvement of Border Services Project*. Manila.

³³ ADB. 2003. *Environmental Assessment Guidelines*. Manila.

pilot PBM contracts in the Kyrgyz Republic was delayed. The implementation of the PBM pilot contract is now included in the next ADB-financed project (footnote 14). In addition, the CBA became effective only between the Kyrgyz Republic and Tajikistan, not between the original three countries as the PRC did not participate.

B. Lessons

52. **Project engineering design.** To avoid potential cost overruns during the project implementation period, the engineering design of roads at the project preparation stage should be based on the most reliable traffic forecasts and sufficient geological and climate surveys to enable the preparation of realistic designs without the need to amend them later. Road safety issues should be identified during the project design period in consultation with local communities, and features that enhance road safety, including on sidewalks and at bus shelters, should be adequately reflected in the project design.

53. **Border infrastructure improvement.** The benefits of good infrastructure at border crossings can be fully realized only when countries on both sides of a border fund complementary investments and when their border control agencies cooperate. Projects should support the construction and renovation of border-crossing points in a country where investments to upgrade complementary facilities on the other side of the border have been completed or are nearing completion.

54. **Performance-based maintenance.** Implementing PBM contracts requires sufficient preparation and time for transition. More attention should be given to PBM readiness and to such important factors as allocating proper budgets, developing institutional frameworks, establishing legislation and procedures, recruiting qualified consultants, mitigating negative effects on road maintenance units, and fostering local private contractors. In both countries, the PBM pilot testing was delayed mainly because of the lack of experience and knowledge of the executing agencies. When introducing new concepts and practices to a country, ADB should provide adequate technical support and consider well the local administrative system and situation and share global best practices, as well as including such activities as organizing a study tour and assisting in systematic implementation of related reforms for the whole sector.

55. **Road safety and road asset management.** Road safety and road asset management components should be included in all future projects because they are essential to the sustainability of projects and to their effectiveness. As road safety involves various agencies, the design and implementation arrangements for this component should be based on extensive discussions with all related agencies and policy dialogue with high-level government bodies. Similarly, comprehensive road asset management plans should be developed during project design in consultation with the agencies responsible for road assets development and for operation and maintenance.

56. **Regional project.** This project was designed as a regional project including two countries. A joint effect was observed by executing the two countries' projects simultaneously, yet different institutional frameworks and different effective procedures were required in the two countries. Thus, full agreement among stakeholders is necessary in designing future regional projects.

C. Recommendations

1. Project-Related

57. **Further follow-up actions.** Some of the road corridor related activities were not fully implemented as designed, such as (i) the pilot testing of PBM contracting in the Kyrgyz Republic, (ii) the improvement of the border facility at Karamyk, and (iii) the accession to the CBA of the PRC, Afghanistan, and other countries. Although the implementation of the PBM pilot contract in the Kyrgyz Republic is now included in the next ADB-financed project³⁴ and further improvement of the cross-border facility at Karamyk (on the Kyrgyz Republic side) and at the Guliston point (on the Tajikistan side) is included in the CAREC Regional Improvement of Border Services Project (footnote 32), the governments and ADB need to make continuous efforts to complete all these components on ground. The experience with and lessons learned from the PBM pilot testing in Tajikistan and that government's monitoring should be shared with the Kyrgyz Republic and other neighboring countries.

58. **Timing of the project performance evaluation report.** Both governments were to collect the baseline data agreed with ADB at the beginning of rehabilitation and the project performance data at completion, 1 year after completion, and 3 years after completion. Furthermore, they are expected to continue monitoring the project's impacts after completion, using the data monitoring systems established at the beginning of the project. The project performance evaluation report is recommended to be completed in 2016, when the entire road between Dushanbe, the Kyrgyz border, and the PRC will have been operating for about 3 years and the traffic, maintenance, physical condition, attainment of benefits, and socioeconomic impact can be assessed more comprehensively. ADB should closely follow up and provide necessary assistance to ensure that the entire corridor has been fully rehabilitated and improved.

2. General

59. **Road sector strategy.** In the Kyrgyz Republic, the government plans to develop a road sector strategy for 2014–2020. Preparing the strategy requires the involvement of ADB and other development partners. To ensure further progress in sector reforms, the strategy should be comprehensive, with a clear focus on the road maintenance system, road asset management, and road safety, and the effective contribution of the strategy to national development.³⁵

60. **Development from transport corridor to economic corridor.** The objective of improving the road corridor is to facilitate regional cooperation, promote socioeconomic development, and ultimately turn the transport corridor into an economic corridor. ADB should design and conduct a special study on the economic development of the Kashgar–Irkeshtam–Karamyk–Dushanbe corridor. Such a study could propose a set of government interventions to use the road and border infrastructure to facilitate and accelerate the development of the economic corridor. Examples of such interventions include related industrial and agricultural projects, the establishment of local markets, the promotion of transport logistics services, the implementation of poverty alleviation programs, the facilitation of cross-border trade, and the provision of public transport service.

³⁴ ADB. 2013. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan and Grant to the Kyrgyz Republic: Central Asia Regional Economic Cooperation Corridor 3 (Bishkek–Osh Road) Improvement Project, Phase 4*. Manila.

³⁵ Tajikistan has a transport sector master plan for 2011–2025, which the government approved in March 2011.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Indicators/Targets	Data Sources and/or Reporting Mechanisms	Status at Completion
<p>Impact Contribution to reducing transport costs and fostering regional trade and cooperation among the Kyrgyz Republic, the PRC, Tajikistan, and other Central Asian countries</p>	<p>Tajikistan–Kyrgyz Republic trade increases from 27,236 tons in 2006 to 250,000 tons in 2015</p> <p>Tajikistan–PRC trade increases from 14,260 tons in 2006 to 1,000,000 tons in 2015 (the PRC's share in Tajikistan's total imports increases from 11% to 20%)</p> <p>PRC–Afghanistan trade increases from 0 tons in 2006 to 500,000 tons in 2015 (the PRC's share in Afghanistan's total trade increases from 0% to 10%)</p>	<p>National economic and social statistics</p> <p>Statistics from international organizations</p>	<p>Likely to be achieved.^a Tajikistan–Kyrgyz Republic trade grew from \$26.7 million in 2006 to \$55.1 million in 2013.</p> <p>Tajikistan–PRC trade grew from \$158.8 million in 2006 to \$2.0 billion in 2012 (the PRC's share in Tajikistan's total imports grew from 11% to 42% by 2012).</p> <p>Afghanistan's imports from the PRC grew from \$110.7 million in 2006 to \$510.9 million in 2012 (the PRC's share in Afghanistan's total imports grew from 0% to 5% by 2012).</p>
<p>Outcome Improved access to markets and social services</p>	<p>Daily international freight traffic on the project road increases from about 10 trucks in 2006 to 120 trucks in 2015</p> <p>Domestic traffic on the project road increases from 250 annual average daily traffic (AADT) in 2006 to 750 AADT in 2015</p> <p>Traffic accidents on the corridor decline from 14 accidents per 250 AADT in 2006 to 14 per 750 AADT in 2015</p> <p>Travel time between Dushanbe and Kyrgyz–PRC border reduces from 13 hours in 2007 to 8 hours by 2015</p> <p>Travel time between Sary-Tash and Karamyk reduces from 4 hours in 2009 to 2.5 hours by the end of 2012</p> <p>Number of children in the project area attending</p>	<p>National economic and social statistics</p> <p>ADB project performance report, if undertaken</p> <p>Project progress reports MOT, MOTC, and ADB household surveys</p> <p>ADB review missions</p>	<p>Partly achieved. Daily international freight traffic on the project road rose from about 10 trucks in 2006 to 80 in 2012 in Tajikistan and to 50 in 2013 in the Kyrgyz Republic.</p> <p>Achieved. Domestic traffic on the project road grew from 250 AADT in 2006 to 1,723 AADT in 2012 in Tajikistan and to 390 AADT in 2013 in the Kyrgyz Republic.</p> <p>Achieved. Traffic accidents declined from 14 per 250 AADT in 2006 to 14 per 2,930 AADT in 2012 in Tajikistan and to 14 per 288 AADT in 2013 in the Kyrgyz Republic.</p> <p>Achieved. Travel time between Dushanbe and the Kyrgyz–PRC border declined from 13 hours in 2007 to about 6 in 2012.</p> <p>Achieved. Travel time between Sary-Tash and Karamyk declined from 4 hours in 2009 to about 2 hours by the end of 2013.</p> <p>Achieved. The overall student attendance rate rose from 94% in 2006 to</p>

Design Summary	Performance Indicators/Targets	Data Sources and/or Reporting Mechanisms	Status at Completion
	<p>secondary school increases from 92% in 2007 to 99% in 2015</p> <p>Agricultural, horticultural, and livestock production in the project area increases from 100,000 tons in 2006 to 160,000 tons in 2015</p>		<p>99% in 2012 in Tajikistan, and from 92% in 2007 to 94% in 2013 in the Kyrgyz Republic.</p> <p>Achieved. Agricultural, horticultural, and livestock production grew from 100,000 tons in 2006 to 454,909 tons in 2012.</p>
<p>Outputs</p> <p>1. Nimich (Tajikistan) to Sary-Tash (the Kyrgyz Republic) road corridor improved</p> <p>2. Nimich to Sary-Tash road corridor properly maintained and receives adequate financing</p>	<p>263 km of main regional corridor, including 24 bridges, improved by 2010 (total project road sections in both countries)</p> <p>136 km section in the Kyrgyz Republic with two-layer asphalt concrete pavement (under supplementary financing) by 2010</p> <p>Pilot cases of outsourcing road maintenance for the Kyrgyz Republic introduced, with five contracts awarded to private sector during 2008–2013</p> <p>Pilot cases of outsourcing road maintenance for Tajikistan introduced, with five contracts awarded to private sector during 2008–2013</p>	<p>ADB project performance evaluation reports, if undertaken</p> <p>Project progress reports</p>	<p>Achieved. In all, 250 kilometers of road section and 24 bridges were rehabilitated and improved.^b</p> <p>Achieved. A 136-km section with two-layer asphalt concrete pavement was rehabilitated and is being maintained by the MOTC.</p> <p>Partly achieved. The consultants (i) carried out a survey and assessment of road maintenance in the country; (ii) conducted training on major aspects of PBM contracting and activities; (iii) provided institutional support for PBM by developing a strategy for private participation in the road sector; and (iv) drafted a bidding document for PBM contracting. A pilot-testing PBM contract has been carried forward to the next ADB-financed project.</p> <p>Achieved. Two pilot projects were awarded with a start date of 1 July 2013 and an implementation period of three years.</p>

