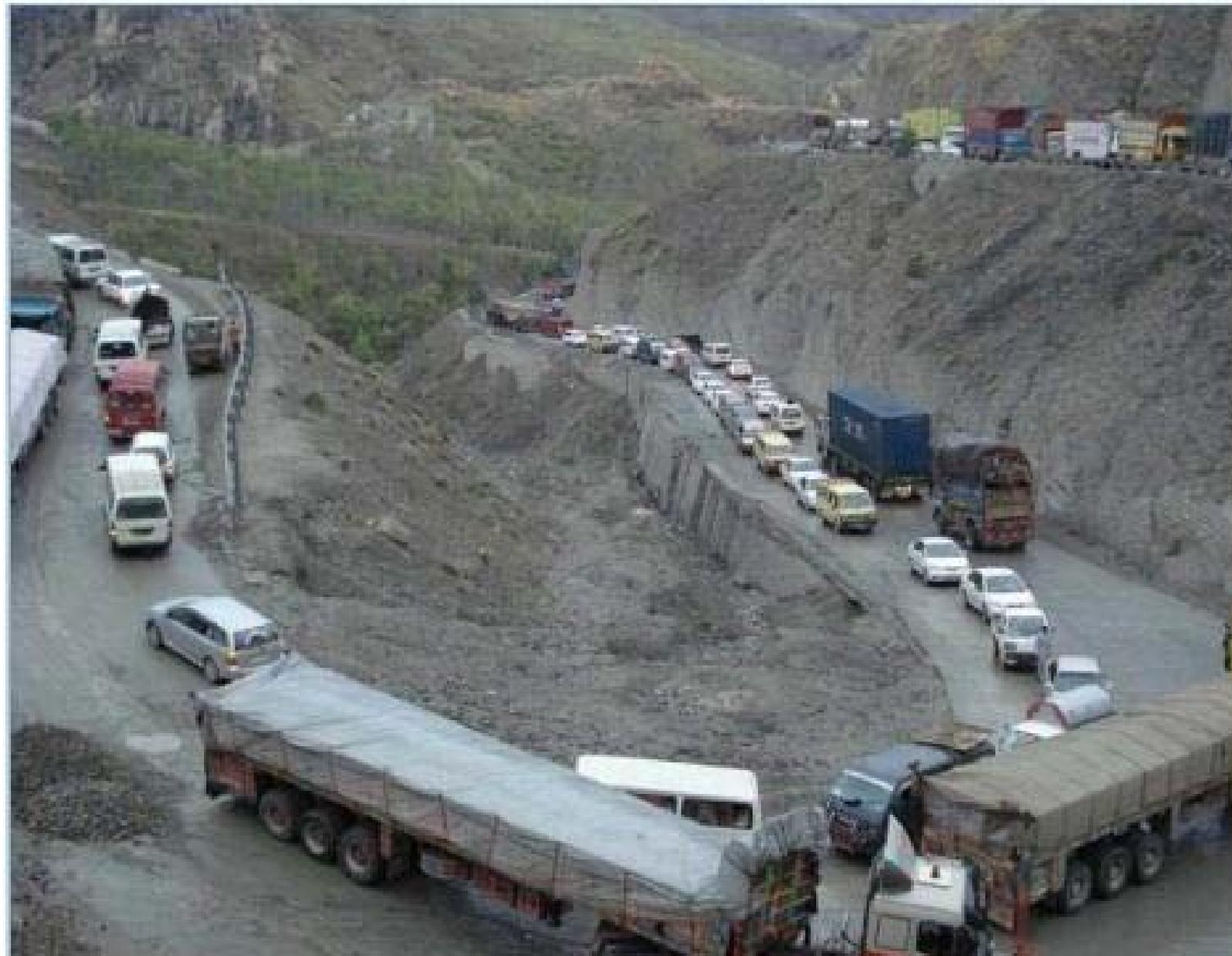




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**STRENGTHENING & IMPROVEMENT OF PESHAWAR - TORKHAM ROAD
KHYBER AGENCY, FATA**

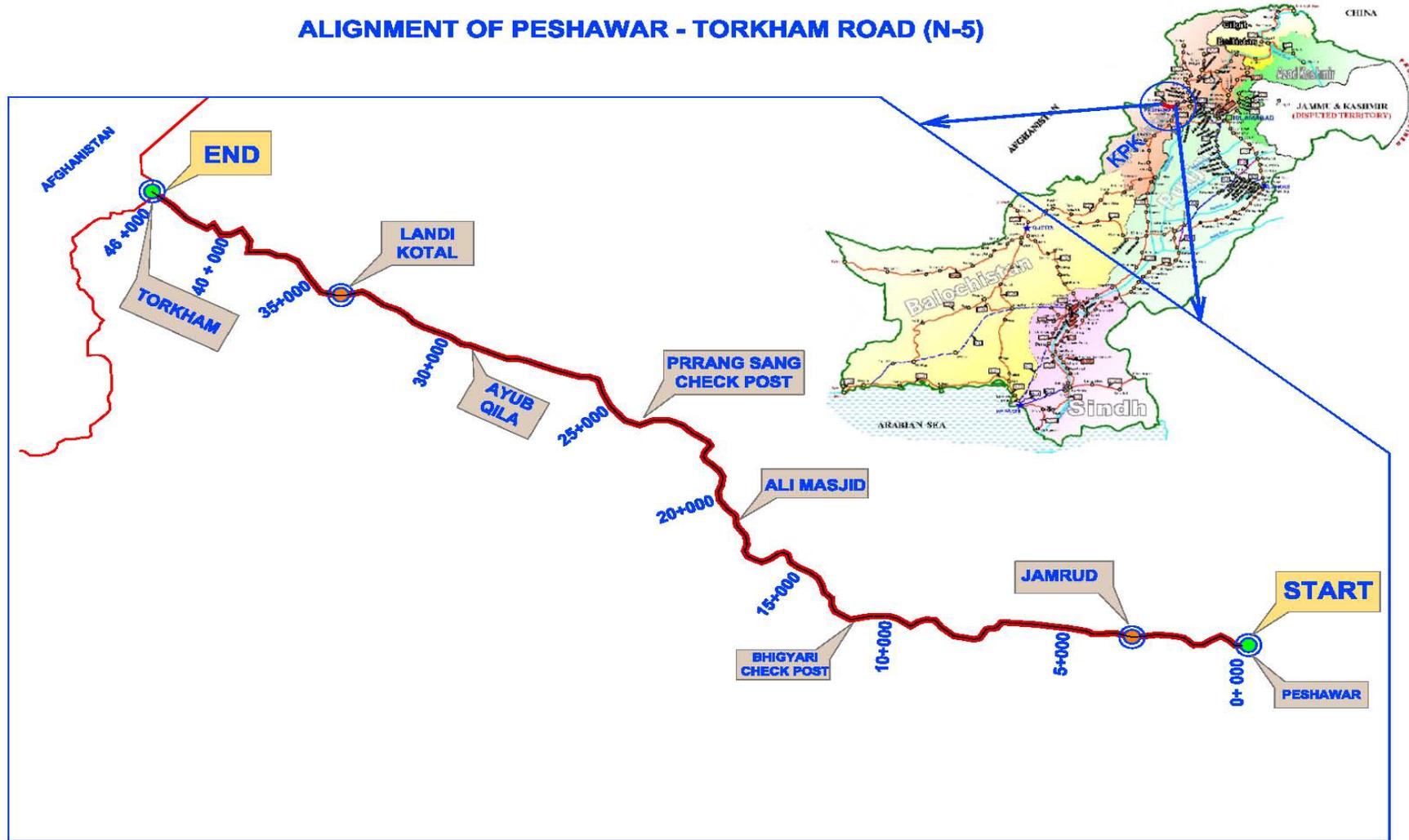
MONTHLY PROGRESS REPORT # 14
January 2014

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ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5)



SUMMARY

Peshawar – Torkham road is an integral part of National Highway (N-5), a vital piece of the nation’s infrastructure, which connects Pakistan with Afghanistan at Torkham border and plays an important role in the economic activities as well as providing timely logistic support to the security agencies deployed in Khyber Agency. The project “Strengthening & Improvement of Peshawar Torkham Road” is funded with United State Agency for International Development (USAID) grant amounting to USD and implemented by FATA Secretariat as project proponent through Frontier Works Organization (FWO) as EPC (Engineer, Procure, and Construct) Contractor.

The 46 KM Peshawar – Torkham road (PTR) has been split into multiple sections for designing / construction purposes due to inherited site specific conditions such as live traffic corridor, gigantic hilly terrain, safety and security restrictions etc. Work on section – I of the project was initiated by FWO on October 15, 2012.

During the reporting month, the contractor team fully utilized the available 26 working days. FWO was constantly pressed for demonstrating good environmental practice in conformity with the construction environmental management plan.

The overall certified payment upto the end of January is US \$ 8.042 Million for section – I and US \$ 661,911 for section - II. No IPC was processed by the Contractor during the reporting month.

Major physical construction activities in each section are presented as under:

SECTION – I (KM: 0+000 To 9+000)

Section – I of the project can be declared complete with respect to earthwork, Sub Base, Aggregate Base Course / WBM, Asphaltic Base Course, Asphaltic Wearing Course and pavement marking, and switched on for all kind of traffic. Culverts and retaining walls have been completed 100% and 93.5% respectively upto the end of the reporting month. Works on construction of longitudinal drains and rural link roads are in progress.

SECTION – II (KM: 9+000 To 14+000)

<u>WORK ITEM</u>	<u>SEC – II</u>
○ Earthwork:	72.50 %
○ Sub Base:	52.05 %
○ Aggregate Base Course/WBM:	30.43 %
○ Asphaltic Base Course:	26.09 %
○ Asphaltic Wearing Course	17.39 %
○ Culverts:	69.68 %
○ Retaining Walls:	32.91 %

- Bulk earthwork and roadway excavation continued along with construction of 17 No's cross drainage structures & 1600 M (cumulative) retaining/breast walls.
- Traffic continually plying on diversions / detour.

SECTION – III (KM: 14+000 To 19+000)

<u>WORK ITEM</u>	<u>SEC – III</u>
○ Earthwork:	60.00 %
○ Sub Base:	41.53 %
○ Aggregate Base Course/WBM:	46.81 %
○ Asphaltic Base Course:	25.53 %
○ Asphaltic Wearing Course	NIL
○ Culverts:	47.89 %
○ Retaining Walls:	17.21 %

- PC – 1 of section – III approved with PIL approval in progress.
- Construction continued on 16 No's cross drainage structures & 850 m (cumulative) retaining walls in section – III.
- Traffic continually plying on diversions / detour.

SECTION – IV (KM: 19+000 To 24+000) AND SECTION – V (KM: 24+000 To 34+000)

- PC-1 of section-IV approved during the reporting month.
- Work continued to finalize the conceptual design for the section – V of the project.
- Earthwork including massive roadway excavation & sub-base paving work in section – IV & V continued.
- Work continued on construction of 03 No's culverts in section - V.
- Traffic continually plying on diversions / detour.

BRDIGES AND MULTICELL CULVERTS FALLING IN DIFFERENT SECTIONS

- PC – 1 for 02 bridges & 02 Multicell culverts approved during the reporting month with approval of PIL in progress.
- Pile boring & concreting work completed at bridge No: 02 (KM: 09+560). Similarly work on 10 out of 15 Nos of Post Tensioned Girders concrete casted up to the end of the reporting month.
- Pile load test on Bridge No.10 (KM: 23+750) completed and working piles construction are in progress.
- Reinforced concrete base slab completed for multicell culvert at KM: 11+190 and fabrication of rebars for multicell culvert at KM 22+925 completed.

INTRODUCTION

1.1 PROJECT 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 long 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						
Physical Limits	Peshawar to Torkham					
Feature	Section – I	Section – II	Section – III	Section – IV	Section – V	Section – VI
Kilometers	0+000 to 9+000	9+000 to 14+000 (Revised)	14+000 to 19+000 (Revised)	19+000 to 24+000 (Revised)	24+000 to 34+000 (Revised)	34+000 to 46+000 (Revised)
Black Top	Total 12.3 meter (7.3 meter carriageway & 2.5 meter structural shoulders on either side)					
Completion Period	807 Calendar Days					

1.2 SCOPE OF WORK

The project involves widening, strengthening and improvement of the existing two lane carriageway, including construction of new cross drainage structures, bridges, rigid pavements and earth retaining structures spread over 46 KM. At a first stage, the FATA Secretariat has undertaken to contract out section – I of the project from KM: 0 +000 To KM: 9 + 000. Length of each package varies according to topographical features and live traffic conditions along the project route.

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. NESPAK is providing design and quality control services to FWO. While AGES Consultants has been entrusted with the Construction Monitoring and Evaluation Services including Quality Assurance and Environmental Monitoring of the project on behalf of the USAID Pakistan Mission.

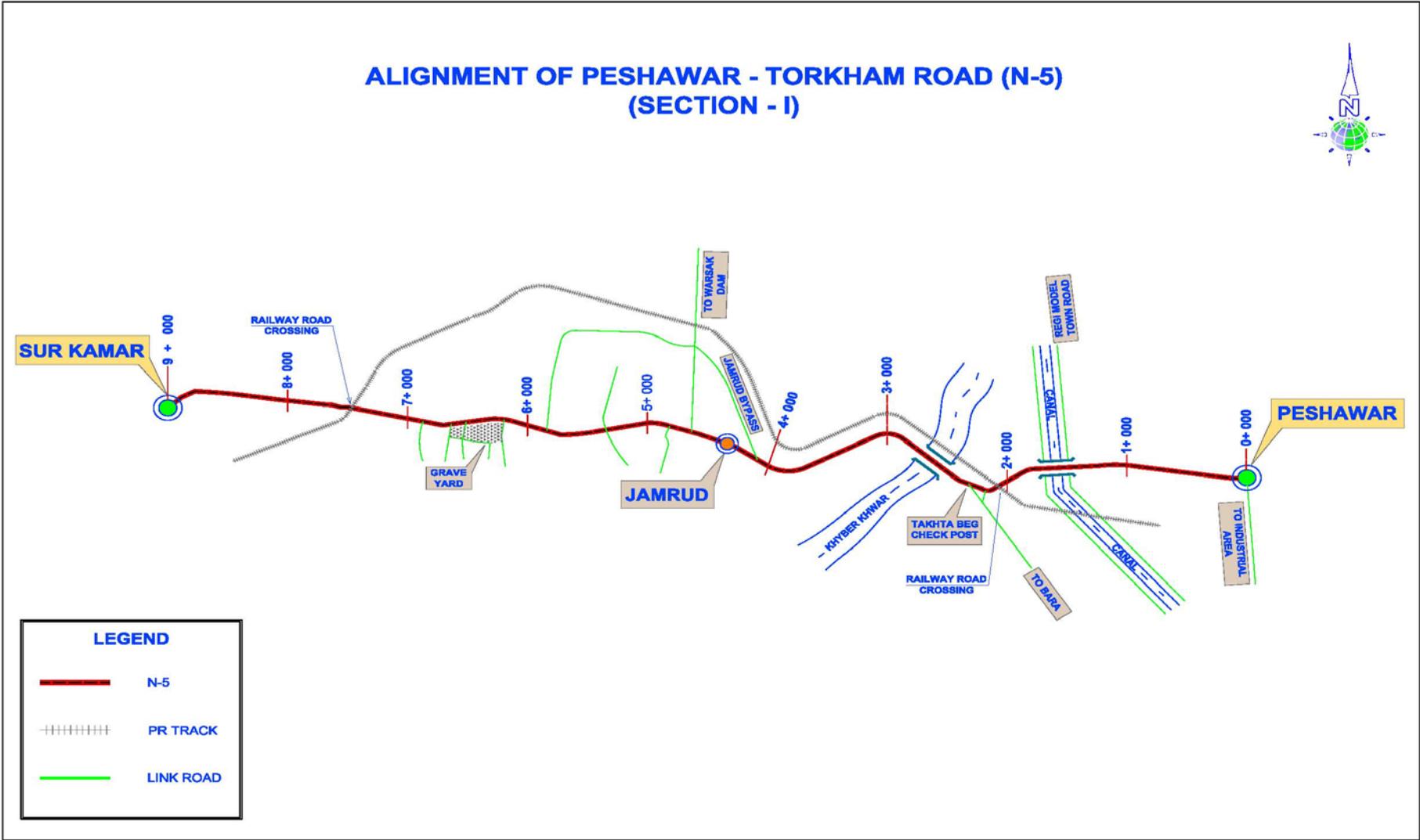
1.3 GENERAL CONTRACT DATA

1.	Name of Project	Strengthening and Improvement of Peshawar Torkham Road (N-5) Khyber Agency FATA
2.	Project Construction Cost	US \$ 67 Million
3.	Donor Agency	USAID PAKISTAN
4.	Donor's Agency Representative	Engr. Farhat Ali Shah Banori, USAID/COR
5.	Sponsoring Agency	FATA Secretariat, Peshawar
6.	Sponsoring Agency Representative	Mr. Roshan Mahsud, Project Director, PMU FATA
7.	Executing Agency	Frontier Works Organization (FWO)
8.	Executing Agency Representative	Col. Zahid (Project Director FWO)
9.	M&E Consultants	AGES Consultants
10.	M&E Consultants Representative	Engr. Aziz-ul- Haq, Project Manager
11.	Time for Completion	807 Calendar Days
12.	Mode of Construction Contract	EPC (Engineer, Procure and Construct) Contract
13.	Chronology	
	Signing of MoU (USAID–FATA–NHA)	Sep 18, 2012
	Signing of Consultancy Contract (USAID – AGES)	Sep 30, 2012
	M&E Consultants Mobilization	Oct 01, 2012
	Project Date of Commencement	Oct 15, 2012
	Project Date of Completion	Dec 31, 2014

