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CONSTRUCTION MONITORING & EVALUATION PROGRAM

**STRENGTHENING & IMPROVEMENT OF PESHAWAR – TORKHAM
ROAD (N-5), KHYBER AGENCY, FATA**

CONTRACT NO. SOL-391-12-000038

MONTHLY PROGRESS REPORT # 02



JANUARY 2013

M&E Consultants



AL-KASIB GROUP OF ENGINEERING SERVICES

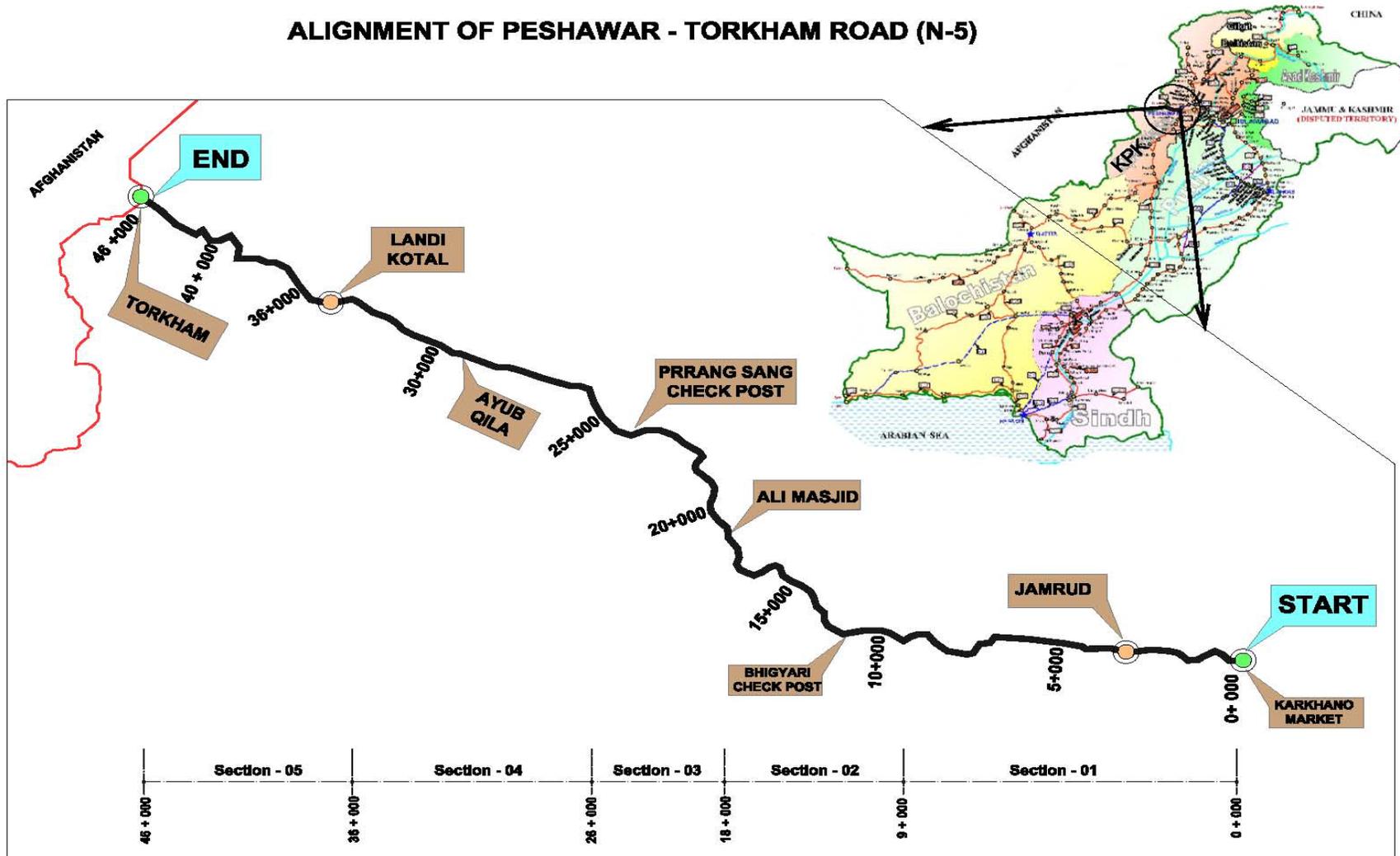
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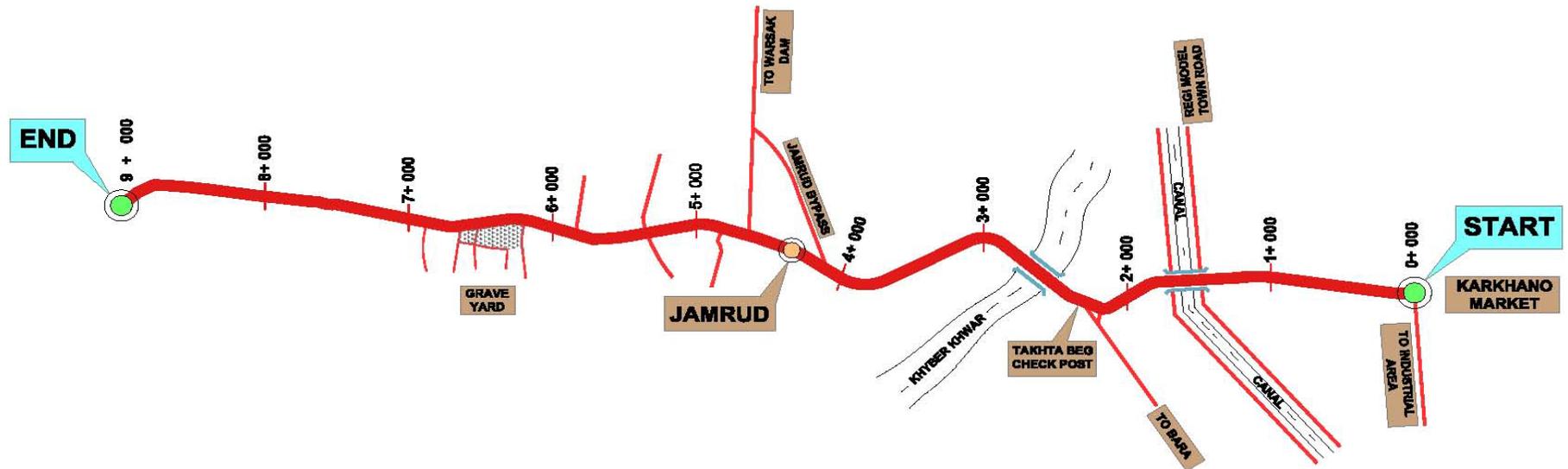
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LOCATION MAP

ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)



ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5) (SECTION - I)



EXECUTIVE SUMMARY

Peshawar – Torkham road is part of the overall Contract that includes Construction Monitoring and Evaluation Services of 107 schools and 100-200 KM roads in Khyber Pakhtunkhwa Province. This road connects Pakistan with Afghanistan at Torkham border and serves an important role in the economic activities as well as in providing timely logistic support to the security agencies deployed in Khyber Agency. The project is funded with USAID grant and implemented by FATA Secretariat through FWO (Frontier Works Organization) as EPC (Engineer, Procure, and Construct) Contractor. FWO has retained the services of M/S NESPAK as the Project Consultants to design and supervise the construction work, while USAID has engaged M/S AGES as M&E Consultants to monitor and report on quality as well as progress of the project. The project is anticipated to be completed by December 31, 2014. To expedite construction activities, the 46 KM Peshawar – Torkham road has been divided in five sections and one package of bridges. Until now, PC-1 for section - I (KM 00 to KM 09) has been approved and construction started.

On October 15, 2012, FWO initiated construction work on section - I of Peshawar – Torkham Road. After a speedy start, the work was slowed down in December 2012, due to inclement weather. By December 31, 2012, the cumulative progress of work was less than 1%. In January 2013, pace of work was improved that resulted in an overall progress of 1.19% till January 31, 2013. Major activities and accomplishments during January 2013 can be summarized as follow:

- Traffic Diversion extended for further 1.5 KM
- One source for sub base material was identified
- Quality Control tests were conducted as per specified frequency, including CBR, MDD, OMC, LA and soil classification tests
- Earthwork: 35.37%
- Sub Base: 4.10%
- Culverts: 7.54%
- Survey: Cross sectional survey was completed for further 5 KM (KM 31 to KM 35)
- The environmental compliance officer of M&E Consultants paid two visits to the site. Detailed reports of the site visits have already been shared with USAID and are also appended in this report.
- FWO/NESPAK enhancement of manpower and machinery / other resources
- M&E Consultants paid daily visits to the site, and documented their observations
- A joint visit by senior engineers of M&E Consultants, USAID and NESPAK was conducted
- Security officer of M&E Consultants visited the site and met with FWO's security personal
- M&E Consultants reviewed draft QAP (Quality Assurance Plan) and construction schedule submitted by NESPAK and provided feedback.

PROJECT

1.1 BACKGROUND:

The Federally Administered Tribal Area (FATA) Secretariat of the Government of Pakistan (GoP) under the Quick Impact Projects (QIPs) in the Khyber Agency has inked an agreement with USAID for financial assistance in the form of a Grant for Strengthening and Improvement of 46 KM existing two-lane, two-way carriageway from Peshawar to Torkham (N – 5). The Project will support the GoP in improving accessibility to the remotely located areas of Khyber agency and enhance logistic support to law enforcing agencies, besides assisting trade between Pakistan and Afghanistan. The Sponsoring agency for the Peshawar Torkham Road Project is FATA secretariat, headed by Additional Chief Secretary FATA. The Executing agency is Frontier Works Organization (FWO).

Table: 1

Civil Works Package Features					
Feature	Section – I	Section – II	Section – III	Section – IV	Section – V
Physical Limits	Peshawar to Torkham				
Kilometers	0+00 to 9+00	9+00 to 18+00	18+00 to 26+00	26+00 to 36+00	36 to 46
Black Top	Total 12.3 meter - 7.3 meter carriageway and 2.5 meter shoulder on either side				
Donor Agency	USAID				
Completion Period	807 Days				
Contract Forms	Conditions of Contract for EPC (Engineer, Procure, Construct)/Turnkey Projects (FIDIC Conditions of Contract – 1999)				

1.2 DESCRIPTION:

The project involves widening, strengthening and improvement of the existing two lane carriageway, including construction of new cross drainage structures, bridges and earth retaining structures. At a first stage, the FATA Secretariat has undertaken to contract section – I of the project from KM: 0 +000 To KM: 9 + 000. The length of each package varies between 08 and 10 KM.

Being an EPC form of contract, FWO is fully responsible for design and construction of the project in conformity with the NHA's specifications and standard engineering practices. AGES Consultants has been awarded the Construction Monitoring and Evaluation Services including Quality Assurance and Environmental Monitoring of the project on behalf of the USAID Pakistan Mission.

