

# **PUBLIC WORKS DEPARTMENT**

## **GOVERNMENT OF KERALA**



# **KERALA STATE TRANSPORT PROJECT - II**

**(UNDER WORLD BANK ASSISTANCE – Loan No. 8254)**

## **QUARTERLY PROGRESS BRIEF**

### **JULY - SEPTEMBER 2017**

#### **Project Management Team**

Kerala State Transport Project  
T.C.11/339, Sree Bala Building  
Keston Road, Nanthancode,  
Kawdiar P.O.  
Thiruvananthapuram - 695003



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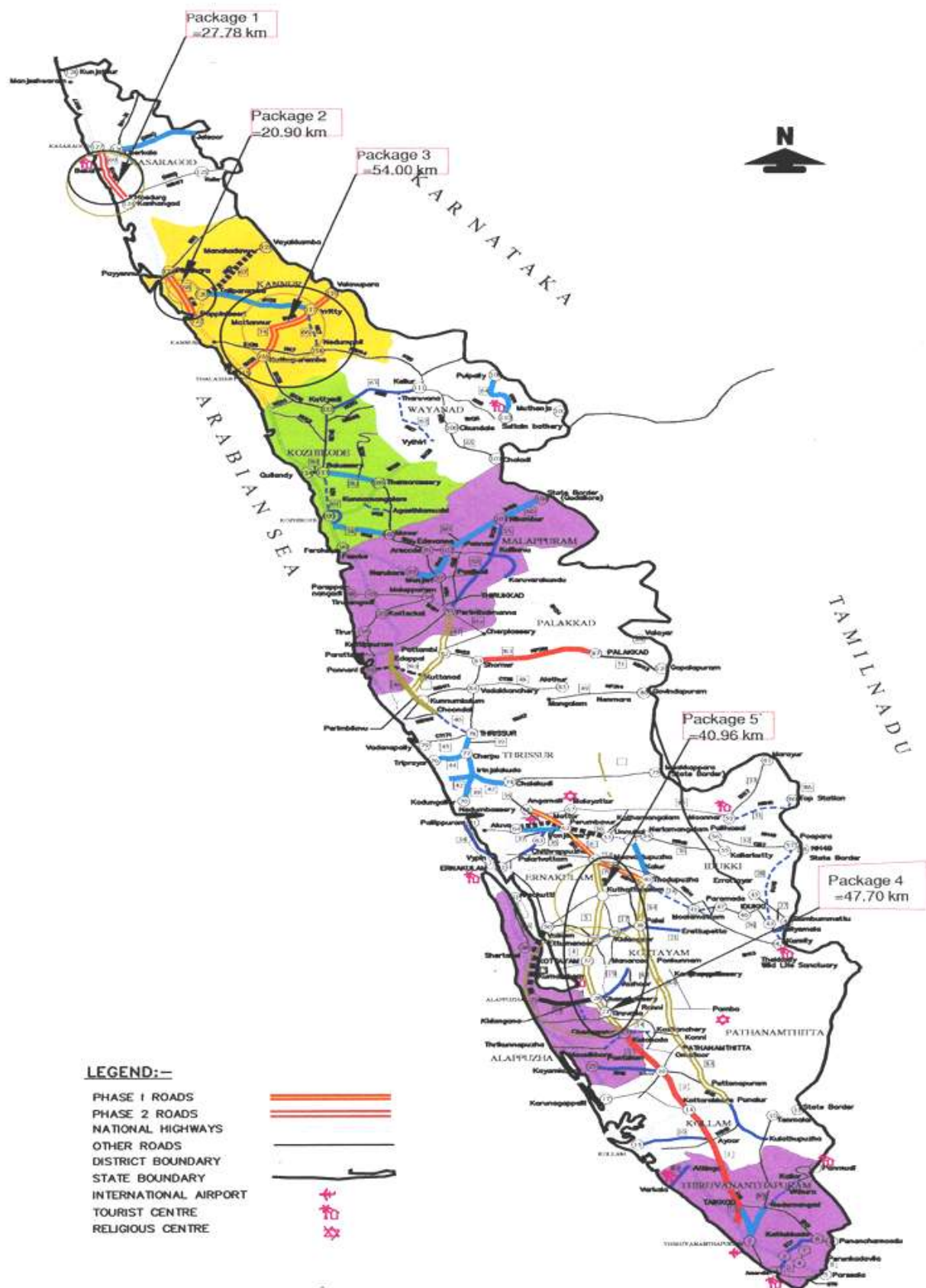
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# KERALA STATE TRANSPORT PROJECT-II

## PROJECT LOCATION MAP



## **Introduction**

Government of Kerala has decided to take up Phase-II upgradation component of KSTP as a standalone project, the KSTP-II. The project envisages the upgradation of 363 km of SH and MDR, Road Safety Management and Institutional Strengthening of PWD. The total Project cost is 445 million USD out of which 216 million USD is loan assistance from World Bank. The project loan agreement was signed on June 19, 2013 at the DEA Office, New Delhi. The loan effectiveness date is September 6, 2013. The project implementation period is five years, up to 31 December 2018 and the expected loan closing date is April 30, 2019.

## **1 Project Development Objectives**

The Project Development objective is to improve condition, traffic flow and road safety with a focus on vulnerable road user on Kerala State Core road networks comprising of 363 Km of state highways. The main beneficiaries of the Project will be the users living along the Project corridors mainly the travelling public, agricultural and industrial producers, consumers and local community. The main benefit is in the form of reduced transport bottlenecks, lower passenger freight transport costs, reduced travel time and improved road safety in terms of reducing severe crashes and injury. The roads identified for improvement passes through about 87 villages covering eight districts.

### **1.2 Outline Project Data:**

The upgrading works for six roads are included in the KSTP-II. The major items of works included are improvement to gradient, widening and strengthening the roads including minor realignments wherever essential, reconstruction of narrow bridges and culverts and improvements to drainage system. A Bypass also is proposed at Thiruvalla. The carriageway proposed are generally 2 lane with 1.50 mt. slow lanes on either side with hard shoulders and drains for a total width of 12 meters. The ROW is generally 15 Meters. The specification for civil works are as per MORTH & IRC standards.

The land acquisition for the project roads are almost completed except in the Perimbilavu- Pattambi- Perinthalmanna Road.

#### **1.2.1 Kasargod Kanhangad Road – SH 57**

Length - 27.76 km. Covers Kasargod, Pallikkara, manikoth and Kanhad areas and Tourist destinations at Bakel Fort and Ezhimala come under this stretch.

#### **1.2.2 Pilathara Pappinissery Road**

Length - 20.90 km. Covers Pilathara, Cheruthayam, Kunnupuram and Pappinissery.

### **1.2.3 Thalassery - Valavupara Road – SH 30**

Length 53.12 km. It is a part of SH 30, Thalassery – Coorg Road and passes through Koothuparambu, Mattannor, and Irutty.

### **1.2.4 Chengannur - Ettumanoor – Muvattupuzha – SH1**

Chengannur Ettumanoor Muvattupuzha stretch of SH-1, MC (Main Central) Road, one of the most important and oldest roads in Kerala, passing through Thiruvalla, Changanassery, Kottayam, Ettumanoor, Kuravilangad, Kuttathukulam.

Total length covered is 88 kms.

Road portion from Thiruvananthapuram (Venjaramoodu) to Chengannur was taken up under Phase I. Bypass at Thiruvalla also forms part of this stretch. The road passes through the plantation areas and provides access to the tourist centres Kumarakom and Thekkady. 13 bridges will be constructed in this stretch.

The improvement for this road portion is proposed in three construction packages, Chengannur- Ettumanoor (41 km), Ettumanoor-Muvattupuzha (47km) and Thiruvalla Bypass (2.4km). Reconstruction of three Major Bridges and Nine Minor Bridges are included in this stretch.

### **1.2.5 Punaloor - Ponkunnam – Thodupuzha – SH 8**

Punaloor - Ponkunnam and Ponkunnam - Thodupuzha stretches of SH 8 are the two stretches. Total road length is 132 kms.

Major areas covered are Punaloor, Pathanapuram, Manimala, Pala and Thodupuzha. Five Bridges will be constructed in this stretch. The road passes through Kollam-Pathanamthitta, Kottayam and Idukki districts. The portion from Ponkunnam – Thodupuzha is proposed under conventional item rate contract and work in progress. The portion from Punalur-Ponkunnam is proposed under PPP (modified annuity) arrangement. The bidding documents are prepared through the Transaction Advisor and pre-qualification of bidders completed. RFP is being forwarded to the pre-qualified bidders.

### **1.2.6 Perumbilavu - Pattambi – Perinthalmanna – SH 39**

Perumbilavu- Pattambi-Perinthalmanna Road Link of SH 39 is included in the package (Starts at Kuttinad Jn). The growth centre connected is Pattambi town. Length: 41 kms. The road passes through Thrissur, Palakkad and Malappuram Districts.



### 1.3 The details of approval are as under:

Project appraisal	- April 2013
Loan agreement signed	- 19 June 2013
Loan Effectiveness date	- Sept 6, 2013
Project cost approved by World Bank	- US\$445 ml
World Bank (IBRD) Loan Assistance	- US\$216 ml
Project implementation period	- 30 <sup>th</sup> Oct 2013 to Dec 31, 2018
Expected closing date (Loan)	- April 30, 2019

Fiscal Year	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
<b>Allocation</b>						
Annual	22	43	45	54	32	20
Cumulative	22	65	110	164	196	216

### 1.4 The Finance plus agenda of KSTP – II

1. Upgrading Punalur – Ponkunnam Road under PPP (Annuity)
2. Development of Model Safe Corridor Kazhakuttam – Adoor Section (80 km)
3. Development of Oxbow land (left out lands)

### 1.5 Overall Implementation:

*Project Staffing:* KSTP is managed by a Project Director, in the Rank of a senior level Chief Engineer assisted by one Chief Engineer, a Superintending Engineer and other engineers and officers. The Technical Wing headed by the Chief Engineer is responsible for activities related to engineering, environment, social and contract management. Further, the legal contract management cell is headed by a legal professional. KSTP has qualified and experienced Social and Environmental Experts and a Project Management Advisor. The Finance Wing headed by a Finance Controller (deputed from the Secretariat) has a qualified Finance Manager with support staff. On the field, the KSTP has Two Superintending Engineers, Five Divisions located at Kottarakkara, Muvattupuzha, Kuttippuram, Kannur, Ponkunnam each headed by an Executive Engineer to monitor project progress.

*Project co-ordination:* Govt. of Kerala has established two committees to monitor, coordinate, and expedite project activities. The *Project Steering Committee* chaired by the Chief Secretary, has its main functions to review and approval of recommendations regarding acceptance of tenders and taking the final decisions on all matters concerning procurement and monitoring of project activities. The members of the committee are

Additional Chief Secretary (Finance), Secretaries to Government, PWD, Law Department, Revenue, Chief Engineer, R&B, Project Director, KSTP, Chief Engineer (Projects) KSTP. There is an Evaluation Committee headed by the PWD Secretary and comprising the Project Director, KSTP and Chief Engineer (Projects), to make recommendations on any issues on procurement as may require approval of the Steering Committee.

## 1.6 Project Components

### 1.6.1 Road Upgrading Works:

This component will include upgrading 363 kms of strategically important State Highways to complete network connectivity in the state with the objective of reducing travel time between key socio-economic centers.