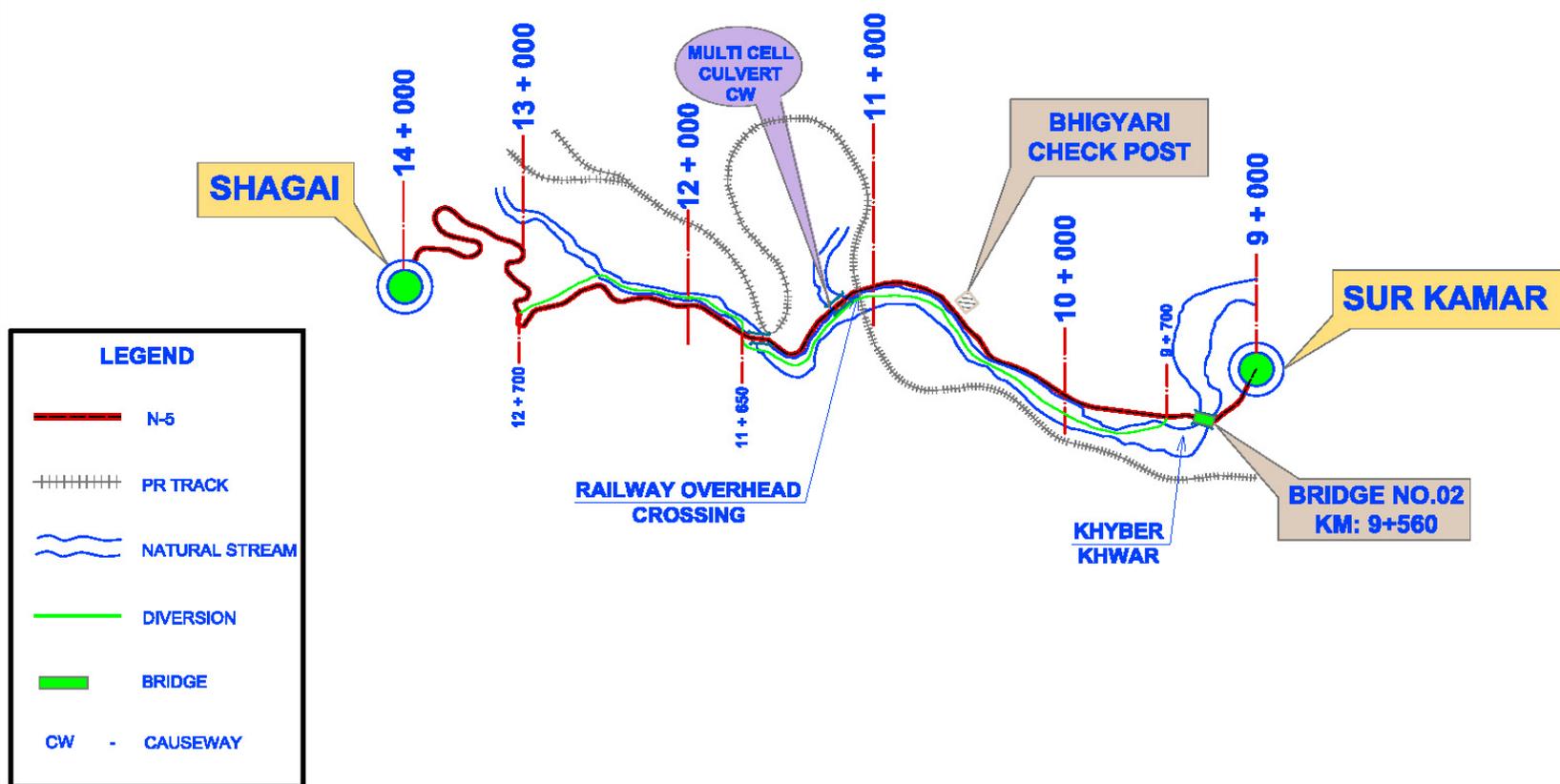
1.4 SECTIONS DATA

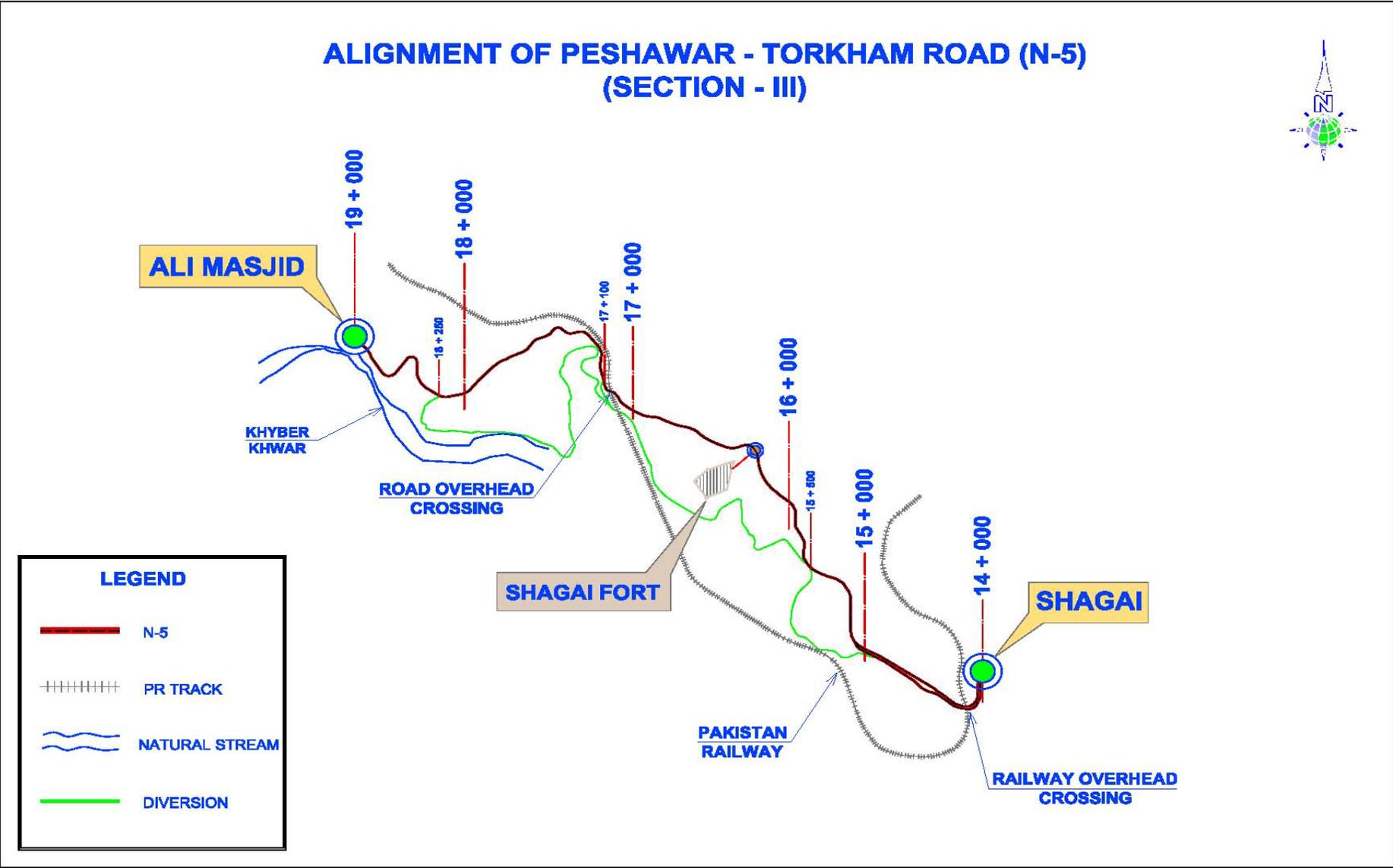
1.	Name of Package	Section – I (CH: KM: 0+000 to CH: KM: 9+000)
2.	PC-1 Cost (Section – I)	Rs. 937.939 Million (PIL Cost: US \$ 9.978 M)
3.	Approval of PC – 1 (Section – I)	Nov 20, 2012
1.	Name of Package	Section – II (CH: KM: 9+000 to CH: KM: 14+000)
2.	PC-1 Cost (Section – II)	Rs. 985.266 Million (PIL Cost: US \$ 9.383 M)
3.	Approval of PC – 1 (Section – II)	Oct 08, 2013
1.	Name of Package	Section – III (CH: KM: 14+000 to CH: KM: 19+000)
2.	PC-1 Cost (Section – III)	Rs. 989.320 Million (PIL Cost: US \$ 9.422 M)
3.	Approval of PC – 1 (Section – III)	Dec 20, 2013

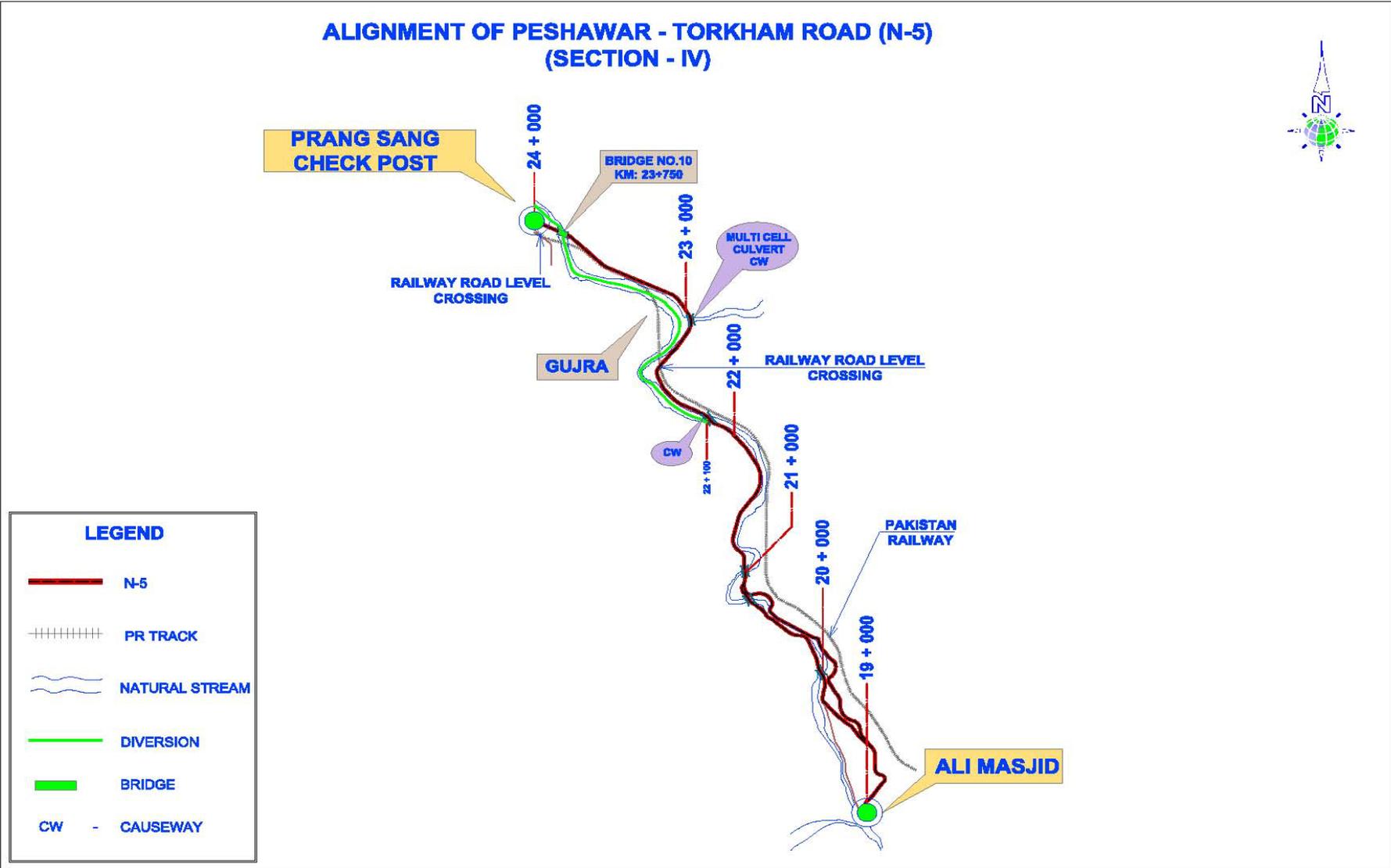
1.5 ALIGNMENT SKETCHES

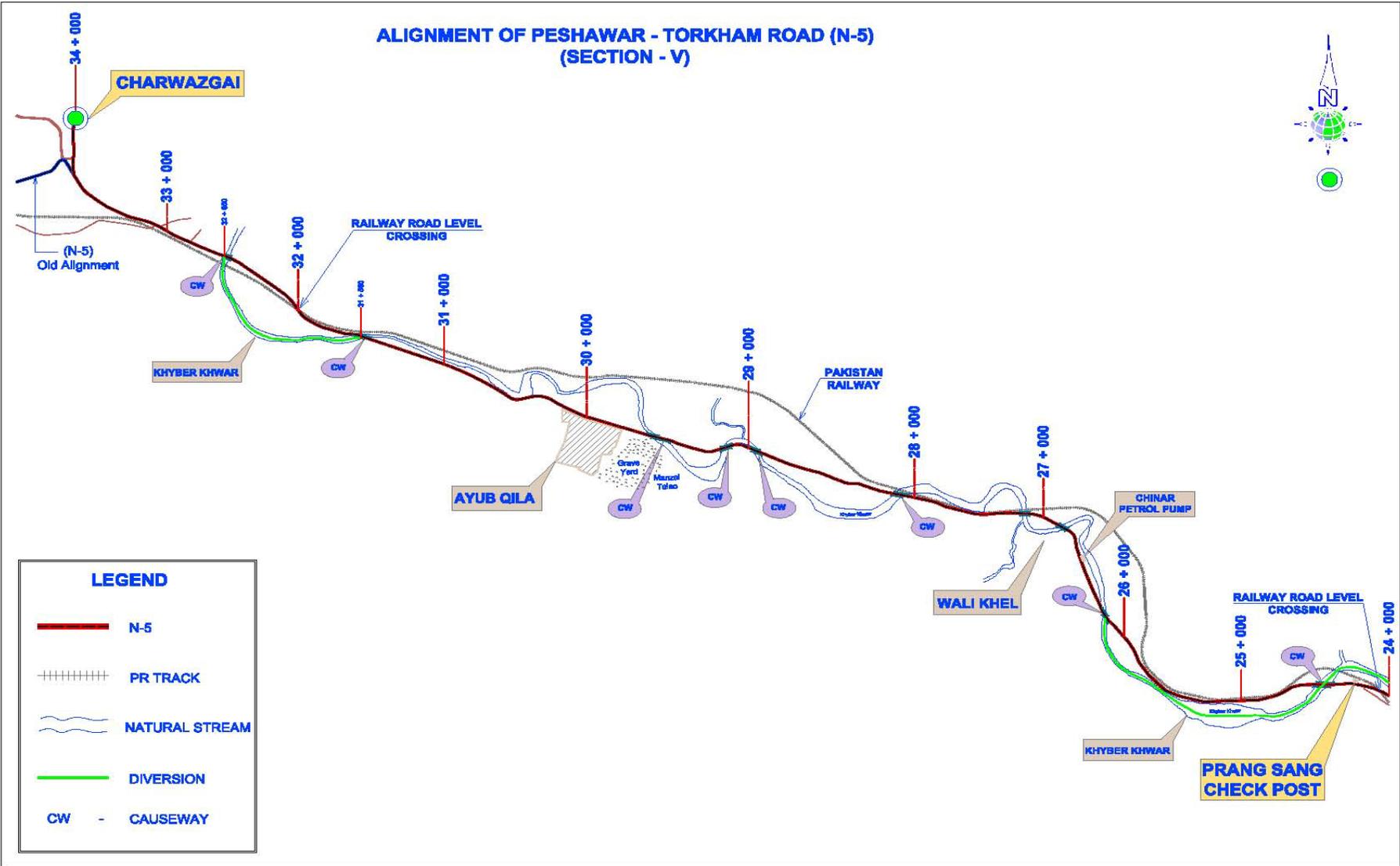


ALIGNMENT OF PESHAWAR - TORKHAM ROAD (N-5) (SECTION - II)