1.3 M&E SERVICES:

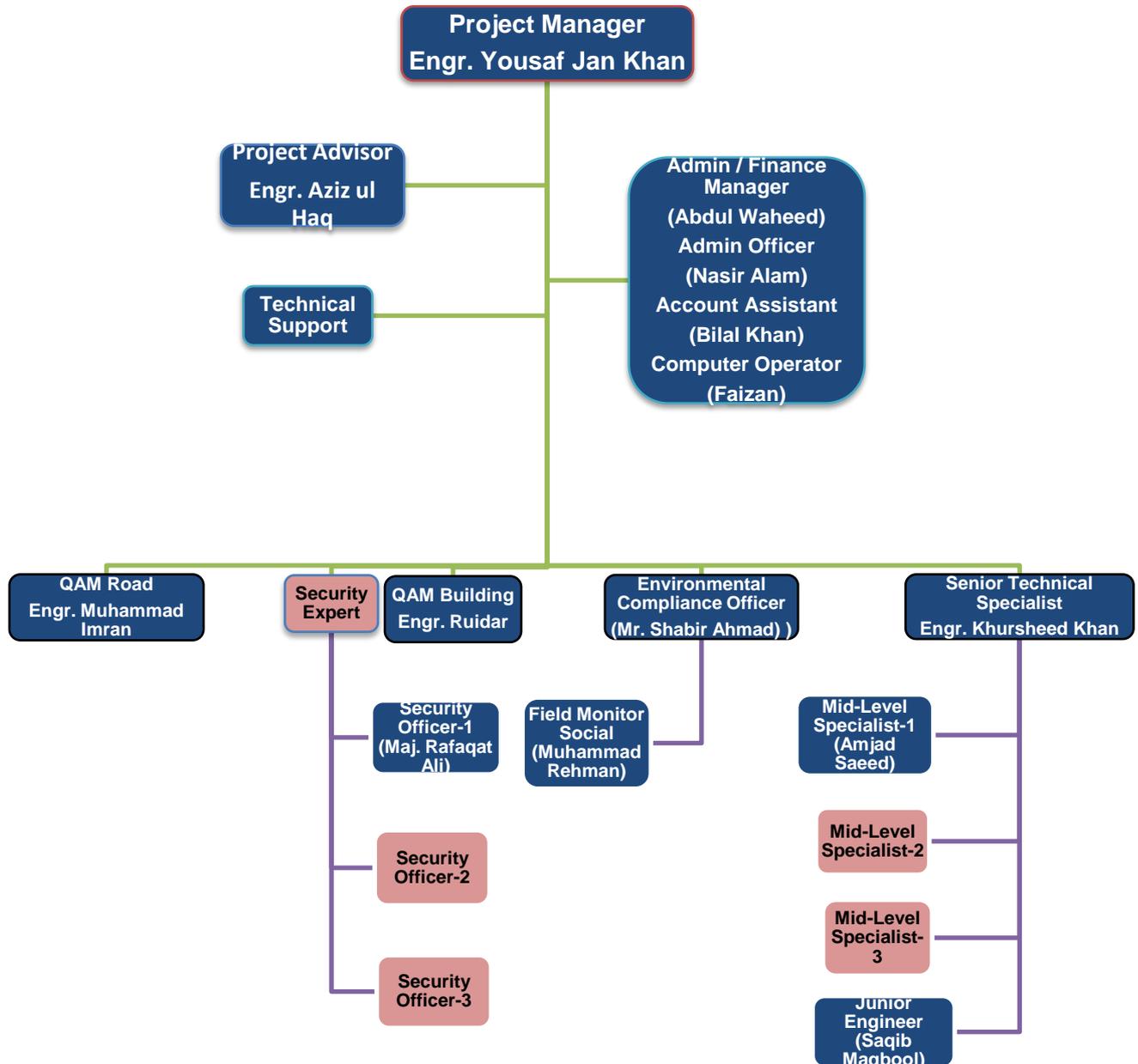
The Contract between USAID and AGES Consultants (called herein as M&E Consultants) for M&E services on the project was signed on September 30, 2012 following submission of proposal in response to RFP issued by USAID Contracting Officer. Mobilization of staff started on October 01, 2012.

1.4 M&E SERVICES OBJECTIVES:

M&E Services for the Peshawar – Torkham Road are meant to:

- Ensure compliance with designs, drawings, and technical specifications
- Establish a high standard quality assurance system
- Monitoring and reporting the progress of work, including identification of the project impediments hampering the baseline schedule and recommend solutions in order to keep the project on track.
- Certification of Milestones payments

1.5 PROJECT MANAGER ORGANIZATION CHART



LEGENDS:

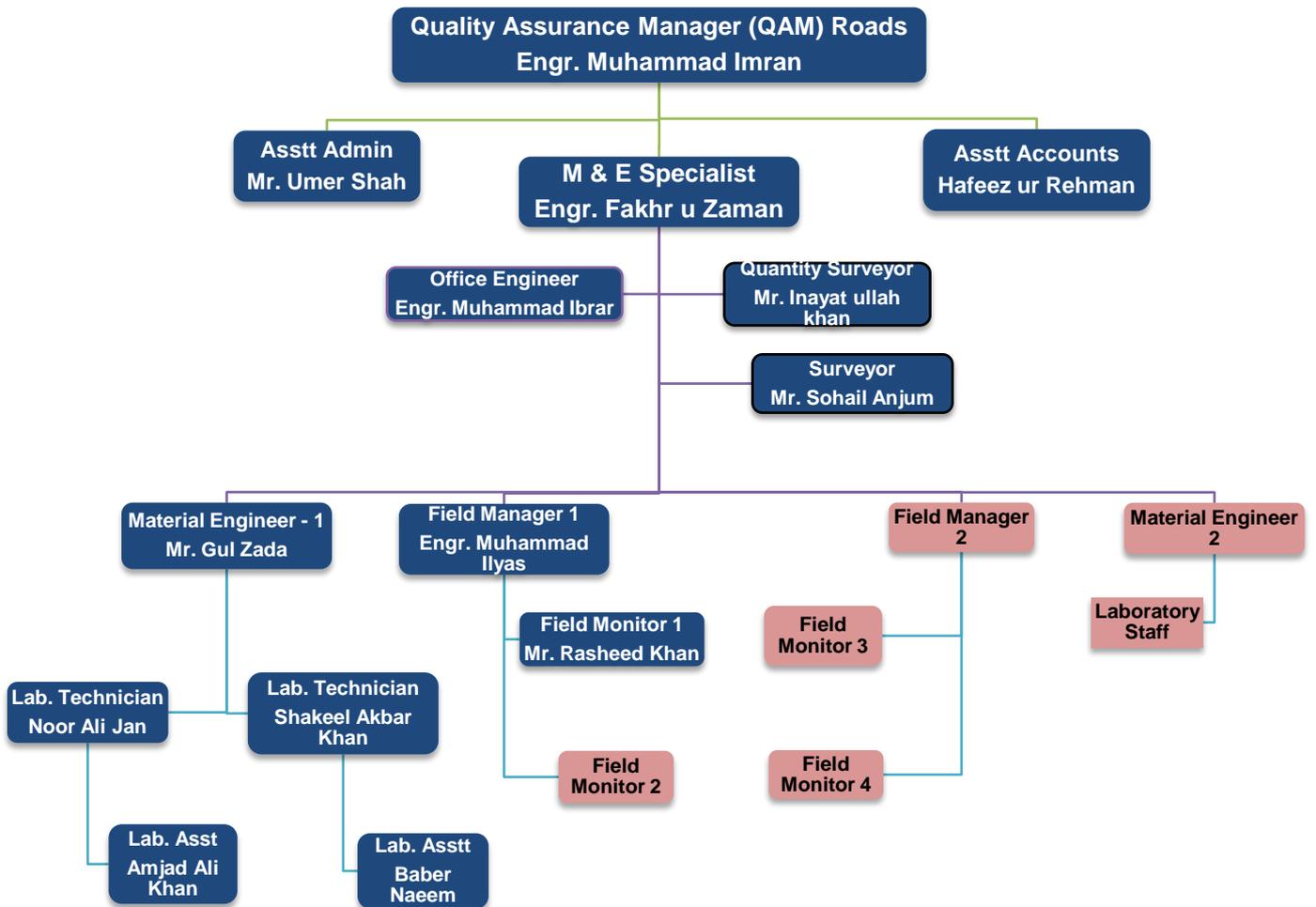


Mobilized



To be mobilized when work on other sections is started

1.6 QAM ROAD ORGANIZATION CHART



LEGENDS



Mobilized



To be mobilized when work on other sections is started

ROAD SECTION - I

2.1 INTRODUCTION

Location

The project road (Section I) starts from karkhano market, an outskirts of Peshawar city & ends up just east of Begyarri Check Post. Majority of project road length traverses through densely populated, built-up area.

Road Inventory

The paved portion of the existing two lane road is 6.0 m to 7.0 m wide bituminous surface with 1.0 m to 2.0 m wide untreated shoulders on either side. The project road (Section – I) passes through plain terrain.

Existing Pavement Condition

The visual condition of existing pavement reveals signs of distress all along the whole stretch of the section – I; with less than 5% of road is in a fair condition. Defects like rutting, pavement disintegration, poor surface drainage and potholes supplemented by substandard geometry of the road can be observed commonly along the entire section.

Bridges

There is 01 No. newly constructed Major Bridge at CH: KM: 2 + 200 in section – I. This bridge needs minor repair works like Guard Rails, Flood Protection treatment, etc.

Culverts

The Existing cross drainage structures are either completely choked or have lost their hydraulic capacity significantly. There are 14 Nos. of Slab Culverts to be newly constructed while 02 Nos. existing Culverts are to be rehabilitated appropriately.

2.2 PROJECT DETAILS

1.	Name of Project	Strengthening and Improvement of Peshawar Torkham Road (N-5) Khyber Agency FATA.
2.	Name of Package	Section – I (CH: KM: 0+000 To CH: KM: 9+000)
3.	Sponsoring Agency	FATA Secretariat, Peshawar
4.	Sponsoring Agency Representative	Mr. Roshan Mahsud, Project Director, PMU FATA
5.	Donor Agency	USAID PAKISTAN
6.	Donor's Agency Representative	Engr. Farhat Banori, USAID/COR
7.	Executing Agency	Frontier Works Organization
8.	Executing Agency Representative	Lt. Colonel Khurram
9.	M&E Consultants	AGES Consultants (Pvt) Ltd.
10.	M&E Consultants Representative	Engr. Yousaf Jan Khan, Project Manager
11.	Project Cost (Section – I)	Rs. 937.939 Million
12.	Time for Completion	807 Days
13.	Mode of Construction Contract	EPC (Engineer, Procure and Construct) Contract
14.	Chronology	
	Signing of MoU (USAID–FATA–NHA)	Sep 18, 2012
	Signing of Contract (USAID – AGES)	Sep 30, 2012
	M&E Consultants Mobilization	Oct 01, 2012
	Executing Agency Mobilization at Site	Oct 15, 2012
	Approval of PC – 1	Nov 20, 2012

2.3 ENVIRONMENTAL COMPLIANCE

The environmental compliance officer of M&E consultants made two visits to the site during the month of January 2013, and compiled his observations in the form of Environmental Monitoring Report. The environmental monitoring reports were recently submitted to USAID; however both the reports are attached as Annexure II to this document for ready reference.

2.4 PROJECT IMPEDIMENTS AND RECOMMENDATIONS

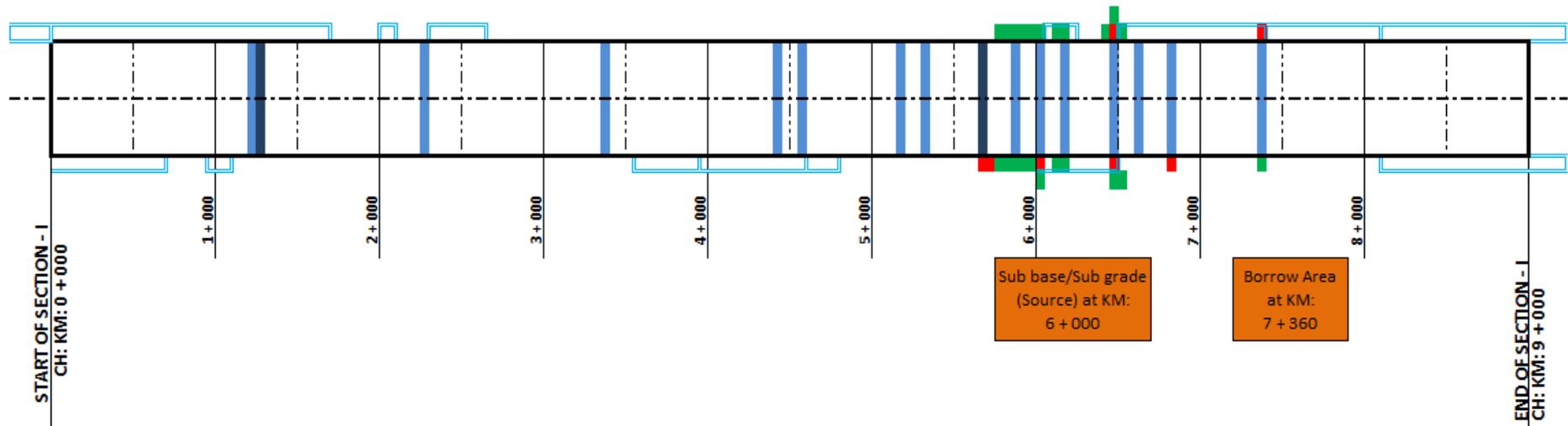
During the course of project implementation, it has been realized that the coordination channel among different stakeholders need to be further improved in order to proceed smoothly with the construction activities. It is recommended that a joint meeting among USAID, FATA, FWO, NHA and AGES should be called to discuss this matter, establish the lines of communication and define the roles / responsibilities of each stakeholder. Further, there are several contract documents that have been requested by USAID but submission from FWO is still awaited. These documents need to be immediately provided by FWO to USAID / M&E Consultants to assist them in the monitoring process. The documents include:

- Traffic Diversion Plan
- Contractor's X – section templates
- Reports of Material Testing and Mix Design for Concrete work
- Contractor's work program / construction schedule (updated version)
- Construction Drawings and Specifications
- Quality Control Protocol (Final version).

