

**MINISTRY OF PUBLIC WORKS AND TRANSPORT
KINGDOM OF CAMBODIA**

**CAMBODIA NORTHWEST PROVINCIAL ROAD
IMPROVEMENT PROJECT
EDCF LOAN NO. KHM-9**

MONTHLY REPORT No.4

February 2012



KOREA CONSULTANTS INTERNATIONAL
IN ASSOCIATION WITH YOOSHIN ENGINEERING CORPORATION



KOREA CONSULTANTS INTERNATIONAL

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**EDCF LOAN NO. KHM-9: CAMBODIA NORTHWEST
PROVINCIAL ROAD IMPROVEMENT PROJECT
MINISTRY OF PUBLIC WORKS AND TRANSPORT**

March 2012

PHENG Sovicheano

Project Director
Project Management Unit 3 (PMU3)
Ministry of Public Works and Transport
Corner Norodom Blvd. and St. 106
Phnom Penh, Cambodia

Our Ref No.KCI-KHM-9-12-

Ref; EDCF Loan KHM-9: Cambodia Northwest Provincial Road Improvement Project
Subject: Submission of Monthly Progress Report No.4 (February 2012)

Dear Sir,

It is pleasure to submit Five (5) copies of the Monthly Progress Report No.4 (3 copies for MPWT and 2 copies for EDCF) in accordance with Section 4, Reporting Requirement of Term of Reference (Contract Condition) as described in 4.2.2.

This Monthly Report Comprise our activities performed during the month of February 2012 in relation to the above Project.

Your continuous support and kind cooperation for the successful executing of our assignments would be highly appreciated.

Sincerely yours

Myung-Geun Lee

Team Leader
Korea Consultants International
EDCF Loan KHM-9

CC : Mr. SAR Vutha, Office Manager.PMU3
Mr. Sok Sam An, Project Manager, PMU3
Ms. HANG Sochivy, Senior Accountant.PMU3

Project Name: Cambodia Northwest Provincial Road Improvement Project

EDCF Loan No. KHM-9

Report Name: Monthly Progress Report No.4, January 2012

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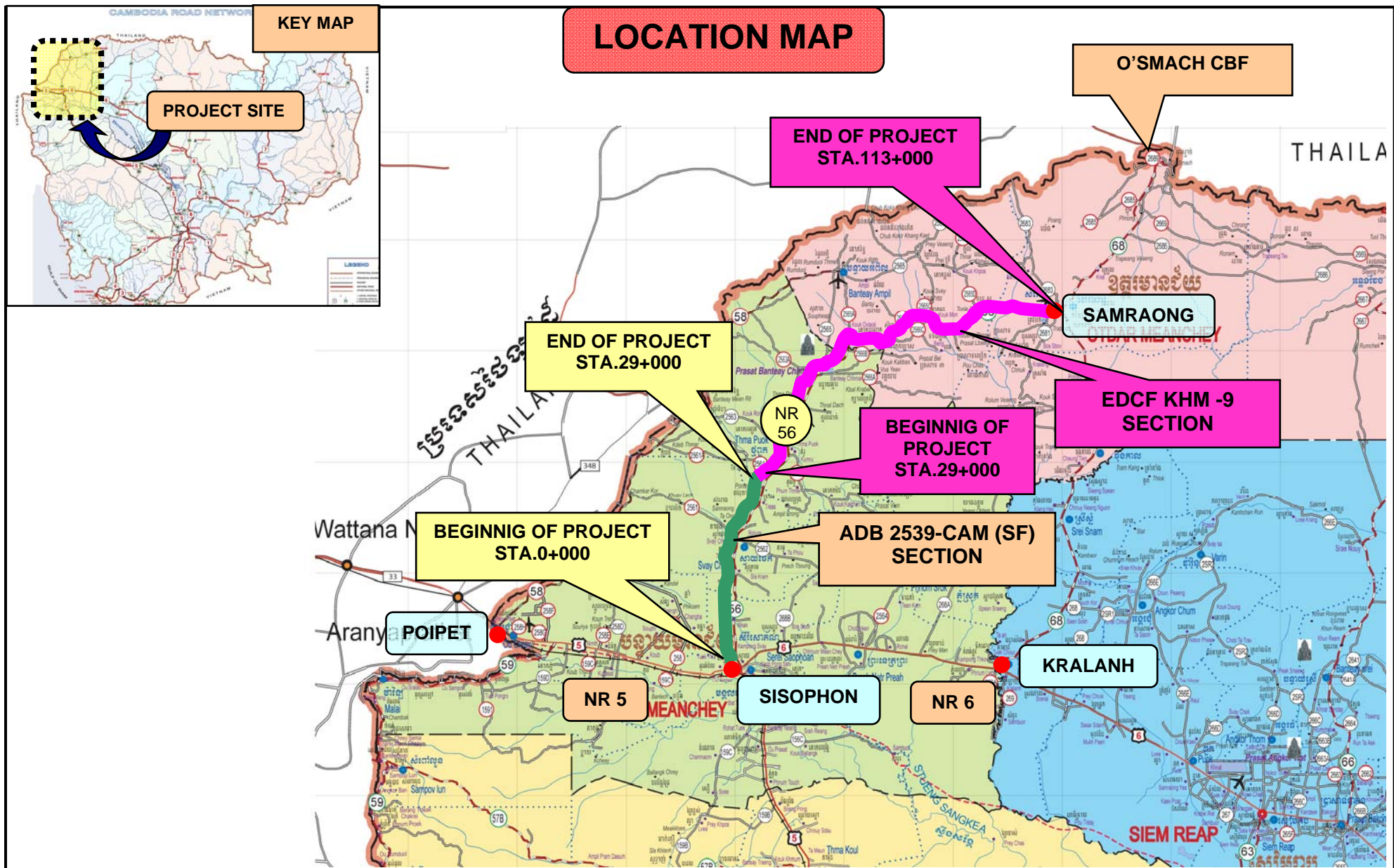
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ABBREVIATIONS

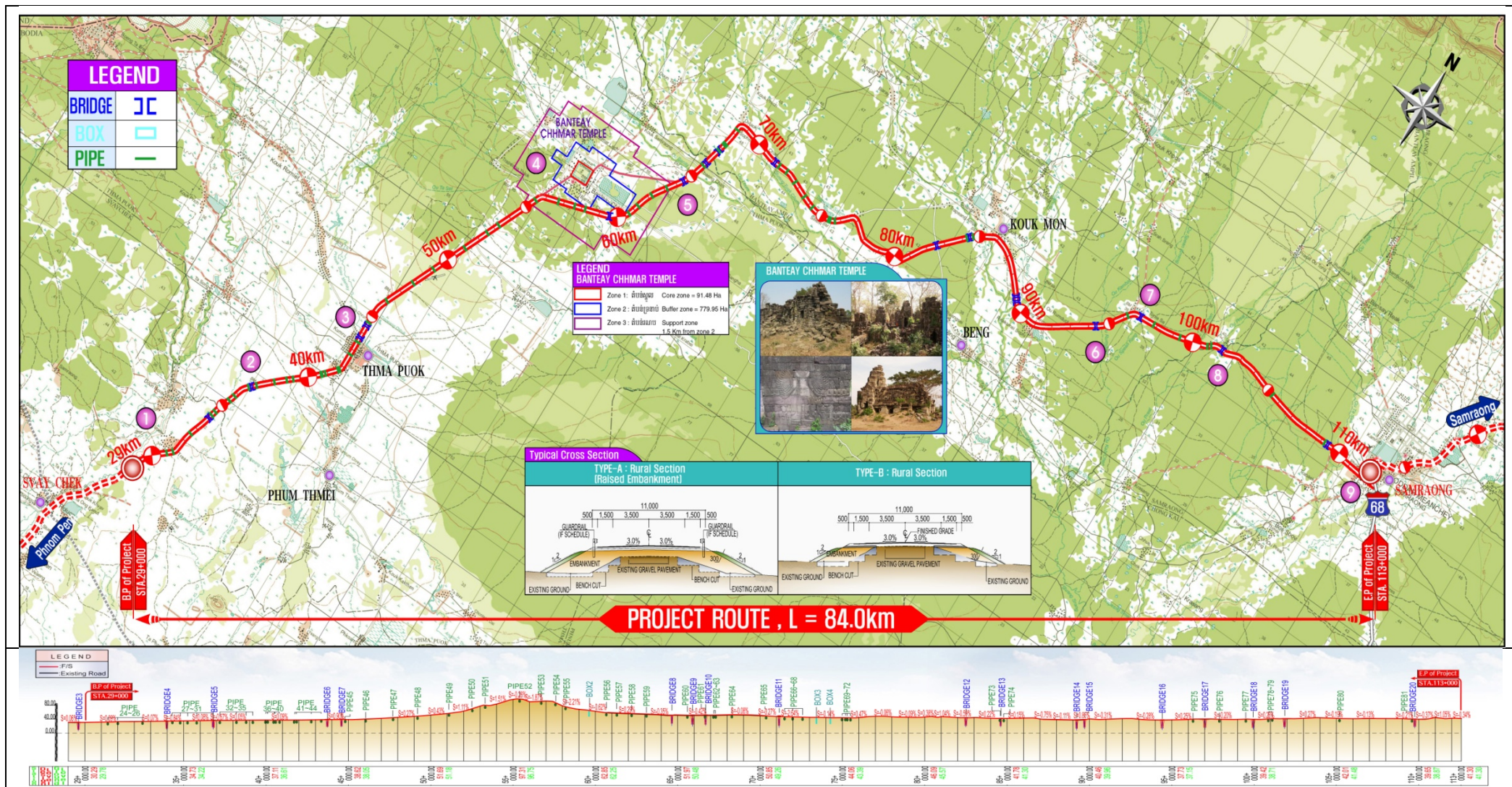
AASHTO	Association of American Society of Highways and Transportation Officials
ADB	Asian Development Bank
AP	Project Affected People
ASTM	American Standard of Testing and Materials
ATCS	Automatic Traffic Counting System
BME	Benefit Monitoring and Evaluation
CBF	Cross Border Facilities
CCA	Common Control Area
COI	Corridor of Impact
COM	Council of Ministers
DMS	Detailed Measurement Survey
EDCF	Economic Development Cooperation Fund
EMP	Environmental Management Plan
GMS	Great Mekong Sub-region
HS-WIM	High Speed Weigh-in-Motion
ICB	International Competitive Bidding
IEE	Initial Environmental Examination
IRC	Inter-Ministerial Resettlement Committee
LCB	Local Competitive Bidding
LS-WIM	Low Speed Weigh-in-Motion
MEF	Ministry of Economy and Finance
MOU	Memorandum of Understanding
MPWT	Ministry of Public Works and Transport
NCB	National Competitive Bidding
NR	National Road
NGO	Non-government Organization
NWPRIP	Cambodia Northwest Provincial Road Improvement Project
OPEC	Organization of Petroleum Exporting Countries
PMU	Project Management Unit
PPTA	Project Preparation Technical Assistance
RGC	Royal Government of Cambodia
ROW	Right of Way
RP	Resettlement Plan
SDR	Special Drawing Rate
SEU	Social and Environment Unit
STD	Socially Transmitted Disease
TOR	Terms of Reference
UXO	Unexploded Ordnance



CAMBODIA NORTHWEST PROVENCAL ROAD IMPROVEMENT PROJECT
EDCF Loan KHM-9

PROJECT ROAD

EDCF Loan KHM-9: Cambodia Northwest Provincial Road Improvement Project



1. INTRODUCTION

1.1 Brief Description of Project

The NR56 (the project road) is a major provincial road that traverses two provinces (Banteay Meanchey and Oddar Meanchey) in northwestern Cambodia, and also links the project area with the northern provinces of Thailand. The provinces have a strong potential for agriculture development but the existing road infrastructure is inadequate for sustainable rural development. The project road is gravel road, the surface of which severely degraded and is subject to flooding and thus mostly impassable during the wet season. The road also connects to NR68 that links with Thailand at O'smach, a strategic border point with strong potential to promote subregional transport and trade between northwestern Cambodia and northeastern Thailand. Therefore the project will increase access to local markets, reduce travel times and vehicle operating costs, and increase tourism, leading to increased economic activity in the project area. Also, by providing more direct routes to border crossings and links to major economic corridors, the project will strengthen sub-regional cooperation between Cambodia and Thailand.

The impact of the Project will be increase subregional transport and trade between Cambodia and Thailand due to improved subregional connectivity. Improved access in northwestern Cambodia due to rehabilitated roads will result in more direct routes to border crossings, and enable increased trade and tourism between Cambodia and Thailand. The outcome of the Project will be increased transport efficiency in northwestern Cambodia. The Project will help rehabilitate the provincial road network to increase transport efficiency, sustain economic development in the rural areas and provincial centers, and facilitate social development by reducing the remoteness of the project area.

Under the GMS: Cambodia Road Improvement Project (ADB Loan 1945-CAM (SF)), 38 pre-stressed concrete bridges and 21 box culverts have been constructed along NR 56 and NR 68. In addition, 14 flood-prone road sections, on total length about 16 km, have been raised embankment to provide proper public traffic route during rainy season.

The road improvement works are divided into four sub Projects, (i) NR56A from Sisophon to Km 29 (29 km), (ii) NR56B from Km29 of NR56 to the end point at Samraong (84 km), and (iii) Cross Border Facilities at O'smach (iv) ATCS at 7 locations on NR1,5,6 and 7. Out of four sub-Project (i) NR56A and (iii) CBF are financed by the ADB Special Fund Loan, and (ii) NR56B and Cross Border Equipment at O'smach (iv) ATCS at 7 location on NR are financed by the EDCF loan.

The Kingdom of Cambodia is the Borrower of the EDCF Loan KHM-9 with the MPWT as the Executing Agency. The EDCF loan amount for the Project is equivalent of \$ 29.942 million. Allocation table below sets forth the categories of goods, services and other items to be financed out of the Loan and the allocation of amounts of the Loan to each category in the light of the Agreement and Framework Arrangement.

Table 1.1 Loan Agreement Allocation (Schedule 2)

Description	EDCF			GoC	Total
	Foreign	Local	Sub-total		
A. Direct Cost	15,170	5,803	21,513		21,513
- Rehabilitation of NR56	14,924	5,689	20,613		20,612
- CBF Facilities	486	114	600		600
- ATCS Facilities	300	-	300		300
B. Consulting Services	1,708	691	2,399		2,399
c. Sub-total (A+B)	17,418	6,494	23,912		23'912
D. Taxes (VAT:12% of C)	-	-	-	2,869	2,869
E. Contingencies	3,891	2,109	6,000	527	6,527
F. Project Management cost (2% of C)	-			320	320
G. Land Acquisition	-			1,160	1,160
H. Service Charge (0.1% of EDCF loan)	30		30		30
I. Grand total (C+D+E+F+G+H)	21,339	8,603	29,942	4,876	34,818

- This Amendment of Loan Agreement reallocated for installation of ATCS approved by EDCF on August 25, 2011

1.2 Project Component

Category	Item	Description of works
1	Civil Works	
1A	Improvement of NR 56B	29Km from Sisophone to Samraong 113Km (length = 84Km, DBST)
1B	Cross Border Equipment and Furniture's	Procurement of Equipment and Furniture for CBF included in Contractor's BOQ
1C	Provision for ATCS at 7 location on NR1,5,6 and 7	Procurement of ATCS included in Contractor's BOQ
2	Consulting Services	
2A	Detailed Design and Implementation Supervision for NR 56B	Detailed Design and Construction Supervision for NR 56

The Overall Schedule of the Project for implementation of civil works updated by contract amount and financial progress shown in Fig 1.2.

Construction Works Schedule

Project : Improvement National Road No.56B EDCF Load KHM-9

Date 31-03-2012 KUMHO E&C

Description	Unit	Q'ty	Amount (USD)	Assigned Weight (%)	2012											2013											2014					Sum	Actual Progress (%)	Weighted Progress (%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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LEGEND: Planned Achieved S-CURVE: Planned Achieved

2. EXECUTIVE SUMMARY

2.1 Status

In order to carry out the detailed design, the field surveys for 84 km of road section commence 1st December 2010 and completed on 28 February 2011, so submitted final design PMU3 and EDCF on 31 May 2011.