Design Summary	Performance Indicators/Targets	Data Sources and/or Reporting Mechanisms	Status at Completion
<p>3. Border infrastructure at Kyrgyz–Tajik and Kyrgyz–PRC borders improved</p> <p>4. Cross-border agreement among the Kyrgyz Republic, the PRC, and Tajikistan</p>	<p>Border infrastructure improved and adequate procedures in place by the end of 2010</p> <p>A CBA signed and effective by the end of 2012</p>		<p>Achieved. The Irkeshtam border-crossing point was constructed and equipped using financing from another donor; the work was completed in August 2010.</p> <p>The border infrastructure at Karamyk (Tajikistan side) was improved between July 2009 and November 2010, including construction of two entry check points, an administrative building, and an examination facility, as well as placement of concrete and supply of water and electricity. A diesel generator, x-ray machine, and electric scale were delivered to the border post. Under the custom project, a unified automated information system was developed and rolled out to 74 border posts, including Karamyk.</p> <p>Achieved. A draft CBA prepared under TA-6415 (REG) formed the basis of a substantive agreement between the Kyrgyz Republic and Tajikistan. The two governments finalized and signed it on 2 December 2010, and it became effective on 28 June 2011.</p>
Activities with Milestones		Inputs at Appraisal	Actual Inputs
<p>Kyrgyz Republic Component:</p> <p>1. Civil works implemented</p> <p>1.1 136 km of road section from Nimich to Sary-Tash rehabilitated and improved, including (i) implementing earthworks for the entire section; (ii) rehabilitating a 30-km asphalt-concrete-surfaced section (Km 462–Km 492) with 5 cm pavement; (iii) gravel surfacing the remaining 106 km of existing gravel-surfaced section, and (iv) constructing seven bridges and reconstructing four bridges, replacing 214 culverts, and installing river protection and road safety facilities, Q4 2008–Q4 2012 (Grant 0084-KGZ)</p> <p>1.2 136 km of 10-cm two-layer asphalt concrete pavement, Q4 2010–Q4 2012 (Loan 2667-KGZ)</p> <p>1.3 Border infrastructure at Irkeshtam post improved, Q3 2009–Q3 2010 (Grant 0084-KGZ)</p> <p>2. Construction supervision, monitoring, and evaluation consultants provided, Q2 2008–Q3 2013 (Grant 0084-KGZ, Loan 2667-KGZ)</p>		<p>(\$ million)</p> <p>ADB: 48.6</p> <p>G0084-KGZ(SF) 25.6</p> <p>L2667-KGZ(SF) 23.0</p> <p>Civil Works</p> <p>Road corridor improvement 40.3</p> <p>Consulting Services</p> <p>Project supervision 2.6</p> <p>External financial audit 0.1</p> <p>Project management 1.3</p> <p>Institutional support 0.6</p> <p>Contingencies 3.0</p> <p>IDC 0.7</p> <p>Government: 22.9</p> <p>G0084-KGZ(SF) 13.9</p> <p>L2667-KGZ(SF) 9.0</p>	<p>(\$ million)</p> <p>Civil Works</p> <p>Road corridor improvement 47.8</p> <p>Border road infrastructure 3.4</p> <p>Consultants</p> <p>Project supervision monitoring 2.0</p> <p>External financial audit 0.1</p> <p>Project management 0.7</p> <p>Institutional support 0.2</p> <p>Taxes and Duties 10.3</p> <p>Contingencies 0.0</p> <p>IDC 0.3</p> <p>Total: 64.8</p> <p>Actual Project Financing</p> <p>(\$ million)</p> <p>G0084-KGZ(SF) 25.5</p>

Activities with Milestones	Inputs at Appraisal	Actual Inputs
3. External financial audit consultants provided in Q1–Q2 2010, Q1–Q2 2011, Q1–Q2 2012, and Q1–Q3 2013 (Grant 0084–KGZ)	Civil Works Border infrastructure improvement 0.6	L2667-KGZ(SF) 23.0 Government: 16.3 Total: 64.8
4. Project management consultants provided in Q1 2008–Q3 2013 (G0084-KGZ, L2667-KGZ, Government)	Performance-based maintenance 4.0	
5. Institutional support for road maintenance provided in Q4 2008–Q2 2009 and Q1–Q3 2013 (G0084-KGZ)	Taxes and Duties 10.1 Contingencies 8.2 Total: 71.5	
Tajikistan Component:	(\$ million)	(\$ million)
1. Civil works implemented:	ADB: 53.4	Civil Works
1.1 114 km of road section from Nimich to Karamyk rehabilitated and improved by two civil works packages, including sub-base enhancement, asphalt surfacing, slope and earthwork, riverbank protections, safety engineering, and bridge construction improvement (five new bridges, three rehabilitated bridges, and three bridges replaced with concrete causeways), Q3 2008–Q3 2011 (Grant 0085-TAJ, Loan 2359 TAJ, Government)	G0085-TAJ(SF) 12.5 L2359-TAJ(SF) 40.9	Road corridor improvement 55.8 Border road infrastructure 0.3
1.2 Two layers of asphalt surfacing for Nimich–Sayron section, Q3 2008–Q3 2011 (Grant 0085-TAJ, Loan 2359-TAJ)	Civil Works Road Corridor Improvement 44.7	Land Acquisition and Resettlement 0.2
1.3 One layer of asphalt surfacing for Sayron–Karamyk section, Q3 2008–Q3 2013 (Grant 0085-TAJ, Loan 2359-TAJ)	Consulting Services Project supervision and evaluation 2.0	Performance-Based Maintenance 0.8
1.4 Border infrastructure improvement, Q3 2009–Q4 2010 (Government)	External financial audit 0.1 Institutional support for road maintenance 0.6	Consulting Services Project supervision monitoring and evaluation 1.9 External financial audit 0.1
1.5 Performance-based maintenance, Q3 2013–Q4 2013 (Government)	Contingencies 5.6 IDC 0.4 Government: 23.1	Project management 0.3 Institutional support for road maintenance 0.4 Taxes and Duties 10.6 Contingencies 0.0 IDC 0.4
2. Affected households compensated for resettlement, Q3 2011 (Government)	Civil Works Border Infrastructure Improvement 0.4	Total: 70.8
3. Construction supervision, monitoring, and evaluation consultants provided, Q2 2008–Q3 2013 (Grant 0085-TAJ)	Land Acquisition and Resettlement 0.1 Performance-Based Maintenance 4.0	G0085-TAJ(SF) 12.5 L2359-TAJ(SF) 40.9 Government: 17.4 Total: 70.8
4. External financial audit consultants provided, Q2 2009, Q2 2010, Q2 2011, Q2 2012, Q2 2013, and Q4 2013 (Grant 0085-TAJ)	Consulting Services Project management 0.3	Total: 70.8
5. Institutional support for road maintenance provided, Q2 2012–Q3 2013 (Grant 0085-TAJ)	Taxes and Duties 12.9 Contingencies 5.4 Total: 76.5	

ADB = Asian Development Bank, PRC = People's Republic of China, AADT = annual average daily traffic, MOTC = Ministry of Transport and Communications, PBM = performance-based maintenance.

Source: ADB project completion review mission.

^a Country-wide trade data in volume was not available.

^b Originally, the road length was planned 263 km. However, after detailed design and road re-alignment, the length was reduced to 250 km.

PROJECT COST AND FINANCING PLAN
KYRGYZ REPUBLIC COMPONENT
(Combined Grant No. 0084-KGZ[Sf] and Loan No. 2667-KGZ[Sf])
(\$ million)

Item	Appraisal Estimate									Actual		
	Base Cost			Supplementary			Total Cost			ADB	GOK	Total
	ADB	GOK	Total	ADB	GOK	Total	ADB	GOK	Total			
A. Base Costs												
1. Civil works												
a. Road corridor improvement	20.0		20.0	20.3		20.3	40.3		40.3	45.3	2.5	47.8
b. Border infrastructure improvement		0.6	0.6					0.6	0.6		3.4	3.4
2. Performance-based maintenance		4.0	4.0					4.0	4.0			
3. Consulting services for implementation												
a. Project supervision, monitoring, and evaluation	1.6		1.6	1.0		1.0	2.6		2.6	2.0		2.0
b. External financial audit	0.1		0.1				0.1		0.1	0.1		0.1
c. Project management	0.3		0.3	1.0		1.0	1.3		1.3	0.6	0.1	0.7
d. Institutional support for road maintenance	0.6		0.6				0.6		0.6	0.2		0.2
4. Taxes and duties		6.6	6.6		3.5	3.5		10.1	10.1		10.3	10.3
Total base costs (A)	22.6	11.2	33.8	22.3	3.5	25.8	44.9	14.7	59.6	48.2	16.3	64.5
B. Contingencies												
a. Physical contingency	1.9	1.1	3.0		1.0	1.0	1.9	2.1	4.0			
b. Price contingency	1.1	1.6	2.7		4.5	4.5	1.1	6.1	7.2			
Total contingencies (B)	3.0	2.7	5.7		5.5	5.5	3.0	8.2	11.2			
C. Interest During Construction												
Total project cost (A+B+C)	25.6	13.9	39.5	23.0	9.0	32.0	48.6	22.9	71.5	48.5	16.3	64.8
Financing (%)	64.8	35.2	100.0	71.9	28.1	100.0	68.0	32.0	100.0	74.8	25.2	100.0

ADB = Asian Development Bank, GOK = Government of the Kyrgyz Republic.

Sources: ADB. 2013. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan, Asian Development Fund Grant, and Technical Assistance Grant to the Kyrgyz Republic and Republic of Tajikistan for CAREC Regional Road Corridor Improvement Project*, ADB grant and loan financial information system, and the project implementation unit of the Ministry of Transport and Communications.

TAJIKISTAN COMPONENT
(Combined Grant No. 0085-TAJ[SF] and Loan No. 2359-TAJ[SF])
(\$ million)

Cost Items	Appraisal Estimate					Actual				
	ADB			GOT	Total	ADB			GOT	Total
	Grant	Loan	Total			Grant	Loan	Total		
A. Base Costs										
1. Civil works										
a. Road corridor improvement	9.8	34.9	44.7		44.7	10.1	40.5	50.6	5.2	55.8
b. Border infrastructure improvement				0.4	0.4				0.3	0.3
2. Land acquisition and resettlement				0.1	0.1				0.2	0.2
3. Performance-based maintenance				4.0	4.0				0.8	0.8
4. Consulting services for implementation										
a. Project supervision, monitoring, and evaluation	2.0		2.0		2.0	1.9		1.9		1.9
b. External financial audit	0.1		0.1		0.1	0.1		0.1		0.1
c. Project management				0.3	0.3				0.3	0.3
d. Institutional support for road maintenance	0.6		0.6		0.6	0.4		0.4		0.4
5. Taxes and duties				12.9	12.9				10.6	10.6
Total base costs (A)	12.5	34.9	47.4	17.7	65.1	12.5	40.5	53.0	17.4	70.4
B. Contingencies					-					
a. Physical contingency		3.7	3.7	2.3	6.0					
b. Price contingency		1.9	1.9	3.1	5.0					
Total contingencies (B)		5.6	5.6	5.4	11.0					
C. Interest During Construction		0.4	0.4		0.4		0.4	0.4		0.4
Total project cost (A+B+C)	12.5	40.9	53.4	23.1	76.5	12.5	40.9	53.4	17.4	70.8
Financing (%)	16.3	53.5	69.8	30.2	100.0	17.6	57.8	75.4	24.6	100.0

ADB = Asian Development Bank, GOT = Government of Tajikistan, PBM = performance-based maintenance.
Sources: Asian Development Bank and Ministry of Transport project implementation unit.

DISBURSEMENT OF ADB GRANT AND LOAN PROCEEDS

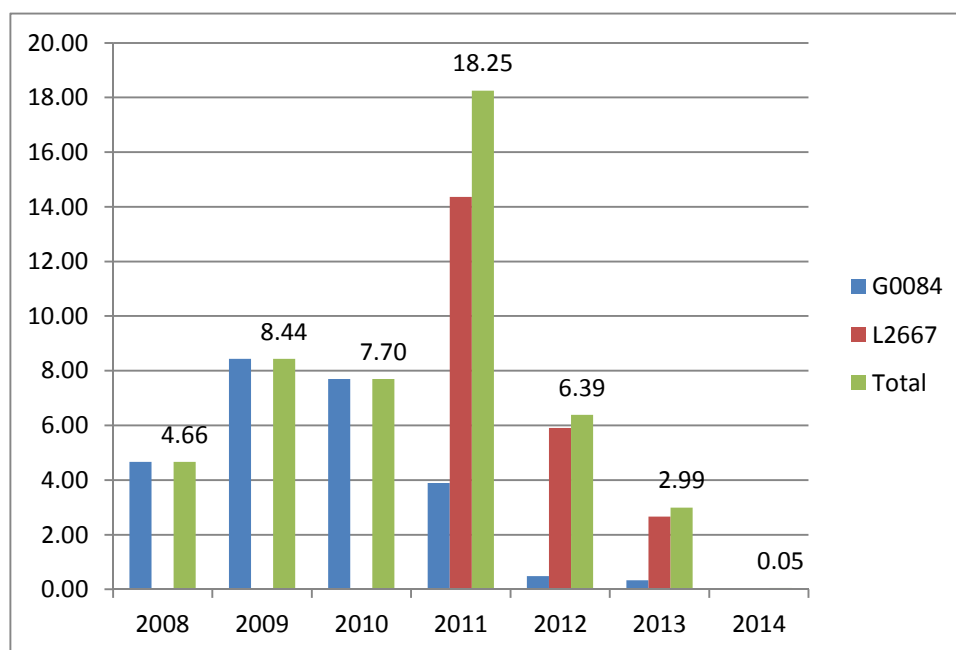
KYRGYZ REPUBLIC COMPONENT

Table A3.1: Annual and Cumulative Disbursements of ADB Grant and Loan Proceeds
(\$ million)

Year	Annual Disbursement				Cumulative Disbursement	
	Amount			Share of Total (%)	Amount	Share of Total (%)
	G0084	L2667	Total			
2008	4.66		4.66	9.61	4.66	9.61
2009	8.44		8.44	17.41	13.10	27.02
2010	7.70		7.70	15.88	20.80	42.90
2011	3.89	14.36	18.25	37.64	39.05	80.55
2012	0.48	5.91	6.39	13.18	45.44	93.73
2013	0.33	2.66	2.99	6.17	48.43	99.90
2014	0.03	0.02	0.05	0.10	48.48	100.00
Total	25.53	22.95	48.48	100.00		

ADB = Asian Development Bank.
Source: Asian Development Bank.