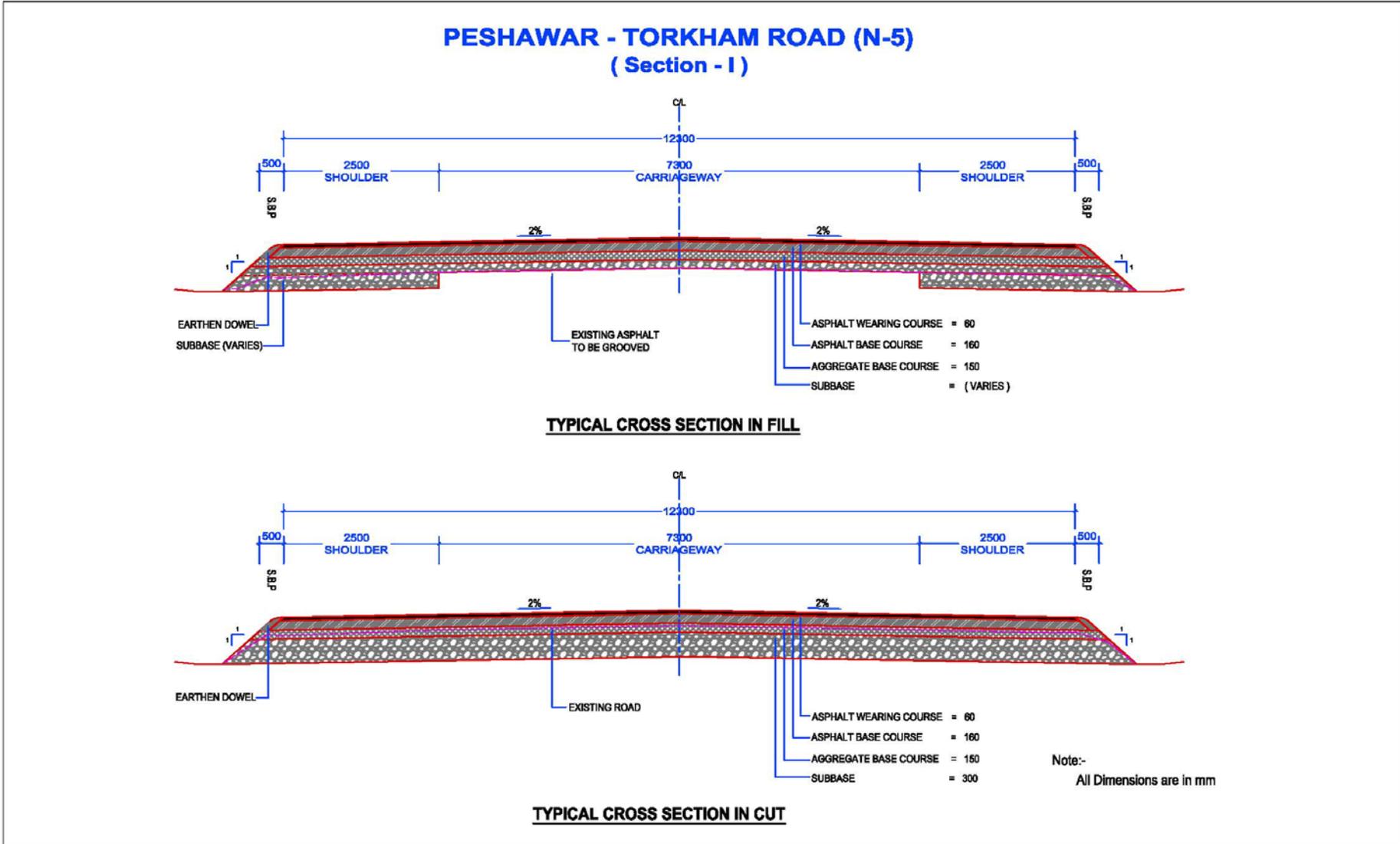


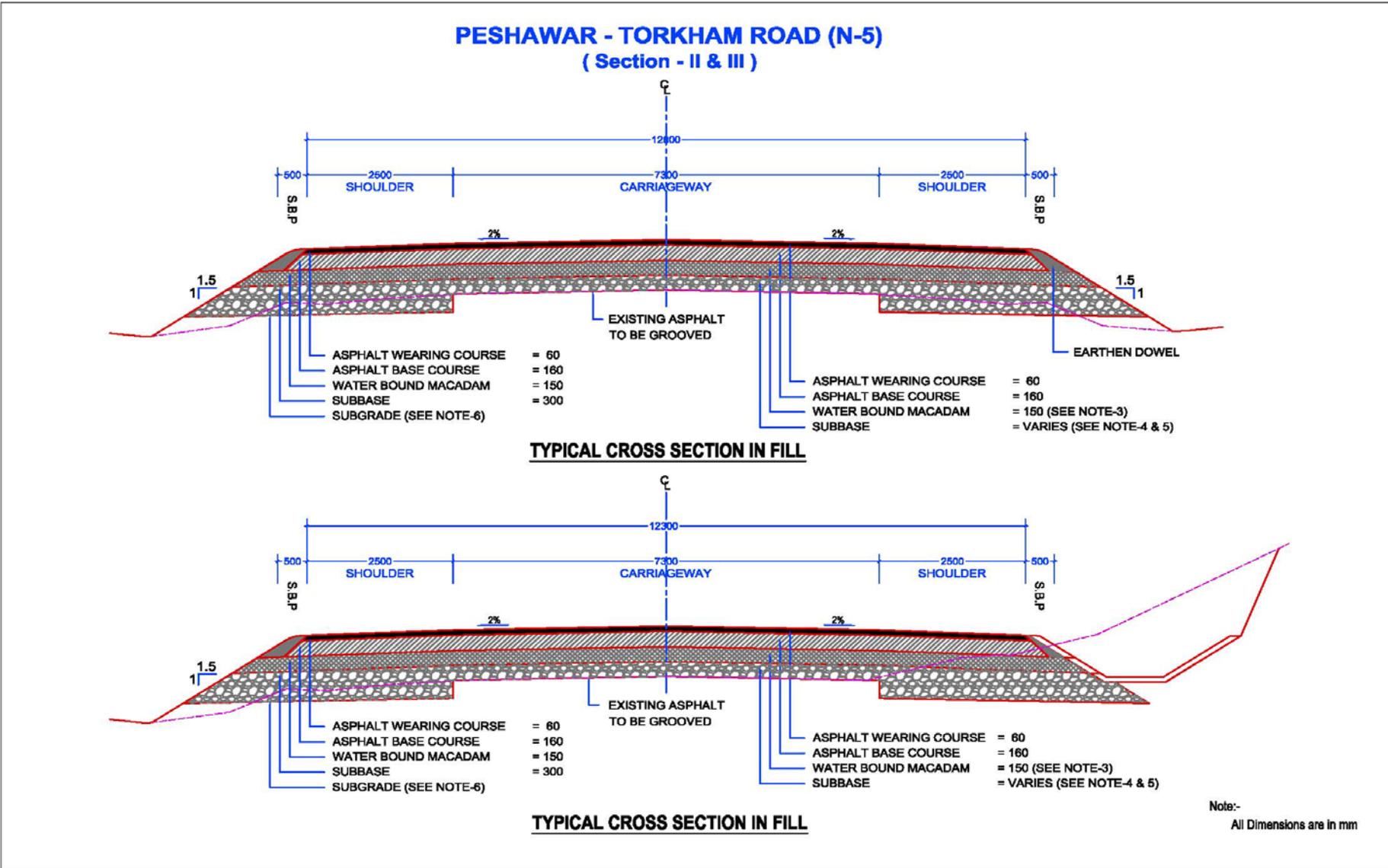


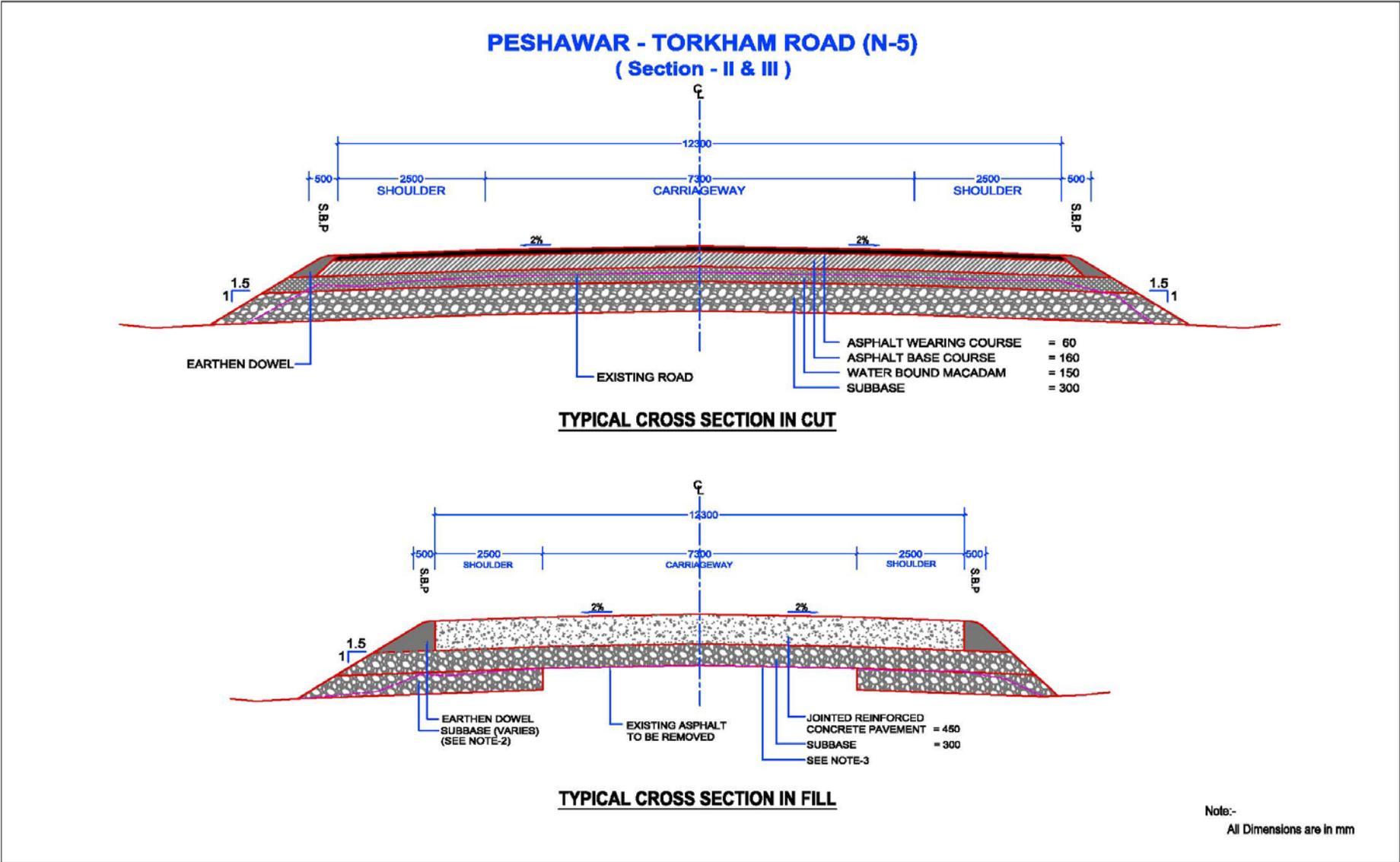




1.6 TYPICAL CROSS SECTIONS OF ROAD







M&E SERVICES & PROGRESS OF ACTIVITIES

2.1 M&E CONSULTANTS MAJOR ACTIVITIES DURING THE REPORTING MONTH – JANUARY 2014

- Key construction achievements made against section – I by the end of January 2014 are :-
 - Retaining Walls were taken from 92% to 93.5%
 - Culverts were taken from 89% to 100%
 - Roadside drains were taken from 48.74% to 64.05%.
- Detailed technical comments on proposed cost estimate & design / drawings for 04 bridges at KMs 18+570, 21+000, 26+875, 27+350 of the project shared with FWO/NESPAK during the reporting period.
- Milestones finalization for Bridge # 02 (KM: 9+560), #10 (KM: 23+750) & Multi-cell Culvert (KM: 11+190) of the project with FWO/NESPAK continued during the reporting period.
- M&E Consultants continued to monitor the Construction activities during the reporting month and conducted requisite material sampling & testing as per NHA's guidelines.
- Work continued to finalize the detailed design & ground survey from KM: 24+000 To 46+000.
- During the reporting month, the M&E consultants attended FDWP meeting at FATA Secretariat regarding PC-1 approval of section-IV.
- M&E consultants continued to liaise with relevant stakeholders about project and address environmental, planning and other concerns relating to the strengthening / improvement of the vital national traffic corridor.
- Joint site visit conducted on 19 Jan, 2014 in company of FWO/NESPAK for design validation of 05 bridges.
- M&E Consultants attended coordination meetings held in the office of CRE NESPAK in the reporting month.
- Actively participated in on-site discussions with FWO/NESPAK regarding ongoing construction activities.
- FWO was constantly pressed for demonstrating good environmental practice in conformity with the construction environmental management plan.
- Total percent time elapsed up to 31th January, 2014 is 58.74 %.

2.2 MATTERS REQUIRING ATTENTION

2.2.1 PROJECT COST ESTIMATES – ADDITIONAL COSTS

The PTR project was initially estimated to cost US \$ 67 million. So far design and cost estimates for about 50% of the road length have been shared with the M&E Consultants and USAID for the purpose of PIL processing. Based on these estimates, the projected cost for the entire 46 KM of road would apparently be significantly high. The first nine KM road was completed close to the estimated per kilometer cost as the road was passing in plain terrain. However, the next sections traverses mostly through difficult hilly terrain requiring increased number of cross drainage structures, considerably increased length of earth retaining structures and roadside drains, inclusion of loops, extensive roadway excavation in varying geological formations and construction of rigid pavement as against the flexible pavement. Conversion of causeways into bridges is another prime factor requiring additional costs.

The matters has been already discussed with USAID COR who has instructed FWO/NESPAK to finalize the overall project design at the earliest and share it with the M&E Consultants. Once the overall design is finalized only then the actual project cutoff cost could be established for necessary arrangement of funds or otherwise by USAID.

2.2.2 COMPLEXITY IN MAINTAINING TRAFFIC ON DIVERSIONS & REDUCING IMPACT TO TRAVELLING PUBLIC

Diversions have been provided at intervals b/w KM: 09+000 To 35+000. However, substandard condition of the diversion tracks including potholes, bumpy and dusty surface, diesel fumes of multi-axle trucks etc. made life miserable for the road commuters as well as adjacent population. Peak hour traffic congestion and frequency of occurrence regularly escalated. Any traffic accident on the corridor results in rapid deterioration of traffic movement and even complete blockage of diversions.

In order to ensure smooth traffic movement along the corridor, minimizing impact on traffic, keeping dust & noise disturbance to a minimum, a higher level of communication and liaison would be required throughout the work period to manage the expectations of stakeholders, road users and locals.

2.2.3 DELAY IN UTILITIES IDENTIFICATION / SHIFTING FROM CONSTRUCTION CORRIDOR

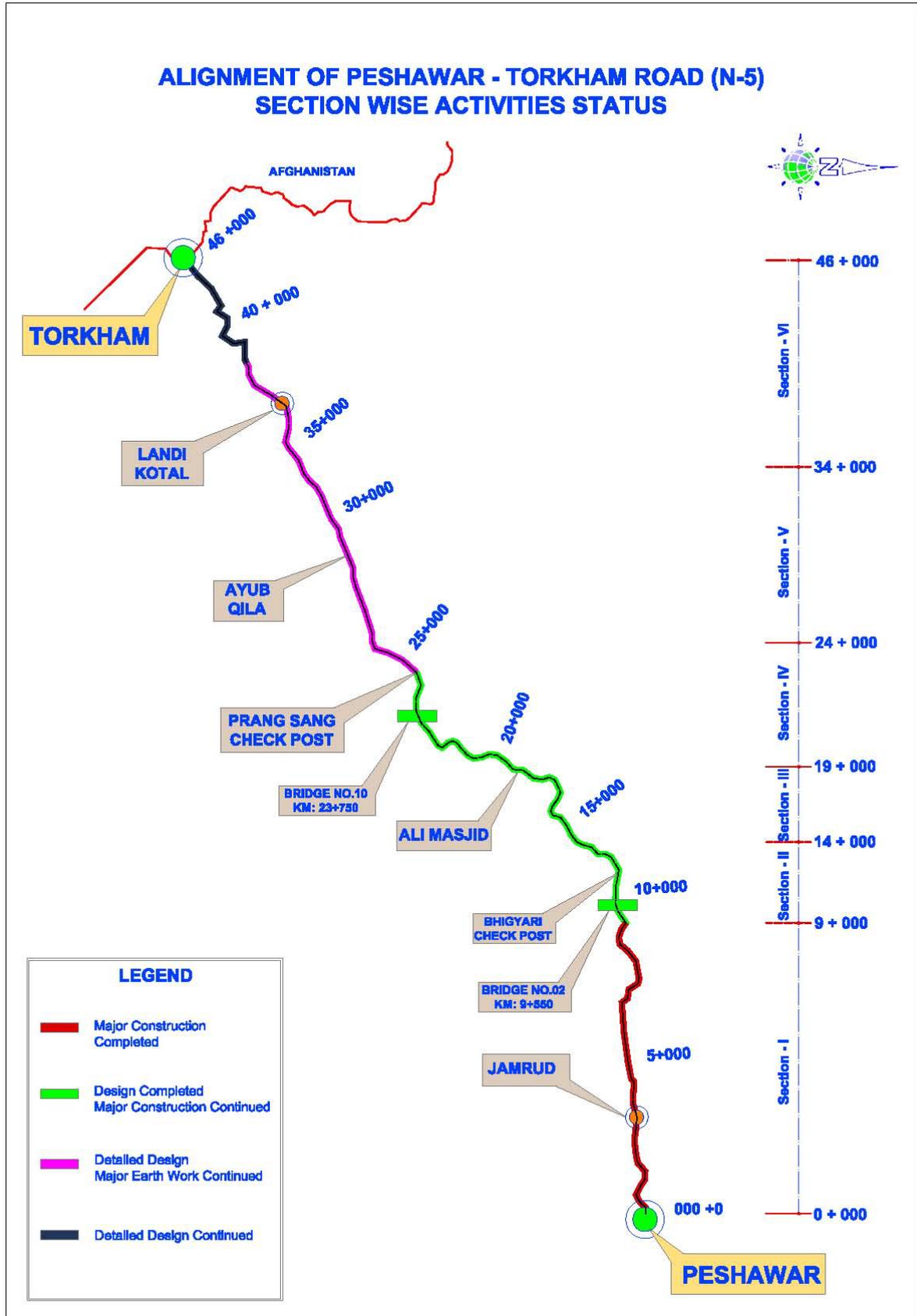
Since the Peshawar Torkham road project traverses through the rolling / hilly terrain of Khyber agency, proper records of the underground utilities like water supply, sewerage lines and telephone cables etc. is seldom available, and the utilities usually get identified during the construction activities. Similarly, shifting of overhead electrical lines (including poles) got delayed due to nonpayment of relevant dues by FWO and cumbersome procedures involved for clearances / approvals / permissions from the concerned departments.

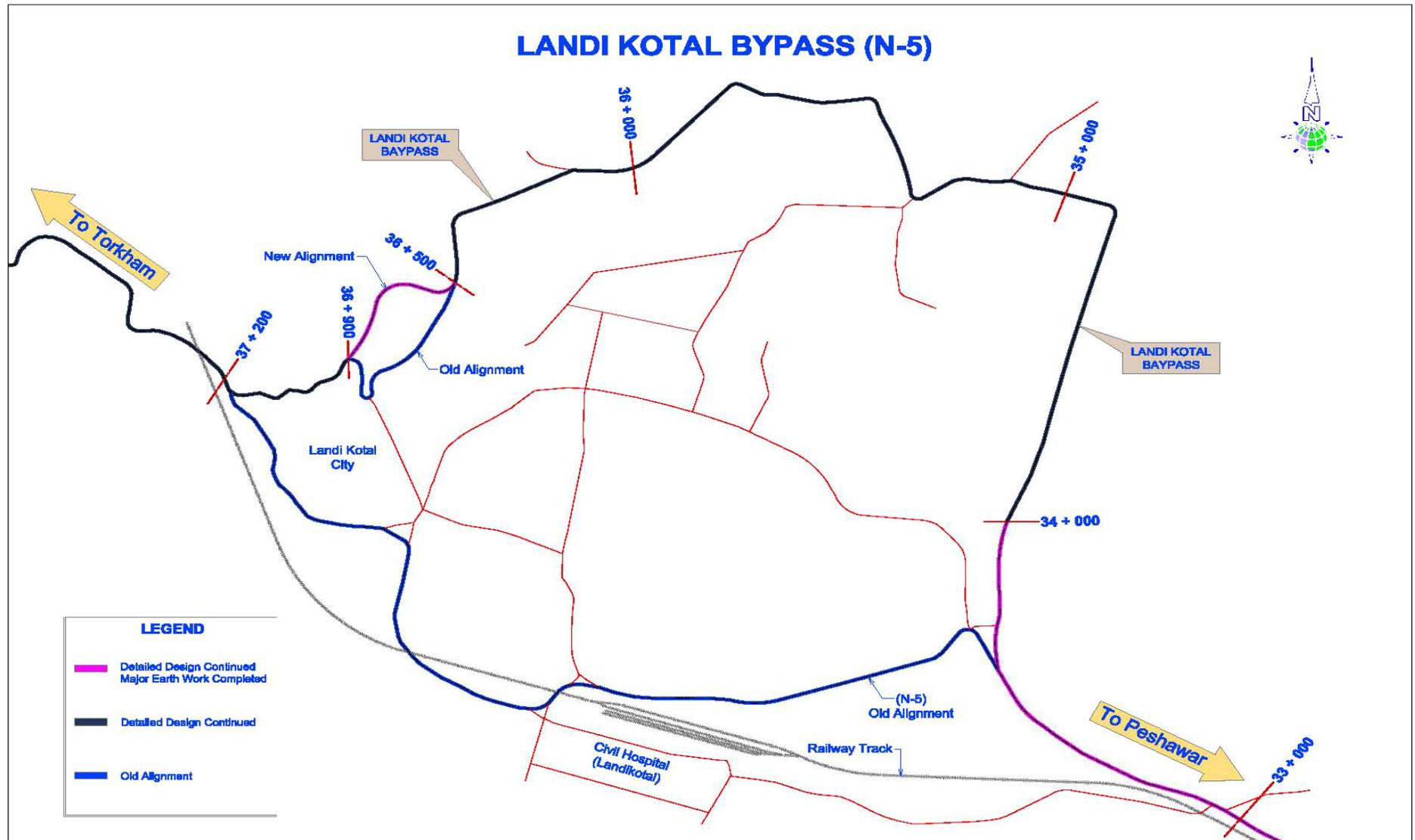
The cited encumbrances put a constraint on the contractor's capacity to undertake construction work in an un-interrupted and continuous manner. Being an EPC contractor, FWO is responsible for identification, coordination, payment and shifting of utilities lines from the construction zone.

2.2.4 ENVIRONMENTAL COMPLIANCE

FWO needs to focus more on environmental compliance measures due to inherited site specific conditions such as live traffic corridor, heavy traffic, hilly terrain, and residential and commercial areas along the road.

2.3 SECTION WISE ACTIVITIES STATUS



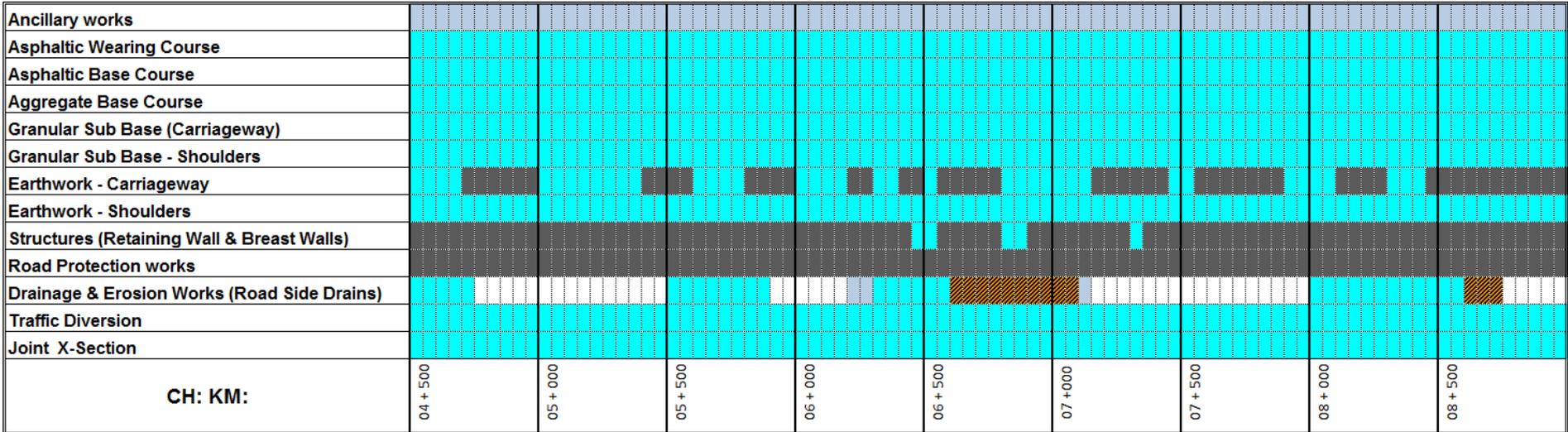
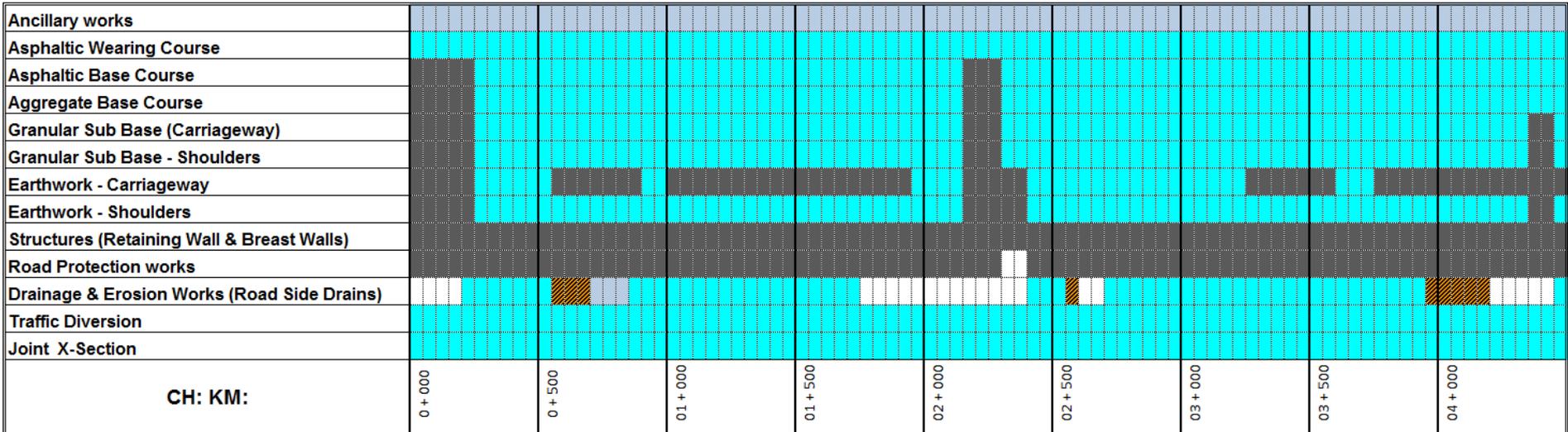