Along the Banteay Chhmar Temple Bay-pass alignment at Level Area category A for Mine/UXO Clearance and Detection. So, the Consultant Survey Team worked with the Mine and UXO detection team during the survey works for safety. The Mine/UXO Specialist should review and prepare new Guideline for Mine/UXO Clearance and Detection in this severe war battle ZONE (category A and B) within existing carriageway and widening area to clear 100% clearance of Mine underneath 1.5 m from ground surface before stating works for safety in accordance with Special specification sub-clause 9.01, approved sub-contractor from PMU3

The Geotechnical Sub-consultants has been engaged at end of February 2011 for checking In-Situ CBR of existing road sub grade soils by use of TRL Dynamic Cone Penetrometer (DCP) and In-Situ collected sample from the test pits for DBST Pavement Design.

The consultant has reviewed previous reports and detailed design data of bridges and checked the discharge/runoff volume with respect to annual precipitation/rainfall and on rush flood water flow from relevant catchment areas and or sudden flash flood water by climate change entering from neighboring areas or country for individual bridge sites before starting Civil Works.

At the initial stage the Consultants made three site inspections on 2-4 December and 3-11 December 2010 and 22-27 January 2011. Project road centerline and vertical alignments were designed and typical cross section for improvement of road for rural and built up sections were prepared. The Consultants undertook site investigation for 16 bridges along NR 56B. The Bridge No.3 (Sta 43+739) has been built by USAID Fund in Year 2000. The condition of bridge seems solid and strong enough to accommodate the traffic at the moment. The total width of the bridge is 7 meters and it is not enough to provide bicycles and motorcycle path. Therefore it was concluded this bridge needs to be widened to accommodate two lane carriageway and proper shoulders space for pedestrians and bicycles.

As part of Good governance Framework (GGH), PMU3 prepared Complaint Handling Mechanism (CHM) APPENDIX B for CNPRIP. The Website for CHM made before starting implementation work.

The Consultants submitted the Report to PMU3 on 13th December 2010 in accordance with the request by the EDCF with contract award/commitments and Disbursement Project (\$ million) for the years 2011.

Team Leader Mr. Myung Geun LEE arrived in Phnom Penh on 1st December 2010 and the replacement of International Highway Engineer (RE1) from Mr. Hee Suk Kang to Mr. Yun Yoo Chen was approval by MPWT on 8th December 2012 and arrived in Phnom Penh on 13th January 2012.

2.2 Progress Summary

Component	Contract	Contract Amount (KRW)	Progress to Date				Amount Certified for Payment (Unit KRW)
			Physical		Financial		
			%	+/-	%	+/-	
1.Works	Improvement of NR 56B	23,541,166,087	5.35	-	30		7,062,350,075 (AP 30%)
2.Consulting Services	1)Detailed Design	668,961,488	100	-	50	-	338,005,369
	2)Implementation Supervision	2,024,260,972	0.57	-3.00	-	-	
3.Supply of Good	1)CBF Equipment 2)ATCS Equipment	683,070,000 341,535,000	-	-	-	-	

2.3 Problems and Solution

<u>Problems</u>	<u>Action Taken</u>	<u>Remarks</u>
No particular problems met		

2.4 Highlight Addressed in this Month

- 1) Embankment rise up by climate change
- 2) Mine/UXO Detection and Clearance at no-impact section resettlement

2.5 Issues to be addressed in next Month

- 1) Variation for Reallocation :
 - Mine/UXO Detection and clearance at no-impact section
 - Embankment rise up climate change

3. Road Improvement

3.1 DETAIL DESIGN

3.1.1 Topographic Survey

In order to carry out the detailed design, the field survey for 84km of road section commenced on 1st December 2010, and completed on 28 February 2011. The field survey works are as follows:

Topographic Survey along the Road Alignment

Topographic survey along the road alignment of NR 56B was carried out along the existing road alignment to show necessary details for design of horizontal alignment and to prepare topographic maps. The survey covered a 60m wide strip (30m either side of the centerline) along the road alignment. The density of survey points was sufficient to prepare accurate topographic maps in scale of 1: 2,000.

Topographic Survey at Bridge Site

Topographic survey at bridge site (Bridge No.3) was sufficient in preparing accurate topographic maps for location and elevation of the bridge to be improved in scale 1: 200. The coordinates (N,E) and elevation of the proposed bridge to be constructed was taken.

Benchmark Survey

Benchmark survey was done along the road alignment of NR 56B. Benchmarks were established at the spacing of about 2.0 km interval. Temporary Benchmarks were established for profile survey and cross section. The Benchmarks were marked by concrete type monument and benchmark survey was executed within tolerable survey error.

Control Point Survey Along the Road Alignment

Control point survey along the road alignment was carried out by using an accurate Total Station. The GPS reference points were established at the spacing of 10 km or less. The coordinates were taken from the available coordinates of ADB 1945 project. Each control point was identified with the coordinates.

Centerline Survey along the Road Alignment

Centerline surveys along the road alignment were carried out and the centerline generally followed existing road alignment. At every set out point of centerline with the interval of 50m, nails and wooden pegs were hammered into ground. In curves, design element of curvature such as IP, BTC and ETC were also set out and pegged.

Longitudinal Profile Survey along the Road Alignment

Longitudinal Profile Survey along the Road Alignment was carried out at 50m intervals along the centerline of road in accordance with the horizontal alignment and the results of benchmark survey. The "+ chain" was installed at the beginning and end of new bridges, culverts and pipe locations.

Cross Section Survey

Cross section survey along the road alignment was taken at 50 m intervals longitudinally or less depending upon the “+ chain”. The standard offset of cross section was taken at 30m both side from the road centerline. The cross section survey was provided in scale 1: 200.

3.2 Geological Investigation

In the previous study on the Road Geometry, Drainage Structures and in Pavement Designs the TA Consultant used the Traffic Loading and relevant data from the Cambodian Road Design Standards Part-1 and “AASHTO-A Policy on Geometric Design of Highways and Street 4th edition 2001”, Part-2 and Part-3 (published in year 2003).

The process of Geological Investigating for the existing road sub grade material and source materials (embankment, subbase borrow pits and stone quarries) is essential. The Geotechnical Sub-consultants has been engaged at end of December 2010 for checking In-Situ CBR of existing road sub grade soils by use of Transport Research Laboratory (TRL) Dynamic Cone Penetrometer (DCP) and determination of corresponding Laboratory CBR value using In-Situ collected sample from the same test pits following the AASHTO T-193 designation to justify the integrity of the CBR values used in the previous studies. Soil and other relevant material physical properties will be checked by the same Geotechnical Consultant for the samples obtained from the test pits and different sources.

The details on geotechnical investigation for existing road sub-grade soil and source material are as shown in Appendix A and major features for soil investigation conducted from 27 November 2010 to end of March 2011 are as follows:

- Test Pit (1x1x0.7m) : Every 5 km (28No.s)
- Dynamic Cone Penetration : 52 places
- Natural Moisture Contents : 52 each
- Particle Size Analysis : 35
- Atterberg limit test : 35
- Specific Gravity test : 35
- Laboratory CBR Test : 35 No.s (26 in-situ, 9 source material)

3.3 Hydrological Survey

Potential information of Hydrological Survey is very important for Bridge and Box Culvert as well as road embankment and pavement designs. As the Consultants has reviewed previous reports and detailed design data of bridges and checked the discharge/runoff volume with respect to annual precipitation/rainfall and on rush flood water flow from relevant catchment areas and sudden flash flood water entering from neighboring areas or country for individual bridge sites. Embankment height will be maintained at designed level so that during Highest Flood Level (HFL), water cannot get chance to seepage and run through the pavement layers. Deck elevation of existing bridges and raised embankment at 14 locations constructed by the previous ADB project are high enough to discharge flood water and they have been proved safe during last three years of floods.

International Hydrologist, Mr. Jong Gab KIM who worked in Phnom Penh from 14 February to 15 March 2011 and completed Hydrology and Drainage Design Report.

Its summary and recommendations are as follows.

1) Summary

At present there are 4 existing box culverts, and 94 existing pipe culverts along NR 56B. Under our proposed scheme, 2 box culvert and 25 pipe culverts have to be newly constructed. 10 existing pipe culverts and 2 box culverts have to be extended while 22 existing pipe culverts have to be replaced.

The existing box culverts and the pipe culverts were built quite long time ago and most of their levels are lower than the existing ground, so Inlet and outlet of the culverts are blocked by the siltation materials. Some of the existing culverts need of rehabilitation or replacement. There are few that are good condition but their width are shorter than the new road embankment and the existing structures have poor strength to resist the new road width and working load. Generally the hydraulic capacities of some existing culverts are adequate but some of them have wrong elevations.

2) Recommendations

Most of the structures are in similar conditions except some the widths of the culverts are generally short (8m and 6m). Most of the new structures constructed by ADB Loan 1945-CAM(SF) Project are in good conditions but some of old culverts have less durability and capacities to meet the traffic load of the National Road. So contractor have to identify it's durability and conditions by detail survey with Consultant engineers for site investigation reports .The recommendations on the existing culvert and the proposed new culverts are proposed on Table below in Detail Design Stage; DDIS consultant would like to identify existing culverts to need rehabilitation or replacement in Detail Design Stage Survey for site investigation Report for Detail Construction Schedule.

Table 3.1 Proposed Scheme for Culverts

Type	New	Existing			
		Keep	Extension	Replacement	Total
Pipe Culvert	25	62	10	22	119
Box Culvert	2	2	2	-	6

- This proposed drainage structure should be identify in civil works

3.4 Additional Drainage structures by Climate Change on Year 2011

Our Project for Northwest Improvement Road Project NR56 have suffered flood by Climate Change in this flood prone area during last year 2011

The Mekong River started to rise in early August 2011, with the water level rising significantly when Typhoons Nesat and Nalgae in last September and early October brought heavy rain. Eighteen out of 24 province and Municipalities have subsequently been inundated and over 1.5 million people affected the damage from the 2011 flooding is expected to exceed that of floods in 1996 and 2000, both in terms of loss of life and impacts on infrastructure and agricultural crops, largely because the water rose and receded three times (see Appendix flood Photo).

For the purpose of positively responded to carry out the preparatory works focusing on the road damage and validation exercise, PMU3 requested Site Reconnaissance to DDIS Consultant to selected flood damaged areas to achieve initial verification of available flood damage data/ information from DPWT and Provincial/Town villagers for the proposed emergency Flood assessment in repair and rehabilitation after the floods have receded (Photos of the Project Activities).

DDIS Consultant will make field trips to survey flood damaged area for more detailed assessment and validation including cost estimates and implementation plans coordination with MPWT, PMU3 and RGCMEF to submit formal request to EDCF for Reallocation of Loan for variation as soon as possible before started civil works.

3.5 Mine/UXO Detection and Disposal

3.5.1 Introduction

The Consultants Demining/UXO Specialist will review the Mine/UXO Program in Detail Design Stage by analyzing and combining all the available information obtained from CMAC and Methodology for Mine/UXO clearance with the field survey during Mine/UXO clearance operation at NR 56A ADB section by update Guideline before starting works. The Mine/UXO contamination levels for 56B have been identified according to the treat categories. Most of the project area along the NR56B is classified as having Category A or B of Mine/UXO contamination as shown in Table 3.4.

In accordance with Special Technical Specification, Clause 8 Unexploded Ordnance, all Mine/UXO detected in the course of the Mine/UXO Check must be neutralized and destroyed 100% clearance of whole of project corridor in Row by update Guideline on Yearly:2012.March.

Table 3.2 Mine/UXO Category A & B at Minefield Location

No.	Location	From PK	To PK	Length(m)	Mine/UXO Category
1	56B	29+000.	43+632.	14,632	No Mine Field Category B
2	56B	43+632.	43+854.	222	Bridge Widening Category A
3	56B	43+854.	53+600.	9,746	No Mine Field Category B
4	56B	53+600.	64+750.	11,150	Mine Field Site Category A
5	56B	64+750.	71+100.	6,350	No Mine Field Category B
6	56B	71+100.	71+500.	400	Mine Field Site Category A
7	56B	71+500.	76+200.	4,700	No Mine Field category B
8	56B	76+200.	79+500.	3,300	Mine Field Site Category A
9	56B	79+500.	79+800.	300	No Mine Field category B

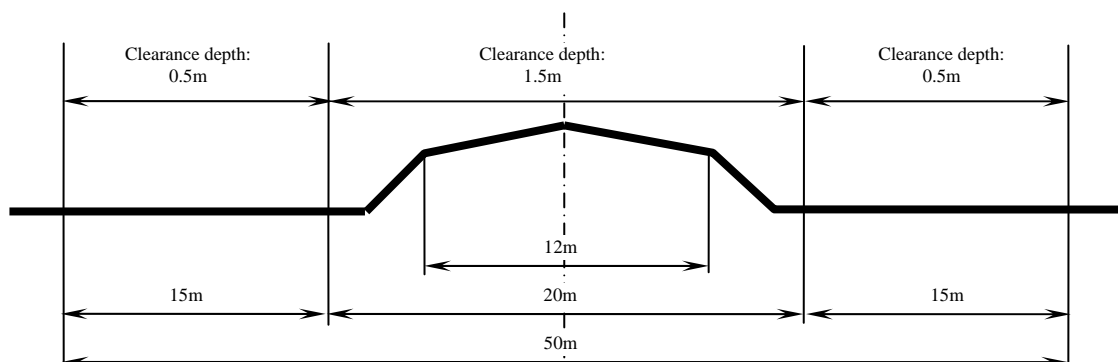
10	56B	79+800.	82+560.	2,760	Mine Field Site Category A
11	56B	82+560.	83+160.	600	No Mine Field category B
12	56B	83+160.	89+300.	6,140	Mine Field Site Category A
13	56B	89+300.	89+900.	600	No Mine Field category B
14	56B	89+900.	94+560.	4,660	Mine Field Site Category A
15	56B	94+560.	94+760.	200	No Mine Field category B
16	56B	94+760.	97+210.	2,450	Mine Field Site Category A
17	56B	97+210.	98+400.	1,190	No Mine Field category B
18	56B	98+400.	99+900.	1,500	Mine Field Site Category A
19	56B	99+900.	101+500.	1,600	No Mine Field category B
20	56B	101+500.	102+300.	800	Mine Field Site Category A
21	56B	102+300.	102+800.	500	No Mine Field category B
22	56B	102+800.	106+300.	3,500	Mine Field Site Category A
23	56B	106+300.	106+800.	500	No Mine Field category B
24	56B	106+800.	109+700.	2,900	Mine Field Site Category A
25	56B	109+700.	110+800.	1,100	No Mine Field category B
26	56B	110+800.	113+418.	2,618	Mine Field Site Category A
Total			A	42,400	
			B	42,018	
			Total	84,418	

3.5.2 New Clearance Concept

In order to carry out this concept PMU3 will have a meeting with MEF and proposed to ADB higher echelon for approval. To be able to do so, a joint meeting between PMU3 project director, KCI team leader and Mine/UXO expert was held at PMU director's office on Friday 02nd March 2012 and new clearance concept were introduced to both NR56A and NR56B sections. This new Mine/UXO clearance concept will be used as a keystone in designing update Mine/UXO clearance guideline, where this document will be presented.

- With the present of mine/UXOs found in categories B, all categories (category A and category B) are considered dangerous and they are subjected to the same clearance concept.
- 1.5m depth mine/UXO clearance will be implemented:
 - At all structures
 - 10m either side from road centerline along the entire road length
- 0.5m depth mine/UXO clearance will be implemented for the entire project, except at 1.5m depth clearance
- If mine/UXO is found at 0.5m depth clearance site, deeper detection and clearance of mine/UXO (up to 1.5m) is not required due to the area is considered no impact to civil work operation.
- The redundancy of mine/UXO clearance service at the same location will be paid to the one that has deepest detection and clearance.
- 1.5m clearance depth between 27th February 2012 until the release of this updated document (with approval from PMU3) is valid for claim of payment.
- Existing structure is not required for mine/UXO clearance since it has already been cleared previously

CLEARANCE DEPTH DEMARKATION



3.6 Road Design for Alignment

In order to reflect road site conditions, the Consultants made three site inspections on 20-22 November, 2-4 December and 3-11 December 2010. Major finding and design concepts in carrying out detailed designing works are as follows:

- 1) Rising of embankment height at flood prone sections.
- 2) Installation of additional cross drainage for climate change.
- 3) Provide proper side drainage in built-up area.
- 4) Provide proper road furniture for road safety

Project road centerline and vertical alignments were designed, and Typical cross section for improvement of road for rural and built up sections were prepared. Prior to preparing drawings for the alignments, the following technical view points were taken into account.