Figure A3.1: Annual Disbursement of ADB Grant and Loan Proceeds
(\$ million)



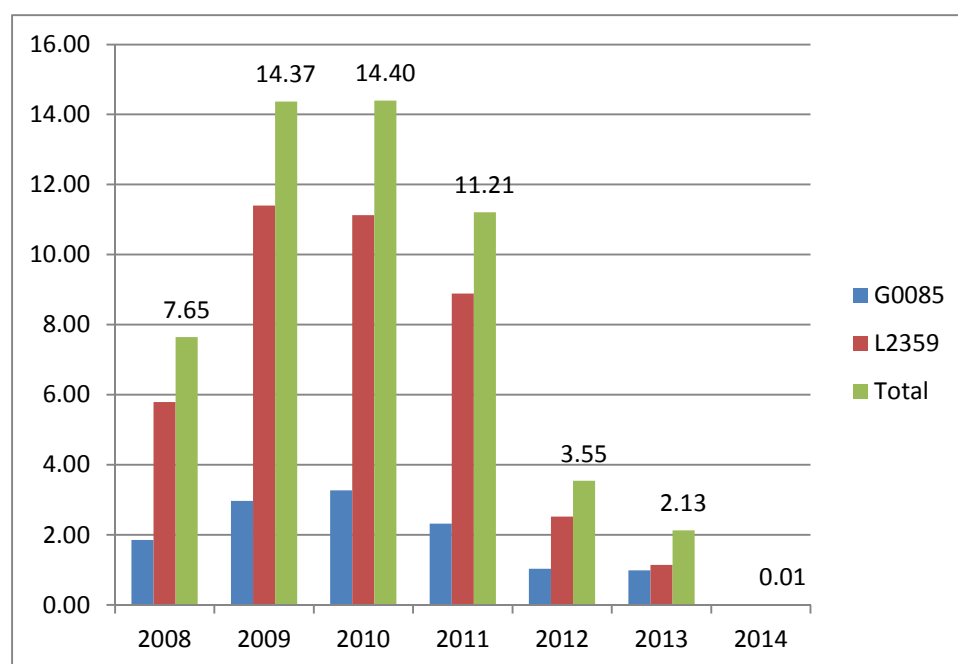
Source: ADB financial system.

TAJKISTAN COMPONENT

Table A3.2: Annual and Cumulative Disbursements of ADB Grant and Loan Proceeds
(\$ million)

Year	Annual Disbursement				Cumulative Disbursement	
	Amount			Share of Total (%)	Amount	Share of Total (%)
	G0085	L2359	Total			
2008	1.86	5.79	7.65	14.35	7.65	14.35
2009	2.97	11.40	14.37	26.95	22.02	41.30
2010	3.27	11.13	14.40	27.01	36.42	68.30
2011	2.32	8.89	11.21	21.02	47.63	89.33
2012	1.03	2.52	3.55	6.66	51.18	95.99
2013	0.99	1.14	2.13	3.99	53.31	99.98
2014	0.01	0.00	0.01	0.02	53.32	100.00
Total	12.45	40.87	53.32	100.0		

ADB = Asian Development Bank
Source: Asian Development Bank.

Figure A3.2: Annual Disbursement of ADB Grant and Loan Proceeds
(\$ million)

Source: ADB financial system.

ACTUAL PROJECT IMPLEMENTATION SCHEDULES

KYRGYZ REPUBLIC COMPONENT

Item	2007				2008				2009				2010				2011				2012				2013					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Civil Works																														
Road improvement																														
Performance-based maintenance																														
Border infrastructure improvement																														
Consulting Service																														
Construction supervision, monitoring, and evaluation																														
Project management																														

Procurement At appraisal Actual
 Implementation At appraisal Actual

Sources: Project implementation unit and ADB project completion review mission.

TAJIKISTAN COMPONENT

Item	2007				2008				2009				2010				2011				2012				2013			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Civil Works																												
Road improvement				At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal								
Performance-based maintenance				Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
Border infrastructure improvement				At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal												
Consulting Service																												
Construction supervision, monitoring, and evaluation		At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal	At appraisal								
Project management				Actual				Actual	Actual	Actual	Actual	Actual									Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual

Procurement At appraisal Actual
 Implementation At appraisal Actual

Source: Project implementation unit.

CHRONOLOGY OF MAJOR EVENTS

KYRGYZ REPUBLIC COMPONENT

Date	Main Event
2007	
3–27 April	Fact-finding mission fielded
27 June	Management review meeting held
12–22 July	Pre-appraisal mission fielded (upgraded to appraisal mission)
19–20 September	Grant negotiations at headquarters by videoconference
28 August	Staff review committee meeting held
2 October	Board circulation
24 October	Board consideration and approval
31 October	Grant agreement signed
18 December	Government request for extension of deadline for grant effectiveness approved
2008	
30 January–6 February	Project inception mission
6 February	Grant effectiveness declared
3 March	Initial deposit of \$61,430 credited to imprest account
6 May	Contract with supervision consultants signed
6 August	Contract with selected civil works contractor (for section) signed
13 October	Notice to proceed sent to contractor
17 November–2 December	Review mission fielded
1 December	Civil works contractor mobilized
2009	
12 February	Consultants fielded for TA-6415 (REG)
14 March	Commencement of PBM consultant's work (implementation expert)
19–20 May	First negotiation meeting on draft CBA in Dushanbe
3–10 June	Review mission held
20 June–1 July	Second negotiation meeting on draft CBA in Bishkek
1 August	Border infrastructure improvement at Irkeshtam post begun
3 September	Contract with financial audit consultant signed
30 September–15 October	Project review mission fielded
30 November–4 December	Third negotiation meeting on draft CBA in Dushanbe
31 December	Completion of regional TA (TA-6415) on CBA between the Kyrgyz Republic, the People's Republic of China, and Tajikistan
31 December	Regional TA (TA-6415) completed
2010	
27 January–10 February	Fact-finding mission for loan fielded
4 February	Concept for loan cleared
9–12 March	Fourth negotiation meeting on draft CBA in Bishkek held
17–18 August	Loan negotiations held
19 August	Management review meeting for loan
31 August	Border infrastructure improvement at Irkeshtam post completed

Date	Main Event
21 September	Loan approved
5 November	Loan agreement signed
29 November–11 December	Review mission held
2 December	CBA signed by governments of the Kyrgyz Republic and Tajikistan
2011	
22 February	Project administration transferred from ADB headquarters to ADB Kyrgyz Resident Mission
19 April	Loan effectiveness declared
28 June	Effectiveness of the CBA declared
1–11 November	Midterm review mission fielded
2012	
21–31 May	Review mission fielded
23 May	Financial auditor recruited for FY2011
6 August	Final reallocations of grant and loan proceeds approved
18 October	Civil works for road improvement and defect liability period begun
29 October– 5 November	Review mission fielded
2013	
30 September	Grant and loan closed
11–18 November	Review mission fielded
5–20 December	Completion review mission fielded
2014	
28 February	Financial accounts for grant and loan closed

ADB = Asian Development Bank, CBA = cross-border agreement, PRC = People's Republic of China.

Source: ADB project completion review mission.

TAJIKISTAN COMPONENT

Date	Main Event
2007	
3–27 April	Fact-finding mission fielded
27 June	Management review meeting held
12–22 July	Pre-appraisal mission fielded (upgraded to appraisal mission)
28 August	Staff review committee meeting held
17–18 September	Grant and loan negotiations held
1 October	Procurement for civil works contract of road improvement component begun
2 October	Board circulation
24 October	Board consideration and approval
3 November	Financial agreement signed
9 November	Recruitment for supervision consultants begun
21 December	Effectiveness of grant and loan declared
2008	
30 January–14 February	Inception mission fielded
22 May	Contract with supervision consultants signed
29 August	Contract with civil works contractors for road improvement signed
5 September	Initial disbursement of grant proceeds
5 September	Contract with institutional expert for PBM signed
11 September	Civil works for Sayron–Karamyk section begun
29 September	Civil works for Nimich–Sayron section begun
10 November	Contract with implementation specialist for PBM signed
17 November–2 December	Project review mission fielded
24 November	Initial disbursement of loan proceeds
31 December	Regional TA (TA-6415) on CBA completed
2009	
12 February	Regional TA (TA-6415) on CBA commenced
28 April	Contract with financial auditor for FY2008 signed
1–6 June	Review mission fielded
14 June	Contract with contractor for border infrastructure improvement signed
1 July	Civil works for border infrastructure improvement begun
12 July	List of people affected by resettlement for Nimich–Sayron section finalized
27–29 July	Review mission fielded
1 September–30 November	Resettlement compensation payments for people affected by Nimich–Sayron section
2010	
2–8 February	Review mission fielded
17–21 May	Review mission fielded
17 June	Contract with financial auditor for FY2009 signed
1 July	List of people affected by Sayron–Karamyk section finalized
13–29 August	Review mission fielded
30 November	Border infrastructure improvement component completed

