

Facility Administration Manual

Project Number: 41193-019
April 2014

Mongolia: Proposed Multitranche Financing Facility for the Western Regional Road Corridor Investment Program – Tranche 2

The facility administration manual is an active document, progressively updated and revised as necessary, particularly following any changes in project costs, scope, or implementation arrangements. This document, however, may not reflect the latest project changes.

Asian Development Bank

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Facility Administration Manual Purpose and Process

The facility administration manual (FAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with Government and Asian Development Bank (ADB) policies and procedures. The FAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the FAM.

The Ministry of Roads and Transportation (MRT)¹ is the project Executing Agency (EA), which is wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by EA of its obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations, the borrower and ADB shall agree to the FAM and ensure consistency with the Loan Agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the FAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the periodic financing request report, changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval they will be subsequently incorporated in the FAM.

¹ After the government restructuring that took place in 2012, the Ministry of Roads, Transportation, Construction and Urban Development was split into the Ministry of Roads and Transportation (MRT) and the Ministry of Urban Development and Construction. The MRT took over project responsibilities as the project Executing Agency (EA).

ABBREVIATIONS

AASHTO	–	American Association of State Highway Transportation Officials
ADB	–	Asian Development Bank
ADT	–	average daily traffic
BOQ	–	bill of quantity
CDTA	–	capacity development technical assistance
PRC	–	People's Republic of China
DMF	–	design and monitoring framework
DOR	–	Department of Roads
EA	–	executing agency
EIA	–	environmental impact assessment
EMDP	–	ethnic minority development plan
FAM	–	facility administration manual
FFA	–	framework financing agreement
IA	–	implementing agency
ICB	–	international competitive bidding
JFPR	–	Japan Fund for Poverty Reduction
km	–	kilometer
MFF	–	multitranche financing facility
MOF	–	Ministry of Finance
MRT	–	Ministry of Roads and Transportation
OCR	–	ordinary capital resources
PCR	–	project completion report
PFR	–	periodic financing request
PIU	–	project implementation unit
PPMS	–	project performance management system
PRA	–	participatory rapid appraisal
PSC	–	Project Steering Committee
SDAP	–	social development action plan
SOE	–	statement-of-expenditure
SPS	–	Safeguard Policy Statement
TA	–	technical assistance
TOR	–	terms of reference
WRRICIP	–	Western Regional Road Corridor Investment Program

NOTE

In this report, "\$" refers to US dollars.

I. PROGRAM DESCRIPTION

A. Rationale, Location, and Beneficiaries

1. Mongolia is a vast, sparsely populated country located between the People's Republic of China (PRC) to the south, and the Russian Federation to the north. Due to the large land area, low population density and severe weather conditions during winter, surface transportation in Mongolia is difficult. Paved roads account for just over 5% of the total road network with the vast majority of roads only dirt tracks. The route of the proposed western regional road corridor, which is part of Asian Highway 4 and is designated Central Asia Regional Economic Cooperation (CAREC) Corridor 4a, runs north–south from Mongolia's border with the Russian Federation at Ulaanbaishint to its border with the PRC at Yarant with a total distance of about 743 kilometers (km). The Asian Development Bank (ADB) is supporting the development of 111 km of the corridor through the Western Regional Road Corridor Development Project – Phase I (WRRCDI).¹ The PRC is financing 145 km of the corridor while the Government of Mongolia is implementing 194 km. The remaining 293 km of road is proposed to be implemented under the Western Regional Road Corridor Investment Program (WRRICIP).

2. Mongolia's western region suffers from slow development because of its remoteness from the country's political and economic centers and its inadequate transport network. Roads to and within the region are mostly unpaved and impose heavy travel costs on residents and visitors. As a result, the region lacks adequate access to jobs, markets, and social services, and is significantly poorer than other parts of Mongolia. Gross domestic product per capita in the western region is only 75% of the national average. The poverty incidence was 48% in 2008 compared to the national average of 34%. Due to proximity to the PRC and the Russian Federation, Bayan–Olgiy and Khovd aimags import about 75% of their energy, foods, consumer goods, and construction materials from the two countries.

3. Lack of paved roads results in high transport costs and long travel times. In recognition of this, the government prepared a Western Regional Economic Development Program, which includes developing the Western Regional Road. The WRRICIP is the government's top priority road sector investment after the ongoing ADB-financed Regional Road Development Project.² A functioning paved road network will help Mongolia to link together its vast and poorly connected territory to promote social and economic development. While the Western region is sparsely populated, it is home to 185,000 people who currently have no paved road access to regional cities and towns. The WRRICIP will provide a vital link to economic opportunity and social services, reduce the high costs of imports, and improve the competitiveness of the regions export products.

4. Mongolia's western regional road corridor can also serve as a direct and convenient transit route between the Xinjiang Region of the PRC and the Russian Federation to reduce transport costs and facilitate trade, tourism, and other economic activities. In the long run, the corridor can also serve as a transit route for traffic from the Kyrgyz Republic, Tajikistan, and

¹ ADB. 2008. *Report and Recommendation of the President to the Board of Directors: Proposed Grant to Mongolia for Western Regional Road Corridor Development Project–Phase I*. Manila.

² The regional road corridor runs north-south from the border with the Russian Federation at Altanbulag, through the national capital Ulaanbaatar, to the border with the PRC at Zamyn-Uud. ADB is supporting the Regional Road Development project under ADB. 2004. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Mongolia for Regional Road Development Project*. Manila; and ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Supplementary Loan and Grant to Mongolia for Regional Road Development Project*. Manila.

Uzbekistan to the Siberia region of the Russian Federation, promoting regional cooperation and integration. Rising incomes will increase the demand for imports from neighboring countries which are now constrained due to extremely high transport costs. Efficient cross-border transport will be essential for the Western Regional Road to deliver the envisioned benefits. ADB is addressing cross-border transport constraints through the Transport and Trade Facilitation: Border Crossing Point Improvement and Single Window Development Project³ which will address both infrastructure constraints and streamline procedures through development of single-window services in Mongolia and other CAREC countries

5. The multitranche financing facility (MFF) is proposed as the financing modality to complete the program. The Western Regional Road represents an expansion of over 20% of the entire paved road network in Mongolia, which will require a medium to long-term commitment by ADB to assist the government to complete the road corridor. The cost to complete the remaining sections of the Western Regional Road is estimated to be about \$260 million which is significantly more than ADB has been able to provide to the transport sector in Mongolia.⁴ At the same time, the full benefits of the road, particularly for long distance and transit traffic and to spur new economic development opportunities, will only be realized once the full road is complete. The MFF modality allows ADB to include the full scope of the road under the program and align ADB's financing with the government's ability to implement the program.

B. Impact and Outcome

6. The impact of the program will be that inclusive economic growth is promoted by enhanced local and regional connectivity in the remote western region of Mongolia. The outcome will be that transport accessibility within the project area and between countries is improved.

C. Outputs

7. The outputs of the program will be: (i) output 1: the Western Regional Road is completed (about 293 km of road remains) including supplementary financing for 103.3 km intended to be completed under Phase I, (ii) output 2: three maintenance units established and equipped, (iii) 34.9 km of local roads and 3 bridges rehabilitated to connect regional soums and Aimag Centers to the Western Regional Road, and (iv) improved capacity of road sector institutions.

8. **Project 1 (Tranche 1).** Outputs to be financed under project 1 will be (i) 103.3 km of paved road constructed between Baga Ulaan Davaa and Mankhan, (ii) one maintenance unit established and equipped, (iii) 20 km of local access road constructed between district centers and the western regional road, and (iv) capacity development for maintenance planning, and works, procurement, and project management.

9. **Project 2 (Tranche 2).** Outputs to be financed under project 2 are expected to be (i) 189.7 km of paved road constructed between Khovd provincial center and Ulaanbaishint; (ii) two maintenance unit established and equipped, (iii) three bridges and 14.9 km of local roads rehabilitated in Khovd provincial center and Ulgii; and (iv) additional and ongoing support for capacity development and reform in the road subsector, which will be identified in the TA.⁵

³ ADB. 2010. *Technical Assistance for Transport and Trade Facilitation: Border Crossing Point Improvement and Single Window Development Project*. Manila.

⁴ The Country Operations Business Plan (COBP) reports that transport sector lending is expected to average about \$38 million per year from 2010 to 2012, representing nearly 60% of all ADB lending to Mongolia.

⁵ ADB. 2011. *Technical Assistance to Mongolia for Road Sector Capacity Development*. Manila (\$2 million financed on a grant basis by the Japan Fund for Poverty Reduction).

II. IMPLEMENTATION PLANS

A. Project-Readiness Activities: Table 1.1: Project-Readiness Activities for Project 1

Indicative Activities	Jun or Prior	Jul	Aug	Sep	Oct	Nov	Dec 11	Jan 12	Feb	Mar	Responsible
Establish project implementation arrangements											MRT
Approval of foreign capital utilization and feasibility study by the Government											MRT
ADB Board approval											ADB
Loan signing											ADB, MOF, MRT
Government legal opinion provided											MRT
Government budget inclusion											MRT, MOF
Contract repackaging (2x25km 1x50km)											ADB, MRT
Value engineering of specs – section 1400											ADB, MRT
Advance procurement actions											ADB, MRT
Loan effectiveness											ADB, MRT

ADB = Asian Development Bank; km = kilometer; MOF = Ministry of Finance; MRT = Ministry of Roads and Transportation.

Table 1.2: Project-Readiness Activities for Project 2

Indicative Activities	Mar	Apr	May	2014 Jun	Jul	Aug	Responsible
Government approval of foreign capital utilization							MRT, MED, MOF
Government approval of detailed design							
ADB Management approval							ADB
Loan signing							ADB, MED, MRT
Government legal opinion provided							MRT
Government budget inclusion							MRT, MED, MOF
Loan effectiveness							

Indicative Activities	2011				2012				2013				2014				2015				2016				2017				2018				2019				2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Support																																								
A4: Project 2																																								
A4.1: Value Engineering ⁷																																								
A4.2: Procurement																																								
A4.3: Civil Works																																								
A4.4: Establish Road Maintenance Unit																																								
A4.5: Capacity Development																																								
B. Management Activities																																								
1. Procurement plan key activities to procure contract packages																																								
2. Consultant selection procedures																																								
3. Environment management plan key activities																																								
4. Social development action plan key activities																																								
5. Communication strategy key activities																																								
6. Annual/midterm review																																								
7. Project completion report																																								

⁷ Have been accomplished through variation to WRRCD Phase 1 Supervision Consultant's contract.

III. PROGRAM MANAGEMENT ARRANGEMENTS

A. Project Stakeholders – Roles and Responsibilities

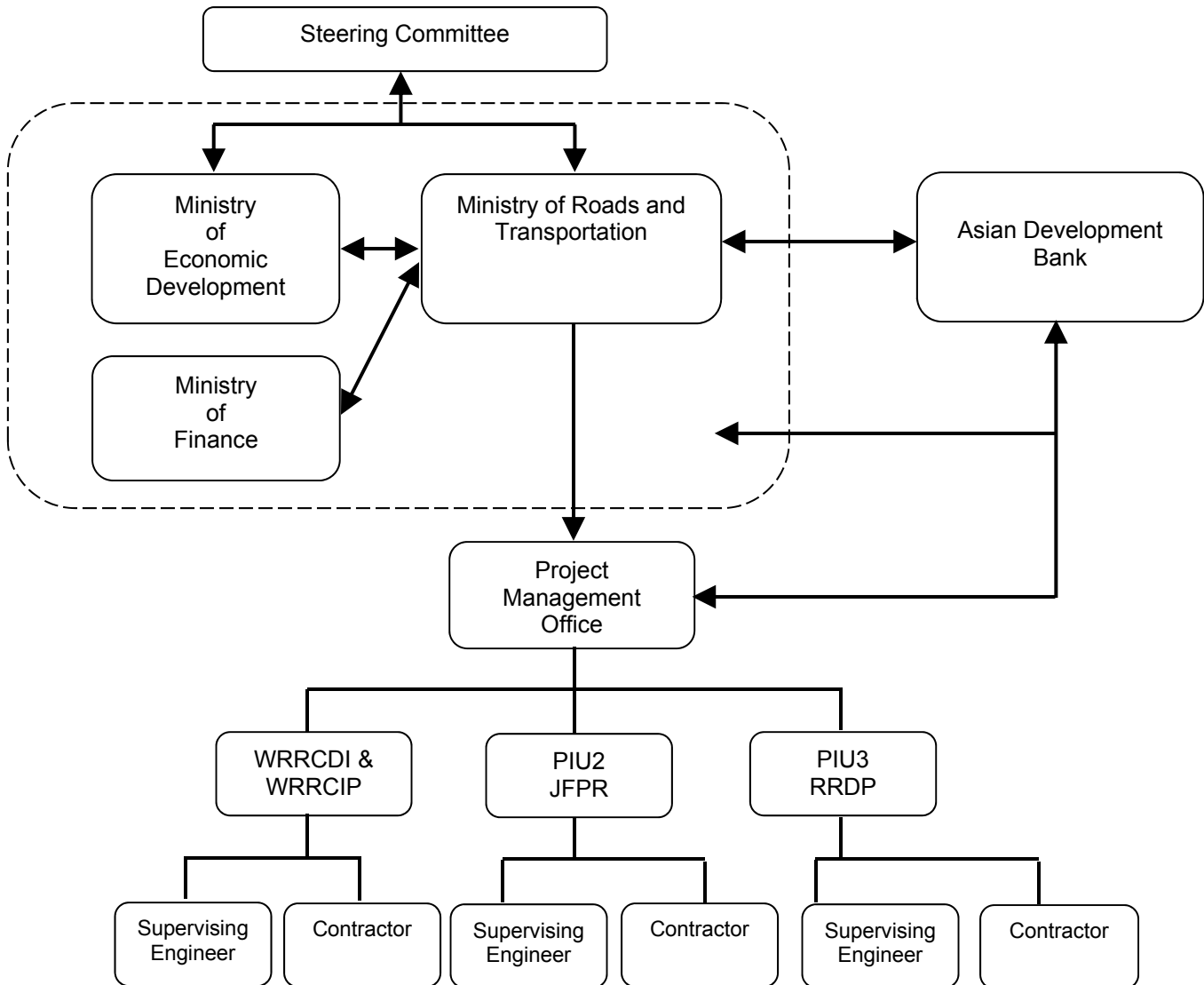
Project Stakeholders		Management Roles and Responsibilities
Asian Development Bank		Support implementation including compliance by EA and its obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.
Ministry of Finance		Establishment and maintenance of an imprest fund; and preparation and review of auditing, progress, and monitoring reports to be submitted to ADB.
Executing Agency (Ministry of Roads and Transportation)		Responsible for overall investment program implementation; Timely provision of counterpart funds; Employer of all civil works contracts; Monitor compliance with loan covenants; Coordinate the tasks of the project management office; and Procurement, withdrawals, and reporting.
Project Implementing Unit		Manage and implement the project; Engage, direct, and coordinate the work of all consultants; Responsible for procurement; Preparation and submission of withdrawal applications; and Retention of supporting documents.
Project Steering Committee (PSC)		Chaired by the State Secretary MRT Responsible for overall investment program implementation; Comprise representatives of the ministries of roads and transportation, economic development, finance, health, environment and green development, labor, custom, and provincial governments Meet at least once in every 6 months Review the progress of implementation and provide guidance, as necessary.

B. Key Persons Involved in Implementation

Executing Agency	
Ministry of Road and Transportation (MRT)	Baasnadorj Batzaya State Secretary Ministry of Roads and Transportation Address: 14251 Chinggis khan avenue, Sukhbaatar District, Ulaanbaatar, Mongolia Email: zaya.mrt@gmail.com Tel.: +976 62263201 Fax: +976 62263201
ADB	
Division Director	Tyrrell Duncan Director Transport Division, East Asia Department Email: tduncan@adb.org Tel: +632 6326383 Fax: +632 6362426
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C. Program Organizational Structure

Figure 1: Program Organizational Structure



IV. COSTS AND FINANCING

11. The program cost is estimated at about \$262 million equivalent. The total cost of project 1, including taxes, duties, physical and price contingencies, interest, and other charges is estimated to be \$72.85 million equivalent.

12. The government has requested an MFF in an amount of up to \$170.00 million equivalent from a blend of ADB's Special Funds resources and ordinary capital resources (OCR) to help finance a part of the investment program. The MFF will consist of several tranches, subject to the government's submission of related periodic financing requests (PFRs), execution of the related loan and project agreements for each tranche, and fulfillment of terms and conditions and undertakings set forth in the framework financing agreement (FFA).

13. In accordance with the FFA, the government has submitted the first and second PFRs to ADB, requesting total amount of \$45.0 million equivalent from Asian Development Fund resources to help finance tranche 1 and \$125.0 million equivalent from Ordinary Capital Resources (OCR) to help finance tranche 2.

14. **For Tranche 1:** (i) the ADB loan finances 61.77% of the total cost; (ii) the loan from Special Funds resources will have a term of 32 years, including a grace period of 8 years, and interest of 1.0% per annum during the grace period and 1.5% per annum thereafter, and such other terms and conditions set forth in the related draft FFA; and (iii) the government finances the remainder of the total project cost in an amount of \$92 million including local taxes and duties.

15. **For Tranche 2:** (i) the ADB loan will finance 62.12% of the total project cost; (ii) the loan from OCR will have a 20-year term, including a 5-year grace period, an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions as set forth in the relevant loan and project agreements; and (iii) the government will finance the remainder of the total project cost in an amount of \$76.21 million. The Government of Mongolia (the Government) is the borrower. The proposed financing plan for the program including tranche 1 and tranche 2 is summarized in Table 4.

Table 4: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Investment Program		
Asian Development Bank	170.00	64.89
Government	92.00	35.11
Total	262.00	100.00
Tranche 1		
Asian Development Bank (ADF)	45.00	61.77
Government	27.85	38.23
Total	72.85	100.00
Tranche 2		
Asian Development Bank (OCR)	125.00	62.12
Government	76.22	37.88
Total	201.22	100.00

Source: Asian Development Bank estimates.

**Table 5: Project Financing of WRRICIP Project 1
(Baga Ulaan Davaa–Mankhan)**

Item	Current Estimate (USD x million)				
	Total Cost	ADB		Government of Mongolia	
		Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs ^a					
1. Civil Works (Total)	56.17	33.47	60%	22.70	40%
a. Component 1 Baga-Ulaan-Davaa- Mankhan (km 0 to km 103.3)	52.17	33.47	64%	18.70	36%
b. Component 2 Access road to Erdenburen Soum (20 km)	4.00	-	-	4.00	100%
2. Consultant (Total)	1.58	1.58	100%	-	0%
a. Construction Supervision ^b	1.40	1.40	100%	-	0%
b. Environment, Social and HIV/AIDS Monitoring	0.18	0.18			
3. Road Maintenance Unit and Equipment	0.27	0.27	100%		
Subtotal (A)	58.01	35.31	61%	22.70	39%
B. Recurrent Costs					
1. Project Administration ^c	0.45	0.45	100%	-	0%
2. Project Management Assistance ^d	0.45	0.45	100%	-	0%
Subtotal (B)	0.90	0.90	100%	-	0%
Total Base Cost (A+B)	58.91	36.21	61%	22.70	39%
C. Contingencies					
1. Physical ^e	4.65	3.35	72%	1.30	28%
2. Price ^f	8.34	5.29	63%	3.05	37%
Subtotal (C)	12.99	8.64	66%	4.35	34%
D. Financial Charges During Implementation					
Financial Charges ADB ^g	0.79	-	0%	0.79	100%
Subtotal (D)	0.79	-	0%	0.79	100%
E. Unallocated	0.15	0.15			
Total Project Costs (A+B+C+D+E)	72.85	45.00		27.85	
% Total Project Costs	100%	61.8%		38.2%	

^a Taxes and duties for civil works in the amount of \$5.69 million are estimated at 10% of base cost for VAT and 5% customs duty on foreign exchange component and will be borne by the government. Taxes and duties on consulting services and equipment in the amount of \$0.19 million estimated at 10% of base cost for VAT and will be paid from the ADB loan.

^b Extension of existing contract for 2 years (was \$2.1 million for 3 years before).

^c Project administration estimated as a lump sum (100% ADB).

^d Project management assistance is support for PIU.

^e Physical contingency estimated at 10% of civil works costs minus taxes and duties for component 1.

^f Price contingency estimate (calculated on base cost minus taxes and duties plus physical contingency) = 14% (component 1 only).

^g IDC is based on 1% interest rate on portion of loan withdrawn.

Source: Asian Development Bank estimates.

Table 6: Project Financing of WRRICIP Project 2: (Khovd–Ulaanbaishint + Other Components)
(\$ million)

Table D1: Detailed Cost Estimate by Financier for Tranche 2-3 (Combined) (USD million)						
Item		ADB		Government of Mongolia		Total Amount
		Amount	% of cost category	Amount	% of cost category	
A.	Investment Costs^a					
1	Civil Works	107.07	71.27%	43.17	28.73%	150.24
	1.1. Construction of road: Khovd - Shuraga Bridge (50.0 km)	22.55	74.97%	7.53	25.03%	30.08
	1.2. Construction of road: Shuraga Bridge - Khashaatin Davaa Pass (53.9 km)	28.23	74.96%	9.43	25.04%	37.66
	1.3. Construction of road: Khashaatin Davaa Pass - Tolbo Soum (60.0 km)	46.10	87.02%	6.88	12.98%	52.98
	1.4. Construction of road: Tsagaannuur-Ulaanbaishint (25.8 km)	10.19	80.74%	2.43	19.26%	12.62
	1.5. Rehabilitation of 2 bridges in Khovd (0.34 km)			6.99	100.00%	6.99
	1.6. Rehabilitation of a bridge in Ulgii (0.18 km)			4.34	100.00%	4.34
	1.7. Rehabilitation of urban roads in Khovd (10 km)			3.60	100.00%	3.60
	1.8. Rehabilitation of urban roads in Ulgii (4.9 km)			1.97	100.00%	1.97
2	Road maintenance unit equipment	2.24	50.56%	2.19	49.44%	4.43
	2.1. Road maintenance unit equipment in Khovd	1.12	50.45%	1.10	49.55%	2.22
	2.2. Road maintenance unit equipment in Bayan-Ulgii	1.12	50.68%	1.09	49.32%	2.21
3	Project Implementation Unit	1.40	100.00%			1.40
4	Consulting Services	6.15	100.00%			6.15
	4.1. Construction supervision	5.76	100.00%			5.76
	4.2. Environment, Social and HIV/AIDS monitoring	0.39	100.00%			0.39
	Subtotal (A)	116.86	72.04%	45.36	27.96%	162.21
B.	Contingencies					
1	Physical			14.09	100.00%	14.09
2	Price			16.77	100.00%	16.77
	Subtotal (B)			30.86	100.00%	30.86
C.	Financing Charges During Implementation					
1	Interest During Construction	7.77	100.00%			7.77
2	Commitment and Administration Fees	0.38	100.00%			0.38
	Subtotal (C)	8.15	-			8.15
	Total (A+B+C)	125.00	62.12%	76.22	37.88%	201.22

^a Taxes and duties for civil works and equipment in the amount of \$13.43 million that are estimated at 10% of base cost for value added tax (VAT) and 5% customs duty on the foreign exchange component. Taxes and duties for civil works and equipment will be funded by the government through exemption. Taxes and duties of \$0.39 million for consulting services and project management will be financed from an ADB loan.

Note: Numbers may not add up due to rounding

Source: Asian Development Bank estimates.

A. Detailed Cost Estimates by Expenditure Category

Table 8.1: Detailed Cost Estimates by Expenditure Category for Project 1

Item	MNT Million			\$ Million			% of Total Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost	
A. Investment Costs ^a							
1. Civil Works (Total)	28,388.19	41,807.46	70,195.65	22.72	33.45	56.17	77%
a. Component 1 Baga-Ulaan-Davaa- Mankhan (km 0 to km 103.3)	26,138.73	39,058.12	65,196.85	20.92	31.25	52.17	72%
b. Component 2 Access road to Erdenburen Soum (20 km)	2,249.46	2,749.34	4,998.80	1.80	2.20	4.00	5%
2. Consultant (Total)	1,749.58	224.95	1,974.53	1.40	0.18	1.58	2%
a. Construction Supervision	1,749.58		1,749.58	1.40		1.40	2%
b. Environment, Social, and HIV/AIDS Monitoring		224.95	224.95		0.18	0.18	0%
3. Road Maintenance Unit and Equipment		337.42	337.42		0.27	0.27	0%
Subtotal (A)	30,137.77	42,369.83	72,507.59	24.12	33.90	58.02	80%
B. Recurrent Costs							
1. Project Administration		562.37	562.37		0.45	0.45	1%
2. Project Management Assistance	562.37		562.37	0.45		0.45	1%
Subtotal (B)	562.37	562.37	1,124.73	0.45	0.45	0.90	1%
Total Base Cost (A+B)	30,700.13	42,932.19	73,632.32	24.57	34.35	58.92	81%
C. Contingencies ^b							
1. Physical	2,615.00	3,196.11	5,811.11	2.09	2.56	4.65	6%
2. Price	4,690.12	5,732.37	10,422.50	3.75	4.59	8.34	11%
Subtotal (C)	7,305.12	8,928.48	16,233.60	5.85	7.14	12.99	18%
D. Financial Charges During Implementation ^c							
Financial Charges ADB		991.01	991.01		0.79	0.79	1%
Subtotal (D)		991.01	991.01		0.79	0.79	1%
E. Unallocated		187.46	187.46		0.15	0.15	0%
Total Project Costs (A+B+C+D+E)	38,005.26	53,039.14	91,044.39	30.42	42.44	72.85	100%

ADB = Asian Development Bank, MNT = Mongolian currency.

Note: Numbers may not add up precisely because of rounding.

^a Investment costs are for January 2012 market prices and include taxes and duties.

^b Price contingencies apply to the base cost and the physical contingencies (10% of construction costs). Price contingencies are derived from expected inflation (CPI type).

^c ADB's interest during implementation is 1% of loan withdrawn.

Source: Asian Development Bank estimates.

Table 8.2: Detailed Cost Estimates by Expenditure Category for Project 2
(\$ million)

Item	MNT Million			\$ Million			% Foreign Exchange	% Base Cost
	Foreign Exchange	Local Currency	Total Cost	Foreign Exchange	Local Currency	Total Cost		
A. Investment Costs^a								
1 Civil Works	189,513.9	53,273.1	242,787.0	107.1	30.1	137.2	78.1%	84.6%
1.1 Construction of road: Khovd - Shuraga Bridge (50.0 km)	39,913.5	8,174.1	48,087.6	22.6	4.6	27.2	83.0%	16.7%
1.2 Construction of road: Shuraga Bridge - Khashaatin Davaa Pass (53.9 km)	49,967.1	10,198.1	60,165.2	28.2	5.8	34.0	83.0%	21.0%
1.3 Construction of road: Khashaatin Davaa Pass - Tolbo Soum (60.0 km)	81,597.0	2,899.3	84,496.3	46.1	1.6	47.7	96.6%	29.4%
1.4 Construction of road: Tsagaannuur - Ulaanbaishint (25.8 km)	18,036.3	2,088.6	20,124.9	10.2	1.2	11.4	89.6%	7.0%
1.5 Rehabilitation of 2 bridges in Khovd		12,372.3	12,372.3		7.0	7.0		4.3%
1.6 Rehabilitation of a bridge in Olgii		7,681.8	7,681.8		4.3	4.3		2.7%
1.7 Rehabilitation of urban roads in Khovd (10.0 km)		6,372.0	6,372.0		3.6	3.6		2.2%
1.8 Rehabilitation of urban roads in Olgii (4.9 km)		3,486.9	3,486.9		2.0	2.0		1.2%
2 Road Maintenance Unit Equipment: Khovd and Bayan-Ulgii	3,964.8	3,239.1	7,203.9	2.2	1.8	4.1	55.0%	2.5%
2.1 Road maintenance unit equipment in Khovd	1,982.4	1,628.4	3,610.8	1.1	0.9	2.0		1.3%
2.2 Road maintenance unit equipment in Bayan-Ulgii	1,982.4	1,610.7	3,593.1	1.1	0.9	2.0		1.3%
3 Project Implementation Unit	2,478.0		2,478.0	1.4		1.4	100.0%	0.9%
4 Consulting Services	10,878.4		10,878.4	6.1		6.1	100.0%	3.8%
4.1 Construction supervision	10,195.2		10,195.2	5.8		5.8		3.6%
4.2 Environment, Social and HIV/AIDS monitoring	683.2		683.2	0.4		0.4		0.2%
5 Taxes and Duties	-	23,772.0	23,772.0		13.4	13.4		8.3%
Subtotal (A)	206,835.1	56,512.2	263,347.3	116.9	45.4	162.2	72.0%	100.0%
Total Base Cost	206,835.1	56,512.2	263,347.3	116.9	45.4	162.2	72.0%	100.0%
B. Contingencies^b								
1 Physical	24,939.3		24,939.3	14.1		14.1	100.0%	8.7%
2 Price	29,682.9		29,682.9	16.8		16.8	100.0%	10.3%
Subtotal (B)	54,622.2		54,622.2	30.9		30.9	100.0%	19.0%
C. Financial Charges During Implementation^c								
1 Interest During Construction	13,752.9		13,752.9	7.8		7.8	100.0%	4.8%
2 Commitment and Administration Fees	663.8		663.8	0.4		0.4	100.0%	0.2%
Subtotal (C)	14,416.7		14,416.7	8.1		8.1	100.0%	5.0%
Total (A+B+C)	275,874.0	56,512.2	332,386.2	155.9	45.4	201.2	77.5%	124.0%

Note: Numbers may not add up due to rounding. Exchange rate is US\$1 = MNT1,770.0.

^a Investment costs are for July 2013 market prices and include taxes and duties.

^b Physical contingencies are computed at 11.5% for civil works, and price contingencies are computed at 13.7% (excluding components under 100% government financing).

^c Includes interest and commitment charges. Interest during construction for ADB loan has been computed at 5-year (corresponding to implementation period) USD fixed swap rate plus an effective contractual spread of 0.50% on the OCR loan. Commitment charges for OCR loan are 0.15% per annum to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

B. Allocation and Withdrawal of Loan Proceeds

Table 9.1: Allocation and Withdrawal of Loan Proceeds for Project 1

Category		ADB FINANCING BASIS	
Number	Item	Total Amount Allocated for ADB Financing (\$)	Percentage of ADB Financing from the Loan Account
1	Civil works*	33,470,000	72% of total expenditure claimed
2	Equipment	270,000	100% of total expenditure claimed
3	Consulting services	1,580,000	100% of total expenditure claimed
4	Project administration	890,000	100% of total expenditure claimed
5	Unallocated	8,790,000	
	Total	45,000,000	

* Exclusive of taxes and duties.

Table 9.2: Allocation and Withdrawal of Loan Proceeds for Project 2

Category		ADB FINANCING BASIS	
Number	Item	Total Amount Allocated for ADB Financing (\$)	Percentage of ADB Financing from the Loan Account
		Category	Subcategory
1	Civil works	107,070,000	
1.1	Construction of road: Khovd–Shuraga Bridge (50.0 km)		22,550,000 83.0% of total expenditure claimed*
1.2	Construction of road: Shuraga Bridge–Khashaatin Davaa Pass (53.9 km)		28,230,000 83.1% of total expenditure claimed*
1.3	Construction of road: Khashaatin Davaa Pass–Tolbo Soum (60.0 km)		46,100,000 96.6% of total expenditure claimed*
1.4	Construction of road: Tsagaannuur —Ulaanbaishint (25.8 km)		10,190,000 89.6% of total expenditure claimed*
2	Equipment	2,240,000	
2.1	Equipment in Khovd		1,120,000 54.9% of total expenditure claimed*
2.2	Equipment in Bayan-Ulgii		1,120,000 55.2% of total expenditure claimed*
3	Consulting services	6,145,000	100% of total expenditure claimed
4	Project management	1,400,000	100% of total expenditure claimed
5	Interest and Commitment Charges	8,145,000	100% of amounts due
	Total	125,000,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower.