### 1.6.2 Road Safety Management:

This component will support the strengthening of the road safety management systems in Kerala with the objective of arresting the increase of crash fatalities in the state. This component will finance various initiatives on capacity building including a *safe corridor demonstration project, implementation of local level programs utilizing the challenge fund and advisory support for road safety activities*. The road section improved under KSTP-I from Kazhakuttom - Venjaramoodu-Adoor is proposed to be developed as Safe Corridor Demonstration Project (80 km)

### 1.6.3 Institutional Strengthening

The objective of this component is to improve the sustainability of Kerala's state road network with respect to its functional adequacy, financial viability and capacity of key state road sector institutions to deliver road infrastructure and services that are responsive to road user needs. The major initiatives include Modernization of Road Sector.

## 1.7 Project Description

### 1.7.1 Road Upgradation Under item Rate Contract

This component will include upgrading of 240 km of State Highways through FIDIC based input contracts and conventional item rate contracts as noted below.

1.	Pilathara - Pappinissery Road	–	20.90 km
2.	Kasaragod – Kanhangad Road	–	27.76 km
3.	Thalassery – Valavupara Road (Rearranged in two contracts)	–	53.10 km
4.	Ponkunnam – Thodupuzha Road	–	50.30 km

- |    |   |   |          |
|----|---|---|----------|
| 5. | Chengalur – Ettumanoor Road                 | – | 41.00 km |
| 6. | Ettumanoor – Muvattupuzha Road              | – | 47.00 km |
| 7. | Perimbilavu – Pattambi- Perinthalmanna Road | - | 41.00 km |

### 1.7.2 Road upgradation under PPP (Modified Annuity) mode

Punalur - Ponkunnam stretch (82 km) of Punalur – Thodupuzha Road

## 1.8 Sub Component A1 (US\$322 mn)

Consists of the following civil contracts:

Sl. No.	CONTRACT PACKAGE	NAME OF WORK	LENGTH (KM)
1.	KSTP-II/UG-1	Kasargod – Kanhangad	27.78
2.	KSTP-II/UG-2	Pilathara – Pappinisery	20.90
3.	KSTP-II/UG-3A	Thalassery – Kalarode	28.80
4.	KSTP-II/UG-3B	Kalarode - Valavupara	25.20
5.	KSTP-II/UG-4	Chengannoor - Ettumanoor	45.40
6.	KSTP-II/UG-4A	Thiruvalla Bypass along Chengannoor - Ettumanoor	2.3
7.	KSTP-II/UG-5	Ettumanoor- Muvattupuzha	40.96
8.	KSTP-II/UG-6	Ponkunnam - Thodupuzha	50
9.	KSTP-II/UG-7	Perumbilavu – Perinthalmanna (with limited scope as overlay in existing surface)	41

## 1.9 Summary of Contract Data for Road Upgrading Packages I, II, IIIA, IIIB, IVA, IV,V, VI, VII & SCDP (Funding agency – World Bank [IBRD])

	CONTRACT DATA	KSTP/PMT/UG – I	KSTP/PMT/UG – II	KSTP/PMT/UG – IIIA	KSTP/PMT/UG- IIIB	KSTP/PMT/UG – IVA	KSTP/PMT/UG – IV	KSTP/PMT/UG – V	KSTP/PMT/UG – VI	KSTP/PMT/UG – VII (overlay)	SCDP
1.	Name of Contract Package	Up gradation of the Road from Kasargod (Km 0+000) to Kanhangad (Km27+780) of SH 57	Up gradation of the Road from Pilathara (Km 0+000) to Pappiniseri (Km20+900) of SH 67	Upgradation of the road from Thalassery – Kalaroad (Km. 1+200 to 30 +00)	Upgradation of the road from Kalaroad to Valavupara	Construction of Thiruvalla Bypass along Chengannoor Ettumanoor Road (SH-1) from chainage 7+390 to 9+400	Up gradation of the Road from Chengannoor (Km 0+000) to Ettumanoor (47+700) of SH 1	Up gradation of the Road from Ettumanoor (Km 47+700) to Muvattupuzha (Km88+660) of SH 1	Upgradation of the Road from Ponkunnam – Thodupuzha	Maintenance of Perimpilavu-Pattambi-Perintalmann a road	MC Road – Safe Corridor Demonstration Project – BC overlay & Road Safety works – Kazhakuttom - Adoor
2.	Total length	27.78 km	20.90 km	30.00km	24km	2.3 km	47.70 km	40.96 km	50 km	39.37 km	78.65 km
3.	Supervision Consultant	Egis International S A in JV with Egis India Consulting Engineers Pvt. Ltd							MSV Inc	-	-
4.	Agreement	KSTP/PMT/PWD/205/2013 dated 28.02.2013								-	-
5.	Agreement Date	01.04.2013	01.04.2013	23.01.2016	29.04.2016	29.11.2013	15.09.2014	30.12.2013	05.05.2014	19.02.2016	05.12.2016
6.	Name of Contractor	M/s RDS Projects Ltd, Kochi	M/s RDS Projects Ltd, Kochi	M/s Dinesh Chandra R.Agarwal Infracon (P) Ltd	M/S GNV- EKK & Co, (JV) Kochi	M/s EKK & Co, Kochi	M/s. Delma-Sreedhanya (JV)	M/s NAPC Ltd, Chennai	M/s GHV-EKK (JV)	M/s K. Ravindran	M/s GHV-EKK (JV)
7.	Contract Price	Rs.133,05,79,485/-	Rs.118,29,77,833/-	Rs 156,33,51,422/-	Rs 209,68,48,832/-	Rs. 31,80,45,071/-	Rs. 293,58,17,987	Rs.171,49,62,293/-	Rs. 227,13,73,548	Rs. 8,11,45,066	Rs.146,67,38,745
8.	Notice to Commence	24.04.2013	23.04.2013	27-06-2016	16.08.2016	19.12.2013	25.11.2013	04.02.2014	10.06.2014	19.02.2016 / 03.03.2016	28.12.2016
9.	Contract Period	24 months	24 months	24 months	24 months	24 months	36 months	30 months	30 month	12 months	16 months

	CONTRACT DATA	KSTP/PMT/UG – I	KSTP/PMT/UG – II	KSTP/PMT/UG - IIIA	KSTP/PMT/UG- IIIB	KSTP/PMT/UG – IVA	KSTP/PMT/UG – IV	KSTP/PMT/UG – V	KSTP/PMT/UG – VI	KSTP/PMT/UG – VII (overlay)	SCDP
10.	Completion Date as per Contract	23 <sup>rd</sup> April 2015	22 <sup>nd</sup> April 2015	26 <sup>th</sup> June 2018	15 <sup>th</sup> August 2018	18 <sup>th</sup> December 2015	24 <sup>th</sup> November 2017	03 <sup>rd</sup> August 2016	09.12.2016	18.02.2017 / 02.03.2017	27.04.2018
11.	Revised Completion Date (As per EOT)	31 <sup>st</sup> March 2017	31 <sup>st</sup> March 2017			06 <sup>th</sup> September 2016	24 <sup>th</sup> November 2017	23 <sup>th</sup> March 2017	-	-	-
12.	Defect Liability Period	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days
15	Original 1 <sup>st</sup> Milestone	31 <sup>st</sup> March 2017	31 <sup>st</sup> March 2017	Km 1+200 – Km 11+200 – 26-09 -2017	Km 30+00 – Km 40+00 – 15-11 -2017	31 <sup>st</sup> May 2017	Completion of 10 Km. -24 <sup>th</sup> May 2016	10 Km. - BC level – 02.05.2015	Completed	Completed	40.35 kms 27.09.2017
	2 <sup>nd</sup> Milestone			Km 1+200 – Km 30+.00 – Whole of works 26-06 -2018	Km 30+00 – Km 55+200 – Whole of works 15-08 - 2018		Completion of 25 Km. -24 <sup>th</sup> November 2016	30 Km. - BC level - 30-06- 2017	Completed	Completed	38.30 kms 27.04.2018
	Completion Date						24 <sup>th</sup> November 2017	Km. 40+960 Whole of works - 27-10- 2017	Completed	02.03.2017	27.04.2018

## **1.10 Supervision Consultancy**

Under this component, 2 supervision consultancies CSC1 and CSC 2, Independent engineering services, and Transaction Advisory Service for PPP are included. Contract Agreement for Consultancy for CSC 1 for 190 Km of upgradation road has been executed with M/s Egis International in JV with Egis India Consulting Engineers Pvt. Ltd on 28.02.2013 and mobilized and in place. Egis has established rented office for Team Leader at Thiruvananthapuram near to Client's Office and started functioning from April 2013. Also RE offices at Kanhangad in Kasargod District for Package - 1, Pazhyangadi in Kannur District for package – II and at Uliyil near Mattannur in Kannur District for package – III, Pallam in Kottayam for Package IV, for Package V at Koothattukulam.

M/s MSV International USA is the selected consultant for Construction Supervision for the Ponkunnam – Thodupuzha stretch (50 km) CSC-2. They have established their Resident Engineer cum Team Leader's office at Ponkunnam. The length of road covered is 50 km and the assignment commenced on 15 May 2014.

## **1.11 Sub Component A2 (US\$ 91 mn)**

DPR for this sub component (Punalur – Ponkunnam – 82 Km under PPP). M/s L&T Ramboll, Chennai in association with M/s Fortress has been selected for the Transaction Advisory Services and activities in progress. The Investor Meet was held on March 2015 at Kochi. In the first bidding there was only qualified bidder and hence re-bid has been invited after obtaining No objection from Bank. In the re-bid eight offers have been received and are evaluated and submitted to Bank for no objection. The Bank's no objection received and clearance for RFP documents awaited.

## **1.12 Component B – Road Safety Management (US\$ 22 mn)**

The baseline survey for the proposed safe demonstration corridor has been completed by 'NATPAC' and report shared with Bank. M/s VicRoads, Australia has been selected as consultant for Road Safety Capacity Building and program management and activities in progress. The design activities on the Safe Corridor Demonstration Project (SCDP) are done (partially) and civil works in progress. The strengthening of KRSA is nearing completion. The challenge fund proposals are awaited.