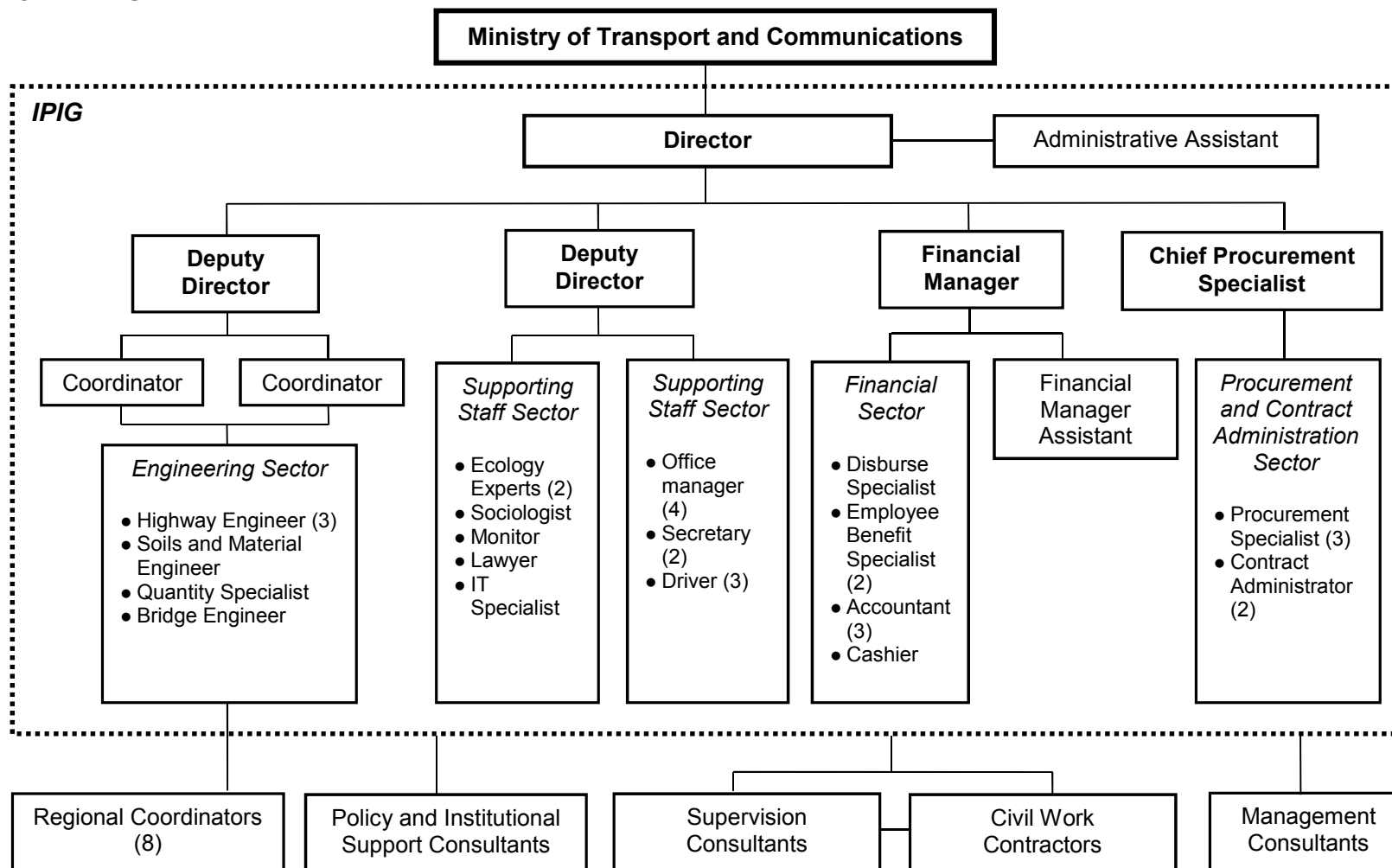
Date	Main Event
1 October–15 December	Resettlement compensation payments for people affected by Sayron–Karamyk section
2 December	CBA between Tajikistan and the Kyrgyz Republic signed
15 December	Civil works for Nimich–Sayron section completed
2011	
17–23 February	Consultation mission fielded
23 February	Transfer of project administration from ADB headquarters to ADB's Tajikistan Resident Mission
1 May	Additional list of people affected by Sayron–Karamyk section finalized
7 June	Contract with financial auditor for FY2010 signed
28 June	Effectiveness of CBA declared
31 July	Resettlement compensation payments for additional lists of people affected by Sayron–Karamyk section
10 August	Civil works for Sayron–Karamyk section completed
26–30 December	Midterm review mission fielded
2012	
27 January	Contract with individual consultant for PBM signed
6 February	Work by individual consultant for PBM begun
12 February	Regional TA on CBA begun
14 May	Contract with financial auditor for FY2011 signed
15–20 October	Review mission fielded
2013	
6 May	Contract with financial auditor for FY2012 and FY2013 signed
25 May	Contract with contractors for PBM pilot-testing projects signed
1 July	PBM contract implementation begun
15–30 September	Review mission fielded
30 September	Contract with supervision consultants completed
30 September	Contract with individual consultant for PBM completed
30 September	Grant and loan closed
6 December	Loan financial account closed
2014	
24 March	Final disbursement of grant proceeds
25 March	Grant financial account closed
27 March–12 April	Project completion review mission fielded

ADB = Asian Development Bank, CBA = cross-border agreement, PBM = performance-based maintenance, TA = technical assistance.

Source: ADB project completion review mission.

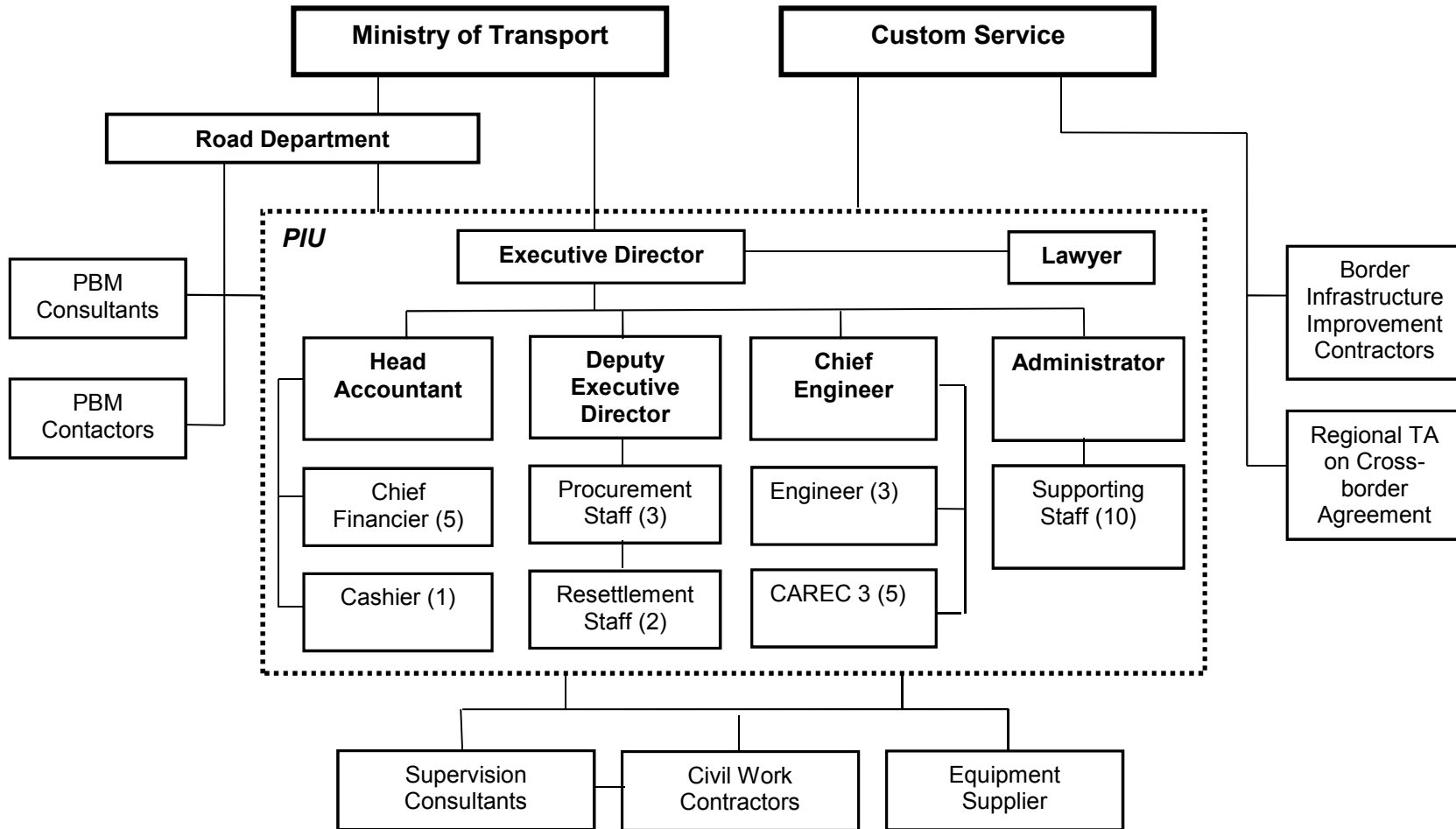
ORGANIZATIONAL STRUCTURES FOR PROJECT IMPLEMENTATION

KYRGYZ REPUBLIC



ADB = Asian Development Bank; IPIG = Investment Projects Implementation Unit; IT = information technology.
 Note: Numbers in bracket represent numbers of staff in posts.
 Source: Ministry of Transport and Communications.

TAJIKISTAN



Note: Numbers in brackets represent numbers of staff.
 ADB = Asian Development Bank, PBM = performance-based maintenance, TA = technical assistance.
 Source: Ministry of Transport, project implementation unit.

STATUS OF COMPLIANCE WITH MAJOR GRANT AND LOAN COVENANTS

Grant 0084-KGZ(SF) and Loan 2667-KGZ(SF)

Particulars	Reference in Grant/Loan Agreements	Status of Compliance
<p>Project Executing Agencies The MOTC as the project executing agency shall be responsible for carrying out Component A and Component B of the Project. The SCS as the project executing agency shall be responsible for carrying out Component C of the Project.</p>	GA. Schedule 4, Para. 1	<p>Complied with. During implementation, the MOTC acted as the executing agency for the road improvement component. The State Customs Service acted as the executing agency for the border infrastructure component.</p>
<p>Counterpart Funding The Recipient shall allocate and make available, in a timely manner, all funds and resources necessary for the implementation of the Project and for the operation and maintenance of the Project facilities. With regard to PBM contracts under the Project, the counterpart funding shall be made available entirely through annual allocations to MOTC's regular road maintenance budget during 2009-2013.</p>	GA. Schedule 4, Para. 6 LA. Schedule 5, Para. 2	<p>Complied with. During implementation, the government provided \$6.76 million to the project . The PBM contracts were not implemented owing to unreadiness. Hence, the MOTC's regular road maintenance budget was used for the local road maintenance unit to do the work.</p>
<p>Maintenance Financing The government will ensure that actual expenditures on maintenance for roads under the MOTC jurisdiction will be increased at the same rate as increases of the national budgets during 2008–2010. The government will maintain a separate budget item within the overall budget of the MOTC for the improvement and maintenance of the entire road and starting in 2012 the government will annually allocate and release on a timely basis \$200,000 equivalent (plus inflation since 2007) for the road maintenance.</p>	GA. Schedule 4, para. 7	<p>Partly complied with. The state fund allocated for road repair and maintenance increased from Som1,058.8 million in 2007 to Som1,836.4 million in 2013. In that period, the average annual growth rate was 10%, which was lower than that for the state fiscal budget (17%). The government maintains separate items in the state budget for road improvement and maintenance, including that for the project road (about \$183,000 equivalent per year).</p>
<p>Cross-Border Agreement The Recipient shall take all actions required from its side to enable the conclusion and effective implementation of CBA by no later than 31 December 2010.</p>	GA. Schedule 4, para. 8	<p>Complied with. Under the regional TA, a draft CBA was prepared, which formed the basis for the substantive agreement between the Kyrgyz Republic and Tajikistan. The two governments finalized discussions and signed the draft agreement on 2 December 2010; it became effective on 28 June 2011.</p>
<p>Road Maintenance Strategy The recipient shall, by 31 December 2008, develop a detailed time-bound action plan for the implementation of the Strategy, including (a) necessary regulatory and legislative amendments enabling the restructuring of MOTC, Department of Roads, PLUADS, and commercialization and privatization of departments during 2007–2010; and (b) adequate procedures and monitoring system for effective collection and utilization of road user charges.</p>	GA. Schedule 4, para. 10	<p>Partly complied with. The MOTC was restructured several times, but commercialization has not been implemented and road user charges are still not in place. The government plans to develop an action plan and fully implement road sector reforms in 2014–2015. Development partners are supporting the government through various interventions (PBM, road asset management, institutional reforms, and user charges).</p>
<p>Construction Quality The Recipient shall ensure that (a) improvement of the Project Road is carried out in accordance with the design and technical specifications of the project improvement: and (b) construction supervision,</p>	GA. Schedule 4, para. 12	<p>Complied with. During construction, the supervision consultant inspected and assessed the civil works to ensure that the specifications were met. No serious</p>