C. Detailed Cost Estimates by Financier

Table 10.1: Detailed Cost Estimates by Financier for Project 1
(\$ million)

Item	Current Estimate (USD x million)				Total Cost
	ADB		Government of Mongolia		
	Amount	% of Cost	Amount	% of Cost	
A. Investment Costs ^a					
1. Civil Works (Total)	33.47	60%	22.70	40%	56.17
a. Component 1 Baga-Ulaan-Davaa- Mankhan (km 0 to km 103.3)	33.47	64%	18.70	36%	52.17
b. Component 2 Access road to Erdenburen	-	-	4.00	100%	4.00
2. Consultant (Total)	1.58	100%	-	0%	1.58
a. Construction Supervision ^b	1.40	100%	-	0%	1.40
b. Environment, Social and HIV/AIDS Monitoring	0.18				0.18
3. Road Maintenance Unit and Equipment	0.27	100%			0.27
Subtotal (A)	35.31	61%	22.70	39%	58.01
B. Recurrent Costs					
1. Project Administration ^c	0.45	100%	-	0%	0.45
2. Project Management Assistance ^d	0.45	100%	-	0%	0.45
Subtotal (B)	0.90	100%	-	0%	0.90
Total Base Cost (A+B)	36.21	61%	22.70	39%	58.91
C. Contingencies					
1. Physical ^e	3.35	72%	1.30	28%	4.65
2. Price ^f	5.29	63%	3.05	37%	8.34
Subtotal (C)	8.64	66%	4.35	34%	12.99
D. Financial Charges During Implementation					
Financial Charges ADB ^g	-	0%	0.79	100%	0.79
Subtotal (D)	-	0%	0.79	100%	0.79
E. Unallocated	0.15				0.15
Total Project Costs (A+B+C+D+E)	45.00		27.85		72.85
% Total Project Costs	61.8%		38.2%		100%

ADB = Asian Development Bank, MNT = Mongolian currency.

Note: Numbers may not add up precisely because of rounding.

^a Taxes and duties for civil works in the amount of \$5.69 million are estimated at 10% of base cost for VAT and 5% customs duty on foreign exchange component and will be borne by the government. Taxes and duties on consulting services and equipment in the amount of \$0.19 million estimated at 10% of base cost for VAT and will be paid from the ADB loan.

^b Extension of existing contract for 2 years (was \$2.1 million for 3 years before).

^c Project administration estimated as a lump sum (100% ADB).

^d Project management assistance is support for PIU.

^e Physical contingency estimated at 10% of civil works costs minus taxes and duties for component 1.

^f Price contingency estimate (calculated on base cost minus taxes and duties plus physical contingency) = 14% (component 1 only).

^g IDC is based on 1% interest rate on portion of loan withdrawn.

Source: Asian Development Bank estimates.

Table 10.2: Detailed Cost Estimate by Financier for Tranche 2
(USD million)

Item	ADB		Government of Mongolia		Total ^a Amount
	Amount	% of Cost Category	Amount	% of Cost Category	
A. Investment Costs^b					
1. Civil Works	107.07	78.06	30.10	21.94	137.17
1.1. Construction of road: Khovd–Shuraga Bridge (50.0 km)	22.55	83.00	4.62	17.00	61.16
1.2. Construction of road: Shuraga Bridge–Khashaating Davaa Pass (53.9 km)	28.23	83.05	5.76	16.95	
1.3. Construction of road: Khashaatin Davaa Pass–Tolbo Soum (60.0 km)	46.10	96.57	1.64	3.43	47.74
1.4. Construction of road: Tsagaannuur–Ulaanbaishint (25.8 km)	10.19	89.62	1.18	10.38	11.37
1.5. Rehabilitation of 2 bridges in Khovd (0.34 km)			6.99	100.00	6.99
1.6. Rehabilitation of a bridge in Ulgii (0.18 km)			4.34	100.00	4.34
1.7. Rehabilitation of urban roads in Khovd (10 km)			3.60	100.00	3.60
1.8. Rehabilitation of urban roads in Ulgii (4.9 km)			1.97	100.00	1.97
2. Road maintenance unit equipment	2.24	55.04	1.83	44.96	4.07
2.1. Road maintenance unit equipment in Khovd	1.12	54.90	0.92	45.10	2.04
2.2. Road maintenance unit equipment in Bayan–Ulgii	1.12	55.17	0.91	44.83	2.03
3. Project Implementation Unit	1.40	100.00			1.40
4. Consulting Services ^c	6.15	100.00			6.15
4.1. Construction supervision	5.76	100.00			5.76
4.2. Environment, social and HIV/AIDS monitoring	0.39	100.00			0.39
5. Taxes and Duties			13.43	100.00	13.43
Subtotal (A)	116.86	72.04	45.36	27.96	162.21
B. Contingencies					
1. Physical			14.09	100.00	14.09
2. Price			16.77	100.00	16.77
Subtotal (B)			30.86	100.00	30.86
C. Financing Charges During Implementation^d					
1. Interest during construction	7.77	100.00			7.77
2. Commitment and administration fees	0.38	100.00			0.38
Subtotal (C)	8.15	100.00			8.15
Total (A+B+C)	125.00	62.12	76.22	37.88	201.22

ADB = Asian Development Bank, MNT = Mongolian currency. Note: Numbers may not add up precisely because of rounding.

^a Taxes and duties for civil works and equipment in the amount of \$13.43 million are estimated at 10% of base cost for value added tax (VAT) and 5% customs duty on the foreign exchange component. Taxes and duties for civil works and equipment will be funded by the government through exemption. Taxes and duties of \$0.39 million for consulting services and project management will be financed from an ADB loan.

^b In July 2013 prices.

^c Physical contingencies are computed at 11.5% for civil works, and price contingencies are computed at 13.7% (excluding components under 100% government financing).

^d Includes interest and commitment charges. Interest during construction for ADB loan has been computed at 5-year (corresponding to implementation period) USD fixed swap rate plus an effective contractual spread of 0.50% on the OCR loan. Commitment charges for OCR loan are 0.15% per annum to be charged on the undisbursed loan amount.

Source: Asian Development Bank estimates.

D. Detailed Cost Estimates by Year

Table 11: Detailed Cost Estimates by Year for Project 1
(\$ million)

Item	Total Cost	Year 1	Year 2	Year 3	Year 4	Year 5
A. Investment Costs ^a						
1. Civil Works (Total)	56.17	3.37	15.17	17.97	19.01	0.65
a. Component 1 Baga-Ulaan-Davaa-Mankhan (km 0 to km 103.3)	52.17	3.13	14.09	16.69	18.01	0.25
b. Component 2 Access road to Erdenburen Soum (20 km)	4.00	0.24	1.08	1.28	1.00	0.40
2. Consultant (Total)	1.58	0.09	0.44	0.52	0.33	0.24
a. Construction Supervision	1.40	0.08	0.38	0.45	0.29	0.20
b. Social and HIV/AIDS Monitoring	0.18	0.01	0.06	0.07	0.04	0.04
3. Road Maintenance Unit and Equipment	0.27	0.02	0.07	0.09	0.05	0.04
Subtotal (A)	58.02	3.48	15.68	18.58	19.39	0.93
B. Recurrent Costs						
1. Project Administration	0.45	0.03	0.12	0.14	0.10	0.06
2. Project Management Assistance	0.45	0.03	0.14	0.17	0.10	0.09
Subtotal (B)	0.90	0.06	0.26	0.31	0.20	0.15
Total Base Cost (A+B)	58.92	3.54	15.94	18.89	19.59	1.08
C. Contingencies ^b						
1. Physical	4.65	0.28	1.25	1.49	1.40	0.23
2. Price	8.34	0.50	2.26	2.67	2.30	0.63
Subtotal (C)	12.99	0.78	3.51	4.16	3.70	0.86
D. Financial Charges During Implementation ^c						
Financial Charges ADB	0.79	0.02	0.05	0.15	0.35	0.22
Subtotal (D)	0.79	0.02	0.05	0.15	0.35	0.22
E. Unallocated	0.15	0.01	0.02	0.03	0.05	0.04
Total Project Costs (A+B+C+D+E)	72.85	4.34	19.50	23.20	23.64	2.16
% Total Project Costs	100.00	5.96	26.77	31.85	32.45	2.96

ADB = Asian Development Bank, MNT = Mongolian currency.

Note: Numbers may not add up precisely because of rounding.

^a Investment costs are for January 2012 market prices and include taxes and duties.

^b Price contingencies apply to the Base Cost and the physical contingencies (10% of construction costs). Price contingencies are derived from expected inflation (CPI type).

^c ADB's Interest during implementation is 1% of loan withdrawn.

Source: Asian Development Bank estimates.

Table 10.3: Detailed Cost Estimates by Year for Tranche-2
(USD million)

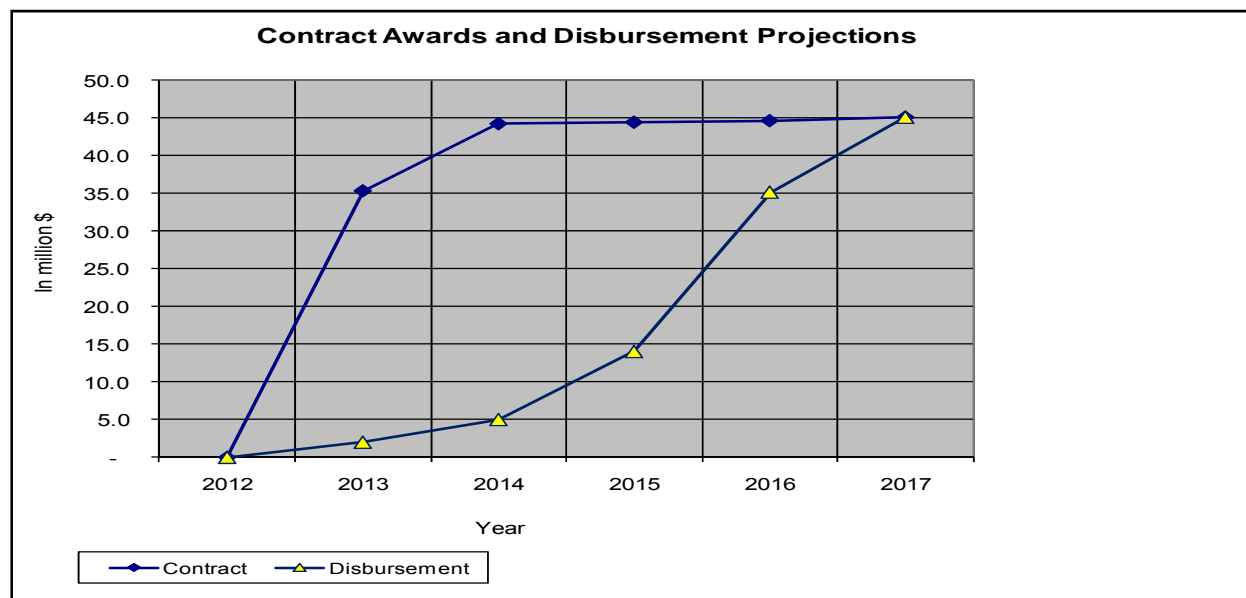
		Total Cost	Year 1	Year 2	Year 3	Year 4	Year 5
A.	Investment Costs						
1	Construction of road: Khovd - Ulaanbaishint (187.9 km)	133.34	13.33	26.67	53.33	26.67	13.33
1.1	Construction of road: Khovd - Shuraga Bridge (50.0 km)	30.08	3.01	6.02	12.03	6.02	3.01
1.2	Construction of road: Shuraga Bridge - Khashaatin Davaa Pass (53.9 km)	37.66	3.77	7.53	15.06	7.53	3.77
1.3	Construction of road: Khashaatin Davaa Pass - Tolbo Soum (60.0 km)	52.98	5.30	10.60	21.19	10.60	5.30
1.4	Construction of road: Tsagaannuur - Ulaanbaishint (25.8km)	12.62	1.26	2.52	5.05	2.52	1.26
2	Urban Bridge Infrastructure: Khovd and Ulgii	11.33	1.13	2.27	4.53	2.27	1.13
2.1	Rehabilitation of 2 bridges in Khovd (0.34 km)	6.99	0.70	1.40	2.80	1.40	0.70
2.2	Rehabilitation of a bridge in Ulgii (0.18 km)	4.34	0.43	0.87	1.74	0.87	0.43
3	Urban Road Infrastructure: Khovd and Ulgii	5.57	0.56	1.11	2.23	1.11	0.56
3.1	Rehabilitation of urban roads in Khovd (10 km)	3.60	0.36	0.72	1.44	0.72	0.36
3.2	Rehabilitation of urban roads in Ulgii (4.9 km)	1.97	0.20	0.39	0.79	0.39	0.20
4	Road Maintenance Equipment: Khovd and Bayan-Ulgii	4.43				2.22	2.22
4.1	Road maintenance unit equipment in Khovd	2.22				1.11	1.11
4.2	Road maintenance unit equipment in Bayan-Ulgii	2.21				1.11	1.11
5	Project Implementation Unit	1.40	0.28	0.28	0.28	0.28	0.28
6	Consulting Services	6.15	0.61	1.23	2.46	1.23	0.61
	Subtotal (A)	162.21	15.92	31.56	62.83	33.77	18.13
B.	Contingencies						
1.	Physical	14.09	1.41	2.82	5.64	2.82	1.41
2.	Price	16.77	1.68	3.35	6.71	3.35	1.68
	Subtotal (B)	30.86	3.09	6.17	12.34	6.17	3.09
C.	Financing Charge During Implementation						
1.	Interest During Construction	7.77	0.26	0.78	1.81	2.33	2.59
2.	Commitment Charge	0.38	0.17	0.13	0.06	0.02	0.00
	Subtotal (C)	8.15	0.43	0.91	1.87	2.35	2.59
	Total (A+B+C)	201.22	19.43	38.64	77.05	42.29	23.81

Note: Numbers may not sum precisely because of rounding.

E. Contract and Disbursement S-Curve

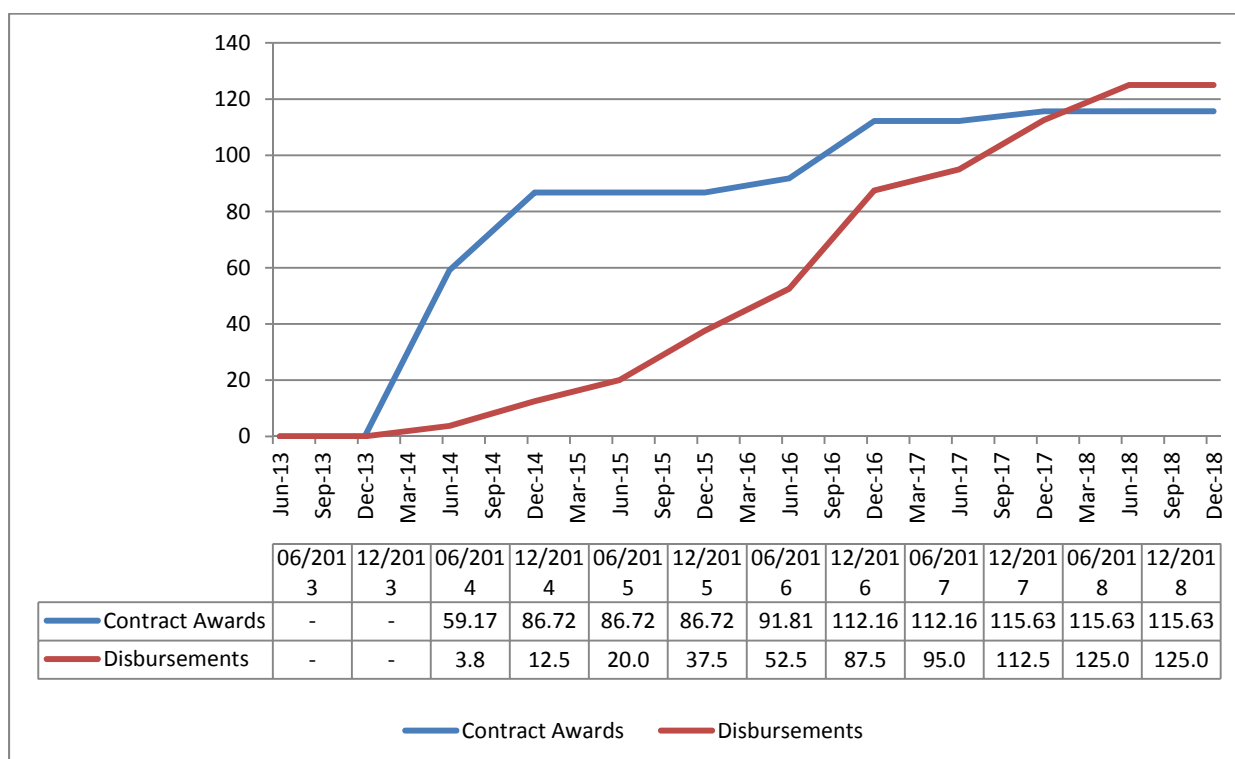
16. Figures 2.1 and 2.2 show the contract awards and disbursement over the life of project 1 and project 2 respectively, and annually based on the contract awards and disbursement projections:

Figure 2.1: Projections for Project 1 (ADB financing)



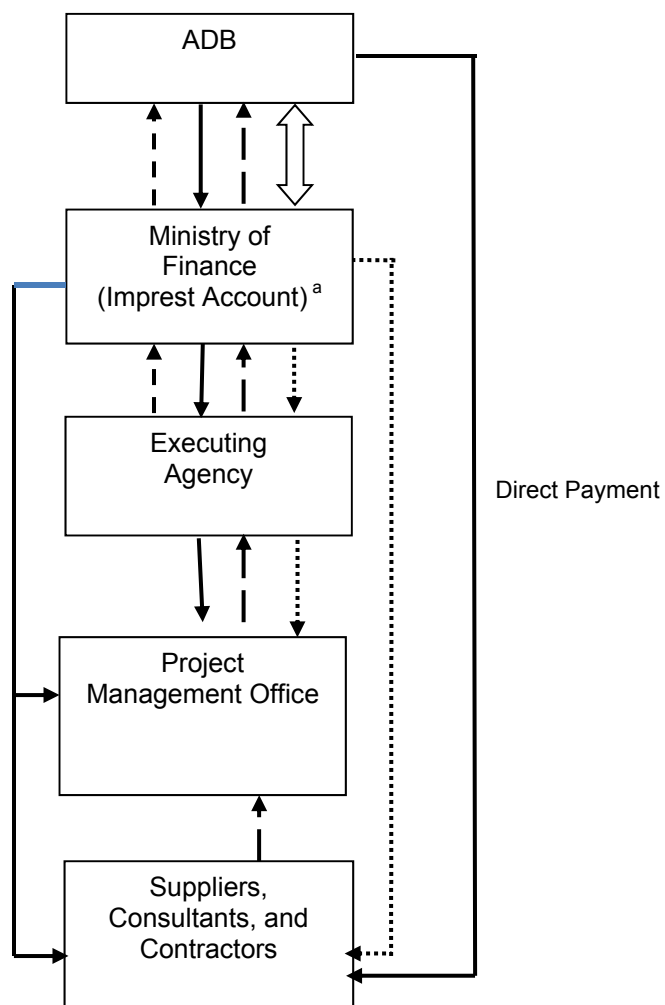
Note: Of the proposed ADB loan amount of \$45 million, \$36.4 million is projected for contract awards as the remaining \$8.6 million is unallocated.

Figure 2.2: Projections for Project 2 (ADB financing)

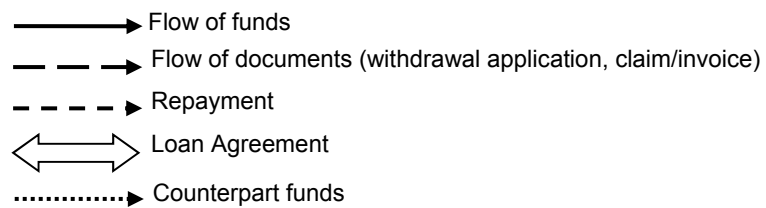


F. Fund Flow Diagram

Figure 3: Fund Flow Diagram



^a MOF will be responsible for management, monitoring, and reconciliation of the imprest account.



I. FINANCIAL MANAGEMENT

17. As envisioned, the investment program covering three tranches will cost \$262 million. The total funding identified for Project 1 includes \$45.00 million from ADB and approximately \$27.85 million of counterpart financing from the government. For Project 2, the total funding from ADB is \$125.0 million and from the government—about \$76.22 of counterpart financing.

A. Financial Management Assessment

18. A financial management assessment questionnaire was completed as part of ADB technical assistance (TA) 4785 in 2007. This was reviewed under TA 7449 and some changes made and the revised assessment is contained in Appendix 3. This indicates that the EA still have financial management capabilities although further training should be provided throughout the course of the project and for new staff.

19. Financial management capacity is still an issue with the speed of transactions but will improve as the project team gains more experience. A risk analysis was carried out as part of the requirements of TA 7449. The financial risk assessment was carried out in accordance with the principles established by ADB and the summary of this analysis is shown in Table 12.

Table 12: Risk Assessment and Mitigation Measures

Risk	Risk Assessment	Risk Mitigation Measures
1. Implementing entity	Moderate/ Substantial	The steering committee will provide overall guidance on project implementation. MRT requires further capacity development to manage project implementation. A team of consultants funded by capacity development technical project (CDTA 7844-MON) is providing project management support.
2. Funds flow	Moderate	The government has provided assurance on the timely availability of counterpart funds starting in 2014. The Ministry of Finance (MOF) is monitoring the project funds flow and endorses withdrawal applications submitted by the PIU through the EA.
3. Staffing	Moderate	The implementation consultant, who has been recruited under Tranche-1, has been assisting the MRT in designing and implementing the training program for PIU staff, especially for ADB financial reporting requirements. This will include disbursement procedures and use of imprest accounts, and their integration into overall financial reporting requirements. ADB's transport team in MNRM is providing additional support and guidance. ADB, EA and MOF agreed to establish a joint position of an accountant who will be in charge of all the ADB-funded projects in the transport sector.
4. Accounting policies and procedures	Negligible	Accounting policy and procedures manual for the PIU have been drafted, taking into account the accounting standards complied with Mongolia Accounting Law and acceptable to ADB and the requirements of ADB.

Risk	Risk Assessment	Risk Mitigation Measures
5. Internal audit	Negligible	MRT's Internal Auditing, Monitoring and Evaluation Department will provide internal control services. The implementation consultants will also review and assess the adequacy of this arrangement.
6. External audit	Moderate	An external auditor acceptable to ADB will audit the project accounts annually in accordance with the international standards of auditing. Audited project accounts are required to be submitted to ADB within 6 months after the end of a calendar year.
7. Reporting and monitoring	Moderate	MRT through the PIU, and the implementation consultants will regularly report in accordance with ADB requirements on inherent adequate control mechanisms.
8. Information systems	Moderate	Appropriate computerized information system (contract management) is being installed at MRT. CDTA consultants will assist the PIU to strengthen the efficiency of existing information system and reporting.
Overall Control Risk	Moderate	The ADB's transport team and the CDTA consultants will monitor and provide assistance to the PIU and MRT in project management and implementation.

ADB = Asian Development Bank, MOF = Ministry of Finance, MRT = Ministry of Roads and Transportation, PIU = project implementation unit.

Source: Asian Development Bank.

20. During implementation of the WRRICP in Mongolia, the EA may face some risks that can be divided into two main categories: (i) country level, and (ii) organization and project level. A delay in the release of counterpart funds can be considered a major country-specific risk for the project. Further, all contracts with foreign suppliers and/or consultants financed from loan funds are subject to approval by the EA, the MOF, and other cognizant agencies, which takes considerable time and eventually will undermine project implementation. These, together with project-specific risks and activities to mitigate them, are summarized in the table below. Financial management risks will need to be considered and updated throughout the life of the investment project. Risk mitigation measures will also be updated accordingly.

21. Although the EA has performed acceptably in the past, there is still room for improvement. Additional training of all project staff should be undertaken by ADB to ensure all ADB procedures are well known to all staff. It is recommended that training provided by ADB and supported by the supervision consultant should include:

- (i) a series of financial management workshops. The full extent of these workshop and other forms of training required will be defined by ADB;
- (ii) the senior staff visiting ADB headquarters in Manila to receive specialist training;
- (iii) all documents on ADB website relating to financial management be translated to Mongolian; and
- (iv) regular reviews of the finances carried out during ADB missions.

B. Disbursement

22. ADB loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),⁸ and detailed arrangements agreed upon between the Government and ADB.

23. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),⁹ ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list to subprojects financed by ADB.

24. To facilitate disbursements, the MOF may set up and administer an imprest account in US dollars at a commercial bank acceptable to ADB after the loan becomes effective.¹⁰ A separate imprest account may be established for each tranche.¹¹ The ceiling of the imprest account will be 10% of the total loan amount. The imprest account is to be used exclusively for the ADB's share of eligible expenditures. MOF will be responsible for management, monitoring, and reconciliation of the imprest account. The request for initial and additional advance to the imprest account should be accompanied by an Estimate of Expenditure Sheet¹² setting out the estimated expenditures to be financed through the imprest account for the forthcoming 6 months of project implementation. The imprest account will be established, managed, and liquidated in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time) and detailed arrangements agreed by the Government and ADB. Supporting documents should be submitted to ADB or retained by the EA or IA as appropriate, in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time) when liquidating or replenishing the imprest account.

25. To expedite flow of funds and simplify the documentation process, the ADB statement-of-expenditures (SOE) procedure may be used in liquidating and replenishing the imprest account and reimbursing eligible expenditures of not more than \$100,000 per individual payment. Payments over the SOE ceiling will be reimbursed, liquidated, or replenished based on full supporting documentation. Separate accounts and records should be kept for each tranche. SOE records should be maintained and made readily available for review by ADB's disbursement and review mission or upon ADB's request for submission of supporting documents on a sampling basis and for independent audit.¹³

26. Before the submission of the first withdrawal application under each tranche, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is \$100,000 equivalent, under reimbursement and imprest fund procedures, unless otherwise approved by ADB. Individual payments below this amount should generally be paid from the

⁸ Available at: http://www.adb.org/Documents/Handbooks/Loan_Disbursement/loan-disbursement-final.pdf.

⁹ Available at: <http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf>.

¹⁰ The bank charges on the imprest account will be financed from the proceeds of the loan.

¹¹ Bank charges may be financed from the loan proceeds.

¹² Available in Appendix 29 of the ADB *Loan Disbursement Handbook*.

¹³ Checklist for SOE procedures and formats are available at:

http://www.adb.org/documents/handbooks/loan_disbursement/chap-09.pdf

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Contracts-100-Below.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Contracts-Over-100.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Operating-Costs.xls

http://www.adb.org/documents/handbooks/loan_disbursement/SOE-Free-Format.xls.

imprest account., or by the EA (or the IA) and subsequently claimed to ADB through reimbursement. Withdrawal applications and supporting documents will demonstrate, among other things that the goods, and/or services were produced in or from ADB members, and are eligible for ADB financing. Any subsequent change in the list of authorized representatives must be reported immediately and authenticated specimen signatures of new representatives must also be provided.

C. Accounting

27. The EA will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project. The EA will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

D. Auditing

28. The EA will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and with the Government's audit regulations, by an independent auditor acceptable to ADB. The audited project financial statements will be submitted in the English language to ADB within six months of the end of the fiscal year by the EA.

29. The annual audit report for the project accounts will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan and grant proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the legal agreements for the project; (iv) use of the imprest fund procedure; and (v) the use of the statement of expenditure procedure certifying to the eligibility of those expenditures claimed under SOE procedures, and proper use of the SOE and imprest procedures in accordance with ADB's *Loan Disbursement Handbook* and the project documents.

30. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

31. The Government, EA and IA have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.¹⁴ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits

¹⁴ ADB Policy on delayed submission of audited project financial statements:

- When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next six months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next six months.
- When audited project financial statements have not been received within 12 months after the due date, ADB may suspend the loan.

are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

32. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011).¹⁵ After review, ADB will disclose the project financial statements for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. The Audit Management Letter will not be disclosed.

¹⁵Available from <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>.

II. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

33. ADB's approved advance contracting and retroactive financing for all civil works, equipment, and consultant contracts for Project 1. ADB's approval of advance contracting and retroactive financing for all civil works, equipment, and consultant contracts within 20% of the loan amount will be requested for Project 2. All advance contracting to be financed out of the proceeds of the loan shall be subject to and governed by ADB's *Procurement Guidelines*¹⁶ (2013, as amended from time to time) and *Guidelines on the Use of Consultants*¹⁷ (2013, as amended from time to time). The issuance of invitations to bid under advance contracting will be subject to ADB approval. The borrower, executing, and implementing unit have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

B. Procurement of Goods, Works, and Consulting Services

34. All procurement of goods and works will be undertaken in accordance with ADB's *Procurement Guidelines* (2013, as amended from time to time).

35. For the procurement of works, the road will be divided into three (3) packages. Procurement will be through international competitive bidding (ICB) procedures using the single stage two envelope (SSTE) modality. Procurement shall use the latest ADB standard bidding documents which can be downloaded from ADB's website. Documents for all procurement under ICB will be subject to the prior review of ADB.

36. The procurement of equipment for maintenance units will be through International Competitive Bidding (ICB).

37. All consultants will be recruited according to ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time).¹⁸ The terms of reference for all consulting services are detailed in Appendix 2.

38. A summary of consulting services for project 1 is provided in Table 13. The project has been financing 82 PM of international and 330 PM of national consulting services to provide for the construction supervision services. The entire road section under project 1 is already included in the scope of work for the construction supervision consultant firm KCI (*Korea Consultants International*) under the ongoing WRRCDI project. The initial supervision consultant contract under WRRCDI is time-based and will end on 31 December 2013. Since the Phase I implementation schedule will be extended until 14 October 2014, the supervision consultant period of performance has also been extended for the same duration. The MFF is proposed to provide additional financing to complete this section. However, since the MFF for WRRCDI is a separate loan from WRRCDI, the supervision consultant contract cannot simply be extended. The services for project 1 of MFF have been single sourced to KCI which has performed satisfactorily on the WRRCDI project to provide an additional 62 PM of international and 294 PM of national consultant inputs. Additional consulting services have been provided to (i) facilitate project management and implementation, and (ii) strengthen the institutional and operational capacity of the executing agency. The following expertise has been provided: (i) an international

¹⁶ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>.

¹⁷ Available at: <http://www.adb.org/Documents/Guidelines/Consulting/Guidelines-Consultants.pdf>.

¹⁸ Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at <http://www.adb.org/documents/handbooks/project-implementation/>.

project management specialist to provide project and contract management support to EA (20 PM international); and (ii) safeguards specialists to provide for monitoring services (36 PM national consultants) and safeguard related studies to be sourced through individual (1 PM international) and local institutes. Due to the specialized nature of the services and small amount of the contracts assigned to the local institutes, services have been contracted through the SSS method. In addition to the services above, 5 PM of international and 12 PM of national will be financed through Phase 1 project to provide services in the areas of (i) value engineering, and (ii) procurement support.