- Design speed
Design speed for urban area and rural area were planned to be $V = 40$ km/hr and $V = 60$ km/hr respectively so as to secure safety in vehicle trips.
- Horizontal Alignment
Consultants' field survey revealed that there is need of improving the horizontal alignment at 9 location of Short curve ($R \leq 150$ m) by Cambodia Road Design standards PART-1.

Table 3.4 Horizontal Alignment

No.	Station	Existing Radius (m)	Design Radius (m)	Remarks
1	Sta. 29+950	150	150	
2	Sta. 31+400	100	150	
3	Sta. 53+620	150	150	
4	Sta. 64+750	150	150	
5	Sta. 69+070	100	150	
6	Sta. 69+300	150	150	
7	Sta. 76+100	100	150	
8	Sta. 83+650	100	150	
9	Sta. 102+550	140	150	

- Vertical Alignment

In consideration of flood prone areas (Sta. 29+300 – Sta. 31+100, Sta. 32+100 – Sta. 33+400 and 11 location stipulated in TA report data and site inspection on flood prone areas will be thoroughly reviewed and reflected.

Table 3.5 Vertical Alignment

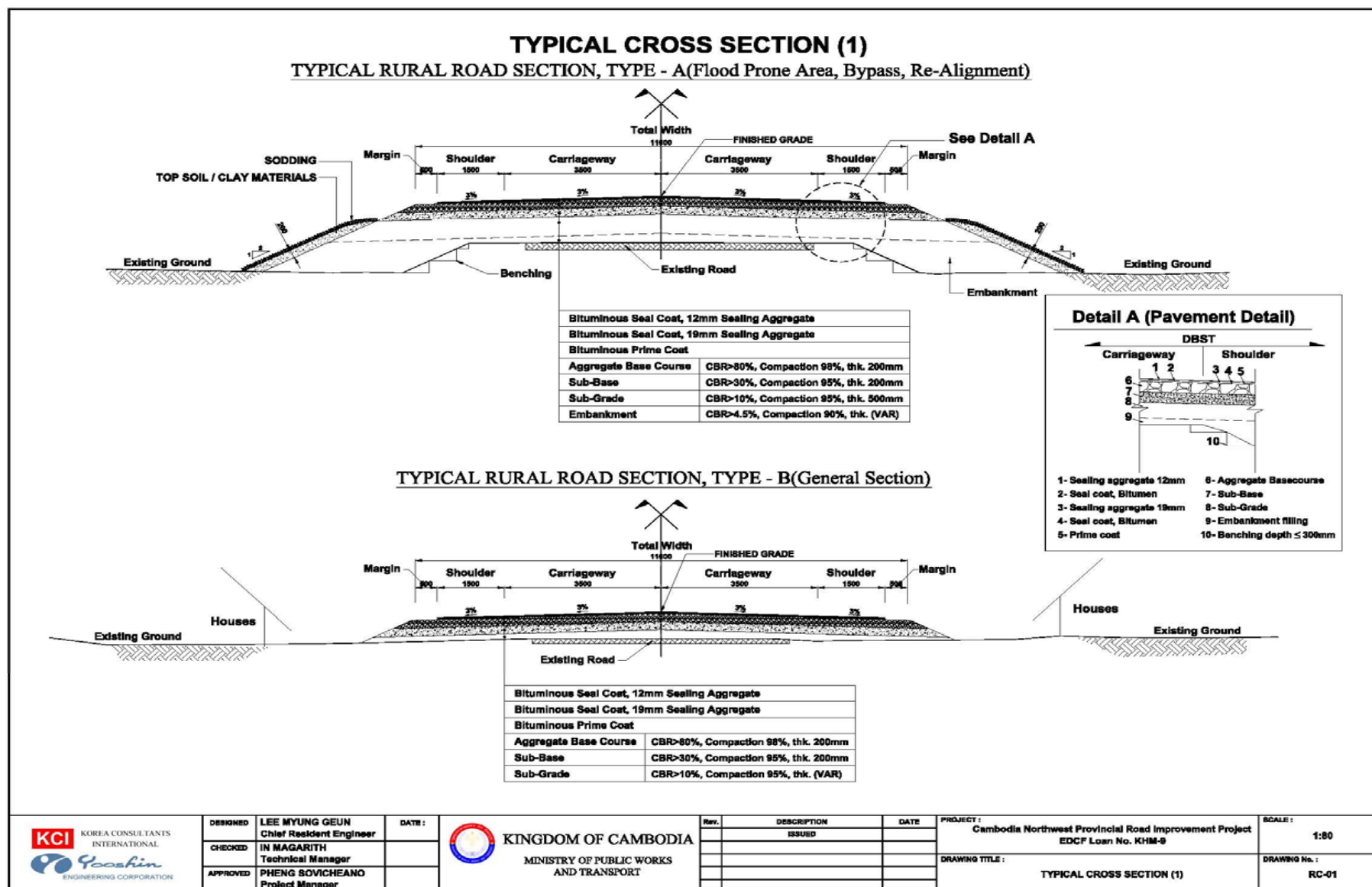
No.	Station BP	Station EP	Length (M)	Upward	Remark
1	Sta. 32+000	Sta. 32+400	400		
2	Sta. 40+850	Sta. 41+400	550		
3	Sta. 43+100	Sta. 43+450	350		
4	Sta. 67+500	Sta. 69+000	1,500		
5	Sta. 69+400	Sta. 70+000	600		
6	Sta. 72+480	Sta. 72+970	490		
7	Sta. 74+250	Sta. 75+100	850		
8	Sta. 82+800	Sta. 83+030	230		
9	Sta. 87+950	Sta. 90+050	2,100		
10	Sta. 106+100	Sta. 107+075	975		
11	Sta. 111+110	Sta. 111+300	190		
12	Sta. 29+300	Sta. 31+100	1,800	+1M	Old Station
13	Sta. 32+400	Sta. 33+400	1,000	+1M	
14	Sta. 40+600	Sta. 40+950	350	+1M	
15	Sta. 48+000	Sta. 55+500	7,500	+1M	
16	Sta. 58+650	Sta. 71+500	12,850	+1M	

- Typical Cross Edition

The whole section of the project road is planned to be paved under DBST pavement method. According to TA report, the project sub grade is analyzed to be S1 and its accumulated traffic load is T3. Therefore the pavement type and thickness is to be designed as follows:

- Surface : DBST (double bituminous surface treatment)
- Base Course : 200mm (aggregate base)
- Subbase Course : 200mm Typical cross section for road is shown in Fig.3.1.

FIGURE 3.1 TYPICAL CROSS SECTION



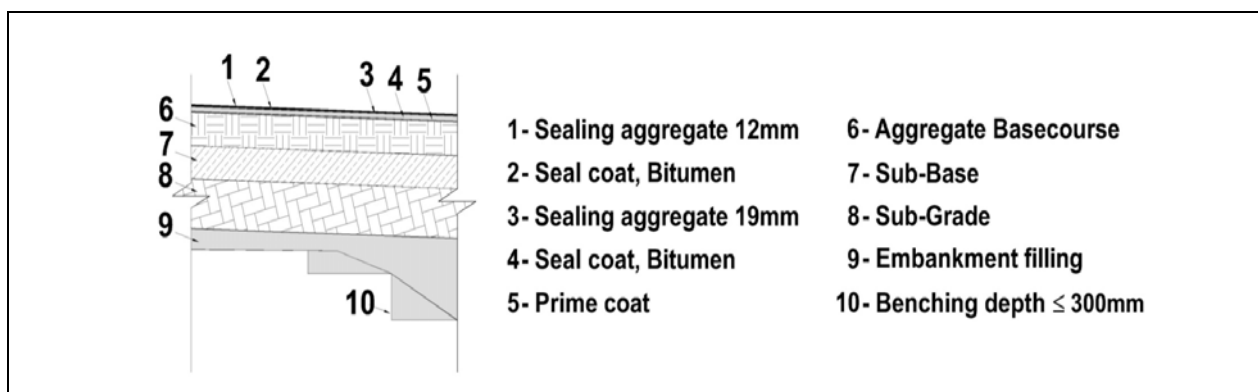
3.7 Bridge Design

The Consultants undertook site investigation for 16 Bridges along NR 56B. Most of them have been newly constructed by the ADB CRIP Project NR56. But, the Bridge No. 6 has been built by USAID Fund in Year 2000. The condition of bridge No. 6 seems solid and strong enough to accommodate the traffic at the moment. The total width of the bridge is 7 meters and it is not enough to provide bicycles and motorcycle path. Therefore it was concluded this bridge need to be widened to accommodate two lane carriageway and proper shoulders space for pedestrians and bicycles. More detailed design works have been carried out by the international Structure Engineer, Mr. In Chan KIL who was mobilized from 1 March 2011. The result will be incorporated in preparation of the final designs for the bridge and drainage structures.

3.8 Pavement Design

Based on the existing road subgrade soil investigation report and prevailing traffic data review it is suggested that the pavement design thickness proposed by ADB TA No. 4691, TIDMP Team can be used for rural section of NR 56B.

The layout of pavement detail (DBST) is as shown below:



3.9 Embranchment Rise up by Climate Change

For the purpose of positively responded to carry out the preparatory works in this project focusing on road damage by climate change Flood during last year, DDIS Consultant plan to field survey for more detailed rise up design of vertical alignment to achieve initial verification of available flood data/ information for the proposed emergency flood assessment in repair and rehabilitation after the floods have receded to access.

DDIS Consultant will make detailed design of vertical alignment with drainage structure including cost estimate and implementation plans coordinate with PMU3 to submit formal request to EDCF through the RGC, MEF as soon as possible before starting flood season come again from May 2012.

4. EQUIPMENTS OF CROSS BORDER FACILITIES (CBF) AT O'SMACH

4.1 Status

The proposed site for improvement of CBF locates at O'smach. Currently the improvement of access road to the proposed CBF from Samraong is now under construction financed by Cambodian Government. The last section about 6 km is being built as a realignment section to avoid steep ascending slopes and many dangerous sharp curves. Thus, freight transport is quite limited.

During site visit from 4 December to 6 December 2010 by ADB Loan Review Mission, the location of CBF tentatively suggested by the PMU3, and it was agreed by the Mission. The CBF will be located approximately 300m south from the existing Cambodia/Thailand border line in the area of about 4ha. The consultants surveyed and installed two benchmarks with coordinates on 22 Dec 2010. The location map for the proposed CBF area was prepared and submitted to PMU3. The following procedures will be processed to obtain necessary approval for the construction of the CBF.

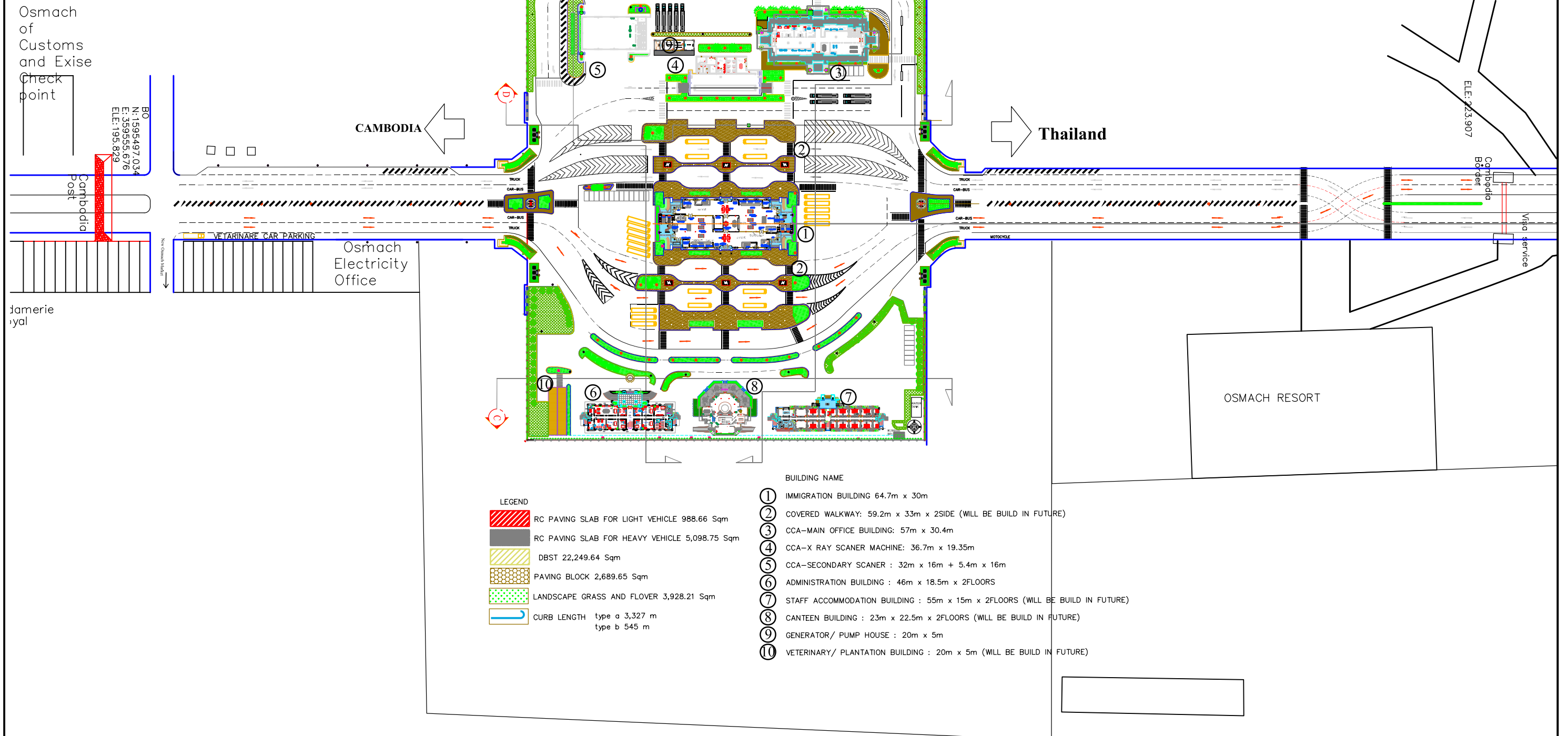
- 1) Confirmation and acceptance of the proposed CBF location by the Cambodia National Border Committee
- 2) Discuss with land owners and sign agreement with two land owners involved for resettlement.
- 3) Conclude a Memorandum of Understanding on the construction and operation of new CBF at O'smach between the Government of Cambodia and the Government of Thailand.



4.2 Procurement of Equipment and Furniture's for CBF

Based on the requirement of Equipment and Furniture's for CBF in accordance with Detail Design by ADB consultant, the Detail list for Procurement of CBE will be prepared during the implementation stage in cooperation with ADB Consultants in charge of CBF and in consultation with MPWT/PMU3. Consultant will update provision of all Equipment and furniture's number for CBF base on the final CBF's Building Schedule cooperated with ADB consultant and MPWT/PMU3, which should be supplied by Contractor.

The Layout of O'smach Cross Border Facilities in DDS is shown in Fig. 4.1

SMALL MOUNTAIN



<div> KCI</div> <div>KOREA CONSULTANTS INTERNATIONAL</div>	DESIGNED	CHUN YUN WOO Highway Engineer		DATE	<div></div> <div>KINGDOM OF CAMBODIA</div> <div>MINISTRY OF PUBLIC WORKS AND TRANSPORT</div>	Rev.	DESCRIPTION	DATE	PROJECT : Cambodia Northwest Provincial Road Improvement Project ADB Loan No. 2539 CAM-(SF) Cross Border Facility at O'smach	SCALE : 1 / 2000	
	CHECKED	LEE JONG SHIN Chief Resident Engineer									
	APPROVED	PHENG SOVICHEANO Project Manager									
	DRAWING TITLE : GENERAL AND EXTERNAL WORKS MASTER PLAN LAYOUT									DRAWING No. : GE-22	

5. ATOMATIC TRAFFIC COUNTING SYSTEM

5.1 Status

In order to determine and forecast Average Daily Traffic(ADT) currently using the National Road with classified vehicle type, traffic counts are normally obtained by Automatic traffic Counting System(ATCS) to collect national wide traffic data and forecasting traffic growth for construction of new Road and developed national economic point of view.