## **1.13 Component C – Institutional Strengthening (US\$ 10 mn)**

### **1.13.1 Consultancy Services**

Procurement for the following Consultancy services was initiated. Some are completed and others are at different stages of progress



1. Consultancy for Road User Perception Survey has been completed for 363 Km of Project Roads through M/s Sherwood Consultants and report shared with Bank.
2. Consultancy for Prioritization and DPR Preparation for 1000 Km of Improvement of State roads was entrusted with M/s Egis India Consulting Engineers Pvt. Ltd and final report submitted. DPR for first 439 km roads has been completed. The preliminary project report for 1106 km was submitted to Government for posing for External Financial Assistance.
3. Consultancy for Strategic Option Study (SOS) for 8570 Km newly declared MDR was completed by M/s CDM Smith Associates Pvt. Ltd. Study report has been handed over to PWD, R&B and further action to improve these roads will be taken by them using their own funds.
4. Consultancy service for Developing Multi Model Integrated Transport Hub at 3 cities, Trivandrum, Kozhikode and Kochi was completed and report forwarded to Government. This report was also shared with NATPAC for consideration while preparing Comprehensive City Development Projects.
5. The Strategic Road Network Program was replaced with the following proposals as per the current priorities of the new Government
 

*Development of KHRI in to Centre of Excellence on Road Safety and Asset Management*

*Development of Public Information Management System integrating the existing Public Information Cell, the WINGS portal of PWD, the GIS etc.,*
6. It is proposed to award the assignment for developing Public Information System to C-DAC. Discussions were held with the PWD Engineers and ToR revised. This will be procured after obtaining World Bank clearance.
7. The Project Management Software has been installed and training given to CSC and KSTP Engineers. The PMS is operationalized.
8. The assignment for "Community Participatory Road Safety and Asset Management" was initially held up due to court order. The Bank has issued no objection for rebidding. The court has passed verdict and Steering Committee decided to re-bid for the assignment. The ToR was modified and approved by the Bank. The re-bidding was initiated. In response to this eight applications received and evaluation finalized. The RFP is being forwarded to the Bank for approval.
9. The periodical Road User Satisfaction Survey is proposed to be conducted by November 2017

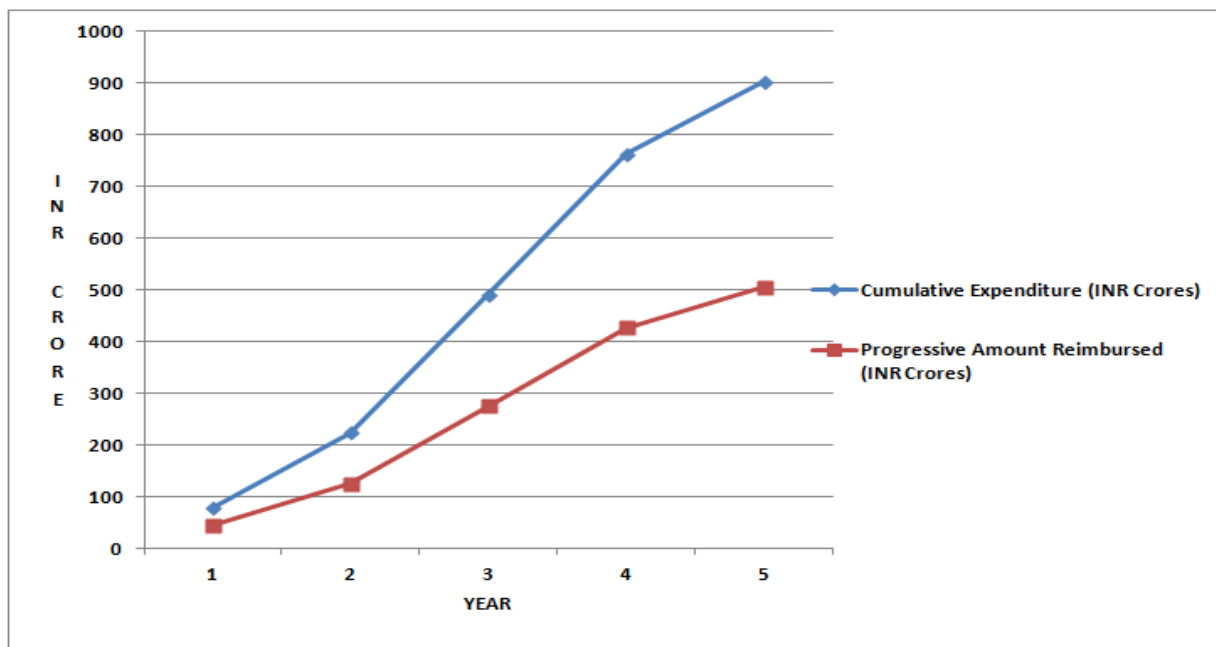
## 1.14 Project Cost and Disbursement

Sl. No	Claim	Date	EXPENDITURE	AMOUNT CLAIMED	DISBURSED
			in Lakh	in Lakh	USD in millions
			TOTAL		
	Front end fee				0.54
1	Retroactive	15.06.12 to 15.06.13	1,863.95	1,043.00	1.69
2	1st Quarter				
3	2nd Quarter	01.07.13 to 30.9.13	1,355.79	764.00	1.23
4	3rd quarter	01.10.13 to 31.12.13	1,906.01	1,071.00	1.71
5	4th quarter	01.01.14 to 20.03.14	2,696.00	1,510.00	2.5
		21.03.14 to 31.03.14	53.79	30.00	0.05
6	1st Quarter	01.04.14 to 18.06.14	1,826.41	1,023.00	1.7
		19.06.14 to 30.06.14	14.69	8.23	0.02
7	2nd Quarter	01.07.14 to 30.09.14	1,405.61	787.00	1.27
8	3rd quarter	01.10.14 to 31.12.14	3,790.21	2,124.00	3.44
9	4th quarter	01.01.15 to 28.02.15	3,706.35	2,076.00	3.32
10	4th quarter	01.03.15 to 31.03.15	3,704.89	2,076.00	3.32
11	1st Quarter	01.04.15 to 16.06.15	3,534.14	1,991.00	3.14
12		17.06.15 to 30.06.15	154.40	86.00	0.14
13	2nd Quarter	01.07.15 to 30.09.15	3,527.06	1,977.00	3.04
14	3rd quarter	01.10.15 to 31.12.15	10,338.17	5,790.00	8.51
15	4th quarter	01.01.16 to 13.03.16	6,413.18	3,592.00	5.38
16		14.03.16 to 31.03.16	2,861.91	1,603.00	2.41
17	1st Quarter	01.04.16 to 10.06.16	2,037.40	1,141.00	1.69
18		11.06.16 to 22.06.16	2,957.89	1,656.00	2.45
19	2nd Quarter	23.06.16 to 31.08.16	4,786.10	2,680.00	4.01
20		01.09.16 to 30.09.16	3,981.82	2,230.00	3.26
21	3rd quarter	01.10.16 to 31.12.16	4,079.22	2,284.00	3.39
22	4th quarter	01.01.17 to 31.03.17	9,237.79	5,173.00	8.04
23	1 <sup>st</sup> quarter	01.04.2017 to 31.05.2017	4292.74	2404.00	3.72
24	1 <sup>st</sup> quarter	01.06.2017 to 30.06.2017	3933.36	2203.00	3.44
25	2 <sup>nd</sup> quarter	01.07.2017 to 30.09.2017	5897.52	3303.00	-

### Progressive Expenditure and amount Reimbursed – Status as on August 2017

Year	Cumulative Expenditure (INR Crores)	Progressive Amount Reimbursed (INR Crores)
2013-14	78.75	44.42
2014-15	223.24	125.40
2015-16	491.53	275.51
2016-17	762.33	426.83
*2017-18	903.56	505.86

\*includes Rs. 33.03 crores claimed for II Quarter which is yet to be reimbursed



**Estimated Actual loan allocation and disbursement received  
(Bank's Financial Year (January to December) (US\$ million)**

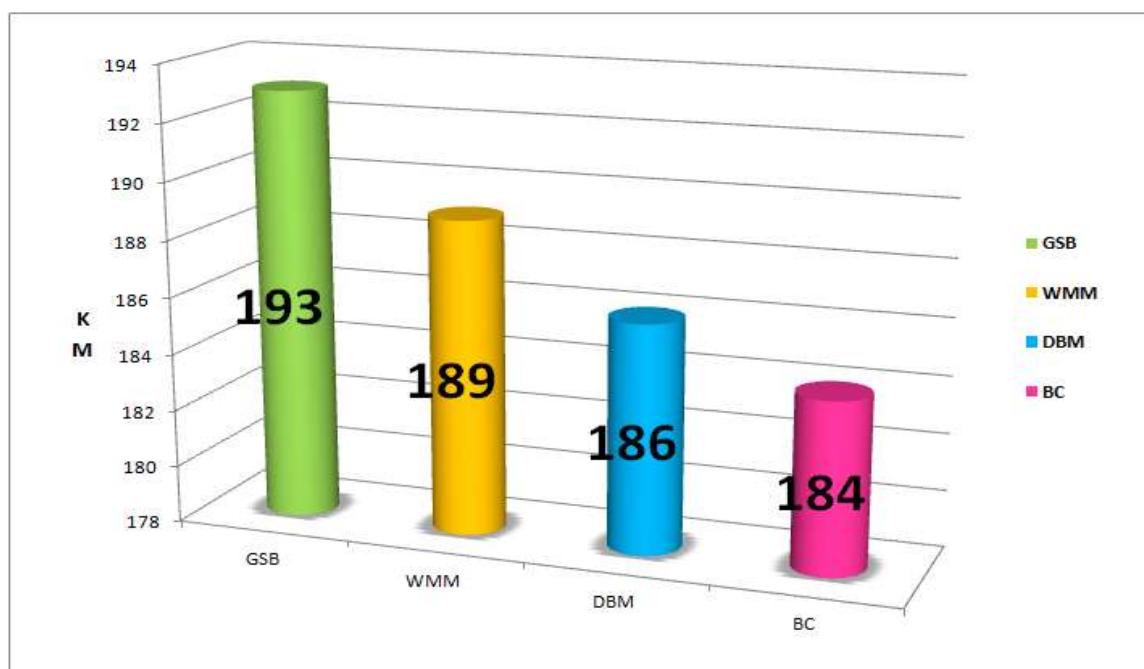
Fiscal Year	FY 2014 (Jan-Dec)	FY 2015 (Jan-Dec)	FY 2016 (Jan-Dec)	FY 2017 (Jan-Dec)	FY 2018 (Jan-Dec)	FY 2019 (Jan-Dec)
<b>Allocation</b>						
Annual	22	43	45	54	32	20
Cumulative	22	65	110	164	196	216
<b>Disbursement</b>						
Received	14.17	21.46	22.59	*15.20		
Cumulative	14.17	35.63	58.22	73.42		

\* Disbursement up to June 2017

\*\* Cumulative up to June 2017

Note: The claims for July to September forwarded to CAAA. This disbursement is expected as US\$ 5.08 million (approximately).

## Physical Progress of Finished Pavement Works (KM)



## Executive Summary

### 1.15 Upgradation Works

The work for Packages 1, 2, 4, 4A, 5 and 6 are in progress. The work in Package 3 was terminated due to poor performance of the contractor, and are arranged as 3A and 3B. The work for Package 8 is under PPP (Hybrid Annuity) and bidding is in progress. The PQ bids are been evaluated. The work for Package 8 is not taken up as upgradation, due to non availability of land. This was taken up as Heavy Maintenance within the available land. The following are the 9 upgradation Contract packages:

Sl. No.	CONTRACT PACKAGE	NAME OF WORK	CONTRACTOR
1.	KSTP-II/UG-1	Kasargod – Kanhangad	M/s RDS Projects, Kochi
2.	KSTP-II/UG-2	Pilathara – Pappinisery	M/s RDS Projects, Kochi
3.	KSTP-II/UG-3A	Thalassery – Kalarode	M/s Dinesh Chandra R. Agrwal
4.	KSTP-II/UG-3B	Kalarode – Valavupara	M/s EKK Infrastructure Pvt. Ltd.,
4.	KSTP-II/UG-4	Chengannoor - Ettumannoor	M/s Delma - Sreedhanya JV
6.	KSTP-II/UG-4A	Thiruvalla Bypass along (Chengannoor – Ettumannoor)	M/s EKK & Co, Kochi.
5.	KSTP-II/UG-5	Ettumannoor- Muvattupuzha	M/s NAPC Ltd, Chennai
7.	KSTP-II/UG-6	Ponkunnam - Thodupuzha	M/s GHV – EKK JV
8.	KSTP-II/UG-7	Perumbilavu – Perinthalmanna (EPC)	LA initiated
9	KSTP-II/UG-8	Punalur – Ponkunnam (PPP)	Bidding to identify concessionaire in progress

The works are being executed under FIDIC (5th edition) Conditions of Contract. The work involves improvement of State Highways including geometrical improvements and

realignments to standard 2 lane of 7 m carriageway and 1.5 m paved shoulders. The Construction Works include:

- Widening the existing pavement where it is less than design width;
- Scarification, clearance, earthworks,
- Granular sub-base, wet mix macadam base course, bituminous mix surfacing,
- Construction of overlays to the existing pavement, inclusive of regarding to a designed vertical profile;
- Geometrical realignments at specific locations;
- Construction of paved shoulders;
- Construction and maintenance of diversion roads
- Construction of lined and unlined longitudinal drains, covered drains and footpaths in urban areas;
- New culverts, new bridges and rehabilitation of existing bridges/culverts and protective works
- Provision of road signs and markings;
- Provision of traffic safety features - road furniture and other road safety appurtenances,
- Routine maintenance and maintenance during Defects Rectification Period.
- Environmental protection measures and Social enhancement works/ landscaping works etc.