39. An 18-month procurement plan indicating thresholds and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is discussed in Section C.

Table 13.1: Summary of Consulting Services for Project 1

Description	Type of Assignment	International		National		Cost Estimates (\$)
		PM	Monthly Rate (\$)	PM	Monthly Rate (\$)	
Consulting Services (Project 1)						
Project Management Specialist (Support PIU)	International	20	22,440			448,800
Social, Environment and HIV/AIDS monitoring	National		22,000	12	4,000	48,000
Community Outreach Officers (SDAP)	National		22,000	24	2,000	48,000
Water Quality Monitoring (local institute)	National					40,000
Wildlife Study (local institute)	National					40,000
Supervision Consultant Project 1 (2014 & 2015)	International					
Team Leader/Highway Engineer	International	24	15,000			360,000
Senior Resident Engineer	International	24	13,000			312,000
CAD Operator	International	12	8,000			96,000
Road Maintenance Specialist	International and National	2	13,000	6	3,000	44,000
Chief Highway Engineer/National Team Leader	National			24	4,000	96,000
Resident Engineer	National			24	3,000	72,000
Resident Surveyors	National			24	2,500	60,000
Survey Crews	National			24	2,000	48,000
Measurement Engineer	National			24	3,000	72,000
Resident Inspector	National			24	2,500	60,000
Office Manager	National			24	1,500	36,000
Accountant	National			24	1,500	36,000
Translator (2 persons)	National			48	1,500	72,000
Clerical Assistant (2 persons)	National			48	1,000	48,000
Total (Project 1)		82		330		2,036,800
Consulting Services through WRRCD Phase 1 Construction Supervision Contract						
Value Engineering	International	3	22,000	12	4,000	114,000
Procurement expert	International	2	22,000			44,000
Consulting Services through PIU Financed Through WRRCD Phase 1						
Routine Maintenance Specialists	International	2	22,000	6	4,000	68,000
Road Safety Specialists	International	2	22,000	3	4,000	56,000

Table 13.2: Summary of Consulting Services for Project 2

Table 10.2: Summary of Consulting Services for Project 2								
		Type of Assignment	International			National		Cost Estimates (\$)
			PM	Monthly Rate (\$)		PM	Monthly Rate (\$)	
Consulting Services (Project 2)								
1	Environment Monitoring	National				36	3,000	108,000
2	SDAP (including HIV/AIDS & Human Trafficking) Monitoring	National				36	3,000	108,000
3	Community Outreach Officers	National				108	500	54,000
4	Water Quality Monitoring (National Institute)	National				15	Lump Sum	15,000
5	Wildlife Study (National Institute) ^a	National				15	Lump Sum	15,000
6	Social Development Action Plan (SDAP) ^b	National				50	Lump Sum	86,000
7	Supervision Consultant (Project 2)	International and National	144	Lump Sum		576	Lump Sum	5,760,000
	Total (Project 2)		144			836		6,146,000

^a The water quality monitoring and wildlife study contracts will be signed as lump sum contracts. The proposed cost estimates are preliminary estimates.

^b The SDAP will be implemented by the PIU team and 3 community outreach officers

C. Procurement Plan

40. ADB-financed contract packages for project 1 are shown in Table 14.1 and for project 2 in Table 14.2. All ICB packages will be procured using of the single-stage, two-envelope (SSTE) system. Prior review will be required for all procurement and consultant selection actions. The detailed procurement plan covering the first 18-month, including the NCB annex for Mongolia, is provided in Appendix 1.

Table 14.1: Contract Packages for Project 1

Reference	Contract Description	Estimated Cost ^a (\$ million)	Procurement/ Selection Method
A. Civil Works			
CW1-1	Baga Ulaan Davaa Mankhan (km 0 - 25)	11.10	ICB
CW1-2	Baga Ulaan Davaa Mankhan (km 25-75)	26.20	ICB
CW1-3	Baga Ulaan Davaa Mankhan (km 75–103.3)	9.10	ICB
CW1-4	20 km Community access roads	4.00	NP
	Subtotal (A)	50.4	
B. Goods			
G1	Equipment for Maintenance Units	0.27	NCB
	Subtotal (B)	0.27	
C. Consulting Services			
CS1	Construction Supervision (2014–2015)	1.400	SSS
CS2	Project Management Specialist (support to PIU)	0.449	ICS

Reference	Contract Description	Estimated Cost ^a (\$ million)	Procurement/ Selection Method
CS3	Social, Environmental and HIV/AIDS monitoring	0.048	ICS
CS4	Community Outreach and Monitoring Coordinators	0.048	ICS
CS5	Water Quality Monitoring (local institute)	0.040	QCBS
CS6	Wildlife study (local institute)	0.040	QCBS
	Subtotal (C)	2.025	
	Total	52.70	

CWx-x = civil works, Gx = Goods (equipment), CS = consulting services, ICB = international competitive bidding, NCB = national competitive bidding, NP = national procedures, QCBS = quality and cost based selection.

^a Including physical contingencies and price escalation, taxes, and duties.

Table 14.2: Contract Packages for Project 2

Description	Value (US\$ million)	Procurement Method
A. Civil Works and Goods:		
1. Construction of road:	133.7	ICB – Works
(i) Lot 1: Khovd–Shuraga Bridge (50.0 km)		
(ii) Lot 2: Shuraga Bridge-Khashaatin Davaa Pass (53.9 km)		
(iii) Lot 3: Khashaatin Davaa Pass–Tolbo Soum (60.0 km)		
(iv) Lot 4: Tsagaanuur–Ulaanbaishint (25.8 km)		
2. Rehabilitation of 2 bridges in Khovd (0.31km)	6.99	NP
3. Rehabilitation of a bridge in Ulgii (0.18 km)	4.34	NP
4. Rehabilitation of urban roads in Khovd (10 km)	3.60	NP
5. Rehabilitation of urban roads in Ulgii (4.9 km)	1.97	NP
6. Equipment for the road maintenance unit in Khovd and Bayan-Ulgii	3.97	ICB – Goods
ICB= international competitive bidding. NCB= national competitive bidding. NP= national procedures,		
B. Consulting Services:		
1. Construction Supervision (2014-2018)	5.760	QCBS
2. Environment Monitoring	0.108	ICS
3. SDAP (including HIV/AIDS & Human Trafficking) Monitoring	0.108	ICS
4. Community Outreach Officers	0.054	ICS
5. Water Quality Monitoring (National Institute)	0.015	ICS
6. Wildlife Study (National Institute)	0.015	ICS
7. SDAP	0.086	QCBS

ICB= international competitive bidding. ICS= individual consultant selection, NCB= national competitive bidding. NP= national procedures, SDAP = social development action plan, QCBS = quality and cost based selection.

Note: QCBS quality and cost ratio will be 80:20.

41. The EA will provide ADB with information about likely suppliers on each procurement item on Tables 13.1, 13.2, 14.1 and 14.2 before advertising the tender. If there are not many likely suppliers, the EA will propose the way to increase the number of bids such as by sending invitations directly to potential bidders, in addition to advertising the tender.

42. **For Project 1:** the consulting services for CS2, CS3, and CS4 (Table 14.1) have been procured using ICS. The reasons for using ICS are: (i) with the exception of CS5, all positions use single individual consultants and unlikely to draw interest from firms; (ii) the consulting industry in Mongolia is not developed so there are very few firms able to provide local consultants; and (iii) ICS allows ADB to better monitor and select consultants with appropriate

skills. Individual consultants hired through firms are also acceptable. Consulting services for CS5 and CS6 are being procured under QCBS method.

43. The threshold for procurement of goods and works is shown in Table 15 below.

Table 15: Procurement Thresholds for Goods and Works

Procurement Method	Thresholds
International Competitive Bidding (ICB) for Works	≥ US\$3 million
ICB for Goods	≥ US\$500,000
National Competitive Bidding (NCB) for Works	≥ US\$200,000 < US\$3 million
NCB for Goods	≥ US\$100,000 < US\$500,000
Shopping for Works	< US\$200,000
Shopping for Goods	< US\$100,000

44. **Procurement Capacity Assessment.** From 2004 to 2012, the Road and Transport Department of the Ministry of Roads, Transportation, Construction and Urban Development (MRTCUD), had full responsibility for the procurement of civil works. As a result of the post-2012 election government reorganization, the MRTCUD was split into the Ministry of Construction and Urban Development and the Ministry of Roads and Transportation (MRT). The MRT took over responsibilities of the project EA and the MRT's Road Sector Policy Implementation Coordination Department took over responsibilities of the project implementation unit. The EA has established a joint Project Management Office (PMO), which included project implementation units (PIUs) of all the ADB-funded transport sector projects.

45. Carrying out procurement efficiently under ADB-financed projects is critical to good project implementation, to the attainment of the objectives of the projects and to their sustainability. Equally, ADB, as part of its developmental role, is interested in strengthening the capacity of its borrowers to administer procurement in an effective and transparent way as part of sound governance and good project management. The capacity to take quick decisions is particularly important as a few months delay can postpone works by a year, given Mongolia's short construction season. The delays can lead to dramatic cost increases, in a context of inflation and global input price increases.

46. Weak procurement management has led to significant delays in the procurement of Phase 1 contracts. Although the costs of this delay are yet to be felt, it is anticipated that they will be significant. A procurement capacity assessment was conducted which has identified areas of weakness in the procurement and contract management capacity of the EA related primarily to lack of expertise and limited resources. Accordingly, following recommendations of the above capacity assessment, project 1 has been financing one international procurement expert with a good knowledge of ADB procurement procedures to assist and support EA in following procurement activities:

- (i) preparation of bid documents,
- (ii) advertising and answering bidding queries,
- (iii) advising and preparing the evaluation reports, and
- (iv) provide training to the EA and PIU staff.

47. The procurement expert has been recruited through a contract variation to the construction supervision consultant. Additionally, during implementation, it is recommended that the EA and IA also be provided support by an independent project management facilitator to (i) provide overall project management guidance and support, (ii) advice for contract management, and (iii) train EA/IA in contract management. The terms of reference are

discussed in section D below. On 11 August 2011, ADB approved Capacity Development Technical Assistance (CDTA) 7844-MON: Road Capacity Development Project. The CDTA, which was extended until 30 September 2013 and is being implemented, provides capacity development and technical support to the EA, including procurement. An experienced road engineer has been training the EA and PIU staff in civil works and goods procurement, including bid preparation and evaluation, and consultant recruitment.

48. To help EA conduct the procurement and ensure transparency and efficiency of procurement during project implementation, the government of Mongolia will appoint representatives of the following government agencies in the bid evaluation committee: (i) National Anti-Corruption Agency; (ii) General Intelligence Agency; (iii) Ministry of Finance; (iv) General Customs Office; (v) General Department of Taxation; and (vi) Mongolia Road Association. According to the current legislation of Mongolia, the newly-established General Procurement Agency (GPA) is in charge of procurement for all government-funded projects.¹⁹

D. Consultants' Terms of Reference (Project 1)

49. Detailed draft terms of reference are found in Appendix 2. The consulting services required under the project 1 include the following:

1. Project Management Facilitator (support to PIU) (International – 20 person-months)

50. The role of the Project Management Facilitator is to assist the consolidated road sector Project Management Office (PMO) and ADB project specific PIU's in fulfilling their roles as Employer representative, and ensure the contractors understand their obligations and duties under the contracts. By means of discussions and day to day exchanges, supplemented by formal workshops if appropriate, the Project Management Facilitator should support PMO and PIU staff in carrying out their roles under FIDIC and by promoting mutual trust and respect, act as an impartial mediator in any misunderstandings between the PIUs/Engineer/Contractor. The overall objective of the services is to maintain smooth operations of the procurement/contract administration processes.

2. Social and HIV/AIDS Monitoring Specialist (under PIU) (National – 12 person-months)

51. For Tranche 1 and 2, the monitoring specialist will be recruited to facilitate the implementation of the SDAP and ensure the grievance redress mechanism functions effectively. The expert will coordinate the work of the Community Outreach Monitoring Officers at the Soum level and facilitate communication and coordination between the supervision engineer, the contractors, local communities and the government.

3. Community Outreach Officer – Soum level (under PIU) (National – 3 positions, 8 person-months per position)

52. The community outreach officers will be posted in three soum center offices nearest the project area and serve as community liaisons to the people under the project impact zone. They will engage with community and households living or likely to settle along the corridor and

¹⁹ Until ADB completes procurement capacity assessment of the GPA, the EA and listed agencies will conduct procurement for Tranche-2.

undertake information dissemination campaigns about the project, construction activities and social development action plan (SDAP), including HIV/AIDS and human trafficking prevention.

**4. Environmental Monitoring Specialist (under PIU)
(National – 12 person-months)**

53. The monitoring specialist will facilitate the implementation of the EMP and ensure the grievance redress mechanism functions effectively. The expert will coordinate the work of the Community Outreach Monitoring Officers at the Soum level and facilitate communication and coordination between the supervision engineer, the contractors, local communities and the government.

5. Water Quality Monitoring (under PIU) (Lump Sum)

54. The main concern for water quality is for temporary increases in turbidity during construction, and accidental contamination from oil, grease, fuel, and other toxic materials associated with construction equipment. Water quality monitoring will be required at key points in important streams that cross the road corridor in the project area. Monitoring during the construction period will be undertaken through a contract to a qualified local environmental monitoring company or institution. Monitoring will include basic parameters (e.g., temperature, suspended particles, pH, dissolved oxygen content, COD, BOD, hydrocarbon (oil, grease, fuels). These results will be shared with the Environment Monitoring Specialist and reported in the semi-annual Environmental Monitoring Reports submitted to ADB.

6. Wildlife Movement Survey (under PIU) (National Institution or NGO – Lump Sum)

55. **Background.** The Mongolian Altai region is characterized by its rich fauna diversity. There are 360 species of vertebrates, including 90 species of mammals, more than 250 species of birds, 11 species of reptiles, 123 species of insects, 10 species of fishes, and 1 species of amphibian. Some of the rare and endangered mammals that occur in the corridor are the Mongolian Saiga Antelope (*Saiga tatarica mongolica*) in Manhan Area (especially Khar Us Nurr National Park, Sharga Nature Reserve and Mankhan Nature Reserve), Argal Sheep (*Ovis ammon*) in Hohserh Mountain area, Siberian Ibex (*Capra siberica*) in Bodonch area and Goitred Gazelle (*Gazella subgutturosa*) in Yarant cross-border area. The proposed road corridor for the Western Regional Road Corridor Investment Program (WRRCP) passes through the Mankhan Nature Reserve.

56. A wildlife movement monitoring study is proposed for the length of the WRRCP between Yarant to Ulaanbaishint during project implementation to:

- (i) Confirm and update the existing information on wildlife migration routes / crossing points along the WRRCP corridor between Yarant and Ulaanbaishint in respect of migratory ungulates such as: Mongolian saiga, Argali sheep, Goitred Gazelle and Siberian Ibex;
- (ii) Determine whether or not, and to what extent, the new paved road and its embankments affect wildlife movements across the road corridor; and
- (iii) Based on information gathered above, provide specific recommendations for any mitigation measures that could be implemented along the new road to facilitate wildlife movements across the road.

57. A specialized national institution or NGO will be contracted to develop the study approach and methodology, design the survey protocol, conduct the wildlife survey, and edit the final report.

**7. Routine Maintenance Specialists (under ongoing WRRCDI project)
(International – 2 person-months and National – 6 person-months)**

58. To ensure that the maintenance centers are implemented on timely schedule at the end of the contract defects liability periods and are capable of performing the routine maintenance activities immediately thereafter, it is envisaged that two Maintenance Specialists be assigned to assist with management and planning of routine maintenance activities. The position will be added to the current supervision consultant's scope of work by means of a contract variation.

**8. Road Safety Specialists (under ongoing WRRCDI project)
(International – 2 person-months and National – 3 person-months)**

59. Road safety audits of the detailed design and pre-opening phases have been included in the existing supervision consultants' contract. However, additional consulting services are required to (i) design a detailed road safety program including a public awareness campaign to deliver the road safety program to road users and those living in or near the road corridor, and (ii) implementation of the program and awareness campaign.

**9. Value Engineering (under WRRCDI supervision consultant)
(International – 3 person-months and National – 12 person-months)**

60. As a part of project preparation, the detailed engineering design has been completed for all sections of the Western Regional Road. Additionally, a due diligence review has been completed of the detailed design for the project road sections. The Final Report from this review highlighted a number of areas where the design could be optimized in order to achieve substantial cost savings in the capital cost of construction for sections planned to be financed under tranches 2 and 3 of this MFF. To assist in the implementation of the future tranches, qualified road engineers will be recruited under the existing supervision consultant's contract to perform the following tasks:

- (i) Value engineering review of the existing detailed design and design optimization to realize cost savings in the capital works;
- (ii) Determining contract packaging requirements in coordination with the EA; and
- (iii) Preparation of bidding documents incorporating the outcome of the value engineering exercise, specification review and agreed contract packages.

**10. Procurement Specialist (under WRRCDI supervision consultant)
(International – 2 person-months)**

61. The role of the Procurement Specialist is to assist members of the PIU, MRT, and the bid evaluation committee to ensure that procurement procedures acceptable to the ADB are applied rigorously but with minimum delays. The Procurement Specialist will:

- (i) assist in preparing bid documents under FIDIC guidelines,
- (ii) assist in the advertising and answering of bidding queries,
- (iii) provide technical support to the Bid Evaluation Committee,
- (iv) assist in preparing evaluation reports,
- (v) liaise with ADB during the evaluation process, and

- (vi) provide training to MRT staff on procurement procedures.

E. Consultants' Terms of Reference (Project 2)

62. Detailed draft terms of reference are found in Appendix 2. The consulting services required under the project 2 include the following:

1. Environmental Monitoring Specialist (under PIU) (National – 36 person-months)

63. The monitoring specialist will facilitate the implementation of the EMP and ensure the grievance redress mechanism functions effectively. The expert will coordinate with the Community Outreach Monitoring Officers at the Soum level and facilitate communication and coordination between the supervision engineer, the contractors, local communities and the government.

2. SDAP, including HIV/AIDS and Human Trafficking, Monitoring Specialist (under PIU) (National – 36 person-months)

64. For Tranche 2, the existing monitoring specialist will be extended by 30 p-ms to facilitate the implementation of the SDAP and ensure the grievance redress mechanism functions effectively. The expert will coordinate the work of the Community Outreach Monitoring Officers at the soum level and facilitate communication and coordination between the supervision engineer, the contractors, local communities and the government.

3. Community Outreach Officer – Soum level (under PIU) (National – 3 positions, 36 person-months per position)

65. The community outreach officers will be posted in three soum center offices nearest the project area (Erden-Buren, Tolbo and Tsagaanuur) and serve as community liaisons to the people under the project impact zone. They will engage with community and households living or likely to settle along the corridor and undertake information dissemination campaigns about the project, construction activities and social development action plan (SDAP), including HIV/AIDS and human trafficking prevention.

4. Water Quality Monitoring (under PIU) (Lump Sum)

66. The main concern for water quality is for temporary increases in turbidity during construction, and accidental contamination from oil, grease, fuel, and other toxic materials associated with construction equipment. Water quality monitoring will be required at key points in important streams that cross the road corridor in the project area. Monitoring during the construction period will be undertaken through a contract to a qualified local environmental monitoring company or institution. Monitoring will include basic parameters (e.g., temperature, suspended particles, pH, dissolved oxygen content, COD, BOD, hydrocarbon (oil, grease, fuels). These results will be shared with the Environment Monitoring Specialist and reported in the semi-annual Environmental Monitoring Reports submitted to ADB.

5. Wildlife Movement Survey (under PIU) (Lump Sum)

67. **Background.** The Mongolian Altai region is characterized by its rich fauna diversity. There are 360 species of vertebrates, including 90 species of mammals, more than 250 species

of birds, 11 species of reptiles, 123 species of insects, 10 species of fishes, and 1 species of amphibian. Some of the rare and endangered mammals that occur in the corridor are the Mongolian Saiga Antelope (*Saiga tatarica mongolica*) in Manhan Area (especially Khar Us Nurr National Park, Sharga Nature Reserve and Mankhan Nature Reserve), Argal Sheep (*Ovis ammon*) in Hohserh Mountain area, Siberian Ibex (*Capra siberica*) in Bodonch area and Goitred Gazelle (*Gazella subgutturosa*) in Yarant cross-border area. The proposed road corridor for the Western Regional Road Corridor Investment Program (WRRCP) passes through the Mankhan Nature Reserve.

68. A wildlife movement monitoring study is proposed for the length of the WRRCP between Yarant to Ulaanbaishint during project implementation to:

- (i) Confirm and update the existing information on wildlife migration routes/crossing points along the WRRCP corridor between Yarant and Ulaanbaishint in respect of migratory ungulates such as: Mongolian saiga, Argali sheep, Goitred Gazelle and Siberian Ibex;
- (ii) Determine whether or not, and to what extent, the new paved road and its embankments affect wildlife movements across the road corridor; and
- (iii) Based on information gathered above, provide specific recommendations for any mitigation measures that could be implemented along the new road to facilitate wildlife movements across the road.

69. This survey will be combined with the survey proposed under Project 1. A national consultant will design the survey protocol, conduct the wildlife survey, and edit the final report.

III. SAFEGUARDS

70. The investment program (project 1 and 2)²⁰ is environmental category A, involuntary resettlement category C, and indigenous people's category C. The environmental management plans for projects 1 and 2 are attached as Appendix 5.

A. Requirements to Screen Environmental Impacts

71. Project 1 and 2 have been categorized as category A. The EIA report for the road section to be funded under project 1 has been completed and was disclosed on the ADB Website in August 2011 and updated in September 2011, including a revised environmental management plan. The EIA report for the road sections to be funded under project 2 was initially disclosed on the ADB Website in August 2010 and updated in July 2013. The procedures for environmental assessment of any subsequent projects in case of additional financing or loan savings are described in the WRRICIP Environmental Assessment and Review Framework (September, 2011) as follows:²¹

- (i) The results of implementation of the environmental safeguards of prior tranches will be reviewed and disclosed; then
- (ii) The new tranche will be screened and categorized by ADB, in consultation with the EA/IA. However, based on EIA work completed to date, it is anticipated that any future projects will be classified as category A;
- (iii) Based on the category, the appropriate level of environmental assessment, including preparation of EIA reports and environmental management plans will be undertaken consistent with the Safeguard Policy Statement (2009), Appendix 1. Safeguard Requirement 1: Environment;
- (iv) All necessary due diligence of EIA reports and environmental management plans will be undertaken by ADB through EARD, and where necessary RSES; and
- (v) All necessary public consultation and disclosure will be conducted consistent with the Safeguard Policy Statement (2009).

72. During the screening stage, the EA/IA coordinated its activities with ADB's due diligence process to ensure, to the extent possible and practical, consistency between the ADB categorization process and the Mongolian General Assessment. This coordination is to continue throughout the environmental assessment and review of each tranche.

73. **Domestic approvals.** The Government of Mongolia approved the initial environmental assessment for the entire corridor in 2007. The detailed EIA was approved in 2009. In 2013, the PIU submitted the 2009 EIA for review and the Ministry of Nature, Environment and Tourism re-confirmed the 2009 EIA for the entire corridor.

74. An environmental management plan was prepared for each individual project/tranche. The environmental management plan prepared is consistent with Safeguard Policy Statement (2009), Appendix 1. Safeguard Requirement 1: Environment, Annex to Appendix 1, Section I. The EA/IA will report on the implementation of the environment management plan through semi-annual Environmental Monitoring Reports are regularly submitted to ADB. There are no outstanding environmental issues reported.

²⁰ Project 1 and 2 refer to Tranches 1 and 2 of the MFF investment program.

²¹ <http://www.adb.org/sites/default/files/projdocs/2011/41193-014-mon-earf.pdf>

B. Requirements to Screen Involuntary Resettlement Impacts

75. Detailed engineering design has been carried out for all 2 tranches of the proposed investment program and has concluded that there will be no physical or economic displacement of people because land acquisition is not required (i.e., the land already belongs to the State) and there are no people, private structures or property within the right-of-way (ROW). The road will be constructed within the ROW and any temporary land use beyond the ROW will be selected based on voluntary negotiated agreements with owners (e.g., for quarries, borrow areas, construction camps, materials assembly yards and disposal sites). The selection of the temporary land occupation sites for Project 2 will be regulated by the environmental management plan and the sites may not belong to individuals. PIU through the soum government will ensure that the temporary occupation of land for borrow pits etc. is undertaken in a way to avoid grasslands, water sources and other community assets. If grassland is utilized, agreements will be reached with the soum governor. Based on the detailed design, MRT has investigated project 2 to reconfirm that there are no involuntary resettlement impacts, as stipulated in the resettlement framework (RF). This has been done by completing the screening/checklist form included in Annex I of the RF. This form has been submitted to ADB prior to disbursement of civil works payments for Project 2. The implementation of the project sections will make every effort to avoid and minimize land acquisition and resettlement impacts, including temporary impacts during construction.²²

76. If MRT identifies that involuntary impacts during implementation, they will need to prepare a resettlement plan for the relevant road section/tranche according to the procedures and guideline set out in Section III of the RF. A resettlement plan will be submitted to ADB for review and approval, endorsed by the MRT and disclosed to the affected peoples prior to undertaking any land acquisition and relocation activities. MRT will ensure availability of the budget to meet the resettlement plan implementation requirements.

77. Regardless of whether any involuntary resettlement impacts are identified, for each tranche MRT will ensure that a cut-off date is established, clearly marked in the field and local people are notified of the cut-off date. The notification should clearly state that people who encroach into the ROW or designated construction sites will be evicted and will not be eligible for compensation or assistance. For project 2, the cut-off date is 15 April 2014, and notification will be done.

C. Requirements to Screen Ethnic Minorities Impacts

78. As part of the project preparation for the Project 2, the EA has conducted screening (see Appendix 6) for impacts on ethnic minority communities. The screening/checklist has been submitted to ADB for review and concurrence. On the basis of this screening/checklist and review by ADB Project 2 has been categorized as C. The social development action plan (SDAP) will suffice to deal with any negative impacts of the project as well as to ensure equitable and inclusive project benefits.

²² In case of, temporary disruption to services (local roads, water, electricity, telephone) these services will be restored within 48 hours or temporary alternative solutions to provide these services for the time of construction impact will be provided.

IV. SOCIAL DEVELOPMENT ACTION PLAN (DRAFT)

79. The investment program is not expected to have significant adverse social impacts in the project impact area. However, to ensure that the investment program (i) optimizes potential benefits with appropriate consideration to gender, ethnic minority, herders and nomadic groups, poor and vulnerable households and labor issues and (ii) mitigates potential risk of the population to HIV/AIDS and human trafficking, socio-cultural misunderstanding and conflicts, and road safety concerns, a social development action plan (SDAP) has been prepared for project 2 and agreed with MRT. The key actions required are shown in Table 17.

80. The SDAP will be treated as an integral part of the Project and will be implemented by the PIU. The social and environment unit at PIU level will be responsible for proper planning, implementation and monitoring of the SDAP. The field level implementation will be handled by a qualified staff at *soum* level (for project 2 there will be three staff at respective *soums*) that will be responsible for implementation of the SDAP. They will work closely with local *soum* level authorities, NGOs and other stakeholders. The staff at PIU and field levels will ensure that collaboration is done with specialized institutions and NGOs to handle issues like skill training, HIV/AIDS and human trafficking. The PIU will be responsible for internal monitoring of proper implementation of SDAP. The field staff will report to PIU staff on a monthly basis. The PIU, through the IA, will update ADB on a semi-annual basis on the progress and results of the implementation of the SDAP.