The deterioration of paved roads caused by traffic results from the magnitude of the individual wheel loads and the number of times these loads are applied.

For Pavement Design purposes, it is necessary to consider not only the total number of vehicles that will use the road but also the wheel loads (or, for convenience, the axle loads) of these vehicles. It should be noted that for the structural design purposes the traffic loading required and for that reason care is always required when interpreting ADT figures.

Even with a developed economy and stable economic condition, traffic forecasting is and uncertain process. In a developing economy, the problem becomes more difficult because such economies are often very sensitive to the world prices of just one or two commodities.

In order to forecast traffic forecasting traffic growth, it is necessary to separate traffic into three categories of Normal Traffic, Diverted Traffic and Generated Traffic.

Axle load surveys must be carried out to determine the axle load distribution of a sample of heavy vehicles using road. If no recent axle load data are available, it is recommended that axle load surveys are carried out by weighing a sample of vehicles at the roadside. The sample should be chosen such that a maximum of about 60 vehicles per hour are weighed. Portable vehicle-wheel weighing devices available which enable a small team to weigh up to 90 vehicles per hours.

The weighing site should be level and, if possible, constructed in such a way that vehicles are pulled clear of the road when being weighing. The portable weighbridge should be mounted in a small pit with its surface level with surrounding area. More importantly, it is also eliminates the large errors that can be occur if all the wheels on side of multiple axle groups are not keep in the same horizontal plan.

Computer programs have been written to assist with analysis of the results from axle road surveys. These programs provide a detailed tabulation of the survey results and determine the mean equivalence factors for each vehicle type if required. If such a program is not available, standard spread sheet programs can be used.

Detailed Guidance on carrying out Axle Load Surveys and analyzing the results is given in TRRL Road Note 40 (Transport and Road Research Laboratory (1978)).

5.2 Procurement of Equipment

Based on the requirement for ATCS at 7 weighing station on NR 1, 6, 5 and 7 in accordance with technical specification sub-clause, we will review eligible sub- contractor with qualification for evaluation submitted by contractor on April.2012

The Location Map of seven ATCS at Weigh Station on NR1.5.6 and 7

Figure 5.1 Location Map of seven ATCS at Weigh Station on NR1.5.6 and 7



6. ENVIRONMENT

In February 2011, International Environment Specialist was mobilized, and reviewed the detailed design to be complied with Initial Environment Evaluation for whole section of road including cross border facilities. He prepared a draft Environmental Management Plan (EMP). In drafting The EMP plan, particular emphasis was placed on potential environmental impacts mitigation of impacts and environmental monitoring.

Summarized potential negative impacts, mitigation measure and responsibilities are attached herewith as **Appendix A**

7. RESETTLEMENT

7.1 Status

Local Resettlement Consultant, International Resettlement and DMS Team of MEF Resettlement Department review impact and resettlement needs on NR 56 in Sections of the road under the ADB Guideline.

There is little impact on the road on ward as far as the start of the Banteay Chimera by-pass. Village or District Centre building has been constructed away from ROW, or moved away since the 2008 draft RAP study and at other village areas so are impacted. Impact in village areas is almost entirely on fences and trees. There are about 10 small Stalls which need to be relocated.

The agricultural areas alongside the road are not impacted by the ROAD, as they are outside the COI. There are some rice crops growing in the ROW at the number of points along the Road. The latter will be harvested in December 2011 or early January 2012.

7.2 Mission Recommendation

The main objective of this survey is to determine area or sections where there is no Impact in order to allow road contractor of NR56B to start earlier of 2012 and before compensation to affected households.

To achieve this objective the mission travels the length of the road from Oddar Meanchey to Banteay Menchey to the Junction at Road No.68.

EA and MEF RD can be advised that there is no impact sections of NR 56 from PK 29(start Sisophone) to PK 111+700(edge of Samraong) amounting to a total about 40.150 km. Road construction could be started in these sections with no resettlement requirement after approved by MEF and ADB.

Table 7.1 Summary of Survey Area to determine no impact Section in NR56B

No.	Section of Site Possession		Length,m	Remarks
	From PK	To PK		
1	29+000	29+150	150	
2	43+800	51+200	7,400	
3	64+800	65+500	700	
4	67+400	68+950	1,550	
5	71+800	75+300	3,500	
6	76+500	77+200	700	
7	78+000	81+900	3,900	
8	82+900	83+650	750	
9	87+800	90+550	2,750	
10	91+650	97+050	5,400	
11	97+550	101+800	4,250	
12	102+600	111+700	9,100	
Total			40,150	

8. GOOD GOVERNANCE FRAMEWORKS

The Good Governance Framework (GGF), PMU3 prepared Complaint Handling Mechanism (CHM). The website PMW3, www.mpw.gov.kh/externalfund/CNPRIP will be made by the end of February 2012. The Consultants will assist MPWT in solving various Complaints to be met during implementation of the project. The update Complaint Handling Mechanism (CHM) is shown in **Appendix C** in Monthly Report No.4, February 2012.

9. LOAN COVENANTS

The Loan Covenants as stipulated in the Loan Agreement will review and update during the reporting period by Contract Price Amount for 2012. The status of compliance is shown in **Appendix D** for Monthly Disbursement Plan 2012.

10. OTHERS

10.1 Yearly Projection of Contract Award/Commitments and Disbursement

In accordance with the request made by the EDCF, the Consultants prepared Quarterly and Yearly Breakdown of Contract Award/Commitments and Disbursement Projections (\$29.9 million) for the years from 2011 through 2014 as shown in Appendix E.

PMU3 will review Quarterly and Yearly Breakdown of Contract Award/Commitments and Disbursement by Contractor's Detailed Schedule projected Physical and Financial Situation in accordance with Loan Agreement for the years from 2011 through 2015 requested by the EDCF

10.2 Consultants Movement

International Experts

Team Leader **Mr. Myung Geun LEE** arrived in Phnom Penh on 1st December 2010 and has been continuously undertaking his assignments for detailed design and Construction Supervision. International Resident Engineers (RE1) **Mr. Yun Woo CHUN** arrived in Phnom on 12 January 2012 and commenced his duty as Resident Engineers (RE1)

National Consultants

Total of six (7) national consultant members approved replacement from PMU3 on 13 January 2012 and 23 January 2012 to assist the international experts in Construction Supervision Stage as follows:

Name	Position	Mobilization date Plan
Kim Saran	Highway Engineer 1	15 February 2012
Ou Sandap	Highway Engineer 2	01 April 2012
Saing Soveasna	Soil/ Material Engineer 1	15 February 2012
Lab. Engineer 1	Kong Vuthy	15 February 2012
Lab Engineer 2	Mam Sinarith (original Candidate)	01 April 2012
Bunneng Sonant	Survey Engineer	15 February 2012

The Consultants' personnel on site during the reporting period are as shown in Table 10.2

Table 10.2 Consultant's Staff Mobilization Schedule

Name	Position	Person Month	Date Commenced	Date Completed	Completed	
					Month	%
Detailed Design Stage and Construction Supervision Stage						
International Expert, KCI						
Myung Geun LEE	Team Leader	40	1.12.10		13.00	43.33
Jeoung Ho Kim	Highway Design Engineer	5	13.12.10	12.05.11	5.00	100.00
Hwang Hyun-Koo	Highway Engineer, Cost	3	7.03.11	05.06.11	3.00	100.00
In-Chan KIL	Structure Engineer	2	1.03.11	30.04.11	2.00	100.00
Dae-Kwon YANG	Soil/Materials Engineer	3	13.01.11	11.04.11	3.00	100.00
Jong Gab KIM	Hydrologist	1	14.02.11	15.03.11	1.00	100.00
Tae Heum Kim	Environmental Specialist	2	14.02.11	15.04.11	2.00	100.00
Byeong Cheon JU	Procurement Specialist	5	13.03.11	31.10.11	4.00	80.00
Yun Woo CHUN	Resident Engineer 1	28	12.01.12		0.57	2.02
	Resident Engineer 2	26				
Hyun Mo CHO	Soil/Material Engineer	28				

Tae Yong HAN	Structure Engineer	2				
Wang Geun Jeong	Environmental Specialist	2				
Total		144			33.57	23.33
Detailed Design Stage and Construction Supervision Stage						
Domestic Consultants						
Prach Chantha	Highway Design Engineer 1	3	01.03.11	18.05.11	2.60	86.67
Keo Chandara	Highway Engineer, Cost	3	28.02.11	29.05.11	3.00	100.00
Gneiv Phally	Highway Design Engineer 2	2	26.03.11	18.05.11	1.87	90.00
Srey Socheat	Structure Engineer	2	11.03.11	30.04.11	1.70	85.00
Kep Sereivuthy	Soil/Materials Engineer	3	28.02.11	25.04.11	1.87	62.33
Mam Sanuon	Hydrologist	1	15.02.11	16.03.11	1.00	100.00
Ma Vanna	De-mining and UXO	2	14.03.11	18.04.11	1.66	58.00
Thum Theun	Environmental Specialist	2	15.02.11	16.04.11	2.00	100.00
Poev Vathana	Procurement Specialist	3	27. 04.11	31.05.11	1.13	37.66
Suon Vy	Draft man 1	5	20.12.11	18.05.11	5.00	100.00
Kit Sokea	Draft man 2	5	07.02.11	08.06.11	4.00	80.00
Kao Dalina	Administrator	6	15.12.10	08.06.11	6.00	100.00
Khon Srey leak	Secretary	6	15.12.10	31.05.11	5.56	92.67
Kim Saran	Highway Engineer 1	28	15.02.12		0.50	0.02
Y Noy	Highway Engineer 2	26				
Saing Soveasno	Soil/Materials Engineer1	28	15.02.12		0.50	0.02
Bunneng Sonat	Survey Engineer	26	15.02.12		0.50	0.02
Srey Socheat	Structure Engineer	4				
Kanith	De-mining and UXO	5				
Mao Vanchann	Environmental Specialist	2				
Kong Sophin	Inspector 1	28				
Saing Soveasna	Inspector 2	28				
Meng Dara	Inspector 3	28				
Kong Vuthy	Inspector 4	26				
Ma Byna	Lab. Engineer 1	26				
Mam Sinarith	Lab. Engineer 2	26				
Total		324			16.60	5.12

- Note; above mobilization schedule of Consultants should be updated by Construction Schedule approved by MPWT

Revised Staffing Schedule to be mobilized

Table 10.2 Schedule of Construction Supervision for Consultants Stage

EDCF Loan No. KHM-9 20. March.2012



Name of Expert / Position	Ref No. (CV)	Experts to be mobilized																																																Total estimate number of man-month to be mobilized							
		Detailed Design												Procurement and Contract Award												Construction Supervision																									Defects Liability						
		2011 Year												2012 Year												2013 Year												2014 Year																			
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th													
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	1st	2nd	3rd	4th	5th	6th	7th													
Detailed Design	Myung Geun LEE	Team Leader	KD1																																																	6	12				
	Kim Jeong Ho	Highway Design Engineer	KD2																																																	5					
	Hwang Hyun-Koo	Higway Engineer (Cost Estimator)	KD3																																																	3	3				
	In-Chan Kil	Structural Engineer	KD4																																																	2	2				
	Dae-Kwon Yang	Soil/Materials Engineer	KD5																																																	3	3				
	Jong Gab KIM	Hydrologist	KD6																																																	1	1				
	Tae Heum KIM	Environmental Specialist	KD7																																																	2	2				
	Ju Byoung Cheon	Procurement Specialist	KD8																																																	3	4				
Construction Supervision	Myung Geun LEE	Team Leader	KC1																																																	28	28				
	Chun Yu Woo	Resident Engineer (Highway Engineer) 1	KC2																																																	28	26				
	Jong Shin LEE	Resident Engineer (Highway Engineer) 2	KC3																																																	26	23				
	Hyun Mo CHO	Soil/Materials Engineer	KC4																																																	28	26				
	Tae Young HAN	Structural Engineer	KC5																																																	2	2				
	Wang Geun JEONG	Environmental Specialist	KC6																																																	2	2				
	Ju Byoung Cheon	Procurement Specialist	KC7																																																	2	-				
	Cumulative Sum (M/M)			1.5	2.5	3.0	7.5	8.0	3.5		1.0	1.0	1.0	3.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	2.0	1.00				141.0	139.0												
			1.5	4	7.5	11	18.5	24.5	24.5	25.5	26.5	27.5	30.5	30.5	32.5	36.5	40.5	44.5	48.5	52.5	56.5	60.5	64.5	68.5	72.5	76.5	78.5	81.5	84.5	89.0	93.5	97.5	101.5	105.5	109.5	113.5	117.5	120.5	124.5	128.5	131.5	133.5	134.50														
			1%	7%	13%	27%	42%	49%	51%	51%	52%	54%	54%	54%	67%	81%	99%	119%	133%	149%	164%	178%	193%	207%	222%	239%	251%	265%	280%	294%	309%	323%	338%	352%	367%	381%	396%	410%	425%	439%	452%																
Detailed Design	Prach Chantha	Highway Design Engineer	ND1																																																	3	2.60				
	Keo Chandra	Highway Engineer (Cost Estimator)	ND2																																																	2	1.80				
	Gniew Phally	Highway Engineer	ND3																																																	3	2.97				
	Srey Socheat	Structural Engineer	ND4																																																	2	1.60				
	Keo Sereivuthy	Soil/Materials Engineer	ND5																																																	3	1.83				
	Mam Saruon	Hydrologist	ND6																																																	1	1				
	Ma Vanna	De-mining and UXO Specialist	ND7																																																	2	1.20				
	Khum Theoum	Environmental Specialist	ND8																																																	2	2				
	Poev Vathana	Procurement Specialist	ND9																																																	3	1.13				
	Suon Vy	Draft man 1	ND10																																																	5	5				
	Kit Sokea	Draft man 2	ND11																																																	5	4				
	Tim Sok Heng	Administrator	ND12																																																	6	10				
	Khon Sreyleak	Secretary	ND13																																																	6	5.57				
Construction Supervision	Kim Saran	Highway Engineer 1	NC1																																																	28	29				
	Y Noy	Highway Engineer 2	NC2																																																	26	24				
	Saing Soveasna	Soil/Materials Engineer 1	NC3																																																	28	28				
	Pin Sovann	Soil/Materials Engineer 2	NC4																																																	26	24				
	Srey Socheat	Structural Engineer	NC4																																																	4	4				
	Tok Suy	De-mining and UXO Specialist	NC5																																																	5	5				
	Mao Vanchann	Environmental Specialist	NC7																																																	2	2				
	Kong Sophin	Inspector 1	NC8																																																	28	28				
	Saing Soveasna	Inspector 2	NC9																																																	28	28				
	Meng Dara	Inspector 3	NC10																																																	28	26				
	Kong Vuthy	Inspector 4	NC11																																																	26	24				
	Ma Byna	Lab. Engineer 1	NC12																																																	28	28				
	Mam Sinarith	Lab. Engineer 2	NC13																																																	26	26				
Cumulative Sum (M/M)			1.5	3.0	4.5	9.5	10.5	5.0	1.0	-	1.0	1.0	-	9.0	10.0	12.0	12.0	12.0	11.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0																
			1.5	4.5	9.0	16.5	26.0	34.0	36.0	36.0	36.0	37.0	37.0	37.0	46.0	56.0	68.0	80.0	92.0	110.0	113.0	123.0	133.0	143.0	143.0	143.0	163.0	173.0	183.0	193.0	203.0	213.0	223.0	233.0	243.0	253.0	263.0	273.0	283.0	293.0	303.0	312.0	320.0														
			3.0%	8.5%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%														
Personnel Input by Stage (%)			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%													
			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%												
			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%												
			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%												
			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%												
			4.0%	13.0%	26.4%	53.6%	76.9%	93.6%	98.2%	96.8%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	10																	

* The personnel input during defects liability period for inspection and issuing the defects liability certificate was not considered in this personnel schedule.