It is worth mentioning that construction sequence adopted by FWO/NESPAK regarding different pavement structures like sub-grade, sub-base, etc. is not in accordance with specification requirements and standard engineering practices. Sub-grade preparation and placement of succeeding layers (sub-base, etc.) must follow each other closely. The sub-grade if prepared too early in relation to the placing of subsequent layer above it is likely to deteriorate due to aggressive environment, temperature variation, rain fall / water ingress, traffic movement etc. and may therefore need to be repaired (leveled, compacted, tested) and restored to the specified level and shape.

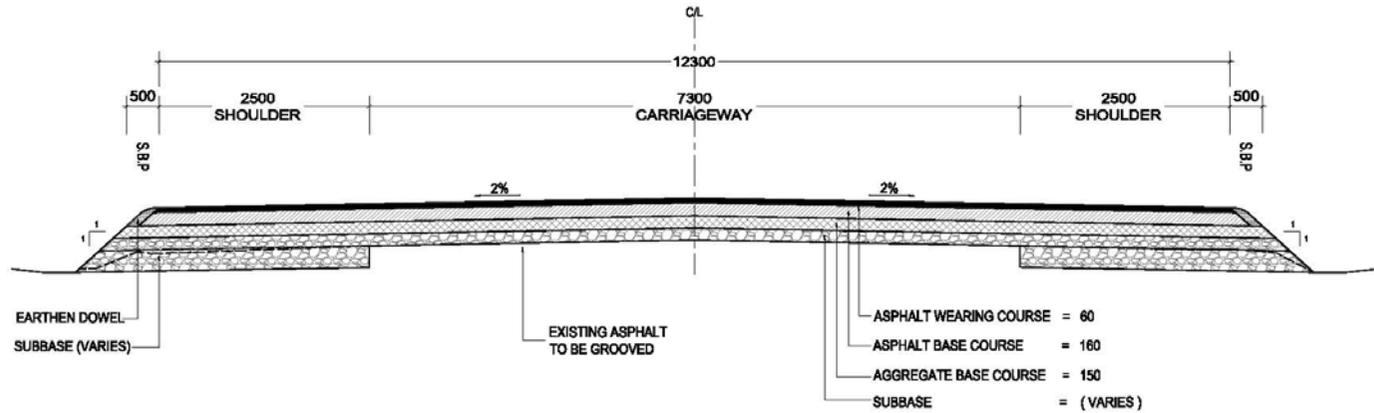
Further, during the site visit by AGES' Environmental Compliance Officer, it was noticed that FWO/NESPAK does not have any expert/inspector to monitor environmental compliance at site. It is recommended that FWO should depute an environmental expert on the project site.

2.5 LINE SKETCH OF ALIGNMENT

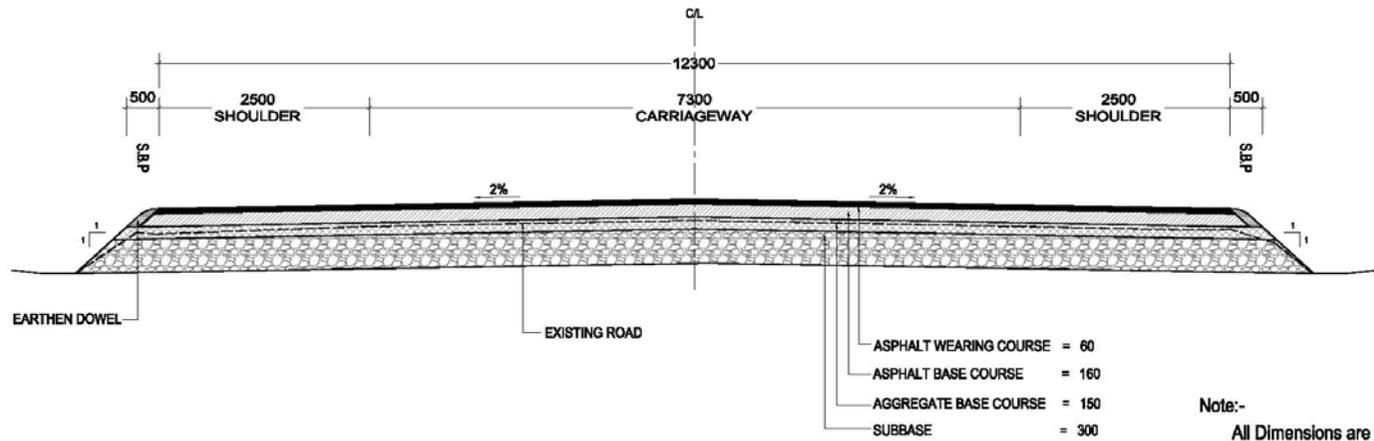


LEGEND	
	Metalled Road (N-5)
	Slab Culverts (New)
	Slab Culverts (Repair)
	Retaining / Breast Wall
	Parapets Wall
	Side Drains

2.6 TYPICAL CROSS SECTION OF ROAD



TYPICAL CROSS SECTION IN FILL

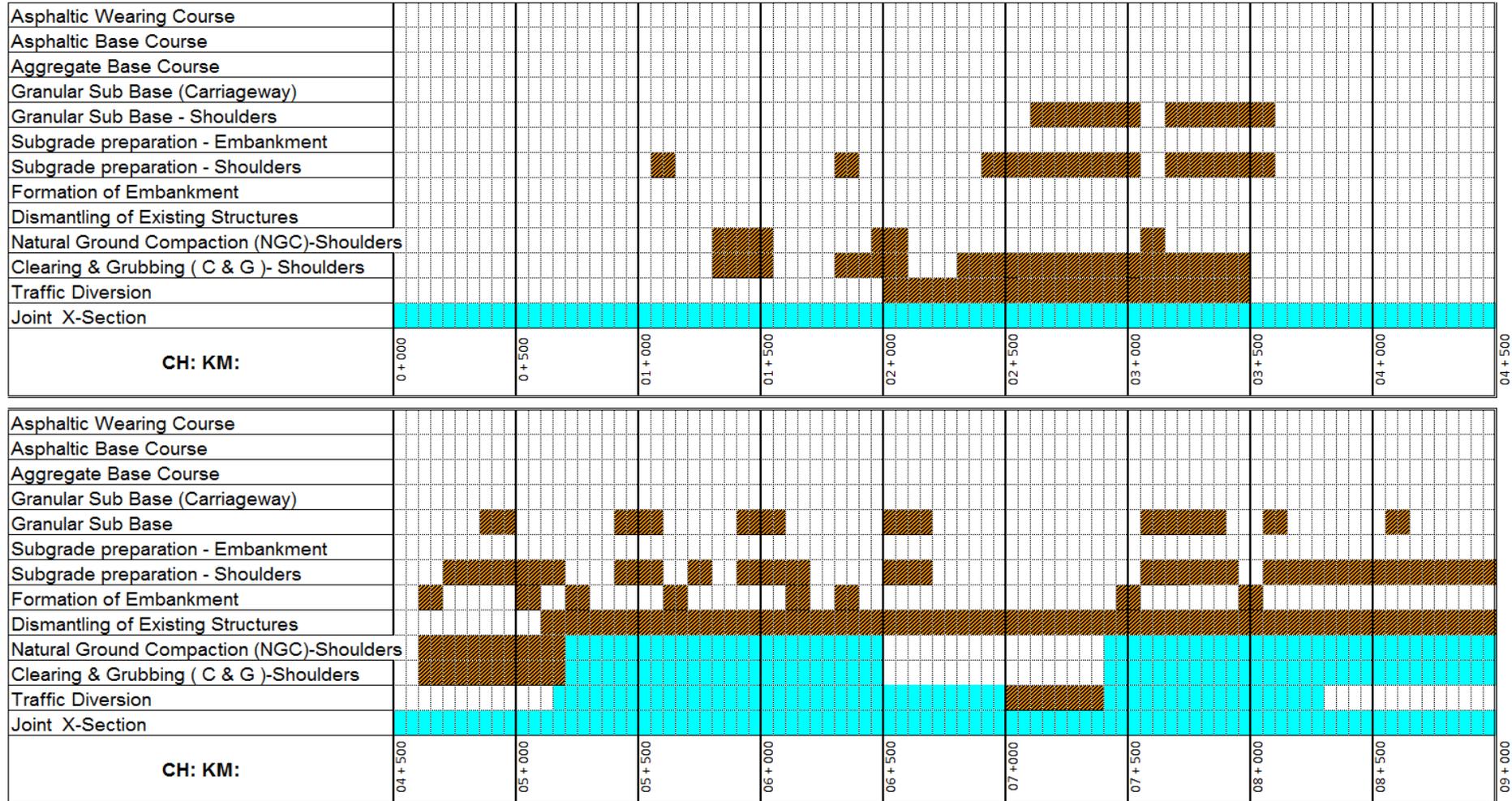


Note:-
 All Dimensions are in mm

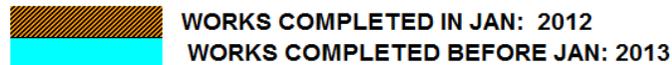
TYPICAL CROSS SECTION IN CUT

WORK IN PROGRESS

3.1 PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS AS ON JANUARY 31, 2013



LEGEND



3.2 CULVERTS PHYSICAL PROGRESS STATUS AS ON JANUARY 31, 2013.

S. NO	CHAINAGE AS PER DRAWG: (KM)	CHAINAGE AS PER SITE (KM)	NO. OF SPAN	SIZE (Mx M)	LENGTH AS PER DRAWG:(M)	LENGTH AS PER SITE (M)	DEMOLISHED	SLAB CULVERTS						WING WALLS			Size revision if any
								Strl: Excavation	Lean Cont	Abt: Wall	Floor	Top. Slab	Rip Rap	Lean Cont:	Wall	Floor	
1	1+230		1	2 x 1.5													
2	2+290		1	2 x 1.5													
3	3+400		1	2 x 1.5													
4	4+460		1	3 x 1.5													
5	4+590		1	3 x 1.5													
6	5+180	5+210	1	2 x 1.5	14.1		△	△									
7	5+335		1	3 x 1.5													
8	5+882	5+905	1	2 x 1.5	14.1	15.60 (Normal)	◆	◆	◆	◆			◆	◆			2 x 1.1
9	6+027		3	3 x 1.5													
10	6+167	6+191	2	3 x 1.5	14.1	14.40 (Normal)	◆	◆	◆	△			◆	△			3 x 3
11	6+477	6+501	5	3 x 1.5	14.1	(Skew)	◆	◆									
12	6+625	6+648	1	2 x 1.5	14.1	14.10 (Normal)	◆	◆	◆	△			◆	△			2 x 2
13	6+850	6+883	1	2 x 1.5	14.1		◆	◆									
14	7+360	7+386	2	3 x 1.5	14.1	(Skew)	◆	◆	◆								