Table 17: Proposed Action Plan (2013–2017) - Draft

Proposed Action	Targets	Agencies	Timing	Funding	Monitoring Indicators
1. Employment and micro enterprise generation during construction	<p>At least 30% of construction labor to be hired locally with specially focusing on local herders, ethnic minority communities and poor and vulnerable given equitable allocation. Of these 30% construction jobs, 20% to be provided to local women willing work.</p> <p>Contractors will provide appropriate training as well as health and safety awareness.</p> <p>Local enterprises supported by seeking services (eatery, lodging, shops, daily provisions etc.) required during construction. A 10% of these enterprises supported will be owned by women.</p>	EA, Contractor, local government agencies	2013-2017	No additional fund required	<ul style="list-style-type: none"> • Number of local (unskilled and skilled) labor employed and trained, by ethnic group • Contract Clause • Sex disaggregated data indicating % of local women provided employment • Number of local businesses provisioning the camps, by ethnic groups. • Sex disaggregated data indicating % of women entrepreneurs supported.
2 Consultation and Participation Activities	<p>Population under the project impact zone especially, women, herders, ethnic minorities, poor and vulnerable. At least 40% participants are to be women.</p> <p>Gender sensitive communication strategies.</p> <p>Consultation locations to be convenient for women's participation.</p>	EA, community outreach officers, local officials	2013-2017	No additional fund required	<ul style="list-style-type: none"> • Number of consultations undertaken with list of participants by ethnicity and gender and socio-economic status. • Sex disaggregated data on participants.
3. Information and Education Campaign on HIV/AIDS, STD and Human Trafficking Prevention	<p>Local population along the road and nearby baghs</p> <p>40% of the population covered to be women.</p> <p>Gender sensitive communication strategies</p>	Ministry of Health, Social Welfare, Traffic Police, community outreach officers, local officials, EA, and community members	2013-onward	<p>Fund from existing program for general implementation. Community outreach officers budget.</p> <p>\$2,500 for info material production</p>	<ul style="list-style-type: none"> • Number of workshops conducted and number of participants, by ethnicity and gender • Number and types of information materials disseminated • Number of focal points trained • Sex disaggregated data

Proposed Action	Targets	Agencies	Timing	Funding	Monitoring Indicators
4. Road safety awareness	Local population along the road and nearby baghs 40% participants to be women. The program to be delivered in a gender sensitive manner at places convenient for women. Road users such as truck drivers	Ministry Social Welfare, Traffic Police, community outreach officers, local officials, EA, and community members	2013 onwards	Project Fund for putting road safety signage Community outreach officers budget. \$2,500 for info material production	<ul style="list-style-type: none"> • Number of signage put • Number of workshops conducted and number of participants, by ethnicity and gender • Number and types of information materials disseminated • Number of community road safety focal points trained
5. Social and cultural awareness building	Outsiders and visitors including construction workers, truck drivers, tourists	Ministry Social Welfare, community outreach officers, local officials, EA, and community members	2013 onwards	Fund from existing program for general implementation. Community outreach officers budget. \$2,500 for info material production	<ul style="list-style-type: none"> • Number and types of information material produced and disseminated • Number of community focal points trained
6. Community based monitoring and reporting system on human trafficking	Local population under the project impact zone	Ministry of Labor and Social Welfare, local officials, EA, community outreach officers, police and community	2012-onward	No additional fund required	<ul style="list-style-type: none"> • Number/types of community members trained on HTP, road safety and socio-cultural awareness building monitoring and reporting • Number of cases reported
7. Promotion and Support of Livelihood Activities for the post construction period as part of the income enhancement measures	Local population focusing on women, herders, ethnic minority, households with women-, disabled heads or will be given special assistance (training and capital) to engage in small enterprises to be set up along the road. At least 20% of these will be women. Provide advice and information on existing micro credit programs at soum and aimag levels	Ministry of Labor & Social Welfare, Local officials, NGOs, Local Chamber of Commerce Women's group, Community outreach officers	2013 onward	Fund from existing programs of Employment generation Fund and Fund from Small and Medium size Enterprises Community outreach officers budget	<ul style="list-style-type: none"> • Sex and ethnicity disaggregated data on: • Number of skills training conducted • Number of HH provided training by ethnicity, poor and vulnerable, herders • Number of trained participants provided capital to engage in micro enterprise • Number of micro enterprises operating along the road as a result of the program • Number of HH and individuals benefiting from the program, by ethnicity and gender

V. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

81. The project design and monitoring frameworks for the MFF and project 1 are shown in Tables 18 and 19.

Table 18: Project Design and Monitoring Framework for Multitranche Financing Facility

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Inclusive economic growth is promoted by enhanced local and regional connectivity	Traffic at the border with the Russian Federation increases to 17,000 vehicles per year by 2023 (2010 baseline: 8,800 vehicles) Traffic at the border with the People's Republic of China increases to 20,000 vehicles per year by 2023 (2010 baseline: 9,600 vehicles) Income per capita in western Mongolia increases to 80% of national average by 2023 (2010 baseline: 75% of national average) Frequency of local herder households' access to health and social services increases to 15 times on average per year by 2023 (2010 baseline: 10 times on average per year)	Mongolia and Xinjiang statistical yearbooks Mongolia border crossing and customs statistics Project completion report and benefit monitoring and evaluation Local household surveys taken before, during, and after project completion	Assumptions Continued macroeconomic stability and growth in Mongolia and neighboring countries Further mining development in western Mongolia Risk The government does not have sufficient funds to complete the whole corridor within the programmed time
Outcome Transport accessibility within the project area and between countries improved	Reduction in passenger and freight vehicle operating costs by an average of 30% by 2020 (2010 baseline: \$470 passenger/\$933 freight) Travel times between Khovd and Olgii reduced to about 3 hours in 2020 (2010 baseline: more than 6 hours) Traffic on improved roads increases by 40% by 2020 (2010 baseline: 100 vehicle per day) Routine and periodic maintenance performed on 743 km of western regional road by 2020	Baseline traffic and transport cost data Traffic counts at border crossings and strategic points in the transport network Field surveys and interviews of road transport operators and road users	Assumptions Ongoing technical assistance now under planning is successfully implemented ^a Neighboring countries improve border crossing procedures Risk Poor maintenance practices degrade road operating performance
Outputs 1. Western regional road constructed	293 km of road constructed on schedule, in compliance with conditions of contracts by 2020	Monthly and quarterly progress reports Project completion report	Assumptions Adequate quality assurance Counterpart resources available on time

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
2. Local roads constructed	34.9 km of community access roads constructed by 2020	Monthly and quarterly progress reports Project completion report	Risk Delays in completion of procurement Assumption Counterpart resources available on time
3. Road maintenance component	Establishment of 3 road maintenance units by 2020 Capacity development and training for road maintenance crews by 2020	Project progress report Project completion report	Assumption Strong client ownership to implement improvements
4. Capacity development program	At least 10 procurement and contract management staff receive on-the-job training by 2014 Average duration between bid date and contract awards halved, from 8 months in 2008 by 2012	Civil works bid evaluation and award of contract reports Project progress reports Project completion report	Assumption Government remains committed to sector capacity development and reform
Project 1 1. Western regional road construction works 1.1. Recruit construction supervision and road safety consultants by June 2012 1.2. Award civil works contracts by April 2012 1.3. Implement environmental mitigation measures during project implementation and operation, according to the environmental management plan, 2012–2016 1.4. Implement and monitor social development action plan, including HIV and human trafficking prevention measures, 2012–2016 1.5. Complete civil works before December 2016 1.6. Complete due diligence for project 2 by July 2013 2. Local roads 2.1. Award civil works contracts by September 2012 2.2. Complete civil works before December 2016 3. Complete road maintenance component before December 2016 3.1. Road maintenance training provided before April 2016 3.2. Procure road maintenance equipment before December 2016 4. Complete capacity development activities before December 2016 Project 2 1. Prepare PFR, including safeguard documents before January 2014 2. Award civil works contracts before August 2014 3. Complete civil works before December 2018 4. Implement environment and social safeguard measures before December 2018			Asian Development Bank: MFF not exceeding \$170 million comprising \$45 million ADF and \$125 million ADF and OCR Government of Mongolia: counterpart budget of \$92 million

ADF = Asian Development Fund, MFF = multitranchise financing facility, OCR = ordinary capital resources, PFR = periodic financing request.

^a ADB. 2011. Technical Assistance to Mongolia for Road Sector Capacity Development. Manila (\$2 million financed on a grant basis by the Japan Fund for Poverty Reduction).

Source: Asian Development Bank.

Table 19.1: Project Design and Monitoring Framework for Project 1

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Inclusive economic growth is promoted by enhanced local and regional connectivity	<p>Traffic at the border with the Russian Federation increases to 17,000 vehicles per year by 2023 (2010 baseline: 8,800 vehicles)</p> <p>Traffic at the border with the People's Republic of China increases to 20,000 vehicles per year by 2023 (2010 baseline: 9,600 vehicles)</p> <p>Income per capita in western Mongolia increases to 80% of national average by 2023 (2010 baseline: 75% of national average)</p> <p>Frequency of local herder households' access to health and social services increases to 15 times on average per year by 2023 (2010 baseline: 10 times on average per year)</p>	<p>Mongolia and Xinjiang statistical yearbooks</p> <p>Mongolia border crossing and customs statistics</p> <p>Project completion report and benefit monitoring and evaluation</p> <p>Local household surveys taken before, during, and after project completion</p>	<p>Assumptions Continued macroeconomic stability and growth in Mongolia and neighbouring countries</p> <p>Further mining development in western Mongolia</p> <p>Risk The government does not have sufficient funds to complete the whole corridor within the programmed time</p>
Outcome Transport accessibility within the project area and between countries improved	<p>Reduction in passenger and freight vehicle operating costs by an average of 30% on road from Yarant to Khovd Aimag Center between 2010 and 2016</p> <p>Travel times between Yarant and Khovd Aimag Center reduced by 50% between 2010 and 2016</p> <p>Traffic on Yarant to Khovd Aimag Center increases by 30% from 2010 baseline by 2016</p> <p>Routine and periodic maintenance performed on Yarant to Khovd Aimag Center of Western Regional Road by 2016</p>	<p>Baseline traffic and transport cost data</p> <p>Traffic counts at border crossings and strategic points in the transport network</p> <p>Field surveys and interviews of road transport operators and road users</p>	<p>Assumptions Ongoing technical assistance now under planning is successfully implemented^a</p> <p>Neighbouring countries improve border crossing procedures</p> <p>Risk Poor maintenance practices degrade road operating performance</p>
Outputs 1. Road section constructed	<p>103.3 km of road constructed on schedule, in compliance with conditions of contracts by 2016</p>	<p>Monthly and quarterly progress reports</p> <p>Project completion report</p>	<p>Assumptions Adequate quality assurance</p> <p>Counterpart resources available on time</p> <p>Risk Delays in completion of procurement</p>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
2. Community access road constructed	20 km access road constructed by 2014	Monthly and quarterly progress reports Project completion report	Assumption Counterpart resources available on time
3. Road maintenance component	Establishment of 1 road maintenance unit by 2016 Capacity development and training for road maintenance crews by 2016	Project progress report Project completion report	Assumption Strong client ownership to implement improvements
4. Capacity development program	At least 10 procurement and contract management staff receive on-the-job training by 2014 Average duration between bid date and contract awards reduced to 4 months by 2012 from 8 months in 2008	Civil works bid evaluation and award of contract reports Project progress reports Project completion report	Assumption Government remains committed to sector capacity development and reform
Activities and Milestones Project 1 1. Western regional road construction works 1.1. Recruit construction supervision and road safety consultants by June 2012 1.2. Award civil works contracts by April 2012 1.3. Implement environmental mitigation measures during project implementation and operation, according to the environmental management plan, 2012–2016 1.4. Implement and monitor SDAP including HIV and human trafficking prevention measures, road safety, socio-cultural awareness 2013–2017 1.5. Complete civil works before December 2016 1.6. Complete due diligence for project 2 by July 2013 2. Community access road component 2.1. Award civil works contracts by September 2012 2.2. Complete civil works before December 2016 3. Road maintenance component completed before December 2016 3.1. Road maintenance training provided before April 2016 3.2. Procure road maintenance equipment before December 2016 4. Complete capacity development activities before December 2016			Inputs Asian Development Bank: Tranche 1 comprising \$45 million ADF loan Government of Mongolia: counterpart budget of \$27.85 million equivalent

ADF = Asian Development Fund.

Source: Asian Development Bank.

Table 19.2: Project Design and Monitoring Framework for Project 2

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
Impact Inclusive economic growth is promoted by enhanced local and regional connectivity	<p>Traffic at the border with the Russian Federation increases to 17,000 vehicles per year by 2023 (2010 baseline: 8,800 vehicles)</p> <p>Traffic at the border with the People's Republic of China increases to 20,000 vehicles per year by 2023 (2010 baseline: 9,600 vehicles)</p> <p>Income per capita in western Mongolia increases to 80% of national average by 2023 (2010 baseline: 75% of national average)</p> <p>Frequency of local herder households' access to health and social services increases to 15 times on average per year by 2023 (2010 baseline: 10 times on average per year)</p>	<p>Mongolia and PRC (Xinjiang) statistical yearbooks</p> <p>Mongolia border crossing and customs statistics</p> <p>Project completion report and benefit monitoring and evaluation</p> <p>Local household surveys taken before, during, and after project completion.</p>	<p>Assumptions Continued macroeconomic stability and growth in Mongolia and neighboring countries</p> <p>Further mining development in western Mongolia</p> <p>Project 1 is completed as scheduled</p> <p>Risk The government does not have sufficient funds to complete the whole corridor within the programmed time</p>
Outcome Transport accessibility within the project area and between countries improved	<p>Reduction in passenger and freight vehicle operating costs by an average of 30% on road from Yarant to Ulaanbaishint between 2014 and 2019</p> <p>Travel times between Yarant and Ulaanbaishint reduced by 50% between 2014 and 2019</p> <p>Traffic on the road from Yarant to Ulaanbaishint increases by 30% from 2010 baseline by 2019</p> <p>Routine and periodic maintenance performed on Yarant to Ulaanbaishint section of Western Regional Road by 2019</p>	<p>Baseline traffic and transport cost data</p> <p>Traffic counts at border crossings and strategic points in the transport network</p> <p>Field surveys and interviews of road transport operators and road users</p>	<p>Assumptions Ongoing capacity development technical assistance is successfully implemented^a</p> <p>Neighboring countries improve border crossing procedures</p> <p>Risk Poor maintenance practices degrade road operating performance</p>
Outputs 1. Road section constructed	<p>189.7 km of road between Khovd and Ulaanbaishint constructed on schedule, in compliance with conditions of contracts by December 2016</p>	<p>Monthly and quarterly progress reports</p> <p>Project completion report</p>	<p>Assumptions Adequate quality assurance</p> <p>Counterpart resources available on time</p> <p>Risk Delays in completion of procurement</p>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
2. Urban roads and bridges constructed	Three bridges (0.49 km) and 14.9 km of urban roads rehabilitated in Khovd and Ulgii by December 2017	Monthly and quarterly progress reports Project completion report	Assumption Counterpart resources available on time
3. Road maintenance units established	Establishment of 2 road maintenance units by December 2017 Capacity development and training for road maintenance crews by December 2017	Project progress report Project completion report	Assumption Strong client ownership to implement improvements
4. Project management, consulting services and capacity development	Project performance monitoring system is developed, installed and efficiently managed by June 2014 At least five of the PIU staff receive on-the-job training by December 2017	Civil works bid evaluation and award of contract reports Project progress reports Project completion report	Assumption Government remains committed to sector institutional development and reform
Activities and Milestones Project 2 1. Western regional road construction works: 1.1. Recruit construction supervision and road safety consultants by August 2014 1.2. Award civil works contracts by August 2014 1.3. Implement environmental mitigation measures during project implementation and operation, according to the environmental management plan, 2014–2017 1.4. Implement and monitor social development action plan (SDAP) including HIV and human trafficking prevention measures, 2014–2017 1.5. Complete civil works before December 2016 2. Urban roads and bridges rehabilitated: 2.1. Complete detailed engineering design by November 2014 2.2. Award civil works contracts by March 2015 2.3. Complete civil works before December 2017 3. Road maintenance component completed before December 2017: 3.1. Road maintenance training provided before April 2017 3.2. Procure road maintenance equipment before December 2017 4. Complete project management, monitoring, and capacity development activities before December 2017			Inputs Asian Development Bank: Tranche 2 comprising \$125.0 million OCR loan Government of Mongolia: counterpart budget of \$76.21 million equivalent

OCR = ordinary capital resources; PRC = People's Republic of China

^a ADB. 2011. *Technical Assistance to Mongolia for Road Sector Capacity Development*. Manila (\$2 million financed on a grant basis by the Japan Fund for Poverty Reduction).

Source: Asian Development Bank.

G. Monitoring

82. **Investment program performance monitoring and evaluation.** The EA will be guided by a Project Steering Committee (PSC). The PSC will be set up at central level and will be chaired by the state secretary of the EA and comprise representatives of the ministries of finance, the EA, nature and environment, labor, customs, and provincial governments. The PSC will meet at least once in every 6 months and review the progress of implementation and provide guidance, as necessary.

83. ADB will regularly visit the Project to monitor performance during implementation.

84. ADB and the EA will use a PPMS to monitor the effectiveness of the investment program. This will be achieved through the use of indicators and targets covering both macro and micro issues including growth of traffic, reduction of accidents, improvements of the local and national economy and reduction of poverty and socioeconomic impacts.

85. **Investment program review.** ADB and the EA will review the investment program and the periodic financing requests annually covering all institutional, administrative, technical, economic, and other relevant aspects that may have an impact on the performance of the investment program. The review will examine implementation progress and compliance with assurances in the loan agreement.

86. **Compliance monitoring.** The compliance status of loan and project covenants will be reported and assessed through the semi-annual progress reports and verified by ADB review missions.

87. **Project performance monitoring and evaluation.** The government will cause the EA to monitor and evaluate impact through a performance monitoring system, as agreed to by the government and ADB, to ensure that project equipment and materials are managed efficiently, benefits are maximized, and impacts are monitored. The government will also cause the EA to collect the necessary information and data on project performance, as agreed to by the government and ADB, before project implementation, and at completion of the investment program.

88. **Social Development Action Plan (SDAP) monitoring.** The government and the EA will ensure that laws and regulations of Mongolia governing social dimensions, as well as ADB's *Safeguard Policy Statement* (2009), if triggered, are followed. If there is any discrepancy between the government's laws and regulations and ADB's SPS will apply. The EA will ensure that all works contracts under the investment program incorporate provisions and budgets. A project implementation unit (PIU) will be established in the IA. The PIU will comprise of a social and environment unit with at least one full-time staff member responsible for social and environmental aspects of the project. For project 2, the PIU will engage three field level staff (8 person –months each, total 24 person-months), who will assist the PIU in implementing the social development action plan (SDAP).

89. **Environmental Management Plan implementation monitoring.** The Ministry of Roads, Transportation (MRT) will be the Executing Agency for the Project and ensure that environmental management is implemented as required and report to the Steering Committee and ADB. The Steering Committee will include representatives of different Ministries and Agencies such as Ministry of Economic Development, Ministry of Finance, Ministry of Environment and Green Development, and MRT. The Chairperson of the Steering Committee is the State Secretary of MRT.

90. The Project Implementation Unit (PIU) will reside within the MRT with on-site offices. The PIU through the supervising engineer (SE) will be responsible for overall contract administration and day-to-day project supervision including environmental management. The Supervising Engineer (SE) will perform the following duties:

- (i) supervise site environmental management system of the contractors, and provide corrective instructions;
- (ii) review the EMP implementation by the contractors; and
- (iii) report EMP implementation status to the PIU/MRT on environmental inspection and monitoring results.

91. **Contractor.** In the technical specification for the civil works contract, activities to protect environment will be described. During construction, contractors will strictly implement the EMP and undertake self-check activities and fully cooperate with the external environmental inspectors.

92. **Grievance redress mechanism.** A joint grievance redress committee for social and environmental issues, will be formed at the PIU level. The committee will consist of representative from EA, representatives from the concerned soum governors' offices, soum social worker, and representative of the local baghs and local people. This committee will be constituted and will become functional prior to the commencement of the civil work. The committee will meet at least three times in a year. The public information dissemination bureau at the soum level will have the facility where households from the project area can drop their complaints and grievances. The representatives of soum and NGOs will forward these complaints to the Grievance Redress Committee (GRC). The GRC will address all complaints and will inform the outcome of the GRC decision to the respective complainant via the local NGO. All expenses related to GRC meetings will be borne by the PIU. The community outreach officers will provide assistance in cases of grievances and their redress.

93. **Monitoring and evaluation.** The PIU will carry out internal supervision and monitoring of the SDAP and EMP and will submit a progress report every six months to ADB.

H. Evaluation

94. ADB and the Government will jointly review implementation of the investment program once a year, covering a detailed evaluation of the scope, implementation arrangements, institutional, administrative, technical, economic, financial, achievement of scheduled targets, and other relevant aspects that may have an impact on the performance of the investment program. The review will examine implementation progress and compliance with assurances in the loan agreement. Feedback from the PPMS activities will be analyzed. Within 3 months of physical completion of the first tranche, the EA will submit a PCR to ADB.²³

I. Reporting

95. The EA will provide ADB with (i) semi-annual progress reports in a format consistent with ADB's PPMS; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for next 12 months; and (iii) a PCR within 6 months of physical completion of the tranche. To ensure

²³ Project completion report format available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

projects continue to be both viable and sustainable, project accounts and the project's audited financial statements, together with the associated auditor's report, should be adequately reviewed.

J. Stakeholder Communication Strategy

96. The PIU with support of supervision consultants will undertake consultations with key stakeholders. Communication with stakeholders will be managed by the PIU social and environmental monitoring specialist with the support of three soum-level community outreach officers. Soum-level staff will ensure local stakeholders are consulted, that information on the project is disseminated, and that questions and complaints are addressed quickly and effectively.

VI. ANTICORRUPTION POLICY

97. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the investment program.²⁴ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of The EA and all project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the investment program.²⁵

98. To support these efforts, relevant provisions of ADB's Anticorruption Policy are included in the loan regulations and bidding documents for the investment program. In particular, all contracts financed by ADB in connection with the investment program shall include provisions specifying the right of ADB to audit and examine the records and accounts of the EA and all contractors, suppliers, consultants, and other service providers as they relate to the investment program. In relation to the investment program, the EA will ensure that (i) a supervisory body is established for prevention of undue interference in business practices, and adequate resources are made available for its effective operation; (ii) a leading group of officials from the supervision division of the EA is located in offices involved in bidding, installation, and other operational activities under the investment program; and (iii) periodic inspections on the contractor's activities related to fund withdrawals and settlements are carried out. The EA shall also initiate liaison meetings with the Prosecutor's Office, as needed, to discuss any warnings about, or information on, alleged corrupt, fraudulent, collusive, or coercive practices relating to the investment program.

VII. ACCOUNTABILITY MECHANISM

99. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.²⁶

VIII. RECORD OF FAM CHANGES

100. All revisions/updates during the course of implementation are retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the FAM.

No.	FAM Changes/Updates	Date	Remarks
1	Initial draft	30 Aug 2011	First draft provided to EA during fact-finding mission
2	Agreed draft	1 Nov 2011	During loan negotiations
3	Update (Project 2)	9 Oct 2013	FAM updated due to PFR 2 submission
4	Update (Project 2)	20 March 2014	FAM updated due to the loan negotiations

²⁴ Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>.

²⁵ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>.

²⁶ For further information see: <http://www.adb.org/Accountability-Mechanism/default.asp>.

Updated and confirmed by:

Mr. B. Batzaya
State Secretary
Ministry of Roads, Transportation,
Construction and Urban Development

Mr. Raushan Mamatkulov
Senior Transport Specialist, EATC
East Asia Department
Asian Development Bank

PROCUREMENT PLAN (Project 1)

A. Basic Data

Country	Mongolia
Borrower Name	Government of Mongolia
Project Name	Western Regional Road Corridor Investment Program: Tranche-1
Loan Amount	US\$45.0 million
Date of Effectiveness	TBA
Executing Agency	Ministry of Roads and Transportation
Date of Original Procurement Plan	1 November 2011
Date of this Procurement Plan	30 June 2013
Period Covered by Plan	2013–2018

B. Procurement Thresholds for Works and Goods

Procurement Method	Thresholds
International Competitive Bidding (ICB) for Works	≥ US\$3 million
ICB for Goods	≥ US\$500,000
National Competitive Bidding (NCB) for Works	≥ US\$200,000 < US\$3 million
NCB for Goods	≥ US\$100,000 < US\$500,000
Shopping for Works	< US\$200,000
Shopping for Goods	< US\$100,000

C. ADB Prior or Post Review

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

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	The 1 st NCB contract will be prior-reviewed by ADB The 1 st NCB contract will be prior-reviewed by ADB
ICB Goods	Prior	
NCB Works	Post	
NCB Goods	Post	
Shopping for Works	Post	
Shopping for Goods	Post	
List other methods of procurement		
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Quality-Based Selection (QBS)	Prior	
Other selection methods: Consultants Qualifications (CQS), Least-Cost Selection (LCS), Fixed Budget (FBS), and Single Source (SSS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

D. Indicative List of Packages Required Under the Project 1:**1. Works and Equipment (Project 1)**

Ref.	General Description	Estimated Value (cumulative) (\$ million)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
WORKS						
CW1-1	Baga Ulaan Davaa Mankhan (km 0–25)	11.10	1	ICB	Yes	
CW1-2	Baga Ulaan Davaa Mankhan (km 25–75)	26.20	1	ICB	Yes	
CW1-3	Baga Ulaan Davaa Mankhan (km 75–103)	9.10	1	ICB	Yes	
CW1-4	20 km community access roads	4.00	1	NP	n/a	GoM financed
EQUIPMENT (GOODS)						
G1	Equipment for maintenance	0.270	1	NCB	n/a	

ICB = international competitive bidding, NCB = national competitive bidding, NP = national procedures.

2. Consulting Services (Project 1)

Ref.	General Description	Estimated Value (cumulative) (\$ million)	Estimated Number of Contracts	Recruitment Method	Type of Proposal	Comments
CS1	Construction supervision	1.400	1	SSS	BTP	International
CS2	Project Management Specialist	0.449	1	ICS	-	International
CS3	Social, Environmental and HIV/AIDS monitoring	0.048	1	ICS	-	National
CS4	Community Outreach and Monitoring Coordinators	0.048	3	ICS	-	National
CS5 ^a	Water Quality Monitoring	0.040	1	ICS	-	National
CS6	Wildlife study	0.040	1	ICS	-	National

BTP = biodata technical proposals, ICS = individual consultants selection, QCBS = quality and cost based selection.

^a The water quality monitoring and wildlife study consultant cost are additional to the cost estimated under project 2. One consultant will be in charge of monitoring under projects 1 and 2

E. Works Contracts estimated at more than US\$1 million and Goods Contracts estimated to cost more than US\$100,000:**Project 1:**

Ref.	General Description	Contract Value (\$ million)	Procurement Method	Pre-qualification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
CW1-1	Baga Ulaan Davaa Mankhan (km 0-25)	11.10	ICB	N	4 th Quarter 2011 Advance contracting	SSTE
CW1-2	Baga Ulaan Davaa Mankhan (km 25-75)	26.20	ICB	N	4 th Quarter 2011 Advance contracting	SSTE
CW1-3	Baga Ulaan Davaa Mankhan (km 75-103)	9.10	ICB	N	4 th Quarter 2011 Advance contracting	SSTE

ICB = international competitive bidding, SSTE = single-stage two-envelope.

F. Consulting Services Contracts Estimated to Cost More Than \$100,000:**Project 1:**

	General Description	Contract Value (\$ million)	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
CS1	Construction supervision	1.40	SSS	2 nd Quarter 2013	International	
CS2	Project Management Specialist	0.45	ICS	1 st Quarter 2012	International	

ICS = individual consultants selection, SSS = single-source selection.

G. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000**Project 1:**

Ref.	General Description	Value of Contracts (cumulative) (\$ million)	Number of Contracts	Procurement/ Recruitment Method	Comments
G1	Equipment for maintenance	0.270	1	NCB, SSTE	Goods
CS3	Social, Environmental and HIV/AIDS monitoring	0.048	1	ICS	National
CS4	Community Outreach and Monitoring	0.048	3	ICS	National
CS5	Water Quality Monitoring	0.040	1	ICS	National
CS6	Wildlife study	0.040	1	ICS	National

ICS = individual consultants selection, NCB = national competitive bidding, SSTE = single-stage two-envelope.

H. ADB Prior or Post Review Requirement

Procurement Method	Review Required	Comments
Procurement of Works and Goods		
ICB	Prior	At each stage of procurement procedure. Also applies to advance contracting.
NCB	Prior	The first contracts for goods and civil works
Recruitment of Consultants		
QCBS	Prior	FTP

CQS = consultant qualification selection, FTP = full technical proposal, ICB = international competitive bidding, NCB = national competitive bidding, QCBS = quality and cost-based selection.

I. National Competitive Bidding

1. The procedures to be followed for national competitive bidding shall be those set forth in the Public Procurement Law of Mongolia of 1 December 2005, effective 1 February 2006, as amended on 6 February 2007 and 16 July 2009 (hereinafter referred to as PPLM), with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB's Procurement Guidelines (2013, as amended from time to time).

- (i) The Standard Bidding Documents of Mongolia for Goods and Works that have been approved by ADB as acceptable for ADB-financed projects, together with ADB's clarifications and modifications thereto, shall be used.
- (ii) Government-owned enterprises in Mongolia shall be eligible for projects only if they can establish that they: (i) are legally and financially autonomous; (ii) operate under

the principles of commercial law; and (iii) are not dependent agencies of the Executing Agency and/or the Implementing Agency.

- (iii) If a bid security is required, the bid security shall be in any of the following forms at the bidder's option: (i) a bank guarantee; or (ii) a cashier's or certified check.
- (iv) Bidders must be nationals of member countries of ADB, and offered Goods and Works must be produced in and supplied from member countries of ADB. Bidders or potential bidders shall not be required to register with the taxation and other registration authorities of the government as a condition or requirement of bidding or award, leaving these requirements for after award and before signing of contract.
- (v) Foreign bidders from eligible countries of ADB shall be allowed to participate in bidding under the same conditions as local bidders and without any domestic preference.
- (vi) Prequalification shall not be required, except in the case of large or complex works, and with prior written concurrence of ADB.
- (vii) Qualification criteria shall be clearly specified in the bidding documents, and all criteria so specified shall be used to determine whether a bidder is qualified. The evaluation of a bidder's qualifications shall only take into account the bidder's capacity and resources to perform the contract, in particular its experience and past performance on similar contracts, capabilities with respect to personnel, equipment and construction or manufacturing facilities, and financial position. The evaluation of the bidder's qualifications shall be conducted separately from the technical and commercial evaluation of the bid.
- (viii) Evaluation and qualification criteria, and submission requirements, to be used in each bidding activity shall be clearly specified in the bidding documents. The evaluation of bids shall be done in strict adherence to the criteria specified in the bidding documents.
- (ix) The invitation to bid and the bidding documents shall be prepared in the Mongolian language. If another language will be used, then such other language shall be English.
- (x) Bidders shall be requested to extend the validity of their bids only under exceptional circumstances and the Executing or Implementing Agency, as the case may be, shall communicate such request for extension to all bidders before the date of expiry of their bids. When the procurement is subject to ADB's prior review, the Executing or Implementing Agency, as the case may be, shall obtain in a timely manner the prior written concurrence of ADB for the extension of the bid validity period.
- (xi) All bids shall not be rejected or new bids invited without ADB's prior written concurrence. No bid shall be rejected merely on the basis of a comparison with the estimated cost or budget ceiling without ADB's prior written concurrence (with specific reference to Article 30 of the PPLM).
- (xii) Negotiations with bidders shall not be undertaken before award of contract, except as provided in Paragraph 2.63 of ADB's Procurement Guidelines (2013, as amended from time to time) with specific reference to Article 30.2 of the PPLM. A bidder shall not be required, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify its bid as originally submitted.

- (xiii) Bidding documents and contracts under national competitive bidding procedures financed by ADB shall include a provision requiring suppliers, contractors and consultants to permit ADB to inspect their accounts and records relating to the bid submission and the performance of the contract by the supplier, contractor and/or consultant, as the case may be, and to have them audited by auditors appointed by ADB, if so required by ADB.
- (xiv) At the same time that notification on award of contract is given to the successful bidder, the results of the bid evaluation shall be posted on a well-known freely accessible website (namely Mongolia's Ministry of Finance e-procurement website: www.e-procurement.mn) identifying the bid and lot numbers and providing information on the: (i) name of each bidder that submitted a bid; (ii) bid prices as read out at bid opening; (iii) names of bidders whose bids were rejected and the reasons for their rejection; and (iv) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. The Executing Agency or Implementing Agency, as the case may be, shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids were not selected.

PROCUREMENT PLAN (Project 2)

Basic Data

Project Name: Western Regional Road Corridor Investment Program: Tranche-2	Executing Agency: Ministry of Roads and Transportation
Country: Mongolia	Loan (Grant) Number: TBD
Loan Amount: \$125.0 million	Date of this Procurement Plan: 20 March 2014
Date of First Procurement Plan: 1 November 2011	

A. Process Thresholds, Review and 18-Month Procurement Plan

1. Project Procurement Thresholds

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

Procurement of Goods and Works	
Method	Threshold
International Competitive Bidding (ICB) for Works ¹	Equal or more than US\$3,000,000
International Competitive Bidding for Goods ¹	Equal or more than US\$500,000
National Competitive Bidding (NCB) for Works ¹	Equal or more than US\$200,000 and below US \$ 3,000,000
National Competitive Bidding for Goods ¹	Equal or more than US\$100,000 and below US \$ 500,000
Shopping for Works	Below \$200,000
Shopping for Goods	Below \$100,000

2. ADB Prior or Post Review

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

Procurement Method	Prior or Post	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Post	The 1 st NCB contract will be prior-reviewed by ADB
NCB Goods	Post	The 1 st NCB contract will be prior-reviewed by ADB
Shopping for Works	Post	
Shopping for Goods	Post	
<i>List other methods of procurement</i>		
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	
Quality-Based Selection (QBS)	Prior	
Other selection methods: Consultants Qualifications (CQS), Least-Cost Selection (LCS), Fixed Budget (FBS), and Single Source (SSS)	Prior	
Recruitment of Individual Consultants		
Individual Consultants	Prior	

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

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

General Description	Contract Value (US\$, mln)	Procurement Method	Prequalification of Bidders (y/n)	Advertisement Date (quarter/year)	Comments
1. Construction of road: (i) Lot 1: Khovd–Shuraga Bridge (50.0 km) (ii) Lot 2: Shuraga Bridge–Khashaatin Davaa Pass (53.9 km) (iii) Lot 3: Khashaatin Davaa Pass–Tolbo Soum (60.0 km) (iv) Lot 4: Tsagaanuur–Ulaanbaishint (25.8 km)	133.3	ICB – Works	No	Q2 2014	Advance action; prior review
2. Rehabilitation of 2 bridges in Khovd (0.31km)	6.99	NP	No	Q4 2014	
3. Rehabilitation of a bridge in Ulgii (0.18 km)	4.34	NP	No	Q4 2014	
4. Rehabilitation of urban roads in Khovd (10 km)	3.60	NP	No	Q4 2014	
5. Rehabilitation of urban roads in Ulgii (4.9 km)	1.97	NP	No	Q4 2014	

ICB= international competitive bidding, NP= national procedures

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

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

General Description	Contract Value	Recruitment Method	Advertisement Date (quarter/year)	International or National Assignment	Comments
1. Construction supervision (2014–2018)	5.76	QCBS	Q2 2014	International	Cost ratio 80:20
2. SDAP Implementation	0.086	QCBS (cost ratio 80:20)	Q2 2014	National	Cost ratio 80:20

QCBS = quality and cost-based selection

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

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

Ref.	General Description	Value of Contracts (cumulative)	Number of Contracts	Procurement / Recruitment Method ¹	Comments
CS1	Environmental Monitoring	0.108	1	ICS	National
CS2	SDAP Monitoring	0.108	3	ICS	National
CS3	Water Quality Monitoring	0.015	1	ICS	National
CS4	Wildlife Movement Study	0.015	1	ICS	National

QCBS = quality and cost-based selection

^a The water quality monitoring (CS3) and wildlife study (CS4) consultant cost are additional to the cost estimated under project 1 (CS6 and CS6). One consultant for each assignment will be in charge of monitoring under projects 1 and 2

B. Indicative List of Packages Required Under the Project

7. The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project. Contracts financed by the Borrower and others should also be indicated, with an appropriate notation in the comments section.