## 1.16 Summary of Progress (works)

The following tables present the summary of progress in each contract package during the month under report August 2017.

Contract Packages	Contract value (Rs. Crores)	Achieved cumulative percentage up to Sep 2017			Balance period (month)
		Financial		Physical (%)	
		Gross (%)	Actual Paid (%)		
KSTP/PMT/UG-I	1,33.05	75.07	70.00	78.25	
KSTP/PMT/UG-II	118.20	71.60	66.30	74.19	
KSTP/PMT/UG-III-A	156.59%	10.03	20.00	19.50	09
KSTP/PMT/UG-III-B	209.58	26.85	34.00	25.72	11
KSTP/PMT/UG-IV	293.58	80.75	71.00	80.20	02
KSTP/PMT/UG-IVA*	31.80	63.52	54.00	63.00	-
KSTP/PMT/UG-V	171.49	82.71	76.00	85.56	-
KSTP/PMT/UG-VI	227.13	119.67	93.00	100	
KSTP/PMT/UG-VIII (done as overlay)	08.00	100	100	100	-
Safe Corridor Demonstration Project (Civil Works)	146.67			6	7

\*Work stopped for want of revision

### 1.17 Details of Supervision Consultancy Assignments:

Name of consultant	Contract signed	Contract Period	Commencement Date	Contract Amount (Rs.)	Work Package
CSC-1 – M/s Egis International in JV with M/s Egis India Pvt. Ltd.	28.02.2013	42 months	04.04.2013	18,36,04,600	I, II, III, IV, IVA & V (190 km)
CSC-2 – M/s MSV International USA	14.05.2014	30 months	14.05.2014	4,41,88200	VI (50 km)

### 1.18 General Issues:

The major factors that hindered the progress of works at initial stage were:

1. Delay in obtaining statutory clearances for erection of plants and crushers from the State Pollution Control Board, Mining and Geology Department and local bodies.
2. Unprecedented unseasonal rains affected adversely works in all the contract Packages in the initial stages
3. Resistance in identifying, erecting and operating crushers and quarry from the local people.
4. Poor cash flow problems with the contractors at the initial stages
5. Shortage of machinery, labour force in most of the contracts.
6. Frequent changes made in key personnel in some of the contracts by the contractor
7. Migrant labours working in all packages and labourers not available during festival season for long duration.
8. Lack of planning and managerial issues in contracts I, II & V
9. Work Contract-III terminated. Balance works procured under two contract (3A & 3B)
10. Delay in getting Environmental Clearance from Government Agency for excavation and conveyance of earth from borrow area.

Almost all these issues are now sorted out and the works are in progress now. Due to rains there had been interruptions in works during this quarter. Contract Package-III was terminated due to poor performance of the contractor and rearranged as IIIA and IIIB and work in progress.



## THE FOLLOWING SECTIONS DESCRIBE CIVIL WORKS CONTRACT PACKAGES IN DETAIL:

### 2 Current Status of Works

#### 2.2 Contract Package I

Upgradation of Road from Kasargod to Kanhangad of SH 57



#### Scope of Works

Viaduct	–	1
Major Bridge	–	2
Minor Bridge	–	2
Widening Bridge	–	2
New culverts	–	16
Widening Slab culverts	–	16
Reconstruction	–	9
Foot path	–	6.7 Km
Drain	–	22.20 Km
Solar Lights		

#### 2.3 Contract Details

Letter of Acceptance	::	06.03.2013
Date	::	06.03.2013
Agreement Date	::	01.04.2013
Name of Contractor	::	M/s RDS Projects Ltd, Kochi
Contract Price	::	Rs.133,05,79,485/-
Notice to Commence	::	24.04.2013
Total Length	::	27.78 Km
Contract Period	::	24 months
Completion Date	::	23-04-2015 extended to 31.03.2017
Defect Liability Period	::	365 days
1 <sup>st</sup> Milestone	::	Km. 0+000 – Km. 10+000
2 <sup>nd</sup> Milestone	::	Km. 0+000 – Km. 20+000
3 <sup>rd</sup> Milestone	::	Km. 0+000 – Km. 27+780

## 2.4 Progress of Works for this month

### 2.4.1 Progress up to month ending August 2017

SI No.	Item	Quarterly Progress	Cumulative Progress	Balance Work
	<b>Main Carriageway</b>			
1	DBM	0.060 Km	25.965 Km	1.815Km Kanhangad
2	BC	0.060 Km	25.965 Km	1.815Km Kanhangad
	<b>Service Road Kanhangad</b>			
3	GSB	0.180 Km	0.685 Km	2.805 Km
4	WMM	0.245 Km	0.595 Km	2.895 Km
5	DBM	0.210 Km	0.560 Km	2.930 Km
6	BC	0.0 km	0.0 km	3.490 Km (1.745 km both side)
	<b>Structures</b>			
7	Viaduct at 3+392		Completed and opened to traffic	
8	Chithari Bridge @ 18+400		Completed and opened to traffic.	
9	Culverts	0	35	
10	Drain – Casting	311.0 m	18170 m	4172 m
11	Drain – Placing	2746 m	16,660m	1912 m

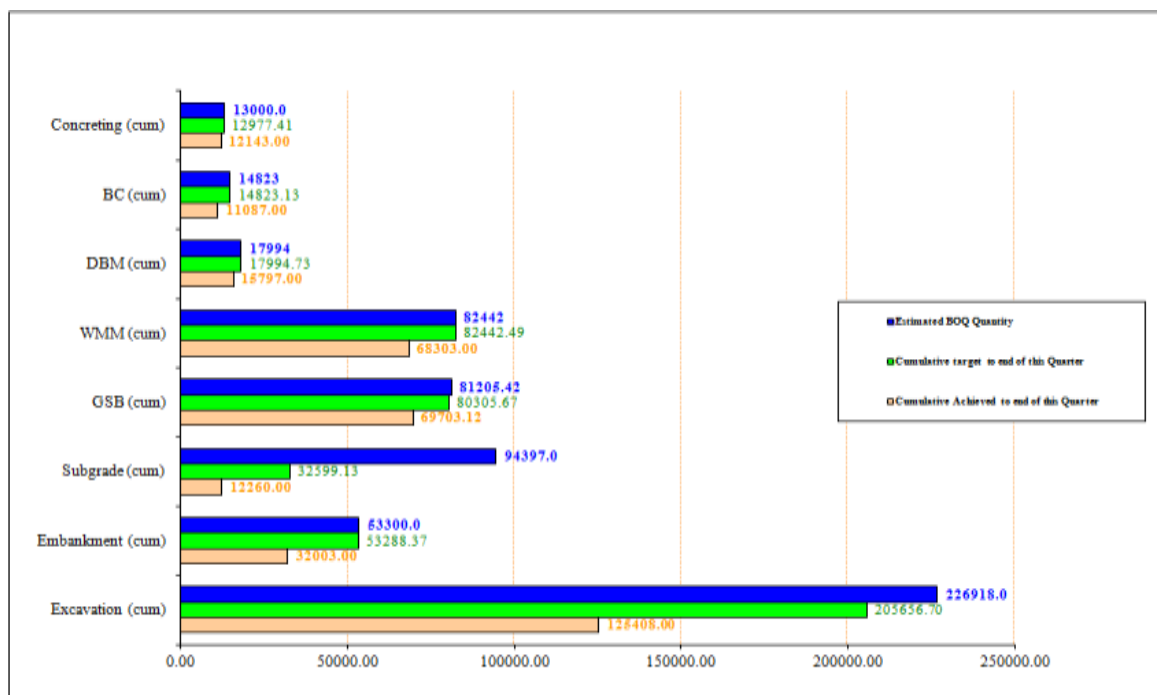
## 2.5 Schedule of Culverts and Drainage works

Nature of work	Total number	No. dwgs approved	Number completed	Number in progress	Number remaining	Total Number	No. dwgs approved	Number completed	Number in progress	Number remaining	Total number	No. dwgs approved	Number completed	Number in progress	Number remaining
<b>Culverts</b>	<b>Milestone - I (1 to 2.8Km and 3.80 to 12.0Km )</b>					<b>Milestone - II (12 to 22Km.)</b>					<b>Milestone - III (0 to 1.0Km, 2.80 to 3.80Km and 22 to 27.78Km.)</b>				
Widening Slab/Box Culverts	9	9	9	-	-	-	-	-	-	-	1	1	1	-	-
Reconstruction Slab/Box	7	7	7	-	-	7	7	7	-	-	2	2	2	-	-
New Box Culvert/Pipe culvert	6	6	6	-	-	2	2	2	-	-	1	1	1	-	-
<b>Total culverts</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>-</b>	<b>-</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>-</b>
Bridges/ROB Retained**	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Bridges Widening ***	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-
New Bridges/Viaduct*	-	-	-	-	-	1	1	1	-	-	1	1	1	-	-

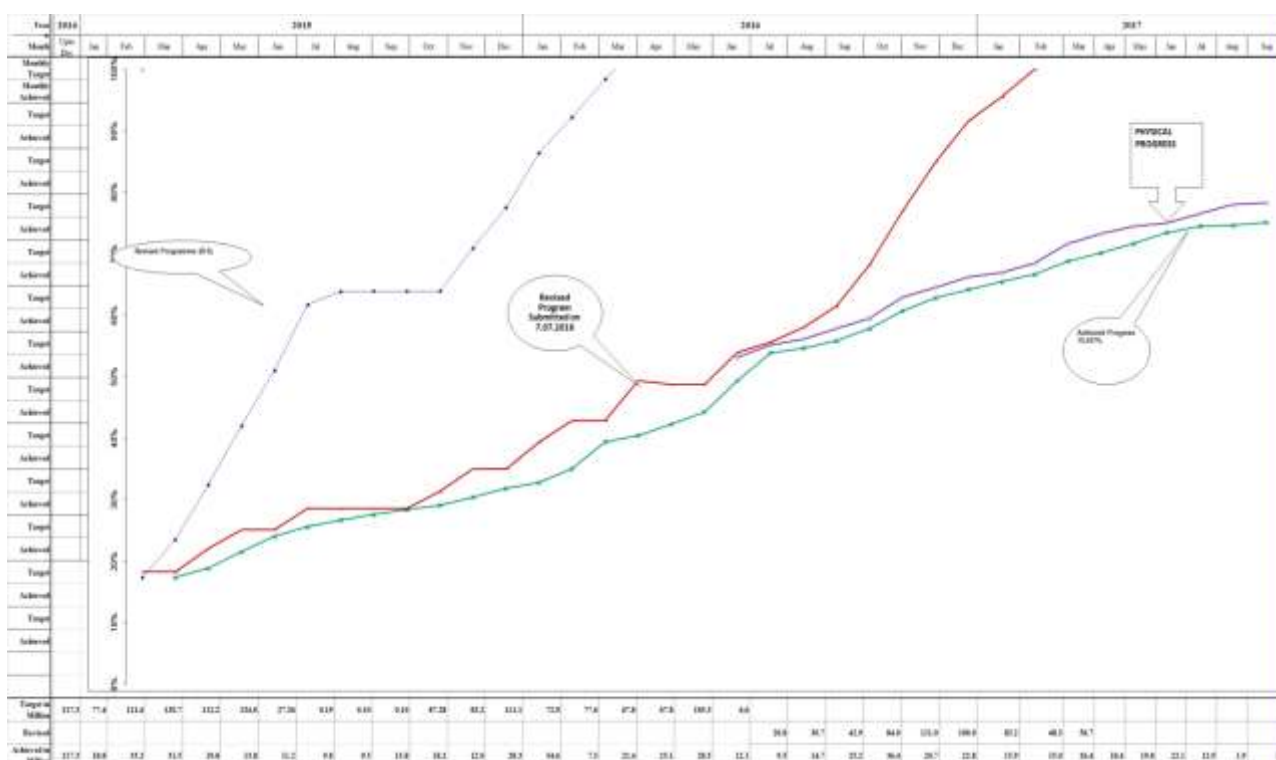
## 2.6 Progress Considering the Contract price up to this Quarter ending Sep. 2017