Legend:

△	In Progress
◆	Completed

PROGRESS PERCENTAGE

4.1 SUMMERY: BILL OF QUANTITIES

Month: Jan. 2013

CONTRACT			WORK DONE UPTO PREVIOUS MONTH		WORK DONE THIS MONTH		WORK DONE UPTO DATE	
BILL NO	DESCRIPTION	AMOUNT (Rs.)	AMOUNT (Rs.)	PROGRESS %	AMOUNT (Rs.)	PROGRESS %	AMOUNT (Rs.)	PROGRESS %
1	EARTH WORK	4,396,321.49	910,677.60	20.71	1,555,120.68	35.37	2,465,854.37	56.09
2	SUB BASE AND BASE COURSE	417,440,419.46	-	-	3,176,068.85	0.76	3,176,068.85	0.76
3	SURFACE COURSES AND PAVEMENT	148,248,125.37	-	-	424,422.00	0.29	424,422.00	0.29
4a	STRUCTURES (RETAINING WALL/BREAST WALL)	2,990,459.56	-	-	-	-	-	-
4b	STRUCTURES (CULVERTS)	34,156,831.05	-	-	2,573,831.19	7.54	2,573,831.19	7.54
5a	DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)	146,629,248.32	-	-	-	-	-	-
5b	ROAD PROTECTION WORKS	851,203.80	-	-	-	-	-	-
6	ANCILLARY WORKS	4,189,586.08	-	-	-	-	-	-
7	DIVERSION	9,000,000.00	377,500.00	4.19	150,000.00	1.67	527,500.00	5.86
8	RELOCATION OF UTILITIES	900,000.00	-	-	-	-	-	-
Sub Total - Construction Cost		768,802,195.13	1,288,177.60	0.17	7,879,442.71	1.02	9,167,676.40	1.19
INDIRECT COST	Contingencies @ 0.5% of Total Construction Cost	3,844,010.98	6,440.89	0.17	39,397.21	1.02	45,838.38	1.19
	EPC Turnkey Cost	-	-	-	-	-	-	-
	- Design , Consultancy & Supervision 6%	46,128,131.71	77,290.66	0.17	472,766.56	1.02	550,060.58	1.19
	- Risk of Quantity Variation @7%	53,816,153.66	90,172.43	0.17	551,560.99	1.02	641,737.35	1.19
	- Market Fluctuation @ 4.5%	34,596,098.78	57,967.99	0.17	354,574.92	1.02	412,545.44	1.19
	Sub Total EPC Turnkey Cost	138,384,395.12	225,431.08	0.16	1,378,902.48	1.00	1,604,343.37	1.16
	Security /Hard Area @ 4%	30,752,087.81	51,527.10	0.17	315,177.71	1.02	366,707.06	1.19
TOTAL PROJECT COST (SECTION-I)		937,938,678.06	1,571,576.67	0.17	9,612,920.11	1.02	11,184,565.21	1.19

4.2 BILL NO. 1 EARTH WORK

Month: JAN 2013

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (Rs)	AMOUNT (Rs)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
101	Clearing & Grubbing	SM	29,876	23.15	691,730.98	21,000.00	486,221.40	70.29	4,412.50	102,164.38	14.77	25,413	588,385.78	85.06
104	Compaction of Natural Ground	SM	29,876	23.58	704,502.97	18,000.00	424,456.20	60.25	10,184.50	240,159.68	34.09	28,185	664,615.88	94.34
106a	Structure Excavation in Unsuitable Material	CM	3,762	299.079	1,125,135.20	-	-	-	-	-	-	-	-	-
106bii	Excavate unsuitable Medium Rock Material	CM	-	443.63	-	-	-	-	-	-	-	-	-	-
106biii	Excavate unsuitable Soft Rock Material	CM	-	341.73	-	-	-	-	-	-	-	-	-	-
106c	Structure Excavation in Surplus Common Material	CM	-	154.59	-	-	-	-	-	-	-	-	-	-
106dii	Excavate Surplus Medium rock Material	CM	-	418.8	-	-	-	-	-	-	-	-	-	-
107a	Structure Excavation in Common Material	CM	-	181.29	-	-	-	-	-	-	-	-	-	-
108a	Formation of Embankment From Road way Exavation in Common Material	CM	4,000	398.64	1,594,540.80	-	-	-	1,434.73	571,931.89	35.87	1,434.73	571,931.89	35.87
108bii	Formation of Embankment From Road way Exavation in medium rock Material	CM	-	542.46	-	-	-	-	-	-	-	-	-	-
108c	Formation of Embankment From Borrow excavation in Common Material	CM	-	241.39	-	-	-	-	-	-	-	-	-	-
108d	Formation of Embankment From Borrow excavation in Medium Material	CM	-	109.38	-	-	-	-	-	-	-	-	-	-
109a	Subgrade Preparation in Earth Cut	SM	4,352	64.43	280,411.55	-	-	-	9,946.25	640,864.74	228.54	9,946.25	640,864.74	228.54
110	Improved Subgrade	CM	-	227.92	-	-	-	-	-	-	-	-	-	-
Total					4,396,321.49		910,677.60	20.71		1,555,120.68	35.37		2,465,854.37	56.09

4.3 BILL NO. 2 SUB BASE & BASE COURSE

Month: JANUARY 2013

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (RS)	AMOUNT (RS)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
201	Granular Sub Base	CM	45,569	1700.75	77,501,426.62	-	-	-	1867.45	3176068.85	4.10	1867.45	3176068.85	4.10
202	Agregate Base Course	CM	22,868	2232.15	51,044,771.90	-	-	-	-	-	-	-	-	-
203a	Asphaltic Base Course Plant Mix (Class-A)	CM	17,805	16225.45	288,894,220.93	-	-	-	-	-	-	-	-	-
TOTAL					417,440,419.46	-	-	-	1867.45	3176068.85	0.76	-	3176068.85	0.76

Note: Quantity of Aggregate Base Course includes 28 Nos. rural links upto 25m

4.4 BILL NO. 3 SURFACE COURSES AND PAVEMENT

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (RS)	AMOUNT (RS)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
302a	Cut-Back Asphalt for Bitumunous Prime Coat	SM	126,444	84.34	10,663,933	-	-	-	-	-	-	-	-	-
303a	Cut-Back Asphalt for Bitumunous Tack Coat	SM	221,150	35.12	7,767,540	-	-	-	-	-	-	-	-	-
305b	Asphaltic Concrete for Wearing Course (Class "A")	CM	6,602	19500.1	128,739,353	-	-	-	-	-	-	-	-	-
NS	Grooving of existing asphalt layers at every 5M interval	SM	63,000	17.10	1,077,300	-	-	-	24820.00	424422.00	39.40	24820.00	424422.00	39.40
TOTAL					148,248,125	-	-	-	-	424422.00	0.29	-	424422.00	0.29

Note: Quantity of Prime Coat and Asphaltic Wearing Course includes 28 Nos. rural links upto 25m

4.5 BILL NO.4a STRUCTURES (RETAINING WALL, RW2 TYPE)

Month: JANUARY 2013

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (RS)	AMOUNT (RS)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
107a	Structural Excavation in Common Material	CM	283	181.29	51,305.07	-	-	-	-	-	-	-	-	-
107e	Common Back fill	CM	96	116.64	11,197.44	-	-	-	-	-	-	-	-	-
401b	Concrete Class "B"	CM	11	5842.23	64,264.53	-	-	-	-	-	-	-	-	-
401f	Lean Concrete	CM	76	4120.90	313,188.40	-	-	-	-	-	-	-	-	-
411g	Roll pointing (Parapets over wall)	CM	130	168.01	21,841.30	-	-	-	-	-	-	-	-	-
411b	Stone Masonry Random with Mortar	CM	294	2450.42	720,423.48	-	-	-	-	-	-	-	-	-
412a	Stone Masonry Dressed Coursed With Mortar (Parapets over wall)	CM	24	2909.01	69,816.24	-	-	-	-	-	-	-	-	-
412a	Stone Masonry Dressed Coursed With Mortar (Parapets over Existing wall)	CM	108	2909.01	314,173.08	-	-	-	-	-	-	-	-	-
401b	Concrete Class "B" (Parapet over existing wall)	CM	14	5842.23	81,791.22	-	-	-	-	-	-	-	-	-
411g	Roll pointing (Parapets over Existing wall)	CM	600	168.01	100,806.00	-	-	-	-	-	-	-	-	-
TOTAL					1,748,806.76		0	-		0	0		0	0

4.6 BILL NO.4b STRUCTURES (Culverts)

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (RS)	AMOUNT (RS)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
NS	Widening and repair of existing Culverts at RD 1+290 & 5+692	No	2	821,155.68	1,642,311.36	-	-	-	-	-	-	-	-	-
NS	Construction of New Culverts No. of Span x Span Width x Height													
	1 x 2 x 1.5	No	7	1,484,606.61	10,392,246.27	-	-	-	0.52	772,090.98	7.43	0.52	772,090.98	7.43
	1 x 3 x 1.5	No	3	1,941,952.95	5,825,858.85	-	-	-	-	-	-	-	-	-
	2 x 3 x 1.5	No	2	3,155,221.89	6,310,443.78	-	-	-	0.57	1,801,740.2	28.6	0.57	1,801,740.2	28.6
	3 x 3 x 1.5	No	1	4,206,699.18	4,206,699.18	-	-	-	-	-	-	-	-	-
	5 x 3 x 1.5	No	1	5,779,271.61	5,779,271.61	-	-	-	-	-	-	-	-	-
TOTAL					34,156,831.05		-	0.00		2573831.19	7.54		2,573,831.19	7.54

4.7 BILL NO.7 DIVERSIONS

Month: JANUARY. 2013

CONTRACT						WORK DONE UPTO PREVIOUS MONTH			WORK DONE THIS MONTH			WORK DONE UPTO DATE		
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE (RS)	AMOUNT (RS)	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %	QUANTITY	AMOUNT (Rs.)	PROGRESS %
NS	Diversion for Traffic During Road Construction	KM	9	1,000,000	9,000,000.00	0.378	377,500.00	4.19	0.150	150,000.00	1.67	0.528	527,500.00	5.86
TOTAL					9,000,000.00		377,500.00	4.19		150,000.00	1.67		527,500.00	5.86

4.8 PHYSICAL AND FINANCIAL PROGRESS

General Details:

Date of Commencement : Oct 15, 2012
 Date of Completion : Dec 31, 2014
 Contractor : Frontier Works Organization (FWO)
 M&E Consultants : AGES Consultant (Pvt) Ltd
 Project Cost (Section-I) : Rs. 937.940 Million

Project length

Section – I : KM 0+000 to KM 9+000

Section	Bill No:	Items	Cost Breakup (Rs: Million)	Achieved progress %age		
				DEC-2012	JAN-2013	Total To-Date
Section – I	01	Earth Works	4.396	20.71	35.37	56.09
	02	Sub Base Course	77.502		4.10	4.10
	02	Aggregate Base Courses	51.045			
	02	Asphaltic Base Course	288.894			
	03	Surface Course and Pavement	148.248		0.29	0.29
	04a	Structures (Retaining Walls & Breast Walls)	2.991			
	04b	Structures (Culverts)	34.157		7.54	7.54
	05a	Drainage & Erosion Works	146.629			
	05b	Road Protection	0.851			
	06	Ancillary Works	4.189			
	07&08	Detours/Miscellaneous works	9.900	4.19	1.67	5.86
	Total Construction Cost			768.802	0.17	1.02

Contract Duration (46 KM) : 807 days
 Time Elapsed up to 31st Jan 2013 : 86 days
 Time Elapsed %age : **(10.66%)**

WORK INFORMATION FOR JANUARY 2013

5.1 MATERIAL ENGINEER REPORT

1. Main Works monitored this Month (January 2013).

- i. Quality analysis of Borrow Material for Sub base, Sub grade, Embankment and NGC
- ii. Supervision of Lean concrete and Field Density Tests at site.
- iii. Sampling of Steel, Cement, Sub grade and Sub base material