General Description	Estimated Value (US\$, mln)	Estimated Number of Contracts	Procurement Method	Domestic Preference Applicable	Comments
Goods					
1. Equipment for the road maintenance unit in Khovd and Bayan-Ulgii	4.43	1	ICB	Yes	Prior review
Works					
1. Construction of road:	133.3	1	ICB – Works	No	Prior review
(i) Lot 1: Khovd–Shuraga Bridge (50.0 km)					
(ii) Lot 2: Shuraga Bridge-Khashaatin Davaa Pass (53.9 km)					
(iii) Lot 3: Khashaatin Davaa Pass–Tolbo Soum (60.0 km)					
(iv) Lot 4: Tsagaanuur–Ulaanbaishint (25.8 km)					
2. Rehabilitation of 2 bridges in Khovd (0.31km)	6.99	1	NP	No	
3. Rehabilitation of a bridge in Ulgii (0.18 km)	4.34	1	NP	No	
4. Rehabilitation of urban roads in Khovd (10 km)	3.60	1	NP	No	
5. Rehabilitation of urban roads in Ulgii (4.9 km)	1.97	1	NP	No	
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Type of Proposal	Comments
Consulting Services^a					
1. Construction supervision (2014-2018)	5.76	1	QCBS	FTP	Cost ratio 80:20
2. SDAP Implementation	0.086	1	QCBS	BTP	Cost ratio 80:20
3. Environmental Monitoring	0.108	1	ICS		National
4. SDAP Monitoring	0.108	3	ICS		National
5. Water Quality Monitoring	0.015	1	ICS		National
6. Wildlife Movement Study	0.015	1	ICS		National
Community Outreach Officers	0.054	3	ICS		National

^a All the consulting recruitment will be subject to ADB prior review.

ICB= international competitive bidding, NP= national procedures, FTP = full technical proposals, BTP = biodata technical proposal, ICS = individual consultants selection, QCBS = quality and cost based selection.

C. National Competitive Bidding

8. The procedures to be followed for national competitive bidding shall be those set forth in the Public Procurement Law of Mongolia of 1 December 2005, effective 1 February 2006, as amended on 6 February 2007 and 16 July 2009 (hereinafter referred to as PPLM), with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB's Procurement Guidelines.

- 1) The Standard Bidding Documents of Mongolia for Goods and Works that have been approved by ADB as acceptable for ADB-financed projects, together with ADB's clarifications and modifications thereto, shall be used.
- 2) Government-owned enterprises in Mongolia shall be eligible for projects only if they can establish that they: (i) are legally and financially autonomous; (ii) operate under the principles of commercial law; and (iii) are not dependent agencies of the Executing Agency and/or the Implementing Agency.
- 3) If a bid security is required, the bid security shall be in any of the following forms at the bidder's option: (i) a bank guarantee; or (ii) a cashier's or certified check.
- 4) Bidders must be nationals of member countries of ADB, and offered Goods and Works must be produced in and supplied from member countries of ADB. Bidders or potential bidders shall not be required to register with the taxation and other registration authorities of the government as a condition or requirement of bidding or award, leaving these requirements for after award and before signing of contract.
- 5) Foreign bidders from eligible countries of ADB shall be allowed to participate in bidding under the same conditions as local bidders and without any domestic preference.
- 6) Prequalification shall not be required, except in the case of large or complex works, and with prior written concurrence of ADB.
- 7) Qualification criteria shall be clearly specified in the bidding documents, and all criteria so specified shall be used to determine whether a bidder is qualified. The evaluation of a bidder's qualifications shall only take into account the bidder's capacity and resources to perform the contract, in particular its experience and past performance on similar contracts, capabilities with respect to personnel, equipment and construction or manufacturing facilities, and financial position. The evaluation of the bidder's qualifications shall be conducted separately from the technical and commercial evaluation of the bid.
- 8) Evaluation and qualification criteria, and submission requirements, to be used in each bidding activity shall be clearly specified in the bidding documents. The evaluation of bids shall be done in strict adherence to the criteria specified in the bidding documents.
- 9) The invitation to bid and the bidding documents shall be prepared in the Mongolian language. If another language will be used, then such other language shall be English.
- 10) Bidders shall be requested to extend the validity of their bids only under exceptional circumstances and the Executing or Implementing Agency, as the case may be, shall communicate such request for extension to all bidders before the date of expiry of their bids. When the procurement is subject to ADB's prior review, the Executing or Implementing Agency, as the case may be, shall obtain in a timely manner the prior written concurrence of ADB for the extension of the bid validity period.
- 11) All bids shall not be rejected or new bids invited without ADB's prior written concurrence. No bid shall be rejected merely on the basis of a comparison with the estimated cost or budget ceiling without ADB's prior written concurrence (with specific reference to Article 30 of the PPLM).

- 12) Negotiations with bidders shall not be undertaken before award of contract, except as provided in Paragraph 2.63 of ADB's Procurement Guidelines (with specific reference to Article 30.2 of the PPLM). A bidder shall not be required, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify its bid as originally submitted.
- 13) Bidding documents and contracts under national competitive bidding procedures financed by ADB shall include a provision requiring suppliers, contractors and consultants to permit ADB to inspect their accounts and records relating to the bid submission and the performance of the contract by the supplier, contractor and/or consultant, as the case may be, and to have them audited by auditors appointed by ADB, if so required by ADB.
- 14) At the same time that notification on award of contract is given to the successful bidder, the results of the bid evaluation shall be posted on a well-known freely accessible website (namely Mongolia's Ministry of Finance e-procurement website: www.e-procurement.mn) identifying the bid and lot numbers and providing information on the: (i) name of each bidder that submitted a bid; (ii) bid prices as read out at bid opening; (iii) names of bidders whose bids were rejected and the reasons for their rejection; and (iv) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. The Executing Agency or Implementing Agency, as the case may be, shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids were not selected.

DRAFT CONSULTANTS' TERMS OF REFERENCE (Project 1)

A. Project Management Facilitator (support to PIU, International – 20 person-months)

1. **Introduction.** Project Implementation Units (PIUs) established under the Ministry of Roads and Transportation (MRT) are in charge for implementing the civil works contracts for ADB financed projects. The MRT is implementing and executing agency for the Project respectively.²⁷ The PIUs serve as a single focal point for contractors, suppliers and consultants in the multi-level approval and decision making process associated with the contract management by the EA in coordination with the concerned government agencies. PIU's for ADB financed projects are being consolidated under a single Project Management Office (PMO).

2. The EA procures all contracts using ADB standard bidding procedures and documents. The procedures reference MDB-Harmonised Edition FIDIC (June 2010 is the latest edition) Conditions of Contract. The PIUs represent the Employer in this arrangement. However FIDIC contracts are quite sophisticated instruments and require considerable experience on the part of all three parties to be fully effective. Otherwise minor misunderstandings may defeat the primary purpose of the FIDIC approach, which is to resolve disputes and claims within an orderly set of processes.

3. In Mongolia, the Supervision Engineer is usually most experienced in FIDIC procedures. The Contractor, (particularly Chinese contractors) is less so. The PIU staff, though made up of experienced senior project personnel often have a background using the obsolescent GOMPT standards, which are inappropriate for FIDIC contracts.

4. **Scope.** The total set of roads to be constructed under FIDIC Conditions of Contract are given in the table following. Successful management of FIDIC contracts requires all three parties, e.g. Employer, Contractor, and Supervising Engineer, to thoroughly understand their roles and appropriate activities during procurement and execution of these contracts.

Design Section	Description	Length (km)
Phase 1 - Package 1*	Temeen Huzuu-Baga Ulaan – construction commenced 1 Mar 2011	110.8 km
MFF project 1 roads	Detailed engineering design for Baga Ulaan to Mankhan	103.3 km
MFF project 2 roads	Detailed engineering Khovd-Hashaat Pass	103.9 km

km = kilometer, MFF = multitranchise financing facility.

* Indicates under construction.

5. **Terms of reference.** The role of the Project Management Facilitator is to assist the consolidated PMO and the PIUs for ADB financed projects in fulfilling their roles as Employer representatives, and ensure the contractors understand their obligations and duties under the contract. By means of discussions and day-to-day exchanges, supplemented by formal workshops if appropriate, the Project Management Facilitator should support the PMO and PIU staff in carrying out their roles under FIDIC and by promoting mutual trust and respect, act as an impartial mediator in any misunderstandings between the PIU/Engineer/Contractor. The overall objective of the services is to maintain smooth operations of the procurement/contract administration processes.

²⁷ As result of government reorganization, MRT has absorbed the Department of Roads (DOR), which was an IA for Project 1.

Staff Requirements and other Inputs

Position	Duration	Experience
International Highway Engineer	Senior 20 person-months over 4 years	Qualified professional engineer with 20 years experience, including extensive contract supervision dealing with all aspects of FIDIC based contract procedures. Experience with IFI procurement procedures and superior people skills are highly desirable, as is some experience with withdrawal procedures within IFI funded programs.

6. **Facilities.** The PMO will provide all required facilities including office space, furniture, equipment and transport.

Reports and Documentation

Report	Required by
Monthly Report on Activities	Beginning 1 month after mobilization
Special Reports on workshops and seminars, as appropriate	Within 1 week of event
Final Report summarizing:	Within 1 month of demobilization
International Project Management Specialist Activities	
Recommendations for future actions with regard training for PIU staff.	

B. Social, HIV/AIDS and Human Trafficking Prevention Monitoring Specialist (National – 12 person-months)

7. The specialist will have a minimum of 10 years' experience in monitoring social safeguards, and social development. The monitoring specialist will refine the SDAP and coordinate and facilitate its implementation and ensure the grievance redress mechanism functions effectively. The consultant will report directly to the PIU. The expert will perform the following with respect to social development monitoring:

- (i) In consultation with local communities and other stakeholders (NGOs and local government agencies) within the project impact zone refine the activities such as local employment, public consultation, HIV/AIDS and Human Trafficking Prevention, Road Safety awareness, social and cultural awareness building, under the SDAP to meet the local needs and requirements.
- (ii) Develop modalities for implementation of SDAP including developing strategy for liaison and coordination between various line agencies, identification and availability of budgetary sources, and developing a coordination between these agencies and the EA;
- (iii) Coordinate the functions of the 3 soum level community outreach and monitoring officers. Based on the ToR, get a functional work plan developed for each soum outreach officer to ensure effective implementation of SDAP measures. Monitor progress of the working of the soum outreach officers;
- (iv) Establish social, poverty monitoring procedures (including baseline surveys as required).
- (v) Coordinate with the PIU staff responsible for the Grievance Redress Mechanism with respect to identification, investigation, and resolution of environmental and social complaints.
- (vi) Conduct site visits to the project area during the construction period.
- (vii) Prepare monthly reports on the implementation of SDAP.
- (viii) Coordinate implementation of SDAP and monitor progress

8. On HIV/AIDS/STI and Human Trafficking risks:

- (i) Assist the MRT in planning and managing the HIV/AIDS/STI and HTP Program.
- (ii) Review the outputs of the ADB TA 4364-MON and assess which components can be adopted as component of Program interventions.
- (iii) Assist the MRT to coordinate with the local offices of the Ministry of Health in the utilization of the training and information materials developed by TA 4364 for field application.
- (iv) Assist the MRT in carrying out a public awareness campaign and behavioral modification among high-risk target population. The awareness campaign will be undertaken at two levels: (i) among the general public through public media and IEC materials and (ii) to high risk groups (truck drivers/helpers, sex workers, road side communities and road side construction workers (not related to the Project) at key spots like the border crossing, rest areas, bars, schools, hospitals and clinics.
- (v) Assist the MRT to coordinate with the Ministry of Labor and Social Welfare in the design and delivery of awareness campaign on human trafficking prevention and to identify local staff responsible for its implementation.
- (vi) Assist in training community monitors who will help the MLSW identify cases of HT and report these to concerned authorities.
- (vii) Assist in establishing the monitoring and reporting system on HT.

9. Road safety awareness:

- (i) Assist the MRT to develop a road safety awareness program for the local communities along the corridor including developing publicity and awareness building information material;
- (ii) Assist the MRT to develop road safety signage (preferably symbolic signage) and in consultation with the local communities especially herdsman, ensure these are located at appropriate locations;
- (iii) Develop a plan to train community focal points on road safety awareness and through community outreach officers ensure implementation of the plan

10. Social and cultural awareness building:

- (i) Assist the MRT to develop a social and cultural awareness building plan to deal with the increased arrival of outsiders/visitors such as construction workers, tourists, truck drivers
- (ii) Consult with local communities to ensure that the plan is culturally and linguistically appropriate
- (iii) Assist the MRT in developing culturally and linguistically appropriate information material on social and cultural awareness building
- (iv) Assist the MRT to develop a dissemination strategy and monitor implementation.

11. Community based monitoring of SDAP activities:

- (i) Develop a mechanism for the community to monitor the implementation of activities outlined under the SDAP and establish strategies to address the suggestions/concerns in the implementation process.

12. Prepare appropriate documents to report the outcomes of various activities.

13. **Qualifications and experience.** The national Social, Environmental, and HIV/AIDS Monitoring Specialist, will have a university degree in the social sciences and at least 5 years experience monitoring internationally financed development projects in Mongolia.

C. Environment Monitoring Specialist (National – 12 person-months)

14. The specialist will have a minimum of 10 years practical experience in the implementation of construction EMPs and environmental monitoring, ability to work with a multidisciplinary team and dealing with all aspects of site-related environmental issues, and excellent communication skills. Previous experience as an Environment Specialist for at least one ADB, World Bank or other IFI funded road project in Mongolia is desirable. The EMP implementation is formally under the Supervision Consultants contract. However, the monitoring specialist will facilitate the implementation of the EMP and ensure the grievance redress mechanism functions effectively. The expert will perform the following with respect to environmental monitoring:

- (i) Review all EIAs and EMPs prepared for Phase 1-Package 1, Project 1 and Phase 1-Package 3, and Project 2 when available, to understand the environmental issues associated with the project area.
- (ii) Consult with PIU to identify if there are any changes in the project alignment/sites or baseline environmental conditions. Assess impacts of any changes and update EMP. Review the EMP and ensure that the location and timing of monitoring and environmental parameters are appropriate.
- (iii) Assist the PIU in obtaining all necessary domestic environmental approvals to allow the projects to proceed, as required.
- (iv) Review Tender and Contractor Documents to ensure all required environmental specifications have been included, update as required.
- (v) Prepare or review (if already existing) environmental audit checklists for daily, weekly and monthly monitoring of implementation of the EMP by the contractor.
- (vi) Prepare monthly (for EA/PIU), quarterly (for ADB Project Progress Report) and biannual Environmental Monitoring Reports (for ADB). The reports should review progress with project implementation, report results of audits and monitoring, identify problems encountered, actions taken/or proposed to be taken to resolve problems and activities programmed for next monitoring period.
- (vii) Conduct training workshops for field level implementing government agencies and contractors and supervision consultant engineers on the requirements and implementation of the EMP. The training workshops must cover:
 - a) Key requirements and components of the EMP
 - b) Contents and use of monitoring checklists
 - c) Institutional set up for implementation and monitoring of the EMP
 - d) Roles and responsibilities of the government, supervision consultants, contractor and other relevant agencies.

The key outcome of the workshop must be to prepare the field staff of the implementing agency, supervision consultants and the contractor in implementing the EMP and monitoring the EMP including site audit, completion of checklists and other associated paperwork.
- (viii) Monitor the implementation of the mitigation measures and monitoring requirements of the environmental management plan.
- (ix) Review the plans for water quality monitoring and monitor implementation of the water quality monitoring program.
- (x) Review the plans for the wildlife survey and monitor implementation of the survey.

- (xi) Include water quality sampling results from the Water Quality Monitoring Consultant and discussion of results in the monitoring reports and advise/support the contractor in taking remedial actions if any of the test results are not within the required limits.
 - (xii) Facilitate implementation of Grievance Redress Mechanism and maintain proper records of all environment related grievances and details of how they were addressed.
 - (xiii) Maintain a copy of all environment related statutory clearances required for implementation of the project and EMP.
 - (xiv) Facilitate consultation between the contractor and local herdsmen with respect construction scheduling, and proposed mitigation measures to control dust, and to minimize disruption to local traffic.
 - (xv) Facilitate consultation between the contractor and local government, Mankhan Nature Reserve Administration, NGOs, and local herdsmen with respect to:
 - a. The siting, quantities to be removed from, operation, and restoration of borrow areas;
 - b. The sources and amount of water withdrawals and from surface water and groundwater;
 - c. The local design and construction of livestock crossings; and
 - d. The design of wildlife crossings.
 - (xvi) Coordinate with the PIU staff responsible for the Grievance Redress Mechanism with respect to identification, investigation, and resolution of environmental and social complaints.
 - (xvii) Conduct regular site visits to the project area during the construction period.
15. The consultant will report directly to the PIU.
- D. Community Outreach Monitoring Officer - Soum level (National – 3 positions, 8 person-months per position)**
16. The community outreach monitoring officers will be posted in soum centers near the project corridor to provide a direct point of contact for local people potentially affected by the program. They will serve as key contacts for the grievance redress mechanism and help to implement the SDAP. The officers will:
- (i) Assist the MRT in implementing various activities outlined in the SDAP within the respective soum.
 - (ii) To prepare a detailed work plan on how to engage with community and households living or likely to settle along the corridor.
 - (iii) Use various participatory techniques to reach out to communities and households to ensure their participation in project.
 - (iv) Undertake Information dissemination campaign about the project, construction activities and social development strategy.
 - (v) Undertake focus group discussion, household survey to understand their need and priorities so as to plan realistic income generation activities.
 - (vi) To develop the project information material like pamphlets, brochures etc. in local language and distribute these to the households.
 - (vii) To facilitate PIU in setting up information dissemination bureau at soum level.
 - (viii) To organize skill up gradation training for HH, with special focus on women and vulnerable households.
 - (ix) To help HH in establishing credit linkages.
 - (x) To assist families to set up new enterprise like café, garage etc. along the corridor.

- (xi) To encourage women to set up new enterprise.
- (xii) To assist the local health offices through the facilitation of the Ministry of health in carrying out a public awareness campaign and behavioral change of high-risk groups. The awareness raising will be carried out at two levels: (a) at community level; and (b) to high-risk groups (truck drivers/helpers, roadside communities and roadside amenities).
- (xiii) To assist the Ministry of labor and social welfare to conduct of the community awareness campaign on human trafficking.
- (xiv) To work as a liaison between the households and the PIU.
- (xv) To prepare yearly work plan and submit the same to PIU.
- (xvi) To submit quarterly progress reports to PIU.

17. **Qualifications and experience.** At least two years of working experiences in similar tasks with international development projects. Coordinators should have sound knowledge of local conditions in the Project areas and the needs of participatory development. Knowledge and skills in designing of instruments for data collection, especially at the community level are desired.

E. Water Quality Monitoring (National – Lump Sum)

18. **Background.** The Government of Mongolia, with financial support from Asian Development Bank (ADB) is upgrading the internal transport network in the western region to improve trade and transit links between Mongolia and neighboring countries. The outcome of the Project will be an efficient and safe regional transport route that links Xinjiang Uygur Autonomous Region in the People's Republic of China and Siberia in the Russian Federation through western Mongolia.

19. The Western Regional Road Corridor is under various stages of construction and planning. The sections and status of each is below:

Road section	Description	Length, km	Construction timetable
Package 1	Temeen Huzuu – Baga Ulaan	110.8	2011-2014
Package 2	Baga Ulaan – Mankhan	103.3	2012-2015
Package 3	Mankhan – Khovd	85.3	2010-2013
Not yet started	Khovd – Khashaatiin	103.9	2014-2017
Not yet started	Khashaatiin – Tolbo	60	2015-2018
Package 5	Tolbo – Ulgii	60	2011-2014
Not yet started	Tsagaannuur – Ulaanbaishint	25.8	2015-2018

20. **Objective.** The primary objective of the assignment is to provide water quality monitoring support to the Project Implementation Unit (PIU) and Project Environmental Monitoring Consultant (PEMC) in the implementation of project environmental management and monitoring requirements during the construction of the project.

21. The main concern for water quality is for temporary increases in turbidity during construction, and accidental contamination from oil, grease, fuel, and other toxic materials associated with construction equipment. Water quality monitoring will be required at key points in important streams that cross the corridor in the project area. This work is related to the environmental requirements in ADB's Safeguards Policy Statement (2009) and the consultant should know these environmental requirements provided by Employer according to Environmental Assessment Guidelines and environmental safeguard policy of the ADB, and Environmental Impact Assessment Law of Mongolia. This monitoring will include basic parameters (e.g., temperature, suspended particles, pH, dissolved oxygen content, COD, BOD, hydrocarbon (oil, grease, fuels)).

22. **Tasks of the assignment.** The consultant shall work closely with the PIU staff and PEMC, and report directly to the project coordinator of the PIU. The consultant shall monitor and evaluate implementation of the water quality monitoring which required at key points in important streams that cross the corridor in the project area according to EIA, SEIA and EMP/EMOP through regular site audits, consultation with civil work's contractors, consultants and PEMC, and monitoring of agreed parameters for water quality. The tasks of the Water Quality Monitoring Consultant include, but are not limited to:

- (i) Review EIA/IEE/SEIA reports prepared for the project to understand the environmental issues associated with the project area and the mitigation and monitoring requirements;
- (ii) Review the EMP and EMOP for inclusion of all site specific issues related to water quality and make necessary amendments if any issues are not covered and ensure that the location and timing of monitoring and water quality parameters are appropriate, and consult with PEMC;
- (iii) Identify sensitive areas in terms of water pollution and water resources depletion along the road alignment, based on the review findings of DEIA report, EMP and EMOP;
- (iv) Develop a detailed water monitoring plan in line with the revised EMOP, including monitoring protocol with monitoring points, sampling frequency, parameter to be monitored, analytical methods, monitoring schedule and reporting requirements;
- (v) Agree the detailed monitoring plan along with the monitoring protocol for review and approval by PIU and PEMC for construction packages;
- (vi) Regularly monitor water quality and check contamination through basic parameters for temperature, suspended particles, pH, dissolved oxygen content, COD, BOD and hydrocarbon (oil, grease and fuels) in accordance with the monitoring plan and report them to PIU and PEMC. Result of checking all parameters for water quality shall be included in the report;
- (vii) Prepare or review (if already existing) and agree reporting formats for monthly, quarterly and semi-annual monitoring reports for water quality monitoring at the construction site;
- (viii) Where necessary, request EA/Supervision Consultants to organize technical training workshops and undertake site-based 'tool-box' talks (briefings) to enhance the field level staff's understanding on water quality monitoring significances and issues. Topics may include, but not are limited to the following:
 - a) Typical water quality monitoring issues related to road construction
 - b) Environment friendly road construction techniques and their benefits
 - c) How to use drinking and water for construction during the road construction
 - d) Methods for measurements of water quality parameters;
- (ix) Check the water contamination from oil, grease, fuel, and other toxic materials associated with road construction equipment in every month within the assigned period and record the result of checking for inclusion into the related reports;
- (x) Check the storm water drainage and retention basins which should be constructed, and siltation fence (where a river/stream is nearby) prior to commencement of construction. Record the result of checking and submit to PIU and PEMC, if these are not constructed prior to road construction;
- (xi) Take the relevant measures to construct storm water drainage, retention basins and siltation fence in consultation with PIU and PEMC during the construction period, if these were not constructed prior to road construction;
- (xii) Monitor the implementation of Spill Management Plan developed by the Contractors and update this plan, or submit the comments, if necessary;

- (xiii) Agree process and resolution of water issues identified during site audits or through the grievance redress mechanism and report in mid-term and final water monitoring report;
 - (xiv) Conduct on the job or site based practical training for the contractors where necessary while implementing the water quality monitoring;
 - (xv) Prepare Inception (for EA/PIU), Mid-term (for ADB Project Progress Report) and Final Water Quality Monitoring Reports (for ADB). The reports should review progress with project implementation, report results of audits and monitoring, identify problems encountered, actions taken/or proposed to be taken to resolve problems and activities programmed for next monitoring period;
 - (xvi) Consult with local relevant agencies and experts to interpret outcomes of water monitoring, if required;
 - (xvii) Include water quality test analyses and discussion of results in the monitoring reports and advise/support the contractor in taking remedial actions if any of the test results are not within the required limits;
 - (xviii) Facilitate public consultation and liaison with statutory agencies, where necessary;
 - (xix) Facilitate implementation of Grievance Redress Mechanism and maintain proper records of all water quality related grievances and details of how they were addressed; and
 - (xx) Maintain a copy of all water quality monitoring related statutory clearances required for implementation of the project and EMP.
23. The following reports shall be submitted by consultant/specialist to PIU/Employer and ADB:
- (i) Inception Report on Activities, within 1 month after mobilization with recommendations for actions to improve water quality in line with EMP/EMOP, as required.
 - (ii) Special Reports on workshops and Seminars, as appropriate, within 1 week of event
 - (iii) Mid-term report on the implementation of Water Quality Monitoring for quarterly Project Progress Report for EA and ADB
 - (iv) Final water quality monitoring report for inclusion into semi-annual report of EA to ADB6 Final report includes conclusions, recommendations and appendices with all monitoring findings and data in MS Word/Excel or other acceptable format.
24. The proposed study should start as soon as possible with recommendations for sections under construction (Temeen Huzuu to Hovd) by 1 October 2013. Recommendations for sections which will start construction in 2014 (Hovd to Ulgii and Tsangaannuur to Ulaanbaishint) should be provided by 1 October 2014.

F. Wildlife Movement Survey (National– Lump Sum)

25. **Background.** The Mongolian Altai region is characterized by its rich fauna diversity. There are 360 species of vertebrates, including 90 species of mammals, more than 250 species of birds, 11 species of reptiles, 123 species of insects, 10 species of fishes, and 1 species of amphibian. Some of the rare and endangered mammals that occur in the corridor are the Mongolian Saiga Antelope (*Saiga tatarica mongolica*) in Manhan Area (especially Khar Us Nurr National Park, Sharga Nature Reserve and Mankhan Nature Reserve), Argal Sheep (*Ovis ammon*) in Hohserh Mountain area, Siberian Ibex (*Capra siberica*) in Bodonch area and Goitred Gazelle (*Gazella subgutturosa*) in Yarant cross-border area. The proposed road corridor for the Western Regional Road Corridor Investment Program (WRRICIP) passes through the Mankhan Nature Reserve.

26. The Western Regional Road Corridor is under various stages of construction and planning. The sections and status of each is below:

Section	Construction Timetable	Financed by
Yarant – Temeen Huzuu	Near completion	Government of Mongolia
Temeen Huzuu – Baga Ulaan Davaa	2011-2014	ADB – Grant 0107
Baga Ulaan Davaa – Mankhan	2012-2015	ADB Tranche 1
Mankhan – Khovd	2010-2013	Government of PRC
Khovd – Khashaatin Davaa	Not yet started (2014-2017)	ADB Tranche 2
Khashaatin Davaa – Tolbo	Not yet started (2015-2018)	ADB Tranche 2
Tolbo – Ulgii	2011-2014	Government of PRC
Ulgii – Tsanganuur	Near completion	Government of Mongolia
Tsagaannuur – Ulaanbaishint	Not yet started (2015-2018)	ADB Tranche 2

27. During preparation of the Government of Mongolia's EIA for the WRRCP in 2007 consultations with experts from the Specially Protected Area Administration Department in Bayan-Ogii, World Conservation Society (WCS) and WWF Mongolia Office were undertaken. The results of the consultations led to the identification of potential wildlife migration crossing points along the length of Western Regional Road Corridor as shown on **Figure 35** of this EIA.

28. The impact of habitat fragmentation because of the WRRCP has been considered in the various EIAs undertaken by the GOM and ADB for the project. Because the project road is largely within an existing road corridor it is not anticipated that habitat fragmentation in respect of wildlife migration patterns will be significantly affected by the project provided mitigation measures are implemented near the known wildlife crossing points. Such mitigation measures will include: (i) installation of road signage and reflectors to warn drivers of potential wildlife crossing points; (ii) traffic speed restrictions; and (iii) provision of at-grade or reduced road embankment grades near the known crossing points to facilitate wildlife crossing by increasing their cross road visibility.

29. A wildlife movement monitoring study is proposed for the length of the WRRCP between Yarant to Ulaanbaishint during project implementation.

30. **Objectives.** The objectives of the wildlife movement monitoring study are to:

- Confirm and update the existing information on wildlife migration routes / crossing points along the WRRCP corridor between Yarant and Ulaanbaishint in respect of migratory ungulates such as: Mongolian saiga (*Saiga tatarica mongolica*), Argali sheep (*Ovis ammon ammon*), Goitred Gazelle (*Gazella subgutturosa*) and Siberian Ibex (*Capra siberica*);
- Determine whether or not, and to what extent, the new paved road and its embankments affect wildlife movements across the road corridor; and
- Based on information gathered above, provide specific recommendations for any mitigation measures that could be implemented along the new road to facilitate wildlife movements across the road.

31. **Tasks of the assignment.** The monitoring will be undertaken by an appropriately qualified and experienced wildlife ecologist, preferably a recognized expert on the ecology of the Central Asian region. The Consultant shall undertake the monitoring survey in two phases comprising a total of 6 monitoring events as follows:

- Phase 1 – twice in the year 2014
- Phase 2 – twice per year in 2015 and 2016

32. The actual timing of each monitoring event will be agreed between the Consultant and ADB and take account of expected times when migratory wildlife are likely to be crossing or near the road corridor.

33. Phase 1 monitoring shall focus on sections of road where construction has not yet commenced or is in the early stages of construction. Phase 2 monitoring will focus on road sections that have been recently completed (within the previous 6 months).