CIVIL WORKS PROGRESS STATUS

3.1 SECTION - I CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS MONTH			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %
1	EARTH WORK	KM	9	6,339.85	57,058.65	9.00	57,058.65	100.00	-	-	-	9.00	57,058.65	100.00
2	SUB BASE AND BASE COURSE													
i	GRANULAR SUB BASE	KM	9	111,763.61	1,005,872.49	9.00	1,005,872.49	100.00	-	-	-	9.00	1,005,872.49	100.00
ii	AGGREGATE BASE COURSE	KM	9	73,611.56	662,504.04	9.00	662,504.04	100.00	-	-	-	9.00	662,504.04	100.00
iii	ASPHALTIC BASE COURSE	KM	9	416,608.69	3,749,478.21	9.00	3,749,478.21	100.00	-	-	-	9.00	3,749,478.21	100.00
3	SURFACE COURSES AND PAVEMENT	KM	9	213,785.71	1,924,071.39	9.00	1,924,071.39	100.00	-	-	-	9.00	1,924,071.39	100.00
4a	STRUCTURES (RETAINING WALL/BREAST WALL)	JOB	1	38,812.31	38,812.31	0.92	35,707.33	92.00	0.02	582.18	1.50	0.94	36,289.51	93.50
4b	STRUCTURES (CULVERTS)													
I	WIDENING AND REPAIR OF EXISTING CULVERTS AT RD 1+290 & 5+692	NUMBER	2	10,657.55	21,315.10	-	-	-	-	-	-	-	-	-
II	CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)													
	1 x 2 x 1.5	NUMBER	7	19,268.30	134,878.10	7.00	134,878.10	100.00	-	-	-	7.00	134,878.10	100.00
	1 x 3 x 1.5	NUMBER	3	25,204.07	75,612.21	1.95	49,147.94	65.00	1.05	26,464.27	35.00	3.00	75,612.21	100.00
	2 x 3 x 1.5	NUMBER	2	40,950.75	81,901.50	2.00	81,901.50	100.00	-	-	-	2.00	81,901.50	100.00
	3 x 3 x 1.5	NUMBER	1	54,597.59	54,597.59	1.00	54,597.59	100.00	-	-	-	1.00	54,597.59	100.00
	5 x 3 x 1.5	NUMBER	1	75,007.57	75,007.57	1.00	75,007.57	100.00	-	-	-	1.00	75,007.57	100.00
5a	DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)													
i	DRAIN TYPE D-1 & D-2 (COVERED)	KM	5.5	249,002.78	1,369,515.29	2.40	597,606.67	43.64	1.08	267,677.99	19.55	3.48	865,284.66	63.18
ii	DRAIN TYPE D-1a & D-2a (UNCOVERED)	KM	3	110,128.52	330,385.56	1.95	214,750.61	65.00	-	-	-	1.95	214,750.61	65.00
iii	DRAIN TYPE D-3 (Converted to D-2 type)	KM	1.5	135,439.74	203,159.61	0.85	115,123.78	56.67	0.18	23,701.95	11.67	1.03	138,825.73	68.33
5b	ROAD PROTECTION WORKS (100 M)	JOB	1	11,047.54	11,047.54	-	-	-	-	-	-	-	-	-
6	ANCILLARY WORKS COMPLETE IN ALL RESPECT	JOB	1	54,375.49	54,375.49	0.47	25,556.48	47.00	-	-	-	0.47	25,556.48	47.00
7	DIVERSION	KM	9	12,978.72	116,808.48	9.00	116,808.48	100.00	-	-	-	9.00	116,808.48	100.00
8	PLANTATION OF TREES (450 Nos)	KM	9	1,297.87	11,680.83	-	-	-	-	-	-	-	-	-
	TOTAL PROJECT COST (SECTION-I)				9,978,082		8,900,071	89.20		318,426	3.19		9,218,497	92.39

3.2 SECTION - I PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



LEGEND

- WORKS COMPLETED IN JANUARY 2014
- WORKS COMPLETED IN PREVIOUS MONTHS
- PARTIAL COMPLETION
- SINGLE LANE TRAFFIC MAINTAINED
- ITEM NOT REQUIRED

3.3 SECTION - I CULVERTS PHYSICAL PROGRESS STATUS

RCC Railing	Deleted - Replaced with Pipe Culvert Extension				Deleted										
Roll Pointing															
RCC Slab Cast in situ															
Flooring/Cut-off wall/ Rip rap															
Back Filling															
Bed plate/Curtain wall															
Stone Masonry (Wing Walls)															
Stone Masonry (Abutments/ Pier)															
Lean Concrete															
Structural Excavation															
Dismantling of Existing Structure															
Size of Culvert (No. of Span*Width*Height)			1*2*1.5	1*2*1.5		1*3*1.5		1*2*1.5	1*3*1.5	1*2*1.5	3*3*1.5	2*3*1.5	5*3*1.5	1*2*1.5	1*2*1.5
Activity															
KM	1+230	2+611	3+081	4+480	4+590	5+202	5+354	5+905	6+050	6+191	6+501	6+648	6+883	7+384	

-  ACTIVITIES COMPLETED IN JANUARY 2014
-  ACTIVITIES COMPLETED IN PREVIOUS MONTHS
-  ACTIVITIES NOT REQUIRED

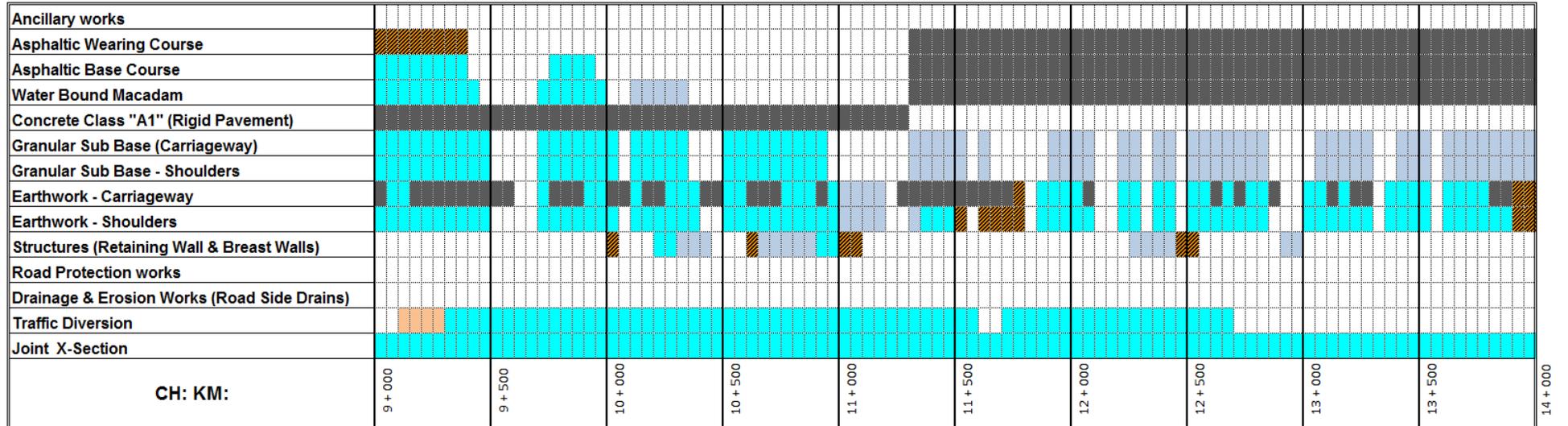
3.4 SECTION - II CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS MONTH			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %
1	EARTH WORK (INCLUDING EARTHEN DOWELS)	500 m	10	101,245	1,012,450	6.55	663,154.75	65.50	0.70	70,871.50	7.00	7.25	734,026.25	72.50
2	SUB BASE AND BASE COURSE													
a	GRANULAR SUB BASE	500 m	10	27,073	270,730	4.18	113,056.85	41.76	1.03	27,858.12	10.29	5.21	140,914.97	52.05
b	WATER BOUND MACADAM	500 m	4.6	28,702	132,029	1.40	40,182.74	30.43	-	-	-	1.40	40,182.74	30.43
c	ASPHALTIC BASE COURSE	500 m	4.6	221,168	1,017,373	1.20	265,401.65	26.09	-	-	-	1.20	265,401.65	26.09
3	SURFACE COURSES AND PAVEMENT													
a	ASPHALTIC CONCRETE FOR WEARING COURSE AND ALLIED ACTIVITIES	500 m	4.6	104,708	481,657	-	-	-	0.80	83,766.43	17.39	0.80	83,766.43	17.39
b	RIGID PAVEMENT (6.15 m Width Lane of 500 m)	500 m	10.8	262,510	2,835,108	-	-	-	-	-	-	-	-	-
4a	STRUCTURES (RETAINING WALL /BREAST WALL)													
4a - i	RETAINING WALL - 1975 M	100 m	19.75	70,864	1,399,564	3.00	212,592.00	15.19	3.50	248,024.00	17.72	6.50	460,616.00	32.91
4a - ii	BREAST WALL - 325 M	100 m	3.25	28,169	91,549	-	-	-	-	-	-	-	-	-
4b	STRUCTURES (CULVERTS)													
	CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)													
	1 x 2 x 2.5 (15 skew, Flexible Pavement)	No	2	33,373	66,746	1.40	46,722.36	70.00	0.17	5,673.43	8.50	1.57	52,395.78	78.50
	1 x 2 x 2.5 (22 m long, Flexible Pavement)	No	1	49,109	49,109	0.63	-	-	0.29	14,241.54	29.00	0.92	45,180.07	92.00
	1 x 2 x 3 (Flexible Pavement)	No	2	43,350	86,700	1.76	76,296.16	88.00	0.16	6,936.01	8.00	1.92	83,232.17	96.00
	1 x 2 x 3 (Rigid Pavement)	No	0	-	-	-	-	-	-	-	-	-	-	-
	1 x 2 x 3 (15° skew)	No	1	44,585	44,585	0.63	-	-	0.02	891.71	2.00	0.65	28,980.49	65.00
	1 x 2 x 3 (30° skew)	No	1	48,068	48,068	0.62	-	-	-	-	-	0.62	29,801.87	62.00

SECTION - II CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS QUARTER			PROGRESS IN THIS QUARTER			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %
	CONSTRUCTION OF NEW CULVERTS (REPLACEMENT OF OLD) (No. of Span x Span Width x Height)													
	1 x 2 x 2.5 (Rigid Pavement)	No	3	33,083	99,249	0.81	26,797.23	27.00	0.77	25,473.91	25.67	1.58	52,271.14	52.67
	1 x 2 x 2.5 (30° skew)(Flexible Pavement)	No	1	36,376	36,376	0.80	29,100.80	80.00	-	-	-	0.80	29,100.80	80.00
	1 x 3 x 4.0	No	1	76,130	76,130	0.87	66,233.10	87.00	-	-	-	0.87	66,233.10	87.00
	1 x 2 x 4 (22 m length)	No	1	89,408	89,408	0.01	894.08	1.00	0.49	43,541.70	48.70	0.50	44,435.78	49.70
	1 x 2 x 4.5 (22 m length)	No	1	105,875	105,875	0.88	93,170.00	88.00	0.06	6,352.50	6.00	0.94	99,522.50	94.00
	1 x 2 x 4.5 (15° skew)	No	1	83,564	83,564	0.20	16,712.80	20.00	0.36	30,083.04	36.00	0.56	46,795.84	56.00
	1 x 3 x 2.5 (15° skew)	No	1	38,000	38,000	0.27	10,260.00	27.00	0.60	22,800.00	60.00	0.87	33,060.00	87.00
	1 x 3 x 4.5 (15° skew)	No	1	88,589	88,589	0.02	1,771.77	2.00	0.17	15,060.07	17.00	0.19	16,831.84	19.00
	Service Ducts	No	23	2,666	61,318	19.00	50,654.00	82.61	-	-	-	19.00	50,654.00	82.61
5a	DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)													
i	DRAIN TYPE D-1 (COVERED) - (0.8 KM)	JOB	1	161,945	161,945	-	-	-	-	-	-	-	-	-
ii	DRAIN TYPE D-4 (0.875 KM)	JOB	1	232,586	232,586	-	-	-	-	-	-	-	-	-
iii	DRAIN TYPE D-3a (3.725 KM)	KM	3.725	34,924	130,092	-	-	-	-	-	-	-	-	-
5b	ROAD PROTECTION WORKS (75 M)	JOB	1	404,279	404,279	-	-	-	-	-	-	-	-	-
6	ANCILLARY WORKS COMPLETE IN ALL RESPECTS	JOB	1	70,050	70,050	-	-	-	-	-	-	-	-	-
7	DIVERSION	KM	5	30,579	152,895	-	-	-	1.00	30,579.00	20.00	1.00	30,579.00	20.00
8	MISCELLANEOUS (Relocation of utilities and plantatio	JOB	1	17,460	17,460	-	-	-	-	-	-	-	-	-
	TOTAL				9,383,484		1,713,000	18.26		632,153	6.74		2,433,982	25.94

3.5 SECTION - II PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



LEGEND



WORKS COMPLETED IN JANUARY 2014
 WORKS COMPLETED IN PREVIOUS MONTHS
 PARTIAL COMPLETION



SINGLE LANE TRAFFIC MAINTAINED
 ITEM NOT REQUIRED

#

3.6 SECTION - II CULVERTS PHYSICAL PROGRESS STATUS

RCC Railing	U/S side																	
	D/S side																	
Roll Pointing	Abt No1																	
	Abt No2																	
Flooring/Cut-off wall/ Riprap	B/W Abts																	
RCC Slab cast insitu																		
Bed plate/Curtain wall	Abt No1																	
	Abt No2																	
Back filling	Abt No1																	
	Abt No2																	
	B/W Abts																	
Stone Masonry (Wing Walls)	U/S side																	
	D/S side																	
Stone Masonry (Abutments/ Pier)	Abt No1																	
	Abt No2																	
Lean Concrete	Abt No1																	
	Abt No2																	
Structural Excavation	Abt No1																	
	Abt No2																	
Dismantling of Existing Structure																		
Pavement Type	Rigid/Flex	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid		Rigid	Rigid	Rigid
Construction Sequence (FW/HW)		FW	FW	FW	FW	FW	FW	FW	FW	HW	HW	FW	FW	FW	FW	FW	FW	FW
Size of Culvert (No. of Span*Width*Height)		1*2*3	1*2*2.5 (22M)	1*2*4.5 (22M)	1*3*4 (22M)	1*2*2.5	1*2*3	1*2*2.5	1*2*2.5	1*2*3	1*2*2.5	1*3*4.5	1*2*2.5	1*3*2.5	1*2*4.5	1*2*4	1*2*3	1*2*2.5
KM as per site		10+050	10+502	10+562	10+602	10+788	10+850	10+961	11+372	11+691	11+841	12+178	12+337	12+460	12+975	13+212	13+333	13+565
KM as per Drawing		10+025	10+500	10+571	10+615	10+790 (skew)	10+850	10+965 (skew)	11+375	11+690 (skew)	11+840	12+200 (skew)	12+336 (skew)	12+460 (skew)	12+975 (skew)	13+215	13+325 (skew)	13+650

 ACTIVITIES COMPLETED IN JANUARY 2014
  ACTIVITIES NOT REQUIRED

 ACTIVITIES COMPLETED IN PREVIOUS MONTHS
  ACTIVITIES IN PROGRESS

3.7 SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS MONTH			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %
1	EARTH WORK	500m	10	103,456.14	1,034,561.35	5.9	610,391.20	59	0.1	10,345.61	1.00	6	620,736.81	60.00
2	SUB BASE AND BASE COURSE													
a	GRANULAR SUB BASE	500m	11.80	39,501.71	466,120.20	4.1	161,957.02	34.75	0.8	31,601.37	6.78	4.9	193,558.39	41.53
b	WATER BOUND MACADAM	500m	4.70	27,756.26	130,454.41	1.6	44,410.01	34.04	0.6	16,653.75	12.77	2.2	61,063.77	46.81
c	ASPHALTIC BASE COURSE	500m	4.70	210,339.87	988,597.39	0.8	168,271.90	17.02	0.4	84,135.95	8.51	1.2	252,407.85	25.53
d	EARTHEN DOWEL	JOB	1.00	24,017.65	24,017.65	-	-	-	-	-	-	-	-	-
3	SURFACE COURSES AND PAVEMENT													
a	ASPHALTIC CONCRETE FOR WEARING COURSE AND ALLIED ACTIVITIES	500m	4.70	100,038.13	470,179.22	-	-	-	-	-	-	-	-	-
b	RIGID PAVEMENT (HALF PAVEMENT WIDTH)	500m	14.30	214,441.76	3,066,517.22	-	-	-	-	-	-	-	-	-
4a	STRUCTURES (RETAINING WALL /BREAST WALL)													
4a - i	RETAINING WALL (RW-2) - TOTAL L = 2780 M													
a	RETAINING WALL (RW-2) : H= 1.5 M ; L= 475 M	200M	2.38	18,528.73	44,005.74	-	-	-	0.5	9,264.37	21.05	0.5	9,264.37	21.05
b	RETAINING WALL (RW-2) : H= 2.0 M ; L= 100 M	JOB	1.00	13,847.26	13,847.26	-	-	-	-	-	-	-	-	-
c	RETAINING WALL (RW-2) : H= 2.5 M ; L= 1075 M	100M	10.75	18,862.43	202,771.13	-	-	-	-	-	-	-	-	-
d	RETAINING WALL (RW-2) : H= 3.0 M ; L= 150 M	JOB	1.00	37,501.23	37,501.23	-	-	-	0.67	25,125.82	67.00	0.67	25,125.82	67.00
e	RETAINING WALL (RW-2) : H= 4.0 M ; L= 105 M	JOB	1.00	43,778.74	43,778.74	-	-	-	-	-	-	-	-	-
f	RETAINING WALL (RW-2) : H= 6.0 M ; L= 600 M	100M	6.00	92,619.08	555,714.48	-	-	-	2	185,238.16	33.33	2	185,238.16	33.33
g	RETAINING WALL (RW-2) : H= 7.0 M ; L= 175 M	100M	1.75	123,325.48	215,819.60	-	-	-	-	-	-	-	-	-
h	RETAINING WALL (RW-2) : H= 8.0 M ; L= 100 M	100M	1.00	162,609.25	162,609.25	-	-	-	-	-	-	-	-	-
4a - ii	BREAST WALL - 225 M	100M	2.25	33,713.09	75,854.45	-	-	-	-	-	-	-	-	-