Up to previous Quarter (Rs. Cr)		This Quarter		Cumulative to end of this month (gross) (Rs. Cr)		Physical Progress
Target	Achieved	Target	Achieved	Target	Achieved (Financial)	
100%*	73.43**	*	1.64%	100%*	75.07%	78.25%

## 2.7 Physical progress Bar Chart



## 2.8 S-Curve



## 2.9 Strip map

[illegible]



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## **2.10 Potential Issues**

- The extended time for completion of works ended on 31.03.2017. However, finishing works are incomplete including junction improvement in complete works and snags.
- The work of main carriage way and service road works in Kanhangad town are not completed. The work in Kanhangad town has been unduly delayed due to the delay in shifting of OFC cables belonging to BSNL and UG cable belonging to KSEB and public interference to works.

## **2.11 Payments to the Contractor**

Mobilization advance, Equipment advance and Interim payment Certificate for works up to (IPC-20) was paid to the Contractor amounting to Rs. 93.65 crores. Timely payments are released to the contractor. The Steering Committee held on 28.06.2014 lowered the threshold limit of minimum IPC amount for Rs. 1.5 crores from Rs. 3.00 crores to facilitate the cash flow of contractor. Payment towards variation and other bills are under processing.

## **2.12 Implementation of EMP**

### **2.12.1 Environment Management at work sites**

Contractor completed all road works except the roads in Kanhangad town. The works of parking area, bus shelter, balance street lighting is remaining. Some more drain works and culvert in Kanhangad town is remaining to be completed. The land slide at Kasargode removed. The noise barrier construction in front of kottakulam school is in progress.

The lost access to the Homoeopathy hospital at Kanhangad town reinstated. The safety of construction site is a primary concern and requires further improvement. Pavement markings, fixing of sign boards, safety barriers installation bus bay construction, parking area developments started and halted due to rains.

The enhancement works in front of the Thrikanad temple is pending. Tree planting construction of bus bay footpath is to be completed at this location.

World Bank team visited site on 5<sup>th</sup> June and express concern on the progress and laxity on work zone safety. Land scape and tree plantation in Kanhangad town has to be done along with other works. The proposal in this regard is pending with the contractor.



## 2.12.2 Traffic Management and Road Safety Measure

The Contractor has not provided the required safety precautions such as flags, safety signboards, traffic cones, blinkers and safety tapes at the work zone at Kanhangad town.

## 2.13 Quality Control Tests

### 2.13.1 Material for Structure

Tests Performed	Standard used	Standard limits	Test Frequency	Tests conducted up to Previous Quarter			Tests conducted during this Quarter			Total tests up to end of this Quarter		
				No. of Test Conducted	Passed	Failed	No. of Test Conducted	Passed	Failed	No. of Test Conducted	Passed	Failed
<b>STONE</b>	MORT&H 1004											
Water Absorption	IS:1124	Max 2%	lot	1	1					1	1	
<b>CEMENT</b>	MORT&H 1006		lot									
Fitness	IS:269-1976		* *	129	129		2	2		131	131	
Standard Consistency	* *		* *	129	129		2	2		131	131	
Soundness	* *		* *	5	5					5	5	
Compressive Strength	* *		* *	5	5					5	5	
3 day strength test	* *	27 Mpa	Sets	127	127		2	2		129	129	
7 day strength test	* *	37 Mpa		127	127		4	4		131	131	
28 day strength test	* *	53 Mpa		127	124	3	4	4		131	128	3
Initial Setting time	IS:4031(Part 1)	< 30 min		129	129		2	2		131	131	
Final Setting time	IS:4031(Part 5)	> 600 min		129	129		2	2		131	131	
<b>COARSE/FINE Aggregates</b>	MORT&H 1007/1008											
Gradations	IS:2386(Part 1)		lot	2555	2555		37	37		2592	2592	
Flakiness Index	* *	min 35%	* *	1313	1313		37	37		1350	1350	
Deleterious Mat./Organic Imp.	" (Part 2)		* *									
Water Absorption/Spec.Grav.	" (Part 3)	Max 2%	* *	4	4					4	4	
Bulk Density	* *		* *									
Impact or Crushing Aggr.Value	" (Part 4)	Max 30%	* *	936	936		31	31		967	967	
Los Angeles Abrasion Value	* *		* *									
Soundness	" (Part 5)		* *									
Alkali Aggregate Reactivity	" (Part 7)		* *									
Surface Moisture Content	" (Part 3)		* *	290	290		34	34		324	324	
Fitness Modulus of FA				898	898		31	31		929	929	
<b>STEEL</b>	MORT&H 1009											
Verification of conformity( Yield stress,U.T.S, % Elg./Unit Wt.Dia. Test Etc	IS:432/1030/1785/1786		lot	4	4					4	4	
	2004/2062											
<b>WATER</b>	MORT&H 1010											
Verification of conformity	IS:3025		lot	4	3	1				4	3	1
<b>CONCRETE ADMIXTURE</b>	MORT&H 1012											
Verification of conformity	IS:1199/6925/9103		lot	4	4					4	4	
<b>MIXING CONCRETE</b> (Trial mixes)	MORT&H 1700											
3 Test Cubes/Slump test	IS:516/1199		MORT&H 1700-8									
Grade 15: 7 Days	* *		* *	19	19					19	19	
28 Days	* *			23	23					23	23	
Grade 20: 7 Days	* *		* *	31	31					31	31	
28 Days	* *			21	21					21	21	
Grade 25:(RCC) 7 Days	* *		* *	24	24					24	24	
28 Days	* *		* *	21	21					21	21	
Grade 25:(Dmin) 7 Days	* *		* *									
28 Days	* *		* *	3	3					3	3	
Grade 30: 7 Days	* *		* *	3	3					3	3	
28 Days	* *			6	6					6	6	
Grade 35:(RCC) 7 Days	* *		* *	36	36					36	36	
28 Days	* *		* *	42	42					42	42	
M-40: 7 Days	* *		* *	6	6					6	6	
28 Days	* *		* *	12	12					12	12	
<b>CONCRETE CUBE STRENGTH</b>	MORT&H 1700/900											

M-15 : 7 Days		11.25 N/mm2	set	323	323		12	12		335	335	
28 Days		15 N/mm2	" "	505	494	11	40	40		545	534	11
M-20 : 7 Days		15 N/mm2	" "	208	206	2	5	5		213	211	2
28 Days		20 N/mm2	" "	250	249	1	12	12		262	261	1
M-25 : 7 Days		18.75 N/mm2	set	521	519	2				521	519	2
28 Days		25 N/mm2	" "	938	931	7				938	931	7
M-25(Drain): 7 Days		18.75 N/mm2	" "	807	806	1	36	36		843	842	1
28 Days		25 N/mm2	" "	1265	1255	10	65	65		1330	1320	10
M-35: (Pile) 7Days		26.25 N/mm2	" "	2	2					2	2	
28 Days		35 N/mm2	" "	4	4					4	4	
M-35: (Pile Cap) 7 Days		26.25 N/mm2	" "	70	70					70	70	
28 Days		35 N/mm2	" "	143	143					143	143	
M-30: 7 Days		26.25 N/mm2	" "	17	17					17	17	
28 Days		35 N/mm2	" "	53	53					53	53	
M-40: 7 Days		30.00 N/mm2	" "	86	86					86	86	
28 Days		40 N/mm2	" "	280	274	6				280	274	6
STONE MASONRY	MORT&H 1400			17	15	2				17	15	2
3 Test Mortar Cubes	IS-2250		MORT&H 1407	26	18	8				26	18	8

## 2.13.2 Material for Pavement

Common Tests Performed	Indian / Foreign Standard	Test Frequency 1 test per	Total tests up to end of Previous Month			Tests during this Month			Total tests up to end of this Month		
			Tested	Passed	Failed	Tested	Passed	Failed	Tested	Passed	Failed
<b>EARTHWORK</b>	<b>MORT&amp;H 305/903.2</b>	Emb./Subgrade									
Gradation/Sand content	IS2720(Part 4)	1500 cum	203	203					203	203	
Atterberg Limits	" (Part5)	" "	196	194					196	194	
Proctor	" (Part 8)	" "	204	204					204	204	
CBR	" (Part 16)	3000 cum	137	137					137	137	
Free Swell Index	" (Part 40)	" "	191	190	1				191	190	1
Field Density/Compaction	" (Part 28)	500/1000 sqm	7026	6867	156	78	78		7104	6945	156
<b>SUBBASE (GSD) granular material</b>	<b>MORT&amp;H 401/900.3.1</b>										
Gradation	IS2720(Part 4)	200 cum	535	534	1	17	17		552	551	1
Atterberg Limits	" (Part5)	" "	535	535		17	17		552	552	
Proctor			6	6					6	6	
Deleterious content											
10% fine value			42	42		2	2		44	44	
Water Absorption			1	1					1	1	
Field Density/Compaction	" (Part 28)	500 sqm	3225	3118	101	96	96		3321	3214	101
CBR if grading (II or III)			86	86		1	1		87	87	
<b>BASE (WMM)</b>	<b>MOST 406/900.3.4</b>										
Gradation & Belt Samples	IS 2386 (Part 4)	200 cum	978	976	2	25	25		1003	1001	2
Flakiness/Elongation Value	" (Part1)	" "	469	469		25	25		494	494	
Aggregate Impact Value / LAAV	" (Part4)	" "	474	474	12	25	25		499	499	12
Atterberg Limits	" (Part4)	100 cum	910	910		25	25		935	935	
Los Angeles Abrasion Value	" (Part1)	" "	161	161		2	2		163	163	
Proctor			36	36					36	36	
Water Absorption			35	35					35	35	
Field Density/Compaction	" (Part 28)		4444	4331	107	126	126		4570	4457	107
<b>PRIME/TACK COAT</b>	<b>MORT&amp;H 502/503/900.3.4</b>										
Rate of Spread	IS217/8887	500 sqm	1764	1764		50	50		1814	1814	
<b>DENSE BITUMINOUS MACADAM</b>	<b>MORT&amp;H 504/900.4.4</b>										
Aggregate Gradation (Individual, Combined + GSA Mix)	" (Part 1)		1704	1704		84	84		1788	1788	
Aggregate Impact Value (AIV)/ LAAV	IS-2386 (Part 4)	50 cum	313	313		7	7		320	320	
Flakiness/Elongation Value	" (Part 1)	" "	384	384		7	7		391	391	
Quality of Binder	IS-73		22	22					22	22	
Coating and Stripping	IS 6241		4	4					4	4	
Binder Content (ASTM - 2172-95)			326	326		14	14		340	340	
Marshall Stability Test	ASTM D 1559-02T	Sets	232	232		14	14		246	246	
Specific Gravity /Water Absorption	IS 2386(Part-3)		18	18					18	18	
Soundness	IS 2386(Part-5)	2 per day									
Bulk Density	IS-2386(Part 3)	" "									
Field Density/Compaction (Core density)	ASTM D 2041-95		1097	1092	5	113	113		1210	1205	5
Sand Equivalent Value for FA											
Plasticity Index											
<b>BITUMINOUS CONCRETE</b>	<b>MORT&amp;H 504/900.4.6</b>										
Aggregate Gradation (Individual, Combined + GSA Mix)			791	791		50	50		841	841	
Aggregate Impact Value/ LAAV	IS-2386 (Part 4)	50 cum	226	226		5	5		231	231	
Flakiness/Elongation Value	" (Part 1)	" "	238	238		5	5		243	243	
Marshall Stability	ASTMD 1559	2 tests per day	218	218		10	10		228	228	
Quality of Binder											
Binder Content	IS-2386 (Part 4)	" "	195	195		10	10		205	205	
Field Density/Compaction (Core density)	Core Samples	250 sqm	1057	921		73	73		1130	921	
Plasticity Index											