34. The detailed tasks include:

- (i) Developing a study approach and methodology for review and approval by ADB for each section of the WRRICP identifying critical wildlife known to migrate and move in and around the project corridor.
- (ii) Reviewing available information on migratory wildlife populations and patterns of movement for key species within the broader project area. Such species shall include but not be limited to Mongolian saiga (*Saiga tatarica mongolica*), Argali sheep (*Ovis ammon ammon*), Goitred Gazelle (*Gazella subgutturosa*) and Siberian Ibex (*Capra siberica*). Information shall include: seasonal movements, locations, corridors and their biological and ecological justifications (eg water supply, food chain, accessibilities, reproductive and breeding sites) within the road corridor
- (iii) Developing a survey protocol.
- (iv) Conducting a wildlife movement survey during peak migrations (Spring (April/May) and Autumn (September/October)). Monitoring activities shall include consultations with WWF and similar organizations, interviews with local herdsman, residents and contractors and field observations including actual sightings, scat and other signs.
- (v) Delineating wildlife crossing corridors along the road corridor and update existing information as shown on **Figure 1**.
- (vi) Determining whether or not, and to what extent, the new paved road and its embankments have affected wildlife movements across the road corridor.
- (vii) Delineating critical wildlife crossing areas including any additional mitigation measures required to reduce any effects the new road is found to have on migratory wildlife. Such measures may include reducing road embankment grades, providing additional wildlife warning signage, increasing number of reflectors, implementing speed restrictions or other practical measures.
- (viii) Preparing and submitting a monitoring report to ADB within one month after each monitoring event (total of 6 monitoring reports). Each report shall provide interim results and recommendations, and shall compare and contrast results of the previous reports

The proposed monitoring program (Phase 1) will start during spring of 2014.

G. Routine Maintenance Specialists (International – 2 person-months and National – 6 person-months)

35. **Introduction.** The Western Regional Road Corridor Investment Program includes the establishment of three road maintenance centers, approximately one every 100 km. The maintenance centers will be tasked with the usual routine maintenance activities, viz. keeping the roadway free of debris/rockfalls, pothole and edgebreak repairs, crack sealing, maintaining drainage, snow/ice removal in winter and any other routine activities to minimize hazard to users, plus emergency attendance at serious crashes. The road maintenance centers will be suitably equipped with a standard list of equipment as specified for the MRT for carrying out routine

maintenance activities, including a grader, loader, transport vehicles, a bitumen spreader and portable powered equipment for carrying out surface repairs.

36. To ensure that the maintenance centers are implemented on timely schedule at the end of the contract defects liability periods and are capable of performing the routine maintenance activities immediately thereafter, it is envisaged that a Highway Maintenance Specialist be assigned to assist with management and planning of routine maintenance activities. The position will be added to the current supervision consultant's scope of work by means of a contract variation.

37. **Scope.** The three maintenance centers will be located at sites yet to be determined by the MRT, to maintain the following road sections:

Design Section	Description	Length (km)
Phase 1 - Package 1*	Temeen Huzuu-Baga Ulaan – construction commenced 1 Mar 2011	110.8 km
MFF project 1 roads	Detailed engineering design for Bagan Ulaan to Mankhan	103.3 km
Phase 1 - Package 3*	Mankhan-Khovd – construction commenced 1 Mar 2011	85.3 km
MFF project 2 roads	Detailed engineering Khovd-Hashaat Pass	103.9 km

* Indicates under construction.

38. **Terms of reference.** Although there is current capability within MRT and contractor resources to undertake routine maintenance activities, some capacity building and training of local road maintenance contractors and MRT staff would be highly beneficial. Areas needing further expertise include:

- (i) annual programs for routine maintenance,
- (ii) development and implementation of inspection schedules,
- (iii) routine maintenance best practices,
- (iv) levels of service and intervention timeframes,
- (v) responsibilities of patrol crews, and
- (vi) materials handling and placement.

39. It is envisaged that an International Highway Maintenance Specialist, assisted by a National Maintenance Specialist be added to the current supervision consultant's scope of work by means of a contract variation.

40. The activities to be undertaken will include:

- (i) provision of training in routine maintenance,
- (ii) assist in the development of annual maintenance work programs,
- (iii) assist in developing basic resource (materials/equipment/labor) and cost reporting systems,
- (iv) review the current MRT routine maintenance standards and guidelines and recommend improvements as appropriate to bring them up to international best practice, and
- (v) assist in the development and implementation of regional maintenance plans.

Staff Requirements and other Inputs

Position	Duration	Experience
International Senior Highway Engineer/Routine Maintenance Specialist	2 months	Qualified professional engineer with 15 years experience, including extensive experience in highway maintenance, particularly the organization and management of routine maintenance from depots. Experience in a cold climate environment would be highly desirable.
National Road Maintenance Specialist	6 months	Experienced road maintenance engineer, with good English language skills

41. It is envisaged that suitable training and technology transfer will be achieved by:

- (i) an initial training workshop at a suitable centralized location for maintenance depot staff, to be conducted within 1 month of the International Maintenance Specialist's mobilization;
- (ii) subsequent visits of approximately one week duration to each of the three maintenance depots by the International and National Specialists, to observe operations and to receive feedback from site staff;
- (iii) follow up visits from the National Specialist, to report progress on maintenance management practices at the centers and to facilitate and support training developments; and
- (iv) a wrap up workshop for all depot staff at a centralized location, at which feedback from depot staff is analyzed and potential improvements to exist management and practice can be explored.

42. However this approach and program is subject to review by the Highway Engineer and must be adapted to the stage of staffing and readiness and activities being undertaken on mobilization of the Highway Engineer.

43. **Facilities.** The Supervision Consultant shall provide all required facilities including office space, furniture, equipment, and transport.

Reports and Documentation

Report	Required by
Initial Training Workshop, Program and Presentations and audience feedback and comments	1 month after commencement
Report on Maintenance Depot Visits x 3	Within one week of visit.
Report on Activities by National Maintenance Specialist	Monthly during assignment
Final Report summarizing: International and National Specialist Activities Proceedings and conclusions of Final Workshop Recommendations for future actions with regards to maintenance depots	Within one month of Final Workshop

H. Road Safety Specialists (International – 2 person-months and National – 3 person-months)

44. The Consultant will assist the PIU and Traffic Police and the Aimag governments establish a road safety awareness program for the entire Project corridor. It is expected that program will emulate safety initiatives underway in other parts of Mongolia and make use of public awareness programs and materials already developed by the government and their consultants.

45. Successful road safety publicity aimed at influencing road user behavior must be based on knowledge of local crash characteristics. It is anticipated that relevant data allowing determination

of crash characteristics will be sparse at the outset of the Project. In the absence of data, especially road user behaviour data, such as seat belt wearing levels and attitudes, only general advice about road safety issues relating to specific target groups shall be provided in an attempt to at least raise awareness and influence behaviour in a coordinated way.

46. A range of media shall be utilised by the Consultant to inform and raise road user awareness of safety behaviour. The choice of media will be dependent on available budget. The Consultant shall prepare a report indicating the most appropriate media type to be used.

47. Planning for road safety publicity campaigns is often the most critical part of the campaign development process. Much of the planning actually takes place prior to the campaign implementation. The Consultant shall undertake the following steps necessary for publicity campaigns:

- (i) Research through data analysis and possibly market research;
- (ii) Identify target group or groups;
- (iii) Choose road safety behaviour to target;
- (iv) Develop message and context;
- (v) Selection of media and usage levels;
- (vi) Choose of timing and duration; and
- (vii) Evaluate impact, process and actions.

48. Campaign target behaviour, development of the message and context must be carefully considered. Care should be taken to avoid focusing on the traffic rules as such, but rather on the behaviour the rule is designed to affect. It is important to treat the issue from the road user perspective so that the information given is useful and benefits can be recognised by the recipient. Much of the program will require local police support if it is to be successfully implemented. The Consultant will need to work with local police on very wide range of issues and utilize them as much as possible when implementing the road safety awareness program.

49. The Consultant shall prepare a report for the Road Safety Awareness Program and obtain ADB and PIU approval to this proposed program prior to undertaking the program. Road safety awareness materials will be prepared in Mongolian and disseminated to people living along the corridor and other potential road users. The community outreach and monitoring officers in the soum centers will actively participate in targeting appropriate recipients and disseminating traffic safety awareness materials. A final report shall be prepared at the end of the program to describe what was undertaken and its effectiveness.

50. **Qualification and Experience:** A senior level engineer with at least 10 years experience, a degree in civil engineering, and training in road safety. Occupation Health and Safety Assessment Series certification is desirable. Previous experiences in conducting road safety audits, and accident and analysis and mitigation, and designing and implementing road safety awareness and training programs will be an advantage.

I. Value Engineering (International – 3 person-months and National – 12 person-months)

51. As a part of project preparation, the detailed engineering design has been completed for all sections of the Western Regional Road. Additionally, a due diligence review has just been completed of the detailed design for the project road sections to be financed under tranches 2 and 3 under the investment program MFF. The Final Report from this review highlighted a number of areas where significant savings could be realized with alternative design solutions. Highway

engineering consultants are needed to update the detailed designs, BOQ, and validate and revise the due diligence cost estimates before the road sections to be financed in tranches 2 and 3 are tendered.

52. The value engineering covers the following road sections:

Design Section	Description	Length (km)
1	Detailed Engineering Design for Olgii to Khashaatin Davaa Pass (km 76-120 is within current project scope)	44.0
2	Detailed Engineering Design for Khashaatin Davaa Pass to Khovd	103.9

53. To assist in the implementation of this project, a consultancy contract is required to undertake the following tasks:

- (i) Value engineering review of the existing detailed design and design optimization to realize cost savings in the capital works;²⁸
- (ii) Determining contract packaging requirements in coordination with the EA and MRT; and
- (iii) Preparation of bidding documents incorporating the outcome of the value engineering exercise, specification review and agreed contract packages.

54. **Task 1: Value Engineering and Design Optimization.** The consultant will review the Final Report and findings and recommendations made by the due diligence consultant and will review in detail aspects of the design identified for optimization and/or improvement. Areas of review shall include but will not be limited to:

Item	Value Engineering	Description
1	Design optimization at Buraat Pass, 4 Stages Stage 1 – Topographic survey Stage 2 – Geological Survey Stage 3 – Geotechnical investigation (coordinated by Geological specialist from Step 2) Stage 4 – Design analysis & optimization The first three stages should be conducted concurrently, outside of the winter months.	<p>Stage 1: Undertake topographic survey of sections which will be redesigned to establish a strip map with contour accuracies of $\pm 500\text{mm}$ and plan accuracies of $\pm 50\text{-}100\text{mm}$ (not in winter)</p> <p>Stage 2: Undertake geological survey to establish the geomorphology of the section, recent geological history etc, stability/composition of slopes, susceptibility/likely location of permafrost lenses. (not in winter)</p> <p>Stage 3: Undertake site specific geotechnical investigation (on and about preferred alignment centreline), including boreholes, DCP, test pits and sampling and appropriate materials testing. (not in winter).</p> <p>Stage 4: Prepare and cost alignment options to obtain minimum costs which meet design standards and avoids identified negative geological and geotechnical aspects. Design alternative must be considered which minimizes fill heights, reduces earthworks and overall construction costs. The road geometry shall provide for horizontal curve radii of not less than 120 m unless approved otherwise by MRT.</p>
2	Design optimization of Km 89.3-103.9 (Khovd-Khashaat Pass) Assess alternative for widening & overlay of section as opposed to reconstruction	<ol style="list-style-type: none"> Undertake geotechnical survey to establish feasibility to construct on the existing road formation. If geotechnical investigation indicates overlay as a viable option to achieve cost savings, then undertake

²⁸ Design standard to be adopted shall be Mongolian Design Standard BNbD 32-01-07 (2007) for roads and standard BNbD 32.02.03 for bridges and culverts.

Item	Value Engineering	Description
	This will require geotechnical investigation (test pits) and testing to establish strength of existing pavement, plus a topographic survey to re-establish existing ground in order to redesign the formation.	topographic survey to re-establish original ground surface. 3. Prepare revised design as appropriate
3	Culvert inlet and outlet structures 1. Review potential to apply more cost effective energy dissipation structures (rip-rap rock) on culvert outlets 2. Review extensive need for rock protection behind culvert headwalls and inlets	Office exercise with site verification. Review culvert outlet velocities (and volumes) and determine if the lower range of velocities can be handled by rip-rap structures, design and specify riprap. Verify on site taking into consideration nature of in situ material (rock, gravel, sand etc.)
4	Guardrail Requirement 1. Compare different design standards (AASHTO, TRL ORN) for design of guardrail with the Mongolian Standard and gain approval for a revised standard. 2. Review guardrail requirements based on MRT agreed standard	1. Office exercise. Review standards and establish a set of criteria which can be applied for this road project, taking into account traffic, safety and environmental considerations. Consider options for substituting with reflective marker posts on sections with low embankment heights 2. Gain approval from MRT regarding minimum standards to apply Apply the developed criteria to the project road and revise the quantity of guardrail
5	Lighting Design	1. Prepare lighting design and drawings for requirements at Khovd and incorporate into the detailed engineering documentation
6	Update BOQ	1. Update BOQ quantities to capture any design changes resulting from Value Engineering exercise 2. Ensure BOQ items are consistent with standard Specifications & BOQ Items as prepared separate consultancy by Client and ensure bridge items have been rationalized 3. Update bidding documentation to reflect any changes to quantities
7	Specifications for Project Incorporate the Standard Specifications as prepared under Item 1 into the project design documentation.	1. Detail any amendments required to the standard specifications applicable for the project road (i.e. Supplements) 2. Office exercise can be undertaken any time after design is finalized. Requires completion of Item 1

55. The consultant shall also review the other recommendations made in the due diligence review Final Report which are not listed above and shall amend the design, including incorporating recommendations for safety improvement.

56. Following the value engineering and design optimization tasks, the consultant shall provide a summary report outlining each of the due diligence recommendations and the corresponding outcome from the value engineering exercise. Details of changes in costs in applying the design changes will also be identified.

57. The summary report prepared by the consultant shall be submitted to the EA for review and approval. The consultant shall be required to make a presentation detailing the findings and outcomes of the value engineering and cost savings achieved. Following approval by the EA, the consultant shall incorporate approved design changes in to the detailed design documentation.

58. **Task 2: Specifications and Pavement Design Review.** In conjunction with the value engineering exercise, a separate consultant shall be engaged by ADB to undertake the following tasks:

- (i) Prepare model standard ADB-conformant bidding documents under standard headings to bring them into line with international best practice. In particular the current Standard Specifications, especially those in the 1300–1400 are not workable as international specifications.
- (ii) Prepare standard format BOQ item descriptions which are consistent with the standard specifications, revise BOQ format under the same review, particularly with reference to bridge work related items
- (iii) Revise Pavement design for the project road including the following:
 - a) insitu subgrade material is not frost sensitive, and
 - b) subgrade material is identified as having medium or violent susceptibility to frost where permafrost has been identified.

59. The value engineering consultant shall incorporate the outcome of the above tasks in the detailed engineering design and bidding documentation. The consultant shall review the revised technical specifications and shall prepare any supplementary specifications (detailing changes to the standard specifications) as appropriate for the road project.

60. **Task 3: Contract Packaging and Bidding Documentation.** The consultant shall prepare contract packaging consistent with the recommendations outlined in the due diligence final report and as agreed with the MRT. This shall include preparation of bidding documentation suitable for International Competitive Bidding (ICB) in accordance with ADB requirements.

61. Draft bidding documents shall be submitted to the EA for review and approval. Following approval, the consultant shall prepare the final bidding documents, incorporating any comments as provided by the EA, ADB and MRT.

62. The consultant is expected to provide the following staff inputs:

Position	Duration	
Team Leader/Senior Highway Design Engineer (National)	6 months	Qualified professional engineer with 10 years' experience and should have extensive experience in highway design in accordance with the Mongolian Design Standards. Experienced in preparation of detailed designs and bidding documents.
Geological/Geotechnical Engineer (National)	2 month	Qualified professional engineer with 5 years' experience in geological/geotechnical works in Mongolia
CAD/Road Design Software Operator (National)	4 months	Computer design operator with 5 years' experience
Highway Engineer (International)	2 months	Qualified professional engineer with 15 years' experience and extensive experience in highway design and preparation technical specifications and bidding documents.
Cold Climate Pavement Engineer (International)	1 month	Qualified professional engineer with 15 years' experience. Relevant highway engineering experience and pavement design in cold climate regions similar to Mongolia.

63. The consultant shall undertake all necessary survey, investigation, materials sampling and testing required for the value engineering and design optimization tasks. This work shall be payable under the Provisional Sum allocated.

64. The consultant is expected to provide the following staff inputs:

65. **Facilities.** The consultant shall provide all required facilities to carry out the services, including office space, furniture, equipment, design software.

Reports and Documentation

Report	Required by	Copies
Summary Report of Value Engineering & Design Optimization outcome	Within 3 months from commencement	5
Draft Bidding documents for each contract package for review by EA, MRT and ADB	Within 3.5 months from commencement	3
Final Bidding documents for each contract package	Within 2 weeks of receiving comment	10

66. **Provisional Sums.** The investigation works shall be agreed with the MRT. The following Provisional Sums shall apply to the site investigation works:

- (i) Topographic Survey – USD 25,000
- (ii) Geotechnical Investigation – USD 50,000

J. Procurement Specialists (International – 2 person-months)

67. There are three road sections and some smaller projects to be procured under project 1 of the proposed Western Regional Road Corridor Investment Program which is intended to complete the Western Regional Road. If ADB approves advance contracting and retroactive financing, procurement for Baga Ulaan-Mankhan will be initiated in 2011. Thus there is an opportunity to assist the PIU to fast track procurement for Baga Ulaan Davaa to Mankhan and at the same time increase processing capacity for procurement under subsequent tranches.

Design Section	Description	Length (km)
Package 1	Km 0–25	25
Package 2	Km 25-75	50
Package 3	Km 75-103.3	28.3
Total		103.3

68. **Tasks.** The role of the Procurement Specialist is to assist members of the PIU to ensure that procurement procedures acceptable to the ADB are applied rigorously but with minimum delays, so that the likelihood of rejection by the ADB review is very low. The Procurement Specialist will:

- (i) assist in preparing bid documents;
- (ii) assist in the advertising and answering of bidding queries;
- (iii) provide technical support to the Bid Evaluation Committee;
- (iv) assist in preparing evaluation reports;
- (v) liaise with ADB during the evaluation process; and
- (vi) provide training to MRT and MRT staff on procurement procedures.

69. The existing standard bid documents require editing for minor discrepancies between reference clauses etc. and require some systematizing, so that only minimal editing is required from one contract to the next. The main emphasis will be on analyzing and refining all of the processes associated with contract evaluation, from the identification of qualification criteria under ADB guidelines through to applying criteria systematically to all bids, such that evaluation is seamless, and all evaluation criteria are applied objectively and that the Bid Evaluation Committees acquire skills in reaching consensus.

Staff Requirements and other Inputs

Position	Duration	Experience
Procurement Specialist	2 months - intermittent	The Specialist should be a Senior Highway Engineer with 20 years professional experience, including extensive experience in dealing with all aspects of contract procurement under IFI funded projects.

70. **Place and Period of Performance.** All activities under the assignment will be performed in Ulaanbaatar, Mongolia. The assignment should be carried during two approximately 1 month trips to Mongolia over a period of about 4 months. The assignment is expected to begin during October 2011 and be completed by the end of February 2012.

71. **Facilities.** The PIU will provide all required facilities including office space, furniture, equipment and transport.

Reports and Documentation

Report	Required by	Copies
Monthly Report on Activities	Beginning 1 month after mobilization	5
Special Reports on workshops and seminars, as appropriate	Within one week of event.	5
Final Report summarizing:	Within one month of demobilization	5
· International Procurement Specialist Activities		
· Recommendations for future actions with regards to training for PIU staff.		

DRAFT CONSULTANTS' TERMS OF REFERENCE (Project 2)

A. SDAP, including HIV/AIDS and Human Trafficking Prevention Monitoring Specialist (National – 1 position, 36 person-months)

1. The specialist will have a minimum of 5 years of experience in monitoring social safeguards, and social development. The monitoring specialist will refine the SDAP and coordinate and facilitate its implementation and ensure the grievance redress mechanism functions effectively. The consultant will report directly to the PIU. The expert will perform the following with respect to social development monitoring:

- (i) In consultation with local communities and other stakeholders (NGOs and local government agencies) within the project impact zone refine the activities such as local employment, public consultation, HIV/AIDS and Human Trafficking Prevention, Road Safety awareness, social and cultural awareness building, under the SDAP to meet the local needs and requirements.
- (ii) Develop modalities for implementation of SDAP including developing strategy for liaison and coordination between various line agencies, identification and availability of budgetary sources, and developing a coordination between these agencies and the EA.
- (iii) Coordinate the functions of the 3 soum level community outreach and monitoring officers. Based on the ToR, get a functional work plan developed for each soum outreach officer to ensure effective implementation of SDAP measures. Monitor progress of the working of the soum outreach officers;
- (iv) Establish social, poverty monitoring procedures (including baseline surveys as required).
- (v) Coordinate with the PIU staff responsible for the Grievance Redress Mechanism with respect to identification, investigation, and resolution of environmental and social complaints.
- (vi) Conduct site visits to the project area during the construction period.
- (vii) Prepare monthly reports on the implementation of SDAP.
- (viii) Coordinate implementation of SDAP and monitor progress

2. On HIV/AIDS/STI and Human Trafficking risks:

- (i) Assist the MRT in planning and managing the HIV/AIDS/STI and HTP Program.
- (ii) Review the outputs of the ADB TA 4364-MON and assess which components can be adopted as component of Program interventions.
- (iii) Assist the MRT to coordinate with the local offices of the Ministry of Health in the utilization of the training and information materials developed by TA 4364 for field application.
- (iv) Assist the MRT in carrying out a public awareness campaign and behavioral modification among high-risk target population. The awareness campaign will be undertaken at two levels: (i) among the general public through public media and IEC materials and (ii) to high risk groups (truck drivers/helpers, sex workers, road side communities and road side construction workers (not related to the Project) at key spots like the border crossing, rest areas, bars, schools, hospitals and clinics.
- (v) Assist the MRT to coordinate with the Ministry of Labor and Social Welfare in the design and delivery of awareness campaign on human trafficking prevention and to identify local staff responsible for its implementation.
- (vi) Assist in training community monitors who will help the MLSW identify cases of HT and report these to concerned authorities.
- (vii) Assist in establishing the monitoring and reporting system on HT.

3. Road safety awareness:

- (i) Assist the MRT to develop a road safety awareness program for the local communities along the corridor including developing publicity and awareness building information material.
- (ii) Assist the MRT to develop road safety signage (preferably symbolic signage) and in consultation with the local communities especially herdsman, ensure these are located at appropriate locations.
- (iii) Develop a plan to train community focal points on road safety awareness and through community outreach officers ensure implementation of the plan.

4. Social and cultural awareness building:

- (i) Assist the MRT to develop a social and cultural awareness building plan to deal with the increased arrival of outsiders/visitors such as construction workers, tourists, truck drivers.
- (ii) Consult with local communities to ensure that the plan is culturally and linguistically appropriate.
- (iii) Assist the MRT in developing culturally and linguistically appropriate information material on social and cultural awareness building.
- (iv) Assist the MRT to develop a communication and information dissemination strategy and monitor implementation.

5. Community based monitoring of SDAP activities:

- (i) Develop a mechanism for the community to monitor the implementation of activities outlined under the SDAP and establish strategies to address the suggestions/concerns in the implementation process.

6. Prepare appropriate documents to report the outcomes of various activities.

7. **Qualifications and experience.** The national Social and HIV/AIDS Monitoring Specialist will have a university degree in the social sciences and at least 5 years of experience monitoring internationally financed development projects in Mongolia.

B. Community Outreach Monitoring Officer - Soum level (National – 3 positions, 36 person-months per position)

8. The community outreach monitoring officers will be posted in the Erdeneburen, Tolbo and Tsagaanuur soum centers near the project corridor to provide a direct point of contact for local people potentially affected by the program. They will serve as key contacts for the grievance redress mechanism and help to implement the SDAP. The officers will undertake the following tasks:

- (i) Assist the MRT in implementing various activities outlined in the SDAP within the respective soum.
- (ii) Prepare a detailed work plan on how to engage with community and households living or likely to settle along the corridor.
- (iii) Use various participatory techniques to reach out to communities and households to ensure their participation in project.
- (iv) Undertake information dissemination campaign about the project, construction activities and social development strategy.

- (v) Undertake focus group discussion, household survey to understand their need and priorities so as to plan realistic income generation activities.
- (vi) Use the developed project information material like pamphlets, brochures etc. in local language and distribute these to the households.
- (vii) Facilitate PIU in setting up information dissemination bureau at soum level.
- (viii) Organize skill up gradation training for HH, with special focus on women and vulnerable households.
- (ix) Help households in establishing credit linkages.
- (x) Assist families to set up new enterprise like café, garage etc. along the corridor.
- (xi) Encourage women to set up new enterprise.
- (xii) Assist the local health offices through the facilitation of the Ministry of health in carrying out a public awareness campaign and behavioral change of high-risk groups. The awareness raising will be carried out at two levels: (a) at community level; and (b) to high-risk groups (truck drivers/helpers, roadside communities and roadside amenities).
- (xiii) Assist the Ministry of Labor and Social Welfare to conduct of the community awareness campaign on human trafficking.
- (xiv) Work as a liaison between the households and the PIU.
- (xv) Prepare yearly work plan and submit the same to PIU.
- (xvi) Submit quarterly progress reports to PIU.

9. **Qualifications and experience.** At least 2 years of working experiences in similar tasks with international development projects. Coordinators should have sound knowledge of local conditions in the Project areas and the needs of participatory development. Knowledge and skills in designing of instruments for data collection, especially at the community level are desired.

C. Environment Monitoring Specialist (National – 36 person-months)

10. The specialist will have a minimum of 5 years practical experience in the implementation of construction EMPs and environmental monitoring, ability to work with a multidisciplinary team and dealing with all aspects of site-related environmental issues, and excellent communication skills. Previous experience as an Environment Specialist for at least one ADB, World Bank or other international financial institution funded road project in Mongolia is desirable. The EMP implementation is formally under the Supervision Consultants contract. However, the monitoring specialist will facilitate the implementation of the EMP and ensure the grievance redress mechanism functions effectively. The expert will perform the following with respect to environmental monitoring:

- (i) Review all EIAs and EMPs prepared for Phase 1-Package 1, Project 1 and Phase 1-Package 3, and Project 2 when available, to understand the environmental issues associated with the project area.
- (ii) Consult with PIU to identify if there are any changes in the project alignment/sites or baseline environmental conditions. Assess impacts of any changes and update EMP. Review the EMP and ensure that the location and timing of monitoring and environmental parameters are appropriate.
- (iii) Assist the PIU in obtaining all necessary domestic environmental approvals to allow the projects to proceed, as required.
- (iv) Review Tender and Contractor Documents to ensure all required environmental specifications have been included, update as required.
- (v) Prepare or review (if already existing) environmental audit checklists for daily, weekly and monthly monitoring of implementation of the EMP by the contractor.
- (vi) Prepare monthly (for EA/PIU), quarterly (for ADB Project Progress Report) and biannual Environmental Monitoring Reports (for ADB). The reports should review progress with

project implementation, report results of audits and monitoring, identify problems encountered, actions taken/or proposed to be taken to resolve problems and activities programmed for next monitoring period.

- (vii) Conduct training workshops for field level implementing government agencies and contractors and supervision consultant engineers on the requirements and implementation of the EMP. The training workshops must cover:
 - a) Key requirements and components of the EMP;
 - b) Contents and use of monitoring checklists;
 - c) Institutional set up for implementation and monitoring of the EMP;
 - d) Roles and responsibilities of the government, supervision consultants, contractor and other relevant agencies; and
 - e) The key outcome of the workshop must be to prepare the field staff of the implementing agency, supervision consultants and the contractor in implementing the EMP and monitoring the EMP including site audit, completion of checklists and other associated paperwork.
- (viii) Monitor the implementation of the mitigation measures and monitoring requirements of the environmental management plan.
- (ix) Review the plans for water quality monitoring and monitor implementation of the water quality monitoring program.
- (x) Review the plans for the wildlife survey and monitor implementation of the survey.
- (xi) Include water quality sampling results from the Water Quality Monitoring Consultant and discussion of results in the monitoring reports and advise/support the contractor in taking remedial actions if any of the test results are not within the required limits.
- (xii) Facilitate implementation of Grievance Redress Mechanism and maintain proper records of all environment related grievances and details of how they were addressed.
- (xiii) Maintain a copy of all environment related statutory clearances required for implementation of the project and EMP.
- (xiv) Facilitate consultation between the contractor and local herdsman with respect construction scheduling, and proposed mitigation measures to control dust, and to minimize disruption to local traffic.
- (xv) Facilitate consultation between the contractor and local government, Mankhan Nature Reserve Administration, NGOs, and local herdsman with respect to:
 - a) the siting, quantities to be removed from, operation, and restoration of borrow areas;
 - b) the sources and amount of water withdrawals and from surface water and groundwater;
 - c) the local design and construction of livestock crossings; and
 - d) the design of wildlife crossings.
- (xvi) Coordinate with the PIU staff responsible for the Grievance Redress Mechanism with respect to identification, investigation, and resolution of environmental and social complaints.
- (xvii) Conduct regular site visits to the project area during the construction period.

11. The consultant will report directly to the PIU.

D. Water Quality Monitoring (National; 15 person-months)

12. **Background.** The Government of Mongolia, with financial support from Asian Development Bank (ADB) is upgrading the internal transport network in the western region to improve trade and

transit links between Mongolia and neighboring countries. The outcome of the Project will be an efficient and safe regional transport route that links Xinjiang Uygur Autonomous Region in the People's Republic of China and Siberia in the Russian Federation through western Mongolia.

13. The Western Regional Road Corridor is under various stages of construction and planning. The sections and status of each is below:

Road section	Description	Length, km	Constructi on timetable
Package 1 (Grant 0107-MON: Phase 1)	Temeen Huzuu – Baga Ulaan	110.8	2011-2014
Package 2 (Loan 2847-MON (MFF): Tranche 1)	Baga Ulaan – Mankhan	103.3	2012-2015
Package 3 (PRC Government-PRC EXIM Bank)	Mankhan – Khovd	85.3	2010-2013
Package 4 (MFF: Tranche 2)	Khovd – Khashaatiin	103.9	2014-2017
Tranche 2 (MFF: Tranche 2)	Khashaatiin – Tolbo	60	2015-2018
Package 5 (PRC Government-PRC EXIM Bank)	Tolbo – Ulgii	60	2011-2014
Package 6 (MFF: Tranche 2)	Tsagaannuur – Ulaanbaishint	25.8	2015-2018

14. **Objective.** The primary objective of the assignment is to provide water quality monitoring support to the Project Implementation Unit (PIU) and Project Environmental Monitoring Consultant (PEMC) in the implementation of project environmental management and monitoring requirements during the construction of the project.

15. The main concern for water quality is for temporary increases in turbidity during construction, and accidental contamination from oil, grease, fuel, and other toxic materials associated with construction equipment. Water quality monitoring will be required at key points in important streams that cross the corridor in the project area. This work is related to the environmental requirements in ADB's Safeguards Policy Statement (2009) and the consultant should know these environmental requirements provided by Employer according to Environmental Assessment Guidelines and environmental safeguard policy of the ADB, and Environmental Impact Assessment Law of Mongolia. This monitoring will include basic parameters (e.g., temperature, suspended particles, pH, dissolved oxygen content, COD, BOD, hydrocarbon (oil, grease, fuels)).