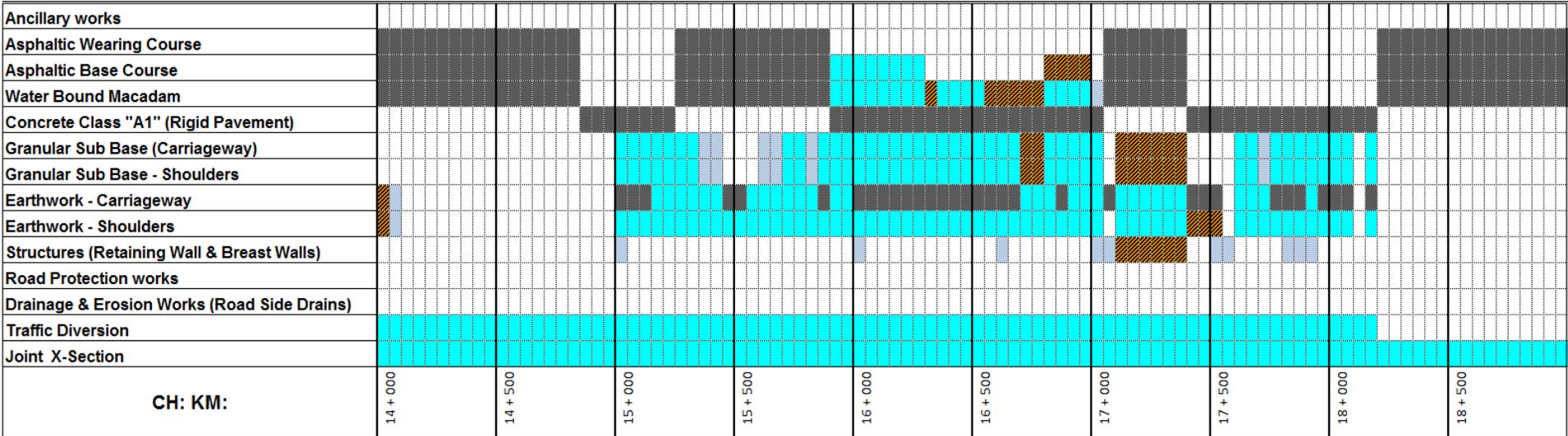
SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS MONTH			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRES S %
4b	STRUCTURES (CULVERTS)													
NS	CONSTRUCTION OF NEW CULVERTS (No. of Span x Span Width x Height)													
	1 x 2 x 2.5 (Flexible Pavement)	No	1	33,123.98	33,123.98	0.34	11,262.15	34.00	0.34	11,262.15	34.00	0.68	22,524.30	68.00
	1 x 2 x 3 (Flexible Pavement)	No	1	43,892.49	43,892.49	0.94	41,258.94	94.00	-	-	-	0.94	41,258.94	94.00
	1 x 2 x 4.5 (Flexible Pavement)	No	1	82,705.93	82,705.93	0.02	1,654.12	2.00	-	-	-	0.02	1,654.12	2.00
	1 x 2 x 3 (Loop-1 Rigid Pavement)	No	2	40,280.12	80,560.23	0.01	483.36	0.60	1.02	41,005.16	50.90	1.03	41,488.52	51.50
	2 x 2 x 3 (Loop-1 Rigid Pavement)	No	1	51,979.66	51,979.66	-	-	-	-	-	-	-	-	-
NS	CONSTRUCTION OF NEW CULVERTS(REPLACEMENT OF OLD) (No. of Span x Span Width x Height)													
	1 x 2 x 2	No	1	26,773.08	26,773.08	0.38	10,173.77	38.00	0.48	12,851.08	48.00	0.86	23,024.85	86.00
	1 x 2 x 2.5	No	2	33,301.15	66,602.29	1.48	49,285.70	74.00	0.18	5,994.21	9.00	1.66	55,279.90	83.00
	1 x 2 x 2.5 (Rigid Pavement)	No	2	33,495.68	66,991.36	0.71	23,781.93	35.50	0.51	17,082.80	25.50	1.22	40,864.73	61.00
	1 x 2 x 2.5(15° skew)	No	1	34,117.26	34,117.26	0.74	25,246.77	74.00	0.24	8,188.14	24.00	0.98	33,434.91	98.00
	1 x 2 x 2.5(30° skew)	No	1	36,831.41	36,831.41	0.96	35,358.16	96.00	-	-	-	0.96	35,358.16	96.00
	1 x 2 x 3 (15° skew)	No	1	45,125.51	45,125.51	0.78	35,197.90	78.00	0.20	9,025.10	20.00	0.98	44,223.00	98.00
	1 x 2 x 3 (30° skew)	No	1	48,651.25	48,651.25	0.09	4,378.61	9.00	-	-	-	0.4	19,460.50	40.00
	1 x 2 x 2.5 (Loop-1)	No	3	30,606.89	91,820.68	0.21	6,427.45	7.00	0.39	11,936.69	13.00	0.6	18,364.14	20.00
	2 x 2 x 2.5	No	1	39,552.36	39,552.36	-	-	-	-	-	-	-	-	-
	Service Ducts	No	6	2,699.38	16,196.30	-	-	-	-	-	-	-	-	-
5a	DRAINAGE & EROSION WORKS (ROAD SIDE DRAIN)													
i	DRAIN TYPE D-3a (7.0 KM)	500m	14	17,835.34	249,694.76	-	-	-	-	-	-	-	-	-
ii	DRAIN TYPE D-3b (0.225 KM)	JOB	1	16,451.91	16,451.91	-	-	-	-	-	-	-	-	-
5b	ROAD PROTECTION WORKS													
i	STONE PITCHING (100M)	JOB	1	5,364.48	5,364.48	-	-	-	-	-	-	-	-	-
ii	METAL GUARD RAIL (475M)	JOB	1	39,626.86	39,626.86	-	-	-	-	-	-	-	-	-
iii	BARRIER (150M)	JOB	1	45,339.50	45,339.50	-	-	-	-	-	-	-	-	-

SECTION - III CUMULATIVE MILESTONE WISE PROGRESS STATUS

BILL NO	DESCRIPTION OF BILL	MILESTONE UNIT	NUMBER OF MILESTONES	AMOUNT AS PER MILESTONE (US \$)	TOTAL AMOUNT (US \$)	PROGRESS UPTO PREVIOUS MONTH			PROGRESS IN THIS MONTH			MILESTONE WISE COMULATIVE PROGRESS		
						MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %	MILESTONE ACHIEVED	AMOUNT (US \$)	PROGRESS %
6	ANCILLARY WORKS (TRAFFIC ROAD SIGNS, PAVEMENT MARKING / STUDS & KM POSTS)													
i	TRAFFIC SIGNS / KM POSTS	JOB	1	18,714.20	18,714.20	-	-	-	-	-	-	-	-	-
ii	PAVEMENT MARKINGS / STUDS	JOB	1	50,188.29	50,188.29	-	-	-	-	-	-	-	-	-
7	DIVERSION	KM	5	30,961.38	154,806.91	1	30,961.38	20.00	-	-	-	1	30,961.38	20.00
8	MISCELLANEOUS													
a	PLANTATION OF TREES (450 NOS)	JOB	1	10,414.29	10,414.29	-	-	-	-	-	-	-	-	-
b	SHIFTING OF UTILITIES (OPTIC FIBRE UPTO KM 19)					-	-	-	-	-	-	-	-	-
i	SHIFTING OF O.F.C FROM KM: 04 TO KM: 09	JOB	1	58,184.04	58,184.04	-	-	-	-	-	-	-	-	-
ii	SHIFTING OF O.F.C FROM KM: 09 TO KM: 14	JOB	1	58,184.04	58,184.04	-	-	-	-	-	-	-	-	-
iii	SHIFTING OF O.F.C FROM KM: 14 TO KM: 19	JOB	1	58,184.04	58,184.04	-	-	-	-	-	-	-	-	-
c	RELOCATION OF ELECTRIC POLES (UPTO KM 30)													
i	RELOCATION OF 45 NO OF ELECTRIC POLES (KM: 09 TO KM:26)	JOB	1	57,158.35	57,158.35	-	-	-	-	-	-	-	-	-
ii	RELOCATION OF 45 NO OF ELECTRIC POLES (KM: 26 TO KM:32+325)	JOB	1	57,158.35	57,158.35	-	-	-	-	-	-	-	-	-
iii	RELOCATION OF 45 NO OF ELECTRIC POLES (KM:32+325 TO KM: 35+010)	JOB	1	57,158.35	57,158.35	-	-	-	-	-	-	-	-	-
d	RELOCATION OF FC CHECK POSTS & RELOCATION OF SHOP AT KM 14+100													
i	RELOCATION OF FC CHECK POSTS BLOCK - 1 (454 SQ-M)	JOB	1	79,852.11	79,852.11	-	-	-	-	-	-	-	-	-
ii	RELOCATION OF FC CHECK POSTS BLOCK - 2 (298 SQ-M)	JOB	1	52,413.94	52,413.94	-	-	-	-	-	-	-	-	-
iii	RELOCATION OF FC CHECK POSTS BLOCK - 3 (298 SQ-M)	JOB	1	52,413.94	52,413.94	-	-	-	-	-	-	-	-	-
iv	RELOCATION OF SHOP AT KM 14+100 (20 SQ-M)	JOB	1	3,517.71	3,517.71	-	-	-	-	-	-	-	-	-
	TOTAL				9,422,099		1,260,500	13.38		479,710	5.09		1,755,293	18.63

3.8 SECTION - III PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS



LEGEND

- WORKS COMPLETED IN JANUARY 2014
- WORKS COMPLETED IN PREVIOUS MONTHS
- PARTIAL COMPLETION
- SINGLE LANE TRAFFIC MAINTAINED
- ITEM NOT REQUIRED

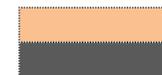
3.9 SECTION - III (LOOP NO. 1) PAVEMENT CONSTRUCTION PHYSICAL PROGRESS STATUS

Ancillary works			
Asphaltic Wearing Course			
Asphaltic Base Course			
Water Bound Macadam			
Concrete Class "A1" (Rigid Pavement)			
Granular Sub Base (Carriageway)			
Granular Sub Base - Shoulders			
Earthwork - Carriageway			
Earthwork - Shoulders			
Structures (Retaining Wall & Breast Walls)			
Road Protection works			
Drainage & Erosion Works (Road Side Drains)			
Traffic Diversion			
Joint X-Section			
CH: KM:	0 + 000	0 + 500	0 + 922

LEGEND



WORKS COMPLETED IN JANUARY 2014
 WORKS COMPLETED IN PREVIOUS MONTHS
 PARTIAL COMPLETION



SINGLE LANE TRAFFIC MAINTAINED
 ITEM NOT REQUIRED

3.10 SECTION - III CULVERTS PHYSICAL PROGRESS STATUS

RCC Railing	U/S side D/S side																						
Roll Pointing	Abt No1 Abt No2																						
Flooring/Cut-off wall/ Riprap	B/W Abts																						
RCC Slab/Precast Pannels																							
Bed plate/Curtain wall	Abt No1 Abt No2																						
Back filling	Abt No1 Abt No2 B/W Abts																						
Stone Masonry (Wing Walls)	U/S side D/S side																						
Stone Masonry (Abutments/ Pier)	Abt No1 Abt No2																						
Lean Concrete	Abt No1 Abt No2																						
Structural Excavation	Abt No1 Abt No2																						
Dismantling of Existing Structure																							
Pavement Type	Rigid/ Flex	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid	Rigid		Rigid	Rigid	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	Flexible	
Construction Sequence(FW / HW)		FW	FW	FW	FW	FW	FW	FW	HW RHS	FW	FW	FW	FW	FW	FW	HW LHS	HW RHS	FW	FW	HW LHS	HW RHS	HW LHS	HW RHS
Size of Culvert (No. of Span*Width*Height)		2*2*2.5	2*2*3	1*2*2.5	1*2*3	1*2*2.5	1*2*3	1*2*2.5	1*2*2	1*2*2.5	1*2*2.5	1*2*2.5	1*2*3	1*2*2.5	1*2*2.5	1*2*2.5	1*2*4.5	1*2*3	1*2*3			1*2*2.5	
KM as per site						14+333	14+433	14+600	15+139	15+647	15+795	16+316	16+618	16+740	17+010	17+435	17+562	17+666	17+901			18+146	
KM as in Drawing		14+250	14+250 (Loop-1)	14+300	14+300 (Loop-1)	14+431	14+431 (Loop-1)	14+600	15+138	15+640	15+795	16+313 (Skew)	16+625	16+750	16+996	17+400	17+561	17+665	17+909 (Skew)			18+142	



ACTIVITIES COMPLETED IN JANUARY 2014



ACTIVITIES NOT REQUIRED



ACTIVITIES COMPLETED IN PREVIOUS MONTHS



ACTIVITIES IN PROGRESS

3.11 BRIDGE NO. 2 PHYSICAL PROGRESS STATUS

BRIDGES	DESCRIPTION	TOTAL	COMPLETED	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	REMARKS
KM: 09+560														
BRIDGE NO: 02	Piles	36	34											
	Pile Caps	4	1											
	Abutments/ Piers	4												
	Transom	4												
	Girder Casting	15	10											
	Girder Prestressing	15												
	Girder Launching	15												
	Deck Slab / Barrier	3												
	Expansion Joint	4												
	Approach Slab	2												



WORKS COMPLETED IN JANUARY 2014
WORKS COMPLETED IN PREVIOUS MONTHS

3.12 BRIDGE NO. 10 PHYSICAL PROGRESS STATUS

BRIDGES	DESCRIPTION	TOTAL	COMPLETED	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	REMARKS	
KM: 23+850															
BRIDGE NO: 10	Piles	30	3												
	Pile Caps	3													
	Abutments/ Piers	3													
	Transom	3													
	Girder Casting	10													
	Girder Prestressing	10													
	Girder Launching	10													
	Deck Slab / Barrier	2													
	Expansion Joint	3													
	Approach Slab	2													



WORKS COMPLETED IN JANUARY 2014
WORKS COMPLETED IN PREVIOUS MONTHS

QUALITY TEST REPORTS

4.1 EMBANKMENT FORMATION FIELD DENSITY TESTS REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compaction	Required Compaction	Remarks
1	32+375 ~ 32+400 H/W	Zone B 2nd Layer	32+385 L/S	2.285	6.2	2.297	5.3	95.2	93	Pass
2	31+475 ~ 31+500 H/W	Zone C 3rd Layer	31+497 L/s	2.285	6.2	2.285	4.8	97.4	90	Pass
3	31+425 ~ 31+450 H/W	Zone B	31+435 R/S	2.222	7.9	2.236	5.9	94.4	93	Pass
4	31+500 ~ 31+575 H/W	Zone C	31+540 L/S	2.222	7.9	2.240	6.3	92.7	90	Pass
5	31+525 ~ 31+550 H/W	Zone C 9th Layer	31+519 R/S	2.222	7.9	2.228	6.1	93.1	90	Pass
6	31+500 ~ 31+525 H/W	Zone C	31+519 R/S	2.222	7.9	2.240	5.7	94.4	90	Pass
7	31+450 ~ 31+500 H/W	Zone C	31+490 R/S	2.222	7.9	2.225	5.6	95.9	90	Pass
8	31+450 ~ 31+475 H/W	Zone B	31+460 R/S	2.222	7.9	2.239	6.4	94.9	93	Pass
9	31+500 ~ 31+575 F/W	Zone C 11th Layer	31+525 R/S	2.279	6.5	2.291	5.6	96.9	90	Pass

4.2 SUB-GRADE FIELD DENSITY TESTS REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compaction	Required Compaction	Remarks
1	30+400 ~ 30+450 W/P	Sub Grade 1st	30+430 R/S	2.222	7.9	2.252	5.7	95.6	95	Pass
2	30+450 ~ 30+500 H/W	Sub Grade 1st	30+470 R/S	2.222	7.9	2.240	5.6	95.3	95	Pass
3	30+400 ~ 30+450 H/W	Sub Grade 1st	30+425 L/S	2.222	7.9	2.240	5.4	98.5	95	Pass
4	30+400 ~ 30+450 H/W	Sub Grade 2nd	30+425 L/S	2.383	5.1	2.380	4.7	95.7	95	Pass
5	26+500 ~ 26+550 H/W	Sub Grade 1st	26+535 R/S	2.383	5.1	2.371	4.6	96.3	95	Pass
6	32+300 ~ 32+350 H/W	Sub Grade 2nd	32+335 R/S	2.383	5.1	2.368	4.7	95.1	95	Pass
7	32+300 ~ 32+350 H/W	Sub Grade 2nd	32+335	2.285	6.2	2.306	4.8	97.5	95	Pass
8	26+475 ~ 26+525 H/W	Sub Grade 2nd	26+488 L/S	2.325	5.1	2.334	4.4	96	95	Pass
9	26+525 ~ 26+575 H/W	Sub Grade 1st	26+555 L/S	2.325	5.1	2.325	4.5	96.6	95	Pass
10	26+625 ~ 26+725 W/P	Sub Grade 2nd	26+680 L/S	2.383	5.1	2.380	4.1	95.4	95	Pass

4.3 SUBBASE FIELD DENSITY REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compaction	Required Compaction	Remarks
1	12+525 ~ 12+725 H/W	Sube Base 1st	12+590 L/S	2.356	5.6	2.356	5.1	98.2	98	Pass
2			12+670 L/S			2.362	5	99.3	98	Pass
3	30+400 ~ 30+500 H/W	Sub Base 1st	30+470 R/S	2.383	5.1	2.395	4.1	98.4	98	Pass
4	26+475 ~ 26+575 H/W	Sub Base 1st	26+505 R/S	2.406	4.8	2.394	4.1	98.5	98	Pass
5	13+700 ~ 13+800 H/W	Sub Base 1st	13+750 L/S	2.335	5.2	2.323	4	99	98	Pass
6	13+600 ~ 13+700	Sub Base 1st	13+640 L/S	2.335	5.2	2.332	4.1	98.8	98	Pass

4.4 WATER BOUND MACADAM FIELD DENSITY TESTS REPORT

S.No	Location (KM)	Description	Station (KM)	MMD (g/cc)	OMC (%)	Adj.MDD (g/cc)	M.C (%)	Achieved Compaction	Required Compaction	Remarks
1	16+287 ~ 16+375 F/W	WBM	16+330 L/S	2.316	5.0	2.257	3.5	100.2	100	Pass
2	16+425 ~ 16+525 F/W	WBM	16+440 L/S	2.316	5.0	2.310	3.6	100.7	100	Pass
3	16+525 ~ 16+600 F/W	WBM	16+580 L/S	2.316	5.0	2.310	3.6	96.7	100	Note 01
4	16+525 ~ 16+600 F/W	WBM	16+570 R/S	2.316	5.0	2.310	2.9	100.8	100	Pass

Note 01: Subsequent layers placement and compaction postponed until previous layer properly compacted/retested and accepted

4.5 ASPHALTIC BASE COURSE QUALITY TESTS REPORT

Specific Gravity A.C (Gb) 1.030									Combined Specific Gravity of Aggregate (Gsb) 2.665							
Paving Date	% A.C By Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. (Gmb)	Maximum Sp.Gravity (G _{mm})	% Air Voids (V _a)	VMA (%)	VFA (%)	Stability (Kg)	Loss of Stability (%)	Flow (0.01") (0.25mm)
		2"	1½"	¾"	#4	#8	#50	#200								
16-Jan-14	3.6	100	100	69.8	33	24.2	8.4	4.2	2.367	2.537	6.5	14.18	54.3	1304	17.2	10.8
JMF LIMITS	3.1 ~ 3.7	100	93~100	59~73	24 ~ 38	19 ~ 27	3.8~11.8	3.7~5.7	-	-	4 ~ 8	13 % Min	55 ~ 75	1000 Kg Min	25% Max	8 ~ 14 at (0.01")

4.6 ASPHALTIC WEARING COURSE QUALITY TESTS REPORT

Specific Gravity A.C (Gb) 1.030									Combined Specific Gravity of Aggregate (Gsb) 2.665							
Paving Date	% A.C By Wt of Mix Pb	Sieves analysis							Bulk Sp. Gr. (Gmb)	Maximum Sp.Gravity (G _{mm})	% Air Voids (V _a)	VMA (%)	VFA (%)	Stability (Kg)	Loss of Stability (%)	Flow (0.01") (0.25mm)
		1"	¾"	3/8"	#4	#8	#50	#200								
26-Jan-14	4.09	100	91.4	61.9	38.2	26.3	8.7	3.6	2.352	2.521	6.7	15.07	55.5	1240	15.9	10.7
28/Jan/2014	3.98	100	90.5	61.6	40.3	26.9	8.4	4	2.377	2.505	5.1	14.07	63.7	1402	16.4	10.3
JMF LIMITS	3.6 ~ 4.2	100	85 ~ 99	59~73	38 ~ 46	24 ~ 32	6 ~ 14	3.7~5.7	-	-	4 ~ 8	13 % Min	55 ~ 75	1000 Kg Min	20%	8 ~ 14 at (0.01")