EARTH WORK QUALITY TESTS.														
S.No	Location	Description	Classification						MDD (g/cc)	OMC %	LA %	CBR%	Remarks	
			#4	#10	#40	#200	LL	PL						PI
1	6+000 (source)	Sub base/ Sub grade	30.7	19.8	9.2	5.7			Non Plastic	2.271	6.1	25.1	82	
2			28.3	17.7	7.8	4.2				2.281	6		71.1	
3	9+600 (Source)	Sub grade/Sub base	34.9	20.1	8	3.4			Non Plastic	2.246	6.6	37.3	66.2	
4			53.8	35.6	11.4	7.3				2.225	6.8		75	
5			38.1	24	9.1	4.9				2.244	6.6		60.6	
6	5+000-6+000 R/S	Sub base							2.274	5.7				
7	6+000-7+000 R/S	Sub base	42.7	23.3	10.7	7			2.288	5.8				
8	7+000--8+000 L/S	Sub base (Dumped material at site)	43.3	26.2	11.4	7.3			2.289	5.6				
9	1+000-3+000 L/S	1+640 (NGC/Sub grade)	37.3	26.4	16.3	10.3	20.4	16.4	4	2.206	6.9		61.5	A-1-a
10	1+000-3+000 R/S	1+540 R/S (NGC/Sub grade)								2.213	6.6		64	
11	0+000-1+000 R/S	0+610 (NGC/Sub grade)	38.3	28.3	17.1	9.6	20.2	16.4	3.8	2.22	6.4		68.4	A-1-a
12	0+000-1+000 L/S	0+825 (NGC/Sub grade)	36.1	27.5	16.7	10.4	20.1	16.3	3.8	2.217	6.5		57	A-1-a
13	1+000-3+000 R/S	1+510 (NGC/Sub grade)	42.8	29.5	15.3	9	20.2	16.3	3.9	2.213	6.6		64	
Total Nos.of Tests			11				9			13	13	2	10	

Field Density Tests

Description	Total Nos. of Tests	Pass	Failed	% Failed
NGC	25	22	3	12
Embankment	14	14	0	0
Shoulder Sub Grade	47	42	5	10.6
Shoulder Sub Base	38	31	7	18.4

2. Main Works Planned for February 2013

- i. Supervision of Sub base, Sub grade and Embankment at site.
- ii. Identification of Borrows for Aggregate base course and Asphaltic Base course and Wearing course.
- iii. Installation of crush plant and Asphalt plant.

Comments of Material Engineer

1) Laboratory.

The contractor has not time-honored a full furnished and well equipped laboratory till this date. They have still not arranged concrete compressive strength machine to ensure the 7 days as well as the 28 days compressive strength while the Lean concrete is in progress at site.

2) Concrete Mix designs.

For concrete mix designs the contractor has to provide coarse aggregates and fine aggregates (Natural sand) as per prescribed Specifications to prepare mix designs for various classes of concrete. For smooth progress of work the contractor should arrange the approved materials to start trials for mix designs. M/S NESPAK has permitted the contractor for lean concrete with 1:3:6 ratio of cement, sand and coarse aggregates which is on conservative side but it is recommended that proper mix design for lean concrete should be prepared and cylinder should be tested at lab Of FWO.

3) Identification of Sources/Borrows for Aggregates

The contractor (FWO) has not identified the sources of Aggregates for Concrete, Base Course, Asphaltic Base Course and Wearing Course. The contractor should identify the sources for Aggregate Base Course as soon as possible because he has started the laying and compaction of sub base material at site.

4) Installation of Crush Plant and Asphalt Plant

The contractor has been mobilized since Oct 15, 2012 while still they have no preparation for installation of crush plant to produce Aggregates for Concrete, Base course and Asphalts. The contractor has reserved the place for installation of Asphalt plant in their camp area (KM: 5+000) but time frame for mobilization, installation, testing and commissioning of Asphalt plant is yet awaited.

5.2 WEATHER RECORD

Date	Temperature (°C)		Humidity (%)		Weather Condition	Rainfall – Last 24 hours in mm
	Maximum	Minimum	Maximum	Minimum		
01- Jan-13	16	5	87	36	Sunny	0 mm
02- Jan-13	19	4	87	30	Sunny	0 mm
03- Jan-13	16	4	87	41	Sunny	0 mm
04- Jan-13	17	4	87	39	Sunny	0 mm
05- Jan-13	19	3	87	24	Sunny	0 mm
06- Jan-13	16	3	87	31	Sunny	0 mm
07- Jan-13	8	1	100	87	Sunny	0 mm
08- Jan-13	11	2	100	82	Foggy/Sunny	0 mm
09- Jan-13	17	3	100	52	Sunny	0 mm
10- Jan-13	19	4	93	35	Sunny	0 mm
11- Jan-13	20	8	87	28	Sunny	0 mm
12- Jan-13	15	9	94	63	Cloudy	0 mm
13- Jan-13	19	6	87	30	Sunny	0 mm
14- Jan-13	17	4	81	30	Sunny	0 mm
15- Jan-13	20	58	87	59	Sunny	0 mm
16- Jan-13	17	6	87	42	Sunny	0 mm
17- Jan-13	15	6	87	59	Sunny	0 mm
18- Jan-13	17	5	93	34	Sunny	0 mm
19- Jan-13	7	4	93	71	Sunny	0 mm
20- Jan-13	18	4	87	28	Sunny	0 mm
21- Jan-13	19	3	87	24	Sunny	0 mm
22- Jan-13	17	5	71	20	Sunny	0 mm
23- Jan-13	19	7	81	32	Sunny	0 mm
24- Jan-13	21	6	81	25	Sunny	0 mm
25- Jan-13	20	6	87	24	Sunny	0 mm
26- Jan-13	10	7	71	50	Sunny	0 mm
27- Jan-13	19	9	76	43	Sunny	0 mm
28- Jan-13	22	6	87	29	Sunny	0 mm
29- Jan-13	24	8	76	27	Sunny	0 mm

30- Jan-13	19	9	76	43	Cloudy	0 mm
31- Jan-13	22	9	76	35	Cloudy/ Sunny	0 mm

5.3 CONTRACTOR'S PLANT & EQUIPMENTS

Date	Loader	Back Hoe	Motor Grader	Dozer	Vibratory Roller	Dumper	Water Tanker	Tractor	Active/Idle
1- JAN-13	-	2	1	-	2	5	2	-	Active
2- JAN-13	-	2	1	-	2	3	2	-	Active
3- JAN-13	-	2	2	-	2	3	2	-	Active
4- JAN-13	No activity at site								-
5- JAN-13	-	2	2	-	3	6	3	-	Active
6- JAN-13	-	3	3	-	2	5	3	-	Active
7- JAN-13	1	4	4	-	3	5	3	-	Active
8- JAN-13	Work hampered due to heavy fog								-
9- JAN-13	1	4	4	-	3	5	3	-	Active
10- JAN-13	1	5	4		3	7	3	-	Active
11- JAN-13	Holiday								-
12- JAN-13	1	6	4	-	2	8	2	-	Active
13- JAN-13	1	6	4	-	3	7	2	-	Active
14- JAN-13	1	6	5	1	3	9	2		Active
15- JAN-13	1	5	5	1	3	7	2	-	Active
16- JAN-13	1	6	5	1	3	9	3	-	Active
17- JAN-13	1	4	4	1	3	5	3	-	-
18- JAN-13	Holiday								Active
19- JAN-13	1	4	4	1	3	5	3	-	Active
20- JAN-13	1	6	5	1	3	9	3	-	Active
21- JAN-13	1	6	3	1	3	8	3	-	Active
22- JAN-13	1	6	3	1	3	10	3	-	Active
23- JAN-13	1	5	4	1	3	9	3	-	Active
24- JAN-13	1	6	4	1	3	10	3	-	Active
25- JAN-13	Holiday								-
26- JAN-13	1	6	3	1	3	11	3	-	Active
27- JAN-13	-	4	3	1	3	7	3	-	Active
28- JAN-13	2	5	5	1	3	8	3	-	Active
29- JAN-13	1	4	5	2	3	7	5	-	Active
30- JAN-13	1	5	4	2	5	7	5	-	Active
31- JAN-13	1	3	4	2	4	6	4	-	Active

FIELD VISIT REPORT (Jan 10, 2013)

Name of Project: Strengthening & Improvement of Peshawar Torkham Road,
Khyber Agency, FATA

Date of Visit: January 10, 2013

Section Visited: Section – I (KM 0+ 00 to 9+00)

Weather Condition: Clear, Sunny

Members of the visiting team:

1. Mr. Jalil ur Rehman, USAID
2. Mr. Muhammad Imran, AGES
3. Mr. Fakhr uz Zaman, AGES
4. Mohammad Naeem, NESPAK

Summary

Mr. Jalil ur Rehman (USAID Representative) visited the AGES CMEP office at Hayatabad on Jan 10, 2013. Mr. Yousaf Jan (Project Manager, AGES) briefed him about the on-going site activities and the quality monitoring plan being practiced by this office. The Project Manager AGES highlighted the problems being faced by M&E Consultants due to delay in fulfillment of contractual obligations by FWO regarding provision of requisite information / documents, urgently required for keeping the project on track. Mr. Jalil ur Rehman agreed in principle with the PM AGES reservations and assured full cooperation in the matter. PM AGES telephonically informed Major Ajmal Khan, Project officer of FWO about the visit of USAID and AGES team to his office. Accordingly, a meeting between USAID / AGES team and FWO's field management team comprising of Project officer and Mr. Mohammad Naeem (Resident Engineer, NESPAK) was held in cordial environment. Salient features of the matters came under discussion were:

- FWO was requested to either provide identity cards to AGES and USAID staff or otherwise advise the security staff at the entrance of the FWO compound to recognize USAID and AGES personnel and not ask for physical search in future. It is worth-mentioning that the visiting team was stopped at the entrance, asked for the National Identity Cards and then for physical search. The Project Officer FWO assured for resolution of the matter at once.
- FWO informed that work on Section-II has also been initiated. It is note-worthy that no documents (PC-1, Design, Drawings, etc.) about Section-II have been submitted to FATA/USAID/AGES so far. FWO was requested for early submission of the necessary documents for Section-II.
- FWO agreed to provide construction schedule for Section-I on an acceptable format.
- Mr. Naeem (RE NESPAK) promised to provide their Quality Assurance Plan (QAP).

- FWO was reminded to provide Construction drawings, Traffic Control & Diversion Plan, Material Lab testing reports, List of machinery / plants, Laboratory equipments, and staff on the project.
- FWO mentioned that Asphalt Plant will start mobilizing by 15th Feb 2013.
- USAID representative informed that the FWO's payment installments will be scrutinized / certified by AGES Consultants prior to release of payment by USAID.
- The proposal for joint sampling testing of construction material from AGES Consultants was mutually agreed upon by the parties in the pretext of EPC mode of contract.
- NESPAK's staff so far mobilized at site includes a Resident Engineer, Material Engineer, 03 No's Inspectors, 03 No's Surveyors and 01 Lab technician.

After meeting, the visiting members inspected the FWO's Material Testing Laboratory, located inside the FWO's premises. NESPAK was requested to provide a copy of calibration certificates for the concerned equipments.

The team along-with the Resident Engineer (NESPAK) then visited the site and inspected different detours as well as construction activities under progress across various stretches of the alignment. Field Monitoring staff of AGES Consultants (Material Engineer, Field manager, Surveyor) was introduced with USAID representative at site. Pictures were taken between KM: 7+375 and KM: 8+000 to highlight some of the on-site construction activities.