16. **Tasks of the assignment.** The consultant shall work closely with the PIU staff and PEMC, and report directly to the project coordinator of the PIU. The consultant shall monitor and evaluate implementation of the water quality monitoring which required at key points in important streams that cross the corridor in the project area according to EIA, SEIA and EMP/EMOP through regular site audits, consultation with civil work's contractors, consultants and PEMC, and monitoring of agreed parameters for water quality. The tasks of the Water Quality Monitoring Consultant include, but are not limited to:

- (i) Review EIA/IEE/SEIA reports prepared for the project to understand the environmental issues associated with the project area and the mitigation and monitoring requirements;
- (ii) Review the EMP and EMOP for inclusion of all site specific issues related to water quality and make necessary amendments if any issues are not covered and ensure that the location and timing of monitoring and water quality parameters are appropriate, and consult with PEMC;
- (iii) Identify sensitive areas in terms of water pollution and water resources depletion along the road alignment, based on the review findings of DEIA report, EMP and EMOP;
- (iv) Develop a detailed water monitoring plan in line with the revised EMOP, including monitoring protocol with monitoring points, sampling frequency, parameter to be monitored, analytical methods, monitoring schedule and reporting requirements;

- (v) Agree the detailed monitoring plan along with the monitoring protocol for review and approval by PIU and PEMC for construction packages;
- (vi) Regularly monitor water quality and check contamination through basic parameters for temperature, suspended particles, pH, dissolved oxygen content, COD, BOD and hydrocarbon (oil, grease and fuels) in accordance with the monitoring plan and report them to PIU and PEMC. Result of checking all parameters for water quality shall be included in the report;
- (vii) Prepare or review (if already existing) and agree reporting formats for monthly, quarterly and semi-annual monitoring reports for water quality monitoring at the construction site;
- (viii) Where necessary, request EA/Supervision Consultants to organize technical training workshops and undertake site-based 'tool-box' talks (briefings) to enhance the field level staff's understanding on water quality monitoring significances and issues. Topics may include, but not are limited to the following:
 - a) Typical water quality monitoring issues related to road construction
 - b) Environment friendly road construction techniques and their benefits
 - c) How to use drinking and water for construction during the road construction
 - d) Methods for measurements of water quality parameters;
- (ix) Check the water contamination from oil, grease, fuel, and other toxic materials associated with road construction equipment in every month within the assigned period and record the result of checking for inclusion into the related reports;
- (x) Check the storm water drainage and retention basins which should be constructed, and siltation fence (where a river/stream is nearby) prior to commencement of construction. Record the result of checking and submit to PIU and PEMC, if these are not constructed prior to road construction;
- (xi) Take the relevant measures to construct storm water drainage, retention basins and siltation fence in consultation with PIU and PEMC during the construction period, if these were not constructed prior to road construction;
- (xii) Monitor the implementation of Spill Management Plan developed by the Contractors and update this plan, or submit the comments, if necessary;
- (xiii) Agree process and resolution of water issues identified during site audits or through the grievance redress mechanism and report in mid-term and final water monitoring report;
- (xiv) Conduct on the job or site based practical training for the contractors where necessary while implementing the water quality monitoring;
- (xv) Prepare Inception (for EA/PIU), Mid-term (for ADB Project Progress Report) and Final Water Quality Monitoring Reports (for ADB). The reports should review progress with project implementation, report results of audits and monitoring, identify problems encountered, actions taken/or proposed to be taken to resolve problems and activities programmed for next monitoring period;
- (xvi) Consult with local relevant agencies and experts to interpret outcomes of water monitoring, if required;
- (xvii) Include water quality test analyses and discussion of results in the monitoring reports and advise/support the contractor in taking remedial actions if any of the test results are not within the required limits;
- (xviii) Facilitate public consultation and liaison with statutory agencies, where necessary;
- (xix) Facilitate implementation of Grievance Redress Mechanism and maintain proper records of all water quality related grievances and details of how they were addressed; and
- (xx) Maintain a copy of all water quality monitoring related statutory clearances required for implementation of the project and EMP.

17. The following reports shall be submitted by consultant/specialist to PIU/Employer and ADB:
- (i) Inception Report on Activities, within 1 month after mobilization with recommendations for actions to improve water quality in line with EMP/EMOP, as required.
 - (ii) Special Reports on workshops and Seminars, as appropriate, within 1 week of event
 - (iii) Mid-term report on the implementation of Water Quality Monitoring for quarterly Project Progress Report for EA and ADB
 - (iv) Final water quality monitoring report for inclusion into semi-annual report of EA to ADB. Final report includes conclusions, recommendations and appendices with all monitoring findings and data in MS Word/Excel or other acceptable format.
18. The proposed will start on 1 April 2014 with recommendations for sections under construction (Temeen Huzuu to Hovd) to be provided soonest and recommendations for sections which will start construction in 2014 (Hovd to Ulgii and Tsangaannuur to Ulaanbaishint) should be provided by 1 June 2014.

E. Wildlife Movement Survey (National – Lump Sum; during the road construction period, 15 person-months)

19. **Background.** The Mongolian Altai region is characterized by its rich fauna diversity. There are 360 species of vertebrates, including 90 species of mammals, more than 250 species of birds, 11 species of reptiles, 123 species of insects, 10 species of fishes, and 1 species of amphibian. Some of the rare and endangered mammals that occur in the corridor are the Mongolian Saiga Antelope (*Saiga tatarica mongolica*) in Manhan Area (especially Khar Us Nurr National Park, Sharga Nature Reserve and Mankhan Nature Reserve), Argal Sheep (*Ovis ammon*) in Hohserh Mountain area, Siberian Ibex (*Capra siberica*) in Bodonch area and Goitred Gazelle (*Gazella subgutturosa*) in Yarant cross-border area. The proposed road corridor for the Western Regional Road Corridor Investment Program (WRRICIP) passes through the Mankhan Nature Reserve.

20. The Western Regional Road Corridor is under various stages of construction and planning. The sections and status of each is below:

Package	Section	Construction Timetable	Financed by
Package 0	Yarant–Temeen Huzuu	Near completion	Government of Mongolia
Package 1	Temeen Huzuu–Baga Ulaan Davaa	2011–2014	ADB – Grant 0107-MON
Package 2	Baga Ulaan Davaa–Mankhan	2012–2015	ADB Tranche 1
Package 3	Mankhan–Khovd	2010–2013	Government of PRC
Package 4	Khovd –Khashaatin Davaa	Not yet started (2014–2017)	ADB Tranche 2
Package 4	Khashaatin Davaa–Tolbo	Not yet started (2015–2018)	ADB Tranche 2
Package 5	Tolbo –Ulgii	2011–2014	Government of PRC
Package 6	Ulgii –Tsanganuur	Near completion	Government of Mongolia
Package 6	Tsangaannuur–Ulaanbaishint	Not yet started (2015–2018)	ADB Tranche 2

21. During preparation of the Government of Mongolia's EIA for the WRRICIP in 2007 consultations with experts from the Specially Protected Area Administration Department in Bayan-Ogii, World Conservation Society (WCS) and WWF Mongolia Office were undertaken. The results of the consultations led to the identification of potential wildlife migration crossing points along the length of Western Regional Road Corridor as shown on **Figure 35** of this EIA.

22. The impact of habitat fragmentation because of the WRRICIP has been considered in the various EIAs undertaken by the GOM and ADB for the project. Because the project road is largely within an existing road corridor it is not anticipated that habitat fragmentation in respect of wildlife migration patterns will be significantly affected by the project provided mitigation measures are

implemented near the known wildlife crossing points. Such mitigation measures will include: (i) installation of road signage and reflectors to warn drivers of potential wildlife crossing points; (ii) traffic speed restrictions; and (iii) provision of at-grade or reduced road embankment grades near the known crossing points to facilitate wildlife crossing by increasing their cross road visibility.

23. A wildlife movement monitoring study is proposed for the length of the WRRCP between Yarant to Ulaanbaishint during project implementation.

24. **Objectives.** The objectives of the wildlife movement monitoring study are to:

- Confirm and update the existing information on wildlife migration routes / crossing points along the WRRCP corridor between Yarant and Ulaanbaishint in respect of migratory ungulates such as: Mongolian saiga (*Saiga tatarica mogolica*), Argali sheep (*Ovis ammon ammon*), Goitred Gazelle (*Gazella subgutturosa*) and Siberian Ibex (*Capra siberica*);
- Determine whether or not, and to what extent, the new paved road and its embankments affect wildlife movements across the road corridor; and
- Based on information gathered above, provide specific recommendations for any mitigation measures that could be implemented along the new road to facilitate wildlife movements across the road.

25. **Tasks of the assignment.** The monitoring will be undertaken by a wildlife ecologist with a university degree in Ecology and Environment and at least 5 years of practical experience in the field of Ecology, preferably a recognized expert on the Ecology of the Central Asian region. The Consultant shall undertake the monitoring survey in two phases comprising a total of 6 monitoring events as follows:

- Phase 1 – twice in the year, spring and autumn 2014
- Phase 2 – twice per year, spring and autumn 2015 and 2016

26. The actual timing of each monitoring event will be agreed between the Consultant and ADB and take account of expected times when migratory wildlife are likely to be crossing or near the road corridor.

27. Phase 1 monitoring shall focus on sections of road where construction has not yet commenced or is in the early stages of construction. Phase 2 monitoring will focus on road sections that have been recently completed (within the previous 6 months).

28. The detailed tasks include:

- (i) Developing a study approach and methodology for review and approval by ADB for each section of the WRRCP identifying critical wildlife known to migrate and move in and around the project corridor.
- (ii) Reviewing available information on migratory wildlife populations and patterns of movement for key species within the broader project area. Such species shall include but not be limited to Mongolian saiga (*Saiga tatarica mogolica*), Argali sheep (*Ovis ammon ammon*), Goitred Gazelle (*Gazella subgutturosa*) and Siberian Ibex (*Capra siberica*). Information shall include: seasonal movements, locations, corridors and their biological and ecological justifications (eg water supply, food chain, accessibilities, reproductive and breeding sites) within the road corridor
- (iii) Developing a survey protocol.
- (iv) Conducting a wildlife movement survey during peak migrations (Spring (April/May) and Autumn (September/October)). Monitoring activities shall include consultations with

- WWF and similar organizations, interviews with local herdsman, residents and contractors and field observations including actual sightings, scat and other signs.
- (v) Delineating wildlife crossing corridors along the road corridor and update existing information as shown on **Figure 1**.
 - (vi) Determining whether or not, and to what extent, the new paved road and its embankments have affected wildlife movements across the road corridor.
 - (vii) Delineating critical wildlife crossing areas including any additional mitigation measures required to reduce any effects the new road is found to have on migratory wildlife. Such measures may include reducing road embankment grades, providing additional wildlife warning signage, increasing number of reflectors, implementing speed restrictions or other practical measures.
 - (viii) Preparing and submitting a monitoring report to ADB within one month after each monitoring event (total of 6 monitoring reports). Each report shall provide interim results and recommendations, and shall compare and contrast results of the previous reports
29. The proposed monitoring program (Phase 1) will start during spring of 2014.

F. Construction Supervision (international: 151 person-months; national: 529 person-months)

1. **Background:** A Request for Proposals (RFP) will be issued for the purpose of recruiting construction supervision consultants for the Tranche 2 civil works. Construction duration is 36 months for **CW1-1** (50km from Khovd to Shuraga bridge), **CW1-2** (53.9km from Shuraga to Khashaatiin davaa) and **CW1-3** (60km from Khashaatiin davaa to Tolbo soum), and 24 months for **CW1-4** (25.8km from Tsagaannuur to Ulaanbaishint).

2. **Consultants Tasks:** About 151 person-months of international consultants and 529 person months national consultants will be required to (i) provide advisory services in construction supervision, pavement design and construction, all associated materials testing requirements, bridge and culvert construction and overall quality assurance, (ii) ensure that all works are carried out in full compliance with the engineering design, technical specifications and other contract documents, (iii) promote technology transfer either through associations between expatriate and local firms or by employment of local staff, (iv) undertake road safety audits, (iii) provide data for the project performance monitoring system (PPMS).

3. The supervision of the civil works will be carried out by qualified international and national consultants with satisfactory experience in implementing projects of a similar nature and size. The construction contract documents are based on FIDIC General Conditions of Contract.

4. The international consultant team will comprise: (i) a highway construction engineer / contract management specialist acting as the "Engineer" / Team leader (37 person-months), (ii) the pavement design and construction engineer (14 person-months), (iii) bridge engineer (24 person-months), (iv) earthwork and highway engineer (24 person-months), (v) material engineer for all kind of construction (23 person-months), (vi) quantity engineer (24 person-months) and (vii) road safety engineer (5 person-months).

5. The national consultant team will comprise: (i) highway construction engineer acting as deputy team leader (31 person-months) (ii) pavement design and construction engineers (56 person-months), (iii) material engineer (88 person-months), (iv) earthwork and highway engineers (88 person-months), (v) bridge engineers (80 person-months), (vi) quantity engineers (88 person-months), (vii) Geodesy engineer (88 person-months) and (viii) geology engineer for CW1-2 which contains the Buraat pass (10 person-months).

6. The consultant team will be fielded 8-10 months per year, totaling 24- 30 months throughout the 2–3 year construction period. The Employer may request for part of consultant team to provide additional services throughout the defects liability period, if deemed necessary.

7. The Team Leader will act as the "Engineer" in accordance with the FIDIC contract documents. The Engineer may delegate some authority to engineers, who will act as "the Engineer's Representative" also as defined in the construction documents. Project Implementation Unit (PIU) will be responsible for day to day management of implementation on behalf of the Employer.

8. The supervision team will be composed of highly qualified and experienced experts, who can carry out all the construction supervision duties as a fully competent and independent unit. The proposals should identify communication protocols that will ensure thorough coordination of the teams, so that all team members are at all times fully aware of the remedies to common problems, and so that the full experience of all team members can be applied as necessary to all four contract packages.

9. The duties of the Engineer/Team leader are to supervise the Works and to approve the materials and workmanship in cooperation and consultation with the PIU, in compliance with the Works Specification. The Engineer shall have no authority to relieve the Contractors of any of their duties or obligations under the contracts or to impose additional obligations not included in the contracts. The principal responsibilities of the Engineer will be the following:

- (i) to review the contractors' work programs and sources of materials and submit to PIU for the Employer's approval;
- (ii) to review, verify and further detail the design, the Contractors' working drawings and, if necessary, to issue further drawings and/or to give instructions to the Contractor after receiving the Employer's approval;
- (iii) to control and appraise the progress of the works, to order suspension of works and extensions of the period for completion of the works based on valid grounds and submit the proposal regarding this to PIU for Employer's approval;
- (iv) to certify all interim certificates for payment to the Contractors on the basis of measured work items or to certify the completion of the works or parts thereof and submit to PIU for Employer's approval
- (v) to inspect the works regularly during the construction period and the Defects Liability Period and to issue Defects Liability Certificates
- (vi) to carry out generally all duties of the Engineer as specified in the Contract, within the limitations specified therein;
- (vii) to advise the PIU on all matters relating to claims from the Contractor and to make recommendations thereon, including the possible recourse to arbitration; and
- (viii) Review and check the contractors' applications for subcontracting parts of the civil works, by reviewing ambiguities and discrepancies in contract documents, and in settling disputes with contractors and advise the PIU.
- (ix) Ensure that all required data are provided for setting out the civil works.
- (x) Review the contractors' working drawings and advise the PIU on further drawing requirements or other instructions to the contractors.
- (xi) Review and check the contractors' organizational arrangements, key personnel and construction programs, materials, and sources of materials and advise the PIU.
- (xii) Monitor the progress of the works against programmed targets, advise the PIU on measures to be taken to improve progress and quality, review and advocate proposed variation orders, and validate rate claims for works, and provide recommendations on alternatives.

- (xiii) Monitor the civil works so as to ensure that they are carried out in an environmentally sound manner and meet the requirements of the environment impact assessment (EIA), summary environment impact assessment (SEIA), the environment management plan (EMP), and laws and regulations of Mongolia.
- (xiv) Inspect the quality of the works with regard to workmanship and compliance with specifications; order, supervise, or perform tests on materials and civil works; advise on approval or disapproval of the contractors' plant and equipment; propose, if required, the uncovering of completed civil works and the removal and substitution of improper material and works.
- (xv) Check the progress of the civil works, examine and review sampling measurements of any work that is about to be covered or put out of view before permanent work is placed thereon, examine the measurements of the completed civil works, and (as directed by PIU) order the initiation of additional civil works that are part of the contract.
- (xvi) Supervise the contractors in all matters concerning safety and care of civil works including the provision of necessary lights, guardrails, fencing, and security.
- (xvii) Examine the contractors' accounts, invoices, claims, and other statements for errors and compliance with the contract, and suggest and make corrections thereto.
- (xviii) Collect PPMS related data before, during and just after the construction and deliver to PIU in time.
- (xix) Ensure road safety during construction and report incidents and make recommendations of safety measures to the PIU.

10. The duties of the Engineer's Representatives are, under the overall control of the Engineer, to supervise construction of the work and to test or order to test and examine any materials to be used or workmanship employed in connection with the works. They shall have no authority to relieve the Contractor of any duties or obligations under the Contract nor to order any works involving delay or any extra payment by the Employer nor to make any variation of or in the works. The Engineer may from time to time delegate to the Engineer's Representative any of the duties and authorities vested in the Engineer and may at any time revoke such delegation based on the Employer's approval.

7. International Consultant's Qualifications:

7.1. The Engineer/Team Leader

11. The Consulting firm employed by the Employer will appoint an individual to exercise the authority of the "Engineer". This individual, who will reside in Mongolia on a full-time basis throughout the period of the construction supervision services, will be a senior highway engineer with at least 15 years professional experience, including assignments in developed countries with at least 10 years of relevant managerial positions, as well as at least 10 years on similar projects, with experience in similar climatic and geographic conditions to those in western Mongolia. The candidate should have a proven record of managerial capability through the directing/managing of major international civil engineering works, including projects of a similar magnitude financed by a major multilateral international lending agency. The duties of the Engineer will include amongst others the issuing of decisions, certificates and orders as specified in detail in the construction contract documents. The Engineer will act as the consultant's authorized representative and administrator for the construction supervision consultancy services contract, with authority to raise with the Employer and make binding decisions on behalf of the Consultant on all matters pertaining to the consultancy services. The Engineer will also coordinate the four supervision teams including national engineers, to ensure that technical policies are correctly and consistently implemented on all the road sections included in the project.

7.2. International pavement engineer and earthwork engineer (2 positions)

12. Each engineer will be a Senior Engineer with at least 15 years of professional engineering experience and at least 10 years experience as a field engineer, at least 10 years experience in similar climatic and geographic conditions to those in western Mongolia; and at least 5 years experience with internationally financed road projects. A thorough understanding and experience with international best practices, modern highway construction technology and contractual arrangements used for the project is important. Engineers will be assigned to each Contract package being supervised by the Engineer and they will assist national pavement and earthwork engineers during the construction period.

13. In addition, they will review and assess pavement design and provide recommendations to ensure pavement quality. The assessment should be carried out on: (i) geological characteristics of quarries, (ii) quality control system of quarries, (iii) bitumen specification, (iv) asphalt mix plants' capacity and quality control ability, (v) equipment and labor on site, and (vi) quality control system on site. The recommendations should include, but not be restricted to: (i) selection of quarry, (ii) selection of bitumen, (iii) terms of the specification in the contract documents, and (iv) construction supervision system for PIU during the construction. An international highway engineer for earth works, supported by national engineers, will review and assess the sub-grade design, material and construction method, and provide recommendations to ensure the earth works quality.

7.3. International bridge engineer (1 position)

14. A qualified structural engineer with at least 15 years experience in bridge engineering including at least 10 years of assignments in developed countries, with 5 years experience in similar climatic and geographic conditions to those in western Mongolia. The candidate should have a thorough understanding and experience with international best practices, and of modern bridge construction technology. The candidate should be capable of monitoring the Contractors' bridge construction to assess and determine the need for adjustment of the works specified in the Contracts, and, as required, provide working drawings, specification details and instructions to the Contractors for any bridge within the construction site. The International bridge engineer will be assigned across all the Contract packages being supervised by the Engineer and will assist national bridge engineers during the construction period.

15. The international bridge engineer, supported by national engineers, will provide recommendations on bridge construction and maintainability aspects. Advice will be provided on: (i) design standards and design method, (ii) suitability of materials identified in the geological survey, (iii) technical capacity of cement concrete mixing plants, (iv) reinforcement corrosion protection measures, and (v) construction methods. The recommendations should include, but not be restricted to: (i) pile construction and driving method, (ii) quality control of concrete and casting methods, (iv) on site pre-stress management method, (v) recommendation on shoes and expansion joints, and (vi) recommendations on design modifications to improve maintainability.

7.4. International material engineer (1 position)

16. This position requires at least 15 years of professional engineering experience including 10 years supervising the testing and evaluation of road construction materials used in modern road construction techniques, with 10 years experience in similar climatic and geographic conditions to those in western Mongolia, and experience working with international financing agencies. The candidate must be familiar with all the standard laboratory testing procedures specified in the Contract Documents and must have past experience in pavement design and bituminous mix

design works as well as earthworks and bridge/culverts. The international materials engineer will be assigned across all Contract packages supervised by the Engineer and will assist national material engineers during the construction period.

7.5. International quantity engineer (1 position)

17. This position requires an engineer with at least 15 years of professional engineering experience including measurement and checking of actual quantities of embankments, sub-base, base course and other pavement associated materials. This experience should include at least 10 years on projects of a comparable nature in similar climatic and geographic conditions to those in western Mongolia. A thorough understanding and experience of international best practice involving modern road construction technology and contract management. The international quantity engineer will be assigned across all Contract packages supervised by the Engineer and will assist national quantity engineers during the construction period.

7.6. International road safety engineer (1 position)

18. This position requires an engineer with at least 15 years of professional engineering experience including measurement and checking of standard road safety furniture and signs along the roads and undertake the road safety audits. This experience should include at least 10 years on projects of a comparable nature in similar climatic and geographic conditions to those in western Mongolia.

8. National Consultant's Qualifications

8.1. Deputy Team Leader/Highway engineer

19. This engineer shall work on a full-time basis throughout the period of the road construction supervision services, will be a senior highway engineer with at least 15 years professional experience, including experience with at least 10 years of relevant managerial positions, as well as at least 5 years on similar projects. The Engineer will also coordinate the four supervision teams together with national engineers under instructions by team leader/ international engineer, to ensure that technical policies are correctly and consistently implemented on all the road sections included in the project.

8.2. All national engineers/consultants

20. All national engineers will have at least 10 years of professional engineering experience including 5 years supervising modern road construction techniques. These experiences should include at least 3 years on projects of a comparable nature in similar climatic and geographic conditions to those in western Mongolia. All candidates must be familiar with all the standard laboratory testing procedures, construction method, drawings and technical specifications specified in the Contract Documents and must have experience relevant to their identified role.

9. Submission of Reports, Documents and Drawings. The Consultants are required to submit to PIU various reports/documents including amongst others:

No.	Type of the reports	Date of submission	Number of copies
1	Inception report	Within 1 month after commencement	6 copies
2	Monthly progress reports	Each month after commencement	8 copies
3	Quarterly report	Each quarter	8 copies
4	Defect Liability Period Report	Within 28 days of issue of certificate of completion	8 copies
5	Project Completion Report	End of the consultant's work	8 copies
6	Monitoring and Evaluation Reports	Three months after project completion report	8 copies
7	Equipment Specifications and Cost Estimations for Road Maintenance Equipments	During service	8 copies
8.	Project Performance Management Report	Before, during and end of project implementation	8 copies

10. **Local Project Office and Logistics.** The Consultant is to provide their own Project office in Khovd during the construction supervision period. The Consultant will equip their own office, provide their own means of local transportation for staff in that office and make allowance to hire appropriate local administrative staff. The following services, facilities and equipment will be provided by the Client.

1. Description	Unit	CW1-1: 0-50km	CW1-2: 50-103.9km	CW1-3: 60km	CW1-4: 25.8km
Engineer's supervisory staff house	Flat-month	160	160	160	80
Engineer's office	m ² -month	3800	3800	3800	1900
Site laboratories	m ² -month	2000	2000	2000	1000
Providing of furniture and equipment for Engineer's office	L.S	1	1	1	1
Providing of furniture and equipment for site laboratories	L.S	1	1	1	1
Maintenance of furniture and equipment including communities and supply of stationary, computer supplies and other consumables for Engineer's offices	month	24	24	24	12
Maintenance of furniture and equipment including communities and supply of stationary, computer supplies and other consumables for site laboratories	month	24	24	24	12
Vehicles for the engineer	P.sum	4	4	4	3
Km travelled by vehicles for the engineer					
i) Toyota Landcruiser, 4WD or equivalent (new car)	Veh-km	90 000	90 000	120 000	60 000
ii) Mitsubishi Pajero, 4WD or equivalent (new car)	Veh-km				
iii) Pick up (new car)	Veh-km	102 000	102 000	200 000	60 000
		50 000	50 000	80 000	40 000
Km travelled by rented vehicles for the Engineer	Veh-km	80 000	80 000	100 000	50 000

FINANCIAL MANAGEMENT ASSESSMENT QUESTIONNAIRE

Topic	Response	Remarks
1. Implementing Agency		
1.1 What is the entity's legal status/registration?	A Department of Road Sector Policy Implementation Coordination Department under the Ministry of Roads and Transportation is a national government agency. It is assisted by the Project Implementing Unit (PIU). ²⁹	
1.2 Has the entity implemented an externally-financed project in the past (if so, please provide details)?	It has successfully completed the first phase of Project for the construction of paved road running from Nalaikh district, UB to the southern border point Zamiin-Uud under ADB financing. A 215 km long Nalaikh-Choir section of the paved road was constructed 2004–2005. The construction of Choir-Sainshand 225 km road section started in 2006.	
1.3 What are the statutory reporting requirements for the entity?	Mongolian Accounting Law enacted in 2002 requires international accounting reporting practices for the entity.	
1.4 Is the governing body for the project independent?	MRT is a Government Agency.	
1.5 Is the organizational structure appropriate for the needs of the project?	Yes.	
2. Funds Flow Arrangements		
2.1 Describe (proposed) project fund flow arrangements, including a chart and explanation of the flow of funds from ADB, government and other financiers.	Project fund flow is shown on a flow chart in Section 1 of this report.	
2.2 Are the (proposed) arrangements to transfer the proceeds of the loan (from the government / Finance Ministry) to the entity satisfactory?	Yes	
2.3 What have been the major problems in the past in receipt of funds by the entity?	There haven't been major problems in the past in the receipt of funds by the entity in respect to road Projects financed internationally.	
2.4 In which bank will the Imprest Account be opened?	In previous cases, Imprest Accounts were opened in Trade and Development Bank.	
2.5 Does the (proposed) project implementing unit (PIU) have experience in the management of disbursements from ADB?	PIU has an earlier experience in implementing externally-financed projects namely the construction of 214 km long road section under Mongolian Western Regional Road Development Project- Phase I, packages 1 and 2, funded by ADB and the GOM. PIU has accumulated enough experience in the management of disbursements from ADB for the last 2 years. An appropriate organizational structure for efficient management of disbursements has been set up.	

²⁹ As a result of government reorganization, MRT has absorbed the DOR. Currently, the Department of Road Sector Policy Implementation Coordination Department is in charge of the project.

Topic	Response	Remarks
2.7 Does the entity have/need a capacity to manage foreign exchange risks?	It can be monitored by the PIU.	
2.8 How are the counterpart funds accessed?	Allocation at the agreed percentage specified in the Loan Agreement through the annual state budget plan of the Government of Mongolia	
2.9 How are payments made from the counterpart funds?	Finance Ministry endorses the payments from counterpart funds within the approved budget.	
2.10 If part of the Project is implemented by communities or NGOs, does the PIU have the necessary reporting and monitoring features built into its systems to track the use of Project proceeds by such agencies?	Major state road projects were implemented with no involvements of any communities and NGOs in the past.	
2.11 Are the beneficiaries required to contribute to Project costs? If beneficiaries have an option to contribute in kind (in the form of labor), are proper guidelines formulated to record and value the labor contribution?	The beneficiaries are not required to contribute to Project costs. Beneficiaries do not have an option to contribute in kind (in the form of labor). In Mongolia the road companies that win work will recruit some local non professional people for construction work.	
3. Staffing		
3.1 What is the (proposed) organizational structure of the accounting department? Attach an organization chart.	As disbursements are made directly to executing body with respect to Projects financed by ADB, there is no need to establish a separate accounting unit and PIU just nominates a Project accountant.	
3.2 Identify the (proposed) accounts staff, including job title, responsibilities, educational background and professional experience. Attach job descriptions and CVs of key accounting staff.	PIU's accountant is. Ms. D. Tsetsegmaa, She has a higher accounting education /qualification and has worked in this position for the last 12 years.	
3.3 Is the Project finance and accounting function staffed adequately?	EA attaches importance to Project staffing including its finance and accounting function and as such financing and accounting staffing are regarded as adequate. As need arises EA will nominate additional accountants.	
3.4 Is the finance and accounts staff adequately qualified and experienced?	Yes. The finance and accounting staff is adequately trained and qualified with many years of work experience.	
3.5 Is the Project accounts and finance staff trained in ADB procedures?	ADB resident Mission conducts special training for project finance and accounts staff.	
3.6 What is the duration of the contract with the finance and accounts staff?	EA concludes a labor contract with the finance and accounts staff on yearly basis in compliance with Mongolian Labor Law.	
3.7 Indicate key positions not contracted yet, and the estimated date of appointment.	There are no key positions not contracted yet.	
3.10 Does the Project have written position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff?	Department of Roads approves position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff.	

Topic	Response	Remarks
3.11 At what frequency are personnel transferred?	A policy is pursued to keep key positions such as Chairman of PIU, Project Coordinator, and Project Accountant on sustainable basis until the Project is completed. But support staff, such as drivers and translators, is replaced if the need arises.	
3.12 What is training policy for the finance and accounting staff?	Participation in training courses held in Mongolia by the Government. In addition, annual training plan for the finance and accounting staff is agreed with ADB resident Mission.	
4. Accounting Policies and Procedures		
4.1 Does the entity have an accounting system that allows for the proper recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds? Will the Project use the entity accounting system?	In 1998, ADB implemented TA-2993-MON in Mongolia on the recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds. Disbursements are made directly to the executing body from ADB through the Ministry of Finance (MOF) using the imprest account.	
4.2 Are controls in place concerning the preparation and approval of transactions, ensuring that all transactions are correctly made and adequately explained?	Yes, there are controls in place. ADB accounting procedures are adhered to locally which clearly define the preparation and approval of transactions and loan utilization reports as well as duties and limits of authority of PIU and key positions.	
4.3 Is the chart of accounts adequate to properly account for and report on Project activities and disbursement categories?	Yes. The national accounting procedures are followed locally, the chart of accounts is adequate to properly account for and report on project activities and disbursement categories.	
4.4 Are cost allocations to the various funding sources made accurately and in accordance with established agreements?	Yes, cost allocations to the various funding sources are made accurately and in accordance with established agreements. The detailed conditions are in an established agreement of the Mongolian Government with ADB. ADB is directly financing road construction companies using International accounting standard for cost expenditure.	
4.5 Are the General Ledger and subsidiary ledgers reconciled and in balance?	IA uses VINITSA accounting software which corresponds with international standards and is approved by the MOF. Accordingly general ledger and subsidiary ledgers are reconciled.	
4.6 Are all accounting and supporting documents retained on a permanent basis in a defined system that allows authorized users easy access?	Accounting and supporting documents are checked and bound every month and deposited on a timely basis in accordance with Mongolian Accounting Law. Authorized users can get access to them with the permission of higher management. If required, under the surveillance of a project accountant the user can get acquainted with it.	