## 2.14 Accident Report (July – Sept 2017)

Sl	Month	Police Station	Date	Day	Time	Wheather	Location with KM	Person Status after Accident			Cause Of Accident	Type of Vehicles involved	Remarks
								Minor Injury	Major injury	Fatal			
1	July '2017	Kasargode	12.07.2017	WED	23.30		Chemmanadu Bridge,3+	1			Overspeed	Bike-KL 14 F77,Car KL 60 J-1144	Car hit to Bike
2	July '2017	Bakel	07.07.2017	FRI	17.55		Kattangal, Near petrol pump,6+250			1	Overspeed /Lost control	KL 60 M 1736	Car Hit to Pedastrian
3	July '2017	Bakel	09.07.2017	SUN	18.00		Melparmba, near lulu english medium school, 5+100	2			Overspeed	Car-KL 14 S 0306,Bike-KL 14 R 8114	Car Hit to Bike
4	July '2017	Bakel	16.07.2017	SUN	14.30		Kattangal,Kalanadu village, 7+480	2			Overspeed	Car-HR 16 K 0126	Car HitTo Pedastrian
5	July '2017	Bakel	18.07.2017	THU	10.30		Uduma, fortland ,9+200	1			Overspeed	Auto-KL 60 G 3202	Auto Hit To Pedastrian
6	July '2017	Bakel	21.07.2017	FRI	4.30		Kottikulam, near Masjid,10+945		1		Overspeed	Car-KL 14 P 1047	Car Hit To Pedastrian
7	July '2017	Bakel	21.07.2017	FRI	6.30		Kottikulam,11+550	1			Overspeed/Carless drive	KL 60 C 8535	Car hit to Pedastrian
8	July '2017	Bakel	23.07.2017	SAT	11.30		Vattathur	1			Overspeed	KL 14 N 6695	Fell down from moving Bike
9	July '2017	Kasargode	27.07.2017	THU	15.35		Mundamkulam	1			Overspeed	Bike(KL 14 M569),KL 14 974(Pick up)	Pick up ht to bike

SI	Month	Police Station	Date	Day	Time	Whether	Location with KM	Person Status after Accident			Cause Of Accident	Type of Vehicles involved	Remarks
								Minor Injury	Major injury	Fatal			
1	Aug-2017	Bakel	04.08.2017	FRI	17.30		Keekan Grama, Thekkupuram	1			Overspeed/Carless drive	Car-KL 60 G3724, Pick up KL 14 H 9716	Pick up hit to car, car rider fell down road and injured
2	Aug-2017	Hosdurg	07.08.2017	MON	16.50		Kovvalpally, Kanhangadu		1		Overspeed	KL59L8755	vehicle Hit to Pedestrian
3	Aug-2017	Hosdurg	12.08.2017	SAT	22.10		Kottacheri Circle, 24+000	1			Overspeed	KL 60 H 8950 Scooter	Scooter Hit to Traffic Police SI (on Duty)
4	Aug-2017	Bakel	18.08.2017	FRI	17.15		Pallikkara, Infront of Petrol Pump, 15+440	2			Overspeed	KL 13 w 903 Parcel lorry, KL60 L6929 (Auto)	Lorry Hit to Auto and passengers injured
5	Aug-2017	Hosdurg	22.08.2017	TUE	6.45		Hosdurg Grama, in front of Puthiyakotta Tele. Exchange, 25+100	1			Overspeed/Carless drive	KL51 B8936 (Lorry) KL60K3502 (Auto)	Lorry Hit to Auto (Parked at road side) and Auto Driver got injured
6	Aug-2017	Hosdurg	24.08.2017	THU	14.05		Kanhangadu South	1			Overspeed	KL 13T 6454 (Car) KL60 L 6059 (Car)	Car hit on other car
7	Aug-2017	Hosdurg	29.08.2017	TUE	8.45		Kanhangadu Town, near Real Hyper market, 24+500	1			Overspeed/Carless drive	KL9L 6265-Bus	Bus Hit To Pedestrian
8	Sep-2017	Kasargode	07.09.2017	THU	22.30	Rainy	Chemmanadu, near Chandragiri Bridge			1	Overspeed	KL 14 R 2777 Car	Car Hit To Pedestrian (while crossing the road)

## 2.15 Photograph



**KM: 1+600 BAR MARKING WORK COMPLETED**



**PEDESTRIAN MARKING AT KM 1+450 (BHS)**



**KM: 0+280-405 RHS BREAST WALL WORK IS IN PROGRESS**



**ROAD STUDS FIXING IN PROGRESS  
KM 10+300 TO 0+600**



### 3 Contract Package - 2

Upgradation of Road from Pilathara to Pappinissery of SH 67



#### Scope of Works

New ROB	—	2
Repair of Bridge	—	2
New Box culverts	—	9
Widening Slab culverts	—	20
Reconstruction	—	8
Drain	—	26.04 Km
Foot path	—	12.6 Km
Solar Lights	-	-

#### 3.1 Contract Details

Letter of Acceptance	::	05.03.2013
Date	::	05.03.2013
Agreement Date	::	01.04.2013
Name of Contractor	::	M/s RDS Projects Ltd, Kochi
Contract Price	::	Rs.118,29,77,833/-
Notice to Commence	::	23.04.2013
Total Length	::	20.90 Km
Contract Period	::	24 months
Completion Date	::	22 <sup>nd</sup> April 2015 extended to 31.03.2017
Defect Liability Period	::	365 days
1 <sup>st</sup> Milestone	::	Km. 0+000 – Km. 08+000
2 <sup>nd</sup> Milestone	::	Km. 0+000 – Km. 14+000
3 <sup>rd</sup> Milestone	::	Km. 0+000 – Km. 20+900 revised to March 31, 2017



## 3.2 Progress of Works

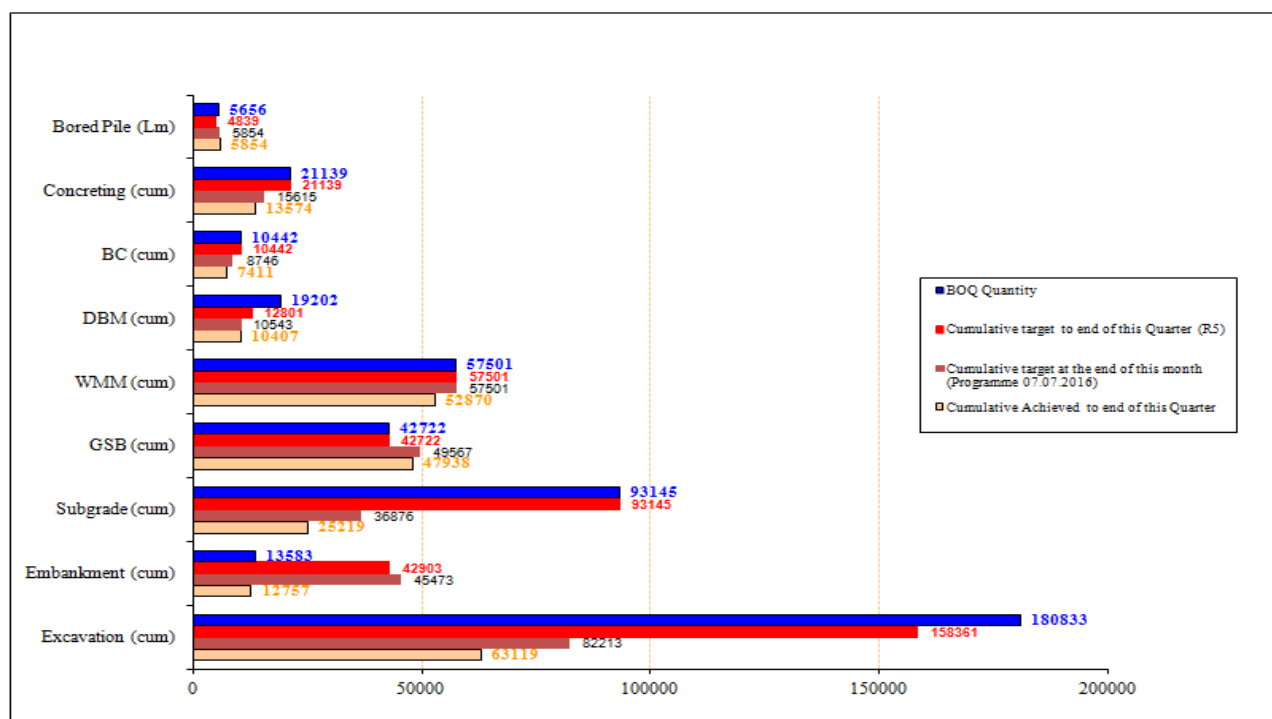
### 3.2.1 Road portion

SI No.	Item	Quarterly Progress	Cumulative Progress	Balance Work
1	DBM	0.365 km	19.255 km	1.645 km
2	BC	0.12 km	16.780 km	4.12 Km including Thavam ROB 1.1 Km & Ramapuram Bridge Approaches 400 m
<b>Structures</b>				
SI No.	Item	Quarterly Progress	Cumulative Progress	
3	Ramapuram Bridge @ km 4+260	Pile casting and Pile cap for 2 Nos completed on A2 side approach. PCC for 3 <sup>rd</sup> pile cap completed and reinforcement work is in progress.	Super structure work except crash barrier and other finishing work completed. Approach work at A2 side pile casting completed (8 Nos) and pile cap 2 Nos completed.	
4	Thavam ROB @7+420	PSC girder 8 Nos casting done during this quarter. <u>Box cell:</u> Raft- 80 mtr length completed during this quarter. Wall & top slab- work completed for about 54 Mtrs on A1 side and 48 mtr on A2 side.	Out of total 10 spans, Girder and deck slab for 6 Nos completed. PSC girders casting completed. Pre-stressing noted started. Box cell approach: A2 side Box cell raft 135 mtr length completed out of 160mtr length. A1 side Box cell raft 80mtr length completed out of total 128 mtr. Top slab work completed for about 102 Mtrs (A1- 54 mtr and 48 mtr on A2 side).	
5	Pappinissery ROB @19+950	Subway approach retaining wall work and service road works are in progress	Work completed except miscellaneous works such as painting, road marking, road signs etc. Service road and Subway approach retaining wall works are in progress	
6	Tree plantation	Tree plantation work in progress	Tree plantation completed from km 0+000 to 2+000 and from km 3+000 to 4+000. Partially completed between km 4+000 to km 5+000	
7	Solar Street Lighting	34 Nos of pole fixing	149 Nos completed	
8	Culverts	Nil	Out of total 38 Nos, 27 Nos completed except apron and protection works. Culvert 7 Nos deleted. Culvert at km 4+162 (at Ramapuram bridge approach), and 20+700 are yet to be started.	
9	Drain – Casting	8.0 m	19435 m	
10	Drain – Placing	145 m	14395 m	