ENVIRONMENTAL COMPLIANCE MONITORING

7.1 ENVIRONMENTAL COMPLIANCE REPORT # 01

1. **Date of visit:** 3rd January, 2013
2. **Environmental Compliance Officer:** **Shabir Ahmad Khan**
3. **Road Section under Construction:** Section Km 0+000 to Km 9+000
4. **Road Section Completed:** Section From - to -
5. **Name of Sub contractor if any:** -----
6. **Persons Consulted at Site:**
 - i. Mr Mohammad Asif, FWO.
 - ii. Mr Amjad, FWO.
7. **Work Position:**

➤ Work Under way.	<input checked="" type="checkbox"/>
➤ Work Stopped	<input type="checkbox"/>
➤ Work Abandon	<input type="checkbox"/>
➤ Work Completed	<input type="checkbox"/>
8. **Quality of Environment Compliance:**

❖ Good	<input type="checkbox"/>
❖ Satisfactory	<input checked="" type="checkbox"/>
❖ Poor	<input type="checkbox"/>
9. **Issues:** Damages to PTCL Telephone cables at RD 5+560, dumping of excavated material in graveyard, Standing water and drainage problems at RD 5+905, dig pits at quarry area near RD 7+400

Recommendation/Instructions: Advised to contact PTCL department before excavation at any site, where telephone cables pass, drainage problem should be resolve as per guidance at site (RD 5+905), the land should be leveled and fill the pits with the same material at quarry areas.

Activity	Mitigation Measures	Monitoring indicators	Observations
Construction Phase			
Use of heavy equipment	a. Minimize use of heavy machinery. b. Set protocols for vehicle Maintenance. c. Monitoring and cross checking fuel level deliveries and use. d. Checking pipes and joints for leaks. e. Tightening generator and fuel lines. f. Preventing over filling of main storage and vehicle tanks. g. Heavy equipment should not be parked under the tree to avoid soil compaction and damage to the roots of the trees.	Soil contaminations , stability and erosion	All heavy machinery is maintained in good condition and environmental protocols are properly followed.
Flood protection	a. Culverts should be provided to control flood damages and provision of safety of Embankments. b. Road protection work along the river side. c. Construction of retaining wall d. New causeways for the smooth flow of water during rainy seasons and flooding.	Site inspection	Culverts are provided where necessary for flood control and sewerage water. No other action is required at present stage up to RD 9. Please see photo 1 to 2
Handling and transportation of hazardous waste	a. Prevent dumping of hazardous materials especially near villages and water bodies. b. Burn waste oil that is not readily reusable. c. Recyclable material don't contain heavy metals that are inflammable, investigate and use less toxic alternative products. d. Prohibit use of waste oil as cooking oil.	Soil Contamination and Safety	No action is required at present stage.
The handling of solid Waste	a. Site manager would be responsible for the collection and disposal of solid waste. b. Training of site personnel in waste management and chemical waste handling procedures. c. Separation of chemical waste for special handling. d. Recording system for the amount of waste generated recycled and reused. e. Proper storage and site practices to minimize the potential for damage or contamination of construction materials. f. General refuse would be stored in enclosed bins to separate from construction materials	Toxicity, Soil Contamination and Pollution	At project site no action is required because solid waste at labor camp is properly disposed. The storage materials such as cement, steel etc have also been stocked properly.

	<p>g. A refutable waste collector should be employed by the contractor to remove the general refuse from the site.</p>		
Construction crews and camps	<p>a. Explore off – site accommodations for crew, keep camp size in containers or specific facilitated position.</p> <p>b. Avoid as much clearing of vegetation as possible.</p> <p>c. Provide temporary sanitation on site such as pit latrines (assuring the water table is enough and soil and geology of appropriate composition).</p> <p>d. Use local or regional labor.</p> <p>e. Screen potential crew members of HIV and tuberculosis.</p> <p>f. Provide education and enforce guidelines on contact with local residents.</p> <p>g. Set guidelines prohibiting poaching and collection of plants.</p> <p>h. Provide adequate quantities and good quality food and cooking fuel.</p> <p>i. If the water is stored for drinking, water should meet the WHO standards and if it is used for construction purpose then it should be clearly demarcated.</p> <p>j. No domestic pets or livestock are allowed on the site.</p>	<p>Surface and ground water pollution and conflicts with locals.</p>	<p>Both construction crews and camps are maintained in a best manner at army accommodation, where all required facilities like washrooms, kitchen, TV lounge, café shop etc are available. These army camps have recently renovated by the FWO for the labor camp. The quality of food provided was good. The other protocols like hygienic water etc are satisfactory.</p> <p>Please see Photo 3 to 8.</p>
Material handling use and storage	<p>a. Material should be appropriately secured to ensure safe passage b/w the destinations during transportation. Loads shall have proper cover to prevent spillage and contractor is responsible for any clean up resulting from failure.</p> <p>b. Materials from borrow site should be directly transported and deposited to the site where it has to be used. Stockpiles should be positioned and sloped to create less visual impact. No foreign materials generated or deposited should remain on the site after completion of the activity and the areas affected by stockpiling should be reinstated.</p> <p>c. Over spray of bitumen products outside the road surface on the road, vegetation should be preventing.</p> <p>d. Concrete mixing on the ground shall not be allowed.</p> <p>e. Pre-wet gravel when not available</p>	<p>Dust pollution</p>	<p>All the Environmental protocols in this regard are fully followed.</p>

	<p>during the dry season and store gravel in a way that will keep it wet, for instance, covered with plastic sheeting.</p> <p>f. Avoid using sensitive areas or sites that drain directly into a sensitive area.</p> <p>g. All runoff from batching plant should be strictly controlled and cement contaminated water should be collected, stored and disposed of at the designated site.</p> <p>h. Used empty cement bags should be collected and stored to deliver these to recycling plant.</p> <p>i. Contaminated water storage facilities should not be allowed to over flow and appropriate protection from rain should be implemented.</p>		
Materials extraction Quarrying , logging	<p>a. Identify the most environmentally sound source of materials that is within budget.</p> <p>b. Use materials from local road cuts first but only if it produces a suitable, durable aggregate for embankment fill, or surface stabilization materials.</p> <p>c. On removal of materials, the area should be restored and be treated with erosion control measures.</p> <p>d. Develop logging quarrying and borrowing plans and take into account accumulative effects.</p> <p>e. Take photos of site before initiating excavation, that restoration can match the original site characteristics as much as possible. Site quarries and gravel pits so that they are not visible to travelers on the roads,</p> <p>f. Monitor adherence to plans and impacts of extraction and modify as necessary.</p> <p>g. Restore area so it is suitable for sustainable use after extraction is completed.</p> <p>h. Install drainage structures to direct water away from pits.</p> <p>i. Implement safety protocols to minimize risks from falling rock or debris, collapsing quarry walls or accidental falls from clefts.</p> <p>j. Discuss with local community the option of retaining walls pits as water collection ponds for cattle, crops or similar use.</p>	<p>Change in landscape & Creation of water ponds</p>	<p>At material extraction site near RD 7+400, the area is not been restored and leveled. Advised Mr Javeed, FWO Guard at site for onward explanation to site Engineer that level the quarry site and fill the pits.</p> <p>Please see Photo 9 to 10.</p>

Site clearing or leveling	<ul style="list-style-type: none"> a. Minimize disturbance of native flora during construction. b. Minimize the amount of clearing of small areas for active work one at a time. c. Avoid use of herbicides. Any use should follow health and safety procedures to protect people and the environment. d. Herbicide should be used according to the manufacturer specifications e. Clear without destroying large plants and turf where possible and preserve for replanting in temporaries nurseries. f. Move earth and vegetation only during dry periods, Store top soil for re-spreading if vegetation must remove during wet periods; disturb ground only just before the actual construction. g. Use erosion control measures such as hay bales h. Re-vegetate the recovered plants and other appropriate local flora immediately after equipment is removed from site. 	<p>Loss of vegetation, soil erosion and stability , surface water pollution and occupational health of workers and community</p>	<p>The area is almost rugged and without vegetation, so no impact on vegetation at site. However at present the excavation has only been made at the shoulders of the existing road, which is already cleared.</p>
Excavation , cutting & filling	<ul style="list-style-type: none"> a. Cover Pile with plastic sheeting, prevent run off with hay bales, or use similar measures. b. Place fence around excavation. c. Investigate shallow over excavation and no excavation alternatives. d. Have construction crews and supervisors be alert for buried historic, religious, and cultural objects and provide them with procedures to follow if such objects are discovered. Provide incentives for recovery of objects and disincentives for their destruction. e. Ensure excavation is accompanied by well-engineered drainage. f. Don't fill the flow line of a watershed. Even in arid areas, occasional rains may create strong water flow in channels. g. Use good engineering practices, For instance don't use soil alone. First lay a bed of rock and gravel. h. Balance the cuts and fills whenever possible to minimize the earth work movement. i. Water sprinkling should be carried out at the temporary access road 	<p>Soil erosion and stability and surface water contamination</p>	<p>The excavation is only done at the shoulders of the existing road in shallow depth of about one foot. The other mitigation measures are either appropriate or not required. At RD 5+630, the excavated materials have been placed at graveyard. To avoid the local conflict, advised to the FWO site Engineer to remove the excavated material to some other suitable place.</p> <p>Please see photo 11.</p>

	and all the areas prone to dust pollution.		
Traffic Control	<ul style="list-style-type: none"> a. Efforts should be made to accommodate the traffic along the road as far as practically possible. b. Provision of sign boards directing the drivers about the diversions. c. Contractor staff could be trained and put on the duty to manage the traffic during the construction activities taking place along the road. d. Temporary by pass if possible should be avoided as involved clearing of land. e. Max allowable speed for heavy machinery on the site should not exceed 20Km/hr. f. Keep road partly closures to a minimum Maintain safe passage of vehicles/pedestrians at all times g. Conduct work that requires road closure at times when traffic volume is low h. Schedule truck sand deliveries for periods of low traffic 	Health and Safety for the local population and workers.	As the project construction is at initial stage, therefore, at this time no traffic problem exists. At diversion near RD 5+500, the FWO keep the traffic control environmental protocols satisfactory.
Blasting	<ul style="list-style-type: none"> a. Minimize blasting. b. Take safety precautions to protect workers and others from being injured by flying or falling rocks and avalanches and c. Provide Person protection equipments to the workforce. 	Noise pollution and occupational safety	There is no blasting at present stage.
Source of building materials	<ul style="list-style-type: none"> a. Develop logging, quarrying and borrowing plans that take into account cumulative effects b. Monitor adherence to plans and impacts of extraction practices. Modify as necessary c. Fill in quarries and pits before abandoning d. Control runoff into pit 	Damage aquatic ecosystems erosion , siltation, Harm terrestrial ecosystems and vector-borne diseases	At material extraction site near RD 7+400, the area is not been restored and leveled. Advised Mr Javeed, FWO Guard at site For Further Explanation to Site Engineer for leveling the quarry site and filling the pits. It has also been advised to prepare the quarrying and borrowing plans. Please see photo 9 to 10.
Dust	<ul style="list-style-type: none"> a. Water spraying b. trucks should be covered with tarpaulins 	Nuisance to the public, undermining the air quality and water contamination	The water spraying at site was appropriate, on the date of visit at diversion near 5+500 RD. Please see Photo 12

Noise & Vibrations	<ul style="list-style-type: none"> a. Blasting will have to be preceded with ample notices to communities within the area. b. Workers will be briefed on the need to maintain order to minimize noise concerns. c. The construction equipment should be well maintained to minimize air pollution from carbon fumes. 	Noise generating activities such as blasting stone quarry, equipment operations and the workers themselves.	As there was no blasting or any other noise generating activities at the site, so no noise or vibrating has noted.
Borrow Areas	These impacts are reversible through a diligent restoration process which must be put in place by the contractor and approved by the Highway Division.	Landscape rugged and interfere with the aesthetics of the area; pose danger to livestock and children; hold stagnant water and they take up agricultural land.	There were no activities at site in respect to borrow area use and borrow areas are still to be identified, if required.
Damages of existing infrastructure	<ul style="list-style-type: none"> a. Locate different infrastructure on opposite site of road b. Determine locations of water pipes, electricity pylons, etc and design scheme to avoid damage 	Facilities to the locals	Damages to PTCL Telephone cables at RD 5+560 was noted and advised to rectify the matter. It was also advised to the site engineer, that in future inform PTCL Department before starting excavation. Please see Photo 13.
Health & Safety of the workers	<ul style="list-style-type: none"> a. Prepare and implement a site Health and Safety Plan. b. Exclude the public from site. c. Ensure that workers use Personal Protective Equipment d. Provide Health & Safety Training (including process of transmission of HIV/AIDS) for all personnel. e. Follow documented procedures for all site activities. f. Keep accident reports and records. 	Workers and the public are at risk from accidents on site	The contractor FWO still not prepared the H&S Plan and has been advised to prepare the Health and Safety Plan. However the contractor being an Army Organization, generally follow the H & S requirements.
Local Employment	Contractor' should employ at least 50% of workforce from communities in vicinity of work site	Economic benefits of local people	Being an Army organization, the contractor FWO has regular employees. In case of subcontract/sublet of any small component to local contractor, local labor is hired.