Topic	Response	Remarks
Segregation of Duties		
4.7 Are the following functional responsibilities performed by different units or persons: (i) authorization to execute a transaction; (ii) recording of the transaction; and (iii) custody of assets involved in the transaction?	The staff have the following responsibilities: 1. Project accountant executes a transaction but the recording of transactions and reports are made by an accountant nominated by IA. 2. Custody of assets involved in the transaction is done by the store-keeper/treasurer.	
4.8 Are the functions of ordering, receiving, accounting for, and paying for goods and services appropriately segregated?	Yes. These functions are segregated in the following way. 1. Ordering of goods and services is done by a qualified engineer or staff, and higher management monitors the whole process. 2. Accounting and paying for goods and services are executed by accountant and the manager exerts control over the execution and signing (first and second signature) the relevant documents. 3. Receiving is performed by the store-keeper under control of those ordered.	
4.9 Are bank reconciliations prepared by someone other than those who make or approve payments?	Bank reconciliations are prepared by the Project unit that prepares the following documents: 1. Order to establish the project unit; 2. Signature Form (approved by notary office) of persons who will sign accounting documents of the project; 3. Form of stamp. 4. Official letter (to order bank accounts).	
Budgeting System		
4.10 Do budgets include physical and financial targets?	Yes, budgets include physical and financial targets.	
4.11 Are budgets prepared for all significant activities in sufficient detail to provide a meaningful tool with which to monitor subsequent performance?	Yes. Budgets are prepared for all significant activities in sufficient detail to monitor subsequent performance. On the basis of budget report, the cost performance is strictly controlled.	
4.12 Are actual expenditures compared to the budget with reasonable frequency, and explanations required for significant variations from the budget?	Yes. Actual expenditures are monitored and compared to the budget regularly.	
4.13 Are approvals for variations from the budget required in advance or after the fact?	Approvals for variations from the budget are required in advance.	
4.14 Who is responsible for preparation and approval of budgets?	MRT (EA) is responsible for preparation of the budget and the Finance Ministry approves the budget.	
4.15 Are procedures in place to plan Project activities, collect information from the units in charge of the different components, and prepare the budgets?	Yes. A mechanism is in place to plan Project activities, collect information from the units in charge of the different components, and prepare, reconcile and approve the budgets.	

Topic	Response	Remarks
4.16 Are the Project plans and budgets of Project activities realistic, based on valid assumptions, and developed by knowledgeable individuals?	Project plan and budgets are prepared according to approved norms and standards by Project accounting staff trained on special courses conducted by the ADB. These are checked by relevant IA staff and approved by the MOF.	
Payments		
4.17 Do invoice-processing procedures provide for: (i) Copies of purchase orders and receiving reports to be obtained directly from issuing departments? (ii) Comparison of invoice quantities, prices and terms, with those indicated on the purchase order and with records of goods actually received? (iii) Comparison of invoice quantities with those indicated on the receiving reports? (iv) Checking the accuracy of calculations?	Invoice-processing procedures involve: 1. comparison of copies of purchase orders and receiving reports; 2. comparison of invoice quantities, prices and terms, with those indicated on the purchase order and with records of goods actually received; and 3. checking of the accuracy of calculations and obtaining manager's approval/first signature.	
4.18 Are all invoices stamped PAID, dated, reviewed and approved, and clearly marked for account code assignment?	When payments are made all invoices are stamped PAID and dated. The approval process is given under No. 4.17.	
4.19 Do controls exist for the preparation of the payroll and are changes to the payroll properly authorized?	Controls exist for the preparation of the payroll to Project staff according to the MOF approved limit. No changes are made to the payroll until the completion of the project.	
Policies And Procedures		
4.20 What is the basis of accounting (e.g., cash, accrual)?	The basis of accounting is accrual, according to Mongolian Accounting Law.	
4.21 What accounting standards are followed?	According to Mongolian Accounting Law, International accounting standards shall be followed.	
4.22 Does the Project have an adequate policies and procedures manual to guide activities and ensure staff accountability?	Project staff that requires special qualifications such as engineers and accountants are trained and provided with a procedures manual. Staff accountability is regulated by position descriptions, duties and responsibilities and approved by the project manager.	
4.23 Is the accounting policy and procedure manual updated for the Project activities?	The accounting policy shall be approved and enforced by an entity's management in accordance with Accounting Law of Mongolia. As a result of TA-2993 implemented by ADB in association with EA in 1998, accounting policy has been formulated and accounting staff have been provided with procedure manuals.	
4.24 Do procedures exist to ensure that only authorized persons can alter or establish a new accounting principle, policy or procedure to be used by the entity?	Accounting principles and policies can be altered or established under the following circumstances: 1. Changes are made in the Accounting Law. 2. Accounting software is changed according to Law. Procedure to be used by the entity can be altered by EA upon agreement with ADB.	

Topic	Response	Remarks
4.25 Are there written policies and procedures covering all routine financial management and related administrative activities?	TA-2993 implemented by ADB in association with EA in 1998 has contributed to solving issues connected with policies and procedures covering all routine financial management and related administrative activities.	
4.26 Do policies and procedures clearly define conflict of interest and related party transactions (real and apparent) and provide safeguards to protect the organization from them?	TA-2993 implemented by ADB in association with EA in 1998 defined loan financing principles and duties, responsibilities, lines of supervision for all related officers, managers, and staff which contributed much to the limitation of any rise of conflict of interests. Direct disbursements made from ADB to the executing body provide safeguards to protect the organization from any conflict of interests.	
4.27 Are manuals distributed to appropriate personnel?	During the implementation of the above project, the manuals were distributed to all Project related staff.	
Cash and Bank		
4.28 Indicate names and positions of authorized signatories in the bank accounts.	Project accountant D. Tsetsegmaa and State Secretary of MOF are authorized signatories to sign the withdrawal applications for ADB transactions.	
4.29 Does the organization maintain an adequate, and up-to-date cashbook, recording receipts and payments?	MRT as EA does not do cash transactions.	
4.30 Do controls exist for the collection, timely deposit and recording of receipts at each collection location?	The Project Accountant is responsible for collection, timely deposit and recording of receipts. The administration exerts controls over this performance.	
4.31 Are bank and cash reconciled on a monthly basis?	Bank account records are collected on a weekly basis and cash reports are reconciled on a monthly basis.	
4.32 Are all unusual items on the bank reconciliation reviewed and approved by a responsible official?	There are not unusual items on the bank reconciliation. In case of unusual items on the bank reconciliation, the PIU accountant requests for guidance from MOF and EA.	
4.33 Are all receipts deposited on a timely basis?	All receipts are bound on a monthly basis and deposited into archives on a yearly basis.	
Safeguard over Assets		
4.34 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?	Project staff assigned to assets is provided with a signed control card, a copy of which is kept by the accountant. Reconciliation is made each year with the control card.	
4.35 Are subsidiary records of fixed assets and stocks kept up to date and reconciled with control accounts?	Subsidiary records of fixed assets and stocks are kept up to date and reconciled with control accounts by accounting software approved by the Finance Ministry.	
4.36 Are there periodic physical inventories of fixed assets and stocks?	Physical inventories of fixed assets and stocks are done once a year according to Accounting Law.	

Topic	Response	Remarks
4.37 Are assets sufficiently covered by insurance policies?	No. Vehicles are covered by insurance policies according to law however other assets are mostly covered by insurance policy against the fire.	
Other Offices and Implementing Entities		
4.38 Are there any other regional offices or executing entities participating in implementation?	No. There are no other regional offices or executing entities participating in implementation.	
4.39 Has the Project established controls and procedures for flow of funds, financial information, accountability, and audits in relation to the other offices or entities?	No. As there are no other regional offices or executing entities participating in implementation therefore no controls and procedures are established for flow of funds in relation to other offices.	
4.40 Does information among the different offices/implementing agencies flow in an accurate and timely fashion?	As there are no other offices/implementing agencies participating in implementation, there is no information flow.	
4.41 Are periodic reconciliations performed among the different offices/implementing agencies?	As there are no other offices/implementing agencies participating in implementation, there are no reconciliations.	
Other		
4.42 Has the Project advised employees, beneficiaries and other recipients to whom to report if they suspect fraud, waste or misuse of Project resources or property?	If fraud, waste or misuse of Project resources or property are detected the employees, beneficiaries and other Project recipients should report to PIU management and the Project Consultant. This is written in their responsibilities and duties.	
5. Internal Audit		
5.1 Is there an internal audit department in the entity?	No. There is no internal audit department in the entity. A joint professional group from the MOF and MRT conducts inspection/auditing and assessment of project activities.	
5.2 What are the qualifications and experience of audit department staff?	Professionals from the Ministries of Finance and MRT and sometimes ADB are included in the above mentioned group.	
5.3 To whom does the internal auditor report?	Reports prepared by the group are submitted to the Ministries of Finance and MRT for discussion by the Boards of both Ministries.	
5.4 Will the internal audit department include the Project in its work program?	With the start of the project, the inspection/auditing group is set up with its work program.	
5.5 Are actions taken on the internal audit findings?	Yes. Following the findings of the group, relevant instructions are given to the Project Steering Committee and appropriate controls are exerted.	
6. External Audit		
6.1 Is the entity financial statement audited regularly by an independent auditor? Who is the auditor?	Yes. Entity financial statement is audited on a yearly basis by an independent auditor.	

Topic	Response	Remarks
6.2 Are there any delays in audit of the entity? When are the audit reports issued?	There are no delays in audit of the entity. Audit reports are issued within one month after audit is being made.	
6.3 Is the audit of the entity conducted according to the International Standards on Auditing?	The audit of the entity is conducted according to Mongolian Law on Auditing and the International Standards on Auditing.	
6.4 Were there any major accountability issues brought out in the audit report of the past three years?	No. There have been no accountability issues during the past three years.	
6.5 Will the entity auditor audit the Project accounts or will another auditor be appointed to audit the Project financial statements?	An independent auditor from an auditing company will audit the Project accounts.	
6.6 Are there any recommendations made by the auditors in prior audit reports or management letters that have not yet been implemented?	There are no recommendations made by the auditors that have not yet been implemented.	
6.7 Is the Project subject to any kind of audit from an independent governmental entity (e.g., the supreme audit institution) in addition to the external audit?	Yes. EA is audited by State auditor every year.	
6.8 Has the Project prepared acceptable terms of reference for an annual Project audit?	Auditing time is not predetermined. State auditor sets the time for auditing.	
7. Reporting and Monitoring		
7.1 Are financial statements prepared for the entity? In accordance with which accounting standards?	Financial statements are prepared for the entity in accordance with international accounting standards.	
7.2 Are financial statements prepared for the implementing unit?	Yes. Financial statements are prepared for the implementing unit.	
7.3 What is the frequency of preparation of financial statements? Are the reports prepared in a timely fashion so as to useful to management for decision making?	Financial statements are prepared on a monthly and quarterly basis. The reports are prepared so as to make decisions for the management.	
7.4 Does the reporting system need to be adapted to report on the Project components?	The reporting system is in the same tune with report on the Project components.	
7.5 Does the reporting system have the capacity to link the financial information with the project's physical progress? If separate systems are used to gather and compile physical data, what controls are in place to reduce the risk that the physical data may not synchronize with the financial data?	Yes. Since the reporting system is based on international standards introduced by a special ADB project, it has the capacity to link the financial information with the project's physical progress. Performance indicators are controlled stage by stage, thus physical data is synchronized with the financial data.	
7.6 Does the Project have established financial management reporting responsibilities that specify what reports are to be prepared, what they are to contain, and how they are to be used?	Yes. Within the framework of ADB TA-2993 project financial management reporting responsibilities were established. This management is also spelled out in the Mongolian Auditing Law.	
7.7 Are financial management reports used by management?	Yes.	

Topic	Response	Remarks
7.8 Do the financial reports compare actual expenditures with budgeted and programmed allocations?	The annexes of financial reports give comparisons of actual expenditures with budgeted and programmed allocations.	
7.9 Are financial reports prepared directly by the automated accounting system or are they prepared by spreadsheets or some other means?	Financial reports are prepared directly by the automated accounting system approved by the MOF.	
8. Information Systems		
8.1 Is the financial management system computerized?	Yes. Fully computerized.	
8.2 Can the system produce the necessary project financial reports?	Yes.	
8.3 Is the staff adequately trained to maintain the system?	Yes. The staff is specially retrained more than twice and given certificates to maintain the system.	
8.4 Does the management organization and processing system safeguard the confidentiality, integrity and availability of the data?	Yes. Confidentiality, integrity and availability of the data are safeguarded by the entity's internal rules.	

SUMMARY SOCIAL DEVELOPMENT ACTION PLAN¹

1. A Social Development Action Plan is prepared to ensure inclusive project benefits for affected communities and to avoid or mitigate adverse impacts of the Project. The Plan aims to protect or enhance the quality of life of the vulnerable groups. Specific measures outlined in the Plan to ensure equitable benefits to the vulnerable groups are developed on the basis of a detailed poverty and gender analysis undertaken within the project impact zone. The Plan will ensure that local people are consulted and are provided opportunity to participate in decision making and implementation activities. The overall objective of the Plan is that the project investment optimizes potential benefits with appropriate consideration to gender, project affected people, poor and vulnerable groups, labor issues and mitigates potential risks of HIV/AIDS and human trafficking and road safety concerns. This Appendix (No. 4) is a summary statement and a detailed SDAP is available for reference.

A. Community Consultation and Information Dissemination Strategy

2. The project has a clear strategy to ensure active participation of local communities and households in the overall project cycle. Proactive efforts will be made to reach out to households to provide timely and complete project information, in a language and means easily understandable to the local communities. Special focus will be made towards engaging with the poor and vulnerable households (HHs) and ensuring their participation in the project. By means of this SDAP, the Project will adopt following measures to disseminate information to the communities and households living near/around the project site.

B. Community/Households Meetings

3. The Project, with the help of local staff at soum level, will reach out to households living along the project corridor to provide them with timely information about the construction activities, schedules and such other project related information that will help them to assess if the construction will have any negative impacts for these households. Such community meetings will also be used to plan various social development activities and to review the effectiveness of various interventions under implementation.

C. Distribution of Pamphlets

4. The project implementation unit (PIU) will prepare pamphlets and brochures related to the project, sharing project information, details of the road section and the social and environment mitigation measures. These pamphlets and brochures will be distributed to the project communities and HHs and other key stakeholders. All dissemination material will be prepared in the local language and will be easily understandable to the local communities.

D. Information Bureau at Soum Level

5. A project information dissemination bureau will be established in collaboration with the three local soum governments. These bureaus will have all material and information related to the project. The local communities will be informed about these bureaus and will be encouraged to access the bureaus for project information and for submitting their suggestions for grievances, if any.

¹ The SDAP is being updated. The current version of SDAP will be replaced with the updated SDAP upon readiness, tentatively by 31 December 2013.

E. Social Development Action Plan Components

6. See Table A4.1 for details.

F. Institutional Arrangement, Monitoring, and Reporting

7. The project visualizes a multi-pronged strategy to achieve project benefits that requires involvement of a number of institutions and agencies. Proper coordination and liaising among various agencies is necessary for a successful implementation of the SDAP. For this reason, the SDAP will be treated as an integral part of the Project and will be implemented by PIU. The social and environment unit at PIU level will be responsible for proper planning, implementation and monitoring of the SDAP. The field level implementation will be handled by a qualified staff at soum level (for project 1 there will be three staff at respective soum level) that will be responsible for implementation of the SDAP. They will work closely with local soum level authorities, NGOs and other stakeholders. The staff at PIU and field level will ensure that collaboration is done with specialized institutions and NGOs to handle issues like skill training, HIV/AIDS and human trafficking. The PIU will be responsible for internal monitoring of proper implementation of SDAP. The field staff will report to PIU staff on a monthly basis. The PIU, through the IA, will update ADB on a biannual basis on the progress and results of the implementation of the SDAP.

G. Budget

8. The total allocation for implementation of the SDAP over 4 years will be US\$120,000. This will cover the cost of human resource, information dissemination material, training programs and support for small enterprise development.

Table A4.1: Proposed Action Plan (2012-2015)

Proposed Action	Targets	Agencies	Timing	Funding	Monitoring Indicators
1. Employment generation during construction	At least 40% of construction labor to be hired locally with women and poor and vulnerable sections of the community given equitable allocation. Contractors will provide appropriate training as well as health and safety awareness.	EA, Contractor, local government agencies	2012-2015	No additional fund required	* Number of local (unskilled and skilled) labor employed and trained, by ethnic group * Contract Clause
2. Micro enterprise opportunities	Local entrepreneurs including women and poor and vulnerable sections to be given support to provide services (eatery, lodging, shops etc.) required during construction	EA, Contractor, local government agencies	2012-2015	??	Number of local businesses provisioning the camps, particularly by poor and vulnerable groups including women.
3. Promotion and Support of Livelihood Activities for the post construction period as part of the income enhancement measures	Local project affected population, poor households and households headed by women and disabled people will be given special assistance (training and capital) to engage in small enterprises to be set up along the road	Ministry of Labor & Social Welfare, Local officials, NGOs, Local Chamber of Commerce Women's group, ethnic minority and poor HH	2013 onward	Fund from existing programs of Employment generation Fund and Fund from Small and Medium size Enterprises	* Number of skills training conducted * Number of poor and vulnerable HH and women provided training * Number of trained participants provided capital to engage in micro enterprise * Number of micro enterprises operating along the road as a result of the program
4. Consultation and Participation Activities	All stakeholders, particularly women	EA, local officials,	2012-2015	No additional fund required	* Number of consultations undertaken with list of participants indicative of gender
5. Information and Education Campaign on HIV/AIDS, STD and Human Trafficking Prevention	Local population along the road and nearby baghs	Ministry of Health, Social Welfare, Traffic Police, local officials, EA , and community members	2012-onward	Fund from existing program for general implementation. \$5,000 for info material production	* Number of workshops conducted and number of participants including the poor and vulnerable sections and women. * Number and types of information materials disseminated

Proposed Action	Targets	Agencies	Timing	Funding	Monitoring Indicators
6. Road safety awareness	Local population along the road and nearby baghs	Ministry of Health, Social Welfare, Traffic Police, local officials, EA, and community members	2012-onwards	Fund from existing program for general implementation. \$5,000 for info material production	<ul style="list-style-type: none"> * Number of workshops conducted and number of participants including the poor and vulnerable sections and women. * Number and types of information materials disseminated
7. Community based monitoring and reporting system on HIV/AIDS, human trafficking and Road Safety	Local population along the road and close to the border zone	Ministry of Labor and Social Welfare, local officials, EA, police and community members	2012-onward	No additional fund required	<ul style="list-style-type: none"> * Number/types of community members trained on HTP monitoring and reporting * Number of cases reported
8. Provide advice and information on existing micro credit programs at soum and aimag levels for community capacity building to ensure sustained economic benefits beyond the project duration	Vulnerable households in the Project soums	Ministry of Labor & Social Welfare, Local officials, NGOs, Local Chamber of Commerce	2012 - ongoing	Fund from existing programs of Employment generation Fund and Fund from Small and Medium size Enterprises	<ul style="list-style-type: none"> * Reports on the linkages established between concerned agency and the community and households * Number of HH and individuals benefiting from the program, by ethnicity and gender
9. Coordination and liaison with local authorities to review development program and investment in the aimag	Ensure all groups in each bagh of the two soums participate and benefit.	Ministry of Labor & Social Welfare, Local officials, NGOs, Local Chamber of Commerce	2012 - ongoing	No additional fund required	<ul style="list-style-type: none"> * Report on the development program and investment allocated to local communities

ENVIRONMENTAL MANAGEMENT PLAN FOR PROJECT 1

Table A5.1: Detailed Environmental Management Plan

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
I. Pre-Construction Phase						
1. Fauna						
Wildlife corridor restrictions	Studying/Monitoring wildlife routes and animal behavior	70,000	Mankhan Nature Reserve and other potential Saiga movement corridors	At pre-Construction, Construction and post Construction phases	Mongolian research institute or an environmental NGO supported by an international wildlife biologist	MRT/MNET
2. HIV/AIDS/STIs, Communicable Diseases, and Human Trafficking						
	Awareness Raising Campaign for local population ¹	Included in HIV/AIDS budget	Project Area	Pre-construction and construction	PIU/MRT	MRT
3. Public Consultation on EMP Implementation						
People's opinion on the EMP Implementation	Public consultations conducted to disclose information on the EMP and its implementation process and obtain the opinions of environmental experts and general public on the detailed design in environmentally sensitive areas and other affected areas. Consultations will include: identification, design, and construction of livestock and wildlife crossings; location, quantities needed, operation, and restoration of borrow areas; location, quantities of water withdrawals from surface and groundwater; and construction scheduling to avoid conflict with traditional use areas during the construction period	5,000	Mankhan	Pre-construction and construction	PIU/SE	MRT

¹ Provision for HIV/AIDS prevention campaign for workers will be included in work contracts.

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
Reporting project environmental monitoring	Training PIU on project environmental reporting	Provided under capacity building of PIU	-	Pre-construction	MRT	MRTUCD
II. Construction Phase						
1. Grievance Redress						
Grievances	Official in charge of people's grievance will be designated in MRT and PIU. A leaflet outlining environmental protection measures and listing grievance contact points will be distributed. Community leaders will be given detailed information on the grievance management process NGOs will be informed in the same manner as the community leaders	10,000	Throughout the Project alignment	Before construction	PIU/MRT	MRT
2. Soil						
Soil erosion	Preparation of a Soil Erosion management Plan Areas of soil clearance should be minimized; Less erodible materials should be selected and good compaction, placement of gabions and riprap particularly around bridges and culverts Stepped embankments will be required for embankments greater than six meters. Separation of topsoil from subsoil during the excavation works; reuse of topsoil as a superficial layer; Reshaping the slope surface by notching, blazing and pocking to enhance seedling survivability; Seeding with a fast growing native species and seed mix immediately	Included in the main civil works cost	throughout the Project area	Construction Period	Contractor	SE/PIU

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
	after fill placement; Stabilization of embankment slopes and road cuts by re-vegetation with grazing resistant plant species; Completion of discharge zones from drainage structures with riprap to reduce erosion when required. Down drains/chutes lined with riprap/masonry or concrete to prevent erosion. Construction in erosion and flood-prone areas should be restricted to the dry season Using geotextile for erosion control will be limited but might be justified in some locations.					
Permafrost	Precautions in designing of roadbed in embankments; Erection of the roadbed of rock, coarsely clastic rock and sand soils, Using natural and artificial heat-insulating materials in subgrade, embankment and road pavement; Using non-woven synthetic materials (geotextile) in subgrade and embankment Replacement of waterlogged soils of seasonally thawing layer and ice-saturated underlying permafrost with coarsely clastic rock and sand soils correspondingly.	Included in the main civil works cost	In permafrost areas	Construction Period	Contractor	SE/PIU
3. Natural Hazards						
Flashfloods	Installation of box culverts Warning signs	Included in the main civil works cost	Identified flash flood prone areas	Construction phase	Contractor	RSRC/PIU
Blowing and drifting snow	Installation of snow fencing	Included in the main civil works cost	Baga Ulaan Davaa	Construction phase	Contractor	SE/PIU

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
4. Air Quality						
Generation of dust	All earthwork vehicles shall be covered to avoid spillage Material storage site should be 300 m away from residential areas Water will be sprayed on the construction sites and major feeder roads twice a day during dry season	72,000	Construction sites, asphalt plants	Construction phase	Contractor	SE/PIU
Emissions from Construction Vehicles, Equipment, and Machinery	The asphalt batching plants/ crushing plants must be fitted with dust extraction units in compliance with local standards All vehicles, equipment, and machinery used for construction shall be regularly maintained and correctly operated (including the use of dust filters or hoods) throughout the Project alignment.	20,000 for air pollution control equipment for asphalt plants / crushing plants	Construction sites (asphalt plants / crushing plants)	Construction period	Contractor	SE/PIU
5. Water Issues						
Contamination of water bodies	Control of water flow speed by means of rip-raps, dissipation structures, grass, etc. Storm water drainage and retention basins would be constructed and a siltation fence (where a river/stream is nearby) would be installed prior to commencement of construction; Contractor should develop and implement a Spill Management Plan	Included in the main civil works cost	Construction sites	Construction period	Contractor	SE
Contamination of drinking water sources	Existing water wells and springs would be clearly marked to prevent accidental damage from construction vehicles	2,000	Throughout the 103.3 km section	Pre-construction	Contractor	SE/PIU
Monitoring of impacts on water bodies	Monitoring of the basic parameters of wastewater and affected water bodies (Temperature, suspended particles, pH, dissolved oxygen	40,000	Key rivers and streams	Construction period	Contractor/SE	PIU

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
	content, COD, BOD, oil products)					
Conservation of water and protection of water sources	<p>Water withdrawal plan: Estimation of the specific locations and estimation of quantities for water withdrawals from both surface and groundwater.</p> <p>It will specify that the water shall not be taken from protected areas.</p> <p>Procedures for abandonment of wells will be specified. Measures for protection of surface water at water withdrawal points.</p> <p>Spill Management Plan to apply at water withdrawal points.</p>	Included in civil works contracts	Identified water withdrawal points used for construction	Construction period	Contractor/SE	PIU
6. Wildlife						
Wildlife corridor restriction	Installation of wildlife reflectors; Installation of warning signs; Speed restrictions	5,000	Wildlife migration routes in the Project Section	Installation of reflectors and signs – construction phase; Maintenance of reflectors – Operation phase	Contractor, Administrations of SPA in Khovd and coordination with WWF and WCS.	PIU
Wildlife Crossing	Construction of Wildlife Crossing Points	Included in civil works contracts	Critical areas for wildlife movements	End of Construction Period	Contractor, Administrations of SPA in Khovd and coordination with WWF and WCS.	PIU
Illegal Poaching and Hunting	Clauses written into construction contracts: immediate firing and prosecution of individuals involved in poaching and illegal trade, hunting, or cutting of vegetation	The restriction will be included in construction contracts	Project section and associated component sections	Construction and post-construction	Contractor	PIU/MNET
7. Noise and Vibration						
Blasting Operations	Blasting operations shall be carried out in accordance with Law on Control of Explosives	Safety measures are included in the main civil works	Cut areas and quarries	Construction period	Contractor	SE/PIU

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
	<p>(2004)</p> <p>Blasting schedules shall be publicly disseminated in areas where residences will be impacted by the blasting noise including shepherds.</p> <p>Potential structures which may be impacted from blasting vibration will be identified prior to blasting and monitored during blasting.</p> <p>Appropriate safety measures will be implemented. This applies to all blasting sites (cuts, rock quarries) during all blasting activities.</p> <p>Trial blasts in less sensitive areas will be made for better blast design and identification of potential zone of influence.</p> <p>Noise Reduction techniques will be used to decrease physical disturbance of wildlife</p>	cost 10,000 (blasting mats)				
Noise from Vehicles, Plant, and Earthmoving Equipment	<p>Plant and equipment used in construction shall strictly conform to local noise standards.</p> <p>Within 200 m of the nearest habitation, construction work such as crushing, concrete mixing and batching, mechanical compaction, etc., will be stopped between 22:00 and 06:00 hours throughout the Project area, sites temporarily acquired, and all borrow areas.</p>	Included in the main civil works cost	Construction Sites	Construction period	Contractor	SE/PIU
8. Historical, Cultural, and Archaeological Heritage						
Encountered during Construction	<p>If a historical, cultural, or archaeological relic is encountered during construction, throughout the Project area, all activities will halt and an established action plan will be implemented (notification of soum/district governor, Institute of</p>		Project Area	Construction Period	Contractor	MRT, If needed soum/district governor, Institute of Archaeology and local police

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
	Archeology and local police). Works will recommence only after appropriate measures have been taken as requested by the appropriate authority, and confirmation has been received from them that works may resume.					
9. Restoration of Borrow Pits and Quarries						
Reinstatement of borrow pits and quarries	Topsoil strip (where necessary) Grassing the area	Included in the main civil works cost	Identified quarries and borrow pits along the road	After a completion of construction works	Contractor	SE/PIU
10. Construction Camps						
Damage of topsoil Contamination related to fuel storage and fuelling operations Sewerage related contamination Waste management	Proper construction camp management in compliance with Construction Camp Management Plan; Proper waste management in compliance with Waste Management Plan; Proper spill management in compliance with Spill Management Plan.	25,000			Contractor	SE/PIU
11. Road Safety	Planning to reduce the likelihood of accidents Education of users on the risks of high speeds Enforcement of traffic laws	Included in road safety budget	In all sections	Design, Construction, and Operation phases	Contractor, Local Police	SE/PIU
12. Livestock Crossings	Construction of livestock crossing points	Included in the main civil works cost	Traditional areas where herders cross the road corridor with their livestock	Towards the end of construction	Contractor	SE/PIU
III. Operation Phase						
1. Solid waste	Contractors will be required to clean up the ROW after construction Garbage bins will be installed in maintenance centers and service stations Staff in the maintenance centers	10,000	In all sections	Operation period	MRT	MRT

Environmental Issue	Mitigation Measures	Estimated Cost, \$US	Location	Time Frame	Responsibility	
					Implementation	Supervision
	will carry out periodical solid waste collection					
2. Water Quality	Monitoring in proximity to key stream	The cost of this equipment is included in Water Quality Monitoring during Construction Phase			Water Quality Monitoring Contract	State Professional Inspection Agency

DOR = Department of Roads, EMP = environmental management plan, MNET = Ministry of Nature, Environment and Tourism, MRT = Ministry of Roads and Transportation, NGO = nongovernment organization, PIU = project implementation unit, SE = supervising engineer.

Table A5.2: Environmental Monitoring Framework

Monitoring Parameters	Location and Frequency of Parameter Measurement	Location	Time Frame	Responsibility
1. Water Quality	<p>A. Monitoring Parameters: Monitoring of the basic parameters of wastewater and affected water bodies (Temperature, suspended particles, pH, dissolved oxygen content, COD, BOD, oil products), turbidity, hydrocarbon (oil, grease, fuels) , other toxic construction chemicals</p> <p>B. Monitoring Frequency: Construction phase: daily Operation phase: monthly Monitoring points: Key streams at risk during construction and operation</p> <p>C. Monitoring Standard Mongolian standard: MNS 4586:1998 MNS 4943:2000</p>	Key streams crossing the alignment	Construction and operation phases	<p>Construction phase – Water Quality Monitoring Contract</p> <p>Operation phase: State Professional Inspection Agency</p>
2. Wildlife	<p>A. Monitoring Item Endangered wildlife and movement patterns.</p> <p>B. Monitoring Frequency Wildlife survey to determine movement corridors and crossing points</p> <p>C. Monitoring Points Wildlife migration routes near Mankhan Nature Reserve and other important areas along the corridor</p>	In ecologically sensitive Project Areas	Preconstruction and construction	<p>Preconstruction and construction Mongolian research institute or an environmental NGO supported by an international wildlife biologist</p> <p>Operation: Administration of SPA of Khovd aimags</p>