Particulars	Reference in Grant/Loan Agreements	Status of Compliance
quality control, and contract management are in accordance with internationally accepted standards and practices.		quality issues were reported. The PCR mission observed that the improved road was of proper quality and that substantial drainage, safety, and environment protection facilities had been installed along the road.
<p>Financial Management</p> <p>The Borrower shall (i) maintain, or cause to be maintained, separate accounts for the Project; (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB; (iii) furnish to ADB, as soon as available but in any event not later than 6 months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and compliance with the financial covenants of this Loan Agreement as well as on the use of the procedures for imprest account/statement of expenditures), all in the English language; and (iv) furnish to ADB such other information concerning such accounts and financial statements and the audit thereof as ADB shall from time to time reasonably request.</p>	GA. Article IV. Section 4.02 LA. Article IV. Section 4.02	<p>Complied with.</p> <p>Separate project financial accounts were maintained and audited annually by external chartered auditors acceptable to ADB. The financial audit reports were submitted to ADB in a timely fashion. ADB found that the financial audit reports for the project were in order and that the unqualified audit opinions acceptable. The imprest accounts were established for both the grant and the loan. The initial deposit of \$61,430 was credited on 3 March 2008.</p>
<p>Governance and Anticorruption</p> <p>The Borrower shall (i) comply with ADB's Anticorruption Policy. The Borrower shall ensure that the anticorruption provisions acceptable to ADB are included in all bidding documents and contracts. The Borrower shall enhance and further develop the MOTC's website to provide the public with information on the Project.</p>	GA. Schedule 4, para. 20 LA. Schedule 5. paras. 9 and 10	<p>Complied with.</p> <p>In October 2011, ADB held a workshop on its Anticorruption Policy for the PIU. Anticorruption clauses are now included in documents and a website has been launched (http://www.sk-road.com/).</p>
<p>Midterm Review</p> <p>ADB and the government will carry out two midterm reviews of the Project: one in 2009 for the road and border infrastructure components and another in 2011 for the PBM road maintenance components.</p>	GA. Schedule 4, para. 21	<p>Partly complied with.</p> <p>The midterm review was conducted in November 2011. But review of the PBM road maintenance component was canceled because the PBM pilot contracts had been to the next ADB-financed project.</p>
<p>Monitoring and Evaluation</p> <p>The government will ensure that the MOTC and the SCS, executing agencies, with the assistance from the international consultants, will monitor and evaluate project impacts so that the project facilities are managed effectively, and that the benefits are maximized. The MOTC and the SCS will collect the data agreed with ADB at the commencement of rehabilitation, at project completion, 1 year after project completion, and 3 years after project completion.</p>	RRP, Section VI (xvi)	<p>Complied with.</p> <p>A preliminary baseline report was submitted in December 2008. A full report and a spreadsheet model with progress data was completed on 30 September 2009. An updated report was submitted in December 2010. A traffic and social survey was conducted in August 2013 just before project completion.</p>
<p>Support to PIU</p> <p>The government will ensure that 6 new professional staff will be appointed to the existing Project Implementation Unit prior to civil works mobilization.</p>	RRP, Section VI (xvii)	<p>Complied with.</p> <p>The PIU was established in January 2008, and new professional staff were appointed on 16 June 2009. The PIU has</p>

Particulars	Reference in Grant/Loan Agreements	Status of Compliance
New staff members should have expertise and experience in financial accounting, highway engineering, construction supervision, procurement, monitoring social and environmental issues, and support staff.		adequate expertise and experience to implement ADB-financed projects.
Environment The government will ensure that activities under the project are carried out in accordance with the respective national environmental laws and regulations and ADB's Environment Policy (2002), and the agreed IEEs and SIEE prepared for the project. The governments will ensure the implementation of all environmental mitigation measures and monitoring programs identified in the IEEs.	GA. Schedule 4, para. 14 LA. Schedule 5, para. 5	Complied with. During implementation, the consultants complied with the environmental safeguard requirements in the grant and loan documents, and carried out regular environmental impact surveys and monitoring. Monitoring reports were submitted to ADB starting in September 2009. The borrow pits were recovered properly after completing the civil works.
Land Acquisition and Resettlement The government will ensure that the implementation of the project road will be carried out on land already acquired and/or owned by the government.	GA. Schedule 4, para. 15 LA. Schedule 5, para. 6	Complied with. All civil works took place either within the existing right-of-way or on unused state-owned land. No relocation of households or acquisition of productive land was required.
Axle Load The Borrower shall ensure that (a) axle load limit signs are installed along the Project Road; (b) the use of vehicle weighting equipment to prevent overloaded vehicles entering the Project Road starts from 31 December 2011; and (c) penalties for violation of axle load limits are published in the MOTC's website and in national media by 15 July 2011. (Supplementary Loan Agreement)	LA. Schedule 5, para. 3	Complied with. The MOTC drafted a law providing for an axle load of 10 tons for freight vehicles. The law was adopted by the Jogorku Kenesh on 30 June 2011. In 2013 the government proposed additional administrative measures to prevent overloaded vehicles from using the roads. A weighing station has been installed on the project road.
Traffic Safety The Borrower shall ensure that (a) speed control measures are installed in built-up areas and sensitive zones such as schools and hospitals; (b) enforcement of the restrictions by local police starts by 15 July 2011; and (c) a traffic safety program for increasing the awareness of school children and young drivers is developed and agreed with ADB, and delivered in local communities along the Project Road and at least one other region of the country by 15 July 2011. (Supplementary Loan Agreement).	LA. Schedule 5, para. 4	Complied with. The MOTC implemented a traffic safety awareness program for school children in the project area in May 2012. The government should continuously implement measures such as installing adequate speed and accident control facilities, enforcing traffic laws on speeding and overloaded trucks, and conducting road safety campaigns, especially for children along the project road.
Copyright Protection MOTC shall ensure that all works procured (including without limitation all computer hardware, software and systems, whether separately procured or incorporated within other services procured) do not violate or infringe any industrial property or intellectual property right or claim of any third party.	GA. Schedule 3, para. 7 LA. Schedule 4, Para. 7.	Complied with. No violation or infringement of industrial property or intellectual property rights occurred, related to implementation of the project.
Gender The government will ensure that specific provisions are included in the bidding documents to ensure maximized local employment, equal employment opportunities for men and women without wage discrimination. The government will ensure ADB's Policy on Gender and Development (1998) is followed during project implementation.	GA. Schedule 4, para. 16	Complied with. Specific provisions for equal opportunities for men and women are included in the contract documents. During implementation, the project used about 5% female laborers, who were paid the same rate as male laborers.

Particulars	Reference in Grant/Loan Agreements	Status of Compliance
<p>Local Labor The government will ensure that the civil works contracts include provisions on health and sanitation and on appropriate working conditions, including as appropriate, accommodation, for construction workers at campsites during the construction period. The government will also ensure that civil works contractors do not employ child labor for construction and maintenance works. A specific clause shall be included in the bidding documents to this effect and compliance shall be strictly monitored during project implementation.</p>	<p>GA. Schedule 4, para. 17 LA. Schedule 5. para. 7</p>	<p>Complied with. Specific provisions for local and child labor were included in the contract documents. About 560 person-months of local labor were used during the project implementation, including 30 female laborers. No child labor was used for construction and maintenance works.</p>
<p>Health Risks and Prevention The government will ensure that the civil works contracts 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 camp sites during the construction period. The government will also develop linkages with national HIV/AIDS prevention or control programs in a timely manner so that the HIV/AIDS prevention activities required under the Project are properly carried out.</p>	<p>GA. Schedule 4, para. 17 LA. Schedule 5. para. 7</p>	<p>Complied with. Specific provisions are included in the contract documents. The contractor and the project management consultants are holding workshops and making information available to workers and residents in project areas.</p>
<p>Illegal Trafficking The government will undertake adequate measures to detect and prevent trafficking of humans, wildlife, endangered species, and illegal substances on the project road.</p>	<p>GA. Schedule 4, para. 19</p>	<p>Complied with. Specific provisions to prevent illegal trafficking are included in the contract documents. The MOTC, State Border Guard Department, and State Customs Service have joined efforts in this regard.</p>

ADB = Asian Development Bank, GA = grant agreement, LA = loan agreement, MOTC = Ministry of Transport and Communication, PIU = project implementation unit, IPIG = Investment Projects Implementation Group, IEE = initial environment examination, PPMS = project performance monitoring system, PBM = performance-based maintenance, SCS = State Customs Service.

Source: ADB project completion review mission.

Grant 0085-TAJ(SF) and Loan 2359-TAJ(SF)

Particulars	Reference in Financing Agreements	Status of Compliance
<p>Particular Covenants (a) Tajikistan shall (i) maintain, or cause to be maintained, separate accounts for the Project; (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB; (iii) furnish to ADB, as soon as available but in any event not later than six (6) months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan proceeds and the Grant proceeds and compliance with the financial covenants of this Financing Agreement as well as on the use of the procedures for imprest account/statement of expenditures), all in the English language; and (iv) furnish to ADB such other information concerning such</p>	<p>Article IV, Section 4.02</p>	<p>Complied with. (a) A separate financial account was maintained for the project implementation. Submission of financial audit reports for FY2008–2013 was generally on time, (the financial audit reports for FY2008, FY2009, and FY2012 were about 0.1–0.8 month late). The financial audit reports included the auditor's opinions, the audited project financial statements, the use of the grant and loan proceeds, and the manager letter, as well as conclusions, public disclosure, and follow-on actions.</p>

Particulars	Reference in Financing Agreements	Status of Compliance
<p>accounts and financial statements and the audit thereof as ADB shall from time to time reasonably request.</p> <p>(b) Tajikistan shall enable ADB, upon ADB's request, to discuss Tajikistan's financial statements for the Project and its financial affairs related to the Project from time to time with the auditors appointed by Tajikistan pursuant to Section 4.02(a) hereabove, and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB, provided that any such discussion shall be conducted only in the presence of an authorized officer of Tajikistan unless Tajikistan shall otherwise agree.</p>		<p>(b) ADB reviewed the financial audit reports for the project. It found that the financial audit reports were in order and found the unqualified audit opinions acceptable.</p>
Project Executing Agencies		
<p>MOTC as the Project Executing Agency (EA) shall be responsible for carrying out Component A and Component B of the Project. CS as the Project EA shall be responsible for carrying out Component C of the Project.</p>	<p>Schedule 5, para. 1</p>	<p>Complied with. As arranged at appraisal, the MOT was the executing agency for the road improvement and PBM components, and the State Customs Service was the executing agency for the customs infrastructure improvement and CBA components.</p>
Implementation Arrangements		
<p>Tajikistan shall ensure that the project implementation unit set up within MOTC under the ADB-financed Dushanbe–Kyrgyz Border Road Rehabilitation Project (Loan No. 2196-TAJ(SF)) shall serve as PIU for this Project. The PIU shall be responsible for the day-to-day implementation of the Project including, among other things, (a) monitoring the progress of Project implementation; (b) preparing withdrawal applications and Project progress reports; (c) maintaining Project accounts and completing financial records for auditing the Project; and (d) carrying out procurement, including advance contracting activities for Road Corridor improvements. The director of the existing PIU shall be responsible for the day-to-day supervision of implementation activities. The existing staff of the PIU shall continue to support the Project. In addition, six (6) professional staff with adequate expertise and experience in financial accounting, road engineering, construction supervision, procurement, social and environmental monitoring, and support staff shall be appointed prior to the mobilization of Works contracts.</p>	<p>Schedule 5, para. 2</p>	<p>Complied with. The PIU under the MOT, originally established in October 2001 for the ADB-financed Road Rehabilitation Project, continued to be responsible for the project management and implementation. The executive director of the PIU was supported by a group of professional and administrative staff with expertise and experience in financial accounting, road engineering, construction supervision, social aspects, and contract management. With assistance from the supervision consultants, the PIU fulfilled all the responsibilities of project implementation and coordination with related government agencies. It also prepared and submitted all required progress reports to ADB.</p>
<p>Tajikistan shall ensure that the day-to-day implementation of Component C of the Project is carried out by the project management office set up within CS under the ADB financed Regional Customs Modernization and Infrastructure Development Project (Loan No. 2114-TAJ [SF]).</p>	<p>Schedule 5, para. 3</p>	<p>Complied with. The infrastructure improvement at the Karamyk check post was implemented under the ADB-financed Regional Customs Modernization and Infrastructure Development Project (Loan 2114-TAJ [SF]). The implementation started in July 2009 and was completed in November 2010.</p>
<p>Tajikistan shall ensure that the implementation of Component B (iii) of the Project is carried out by RCMD with the assistance of an institutional advisor to be recruited under the Project and in close coordination with the PIU. The bidding process for</p>	<p>Schedule 5, para. 4</p>	<p>Complied with. The PBM component was implemented by the Road Department of the MOT. But the implementation of the pilot testing was substantially late. Two pilot projects</p>