Others like Resettlement Concerns etc	<ul style="list-style-type: none"> a. Resettlement if any b. Access roads or pedestrian of local peoples c. Infrastructure like telephone line, sewerage, water supply disturbance etc d. Social Conflict with locals 	Social and Resettlement Management	The Peshawar Torkham road construction is continue on existing road corridor, therefore, no resettlement issues are involved, while in case of other infrastructure like access to local, sewerage, telephone line etc required proper care.
Operation and Maintenance of newly constructed road			
Road maintenance	<ul style="list-style-type: none"> a. Monitor and Maintain drainage structures and ditches including culverts. Clean out culverts and side channels. b. Fill mud holes and pot holes with good quality gravels, removed downed trees and limbs obscuring road ways. c. Use water from settling basin and retention ponds for road maintenance. 	Road Maintenance	No segment of the road construction has been completed.
Use and maintenance of equipment's	Install concrete pads, drains and oil/water separators in areas where vehicles and equipment maintenance and fueling will occur regularly.	Water and soil pollution	NA
Accidents of hazardous materials	<ul style="list-style-type: none"> a. In case of spill, there should be a relevant department dealing with it in accordance with emergency plan. b. A road administration department should be established after the completion of the project which will administer the hazardous substances 	Accidents cases	NA
Vehicle management	<ul style="list-style-type: none"> a. Vehicle with excessive noise should be prohibited to travel on the road. b. Public should be educated about the noise and the air pollution and how to keep the road clean. 	Visual inspection	NA

7.2 ENVIRONMENTAL COMPLIANCE REPORT # 02

1. **Date of visit:** 22nd January, 2013
2. **Environmental Compliance Officer:** **Shabir Ahmad Khan**
3. **Road Section under Construction:** Section Km 0+000 to Km 9+000
4. **Road Section Completed:** Section From - to -
5. **Name of Sub contractor if any:** -----

6. Persons Consulted at Site:

- i. Major Ajmal, Incharge Peshawar-Torkham Road, FWO
- ii. Major (R) Tehsin Ullah, Admin & Finance Officer, FWO
- iii. Mr Faridullah Shah, Surveyor.
- iv. Mr. Farooq Khan.

7. Work Position:

- Work Under way.
- Work Stopped
- Work Abandon
- Work Completed

8. Quality of Environment Compliance:

- ❖ Good
- ❖ Satisfactory
- ❖ Poor

9. Issues:

Recommendation/Instructions:

Activity	Mitigation Measures	Monitoring indicators	Observations
Construction Phase			
Use of heavy equipment	a. Minimize use of heavy machinery. b. Set protocols for vehicle Maintenance. h. Monitoring and cross checking fuel level deliveries and use. c. Checking pipes and joints for leaks. d. Tightening generator and fuel lines. e. Preventing over filling of main storage and vehicle tanks. f. Heavy equipment should not be parked under the tree to avoid soil compaction and damage to the roots of the trees.	Soil contaminations, stability and erosion	FWO Machinery generally gets its maintenance inside the camps. FWO staff and site supervisors always maintain the machinery in good condition. Heavy machinery is parked in fenced area near the main camp at Jamrod. As this area have no vegetation/trees. Therefore, no vegetation damage has occurred. As generally Heavy machinery is used for carrying material from quarry area, therefore, FWO official was advised to always follow the compacted routes.
Flood protection	a. Culverts should be provided to control flood damages and provision of safety of Embankments. b. Road protection work along the river side. c. Construction of retaining wall d. New causeways for the smooth flow of water during rainy seasons and flooding.	Site inspection	It was notice during site visit that no temporary arrangements has been made for disposal of flood and sewerage water nor any protection measures have been adopted for safety of other infrastructure like telephone cables etc.(RD 5+905, RD 6+191, RD 6+850, RD 7+384) Please see photo.14,15,16,17
Handling and transportation of hazardous waste	a. Prevent dumping of hazardous materials especially near villages and water bodies. b. Burn waste oil that is not readily reusable. c. Recyclable material don't contain heavy metals that are inflammable, investigate and use less toxic alternative products. d. Prohibit use of waste oil as cooking oil.	Soil Contamination and Safety	No action is required at present stage.
Handling of solid Waste	a. Site manager would be responsible for the collection and disposal of solid waste. b. Training of site personnel in waste management and chemical waste handling procedures. c. Separation of chemical waste for special handling. d. Recording system for the amount of waste generated recycled and reused.	Toxicity, Soil Contamination and Pollution	No waste segregation observed at construction site nor any such records had been shared in respect of solid waste management. The construction materials are generally stored in good condition to minimize the chance of damage to them. Although mixing of refuse with construction material

	<ul style="list-style-type: none"> e. Proper storage and site practices to minimize the potential for damage or contamination of construction materials. f. General refuse would be stored in enclosed bins to separate from construction materials g. A reusable waste collector should be employed by the contractor to remove the general refuse from the site. 		<p>was not found at site, but at the same time no special bins or collector have been seen to collect them systematically.</p>
Construction crews and camps	<ul style="list-style-type: none"> a. Explore off – site accommodations for crew, keep camp size in containers or specific facilitated position. b. Avoid as much clearing of vegetation as possible. c. Provide temporary sanitation on site such as pit latrines (assuring the water table is enough and soil and geology of appropriate composition). d. Use local or regional labor. e. Screen potential crew members of HIV and tuberculosis. f. Provide education and enforce guidelines on contact with local residents. g. Set guidelines prohibiting poaching and collection of plants. h. Provide adequate quantities and good quality food and cooking fuel. i. If the water is stored for drinking water should meet the WHO standards and if it is used for construction purpose then it should be clearly demarcated. j. No domestic pets or livestock are allowed on the site. 	<p>Surface and ground water pollution and conflicts with locals.</p>	<p>Both construction crews and camps are maintained in a best manner at army accommodation, where all required facilities like washrooms, kitchen, TV lounge, café shop etc are available. These army camps have recently renovated by the FWO for the labor camps. The quality of food provided was good. The other protocols like hygienic water etc are satisfactory. Sub-contractor and some workers are the local inhabitants of the area. <u>No such investigation and diagnosis at site observed.</u> FWO staff is educated and follow strict guidelines from their senior to interact with locals. <u>No guidelines neither provided nor followed as trees cutting were noticed earlier and they were then carried to camps.</u> Domestic livestock can be seen at site office, but the camps are away and are protected, so no entrance was seen during site visit.</p> <p>Please see Photo-18</p>
Material handling use and storage	<ul style="list-style-type: none"> a. Material should be appropriately secured to ensure safe passage b/w the destinations during transportation. Loads shall have proper cover to prevent spillage and contractor is responsible for any clean up resulting from failure. b. Materials from borrow site should be directly transported and deposited to the site where it has to be used. Stockpiles should be positioned and sloped to create less visual impact. No foreign materials generated or deposited should remain on the site after completion of the activity and the 	<p>Dust pollution</p>	<p>FWO staff have been advised for safe passage of dumpers which usually carry materials. No concrete batching plant is present nor any water storage observed at site. All the Environmental protocols are fully followed at site.</p>

	<p>areas affected by stockpiling should be reinstated.</p> <ul style="list-style-type: none"> c. Over spray of bitumen products outside the road surface on the road, vegetation should be preventing. d. Concrete mixing on the ground shall not be allowed. e. Pre-wet gravel when not available during the dry season and store gravel in a way that will keep it wet, for instance, covered with plastic sheeting. f. Avoid using sensitive areas or sites that drain directly into a sensitive area. g. All runoff from batching plant should be strictly controlled and cement contaminated water should be collected, stored and disposed of at the designated site. h. Used empty cement bags should be collected and stored to deliver these to recycling plant. i. Contaminated water storage facilities should not be allowed to over flow and appropriate protection from rain should be implemented. 		
Materials extraction Quarrying , logging	<ul style="list-style-type: none"> a. Identify the most environmentally sound source of materials that is within budget. b. Use materials from local road cuts first but only if it produces a suitable, durable aggregate for embankment fill, or surface stabilization materials. c. On removal of materials, the area should be restored and be treated with erosion control measures. d. Develop logging quarrying and borrowing plans and take into account accumulative effects. e. Take photos of site before initiating excavation, that restoration can match the original site characteristics as much as possible. Site quarries and gravel pits so that they are not visible to travelers on the roads, f. Monitor adherence to plans and impacts of extraction and modify as necessary. g. Restore area so it is suitable for sustainable use after extraction is completed. h. Install drainage structures to direct water away from pits. i. Implement safety protocols to minimize risks from falling rock or debris, collapsing quarry walls or accidental falls from clefts. j. Discuss with local community the option of retaining walls pits as water 	<p>Change in landscape & Creation of water ponds</p>	<p>FWO officials till this time are not sharing and providing their logging, quarrying and borrowings plans nor any relevant photos. No dangerous terrain were observed during site visit, however, FWO staff have been advised to follow safety protocol while working. Material extraction process is in progress near site RD 6+00, but no photos have been taken before extraction. So far Safety protocol sare concern, apparently seen no risk of falling rocks or debris at this site. The rest of the protocols will be examined during the period when work will stop at this site.</p> <p>Please see Photo-19.</p>

	collection ponds for cattle, crops or similar use.		
Site clearing or leveling	<ul style="list-style-type: none"> a. Minimize disturbance of native flora during construction. b. Minimize the amount of clearing of small areas for active work one at a time. c. Avoid use of herbicides. Any use should follow health and safety procedures to protect people and the environment. d. Herbicide should be used according to the manufacturer specifications e. Clear without destroying large plants and turf where possible and preserve for replanting in temporaries nurseries. f. Move earth and vegetation only during dry periods, Store top soil for re-spreading if vegetation must remove during wet periods; disturb ground only just before the actual construction. g. Use erosion control measures such as haybales h. Re-vegetate the recovered plants and other appropriate local flora immediately after equipment is removed from site. 	Loss of vegetation, soil erosion and stability , surface water pollution and occupational health of workers and community	<p>As the area is almost rugged and without vegetation, so there is no impact on vegetation at site. Moreover at present time, the excavation is continued at the shoulders of the existing road which is already cleared.</p> <p>Please see Photo-20,21</p>
Excavation , cutting , and filling	<ul style="list-style-type: none"> a. Cover Pile with plastic sheeting, prevent run off with hay bales, or use similar measures. b. Place fence around excavation. c. Investigate shallow over excavation and no excavation alternatives. d. Have construction crews and supervisors be alert for buried historic, religious, and cultural objects and provide them with procedures to follow if such objects are discovered. Provide incentives for recovery of objects and disincentives for their destruction. e. Ensure excavation is accompanied by well-engineered drainage. f. Don't fill the flow line of a watershed. Even in arid areas, occasional rains may create strong water flow in channels. g. Use good engineering practices, For instance don't use soil alone. First lay a bed of rock and gravel. h. Balance the cuts and fills whenever possible to minimize the earth work movement. i. Water sprinkling should be carried out at the temporary access road and all the areas prone to dust pollution. 	Soil erosion and stability and surface water contamination	<p>The excavation is only done at the shoulders of the existing road in shallow depth of about one foot. The other mitigation measures are either appropriate or not required.</p> <p>At RD 5+630 excavated materials have been placed at graveyard. To avoid local conflict, advised FWO site Engineer to shift the excavated material to some other suitable place.</p> <p>At culverts sites, during excavation process require fence around, well engineering drainage for <u>flow line of watershed</u>, proper dumping of excavated material and sprinkling of water at temporary access roads at RD 5+905, RD 6+191, RD 6+850, RD 7+384.</p> <p>Please see photo-22,23</p>
Traffic Control	<ul style="list-style-type: none"> a. Efforts should be made to accommodate the traffic along the 	Health and Safety for the	As far Traffic control is concern, it can flow along