Detailed Design and Implementation Supervision of the EDCF Loan KHM-9
: Cambodia Northwest Provincial Road Improvement Project

10.3 Correspondences

The following correspondences were made between MPWT and the Consultants during the reporting period.

From MPWT to Consultant

<u>Date</u>	<u>Description</u>
-	-

From Consultant to MPWT

<u>Date</u>	<u>Description</u>
02 February 12	Replacement of Local Mine/UXO Specialist
08 February 12	Submission of Guideline for Min/UXO Detection and Clearance
08 February 12	Instruction of Guideline for Mine/UXO Detection and Clearance
13 February 12	Recommendation of Approval for Survey Equipment
13 February 12	Mobilization of Local Engineer for Supervision consulting services Mr. Kim Saran Highway Engineer 1, Mr. Saing Soveana Soil/Material Engineer 1, Mr. Bunneng Sonant Survey Engineer. On 15 February 2012
14 February 12	Provision of Accommodation and Vehicles for Supervision Consulting services
14 February 12	Notice of Approval for Survey Equipment
15 February 12	Submission of Monthly progress Report No.3 (January 2012)
15 February 12	Request for the safety of civil Works at Mine/UXO Area
15 February 12	Provision of Engineer facilities
16 February 12	Request for change of Accident Vehicle Type B (No.25-2-0420)
16 February 12	Accident Report of Engineer's Vehicle Type B
20 February 12	Monthly Payment Certificate No.015 (January 2012)
27 February 12	Approval for Provision of Draftsman
28 February 12	Recommendation for project Information Board

Photo of Project Activities (EDCF Loan No.KHM-9)

1. Survey for Civil Works and Base Camp



2. Mine/UXO Clearance Works



APPENDICES

- A. SUMMARIZED POTENTIAL NEGATIVE IMPACTS, MITIGATION MEASURES AND RESPONSIBILITIES
- B. COMPLAINT HANDING MECHANISM (CHM)
- C. GOOD GOVERNANCE FRAMEWORK (GGF)
- D. COMPLIANCE WITH MAJOR LOAN COVENANTS
- E. YEARLY PROJECTION OF CONTRACT AWARD/ COMMITMENT AND DISBURSEMENT (2011, 2012, 2013, 2014)

APPENDIX A

SUMMARIZED POTENTIAL NEGATIVE IMPACTS MITIGATION MEASURES AND RESPONSIBILITIES

SUMMARIZED POTENTIAL NEGATIVE IMPACTS, MITIGATION MEASURES AND RESPONSIBILITIES

Activities	Potential Negative Impacts	Mitigation Measures	Implementing Organization	Supervising Organization
(a) Road alignment	Damage to ancient temple on NR 56– in contravention of Law on Protection of Cultural and National Heritage (1996)	<ul style="list-style-type: none"> Road alignment was changed to give by pass around Banthey Chhmar and now avoids historical areas. Decision made in collaboration with MoCF. 	Consultant	MoCF, MPWT
(b) Raising Road Affecting Hydrology, Drainage and fish migration.	Increase erosion, possible road failure due to impoundment of flood waters; prevention of fish migration.	<ul style="list-style-type: none"> All bridges stream flow area increased, extra cross drainage provided. Included in detailed design. 	Consultant	MPWT
(c) Road Widening	Loss of infrastructure	<ul style="list-style-type: none"> Minimal Impacts, No mitigation required. 	N/A	N/A
(d) Need for fill material	Loss of livelihood, Loss of Agricultural Land for Borrow Pits.	<ul style="list-style-type: none"> Develop alternative uses for borrow pit areas with agreement of farmers and villagers. Some villagers request borrow pits to be left as water ponds for use by village. 	Contractor	SEU, MPWT
(e) Cutting of roadside trees	Loss of roadside trees, loss of shade and utility.	<ul style="list-style-type: none"> Compensation to be paid under Resettlement Plan. No replanting is required by contractor, planting will be carried out, by if appropriate, by MAFF 	MAFF	MPWT
(f) Cut faces and borrow pits	Erosion and instability of cut faces and borrow pits	<ul style="list-style-type: none"> Design cut slope to minimize instability. Use structural stabilization measures such as retaining walls and gabions, if necessary. Use adequate design, sitting, and sizes of drainage structures. <p>All included in detailed design.</p>	Consultant	MPWT
(g) Outflow from drainage structures	Erosion of Lands below the roadbed receiving concentrated outflow carried by drainage structures– in contravention of Draft Sub-Decree on Water Quality.	<ul style="list-style-type: none"> Position drainage structures to avoid a cascade effect and to ensure that runoff is conveyed into natural drainage lines at controlled velocities. Line receiving areas with stones or concrete to protect soils at outflow areas Incorporate sufficient number of drainage outlets such that flow from any individual outlet is not excessive. <p>Included in detailed design.</p>	Consultant	MPWT
(h) Road alignment next to river/stream	Loss of riverside vegetation	<ul style="list-style-type: none"> Where road alignment is close to the rivers, widening or re-alignment should be on the side not adjacent to the river. <p>Included in detailed design.</p>	Consultant	MPWT

(i) Road widening	Loss of vegetation and habitat through road widening, realignment of right-of-way	Re-grass slopes and embankments. Specification included in detailed design.	Contractor	Consultant
(j) Road alignment	Impacts on wildlife through interruption of migratory routes and other habitat disturbances— in contravention of Law on Environmental Protection and Natural Resource Management (1996)	Other than fish migration no impacts.	Consultant	Consultant, MPWT, DoE
(k) Road alignment	Encroachment on irrigation structures from road widening and realignment	<ul style="list-style-type: none"> Use appropriate drainage structures to replace those presently used in irrigation systems. Avoid encroachment on irrigation systems in use. Consult with relevant government offices and villagers. <p>Already included in detailed design</p>	Contractor	Consultant, SEU, MAFF
(l) Road Construction	Encroachment on water supply systems from road construction activities	<ul style="list-style-type: none"> Identify places where there are existing and planned water pipes and make appropriate arrangement avoid water pipes. Detailed design must include plans for avoidance of damage to water systems and replacement/repair of water systems where avoidance is not possible. Coordination should be exercised through the Inter-Ministerial Resettlement Committee, as well as normal inter-ministry liaison. 	Contractor	Consultant, MPWT, MoWM
(m) Road widening onto agricultural land	Destruction of agricultural land through road widening and realignment	<ul style="list-style-type: none"> Minimize realignment through agricultural land. Ensure appropriate compensation for loss of agricultural lands. 	Consultant	MAFF, SEU
(n) Road shoulder widening	Encroachment on previously unidentified cultural sites— in contravention of Law on Protection of Cultural and National Heritage (1996)	<ul style="list-style-type: none"> Consult with villagers during detailed design to avoid encroachment on graveyard, and other unidentified sites of cultural importance. 	Consultant	, MPWT, MoCF
(a) Mobilization of equipment and workforce	Accident risk from mobilizing construction equipment	<ul style="list-style-type: none"> Minimize the mobilization of heavy equipment to nighttime. Over-width and over-length vehicles should display adequate warnings such as flashing lights, signs, and flags on extending parts of equipment. 	Contractor, Police	SEU
(b) Mobilizing workforce	The introduction of an outside workforce can have a negative impact on the health and social well-	<ul style="list-style-type: none"> Conduct special briefing or on-site training on environmental requirement of the project to workers. 	Contractor	SEU

	being of local people	<ul style="list-style-type: none"> ▪ Strictly supervise workers not to interference with local affairs or quarrel with local people. ▪ In case of complaints from local people on the issues caused by workers, the complaints should be solved as soon as possible, by collaboration of contractor and village representatives. 		
(c) Behavior of workers	Impacts on local wildlife by workforce– in contravention of Joint Parkas of the Ministry of Environment and the Ministry of Agriculture on Prohibition of Hunting and Catching of Wildlife Animals (1996)	<ul style="list-style-type: none"> ▪ Carry out awareness-raising campaigns on wildlife value for workers. ▪ Any worker conduct hunting, or buying wildlife from local people, will be dismissed from job. ▪ Supply workers with sufficient food from outside the project. 	Contractor	SEU, MoE, MAFF
(d) Protecting workers safety	Accident risk from mobilizing	<p>The following safety precautions should be provided to workers.</p> <ul style="list-style-type: none"> ▪ Warning and/or Precaution Signs on safety. ▪ Provide full PPE; Helmets, boots, warning jackets etc. ▪ Instruction on health and safety. ▪ Establishment of all relevant safety measures required by law and good engineering practices. 	Contractor	SEU, MPWT
(e) Health Aspects	Outbreak of disease	<ul style="list-style-type: none"> ▪ The contractor shall have all his workers undergo a medical screening prior to their arrival on site, to check for HIV/AIDS, sexually transmitted diseases, and to provide an awareness program. Any workers screening positive for such diseases shall not be allow on the site. ▪ Site construction camps far away from local communities and rivers. ▪ Keep camps from becoming blight on the local environment. ▪ Provide enough water supplies for workers, and ensure sufficient sanitation for the camp: the proper location for solid waste disposal. ▪ Make medical treatment available for workers. Provide workers mosquito nets and malaria-prevention medication, if needed, spray around camp area with chemicals against mosquitoes. 	Contractor	SEU, MoH
(f) Providing fuel for workers	Depletion of natural resources through demand for building materials, fuel and food for workers– in contravention of Royal Decree on	<ul style="list-style-type: none"> ▪ Do not harvest wood resources within protected area. ▪ Where local materials must be used, make agreements with local communities about the 	Contractor	SEU, MoE, FA

	the Creation and Designation of Protected Areas (1993)	<p>areas or the volume that can be harvested without significant impact.</p> <ul style="list-style-type: none"> ▪ Support community development by paying an adequate price for any local resources used. ▪ All supplies for building camps should be brought from outside area. 		
(i) Construction work area	Loss of water quality– in contravention of Sub-Decree on Water Quality	<ul style="list-style-type: none"> ▪ Revegetation of construction area. This relates to grass seeding of slopes of new embankments for soil stabilisation and control of sediment run off. 	Contractor	MPWT
(ii) Work in stream channels	Loss of water quality– in contravention of Sub-Decree on Water Quality	<ul style="list-style-type: none"> ▪ Limit work in channels to low flows. Diversionary works to be completed in dry season. 	Contractor	MPWT
(iii) Fuel, lubricants and asphalt	Loss of soil and water quality – in contravention of MOE Praka No. 992 on the Regulation of Industrial Solid and Liquid Waste Management (1994)	<ul style="list-style-type: none"> ▪ Fuel storage in properly designed facilities, careful refueling systems 	Contractor	MPWT, DoE
(iv) Solid waste disposal	Loss of soil and water quality– in contravention of Sub-Decree on Waste Management	<ul style="list-style-type: none"> ▪ Solid waste management procedures 	Contractor	MPWT, DoE
(v) Dust impacts	Loss of quality of life values– in contravention of Draft Sub-Decree on Air Pollution Prevention	<ul style="list-style-type: none"> ▪ Road watering, cover stock piles 	Contractor	MPWT
(vi) Noise impacts	Loss of quality of life values– in contravention of Draft Sub-Decree on Noise Prevention	<ul style="list-style-type: none"> ▪ Vehicle noise control, Timing of work, Give advance notice of time of blasting 	Contractor	MPWT
(vii) Vibration impacts	Loss of quality of life values– in contravention of Draft Sub-Decree on Noise Prevention	<ul style="list-style-type: none"> ▪ Schedule work to minimize nuisance 	Contractor	MPWT
(viii) Damage to services	Loss of services	<ul style="list-style-type: none"> ▪ Contractor liaise with utility company on location of services 	Contractor	MPWT
(ix) Damage to bridges and pavements	Loss of access	<ul style="list-style-type: none"> ▪ Truck overloading must be controlled 	Contractor	MPWT/Police
(x) Altered road conditions	Driver hazards	<ul style="list-style-type: none"> ▪ Reduce waiting time delays; signage 	Contractor	MPWT/Police
(xi) Inadequate sanitation	Increased disease– in contravention of Law on Environmental Protection and Natural Resource Management (1996)	<ul style="list-style-type: none"> ▪ Provide sanitation through septic tanks; potable water, by wells and tankers. Well to be sunk on permanent campsites. Septic tanks to be installed on permanent campsites. Temporary camps on NR 56 to be in rented accommodation with existing sanitation, and extra water provided by tanker from Sisophon if needed. 	Contractor	MPWT

(xii) Being ready for accidents and injuries	Slow response to injury, no treatment for illness	<ul style="list-style-type: none"> Worker Health and Safety Plan, First Aid officer on site identifying nearest medical facilities. 	Contractor	Contractor, Consultant, MPWT
(xiii) Transmission of sexually communicable diseases	Spread of diseases to communities	<ul style="list-style-type: none"> Pre-employment worker screening, Public education program. 	Separate study and program implemented	MPWT/ Contractor
(xiv) Stagnant water areas	Breeding habitats for mosquito vector	<ul style="list-style-type: none"> Siting camps distant to communities. Removal of stagnant water areas. 	Contractor	Consultant
(xv) Dislocation of people within RoW	Loss of livelihood and assets	<ul style="list-style-type: none"> Resettlement and compensation plan 	SEU	MPWT/ IRC
(xvi) Discovery of artifacts and relics	Permanent loss of cultural items– in contravention of Law on Protection of Cultural and National Heritage (1996)	<ul style="list-style-type: none"> Contractor awareness; inform MoCF 	Contractor	MoCF
(xvii) Earthworks and operating of quarries and borrow pits	Erosion and instability of cut faces and borrow pits	<ul style="list-style-type: none"> No new side roads should be permitted in areas with steep slopes. Minimize major earthworks during the rainy season, to the extent feasible. Pile topsoil from digging of borrow pits carefully to one side, where it can be later used for reclamation. During construction, employ erosion prevention measures such as the use of hay bales. At the end of the construction phase, recontour borrow pit walls, replace topsoil, and revegetate. At the end of the construction phase, revegetate cut slopes where feasible. 	Contractor	SEU
(xviii) Disposal of overburden	Erosion from disposal of cut spoil	<ul style="list-style-type: none"> Dispose of spoil only where there is vegetated strip at least 50m wide between the disposal site and the nearest water body. To the extent feasible, avoid disposal on slopes greater than 30%. Where spoil disposal in vegetated sites cannot be avoided, select areas with scrub growth over areas of healthy forest. No disposal in the area of the BCPL. No disposal into gullies or watercourses. No disposal in or adjacent to cultivated areas, unless such areas lie within the road reserve width, in which case owner will be compensated 	Contractor	SEU

		<p>under the Resettlement Plan.</p> <ul style="list-style-type: none"> ▪ No disposal by direct tipping of spoil down slope. ▪ Revegetate spoil dumps to maintain the soil stability. 		
(xix) Construction near riverside	Loss of riverside vegetation	<ul style="list-style-type: none"> ▪ Avoid clearing riverside vegetation during road construction except where absolutely necessary. Revegetate riverbanks where clearing is unavoidable. 	Contractor	SEU
(xx) Construction of detour	Loss of vegetation from detour construction	<ul style="list-style-type: none"> ▪ In flat areas, leave enough of a roadside edge for vehicle to pass on the other half of the roadway. ▪ Remove the base soil of any necessary detours and revegetate after road construction. ▪ Avoid use of detour where at all possible. ▪ Where realignments are being built, use the existing roadway for traffic to pass. ▪ Where detour are unavoidable, as in areas where bridges are being built, limit the length and impact of each detour to the degree possible. ▪ Limit the width of any necessary detours to a minimum. 	Contractor	SEU
(xxi) Construction near forests	Loss of vegetation and habitat through road widening, realignment of right-of-way, quarries and borrow pits– in contravention of Royal Decree on the Creation and Designation of Protected Areas (1993)	<ul style="list-style-type: none"> ▪ Do not allow side roads in forested area. ▪ There must be no new quarries within the BCPL nor in any of the provincial or district prohibited areas. ▪ Do not cut any trees outside of the construction zone. ▪ In case of new quarries operation, the environmental authorities – DoE - must approve the quarries. ▪ Where possible, avoid cutting trees along the edge of the construction zone. ▪ Quarrying activity should be limited to a minimum of necessary sites, with previously used sites preferred. 	Contractor	SEU, DoE
(xxii) Construction near Areas Protected by Royal Decree	Impacts on wildlife through interruption of migratory routes and other habitat disturbances– in contravention of Royal Decree on the Creation and Designation of Protected Areas (1993)	<ul style="list-style-type: none"> ▪ Strict monitoring in this area should be used to prevent opportunistic "salvage" logging or illegal timber harvest. If observed, notify relevant authorities or police. ▪ No side roads should be built in the BCPL, as may encourage poaching of wildlife. If observed, notify BCPL rangers or police. 	Contractor	SEU, DoE