4.7 ASPHALTIC BASE COURSE LAYER CORES COMPACTION REPORT

S.No	Core No.	Testing Date	Covered Area	Station (KM)	Offset from C/L	Wt. in air (g)	Wt. in Water(g)	SSD. WT (g)	Volume (cc)	Density (g/cc)	Lab.Density (GMB)	Achieved Compaction	Required Compaction	Remarks
1	C-1	28-Jan-14	16+775~16+875	16+800	1.0m L/S	1624	939.8	1631	691.2	2.350	2.373	99.0	97	OK
2	C-2			16+845	0.5m R/S	1335	782.4	1347	564.6	2.365	2.373	99.6	97	OK
3	C-3		16+875~ 16+975	16+890	5.0m L/S	1425	828.2	1430	601.8	2.368	2.373	99.8	97	OK
4	C-4			16+960	2.3m R/S	1315	767.9	1324	556.1	2.365	2.373	99.6	97	OK

4.8 ASPHALTIC BASE COURSE CORES THICKNESS REPORT

S.No	Core No.	Testing Date	Covered Area	Station (KM)	Offset from C/L	Cores Thickness (cm)				Average Thickness (cm)	Required Thickness (cm)	Remarks
						1	2	3	4			
1	T-1	27-Jan-14	16+775 ~ 16+875	16+800	4.8m L/S	8.8	8.7	9.2	9.2	9.0	8.0	
2	T-2			16+845	2.0m R/S	9	9.3	8.7	8.6	8.9	8.0	
3	T-3		16+875 ~ 16+975	16+890	2.1m L/S	8.2	7.8	7.9	7.8	7.9	8.0	
4	T-4			16+960	4.5m R/S	8.5	8.5	8.4	8.1	8.4	8.0	

4.9 SUBBASE MATERIAL QUALITY TESTS REPORT

S.No	Location (KM)	Description	Sieve Analysis							MDD (g/cc)	OMC %	L.A %	Sand Equivalent	CBR% at		Specific gravity	Plastic Index	Remarks
			2"	1"	3/8"	#4	#10	#40	#200					0.1"	0.2"			
1	11+450 ~ 12+000	Sub Base	100	80.3	53.2	36.9	24.3	12.9	8.1	2.335	5.2	28.6	43	57	76	2.669	3.3	
2	26+000 ~ 27+000	Sub Base	97.3	71	47.6	31	23.2	13.6	7.6	2.383	5.1	33.6	20	62	92	2.754	4.9	Note 02
3	21+500 ~ 22+000	Sub Base	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	Note 02
4	27+400 ~ 27+600	Sub Base	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-	Note 02
5	23+000 ~ 24+000	Sub Base	92.4	73.5	50.1	35.2	26	14.6	8.4	2.383	5.2	29.7	15.4	67	90	2.729	5.8	Note 02
6	29+000 ~ 30+000	Sub Base	100	80.1	53.4	36.9	27.1	15.9	10.7	2.346	5.3	-	18.4	39	54	2.704	-	Note 02
7	27+000 ~ 28+000	Sub Base	100	75.1	46.9	37	27.3	16.1	9.1	2.392	5.6	-	-	-	-	2.726	-	
Specification Limits for Sub Base			100	55~85	40~70	30~60	20~50	10~30	5~15	-	-	50% Max	25% Min	50% Min	-	6 Max		
Total Nos.of Tests			5							5	5	3	6	4	4	5	3	

Note 02: The Sand Equivalent of Sub base material at KM: 24+500 (Borrow) is less than the required minimum limit. The results have been shared with NESPAK & FWO and advised to improve the quarry / crushing operations.

4.10 EARTHWORK QUALITY TESTS REPORT

S.No	Location (KM)	Description	Sieve Analysis							MDD (g/cc)	OMC %	L.A %	Sand Equivalent	CBR% at		Specific gravity	Plastic Index	Remarks
			2"	1"	3/8"	#4	#10	#40	#200					0.1"	0.2"			
1	32+000 ~ 33+000	Earthfill & Sub Grade	100	92.5	74.1	59.1	40.1	23.5	18.5	2.222	7.9	-	-	32	43	2.681	5.64	
2	10+100 ~ 10+500	Backfill	-	-	-	-	-	-	-	2.230	7.4	-	-	-	-	-	-	
Specification Limits			-	-	-	-	-	-	-	-	-	-	-	30% Min		-	10 Max	
Total Nos.of Tests			1							2	2			1	1	1		

4.11 WATER BOUND MACADAM QUALITY TESTS REPORT

S.No	Location (KM)	Station	Sieve Analysis					MDD (g/cc)	OMC %	L.A (%)	Flakiness Index	Elongation (%)	Soundness (%)	Specific gravity	Remarks
			3"	2½"	2"	1½"	3/4"								
1	16+400 ~ 16+550 F/W	16+500	98.4	89.8	60.8	21.9	0.7	-	-	-	-	-	-	-	
2	16+550 ~ 17+600 F/W	16+575	100	77.9	40	10.4	1.5	-	-	-	-	-	-	-	
Specification Limits for Sub Base			100	90~100	25~75	0~15	0~5	-	-	45% Max	15% Max	15% Max	12% Max	-	
Total Nos.of Tests			2								-	-	-		

4.12 AGGREGATE QUALITY TESTS FOR CONCRETE REPORT

S.No	Location	Description	Agg. Size	Sieve Analysis													FM	L.A %	Sand Equivalent	Specific Gravity	Soundness	Remarks		
				2"	1½"	1"	¾"	½"	3/8"	#4	#8	#16	#30	#50	#100	#200								
1	Stock Pile	For "A-3" Concrete	38mm Agg	100	100	49.1	8.5	0.7	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-		
			25mm Agg	-	-	100	88.9	12.3	0.9	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			19mm Agg	-	-	-	100.0	99.1	70.4	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Combined Grading		50,20 & 30 %	100	100	74.6	52.0	32.5	21.6	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Specification Limits			100	95~100	-	35~70	-	10~30	0~5	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	Stock Pile	"A-3" Con.	Sand	-	-	-	-	-	100	93.9	82.3	64.8	43.9	21.9	7.7	3.1	2.9	-	-	-	-	Natural Sand		
	Specification Limits			-	-	-	-	-	100	95~100	-	45~80	-	10~30	2~10	0~3	2.3~3.1	-	-	-	-	-		
2	Stock Pile	For "D-1" Concrete	25mm Agg	-	-	100.0	88.9	12.3	0.9	0.1	-	-	-	-	-	-	-	-	-	-	-	-		
			19mm Agg	-	-	-	100.0	99.1	70.1	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	
			Combined Grading		55 & 45 %	-	100	100.0	93.9	51.4	32.2	2.2	-	-	-	-	-	-	-	-	-	-	-	-
	Specification Limits			-	100	95~100		25~60		0~5	-	-	-	-	-	-	-	-	-	-	-	-	-	
	2	Stock Pile	"D-1" Con.	Sand	-	-	-	-	-	100	93.9	82.3	64.8	43.9	21.9	7.7	3.1	2.9	-	-	-	-	Natural Sand	
Specification Limits			-	-	-	-	-	100	95~100	-	45~80	-	10~30	2~10	0~3	2.3~3.1	-	-	-	-	-			

4.13 SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm ²)	Load in Kg	Strength (Kg/cm ²)			Remarks
									Achieved	Average	Required	
Concrete Class "A-1" Culvert Top Slab KM: 10+602	25/Dec/2013	1/Jan/2014	7 Days	308	30.48	15.24	182.4	31407	172.2	170.9	158	
				312	30.48			31815	174.4			
				297	30.48			30285	166.0			
Concrete Class "A-3" Bridge No.1 Pile No.7 Pier No.2	26/Dec/2013	2/Jan/2014	7 Days	447	30.48	15.24	182.4	45581	249.9	245.0	210	
				445	30.48			45377	248.8			
				423	30.48			43133	236.5			
Concrete Class "A-3" Bridge No.1 Pile No.3 Abutment No.1	5/Dec/2013	2/Jan/2014	28 Days	509	30.48	15.24	182.4	51903	284.6	282.1	280	
				516	30.48			52617	288.5			
				489	30.48			49863	273.4			
Concrete Class "D-1" Bridge No.1 Girder # 4	27/Dec/2013	3/Jan/2014	7 Days	485	30.48	15.24	182.4	49455	271.1	288.1	262	
				530	30.48			54044	296.3			
				531	30.48			54146	296.9			
Concrete Class "A-1" Culvert Top Slab KM: 16+318	29/Dec/2013	5/Jan/2013	7 Days	376	30.48	15.24	182.4	38341	210.2	205.7	158	
				362	30.48			36913	202.4			
				366	30.48			37321	204.6			
Concrete Class "A-3" Bridge No.1 Pile No.6 Abutmenr No.2	30/Dec/2013	6/Jan/2014	7 Days	355	30.48	15.24	182.4	36199	198.5	203.1	210	
				360	30.48			36709	201.3			
				375	30.48			38239	209.6			
Concrete Class "A-3" Bridge No.1 Pile No.9 Abutmenr No.1	31/Dec/2013	7/Jan/2014	7 Days	337	30.48	15.24	182.4	34364	188.4	192.3	210	
				346	30.48			35282	193.4			
				349	30.48			35588	195.1			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm ²)	Load in Kg	Strength (Kg/cm ²)			Remarks
									Achieved	Average	Required	
Concrete Class "A-3" Bridge No.1 Pile No.3 Pier No.2	10/Dec/2013	7/Jan/2014	28 Days	501	30.48	15.24	182.4	51087	280.1	284.6	280	
				512	30.48			52209	286.2			
				514	30.48			52413	287.3			
Concrete Class "A-3" Multicell Culvert KM: 11+190	1/Jan/2014	8/Jan/2014	7 Days	407	30.48	15.24	182.4	41502	227.5	227.3	210	
				410	30.48			41808	229.2			
				403	30.48			41094	225.3			
Concrete Class "D-1" Bridge No.1 Girder # 1	12/Dec/2013	9/Jan/2014	28 Days	628	30.48	15.24	182.4	64037	351.1	354.8	350	
				635	30.48			64751	355.0			
				641	30.48			65363	358.3			
Concrete Class "D-1" Bridge No.1 Girder # 5	2/Jan/2014	9/Jan/2014	7 Days	472	30.48	15.24	182.4	48130	263.9	269.3	262	
				483	30.48			49252	270.0			
				490	30.48			49965	273.9			
Concrete Class "A-3" Bridge No.1 Pile No.2 Pier No.1	13/Dec/2013	10/Jan/2014	28 Days	512	30.48	15.24	182.4	52209	286.2	289.0	280	
				515	30.48			52515	287.9			
				524	30.48			53432	292.9			
Concrete Class "A-3" Bridge No.1 Pile No.3 Pier No.1	4/Jan/2014	11/Jan/2014	7 Days	350	30.48	15.24	182.4	35690	195.7	196.6	210	
				348	30.48			35486	194.5			
				357	30.48			36403	199.6			
Concrete Class "A-1" Culvert Top Slab KM: 10+572	4/Jan/2014	11/Jan/2014	7 Days	316	30.48	15.24	182.4	32223	176.7	175.2	158	
				307	30.48			31305	171.6			
				317	30.48			32324	177.2			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm ²)	Load in Kg	Strength (Kg/cm ²)			Remarks
									Achieved	Average	Required	
Concrete Class "A-3" Bridge No.10 (KM: 23+750) Pile No.7 Abutment #1	5/Jan/2014	12/Jan/2014	7 Days	400	30.48	15.24	182.4	40788	223.6	224.9	210	
				407	30.48			41502	227.5			
				400	30.48			40788	223.6			
Concrete Class "A-3" Bridge No.2 (9+560) Pile No.9 Abutment No.2	5/Jan/2014	12/Jan/2014	7 Days	374	30.48	15.24	182.4	38137	209.1	208.9	210	
				371	30.48			37831	207.4			
				376	30.48			38341	210.2			
Concrete Class "A-1" Culvert Top Slab KM: 10+050	16/Dec/2013	13/Jan/2014	28 Days	419	30.48	15.24	182.4	42725	234.2	229.6	210	
				413	30.48			42114	230.9			
				400	30.48			40788	223.6			
Concrete Class "D-1" Bridge No.2 (KM: 9+560) Girder # 6	6/Jan/2014	13/Jan/2014	7 Days	495	30.48	15.24	182.4	50475	276.7	262.9	262	
				456	30.48			46498	254.9			
				460	30.48			46906	257.2			
Concrete Class "D-1" Bridge No.2 (KM: 9+560) Girder # 2	17/Dec/2013	14/Jan/2014	28 Days	728	30.48	15.24	182.4	74234	407.0	400.6	350	
				710	30.48			72399	396.9			
				712	30.48			72603	398.0			
Concrete Class "A-3" Bridge No.2 (KM: 9+560) Pile No.3 Abutment No.2	7/Jan/2014	14/Jan/2014	7 Days	416	30.48	15.24	182.4	42420	232.6	243.2	158	
				453	30.48			46192	253.2			
				436	30.48			44459	243.7			
Concrete Class "D-1" Bridge No.2 Girder # 7 KM: 9+560	11/Jan/2014	18/Jan/2014	7 Days	516	30.48	15.24	182.4	52617	288.5	292.9	262	
				527	30.48			53738	294.6			
				529	30.48			53942	295.7			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm ²)	Load in Kg	Strength (Kg/cm ²)			Remarks
									Achieved	Average	Required	
Concrete Class "D-1" Bridge No.1 Girder # 3	22/Dec/2013	19/Jan/2014	28 Days	646	30.48	15.24	182.4	65873	361.1	368.0	350	
				648	30.48			66077	362.3			
				681	30.48			69442	380.7			
Concrete Class "A-3" Bridge No.2 (KM: 9+560) Pile No.10 Abutment #2	12/Jan/2014	19/Jan/2014	7 Days	438	30.48	15.24	182.4	44663	244.9	239.1	210	
				423	30.48			43133	236.5			
				422	30.48			43031	235.9			
Concrete Class "A-3" Bridge No.2 Pile No.6 Pier No.1	22/Dec/2013	19/Jan/2014	28 Days	594	30.48	15.24	182.4	60570	332.1	328.9	280	
				587	30.48			59856	328.2			
				584	30.48			59550	326.5			
Concrete Class "A-1" Culvert Top Slab KM: 10+602	25/Dec/2013	22/Jan/2014	28 Days	436	30.48	15.24	182.4	44459	243.7	244.1	210	
				443	30.48			45173	247.7			
				431	30.48			43949	240.9			
Concrete Class "A-3" Bridge No.1 Pile No.7 Pier No.2	26/Dec/2013	23/Jan/2014	28 Days	541	30.48	15.24	182.4	55166	302.4	307.5	280	
				552	30.48			56287	308.6			
				557	30.48			56797	311.4			
Concrete Class "D-1" Bridge No.2 (KM: 9+560) Girder # 8	16/Jan/2014	23/Jan/2014	7 Days	500	30.48	15.24	182.4	50985	279.5	271.5	262	
				477	30.48			48640	266.7			
				480	30.48			48946	268.3			
Concrete Class "A-1" Culvert Top Slab KM: 10+500	16/Jan/2014	23/Jan/2013	7 Days	336	30.48	15.24	182.4	34262	187.8	191.2	158	
				341	30.48			34772	190.6			
				349	30.48			35588	195.1			

SUMMARY OF CONCRETE COMPRESSIVE STRENGTH

Description	Casting date	Testing date	Age	Load in (KN)	Length (cm)	Dia (cm)	Area (cm ²)	Load in Kg	Strength (Kg/cm ²)			Remarks
									Achieved	Average	Required	
Concrete Class "D-1" Bridge No.2 (KM: 9+560) Girder # 4	27/Dec/2013	24/Jan/2014	28 Days	711	30.48	15.24	182.4	72501	397.5	396.7	350	
				706	30.48			71991	394.7			
				712	30.48			72603	398.0			
Concrete Class "A-1" Culvert Top Slab KM: 16+318	29/Dec/2013	26/Jan/2013	28 Days	447	30.48	15.24	182.4	45581	249.9	247.5	210	
				445	30.48			45377	248.8			
				436	30.48			44459	243.7			
Concrete Class "A-3" Bridge No.1 Pile No.6 Abutmenr No.2	30/Dec/2013	27/Jan/2014	28 Days	508	30.48	15.24	182.4	51801	284.0	282.9	280	
				504	30.48			51393	281.8			
				506	30.48			51597	282.9			
Concrete Class "A-3" Bridge No.1 Pile No.9 Abutmenr No.1	31/Dec/2013	28/Jan/2014	28 Days	510	30.48	15.24	182.4	52005	285.1	286.0	280	
				505	30.48			51495	282.3			
				520	30.48			53024	290.7			
Concrete Class "D-1" Bridge No.2 (KM: 9+560) Girder # 9	21/Jan/2014	28/Jan/2014	7 Days	571	30.48	15.24	182.4	58225	319.2	307.8	262	
				540	30.48			55064	301.9			
				541	30.48			55166	302.4			
Concrete Class "A-3" Multicell Culvert KM: 11+190	1/Jan/2014	29/Jan/2014	28 Days	512	30.48	15.24	182.4	52209	286.2	285.3	280	
				510	30.48			52005	285.1			
				509	30.48			51903	284.6			
Concrete Class "A-3" Multicell Culvert KM: 11+190	22/Jan/2014	29/Jan/2014	7 Days	497	30.48	15.24	182.4	50679	277.8	274.7	210	
				485	30.48			49455	271.1			
				492	30.48			50169	275.1			
Concrete Class "D-1" Bridge No.1 Girder # 5	2/Jan/2014	30/Jan/2014	28 Days	645	30.48	15.24	182.4	65771	360.6	356.9	350	
				625	30.48			63731	349.4			
				645	30.48			65771	360.6			

4.14 REINFORCING BARS TEST REPORT

S. No.	Dia (mm) Nominal	Yield Strength (PSI)	Ultimate Strength (PSI)	Elongation (%)	Effective Dia (mm)	Weight (lb/ft)	Bend Test
1 (DEF)	20.00	65413	97204	15.6	19.3920	1.5570	OK
2 (DEF)	20.00	64518	95702	15.6	19.2509	1.5344	OK
3 (DEF)	16.00	66036	97469	15.6	16.2105	1.0880	OK
4 (DEF)	16.00	65066	101560	14.1	16.0037	1.0604	OK
5 (DEF)	13.00	71012	99910	17.2	12.7170	0.6696	OK
6 (DEF)	13.00	69157	97954	14.8	12.6401	0.6615	OK
7 (DEF)	10.00	89431	103055	12.5	10.1835	0.4294	OK
8 (DEF)	10.00	81066	102262	18.8	9.8703	0.4034	OK

4.15 REINFORCING BARS TEST REPORT

Normal Consistency (%)	Initial Setting Time	Final Setting Time	Fineness (% age)	Compressive strength of Mortar Cubes		
				3 days (Psi)	7 Days (Psi)	Avg. Strength 3 days / 7 days
26.66%	2 Hours 17 Minuts	5 Hours & 22 Minuts	94%	2066.25	2644.8	2088.08 / 2633.8
				2093.18	2639.29	
				2104.82	2617.25	
-	Min 45Minuts	Maximum 10 Hours	Minimum 95 %	Minimum 1740 PSI	Minimum 2760 PSI	-

ENVIRONMENTAL COMPLIANCE MONITORING

Environmental Compliance Officer:

Shabir Ahmad Khan

Field Monitor (Social):

Jamil Khan

Road Section under Construction:

Section-I KM: 0+000 to KM: 9+000

Section-II KM: 9+000 to KM: 14+000

Section-III KM: 14+000 to KM: 19+000

Section-IV KM: 19+000 to KM: 24+000

Section-V KM: 24+000 to KM: 34+000

Persons Consulted at Site:

Mr. Imtiaz; Site Engineer FWO

Mr. Faisal; Site Engineer FWO

Mr. Tilal; Site Engineer FWO

Mr. Mazher Iqbal; Surveyor FWO

Mr. Hussain Arif; Surveyor FWO

Mr. Mohammad Togheer Survey Helper FWO

Work Status:

- Work in progress
- Work Stopped
- Work Completed

√

Quality of Environment Compliance:

- Good
- Satisfactory
- Poor

√

Issues at site:

- No preparation of H&S plan, Site Specific Plan and Risk Assessment Report at site.
- Non availability of traffic and speed limit checking sign boards to ensure safety of people at site.
- No records of EHS (Environment, Health and Safety measures).
- Non availability of personal protective equipments at site.
- Non availability of Environmental Specialist/ Expert at site from FWO / NESPAK side.
- No Health and Safety arrangements at work sites.
- No first aid box and Ambulance arrangements at site.