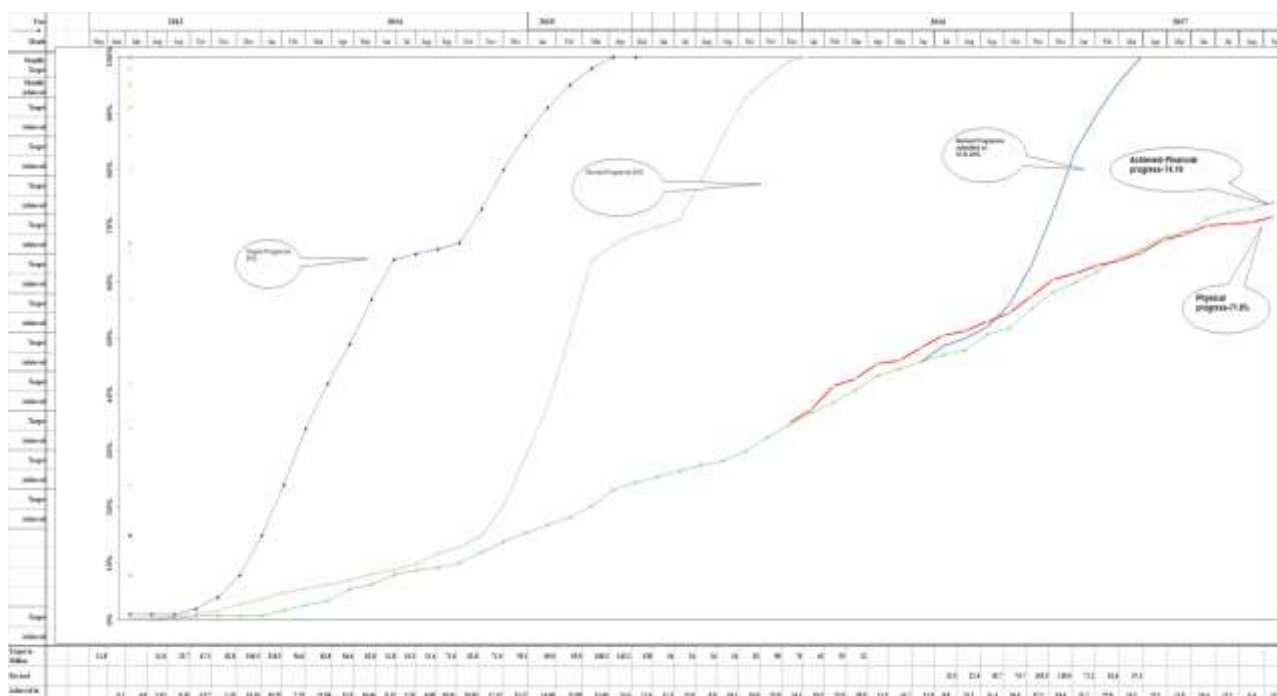
Progress up to Quarter ending September 2017 is as follows:

For previous quarter (Rs. Cr)		This quarter		Cumulative to end of this quarter (Rs. Cr))		Physical
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
100%*	71.25%	*	2.94%	100%*	74.19%	72%

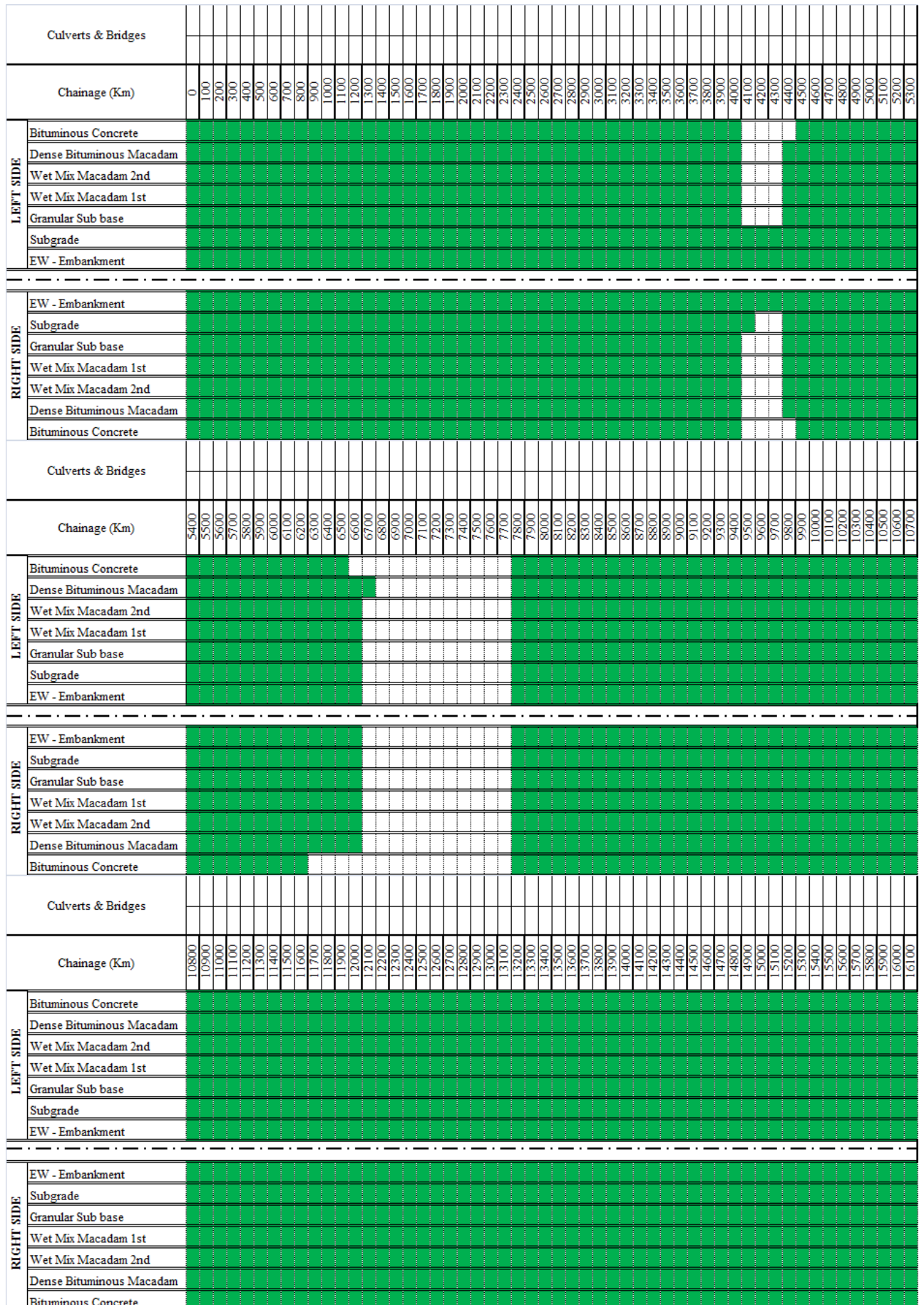
### 3.3 Physical Progress



### 3.4 S-Curve



### 3.5 Strip Chart



[illegible]

### 3.6 Schedule of culverts of drainage

Nature of work	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining
Culverts	Milestone - I(0-8km)					Milestone - II(8-14km)					Milestone - III(14-20.9km)				
Widening Slab Culverts	4	4	4	-	-	5	5	5	-	-	3	2	2	-	-
Slab Culvert retained	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reconstruction	12	12	11		1	-	-	-	-	-	5	2	1	-	4
New Box Culvert	1	1	1	-	-	2	2	1			6	1	2		4
Total culverts	17	17	16	-	1	7	7	6	-	-	14	5	5	-	9
Bridges Retained*	2	-	-	-	2	-	-	-	-	-	1	-	-	-	1
New Bridges/ROB**	1	-	-	-	1	-	-	-	-	-	1	-	-	-	1

### 3.7 Payments to the Contractor

Mobilization advance and Equipment advance and IPC's was paid to the Contractor amounting to Rs. 78.29 crore The Steering Committee held on 28.06.2014 lowered the threshold limit of minimum IPC amount for Rs. 1.5 crores from Rs. 3.00 crores to facilitate the cash flow of contractor. The pending payment are being processed and will be paid.

### 3.8 Key issues

The extended time for completion of works ended on 31.03.2017. However, Works on Thavam ROB and Ramapuram Bridge and railway underpass at Pappinisery are still pending. This includes 4.12 km BC and other finishing works including junction improvements.

The Work zone safety arrangements is not satisfactory.

## 3.9 Implementation of EMP

### 3.9.1 Environment Management at Work Sites

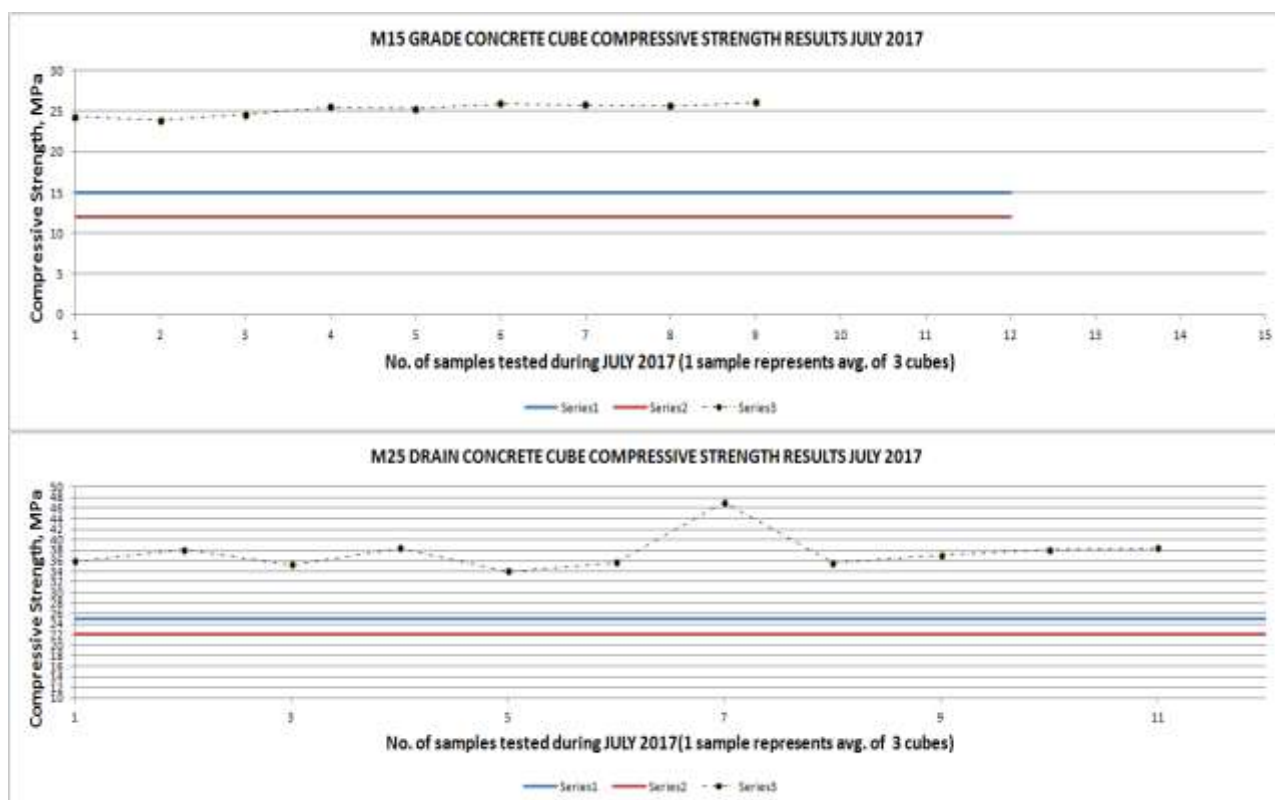
The service road under the ROB is to be constructed and the land available shall be developed as parking areas. This work is pending due to rains. The main gate of the school at A2 approach of ROB has been shifted and a sound barrier construction is in progress.