(xxiii) Construction near village water supplies	Encroachment on water supply systems from road construction activities	<ul style="list-style-type: none"> Contractors should pay a fee to villagers for damage to water system, perhaps based on number of days without water until the system is fixed. Fees might be specifically targeted toward women's groups, since they are usually the ones who will have the main burden of carrying water when the system is down. 	Contractor	SEU
(xxiv) Construction near cultural sites	Encroachment on previously unidentified cultural heritage sites— in contravention of Law on Protection of Cultural and National Heritage (1996)	<ul style="list-style-type: none"> Alert local authority upon discovery of any objects of possible archaeological significance that may be uncovered during construction. Construction activity affecting the area of the find should stop until qualified site assessment has been made and contractors have been given permission to proceed. Bring in a qualified archaeologist as needed. 	Contractor	SEU, MoCF
(xxv) Construction Causing Air Pollution	Dust / Air pollution— in contravention of Draft Sub-Decree on Air Pollution Prevention	<ul style="list-style-type: none"> Use water bowsers to water the road when dust occurs, particularly in the dry season. Maintain all construction vehicles to minimize vehicle emission. 	Contractor	SEU, DoE
(xxvi) Construction Causing Noise	Noise and Vibration— in contravention of Draft Sub-Decree on Noise Prevention	<ul style="list-style-type: none"> All road construction vehicles must have working mufflers and be properly maintained. Time blasting activities so as not to disrupt local people. Avoid working at night near settled areas Inform people of possible damage from vibration before using Vibration Rollers near to settled area. Avoid, as much as possible, using Vibration Rollers for soil compaction in settled areas 	Contractor	SEU, DoE
(xxvii) Excavation of Borrow pits	Creation of stagnant water bodies in borrow pits, quarries	<ul style="list-style-type: none"> Incorporate adequate drainage and fill in borrow pits and quarries. Maintain borrow pits and quarries by landscaping and revegetating after operation. 	Contractor	SEU
(xxviii) Construction of by-pass	Accidental risks by traffic disruption during construction	<ul style="list-style-type: none"> Employ "flag men" to regulate the traffic flow. Where new alignments are being built, allow traffic to continue on old alignments. Where possible, as in flat areas, provide enough edge space for one-way traffic flow. 	Contractor	SEU
(xxix) Visual impact of construction	Visual Impact of road cut, spoil disposal, borrow pits, and quarries.	<ul style="list-style-type: none"> Where feasible, quarries should be sited away from the road. In sites where quarries must be close to the road, trees and other vegetation should be left between the quarry/crushing plant sites and the road. 	Contractor	SEU

(xxx) Removal of unused structures and pavement	Construction waste– in contravention of Draft Sub-Decree on Waste Management	<ul style="list-style-type: none"> ▪ Dispose only on sites approved by DoE. No disposal in the area of the BCPL. ▪ No disposal into gullies or watercourses. ▪ No disposal in or adjacent to cultivated and settled area. 	Contractor, Consultant	SEU
(xxxi) Setting up and operating an asphalt plants, bitumen operation area.	Water pollution by oil, grease, and fuel around gas stations and parking areas– in contravention of Draft Sub-Decree on Hazardous Substances	<ul style="list-style-type: none"> ▪ Locate storage areas for diesel and bitumen at least 500 meters from watercourses. ▪ Employ safe practices in filling bitumen distributor tanks and in healing bitumen. Do not allow smoking or fire of any kind in the vicinity of bitumen and kerosene blending tanks. Provide a carbon dioxide fire extinguisher at the bitumen tank site for fire-fighting. ▪ Collect and recycle all lubricants and take precautions to prevent accidental spills. ▪ Prohibit road asphaltting activities during rainfall. ▪ Develop and implement plans for safe storage of all toxic and potentially toxic materials into construction planning and design. 	Contractor	Consultants, SEU
(xxxii) Construction activities near prime agricultural lands	Destruction of agricultural land through spoil and construction waste disposal– in contravention of Draft Sub-Decree on Waste Management	<ul style="list-style-type: none"> ▪ Do not dispose cut spoil and construction waste at agricultural land. 	Contractor	SEU, MAFF
(xxxiii) Construction Camps Operation	Solid waste– in contravention of Draft Sub-Decree on Waste Management	<ul style="list-style-type: none"> ▪ Provide garbage bins & sanitary facilities for workers. Waste in the bins should be cleared periodically. ▪ Special attention should be paid to the sanitary condition of camps. 	Contractor	SEU
(xxxiv) Residual Effects from Construction Camps	Depletion of natural resources through demand for building materials, fuel and food for workers– in contravention of Law on Environmental Protection and Natural Resource Management (1996)	<ul style="list-style-type: none"> ▪ Do not harvest wood resources within the BCPL ▪ Do not allow construction camps to become permanent settlements. Remove camps prior to project completion. ▪ Use non-wood fuels such as Liquid Propane Gas or kerosene for cooking food and heating bitumen. ▪ Where local materials must be used, make agreements with local communities about the areas or the volume that can be harvested without significant impact. ▪ Support community development by paying an adequate prices for any local resources used. ▪ All supplies for building camps should be brought from outside the area. 	Contractor	SEU

		<ul style="list-style-type: none"> ▪ Upon close of construction, consider transferring camp structures to local people for community or government use. 		
(xxxv) Health Effect from Construction Camps	Creation of a new pathway for disease vectors affecting humans	<ul style="list-style-type: none"> ▪ All workers will have a medical screening conducted by "Cambodian Red Cross", to check for HIV/AIDS, sexually transmitted diseases, etc. ▪ Keep camps from becoming blight on the local environment. ▪ Provide enough water supplies for workers, and ensure sufficient sanitation for the camp: the proper drainage systems and the proper location for solid waste disposal. ▪ Make medical treatment available for workers. Provide workers mosquito nets and malaria-prevention medication. If needed, spray around camp area with chemical against mosquitoes. ▪ Plan post-construction clean-up activities to assure no unsanitary or otherwise hazardous debris are left behind at camp sites. 	Contractor	SEU, MoH
(a) Better quality road and higher speeds	Increase in road accidents to people and livestock	<ul style="list-style-type: none"> ▪ Speed limits enforced. Driver and community awareness; road signs 	Police	Police
(b) More traffic volume	Increased air pollution and noise – in contravention of Draft Sub-Decree on Noise and Air Pollution Prevention	<ul style="list-style-type: none"> ▪ Control of vehicle air and noise emissions from vehicles. Paved road will decrease noise and dust. 	DoE	MoE, Police
(c) Poor control of increased traffic volume with more vehicles carrying hazardous chemicals.	Accidental Risk of Toxic Spills – in contravention of Draft Sub-Decree on Hazardous Substances	<ul style="list-style-type: none"> ▪ Enforcement of transport regulations and HAZCHEM procedures 	Police	DoE, Police
(d) Increased access	Illegal Settlement along RoW	<ul style="list-style-type: none"> ▪ Restriction of development within RoW; offer of alternative sites for activities. 	Provincial Government	SEU, MPWT
(e) Increased access	Accelerated Loss of Forests and Wildlives – in contravention of Joint Prakas of the Ministry of Environment and the Ministry of Agriculture on Prohibition of Hunting and Catching of Wildlife Animals (1996)	<ul style="list-style-type: none"> ▪ Not anticipated as no wildlife conservation areas near to project roads. BCPL contains no rare species; crane conservation area is 5 kms away. 	DoE	MoE, MAFF
(f) Increased vehicular traffic	Overexploitation of forest resources through illegal and unsustainable harvesting– in contravention of Royal Decree on the Creation and Designation of Protected Areas (1993)	<ul style="list-style-type: none"> ▪ Strengthen enforcement of existing laws regulating timber harvest, achieved through inputs in training, staffing, resources and regulatory powers of Forestry officials at all levels. ▪ Improve border area controls on all sides with 	FA, MAFF, BCPL Rangers, DoE	MAFF, MoE

		increased staffing, training, and resources. ▪ Support community forestry initiatives.		
(g) Increased vehicular traffic	Impacts of wildlife through increased pressure from illegal trade— in contravention of Joint Prakas of the Ministry of Environment and the Ministry of Agriculture on Prohibition of Hunting and Catching of Wildlife Animals (1996)	<ul style="list-style-type: none"> ▪ Enforce of existing wildlife regulations prohibiting trade in endangered species. ▪ Build Cambodia government capacity for enforcement of wildlife laws through training resources, and increased staffing. ▪ Improved border area controls on all sides (Thai and Cambodia) with increased staffing, training and resources. 	FA, DoE	MAFF, MoE
(h) Increased vehicular traffic	Loss of cultural resources and tradition – in contravention of Law on Protection of Cultural and National Heritage (1996)	<ul style="list-style-type: none"> ▪ Support well-planned eco-tourism that involves solicitation of continuous feedback from both local residents and travelers. ▪ Support the development of village cultural preservation groups, as already occur in several villages along the Project Road. 	DoCF	MoCF

➤ Note:

G = Gabion

M = Mattress

Geo. = Geo Textile

RP = Resettlement Plan

DoE = Department of Environment, MoE = Ministry of Environment

BCPL = Bantey Chhmar Protected Landscape

FA = Forestry Administration, MAFF

MAFF = Ministry of Agriculture, Forestry and Fisheries

DoCF = Department of Culture and Fine Arts, MoCF = Ministry of Culture and Fine Arts

SEU = Social and Environment Unit

MPWT = Ministry of Public Works and Transport

IRC = Inter-Ministerial Resettlement Committee

MoH = Ministry of Health

MoWM = Ministry of Water Resource and Meteorology

APPENDIX B

COMPLAINT HANDLING MECHANISM

KINGDOM OF CAMBODIA
National Religion King

Ministry of Public Works and Transport
Cambodia Northwest Provincial Road Improvement Project NR 56 (NWPRIP)

Complaint Handling Mechanism (Draft)

Complaint Handling Mechanism (CHM) is an important part of project governance's monitoring framework that is essential for the anti-corruption action plan. The CHM, a NWPRIP mechanism handling measure, once put in place would improve transparency and accountability through strengthened procurement arrangement and financial management, and enhanced public disclosure. Well designed and implemented CHM would strengthen NWPRIP project management's objectives of effective and efficient operation and good governance.

The steps on how to complain, how complaints are received, considered and adjudicated at all times during the implementation of the project are highlighted below for reference and guidance of all concerned departments.

Step in CHM	Details and Mechanics
Step 1: Publicize the Mechanisms	CHM is disclosed in project website: www.mpwt.gov.kh/externalfund/nwprrip . It should also be publicized in information boards of MPWT, Provincial Department of Public Works and Project sign board during the construction. In short all avenues for wide publication should be exploited.
Step 2: Receive and Register	<p><u>Complaints Receive</u></p> <p>a) General public can file complaints through</p> <ul style="list-style-type: none"> (i) Postal address at the Ministry of Public Works and Transport (MPWT), Phnom Penh (ii) E-mail: psovicheano@online.com.kh (iii) Letter written directly to project Director of PMU3. (iv) In addition, complaints can be lodged in a complaint box prominently kept in each project site and in another box also kept in the provincial department of Public Works. (v) In cases a complainant has credible information on wrongdoings and corruption, he may complain to the ECONOMIC DEVELOPMENT COOPERATION FUND (EDCF); KEXIM BANK, , Email: yhsohn@koreaexim.go.kr <p>b) In addition, verbal complaints(made either personally or through telephone calls made to a notified dedicated phone number fitted with a recorder) or anonymous complaints received shall also be considered for due verification of their seriousness and validity.</p> <p>c) The details of investigations, findings, internal discussions and conclusions should be recorded in a separate confidential file for each</p>

Step in CHM	Details and Mechanics
	<p>case.</p> <p><u>Complaints Register</u></p> <ul style="list-style-type: none"> a) Complaints received shall be recorded in a separate <u>confidential</u> register or in a file with unique reference number, date and time received, mode of receipt, complainant's name and contact details. The register should not contain any details of the person or organization against whom the complaint is being made. b) Complaints (verbal and anonymous) shall also be taken into account and registered for further action if the committee perceives that they are falling under potential degree of seriousness. c) The Register being a central record of all complaints should show a brief summary of the logistical steps (with dates) of the investigation process for each complaint as well as the final outcome.
<p>Step 3: Review and Investigation</p>	<p><u>Complaints Committee</u></p> <p>Persons to be in charge of Complaints Handling Committee include:</p> <p><u>Government Level</u></p> <ul style="list-style-type: none"> 1. H.E. Mr. Chhin Kong Hean, Project Coordinator – Chairman 2. Mr. Pheng Sovicheano, Project Director, PMU3 3. Mr. Sar Vutha, Office Manager, PMU3 4. Mr. In Magarith, Technical Manager, PMU3 5. Mrs. Hang Sochivy, Senior Accountant, PMU3 6. Mr. Sok Saman, Project Manager, PMU3 <p style="text-align: right;">} Member</p> <p>Note: If the complaint received involves any of the officers in the above Committee, then such a member shall be promptly replaced by another member appointed by the Minister of MPWT who would be the final authority to decide on the appeals / complaints.</p> <p><u>Process</u></p> <ul style="list-style-type: none"> a) The complaints received by the Administration Manager of the Committee shall be categorized under <ul style="list-style-type: none"> i) Department wise ii) Location wise, and iii) Subject wise for easy reference and analysis b) Once in 15 days the committee members shall meet to review the complaints received and propose an action plan. c) Investigation shall begin quickly and diligently. Investigations must be neutral. In cases where investigations are complex and unavoidably take longer, the complainant should be notified of progress at 14-day intervals.

Step in CHM	Details and Mechanics
	<p>d) Persons or entities accused of wrongdoing must be given a fair opportunity to present their side of the case.</p> <p>e) Result from investigation will be reported to the committee who will take final adjudication within 10 days.</p> <p>During the investigation and consideration stages, confidentiality shall be maintained on the source and any person, company or entity accused of wrongdoing. Investigation findings should not be released beyond Committee members.</p>
Step 4: Right to Appeal Adjudication	<p>a) Complainants have a right of appeal to higher/involved authorities, if they are dissatisfied with the committee's decision.</p> <p>b) When final decision is reached, the outcome will be publicly disclosed website: www.mpwt.gov.kh/external/fund/cnrip. The disclosure of final decision/response on the complaints should be at the project area including MPWT/Provincial Department of Public Works etc, so that "access to information" is readily available to the public at large.</p> <p>c) In case where a complaint that may involve a breach of a development partner's legal agreement should be notified to the concerned partner immediately not after investigation and outcome, to enable the development partner to track the investigation process and status and keep its management informed.</p>
Step 5: Monitoring and Evaluation	<p>a) The complaints book (or computer file) and all notes, memos and letters relating to a complaint and its investigation shall be maintained for review for minimum of two years after the completion of the project.</p> <p>b) Tracking and assessing the progress to resolve complaints.</p> <p>c) Analyze the complaint data for continual improvement in complaints handling system.</p>

This Complaints and Remedies Mechanism shall take effect upon the date of its signature, and all the persons named in the Complaints Committee above shall be tasked to effectively implement the mechanism in its entirety.