Environmental Monitoring Check List for the Site

S. #	Activity	Mitigation Measures	Monitoring indicators	Observations
Construction Phase				
1	Use of heavy equipments	<ul style="list-style-type: none"> a. Set protocols for vehicle Maintenance. b. Check fuel level, deliveries, and use. c. Check pipes and joints for leaks. d. Tight & check generators cables and fuel lines. e. Prevent over filling of main storage and vehicles tanks. f. Avoid parking of heavy equipments under trees to prevent soil compaction and damage to the roots of the trees. 	Soil contaminations, stability and erosion	<p>It was observed among supervisors and contractor staff that they follow an overall compliance about the use and maintenance of both heavy and light machinery at site area.</p> <p>Heavy machinery follow compacted routes while carrying material from the quarrying areas. No damage at site to the vegetation was found, as all the heavy machinery is parked in an area fenced near the main FWO camp at Jamrud. It was observed that there is a need for H&S inspections and protocols compliance set for the purpose of vehicles maintenance in the H&S plan due to parking and maintenance of heavy machinery inside the FWO camps.</p>
2	Flood protection	<ul style="list-style-type: none"> a. Culverts construction to control flood damages and provide safety to embankments. b. Take measures to protect road alongside the river. c. Construction of retaining walls. d. Provide new causeways for smooth flow of flood water during rainy seasons. 	Road protection and Safety	<p>To protect road from flood, safety measures such as, construction of culverts, retaining walls in section -II and III in order to provide smooth flow to flood water and sewerage disposal are already in progress. During site visits, it was observed, that culverts in section- I for the purpose mentioned above are already completed, while work on side drains along the road continues (Please refer to photo # 05).</p>
3	Handling and transportation of hazardous waste	<ul style="list-style-type: none"> a. Prevent dumping of hazardous materials near the villages and water bodies. b. Burn waste oil which is not reusable. c. Recyclable material should not contain heavy metals that are inflammable, investigate and use less toxic alternative 	Soil Contamination and Safety	<p>During site visit, no hazardous material was found along the road site; therefore, no action as such is further required.</p>

		products. d. Prohibit use of waste oil for cooking purposes.		
4	Handling of solid Waste	<ul style="list-style-type: none"> a. Site manager should feel responsible for the collection of solid waste and disposal. b. Provide Training to the site personnel in management of waste material and its handling procedures. c. Separation of chemical waste for special handling. d. Record the amount of waste, generated recycled and reused. e. Proper storage and managed site practices will minimize the potential damage to contaminate construction materials. f. Store general refuse in enclosed bins to control its mixing with construction materials. g. Engage a reputable waste collection firm for waste collection and removal of general refuse from site. 	Toxicity, Soil Contamination and Pollution	A solid waste management plan is required in order to segregate solid waste from construction materials. During the visit, no proper segregation as such was observed at site area. In this respect, FWO should share their solid waste management plan with the AGES Socio-environmental compliance team. A proper handling of the materials was observed at the main storage, while the construction site was devoid of such arrangements. It was also found that the subcontractors do not follow environmental, health and safety protocols. Subsequently, it is strongly advised to the subcontractors to provide bins for handling of solid waste during culverts construction at sites (Please refer to photo # 02).
5	Construction crews, camps & Accommodation	<ul style="list-style-type: none"> a. Check quality and maintenance of accommodations for site crew. b. Avoid cutting of vegetation as much as possible. c. Provide sanitation such as pit latrines to the site crew on temporary basis. d. Use of local labor. e. Screening test of potentially affected HIV and tuberculosis viruses site crews f. Provide education and enforced guidelines to local inhabitants. g. Set guidelines to prohibit poaching and plants collection. h. Provide good quality of food and its 	Ground water pollution and conflicts with locals.	Accommodation provided to the construction crews were properly maintained and found appropriate at army camps. These camps have been renovated in order to fulfill accommodation requirements of the FWO labor force. All the basic facilities e.g. washrooms, kitchen, TV lounge, café shop etc. were available and found adequate to the construction crew at FWO camps. The quality of food provided is good. Other facilities such as hygienic water to the FWO workforce were found satisfactory Majority of sub contractors are local employees, therefore, FWO staff need guidelines, taken

		<p>adequate quantities to the work force.</p> <ul style="list-style-type: none"> i. Drinking water should meet WHO standards, and clearly be demarcated from water for construction purposes. j. Prohibit domestic pets or livestock to enter into the site. 		<p>strictly from their seniors to communicate further with locals. A presence of domestic livestock was found at site but the FWO camp was safely away from such interference (Please refer to photo # 01)</p>
6	Material handling, use, and storage	<ul style="list-style-type: none"> a. Securing of construction materials will ensure safe passage between destinations for transport system. Loaded vehicles shall be properly covered to prevent spillage, and contractor should be held responsible to clear them off. b. Direct transfer and deposit of construction materials to the site for its use. Avoid stockpiles to create less visual impacts. Any leftover of foreign materials should clearly be off, and the area should properly be reinstated if affected by any construction activity. c. Avoid spray of bitumen products on vegetation outside the road area. d. Avoid concrete mixing on ground. e. Use of wet gravel at site. f. Avoid direct fall of drainage water into sensitive areas. g. Control of all runoff from batching plants so that cement do not contaminate water, and if any, it should be collected, stored and disposed of at a designated site. h. Collect and deliver empty cement bags to recycling plants. i. Storage of Contaminated water should not allow to over flow and be protected from rain water. 	Dust pollution	<p>Take appropriate measures such as a proper secure of Loaded material will prevent load spillage and create less visual impacts. FWO staff was advised to provide a safe passage to dumpers while carrying construction materials at site. Loaded vehicles were found without proper cover to prevent spillage. No concrete mixing as such was found during construction activities at site. There was an overall negligence among subcontractors about protocols handling construction materials, especially, during culverts construction at site. Materials, where ever is possible, should directly transport and deposited from borrow areas (Please refer to photos # 03, 04, 05, 06, 07, 08).</p>

7	Materials extraction, Quarrying & logging	<ul style="list-style-type: none"> a. Identify environment friendly materials within budget. b. Use materials from local road cuts first, only if it produces an aggregate of materials for stabilizing surfaces and filling embankments. c. Area should properly be restored and be treated with erosion control measures once materials are removed. d. Develop logging quarrying and borrowing plans, and take into account its accumulative effects. e. Take photos at site before start of excavation so that restoration can match the original site as much as possible. Also make sure Site quarries and gravel pits are not visible to travelers on roads. f. Adhere and monitor the plans to minimize side impacts due to extraction activities. Try to modify the plans as much as required. g. Restore and sustain the site area once the extraction activity is over. h. Install drainage structures to direct water away from pits. i. Implement safety protocols to minimize risks due to fall of rocks, debris, collapse of quarry walls or any accidental falls from clefts. j. Discuss with local community the option of retaining walls pits as water collection ponds for crops, grazing cattle, or similar use. 	Change in landscape & Creation of water ponds.	During site visit, FWO officials were found hesitant while sharing their logging, quarrying and borrowing plans with AGES environmental compliance monitoring team. FWO workforce shows no proper care to follow safety protocols at work site. Therefore, it is advised to the FWO staff to strictly follow safety protocols in order to avoid any mishap during work. In this respect, no environmental protocols as such were followed about quarry protection (Please refer to photo # 04).
8	Site clearing & leveling	<ul style="list-style-type: none"> a. Minimize disturbance of local flora during construction activities as much as possible. b. Minimize the amount of clearance of small 	Loss of vegetation, soil erosion,	No impact on vegetation was observed as most of the road construction area is rugged, and of hilly nature. However, the excavation continues at the

		<p>areas for active work once at a time.</p> <p>c. Avoid use of herbicides. Any such use should follow health and safety procedures to protect people and the environment.</p> <p>d. Limit of herbicides use should specified by the manufacturers.</p> <p>e. Clear out the area without destroying plants and turfs, and take measures to preserve and replant where ever is possible.</p> <p>f. Remove Vegetation during dry periods only, and preserve soil top surface if re spreading is required. While if it is removed during wet periods don't disturb soil just before the start of actual construction.</p> <p>g. Use of erosion control measures such as hay bales</p> <p>h. Replant and re –vegetate the local flora on immediate basis once equipment is removed from site.</p>	<p>stability, water pollution, health of workers and local community.</p>	<p>shoulders of already existed road. Moreover, plantation is needed on emergency basis along the whole of Peshawar-Torkham road. Some specific plant species, in this regard, need to be identified in the area as per the provisions set in the Environment Management Plan. Therefore, it is strongly recommended, that FWO contractor should coordinate with Forest department on immediate basis in this regard. No use of herbicides was found at site, and soil conservation measures were found appropriate due to the hilly, rocky nature which consists of sand, silt and gravels of its compact nature.</p>
<p>9</p>	<p>Excavation , cutting , and filling</p>	<p>a. Cover Piles with plastic sheets, prevent run off with hay bales, or use similar measures.</p> <p>b. Fencing around excavation activities.</p> <p>c. Investigate shallow over excavation and alternatives.</p> <p>d. Construction crews and supervisors must aware of the historic burials, socio-cultural and religious objects. And, if recovered should properly be guarded to avoid any destruction.</p> <p>e. Ensure excavation is accompanied by a well-engineered drainage.</p> <p>f. Don't fill the flow line of a watershed. Even in arid areas, occasional rains may create strong water flow in channels.</p> <p>g. Adopt best engineering practices, for</p>	<p>Soil erosion, stability and surface water contamination</p>	<p>The excavation process continues at the shoulders of the existing road at about half meter in the shallow depth of rocks. Others mitigation measures taken were either fulfilled or not required.</p> <ul style="list-style-type: none"> At KM. 10+400, 14+600, 16+300, 16+500, 17+625 and 18+225, both rocks excavation and structural excavation of culverts construction continued but safety protocols & personal protective measures were remained absent during site visit. It was noticed that during rocks excavation even traffic was poorly handled and found mismanaged which may put the life of people further at danger. During site visit, it was also recommended to FWO staff that culverts construction should properly be

		<p>example, don't use the soil alone, first lay a bed of rock and then gravel it.</p> <p>h. Balance cuts and fills, wherever is possible to minimize the earth work movement.</p> <p>i. Water sprinkling on temporarily used road to avoid dust solution.</p>		covered and fenced at all sites. A proper drainage system engineered on best techniques may also be installed in order to provide flow to waterfall during excavation process. Proper dumping of excavated materials and sprinkling of water are also required to avoid dust pollution.
10	Traffic Control and management	<p>a. Need of practical efforts in order to control and accommodate traffic along the road as far as much possible.</p> <p>b. Provide sign boards in order to direct and guide drivers about diversions.</p> <p>c. Provide proper traffic management training to the contractor staff at the site before the construction activities take place.</p> <p>d. Avoid temporary by passes during land clearing as much as possible.</p> <p>e. Maximum speed limit on the site for heavy machinery should not exceed 20Km/hr.</p> <p>f. Try to keep the road partly closed to provide all time maximum safe passage to the vehicles/pedestrians</p> <p>g. Try to conduct work when traffic volume is low</p> <p>h. Organize a proper schedule in order to deliver sand trucks at the time of less traffic.</p>	Health and Safety of workers & local population	Traffic flows with diversions along the same road. Though FWO has arranged diversions, but proper traffic signboards are still missing which have put the existing traffic control further at risk. Therefore, FWO contractors are strongly suggested to install proper sign boards with reflective materials on temporary basis further maximizing drivers' visibility at night. FWO staff was found cooperative during managing of traffic along the road site construction. First, it was observed, that sign boards signifying limits for driving heavy machinery were found absent at site. Secondly heavy machinery cannot move faster due to construction activities at site. Furthermore, speed checking sign boards are needed in order to provide a smooth flow to the NATO containers alongside Peshawar-Torkham road to Afghanistan borders.
11	Blasting	<p>a. Allow minimum blasting at site as much as possible.</p> <p>b. Take Safety measures to provide protection to workers and locals from injuries due to rocks falling and avalanches.</p> <p>c. Provide protective equipments to the workforce on individual basis.</p>	Noise pollution and occupational safety	Rock excavation is currently in progress in section-II and III for widening purpose of road construction. Safety protocols should properly adopt, if blasting is needed.
12	Sources of building materials	<p>a. Develop logging, quarrying and borrowing plans for providing cumulative effects.</p> <p>b. Adherence to the plans and strong</p>	Damages to the aquatic, terrestrial	No safety protocols were observed at quarry sites.

		<p>monitoring over impacts due to extraction activities. Try to modify these plans as much as required.</p> <p>c. Fill in quarries and pits before abandoning the construction activity.</p> <p>d. Control runoff into pits.</p>	ecosystems erosion , siltation, and vector-borne diseases	
13	Dust Pollution	<p>a. Water spraying</p> <p>b. Covering of Trucks with tarpaulins</p>	Nuisance to the public, undermining of the quality of air and water due to contamination	At this site visit, water sprinkling vehicle was observed at some places, but still problem of dust pollution is found at KM 9+200, 16+00, 18+225 and 31+300 (Please refer to photos # 6, 09, and 10).
14	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.	Rugged landscape and its interference with the local aesthetics; posing a danger to livestock and local community children; holding of stagnant water and take up agricultural land.	No activities at site were seen about borrow areas. Moreover, borrow areas still need to be identified, if needed.
15	Damages to the existing infrastructure	<p>a. Locate different locations of existing infrastructure on both sides of road.</p> <p>b. Determine and avoid damages to locations of water pipes, electricity pylons etc.</p>	Facilities to the locals	During site visit, PTCL and FWO concerned authorities were asked to take care of the existing infrastructure at the time of the excavation activities, especially when culverts are constructed at sites. It was also suggested to the FWO/ NESPAK personals that WAPDA/PTCL departments should early informed before any excavation activity is started.

16	Health & Safety of the workers	<ol style="list-style-type: none"> a. Prepare and implement a Health and Safety Plan at site. b. Exclude public from site area. c. Ensure that workers use Personal Protective Equipments. d. Provide Health & Safety Training (including HIV/AIDS transmission process) to all personnel; e. Follow documented procedures for all activities at site; f. Keep reports and records of accidents. 	Workers and the public are at risk from accidents on site	Health and safety protocols are followed in general at camps, but no respect is shown by the workers to H&S requirements/protocols during construction activities at site. In this regard, FWO officials are advised to take care of the safety protocols and also prepare H&S plan as well as to take measures for keeping records of accidents, illness and workers treatments etc. Moreover, it is also very important to arrange and provide H&S trainings to the workers in order to ensure their good health and safety at site. Health facilities such as, first aid and ambulance facilities should also be provided to the workers at site (Please refer to photos # 03, 04, 05, 07, 08).
17	Local Employment	Contractor' should hire at least 50% of local workforce at work site	Economic benefits to the local people	Most of the employees in the existing FWO contract are their regular employees. Therefore, a sporadic local labor is hired when a subcontract is in place.
18	Others concerns like Resettlement etc.	<ol style="list-style-type: none"> a. Resettlement, if any. b. Provide pedestrians and road access to local people. c. Avoid social disturbances over Infrastructure damages such as, telephone cables, sewerage, water supply schemes etc d. Avoid Social Conflicts with locals. 	Resettlement & Social management	<p>Issues like resettlement or relocation were found absent at site area because the newly constructed road continues on its existing corridor. Infrastructure facilities to the locals such as Sewerage, telephone cables and electricity lines etc. must properly cared, managed, and undisturbed. While going through the site area, some social issues were also observed which need proper attention, and properly addressed.</p> <ul style="list-style-type: none"> • Activities of drains construction at many places in section 1 like KM 0+500 are in progress.

Operation and Maintenance of newly constructed road				
19	Road maintenance	<ul style="list-style-type: none"> a. Monitor and Maintain cleanness of drainage structures, channels, ditches and culverts. b. Fill mud and pot holes with a good quality of gravels, and also remove trees and wooden limbs lying down on road. c. Use water from retention ponds and basins settled for road maintenance. 	Road Maintenance	Most of the construction work in section -I of the Peshawar-Torkham road has already been completed, while construction of side drains along the road for disposal of water are in progress
20	Use and maintenance of equipments	<p>Install concrete pads, drains and oil/water for vehicles maintenance.</p> <p>Areas separation for where equipments, vehicles are maintained and fueled on regular basis.</p>	Water and soil pollution	No compliance was shown at sit. The required protocol may properly addressed
21	Accidents due to hazardous materials	<ul style="list-style-type: none"> a. In case of a spill, concerned department should consult on emergency basis. b. Need for establishing an administrative department which will administer and monitor the road of hazardous substances 	Cases of accidents	No compliance was shown at sit. The required protocol may properly addressed
22	Vehicles management	<ul style="list-style-type: none"> a. Prohibit vehicles to travel on road which promote noise pollution. b. Proper education about noise and air pollution to locals and how to keep the road clean 	Visual inspection	No compliance was shown at sit. The required protocol may properly addressed

APPENDICES

6.1 CONTRACTOR IPC's (SECTION-I)

IPC No:	TOTAL PIL AMOUNT		AMOUNT CLAIMED		DATE OF SUBMISSION BY CONTRACTOR TO FATA	DATE OF SUBMISSION BY FATA TO USAID	DATE OF CERTIFICATION BY M&E CONSULTANTS	AMOUNT CERTIFIED BY M&E CONSULTANTS	
	US \$	EQUIVALENT PKR	US \$	EQUIVALENT PKR				US \$	EQUIVALENT PKR
1	9,978,081	937,939,614	1,444,442	135,777,548	23-May-13	28-May-13	28-Jun-13	597,641	56,178,279
2			2,494,227	234,453,311	28-Jun-13	2-Jul-13	26-Jul-13	2,494,227	234,453,311
3			2,382,898	223,992,366	26-Jul-13	31-Jul-13	29-Aug-13	2,268,345	213,224,394
4			1,738,259	163,396,356	3-Sep-13	11-Sep-13	25-Sep-13	1,096,902	103,108,788
5			699,562	65,758,791	30-Sep-13	3-Oct-13	23-Oct-13	680,293	63,947,570
6			1,287,568	121,031,406	2-Dec-13	2-Dec-13	17-Dec-13	886,305	83,312,672
7			467,684	43,962,288	26-Dec-13	26-Dec-13	30-Dec-13	19,268	1,811,220
UP-TO DATE CERTIFIED AMOUNT								8,042,981	756,036,234

Conversion Rate 1 US \$ = 94 PKR

6.2 CONTRACTOR IPC's (SECTION-II)

IPC No:	TOTAL PIL AMOUNT		AMOUNT CLAIMED		DATE OF SUBMISSION BY CONTRACTOR TO FATA	DATE OF SUBMISSION BY FATA TO USAID	DATE OF CERTIFICATION BY M&E CONSULTANTS	AMOUNT CERTIFIED BY M&E CONSULTANTS	
	US \$	EQUIVALENT PKR	US \$	EQUIVALENT PKR				US \$	EQUIVALENT PKR
1	9,383,484	985,265,820	1,159,388	121,735,792	26-Dec-13	26-Dec-13	31-Dec-13	661,911	69,500,655
UP-TO DATE CERTIFIED AMOUNT								661,911	69,500,655

Conversion Rate 1 US \$ = 105 PKR

6.3 RECORD OF COORDINATION MEETINGS / JOINT SITE VISITS

Date	Meeting	Participants	Venue
08-Jan-14	Coordination Meeting	M&E Consultants, FWO, NESPAK	CRE NESPAK Office
09-Jan-14	Joint Site Visit	M&E Consultants, FWO, NESPAK	P-T Road Project
19-Jan-14	Joint Site Visit	M&E Consultants, FWO, NESPAK	P-T Road Project
20-Jan-14	FDWP Meeting (Section-IV)	FATA,M&E Consultants, FWO, NESPAK	FATA Secretariat Peshawar
21-Jan-14	Coordination Meeting	M&E Consultants, FWO, NESPAK	RE NESPAK Office
23-Jan-14	Coordination Meeting	M&E Consultants, FWO, NESPAK	CRE NESPAK Office

6.4 MOBILIZATION OF M&E STAFF

The following members of the M&E Team were mobilized as various activities of the project progressed. Other staff members will be mobilized according to demand of work load.