Particulars	Reference in Financing Agreements	Status of Compliance
<p>PBM contracts shall start in the second year of Project implementation. PBM contracts shall be tendered to domestic private contractors in accordance with Tajikistan's internal competitive bidding process. PBM contracts shall be implemented within four (4) years. All roads included in PBM shall undergo periodic maintenance in the first year and routine/recurrent maintenance in the remaining years. The PIU shall provide necessary coordination and support to the Road Department in carrying out procurement of contracts, and reporting on the implementation of PBM contracts. RCMD shall provide inputs for the PIU's quarterly reports to be submitted to ADB, MOF, and MOTC.</p>		<p>were selected: Lot 1, from Nurobod to Nimich (Km 140–213); and Lot 2, from Vahdat to Obi-Garm (Km 20–96). In May 2013, two PBM contracts were awarded to the two contractors with a commencement date of 1 July 2013 and an implementation period of three years. The PIU provided necessary coordination and support. The PBM consultant worked intensively from February 2012 to September 2013 and delivered the inception report in May 2012 and the final report in September 2013. The consultant also prepared a bidding document, provided several trainings to the MOT and the private contractor for the PBM component, organized a pre-bid workshop, and assisted the MOT in tendering and contract management.</p>
<p>Counterpart Funding</p> <p>Without limiting the generality of Section 6.06 of the Loan Regulations and Section 6.06 of the Grant Regulations, Tajikistan shall allocate and make available, in a timely manner, all funds and resources necessary for the implementation of the Project in accordance with the agreed financing plan for the Project, and for the operation and maintenance of the Project facilities. With regard to PBM contracts under the Project, the counterpart funding shall be made available entirely through annual allocations to MOTC's regular road maintenance budget during 2009–2013.</p>	<p>Schedule 5, para. 6</p>	<p>Complied with.</p> <p>In all, \$17.4 million of government funding was provided for the project implementation in a timely manner. The maintenance of the project is funded by the annual state budget allocation. Two PBM contracts were signed for a total cost of \$3.9 million, financed entirely by the government.</p>
<p>Maintenance Financing</p> <p>Tajikistan shall ensure that:</p> <p>(a) actual expenditures on maintenance (including emergency maintenance, but excluding rehabilitation and construction) for roads under MOTC's jurisdiction increase at the same rate as increases of the national budgets during 2008–2010;</p> <p>(b) a separate budget item within the overall budget for the improvement and maintenance of the entire Dushanbe–Kyrgyz Border Road is maintained throughout Project implementation; and,</p> <p>(c) annual allocations in the amount of \$200,000 equivalent (plus inflation since 2007) for the maintenance of Dushanbe–Kyrgyz Border Road are made and released in a timely manner following handover of the rehabilitated road sections by contractors to MOTC.</p>	<p>Schedule 5, para. 7</p>	<p>Complied with.</p> <p>(a) The annual budgets for road maintenance were: FY2009, TJS30.3 million (\$7.6 million) FY2010, TJS34.0 million (\$7.6 million) FY2011, TJS39.0 million (\$8.1 million) FY2012, TJS46.8 million (\$9.3 million) FY2013, TJS55.8 million (\$11.2 million)</p> <p>(b) No separate budget item has been included within the overall budget for the improvement and maintenance of the Dushanbe–Kyrgyz border road.</p> <p>(c) Annual funds from the government for maintenance of the Dushanbe–Kyrgyz border road were: FY2009, TJS702,606 (\$175,651) FY2010, TJS699,593 (\$155,465) FY2011, TJS699,593 (\$145,749) FY2012, TJS919,821 (\$183,231) FY2013, TJS930,000 (\$186,000)</p>

Particulars	Reference in Financing Agreements	Status of Compliance
Cross-Border Agreement		
Tajikistan shall take all actions required from its side to enable the conclusion and effective implementation of CBA by no later than 31 December 2010. In particular, Tajikistan shall engage in consultations and enter into protocols, agreements and other arrangements with the governments of the Kyrgyz Republic and PRC and their agencies, and issue decisions and regulations, all as required under the CBA and aimed at facilitating cross-border traffic between the three countries taking into account the recommendations of the Technical Assistance. To this end, Tajikistan shall ensure that consultations of the Working Group with its counterparts are held at least once a year during Project implementation. Tajikistan shall bear the costs of organizing and attending the consultation meetings.	Schedule 5, para. 8	Complied with. Under the ADB regional TA, a draft CBA was prepared, which formed the basis of substantive agreement between the Kyrgyz Republic and Tajikistan. The two governments finalized and signed the draft agreement on 2 December 2010; it became effective on 28 June 2011.
CBA shall include, among other things, provisions concerning (a) the facilitation of border crossing formalities; (b) cross-border movement of people; (c) cross-border movement of goods; (d) requirements of the admittance of road vehicles; (e) exchange of commercial traffic rights; (f) infrastructure; and (g) miscellaneous and final provisions.	Schedule 5, para. 9	Complied with. To fully implement the CBA, an action plan was developed with assistance from ADB and signed on 2 December 2010. The plan included (i) regulatory measures; (ii) organization of management and procedure system; (iii) capacity building, infrastructure, facilities, and equipment; and (iv) institutional support.
Road Sector Development Strategy		
Tajikistan shall adopt, by 30 June 2008, the Road Sector Development Strategy and a time-bound master plan for the implementation of the Strategy agreed by ADB.	Schedule 5, para. 10	Complied with. The Transport Sector Master Plan for 2011–2025 was approved by the government in March 2011.
Vehicle Weighing		
Tajikistan shall ensure that static vehicle weighing systems for the sections of national highways rehabilitated under the ADB-financed Dushanbe–Kyrgyz Border Road Rehabilitation Project, Phase II (Loan 2196-TAJ [SF]) shall be installed and made operational by 31 December 2010.	Schedule 5, para. 11	Complied with. Under G0154-TAJ: Dushanbe–Kyrgyz Border Road Rehabilitation Project, Phase II (Supplementary), five sets of vehicle weighing systems were procured and installed in December 2012.
Construction Quality		
Tajikistan shall ensure that (a) improvement of the Project Road is carried out in accordance with the design and technical specifications of road improvement; and (b) construction supervision, quality control, and contract management are in accordance with internationally accepted standards and practices.	Schedule 5, para. 12	Complied with. During construction, the supervision consultant inspected and assessed civil works to ensure that the specifications were met. As of ADB's PCR mission in December 2013, no serious quality issues were reported.
Road Safety		
Tajikistan shall ensure that appropriate road safety measures such as pavement markings, warning signs, traffic signs and signals, communications facilities, hazard barriers, and traffic monitoring facilities are installed according to design specifications and adequately maintained after Project completion.	Schedule 5, para. 13	Complied with. Substantial road safety facilities have been installed on the project roads according to the project design. The road maintenance is in place, including procedures to ensure that the safety facilities are in good condition.
Environment		
Tajikistan shall ensure that Project activities are carried out in accordance with the environmental laws and	Schedule 5, para. 14	Complied with. Provisions were made in the project cost to

Particulars	Reference in Financing Agreements	Status of Compliance
<p>regulations of Tajikistan, ADB's Environment Policy (2002), and the IEE and the summary IEE ("SIEE"). Tajikistan shall ensure the implementation of all environmental mitigation measures and monitoring program set out in the IEE and SIEE.</p>		<p>cover environmental mitigation and monitoring. During implementation, the supervision consultants complied with the environmental safeguard requirements in the financing agreement and carried out regular environmental impact surveys and monitoring. Environmental monitoring reports were submitted to ADB on quarterly basis. The consultants and the PIU confirmed that the contractors had implemented their environmental action plans in accordance with their contract obligations and no issues were identified.</p>
Land Acquisition and Resettlement		
<p>Tajikistan shall ensure that land acquisition and resettlement are carried out promptly and efficiently in accordance with applicable laws and regulations of Tajikistan and ADB's Involuntary Resettlement Policy (1995). Tajikistan shall ensure, among other things, that (a) all land and rights-of-way required for the Project are made available in a timely manner; (b) the Resettlement Plan is updated based on the detailed engineering design and submitted to ADB for approval; (iii) no contract is awarded for Works on the Nimich-Sayron (Km 217-242) section of the Project Road until an updated Resettlement Plan has been approved by ADB; (c) no notice to proceed for mobilization of Works on the Nimich-Sayron (Km 217-242) section of the Project Road is given to a contractor until the compensation and resettlement program detailed in the updated Resettlement Plan has been completed to the satisfaction of ADB; and (d) implementation of the resettlement activities is monitored, evaluated and reported to ADB as specified in the updated Resettlement Plan.</p>	<p>Schedule 5, para. 15</p>	<p>Complied with. During implementation, the short resettlement plan was updated 3 times to include all the affected people identified and confirmed as well as revised compensation costs. The PIU carefully implemented the plan including planning, implementation, financing, and reporting. The local government took the primary responsibility for the resettlement consultation, implementation, and timely delivery of entitlements. The supervision consultants carried out the monitoring to ensure good compliance with social safeguard requirements. According to the monitoring report and the ADB's observations, the government made all necessary arrangements to compensate all affected people before work started, and all resettlement activities were satisfactorily concluded by August 2011.</p>
Gender, Local Labor, Health Risks and Prevention		
<p>Tajikistan shall ensure that specific provisions are included in the bidding documents to ensure maximized local employment and equal employment opportunities for men and women without wage discrimination in accordance with ADB's Policy on Gender and Development (1998).</p>	<p>Schedule 5, para. 16</p>	<p>Complied with. Relevant provisions were included in the bidding documents.</p>
<p>Tajikistan shall ensure that all civil works contracts include provisions requiring contractors to (a) comply with applicable labor, health and sanitation laws and regulations; (b) provide appropriate working conditions, including as appropriate, accommodation for construction workers at campsites during the construction period; (c) abstain from child labor for construction and maintenance works; and (d) 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 camp sites during the construction period. Tajikistan shall also develop linkages with national HIV/AIDS prevention or control programs in a timely manner so that the HIV/AIDS prevention activities required under the Project are properly carried out.</p>	<p>Schedule 5, para. 17</p>	<p>Complied with. Relevant provisions were included in the bidding documents. Through the project management consultants, the MOT implemented the program and coordinated with national agencies. The contractor complied with the related contract requirements, including establishing proper camps for the workers. The MOT's monitoring and ADB's review mission did not find any problem related to child labor and human trafficking during the project implementation.</p>

Particulars	Reference in Financing Agreements	Status of Compliance
Illegal Trafficking		
Tajikistan shall undertake adequate measures to detect and prevent trafficking of humans, wildlife, endangered species, and illegal substances on the Project Road.	Schedule 5, para. 19	Complied with. The government implemented adequate surveillance through the border control agency and the Department of Interior to prevent illegal trafficking in humans, wildlife and endangered species, and illegal substances on the project road.
Transparency, Governance, and Anticorruption		
Tajikistan shall ensure that all contracts financed by ADB in connection with the Project include provisions specifying the right of ADB to audit and examine the records and accounts of the MOTC, all contractors, consultants, and other service providers as they relate to the Project. In furtherance of the principles of transparency, accountability and anticorruption, Tajikistan shall enhance and further develop the MOTC's web-site to provide the public with information on the Project, including, among other things, information on procurement activities, list of participating bidders and/or consultants, names of the winning bidders and/or consultants, basic details on bidding and/or recruitment procedures adopted, amounts of the contracts awarded, the lists of goods and/or services purchased, and their intended use.	Schedule 5, para. 20	Complied with. The contract documents included the provisions specifying the rights of ADB. All bidding documents were submitted to ADB in a timely fashion. With assistance from the supervision consultant, a website was developed to provide the public with information on the project.
Review		
Tajikistan and ADB shall carry out a midterm review (a) in 2009, for Component A and Component C, and (b) in 2011, for Component B of the Project. The reviews shall focus on Project outputs and milestone activities, particularly those relating to institutional, administrative, organizational, technical, environmental, resettlement, and social aspects. The Project's economic viability and other relevant aspects that may have an impact on project performance shall be assessed. The reviews shall examine the implementation progress for the policy reforms and compliance with assurances specified in this Financing Agreement.	Schedule 5, para. 21	Complied with. The midterm review was in December 2011, after the project had been officially handed over to ADB's Tajikistan Resident Mission for administration (effective 23 February 2011). The midterm review covered all project components and their implementation progress, project management, contract awards, grant and loan disbursement, compliance with covenants, and safeguards.
Specific Assurances		
The Governments will ensure that EAs, with the assistance from the international consultants, will monitor and evaluate project impacts so that the project facilities are managed effectively, and that the benefits are maximized. The EAs will collect the data agreed with ADB at the commencement of rehabilitation, at project completion, 1 year after project completion, and 3 years after project completion.	RRP Section V (xvi)	Partly Complied with. In collaboration with the MOT, the supervision consultants developed a project performance management system. The monitoring focused on several indicators, including regional trade, international and domestic traffic, accidents and travel time, school attendance, and agriculture and livestock production in the project area. The monitoring occurred on a regular basis, but most of the data were from the MOT's statistics and reports were not prepared professionally. The consultants also failed to submit the final monitoring report.