	<p>road as far as practically possible.</p> <p>b. Provision of sign boards directing the drivers about the diversions.</p> <p>c. Contractor staff could be trained and put on the duty to manage the traffic during the construction activates taking place along the road.</p> <p>d. Temporary by pass if possible should be avoided as involved clearing of land.</p> <p>e. Max allowable speed for heavy machinery on the site should not exceed 20Km/hr.</p> <p>f. Keep road partly closures to a minimum Maintain safe passage of vehicles/pedestrians at all times</p> <p>g. Conduct work that requires road closure at times when traffic volume is low</p> <p>h. Schedule truck sand deliveries for periods of low traffic</p>	<p>local population and workers.</p>	<p>the road or at diversions. FWO has arranged diversions as well as existing kacha tracks along the road for traffic management. No proper signboard seen at any location. Therefore, asked FWO official to clearly mark all diversion by installing temporary sign boards for driver's directions. At diversion near RD 5+500, water sprinkling has been done. Moreover, contractor's personnel at construction sites also help in traffic control. Speed was not checked at site, however the machinery cannot move faster due to activities underway.</p>
Blasting	<p>a. Minimize blasting.</p> <p>b. Take safety precautions to protect workers and others from being injured by flying or falling rocks and avalanches and</p> <p>c. Provide Person protection equipments to the workforce.</p>	<p>Noise pollution and occupational safety</p>	<p>There is no blasting at present stage or likely to be needed; therefore, no action is required.</p>
Source of building materials	<p>a. Develop logging, quarrying and borrowing plans that take into account cumulative effects</p> <p>b. Monitor adherence to plans and impacts of extraction practices. Modify as necessary</p> <p>c. Fill in quarries and pits before abandoning</p> <p>d. Control runoff into pit</p>	<p>Damage aquatic ecosystems erosion , siltation, Harm terrestrial ecosystems and vector-borne diseases</p>	<p>At material extraction site near RD 7+400, the area has not been restored and leveled. Asked Mr. Javeed, FWO Guard at site to inform FWO official for leveling the quarry site and filling the pits and also for preparing the quarrying and borrowing plans. The quarry site near RD 6+00 is under extraction stage and need care.</p> <p>Please see photo.19</p>
Dust	<p>a. Water spraying</p> <p>b. trucks should be covered with tarpaulins</p>	<p>Nuisance to the public, undermining the air quality and water contamination</p>	<p>Water spraying at diversion near 5+500 RD was appropriate on the date of visit.</p> <p>Please see Photo.24</p>
Noise & Vibrations	<p>a. Blasting will have to be preceded with ample notices to communities within the area.</p> <p>b. Workers will be briefed on the need to maintain order to minimize noise concerns.</p> <p>c. The construction equipment should be well maintained to minimize air pollution from carbon fumes.</p>	<p>Noise generating activities such as blasting stone quarry, equipment operations and the workers themselves.</p>	<p>As there was no blasting or any other noise generating activity at site, therefore, no noise or vibration has been noted.</p>

Borrow Areas	These impacts are reversible through a diligent restoration process which must be put in place by the contractor and approved by the Highway Division.	Landscape rugged and interfere with the aesthetics of the area; pose danger to livestock and children; hold stagnant water and they take up agricultural land.	There were no activities at site regarding borrow area use. Moreover, barrow areas are still to be identified, if required.
Damages of existing infrastructure	<ul style="list-style-type: none"> a. Locate different infrastructure on opposite site of road b. Determine locations of water pipes, electricity pylons, etc and design scheme to avoid damage 	Facilities to the locals	<p>Damages to PTCL Telephone cables at RD 5+600, RD 5+905, RD 6+850 and RD 7+384 were noticed and asked FWO official to repair cables. It was also asked to site engineer that in future inform PTCL Department before starting excavation. Later on, in a meeting the overall field in charge informed us that a meeting has already been conducted with PTCL and WAPDA departments for proper care of their cables during construction process.</p> <p>Please see Photo. 25</p>
Health & Safety of the workers	<ul style="list-style-type: none"> a. Prepare and implement a site Health and Safety Plan. b. Exclude the public from site; c. Ensure that workers use Personal Protective Equipment d. Provide Health & Safety Training (including process of transmission of HIV/AIDS) for all personnel; e. Follow documented procedures for all site activities; f. Keep accident reports and records 	Workers and the public are at risk from accidents on site	The contractor FWO has still not prepared Health and Safety Plan, therefore, asked FWO official to prepare it. However the contractor being an Army Organization, generally follow H & S requirements.
Local Employment	Contractor should employ at least 50% of workforce from communities in vicinity of work site	Economic benefits of local people	Being an Army organization, the contractor FWO has regular employees. In case of subcontract/sublet of any small component to local contractor, local labor is hired.
Others like Resettlement Concerns etc	<ul style="list-style-type: none"> a. Resettlement if any b. Access roads or pedestrian of local peoples c. Infrastructure like telephone line, sewerage, water supply disturbance etc d. Social Conflict with locals 	Social and Resettlement Management	The Peshawar Torkham road construction is continuing on existing road corridor, therefore, no resettlement issue is involved. In case of other infrastructure like access roads of local, sewerage, telephone line etc require

			<p>proper care.</p> <p>At culvert site near RD 7+384, two shops were demolished due to construction activities. The matter was discussed with Field In charge FWO in meeting and he told us that the matter has been resolved with the owner and the shops will be reconstructed after completion of culvert work.</p>
Operation and Maintenance of newly constructed road			
Road maintenance	<ul style="list-style-type: none"> a. Monitor and Maintain drainage structures and ditches including culverts. Clean out culverts and side channels. b. Fill mud holes and pot holes with good quality gravels, removed downed trees and limbs obscuring road ways. c. Use water from settling basin and retention ponds for road maintenance. 	Road Maintenance	No segment of the road construction has been completed.
Use and maintenance of equipment's	Install concrete pads, drains and oil/water separators in areas where vehicles and equipment maintenance and fueling will occur regularly.	Water and soil pollution	NA
Accidents of hazardous materials	<ul style="list-style-type: none"> c. In case of spill, there should be a relevant department dealing with it. in accordance with emergency plan ; d. A road administration department should be established after the completion of the project which will administer the hazardous substances 	Accidents cases	NA
Vehicle management	<ul style="list-style-type: none"> c. Vehicle with excessive noise should be prohibited to travel on the road. d. Public should be educated about the noise and the air pollution and how to keep the road clean. 	Visual inspection	NA

PROJECT PHOTOGRAPHS

CULVERTS



Lat 34; 0; 6.33, Lon 71; 22; 15.785

KM: 5 + 210 (Culvert) Structural excavation is in progress



Lat 34; 0; 8.723, Lon 71; 21; 27.733

KM: 6 + 191 (Culvert) Stone masonry construction is in progress



Lat 34; 0; 10.876, Lon 71; 21; 25.325

KM 6 + 501 (Culvert) Structural Excavation is in progress



Lat 34; 0; 11.441, Lon 71; 21; 20.862

KM: 6 + 648 (Culvert) Stone masonry construction is in progress



Lat 34; 0; 13.295, Lon 71; 21; 11.898

KM: 6 + 883 (Culvert) Layout for lean concrete is in progress



Lat 34; 0; 15.455, Lon 71; 20; 53.345

KM: 7 + 386 (Culvert) Lean concrete is in progress

PAVEMENT STRUCTURE



Lat 33; 59; 52.6, Lon 71; 24; 13.5

KM: 1 + 850 to 1 + 900 (RHS Shoulder) Excavation for sub grade layer is in progress



Lat 34; 0; 2.7, Lon 71; 23; 42

KM: 2 + 850 to 3 + 050 (RHS Shoulder) Sub base 1st layer preparation is in progress



Lat 33; 59; 57.3, Lon 71; 23; 30

KM: 3 + 200 to 3 + 300 (RHS Shoulder) Sub grade top layer compaction is in progress



Lat 34; 0; 7.6, Lon 71; 22; 39

KM: 4 + 600 to 5 + 000 Grooving is in progress



Lat 34; 0; 10.1, Lon 71; 21; 30.2

KM: 6 + 325 to 6 + 400 Full width embankment 1st layer preparation is in progress



Lat 34; 0; 16.3, Lon 71; 20; 50.6

KM: 7 + 450 to 7 + 550 (Full width) Sub grade top layer material has dumped



Lat 34; 0; 16.9, Lon 71; 20; 46

KM: 7 + 575 to 7 + 675 (Full Width) Sub base 1st layer preparation is in progress



Lat 34; 0; 17.4, Lon 71; 20; 40

KM: 7 + 750 to 7 + 875 (LHS Full Width) Sub base 1st layer preparation is in progress



Lat 34; 0; 18.2, Lon 71; 20; 32.8

KM: 7 + 950 to 8 + 075 (Full width) Embankment 1st layer preparation is in progress



Lat 34; 0; 18.8, Lon 71; 20; 28.4

KM: 8 + 075 to 8 + 125 (Full Width) Plowing of sub base 1st layer is in progress



Lat 34; 0; 19, Lon 71; 20; 5.2

KM: 8 + 550 to 8 + 625 (LHS Shoulder) Sub base 1st layer

FIELD TESTING



KM: 4 + 655 (LHS Shoulder) FDT Test for NGC is in progress in the presence of M & E Material Engineer



KM: 3 + 050 to 3 + 125 (RHS Shoulder) FDT test on NGC is in progress in the presence of M & E lab staff



KM: 6 + 000 Pit # 1 screen for sub base

PHOTOGRAPHS OF FIELD VISIT (Jan 10, 2013)



KM: 7+386 Site interaction between USAID Representative, M&E Consultants and Resident Engineer NESPAK



KM: 7+386 Culvert inspection by USAID Representative, M&E Consultants and Resident Engineer NESPAK



(KM: 7+375 & onward) earthwork on both side shoulders



KM: 7+450 Road inspection by USAID Representative, M&E Consultants and Resident Engineer NESPAK



KM: 7 + 450 Site interaction between USAID Representative, M&E Consultants and Resident Engineer NESPAK

PHPTOGRAPHS OF ENVIRONMENTAL COMPLIANCE MONITORING



Photo (1): Standing water due to no temporary drainage arrangement at RD 5+905



Photo (2): Reconstruction of culvert.



Photo (3): Room inside view of FWO Contractor Labor Camp



Photo (4): Fire protection arrangement at Contractor Camp.



Photo (5): Café Shop at the Contractor Camp



Photo (6): View of Contractor Camp (FWO)



Photo (7): Washrooms at the Contractor Camp.



Photo (8): Washrooms at the Contractor Camp.



Photo (9): Quarry area near RD 7+400



Photo (10): Dig pit at Quarry area near RD 7+400



Photo (11): Excavated Material dumped in graveyard



Photo (12): Temporary diversion road near RD 7



Photo (13): Exposed Telephone cable at RD- 5+560



Photo (14) KM: 5 + 905 (Culvert)



Photo (15): KM: 6 + 691 (Culvert)



Photo (16): KM: 6 + 648 (Culvert)



Photo (17): Damage PTCL cable at RD.5+905



PHOTO (18) View of Camp



Photo (19): View of Quarry source



Photo (20): View of Excavation at shoulder of the road



Photo (21): View of Leveling Process



Photo (22): View of Excavating material place at graveyard



Photo (23): View of Excavation at Culvert without fence.



Photo (24): View of water spraying



Photo (25): View of Damaged PTCL cable