APPENDIX C

GOOD GOVERNANCE FRAMEWORKS (GGF) (LOAN ADB 2539-GMS: CNPRIP) AND EDCF LOAN KHM-9)

Good Governance Framework (GGF)
(Loan 2539-GMS: Cambodia Northwest Provincial Road Improvement Project)

In all instance, the Loan Agreement shall be the overriding legal document. ADB's Procurement Guidelines, 2007 as amended from time to time ("Procurement Guidelines"), and ADB's Guidelines on the Use of Consultants by Asia Development Bank and its Borrowers, 2007, as amended from time to time ("Consulting Guidelines"), shall be applied pursuant to the Loan Agreement as they may be modified by that Loan Agreement. The Government's policies and procedures shall be applicable to the extent there is no discrepancy with Loan Agreement or ADB's Procurement Guidelines and Consulting Guidelines. In the event there is a discrepancy, then the Loan Agreement, the Procurement Guidelines and the Consulting Guidelines shall apply.

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
Element 1: Procurement				
1.a	Risks of corruption and fraud in the procurement process: <ul style="list-style-type: none"> • Collusion during bidding process • Biased bid evaluation • Suppliers / Contractors offering incentives for favorable treatment. 	The executing agency (EA) to establish a national level procurement committee under the Project, in accordance with the Government's Standard Operating Procedure and Procurement Manual (SOP/PM), mandated on 26 February 2007, both of which are in line with ADB guidelines.	The EA is the Ministry of Public Works and Transport (MPWT)	Committee established by loan effectiveness
		For Project-wide procurement, the evaluation committee shall consist of representatives from all relevant line ministries.	MPWT and Ministry of Economy and Finance (MEF) to monitor for compliance with the Loan Agreement, SOP/PM and ADB's Procurement Guidelines and the Procurement Manual.	Throughout Project duration.

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
1.b	Insufficient Compliance with procurement procedures	The EA is to adhere strictly to the procedures and guidelines set forth in the Loan Agreement, Project Administration Manual (PAM), ADB's Procurement Guidelines and SOP/PM that also cover international competitive bidding, and national competitive bidding and shopping.	MPWT MEF to monitor for compliance with the Loan Agreement, ADB's Procurement Guidelines and the SOP/PM	Throughout Project duration by submitting the procurement tracking form to ADB..
1.c	Weak procurement capacity	A procurement capacity assessment was undertaken as part of the project preparation technical assistance for preparation of the Project. The assessment found that the procurement capacity is adequate.	EA	Re-assessment will be conducted by ADB during the mid-term review
		The EA will receive hands-on training and technical assistance from consultants recruited under the Project. The Government SOP/PM will be used under the Project.	EA	Ongoing
		Project to closely monitor and review procurement conduct, and where necessary, take measures to improve procurement procedures based on lessons learn from each successive procurement activity.	EA, MEF and ADB	Throughout Project duration.
1.d	Procurement Plans	Preparation of realistic annual Procurement Plan as guided by the Procurement Guidelines, tied to annual work plan and budget.	EA, and with ADB NOL	First year Plan complete by appraised and attached to Minutes of Loan Agreement negotiations. Annually thereafter in July. The December 2010 Mission revised the procurement plan to update the revised implementation schedule etc.

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
1.e	Informal payments by contractors, suppliers and consultants	All contractors, suppliers and consultants-firms or individuals, national and international – bidding for contracts under the Project shall sign the Declaration on Ethical Conduct and Fraud and Corruption in the SOP/PM. The Project will include the Declaration in all bidding documents, request for proposals, and contracts.	EA and MEF oversight and ADB NOL	Throughout Project duration.
Element 2: Financial Management (FM)				
2.a	Weak internal controls	Strengthen financial management system and internal audit / controls function by ensuring that the Project uses SOP including procedures in the Financial Management Manual (FMM), which cover: <ul style="list-style-type: none"> • Financial policies and standards; • Elements of internal control; • Financial accounting system, ledgers, journals, • Bank accounts and credit / grant withdrawals; • Project expenditure, payroll, petty cash, advances; and • FM report, audit, counterpart funds withdrawals. 	EA MEF to monitor for compliance with SOP/FMM, as well as Loan Agreement and ADB's Anticorruption Policy	Continue throughout Project duration
2.b	Weak financial management capacity	The EA to receive hands-on training and technical assistance from consultants recruited under the Project. The Government FMM and SOP will be used under the Project as well as relevant provisions of the Loan Agreement and ADB's Procurement Guidelines and Consulting Guidelines. Project to closely monitor and review financial management conduct and make necessary improvements as required.	EA EA, MEF, and ADB	Throughout Project duration. Throughout Project duration.

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
2.c	Minimize cash transactions	Project to make all progress payments to contractors, suppliers and consultants – firms, individuals, national and international – by check or transfer to bank accounts, and retain evidence for audit and donor supervision mission.	EA	Throughout Project duration.
2.d	Inconsistency in allowances paid to Government staff attending training, workshops and study tours	Project to follow MEF's Instruction Letter No. 2000 dated 23 April 2007 on standard daily subsistence allowances.	EA to incorporate into Annual Training and Workshop Plan.	Throughout Project duration.
		Project to establish Annual Training and Workshop Plan with estimated budget.	Approved by EA with ADB NOL.	4 th QTR annually.
		Each training or workshop to have a detailed budget and expenses approved by the EA.	EA	Throughout Project duration.
		<p>Project to set eligibility rules for attending training, workshops and study tours. Attendees must:</p> <ul style="list-style-type: none"> • be engaged in work relevant to the training, and • be competent in the language use. <p>Project to ensure that training, workshops, study tours and other similar activities:</p> <ul style="list-style-type: none"> • are in line with Project aims and objectives • meet identified needs within the subproject plans, and • have budget in line with planned expenditure approved by the EA. Project to seek EA prior approval for any significant plan changes or departures. 	<p>EA in consultation with ADB</p> <p>EA in consultation with ADB</p>	<p>Before first training, workshop or study tour. Throughout Project duration.</p> <p>At time of annual work plan preparation, and again before each training, workshop or study tour.</p>

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
		Project to set cost guidelines for selected training / workshop activities, including: <ul style="list-style-type: none">venue rental with refreshments / mealssound and projection equipment hirestationery / hand – outsProject – specific training and workshop materialsSimultaneous translators, andPhotocopying, reproduction, translation.	EA in consultation with ADB	Before first training workshop or study tour.
		Project to define evidence to be submitted by attendees for reimbursement of expenses which may include: <ul style="list-style-type: none">Proof of travel by air – ticket stubs, travel agent’s receipt, airline boarding passesReceipt, hotel bills (for proof of stay)Receipt for incidental traveling expensesReceipt invoices for venue rental, food and beverage, sound / projection, equipment, hire of simultaneous translator, stationery and handouts, use of photocopying facilities.	EA in consultation with ADB	Each occasion
		Project to reimburse against receipts except where cover by fixed allowance in MEF’s Letter No. 2000.	EA in consultation with ADB	Each occasion
		Project to retain evidence of attendance and payment of attendee’s per diem and allowances.	EA in consultation with ADB	Each occasion
2.e	Delayed or non-existent reconciliation of	Project to reconcile operating expenses to staff or field offices within one week of the end of each month.	EA and Project director	Each month
		No further advances to be paid until previous advance reconciled and cleared against documentary evidence.		Throughout Project duration.
Element 3: Disclosure				

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
3.a	Conflict of interest among Project staff	Project staff to disclose private and public affiliations or personal interest before becoming involved in any Project related transaction, such as contract award. EA to prepare a declaration statement for staff's signature.	EA to ensure all Project staff sign the disclosures.	Throughout Project duration.
3.b	Inadequate transparency and disclosure	<p>For all contracts subject to prior review, within two weeks of receiving ADB's no-objection letter to recommendation of contract award, MPWT will publish on its website the results of the bid evaluation, identifying the bid and lot numbers, and providing information on:</p> <ul style="list-style-type: none"> i) name of each bidder who submitted a bid; ii) bid prices as read out at bid opening; iii) name and evaluated prices of each bid that was evaluated; iv) name of bidders whose bids were rejected and reasons for their rejection; and v) Name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. <p>For contracts subject to post review, MPWT will publish the bid evaluation results no latter than the date of contract award.</p> <p>At a minimum, the Project will disclose the information required by the Loan Agreement.</p>	EA to arrange disclosure in MPWT website by February 2011	Throughout Project duration through the website and including an overview in quarterly progress reports.
Element 4: Complaints and Remedies Mechanism				
4.a	Inadequate complaints and remedies mechanisms	<p>Project to build will-defined complaints and remedies mechanism into Project documents</p> <p>Complaints procedures regarding procurement to follow process set out in Loan Agreement and SOP / PM.</p>	<p>EA in consultation with ADB</p> <p>EA and MEF</p>	<p>Needed at effectiveness, but delayed till Jan 2011.</p> <p>Throughout Project duration.</p>
Element 5: Code of Ethical Conduct				

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
5.a	Poor enforcement of the Code of Conduct for Civil servants	Project to provide copies of the relevant laws and articles on Code of Conducts for civil servant to all Project staff, including contracted staff. Project will maintain signed declaration of receipt of these documents by all Project staff, including contracted staff.	EA	Completed by loan effectiveness
Element 6: Sanctions				
6.a	Inadequate sanctions for fraudulent and corrupt activity by Project staff, contractors, suppliers and consultants	The Project to identify and apply sanctions available under current law and regulations of Cambodia, ADB's Loan Regulations, the Loan Agreement, and ADB's Procurement Guidelines and Consulting Guidelines. Sections for individuals may include transfer of duties, retraining, suspension, dismissal, re-grading, and prosecution under Cambodia Law. Sanctions for firms may include: termination of contract, debarment or blacklisting under ADB's Procurement Guidelines and Consulting Guidelines or prosecution under Cambodia Law.	EA and ADB	Effectiveness
Element 7: Project Specific Elements				
7.a	Poor enforcement of contract terms and needing to conduct contractors performance evaluation	EA to ensure that contract terms are strictly enforced and the loan consultant will be a party to ensuring quality control of contract outputs, include acceptance of completion of works and services. The EA to conduct performance evaluation of all contractors providing all types of service under the Project (also see 7c.)	EA MEF to oversight and monitor.	Throughout Project duration by reporting during review missions.
7.b	Poor quality of design and works construction	EA ensure that approved infrastructure's design standards and specification developed by the respective agencies are utilized for the design of structures under the Project. Project to recruit experienced design consultant on timely basis to assist the Project.	EA EA with ADB NOL.	Throughout Project duration, ongoing. Contract signed on 28 October 2010..

Cambodia Northwest Provincial Road Improvement Project
Loan ADB 2539-CAM (SF)

No.	Issue	Action to Mitigate Risk	Responsibility	Monitoring
7.c	Risk of low quality construction and supervision	<p>Project to recruit experienced site supervision consultants to assist EA.</p> <p>Regular technical audit is to be undertaken with any adverse findings to be acted upon immediately.</p> <p>Project to evaluate contractors' performance with poor performing contractors declared ineligible to bid for at least one year.</p>	<p>EA with ADB NOL</p> <p>EA</p> <p>EA with ADB NOL</p>	<p>Recruited on 28 October 2010.</p> <p>Regularly throughout Project duration.</p> <p>Annually in July.</p>

APPENDIX D

COMPLIANCE WITH MAJOR LOAN COVENANTS (LOAN ADB 2539-GMS: CNPRIP)

Compliance with Major Loan Covenants

Covenants	Deadline	Compliance
Operation and Maintenance. MPWT shall be responsible for the operation and maintenance of the Project activities by providing proper technical supervision and ensuring adequate fund allocation. The Borrower shall ensure that adequate budget is requested and made available annually for the operation and maintenance of the Project facilities during and after the Project.	Upon affectivity	Ongoing
Environment. The construction and operation of the Project facilities shall be carried out in accordance with the agreed IEE, and shall comply with Borrower's environmental laws and regulation and ADB's <i>Environmental Policy (2002)</i> . If there is any discrepancy between the Borrower's laws and regulations, and ADB's <i>Environment Policy</i> , ADB's policy shall prevail.	Commencement of Civil Works	Net yet due
The MPWT shall ensure that environmental mitigation measures, environmental monitoring activities and environmental capacity strengthening programs as well as any other recommendations specified in the IEE are implemented as agreed to minimize any adverse environmental impacts arising from the construction and operation of Project facilities. For this purpose, MPWT shall include the IEE's environmental mitigation and monitoring measures in the bidding documents for civil works contracts and ensure that the civil works contractors shall: (i) develop construction environmental management plans based on the measures specified in the bidding documents prior to any site works, and (ii) implement the construction environmental management plans in accordance with the IEE during the construction.	At the start of Construction	Net yet due
Resettlement and Ethnic Minorities. The Borrower, through MPWT, shall ensure that any involuntary resettlement is carried out in accordance with the resettlement plans as agreed between the Borrower and ADB, ADB's <i>Involuntary Resettlement Policy (1995)</i> , and the Borrower's relevant law and regulations. If there are any differences between Borrower's laws and regulations, and ADB's <i>Involuntary Resettlement Policy</i> ADB's policy shall prevail	Before Construction	Not yet due
Prior to commencing land acquisition and involuntary resettlement activities, the Borrower, through MPWT, shall submit the updated resettlement plans to ADB for approval, and disclose them to the public in accordance With the ADB Public Communication Policy (2005).	Before Construction	Not yet due

Covenants	Deadline	Compliance
MPWT shall not issue a notice to commence civil works in a particular section of the roads to be constructed or rehabilitated under the Project, until: (a) compensation payment and relocation of the effected people in such particular section have been completed satisfactorily in accordance with the updated resettlement plan approved by ADB, (b) rehabilitation assistance for such particular section has been put in place, and (c) such particular road section is free of all encumbrances.	Before Construction	Not yet due
MPWT, through its Social and Environmental Unit and in close collaboration with Resettlement Department of the Borrower's Inter-Ministerial Resettlement Committee, shall be responsible for internal monitoring of resettlement activities. Within one (1) month of the commencement of updating the resettlement plans, it shall engage and independent agency for external monitoring reports shall be submitted to ADB on a quarterly basis and uploaded on MPWT's website within two (2) weeks of their submission. Such monitoring shall be carried out all resettlement activities have been completed.	Before and during Construction	Not yet due
The Borrower shall ensure that counterpart funds for resettlement activities are provided in a timely manner, and shall meet any unforeseen obligations in excess of the resettlement budget in order to satisfy the requirements and objectives of resettlement required under ADB's <i>Involuntary Resettlement Policy</i> .	Upon loan effectively	Resettlement plan will be updated and IRC for request for funds.
Ethnic Minority. The Borrower shall ensure that the Project does not affect any ethnic minority peoples. In case any ethnic minority is affected. MPWT shall develop and implement an ethnic minority development plan acceptable to ADB in accordance with the Borrower's applicable laws and regulations and ADB's Policy on Indigenous Peoples (1998).	During Construction	Not yet due
General and Social Issues The Borrower shall ensure that all civil works contracts under the Project incorporate provisions and allocate budgets such that contractors: (a) comply with the Borrower's applicable labor laws and related international treaties / conventions including prohibiting child labor, (b) provide safe working conditions and separate water and sanitation facilities for male and female workers in construction camps and in the construction sites, (c) provide equal wage to male and female works for work of equal value, (d) provide day-care services for children of female construction works, and (e) recruit local labor for construction work and the road maintenance program.	During Construction	Not yet due

Covenants	Deadline	Compliance
<p>The Borrower shall ensure that the gender strategy to be provided in the agreed resettlement plans and their updates, and the Summary of Poverty Reduction and Social Strategy are fully undertaken to maximize project benefits to women. Key actions shall include: (a) separate consultations on resettlement activities for affected women groups (female headed households, elderly women, (b) timely compensation and relocation of houses for such women groups, (c) implementing HIV/AIDS and human trafficking awareness program for women with district and commune councils of women, and (d) developing monitoring indicators covering women groups and implementing project specific gender strategy.</p>	<p>During Construction</p>	<p>Not yet due</p>
<p>UXO Clearance. The Borrower shall ensure that civil works contracts financed by the Project have provisions that before commencing their construction works, civil works constructors: (a) shall have cleared all UXOs on the construction sites, and (b) shall provide to MPWT the verification that the construction sites have actually been cleared. MPWT shall not issue a notice to proceed for any construction Works until it obtains such verification from the concerned civil works contractors.</p>	<p>Before Construction</p>	<p>De-mining/UXO Clearance is in progress.</p>
<p>Audited Accounts. The Borrower shall: (i) maintain, or cause to be maintained, separate accounts for the Project, (ii) have such accounts and related financial statements audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, (iii) furnish to ADB, as soon as available but in any event not later than 6 months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditors' opinion on the use of the Loan opinion on the use of the Loan proceeds and compliance with the financial covenants of this Loan Agreement as well as on the use of the procedures for imp rest account / statement of expenditures), all in the English language, and (iv) furnish to ADB such other statement and the audit thereof as ADB shall from time to time reasonably request.</p>	<p>June 2012</p>	<p>Not yet due</p>