Particulars	Reference in Financing Agreements	Status of Compliance
<p>Support to PIU</p> <p>The Governments of the Kyrgyz Republic and Tajikistan will ensure that 6 and 3 new professional staff will be appointed to the existing Project Implementation Units prior to civil works mobilization. New staff members should have expertise and experience in financial accounting, highway engineering, construction supervision, procurement, monitoring social and environmental issues, and support staff.</p>	<p>RRP Section VI (xvii)</p>	<p>Complied with.</p> <p>The PIU, originally established under the MOT in October 2001 for the ADB-financed Road Rehabilitation Project, continued to be responsible for the project management and implementation. New professional staff were appointed as requested.</p>

ADB = Asian Development Bank, CBA = cross-border agreement, EA = executing agency, MOTC/MOT = Ministry of Transport, PIU = project implementation agency, PBM = performance-based maintenance, PCR = project completion review, PPMS = project performance management system, TA = technical assistance, RRP = Report and Recommendation of the President.

Source: ADB project completion review mission.

PROJECT CONTRACT PACKAGES

KYRGYZ REPUBLIC COMPONENT

Package	Procurement Mode	Contract Cost (\$)	Actual Cost (\$)
A. Civil Works			
Karamyk–Sary-Tash (Km 349–491)	ICB	45,319,430	48,270,879
B. Border Infrastructure Improvement			3,400,000
C. Consulting Services			
Project supervision, monitoring, and evaluation	QCBS	2,041,210	1,945,958
External financial audit	CQS	55,943	65,948
<i>Project management</i>			
PIU director	Direct	39,530	39,740
Chief accountant	Direct	21,872	21,872
Deputy PIU director	Direct	32,887	33,051
Finance manager	Direct	17,641	17,641
Engineer	Direct	18,879	18,879
PIU deputy director	Direct	3,163	3,163
Various operational costs	Direct	620	620
Various operational costs	Direct	16,707	16,807
Various operational costs	Direct	0	49,000
Operational costs	Others	11,809	11,809
Finance management – Software 1C	Direct	4,460	4,460
Various operational costs	Others	35,567	35,567
Various operational costs	Others	8,834	8,834
Social expert	Others	22,808	22,960
Chief procurement specialist	Others	18,380	18,380
Administrative specialist	Direct	10,436	10,436
Road engineer	Direct	10,436	10,436
Office manager/translator	Direct	9,277	9,277
Cashier	Direct	961	961
Coordinator (Finance)	NCB	6,249	6,249
Regional coordinator	NCB	5,385	5,385
Cashier	NCB	2,983	2,983
Various operational costs	Others		286,959
Various operational costs	Others		40,006
<i>Institutional support for road maintenance</i>			
Road maintenance institutional expert	Direct	61,241	61,241
Road maintenance implementation expert	Others	58,022	58,022
Road maintenance implementation expert	Others	120,000	94,489
Total (A+B+C)		48,290,695	54,572,012

CQS = consultants' qualifications selection, ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality- and cost-based selection, SSS = single source selection.

Sources: Asian Development Bank and the Ministry of Transport and Communications.

TAJIKISTAN COMPONENT

Package	Procurement Mode	Contract Cost (\$)	Actual Cost (\$)
A. Civil Works			
Package 1: Sayron–Karamyk (Km 248–337)		33,526,477	31,168,292
	ICB	25,210,434	22,593,512
	ICB	5,730,435	6,016,784
	NCB	2,585,608	2,557,996
Package 2: Nimich–Sayron (Km 217–242)		24,678,136	24,445,516
	ICB	17,871,948	17,871,948
	ICB	4,053,000	4,053,000
	NCB	2,753,188	2,520,568
B. Border Infrastructure Improvement		834,071	834,071
C. Performance-Based Maintenance Consulting Services		3,939,238	779,421
Construction supervision consultant	ICB/QCBS	1,897,688	1,872,083
PBM - Implementation specialist	Others	103,829	103,829
PBM - Institutional expert (terminated)	Others	-	-
External auditor for FY2008	Direct	7,096	7,096
External auditor for FY2009	Others	18,992	18,992
External auditor for FY2010	ICB	22,946	22,945
PBM - Individual consultant	Others	327,375	326,109
External auditor for FY2011	Others	16,462	16,462
External auditor for FY2012	Others	12,500	12,500
External auditor for FY2013	Others	8,800	8,800
Total (A+B+C)		65,393,612	59,616,115

ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality- and cost-based selection.
Sources: Asian Development Bank and the Ministry of Transport, project implementation unit.

ECONOMIC REEVALUATION

A. Background

1. At the request of the governments of the Kyrgyz Republic and the Republic of Tajikistan, in 2007 the Asian Development Bank (ADB) approved a grant for the Kyrgyz Republic, and a grant and a loan for Tajikistan for the CAREC Regional Road Corridor Improvement Project.¹ The project was designed to improve the performance of transport corridors and regional connectivity across the Central Asian countries and the People's Republic of China (PRC).

2. At appraisal, the project's main output was to be about 263 km of improved two-lane road from Sary-Tash in the Kyrgyz Republic to Nimich in Tajikistan—about 142 km from Sary-Tash to the Kyrgyz–Tajik border at Karamyk, and 121 km from Karamyk border to Nimich. The other outputs were to be (i) improved infrastructure and facilities at the Kyrgyz–PRC border crossing (Irkeshtam) and the Kyrgyz–Tajik border crossing (Karamyk); (ii) increased sustainability and capacity of the road subsectors through outsourcing maintenance operations to the private sector; and (iii) a cross-border agreement between the Kyrgyz Republic, the PRC, and Tajikistan.

3. In 2010, the scope of the output (i) for the Kyrgyz Republic's portion was changed by extending the depth of the pavement on the stretch from Km 30 to Km 136, owing to unexpectedly large increases in traffic volumes along the project road. The cost of this variation was estimated at \$32 million. The government asked ADB to provide supplementary financing. ADB agreed and approved supplementary financing of \$23 million in October 2010.²

4. ADB's project completion review (PCR) mission conducted an economic reevaluation of the project using a similar methodology as that used at appraisal and the latest data collected. The actual traffic counts collected by the supervision consultant were analyzed, and the traffic forecast for future years was revised accordingly. The economic reevaluation was based on actual outturn costs.

5. Economic benefits were calculated by comparing the “with-project” and “without-project” cases. In the “without-project” case, it was assumed that the original state of the roads was retained. In the “with-project” case, it was assumed that the roads were improved so that vehicles could drive at faster speeds with lower operating costs and less travel time. Then, the economic internal rate of return (EIRR) was calculated for the project road.

B. Traffic Analysis and Forecast

1. Kyrgyz Republic

6. At appraisal, the traffic count data for 2007 was used as the basis for traffic forecasts and economic evaluation. Under the project performance monitoring system, traffic surveys were

¹ ADB. 2007. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan, Asian Development Fund Grant, and Technical Assistance Grant to the Kyrgyz Republic and Republic of Tajikistan for CAREC Regional Road Corridor Improvement Project*. Manila.

² ADB. 2010. *Report and Recommendation of the President to the Board of Directors on the Proposed Loan to the Kyrgyz Republic for CAREC Regional Road Corridor Improvement Project*. Manila.

conducted in 2009, 2010, 2012, and 2013.³ Twenty-four-hour counts at four locations—(i) Sary-Tash (Km 3), (ii) Sary–Mogol (Km 32), (iii) Daroot–Korgon (Km 91), and (iv) Jekendi (Km 121)—provided estimated flows in both directions and for nine vehicles types. These counts were converted to annual average daily traffic (AADT) by applying an appropriate seasonal adjustment factor.

7. The results show a remarkably high traffic growth rate on the project road, averaging about 28% per year in 2007–2013. AADT reached an average of 390 vehicles per day in 2013 (Table A8.1). However, this traffic level is lower than that forecast at appraisal stage (about 438 vehicles per day). In May 2013, the Karamyk border-crossing point was closed to traffic from third countries, which affected traffic flows, especially relating to international traffic.

Table A8.1: Traffic Survey Results
(AADT)

	2007	2009	2010	2012	2013
Sary-Tash	65	296	370	403	485
Sary–Mogol	136	198	247	313	308
Daroot–Korgon	81	264	438	389	486
Jekendi	73	101	283	388	282
Average	89	215	335	373	390

AADT = annual average daily traffic.

Source: TERA International Group. Traffic Survey Report. October 2013.

8. On the basis of the estimated traffic, the socioeconomic development status, and the development of the international transport corridor, the traffic forecast for the project road was modified slightly but remained generally within the range of the original traffic growth rates—that is 15% in 2013–2015, 10% in 2016–2020, 8% in 2021–2025, and 4% thereafter.⁴ Table A8.2 shows the revised traffic growth rates and forecast results.

Table A8.2: Revised Traffic Growth Rates and Forecast Results

Item	Car	Light Bus/ Van	Medium Bus	Large Bus	Light Truck	Medium Truck	Heavy Truck	Truck Trailer	Truck Semi Trailer	Total
Existing Traffic (AADT)										
2013	232	27	5	0	45	30	16	12	23	390
Revised Traffic Growth Rates (%)										
2013–2015	15	12	10	10	10	15	25.0	25.0	20.0	15
2016–2020	10	10	8	20	10	10	10.0	10.0	10.0	10
2021–2025	8	8	8	10	8	6	8.0	8.0	8.0	8
2026–2030	4	4	4	4	4	4	4.0	4.0	4.0	4
Traffic Forecast (AADT)										
2015	306	34	6	2	55	39	25	19	33	520
2020	493	55	9	5	89	64	41	30	54	839
2025	725	80	13	8	130	85	60	45	79	1,224
2030	882	98	16	10	158	103	73	54	96	1,490

AADT = annual average daily traffic

Source: ADB project completion review mission.

³ TERA International Group. 2013. *Traffic Survey Report*, Consulting Services for the Design Review, Procurement, Construction Supervision and Monitoring and Evaluation for the Asian Development Bank (ADB) Grant 0084-KGZ/Loan 2267-KGZ: CAREC Regional Road Corridor Improvement Project (Sary-Tash Tajikistan Border).

⁴ At appraisal, the traffic growth rates were estimated at 15% per year in 2010–2020 and 5% in 2020–2031.

2. Tajikistan

9. Tajikistan has overcome the impact of the global economic downturn. Growth in gross domestic product (GDP) accelerated from 6.5% in 2010 to 7.5% in 2012. The value of trade has increased sharply: as the combined value of exports and imports reached \$5.1 billion in 2012, with exports increasing by 8.1% and imports by 17.8%. The fast pace of socioeconomic and foreign trade development has translated into robust traffic demand, especially in the international transport corridor where the project is located. According to the statistics of the Ministry of Transport (MOT), AADT on the project road grew by an average of 38% per year, from 250 vehicles in 2006 to 1,723 vehicles in 2012. Cross-border traffic was substantial: about 80 trucks and 200 passengers per day in 2012. This growth was much higher than that estimated at appraisal.⁵ Table A8.3 provides a summary of the traffic counts on the project road.

Table A8.3: Actual Traffic Counts on the Project Road
(AADT)

Year	Car, Taxi, Motorcycle	Jeep, Minibus	Bus	Mini Truck, Tractor	Two-Axle Truck	Three-Axle Truck	Total
2006	89	69	2	15	13	62	250
2010	339	241	7	57	70	279	992
2011	456	313	57	100	85	413	1,425
2012	517	362	103	121	103	517	1,723

Source: Project Monitoring and Evaluation Interim Report.

10. Traffic growth rates assumed at appraisal have been revised—on the basis of the latest traffic count, and economic and trade data—to 11% in 2013–2015, 9% in 2016–2020, 7% in 2021–2025, and 4% thereafter. Table A8.4 shows the results of the revised traffic forecast for 2013–2030. In the forecast, some vehicle categories identified at appraisal were combined.