PROJECT MANAGER OFFICE – STAFF DEPLOYMENT

S. No.	Name	Designation	
1	Aziz-ul-Haq	Project Manager	ROAD COMPONENT
2	Nasir-ul-Mulk	Project Advisor	
3	Abdul Hakim	Senior Technical Specialist	
4	Shabir Ahmad Khan	Environmental Compliance Officer	
5	Amjad Saeed	Mid-Level Specialist	
6	Saqib Maqbool	Junior Engineer	
7	Arshad Khan	CAD Operator	
8	Sohail Anjum	Senior Surveyor	
9	Abdul Waheed	Manager Admin/Finance	
10	Amir Habib	IT Officer	
11	Muhammad Bilal	Assistant Accountant	
12	Faizan Khan	Computer Operator	
13	Jamil Khan	Field Monitor Social	OTHER CONSTRUCTION COMPONENT
14	Anwar Dad	Quantity Surveyor	
15	Waqar ul Mulk	Junior Architect	
16	Naeem Jan	Senior Surveyor	
17	Muhammad Waqas	Survey Assistant	
18	Muhammad Ayaz	Survey Assistant	
19	Muhammad Zeeshan Atta	Survey Assistant	
20	Sana ullah	Accountant	
21	Hamid Ullah	Computer Operator	

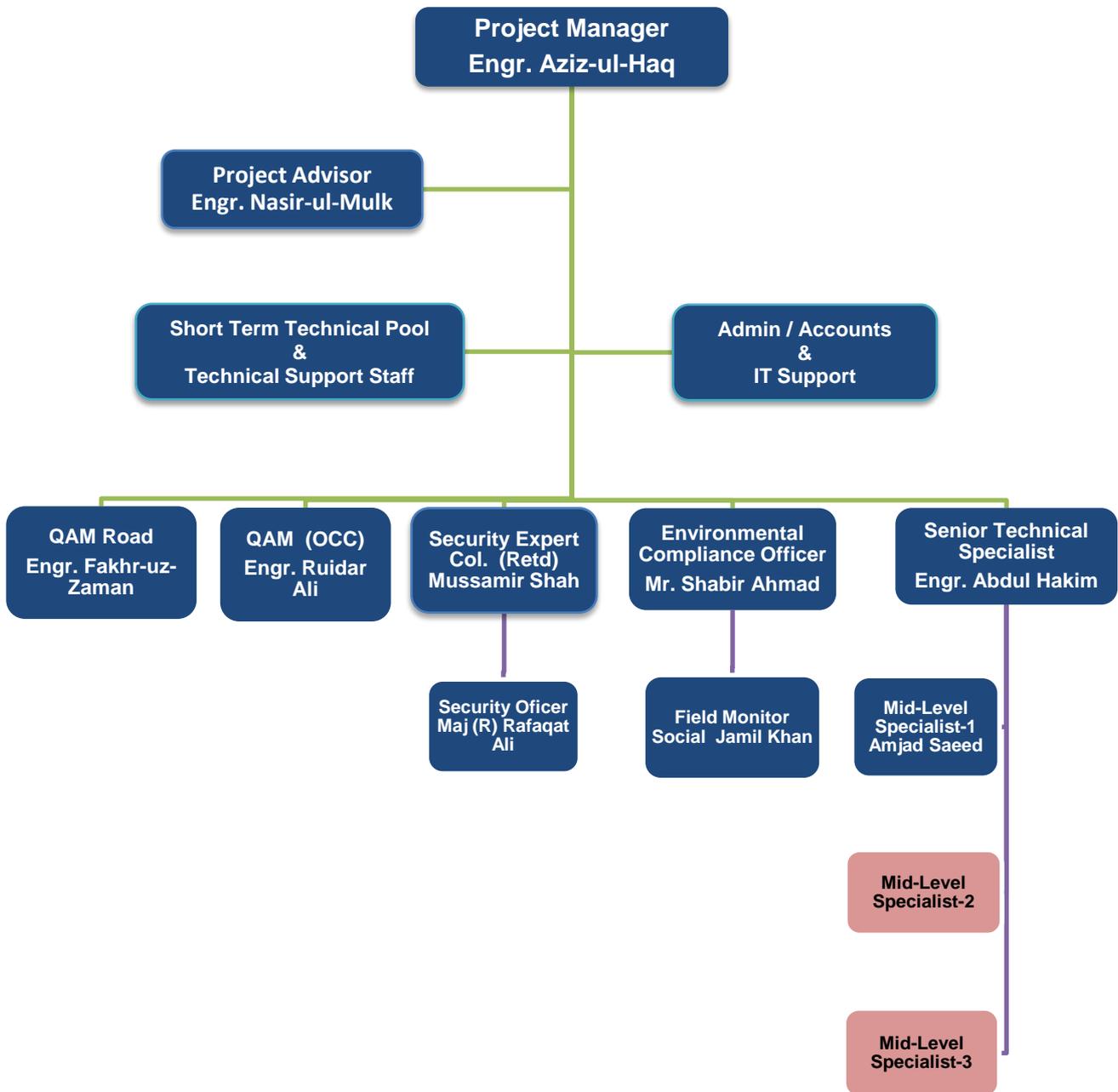
QAM Office (Road Component)

S. No.	Name	Designation
1	Fakhr-uz-Zaman	Quality Assurance Manager (Road)
2	Muhammad Khurshid	M&E Specialist Road
3	Muhammad Ilyas	Field Manager M&E
4	Muhammad Ibrar	Office Engineer
5	Rasheed Khan	Field Monitor Road
6	Muhammad Sher	Field Monitor Road
7	Ghulam Qasim	Field Monitor Road
8	Tariq Ibrahim Khan	Quantity Surveyor
9	Asad Khan	CAD Operator
10	Ihsan Ullah	Accountant
11	Hafiz ur Rehman	Assistant Accountant
12	Nasir Alam	Admin Officer
13	Umar Shah	Assistant Office Admin
14	Hamid Ali	Computer Operator

Laboratory Staff (Road Component)

S. No.	Name	Designation
1	Gul Zada	Material Engineer
2	Amjad Ali Khan	Senior Lab. Technician
3	Khan Umar	Senior Lab. Technician
4	Shakeel Akbar	Lab. Technician
5	Noor Ali Jan	Lab. Technician
6	Mujeeb Khan	Assistant Lab. Technician
7	Babar Naeem	Assistant Lab. Technician

6.5 ORGANIZATION CHART FOR CMEP OFFICE, PESHAWAR



LEGEND:

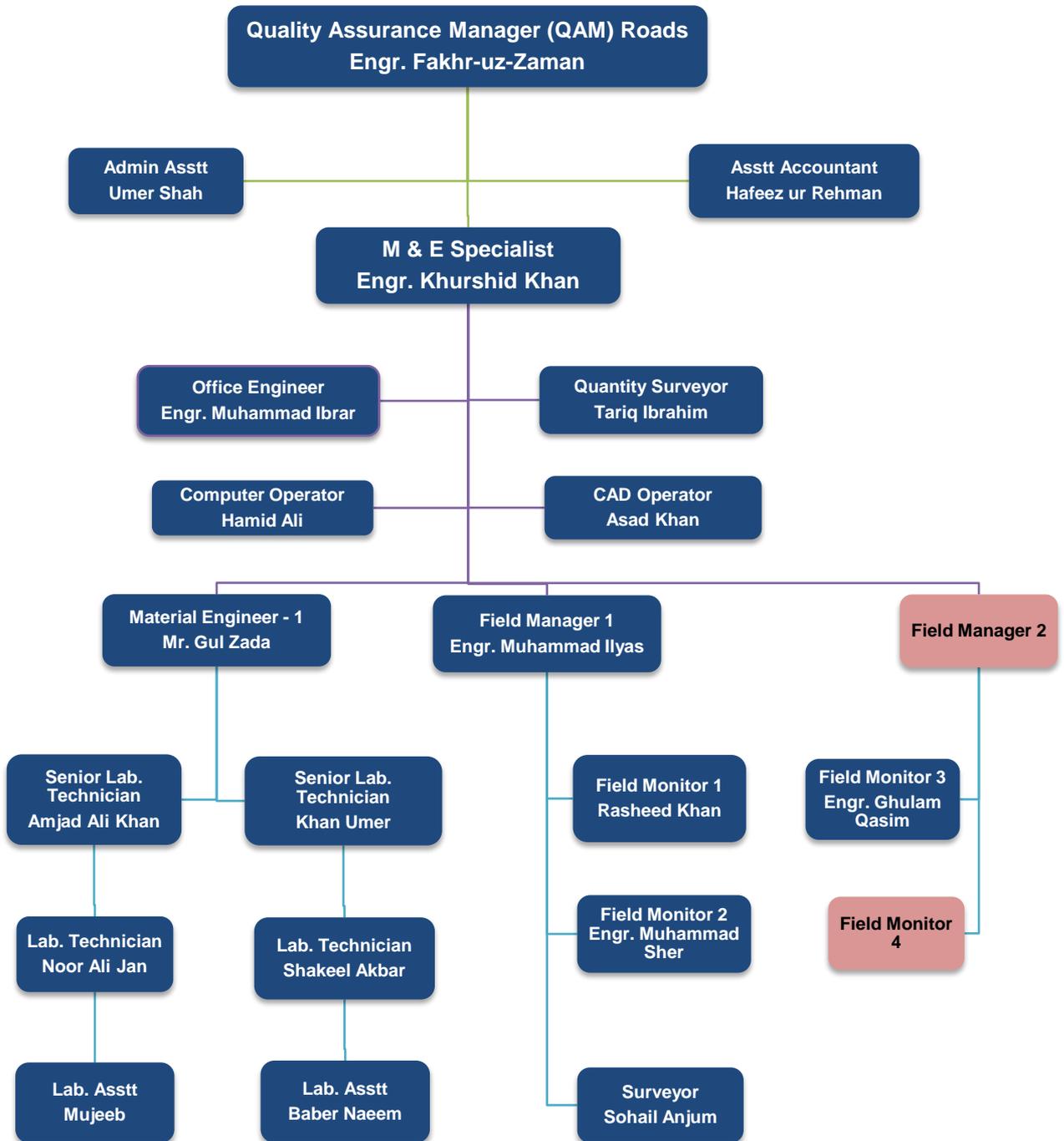


Mobilized



To be mobilized with expansion of work

6.6 ORGANIZATION CHART FOR ROAD COMPONENT OF CMEP PROJECT



LEGEND:



Mobilized



To be mobilized with expansion of work

PROJECT PHOTOGRAPHS

PAVEMENT



KM: 16+316 Culvert joint filling with sealant in progress



KM: 0+700 To 0+900 (Loop-1 RHS) Roadway excavation & disposal of surplus material in progress



KM: 8+975 To 9+350

(Half width LHS) ACWC initial breakdown rolling in progress



KM: 8+975 To 9+350

(Half width LHS) ACWC initial breakdown compaction in progress



KM: 11+275 To 11+350 Full width Sub grade leveling/grading in progress



KM: 11+700 To 11+825 Full width Sub grade top layer being watered prior to compaction



KM: 13+900 To 14+050 (Half width RHS) Sub base 1st layer watering in progress.



KM: 13+900 To 14+050 (Half width RHS) Sub base 1st layer compaction in progress



KM: 14+075 To 14+200

LHS Roadway excavation in progress



KM: 16+275 To 16+400

Full Width WBM spreading in progress



KM: 16+275 To 16+500

Full Width WBM cleaning & brooming prior to prime coat application in progress



KM: 16+775 To 16+975

ACBC 2nd layer compaction in progress



KM: 16+775 To 16+975

ACBC 2nd layer initial breakdown in progress



KM: 17+125 To 17+200

Full width sub base 2nd layer leveling/grading in progress.



KM: 17+450 To 17+525 Full width sub grade top layer being compacted



KM: 18+700 To 19+000 RHS Roadway excavation with control drilling & blasting in progress



KM: 18+800 To 18+900

RHS Roadway excavation in progress



KM: 18+900 To 19+000

RHS Roadway excavation in progress



KM: 19+000

RHS Crushing of boulders by hydraulic hammer in progress



KM: 22+750 To 22+875

Full width Embankment layer leveling/grading in progress



KM: 26+475 To 26+525 Full width sub base 1st layer compaction in progress



KM: 26+725 To 26+825 Full width Existing roadway excavation in progress



KM: 27+700 To 27+800

Full width sub grade top layer compaction in progress



KM: 31+400 To 31+500

LHS Dismantling of existing shops in widening portion in progress



KM: 31+425 To 31+500

Full width Embankment layer leveling/grading in progress

STRUCTURES



Culvert KM: 10+572

Curing of top slab in progress



Culvert KM: 10+788

Top slab ready for concreting



Culvert KM: 10+850

Curing of top slab in progress



Culvert KM: 10+961

Curing of top slab in progress



Culvert KM: 11+190

Curing of bottom slab & wall chamfer in progress



Culvert KM: 11+691

Roll pointing of abutments in progress.



Culvert KM: 12+178

Stone masonry construction in progress

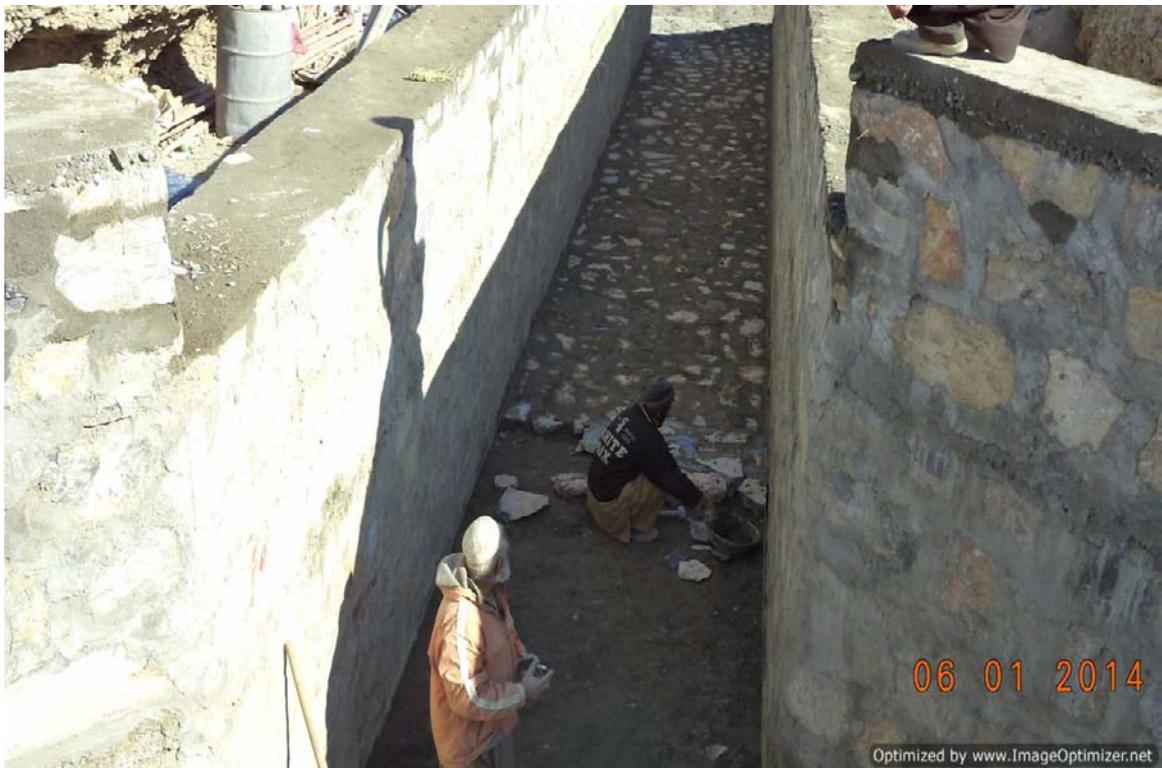


Culvert KM 12+460

Curing of top slab in progress



Culvert KM 12+975 Stone masonry construction of abutments in progress



Culvert KM 13+333 Stone pitching work culvert bed in progress



Culvert KM 14+600 Pad concrete of abutments has been completed



Culvert KM: 15+139 Top slab rebar ready for concreting



Culvert KM: 15+647

Top slab concrete final finishing in progress



Culvert KM: 15+795

Stone masonry completed and backfilling in progress



Culvert KM: 16+740

Curing of top slab in progress



Culvert KM: 17+010

Curing of top slab in progress



Culvert KM: 17+434

Backfilling along abutments in progress



Culvert KM: 17+562

Formwork erection for lean concrete in progress



Culvert KM: 17+666

Curing of top slab in progress



Culvert KM: 17+901 (Half width RHS) Stone masonry of abutments in progress



Drain KM: 6+625 To 6+825

LHS Brick masonry drain type D-1 in progress



Drain KM: 6+625 To 6+825

LHS Brick masonry drain type D-1 in progress



Drain KM: 7+000 To 7+150

LHS Brick masonry drain type D-1 in progress



Drain KM: 7+000 To 7+150

LHS Brick masonry drain type D-1 in progress



Bridge KM: 9+560 Pile boring of abutment-02 in Progress



Bridge KM: 9+560 Pile cap of abutment -01 preparation in progress



Bridge KM: 9+560 Pile cap Pier-01 completed



Bridge KM: 9+560 Prestress Girder # 8 casted



Bridge KM: 9+560

Pre stress Girder-9 profile setting of ducts in progress



Bridge KM: 9+560

Permanent steel casing being erected for 03No's Pier shafts



Bridge KM: 9+560

Steel reinforcement fixing for pile cap Pier-2 in progress



Bridge KM: 27+350

Boring for test pile in progress



Bridge at KM 23+750 Dead load placed for Pile load test



Bridge KM 23+750 M&E Consultants staff monitoring pile load test



KM: 0+125~0+150 RHS Loop-1 Retaining wall stone masonry in progress



KM: 0+209 To 0+225 RHS Loop-1 Retaining wall stone masonry in progress



KM: 6+835

RHS Retaining wall stone masonry in progress



KM: 6+883

(U/S of Culvert) Retaining wall stone masonry completed while drains on both side are in progress



KM: 10+625~10+675

RHS Breast wall stone masonry construction in progress



KM: 10+664 To 10+700

RHS Breast wall stone masonry construction in progress



KM: 12+375 To 12+450 RHS Retaining wall stone masonry in progress



KM: 12+925~12+975 RHS Retaining wall stone masonry in progress

FIELD / LAB TESTING



KM: 9+560

Casting of concrete cylinders for Girder No.9 by M&E consultants



KM: 17+000

Coring of Asphaltic Base Course by M&E Consultants



KM: 16+025 Joint Field density testing of embankment



KM: 16+600 Joint Field density testing of WBM



Crushing of concrete cylinder at M&E Lab



Sand Equivalent Test of WBM in M & E Lab

ENVIRONMENTAL MONITORING



(Photo #1) Outside view of dining hall at FWO Labor Camp



(Photo # 2) KM: 4+200 Blockage of main drain and placement of solid waste near Jamrud Bazar need proper handling and a sound drainage system for its disposal



(Photo # 03) KM: 9+560 Bridge construction needs Safety measures



(Photo# 04) KM: 9+700 Concrete crush plant and quarry areas needs proper H&S protocols for its handling.



(Photo# 05) KM: 10+100 Retaining walls construction needs H&S protocols.



(Photo# 06) KM: 14+350 Dust Pollution needs sprinkling of water



(Photo # 07) KM: 16+100 FWO Crush plant needs proper arrangement as setout in H & S plan



(Photo # 08) KM: 16+825 Asphaltic base course final rolling in progress and need proper signs boards and H & S protocols



(Photo # 09) KM: 17+200 To 17+400 Water sprayed for the control of dust pollution



(Photo # 10) KM: 32+400 sprinkling of water continues