APPENDIX E

PROJECTION OF CONTRACT AWARD/COMMITMENT AND DISBURSEMENT (2011, 2012, 2013, 2014)

WORKSHEET FOR QUARTERLY AND YEARLY DISBURSEMENT PROJECTION (USD)

MINIATRY OF PUBLIC WORKS AND TRANSPORT
CAMBODIA NORTHWEST PROVICAL ROAD IMPROVEMENT PROJECT
ADB LOAD NO.2539-CAM(SF)/ EDCF Load No. KHM-9

ADB Code	Items Description	QUARTER I				QUARTER II				QUARTER III				QUARTER IV				TOTAL PROJECT			
		JANUARY FEBRUARY MARCH 2011				APRIL MAY JUNE 2011				JULY AUGUST SEPTEMBER 2011				OCTOBER NOVEMBER DECEMBER 2011				FOR THE YEAR 2011			
		ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL
1	Civil work				-								-								
	CW 1 NR56A				0				0				0	921,000		149,930	1,070,930	921,000	0	149,930	1,070,930
	CW 2 NR56B														6,453,900		6,453,900	0	6,453,900	0	6,453,900
	CBF (Osmach)				0				0				0	444,000		118,025	562,025	444,000	0	118,025	562,025
2	Consulting Service for 56A	200,000			200,000	200,000			200,000	200,000			200,000	200,000			200,000	800,000	0	0	800,000
	Consulting Service for 56B		100,000		100,000		100,000		100,000		100,000		100,000		200,000		200,000	0	500,000	0	500,000
	Consulting Service for CBF									75,000			75,000	50,000			50,000	125,000	0	0	125,000
	Road Safty									49,200			49,200	65,600			65,600	114,800	0	0	114,800
	HIV-Human Trafficking												0	37,500			37,500	37,500	0	0	37,500
	Road Maintenance												0				0	0	0	0	0
	Equipment for CBF																	0	0	0	0
2	Incremental Administrative cost	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	100,000	0	10,000	110,000
4	Resettlement				-				-							424,000	424,000	0	0	424,000	424,000
	Tax and Duty																	0	0	0	0
5	Unallocated				-													0	0	0	0
																		0	0	0	0
	TOTAL	225,000	100,000	2,500	327,500	225,000	100,000	2,500	327,500	349,200	100,000	2,500	451,700	1,743,100	6,653,900	694,455	9,091,455	2,542,300	6,953,900	701,955	10,198,155

NOTE & REMARKS:

1. DDIS: 1146.54 KRW/USD Contract Civil Work: 1138.45 KRW/USD
2. Civil Work contract signed in DEC 2011
3. Advance Payment for Contract for improvement of Civil works 30% disbursed

Project Director

Date:

(Signature , Full name)

WORKSHEET FOR QUARTERLY AND YEARLY DISBURSEMENT PROJECTION (USD)

MINIATRY OF PUBLIC WORKS AND TRANSPORT
CAMBODIA NORTHWEST PROVINCIAL ROAD IMPROVEMENT PROJECT
ADB LOAD NO.2539-CAM(SF)/ EDCF Load No. KHM-9

ADB Code	Items Description	QUARTER I				QUARTER II				QUARTER III				QUARTER IV				TOTAL PROJECT			
		JANUARY FEBRUARY MARCH 2012				APRIL MAY JUNE 2012				JULY AUGUST SEPTEMBER 2012				OCTOBER NOVEMBER DECEMBER 2012				FOR THE YEAR 2012			
		ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL
1	Civil work				-								-								
	CW 1 NR56A	868,904		141,449	1,010,353	289,635		47,150	336,785	579,269		94,300	673,569	579,269		94,300	673,569	2,317,077	0	377,199	2,694,276
	CW 2 NR56B		6,617,043		6,617,043		1,033,913		1,033,913		620,348		620,348		1,033,913		1,033,913	0	9,305,217	0	9,305,217
	CBF (Osmach)				0	410,800		109,200	520,000	205,400		54,600	260,000	410,800		109,200	520,000	1,027,000	0	273,000	1,300,000
2	Consulting Service for 56A&CBF	68,385			68,385	104,079			104,079	173,000			173,000	173,000			173,000	518,464	0	0	518,464
	Consulting Service for 56B		53,000		53,000		123,000		123,000		176,000		176,000		176,000		176,000	0	528,000	0	528,000
	Road Safty				0				0	82,000			82,000	41,000			41,000	123,000	0	0	123,000
	HIV-Human Trafficking				0	37,159			37,159	26,321			26,321	26,321			26,321	89,800	0	0	89,800
	Road Maintenance									80,000			80,000	40,000			40,000	120,000	0	0	120,000
3	Equipment for CBF				0				0				0				0	0	0	0	0
4	Incremental Administrative cost	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	100,000	0	10,000	110,000
	Resettlement				0			424,000	424,000				0				0	0	0	424,000	424,000
	Tax and Duty				0				0				0				0	0	0	0	0
6	Unallocated				0				0				0				0	0	0	0	0
																		0	0	0	0
	TOTAL	962,289	6,670,043	2,500	7,776,281	866,673	1,156,913	582,850	2,606,435	1,170,990	796,348	151,400	2,118,738	1,295,390	1,209,913	206,000	2,711,303	4,295,341	9,833,217	1,084,199	15,212,757

NOTE & REMARKS:

Project Director

Date:

(Signature , Full name)

WORKSHEET FOR QUARTERLY AND YEARLY DISBURSEMENT PROJECTION (USD)

MINIATRY OF PUBLIC WORKS AND TRANSPORT
CAMBODIA NORTHWEST PROVICAL ROAD IMPROVEMENT PROJECT
ADB LOAD NO.2539-CAM(SF)/ EDCF Load No. KHM-9

ADB Code	Items Description	QUARTER I				QUARTER II				QUARTER III				QUARTER IV				TOTAL PROJECT			
		JANUARY FEBRUARY MARCH 2011				APRIL MAY JUNE 2013				JULY AUGUST SEPTEMBER 2013				OCTOBER NOVEMBER DECEMBER 2013				FOR THE YEAR 2013			
		ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL
1	Civil work												0								
	CW 1 NR56A	868,904		141,449	1,010,353	1,158,539		188,599	1,347,138	579,269		94,300	673,569	289,635		47,150	336,785	2,896,347	0	471,498	3,367,845
	CW 2 NR56B		3,101,739		3,101,739		1,654,261		1,654,261		2,481,391		2,481,391		2,067,826		2,067,826	0	9,305,217	0	9,305,217
	CBF (Osmach)	410,800		109,200	520,000	616,200		163,800	780,000	821,600		218,400	1,040,000	821,600		218,400	1,040,000	2,670,200	0	709,800	3,380,000
2	Consulting Service for 56A&CBF	173,000			173,000	173,000			173,000	130,000			130,000	130,000			130,000	606,000	0	0	606,000
	Consulting Service for 56B		176,000		176,000		176,000		176,000		212,000		212,000		231,000		231,000	0	795,000	0	795,000
	Road Safty	164,000			164,000	164,000			164,000	164,000			164,000	123,000			123,000	615,000	0	0	615,000
	HIV-Human Trafficking	26,321			26,321	26,321			26,321	26,321			26,321	26,321			26,321	105,284	0	0	105,284
	Road Maintenance	160,000			160,000	160,000			160,000	160,000			160,000	120,000	300,000		420,000	600,000	300,000	0	900,000
3	Equipment for CBF										100,000		100,000		500,000		500,000	0	600,000	0	600,000
4	Incremental Administrative cost	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	100,000	0	10,000	110,000
	Resettlement				0				0			212,000	212,000				0	0	0	212,000	212,000
	Tax and Duty				0				0				0				0	0	0	0	0
6	Unallocated				0				0				0				0	0	0	0	0
	TOTAL	1,828,025	3,277,739	111,700	5,358,913	2,323,060	1,830,261	354,899	4,508,220	1,906,190	2,793,391	527,200	5,226,781	1,535,556	3,098,826	268,050	4,902,432	7,592,831	11,000,217	1,403,298	19,996,346

NOTE & REMARKS:

Project Director

Date:

(Signature , Full name)

WORKSHEET FOR QUARTERLY AND YEARLY DISBURSEMENT PROJECTION (USD)

MINIATRY OF PUBLIC WORKS AND TRANSPORT
CAMBODIA NORTHWEST PROVINCIAL ROAD IMPROVEMENT PROJECT
ADB LOAD NO.2539-CAM(SF)/ EDCF Load No. KHM-9

ADB Code	Items Description	QUARTER I				QUARTER II				QUARTER III				QUARTER IV				TOTAL PROJECT			
		JANUARY FEBRUARY MARCH 2014				APRIL MAY JUNE 2014				JULY AUGUST SEPTEMBER 2014				OCTOBER NOVEMBER DECEMBER 2014				FOR THE YEAR 2014			
		ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL	ABD	EDCF	RGC	TOTAL
1	Civil work																				
	CW 1 NR56A	289,635		47,150	336,785	289,635		47,150	336,785				0				0	579,270	0	94,300	673,570
	CW 2 NR56B		1,033,913		1,033,913		1,033,913		1,033,913				0				0	0	2,067,826	0	2,067,826
	CBF (Osmach)	205,400		54,600	260,000	205,400		54,600	260,000				0				0	410,800	0	109,200	520,000
2	Consulting Service for 56A&CBF	32,000			32,000	32,000			32,000				0				0	64,000	0	0	64,000
	Consulting Service for 56B		265,000		265,000		177,039		177,039				0				0	0	442,039	0	442,039
	Road Safty	41,000			41,000	41,000			41,000				0				0	82,000	0	0	82,000
	HIV-Human Trafficking	26,321			26,321	26,321			26,321				0				0	52,642	0	0	52,642
	Road Maintenance	40,000			40,000	40,000			40,000				0				0	80,000	0	0	80,000
	Equipment for CBF				0				0				0				0	0	0	0	0
2	Incremental Administrative cost	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	25,000		2,500	27,500	100,000	0	10,000	110,000
4	Resettlement				0				0				0				0	0	0	0	0
	Tax and Duty				0				0			3,132,714	3,132,714				0	0	0	3,132,714	3,132,714
5	Unallocated	2,198,000			2,198,000				0				0				0	2,198,000	0	0	2,198,000
	TOTAL	2,898,356	1,298,913	57,100	4,301,519	659,355	1,210,952	104,250	1,974,557	25,000	0	3,135,214	3,160,214	25,000	0	2,500	27,500	3,566,711	2,509,865	3,346,214	9,422,789

NOTE & REMARKS:

Project Director

Date:

(Signature , Full name)



KINGDOM OF CAMBODIA

NATION RELIGION KING



Ministry of Public Works and Transport

No..... MPWT/PMU3

March 2012

Mr. Young-Hwan, Sonh
Director
EDCF Operations Group
Asia Department
The Export-Import Bank of Korea
Seoul, Korea
Fax: 82-2-3779-6756

Ref: EDCF Loan KHM-9: Cambodia Northwest Provincial Road Improvement Project

Subject: Submission of Monthly Progress Report No.4 (February 2012)

Dear Sir,

We are pleased to submit herewith two (2) copies of the Monthly Progress Report No.3 (January 2012) as required by EDCF in accordance with Contract for Consulting Services, Section 4: Reporting Requirements.

With best regards

PHENG Sovicheano
Project Director, PMU-3
Ministry of Public Works and Transport

cc : H.E. Chhin Kong Hean, Project Coordinator, PMU3
HE.Vongsey Vissoth, Secretary General of, MEF
Mr.Joong-yul Koh, EDCF Operations Group, Asia Dept



Monthly Progress Report (February 2012)

Project Name : Cambodia Northwest Provincial Road Improvement Project (NR 56B)
Loan No : EDCF Loan KHM-9

1. Project Component

Component	Contract Item	Contract Amount (KRW)	Description of Works
1.	Works		
CW2	Improvement of NR56B	23,541,166,087	From km29 to Samraong (Length 84km, DBST)
EQ1	Cross Border Equipment	683,070,000	Provision of CBE at O'Smarch CBF
EQ1-1	ATCS Equipment	341,535,000	Installation of 7No ATCS at NR 1,5,6 and 7
2.	Consultants Service		
CS2	Detailed Design and Implementation Supervision	2,693,222,460	Detail Design and Implementation Supervision for NR56B

2. Progress Summary

29 Feb 2012

Component	Contract Item	Contract Amount (KRW)	Progress to Date				Amount Certified for Payment
			Physical		Financial		
			%	+/-	%	+/-	
1.Civil Works	Implementation of NR56B	23,541,166,087	5.35	-	30	-	7,062,350,075 (AP 30%)
2.Consultants Service	1) Detailed Design	668,961,488	100	-	50	-	338,005,369
	2) Implementation Supervision	2,024,260,972	0.57	-3.00	-	-	
3.Supply of Good	1) CBF Equipment	683,070,000	-	-	-	-	
	2) ATCS Equipment	341,535,000	-	-	-	-	
Total		26,234,388,547	7.50		28		



3. Progress Detail

3.1 Improvement of NR56B

- 1) The Letter of Acceptance (LOA) issued by MPWT to Contractor on 21 December 2011
- 2) The Contract Agreement was signed between MPWT (Employer) and Kumho Industrial Co. Ltd Hwangbo JV on 27, December 2011
- 3) The order for Commencement of works on 01 February 2012 issued by MPWT to contractor on 05 January 2012.
- 4) The Notice for Site Possession at NR56B issued by PMU3 on 14 March 2012 to Contractor at no resettlement impact section for 40.15 Km.

3.2 Commencement of works

The activities in this Report are Contract site for De-mining/UXO Clearance, Base Camp Buildings, survey for alignment and ROW; borrow pit and quarry, and soil investigation for execution of Works.

3.3 Mine/UXO clearance and Detection

The consultant reviewed the Mine/UXO update Guideline for clearance with the field survey. Most of the Project area along the NR56B is classified category A and B in these decisive battle on yearly 1970 ~ 1998. Sub-contract D & Y Electronics and Technology started Full Clearance Works for The Mine/UXO Detection and Clearance works within ROW and By-pass section base on new Guideline.

3.4 HIV/STD Information and Education Program

Sub-contractor SBK Research and Develop Company undertaken within the project Corridor submitted by the education program of inception Report for their activity schedule will operate throughout the contract period and be undertaken with local health authorities and NGO involved in the campaign from early April 2012.

3.5 Resettlement

The main objective of this survey is to determine area or sections where there is no Impact in order to allow road contractor of NR56B to start earlier of 2012 and before compensation to affected households.

EA and MEF RD advised that there is no resettlement impact on sections of NR 56B from PK 29+000 to PK 111+700(edge of Samraong) amounting to a total about 40.15 km. Road construction can start in these sections with no resettlement requirement sections after De-mining/UXO Clearance approved by MEF and ADB.



4. Problems and Solution

<u>Problems</u>	<u>Action Taken</u>	<u>Remarks</u>
No particular problems met		

5. Issues to be addressed Next Month

- 1) Mine/UXO Detection and Clearance under full Clearance Guideline
- 2) Start Works at Resettlement of No Impact Area for Approval
- 3) Review ATCS Program and installation for setting on NR
- 4) Survey Embankment Rise Up Section for Resilient Design

6. Highlight Addressed in this Month

- 1) Review for Loan Reallocation by climate change and Mine/UXO
- 2) Mine/UXO Detection and Clearance by updated Guideline
- 3) Review ATCS with program and Specification before setting on NR

7. Meeting in this Month

- 1) Meeting for Start Work with PMU3, DDIS Consultant and Contractor