Table A8.4: Revised Traffic Forecast
(AADT)

Year	Car, Taxi, Motorcycle	Jeep, Minibus	Bus	Mini truck, Tractor	Two-axle Truck	Three-axle Truck	Total
2013	574	398	115	133	115	572	1,906
2015	708	481	141	160	141	702	2,335
2020	1,047	707	208	230	217	1,157	3,566
2025	1,412	947	278	299	305	1,689	4,930
2030	1,724	1,152	338	355	367	2,086	6,022

Source: ADB project completion review mission.

C. Economic Costs and Benefits

1. General

11. The project costs used in the economic reevaluation included both investment costs and the incremental change in operation and maintenance costs arising from the construction of the project. Economic analysis was undertaken using 2013 prices, excluding all taxes and duties, interest charges, and costs not relating to the roads components. The economic reevaluation compared the incremental changes in investment and in operation and maintenance costs

⁵ At appraisal, it was expected that traffic would grow at an average rate of 8.3% per year for all vehicle types.

between the “without-project” and “with-project” scenarios. It was assumed that periodic maintenance would take place every 6 years at 20% of the capital cost, routine maintenance costs would increase by 5% per year owing to deterioration of the road surface, and periodic maintenance would take place every 6 years—mainly for re-pavement of the project road. The economic analyses used the domestic price numeraire.

12. As at appraisal, two economic benefits were calculated: (i) savings in vehicle operation cost (VOC), and (ii) savings in passenger travel time costs. The benefit calculation considered both existing and induced traffic. The volume of induced traffic has been assumed to equate to 20% of traffic in the with-project scenario, and the benefits for induced traffic have been estimated at 50% of the benefits accruing to diverted traffic.

2. Kyrgyz Republic

13. Civil works costs were about 20% higher than forecast at appraisal. Unit rates for maintenance costs at appraisal—\$1,350 per kilometer for routine maintenance and \$35,000 per kilometer for periodic maintenance, in 2007 prices—were used in the analysis.

14. Unit rates for VOC savings were based on those estimated at appraisal but adjusted to 2013 prices by applying an appropriate price index. Per vehicle-km savings in VOC, in 2013 prices, were estimated at \$0.07 for cars, \$0.07 for medium buses, \$0.10 for light trucks, and \$0.31 for heavy trucks. Average passenger vehicle speeds were assumed to be 60–80 km per hour for the “with-project” case and 20–25 km per hour for the “without-project” case. The travel time cost savings for passengers were recalculated using different types of passenger vehicles. The passenger travel time cost was derived from the national average gross domestic product per capita in 2012.⁶ Other factors taken into account in the calculation for passenger time cost savings include average vehicle occupancy, percentage of work-related trips, time costs for different road users, and travel speeds for different types of passenger vehicles.

3. Tajikistan

15. The actual outturn cost of civil works was about 24.4% higher than that estimated at appraisal, with the difference due mainly to scope changes and price adjustments in the civil works contract.

16. The national norm for routine maintenance of regional roads indicates an annual expenditure of TJS15,800 per km, but in practice the actual annual expenditure is much less. For the economic reevaluation, half of the national norm was used (about \$1,600 per km per year in 2007 prices).

17. The VOC savings were recalculated using the VOC unit rates at appraisal, adjusted for inflation through the application of an appropriate price index. The savings in VOC per vehicle-km were estimated at \$0.06 for cars, \$0.06 for medium buses, \$0.09 for light trucks, and \$0.27 for heavy trucks. Average passenger vehicle speeds were assumed at 60–80 km per hour for the “with-project” case and 20–35 km per hour for the “without-project” case. The passengers’ travel time cost savings were calculated by different types of passenger vehicles. The passenger time cost was derived from average wages in the project area in 2012.⁷ Other factors taken into account in the calculation were average vehicle loads, percentage of

⁶ ADB. 2013. *Key Indicators for Asia and the Pacific 2013– Kyrgyz Republic*. Manila.

⁷ The average nominal monthly wage in the project area in 2012 was TJS334.47 for the Tojikobod district and TJS341.38 for the Jirgatol district.

work-related trips, time costs for different road users, and travel speeds for different types of passenger vehicles.

D. Economic Reevaluation and Sensitivity Test

18. On the basis of these estimations of economic costs and benefits, the EIRR was recalculated at 18.3% for the combined project. It was higher for Tajikistan road project (21.6%) than for the Kyrgyz Republic project (13.7%).

Table A8.5: Project Economic Indicators

	NPV (2013 \$ million, domestic price numeraire)	EIRR (%)
Kyrgyz Republic	13.6	13.7
Tajikistan	106.2	21.6
Combined	119.8	18.3

NPV = net present value, EIRR = economic internal rate of return.

Source: ADB estimates.

19. The EIRR was subjected to sensitivity analysis to test different scenarios of costs and benefits. The sensitivity analysis result shows that the project's economics are robust to reasonable changes in the VOC and time savings benefits.

Table A8.6: Sensitivity Test, Combined Project

Scenarios	EIRR (%)	ENPV (\$ million)
Base case	18.3	119.8
Sensitivity tests		
Vehicle operating costs–20%	16.6	84.4
Time savings benefits–20%	17.6	103.2

EIRR = economic internal rate of return, ENPV = economic net present value.

Source: ADB estimates.

Table A8.7: Economic Reevaluation of the Project
(2013 constant prices, domestic price numeraire, \$ million)

Year	Cost			Benefit				Net Benefit	Discounted Net Benefit
	Capital	Maintenance	Total	VOC	Time	Generated	Total		
2008	12.58	-	12.58	-	-	-	-	-12.58	-22.16
2009	23.34	-	23.34	-	-	-	-	-23.34	-36.72
2010	23.19	-	23.19	-	-	-	-	-23.19	-32.57
2011	31.05	-	31.05	-	-	-	-	-31.05	-38.95
2012	10.10	-	10.10	9.12	2.55	1.17	12.84	2.74	3.07
2013	7.30	0.25	7.54	10.31	3.09	1.34	14.74	7.20	7.20
2014	-	0.50	0.50	11.61	3.69	1.53	16.83	16.33	14.58
2015	-	0.53	0.53	13.09	4.42	1.75	19.26	18.74	14.94
2016	-	0.55	0.55	14.36	5.08	1.94	21.38	20.83	14.83
2017	-	0.58	0.58	15.76	5.83	2.16	23.75	23.17	14.73
2018	11.48	0.49	11.97	17.30	6.70	2.40	26.41	14.44	8.19
2019	7.93	0.52	8.45	19.00	7.71	2.67	29.38	20.93	10.61
2020	-	0.54	0.54	20.88	8.87	2.97	32.72	32.17	14.55
2021	-	0.57	0.57	22.42	10.01	3.24	35.67	35.10	14.18
2022	-	0.60	0.60	24.08	11.30	3.54	38.92	38.33	13.82
2023	-	0.54	0.54	25.87	12.76	3.86	42.50	41.96	13.51
2024	11.48	0.51	11.99	27.80	14.42	4.22	46.44	34.46	9.91
2025	7.93	0.53	8.46	29.88	16.29	4.62	50.79	42.33	10.86
2026	-	0.56	0.56	31.12	17.88	4.90	53.90	53.34	12.22
2027	-	0.59	0.59	32.41	19.63	5.20	57.24	56.66	11.59
2028	-	0.53	0.53	33.76	21.55	5.53	60.84	60.31	11.02
2029	-	0.56	0.56	35.16	23.67	5.88	64.71	64.15	10.46
2030	11.48	0.52	12.00	36.62	26.00	6.26	68.88	56.88	8.28
2031	7.93	0.55	8.48	38.15	28.56	6.67	73.38	64.90	8.44
2032	-	0.58	0.58	39.74	31.38	7.11	78.23	77.66	9.02
2033	-53.77	0.60	-53.17	41.39	34.49	7.59	83.47	136.64	14.16
Economic net present value:								\$119.8 million	
Internal rate of return:								18.3%	
Discount rate:								12%	

VOC=vehicle operating cost.
Source: ADB estimates.

LAND ACQUISITION AND RESETTLEMENT

1. Land acquisition and resettlement were required in Tajikistan. At appraisal, it was anticipated that all civil works of the project would take place either within the existing rights-of-way or on unused state-owned land. No major relocation of households or acquisition of productive land was expected. However, it was found that the project would affect 27 families (228 persons), on small parcels of land occupied by houses or by sheds that encroached on the road corridor. A short resettlement plan was prepared in accordance with Tajikistan's laws and regulations, and ADB's Involuntary Resettlement Policy (1995).

2. During implementation, the detailed design revealed a substantial increased number of properties affected. Accordingly, the short resettlement plan was updated three times by the MOT, in 2008, 2009, and 2010, to include all the affected people identified and confirmed as well as revised compensation costs. The impacts were on residential houses (7 families), simple structured sheds (24 families), and trees (6 families). The PIU carefully implemented the short resettlement plan including planning, implementation, consultation, financing, and reporting. The local government (Tajikabad Rayon and its three Jamoat governments) took the primary responsibility for the resettlement consultation, implementation, and timely delivery of entitlements. The supervision consultants carried out the monitoring to ensure compliance with social safeguards.

3. The monitoring results for Package 1 were prepared as a separate report.¹ The monitoring results for Package 2 were summarized in the third updated short resettlement plan.² According to the monitoring reports and ADB's observations, the government made all necessary arrangement to compensate all affected people before work began and all resettlement activities were satisfactorily concluded by August 2011. The monitoring report concluded that (i) all affected people had received compensation payments and there were no deductions in the amount paid; (ii) about 66% of the affected people had built structures similar to those damaged and 22% had built larger structures; (iii) almost 85% of the affected people said that their income was not adversely affected. Appendix 5 contains milestones of resettlement safeguards in Tajikistan.

¹ Cardno. July 2012. *Ex Post Evaluation of Resettlement Compensation – TAJ: CAREC Regional Road Corridor Improvement Project (Package 1)*.

² MOT and Cardno. September 2010. *Updated Short Resettlement Plan – TAJ: CAREC Regional Road Corridor Improvement Project*.

CONTRIBUTION TO ADB RESULTS FRAMEWORK

No.	Level 2 Result Framework Indicator	Target	Aggregate Output	Methods/Comments
Transport				
1	Use of roads built or upgraded (average daily vehicle-kilometers [km] in first full year of operation)	197,250 vehicle-km per day in 2015	53,074 vehicle-km per day in 2013 for the Kyrgyz Republic 196,376 vehicle-km per day in 2012 for Tajikistan	In the Kyrgyz Republic, traffic surveys were conducted in 2007, 2009, 2010, 2012, and 2013 under the project performance monitoring system. In Tajikistan, traffic counts for 2010, 2011, and 2012 were provided in the Monitoring and Evaluation Report.
2	Expressways and national highways built or upgraded (km)	263 km of main regional corridor improved by 2010	136 km (the Kyrgyz Republic) and 114 km (Tajikistan) of the road sections were rehabilitated and improved	At completion, 136 km of the road section from Karamyk to Sary-Tash was rehabilitated and improved in the Kyrgyz Republic, and 114 km of the road section from Nimich to Karamyk was rehabilitated and improved in Tajikistan.
Regional Cooperation and Integration				
1	Cross-border cargo volume facilitated (tons per year)	Daily international freight traffic on the project road increases from about 10 trucks in 2006 to 120 trucks in 2015, about 2.19 million tons per year	In the Kyrgyz Republic in 2013, average international traffic on the project road was about 50 trucks per day in 2013 and total cargo was about 912,500 tons per year. In Tajikistan in 2012, the average international traffic on the project road was about 80 trucks per day and total cargo was about 1.17 million tons per year.	In the Kyrgyz Republic, consultants conducted a traffic survey in 2013. Its results are recorded in the Traffic Survey Report (ADB G0084-KGZ/L2667-KGZ: CAREC Regional Road Corridor Improvement Project [Sary-Tash–Tajikistan Border], TERA, October 2013). In Tajikistan, the Customs Service provided the number of cross-border trucks for 2012.

^a This is a standard transport sector indicator for Level 2 (Output and Outcome) as defined in ADB's Guidelines for the Use of ADB's Results Framework Indicators for Core Sector Outputs and Outcomes (2013).

^b The target value is listed in the project design and monitoring framework.

Source: ADB project completion review mission.