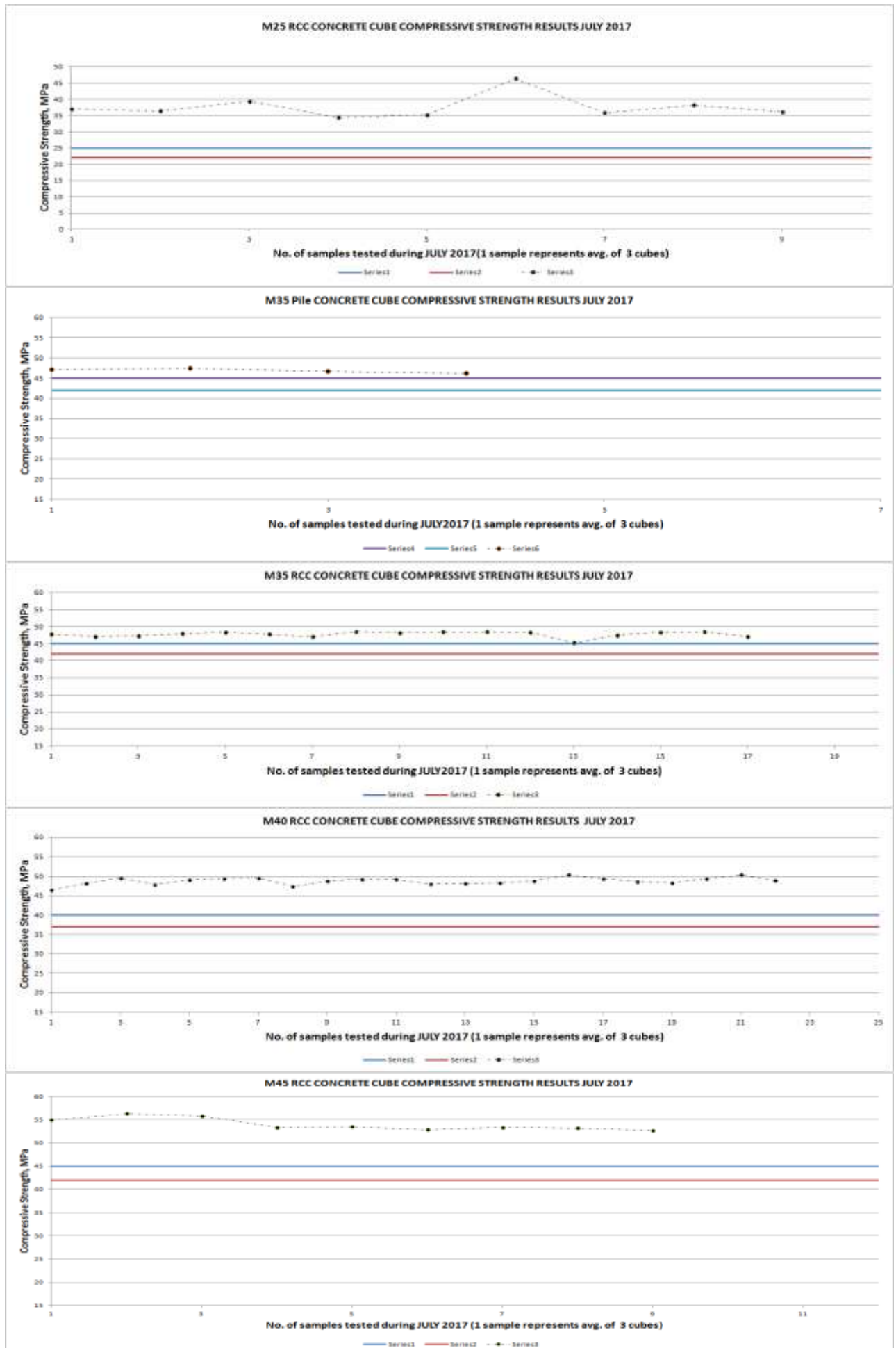
The pavement markings, safety barrier fixing, fixing signage and pedestrian marking are still to completed.

### 3.9.2 Traffic Management and Road Safety Measures

The contractor is required to provide safety precautions such as barricading, flags, safety signboards and traffic cones at all work zones to ensure safety for all road users. Personal safety equipment such as jackets, safety shoes, face shields and hand gloves are to be provided to all workers as necessary. Instructions were given to provide adequate safety sign boards and fencing all along the active work site.. Toilet facilities not provided to the workers at site at Thavom.

## 3.10 Quality Assurance Checklist







### 3.11 Accident Report (July – Sept 2017)

Month	Police Station	Date	Day	Time	Weather	Location with Km	Person Status After Accident			Cause of Accident	Type of Vehicles Involved	Remarks
							Minor Injury	Major Injury	Fatal			
July	Pazhayangadi	19.07.2017	Wednesday	08.15AM	Fine	Pazhayangadi 6+360	✓	Yes	No	Over Speeding	Bus accident	74 minor injury & 2 major injury
Aug	Pazhayangadi	03.08.17	Monday	7:00 AM	Rain	Eripuram High School 5+790	✓	NA	NA	Over speeding	Goods Auto hit on a car	1 Person injured
Aug	Kannapuram	04.08.17	Tuesday	9:20 PM	Rain	Near AK plywoods 9+000	NA	✓	NA	Over speeding	Auto riksha hit on a Motor Cycle	1 Person injured
Aug	Kannapuram	11.08.17	Tuesday	8:30 PM	Rain	Near Guruvayoorappan Hotel 9+850	NA	NA	✓	Over speeding	Motor Cycle hit on a pedestrian	1 Fatality
Aug	Kannapuram	13.08.17	Thursday	4:00 PM	Rain	Near Postoffice 9+430	NA	✓	NA	Over speeding	Car hit on a pedestrian	1 Person injured
Aug	Kannapuram	15.08.17	Saturday	12:40 AM	Rain	Vellarangal 10+550	✓	NA	NA	Over speeding	Scooter hit on a Scooter	1 Person injured
Aug	Kannapuram	19.08.17	Wednesday	6:15 PM	Rain	Near Police Station 12+370	NA	NA	✓	Over speeding	Car hit on a pedestrian	1 Fatality
Aug	Pariyaram	10.08.17	Monday	6:30 AM	Rain	Mandoor 2+675	NA	NA	✓	Over speeding	Mahindra Pickup van hit on a pedestrian	1 Fatality
Aug	Valapattanam	No accident reported										
August	Pazhayangadi	27.08.17	Sunday	06.30 AM	Rain	Aduthila 4+980	✓	NA	NA	Over speeding	Travel Bus	16 Person injured
August	Kannapuram	27.08.17	Sunday	02.15 PM	Rain	Pallichal 12+200	✓	NA	NA	Over speeding	Scooter hit on the Car	1 Person injured
September	Kannapuram	11.09.17	Monday	05.00 PM	Rain	Cherukunnu 12+900	✓	NA	NA	Over speeding	Car hit on the pedestrian	1 Person injured
August - September	Pariyaram	No accident reported										
August - September	Valapattanam	No accident reported										

### 3.12 Photographs



JUNCTION AT KM 6+080



JUNCTION AT KM 0+000



BC LAYING FROM KM 17+250 TO KM 17+450 RHS



DBM LAYING FROM KM 20+270 TO 20+360 LHS

## 4. Contract Package III-A

### Upgradation of Road from Thalassery to Kalarode of SH 30



## 4.2 Contract Details

The Contract for the Upgradation of Road from Thalassery to Kalaroad has been awarded to M/s Dinesh Chandra R AgrawalInfracon (P) Ltd. The date of commencement of the Project is 27<sup>th</sup> June 2016 and completion date is 26<sup>th</sup> June 2018.

The permanent base camp office work in Progress at Valliyavellicham, which is 6km away from km 16+000 (Kuthuparamba) of the project road.

Contractor submitted the work programme with all required supporting resources details on 27<sup>th</sup> Sep-16 and the same was approved on 21<sup>st</sup> Oct-16.

Name of Contractor	::	M/s Dinesh Chandra R. Agrwal
Contract Amount	::	Rs. 156,33,51,422
Date of Agreement	::	20.05.2016
Length	::	28.80 km
Time of Completion	::	24 months
Milestone – I	::	10 km continuous stretch of road from km 1.200 to km 1.200 completion up to BC level 15 month from date of commencement
Milestone – II	::	28.80 km continuous stretch of road from km 1.200 to km 30.00 completion in all respect in 24 month from commencement date



## 4.3 Pre-Construction Activities

### 4.3.1 Utilities

Joint inspection conducted along with KSTP, KSEB, Kerala Water Authority, BSNL and other private cable operators and list finalized. Utility shifting is going on in the 1<sup>st</sup> milestone. No issues due to Utilities in 1<sup>st</sup> Mile Stone.

#### Milestone-I

Electrical Poles	29(Total)	20 shifted	09 to be shifted
Transformers	05(Total)	04 shifted	01 to be shifted
<b>Total</b>	<b>34</b>		

## 3.2 Work Progress

### 4.3.1 Road work

Roadway excavation completed for a length of 8.10 km.

Laying of GSB completed for a length of 8.10 km.

WMM 1st completed 7.40km

WMM Top layer 5.75 km.

DBM Laying 5.75 km completed.

### 4.3.2 Drain Works

Total length of drain for Milestone-1 is 16000lm including both sides. Out of this 7490m laid by the previous Contractor. 3000m laid by the present Contractor. Balance to be laid is 5.51km. Drain laying from Km 01+200 to Km 05+000 is completed. Casting of precast drains and covering slabs are going on at casting yard.

### 4.3.3 Structure work

**Bridge at km.2+910 (Eranholi):-** Pedestal concreting of Abutment A2 and pier completed. Work started for the concreting of pile cap of abutment A1. But work stopped as per the instruction from KSTP. Stressing of balance 3 nos of girders completed. Redesigning of the bridge to accommodate a free board of 6m Navigation Clearance done by M/s. Asia Infrastructure Limited. The preparation of alignment of the service roads for connecting various roads coming the within the Embankment portion also entrusted to the above firm which is expected to be received shortly.

**Bridge at km.19+758 (Merumbai):-** Bridge proper completed. Other works are going on.

**Bridge at km.21+162:-** Bridge marking completed and earth work excavation for A2 abutment started, but stopped due to rain.

**Bridge at km.29+570:-** Single Span Bridge: Bridge proper completed. Other works are going on.

Box culverts 20 Nos completed

Slab culverts 16 Nos completed

Pipe culverts 3 nos completed.

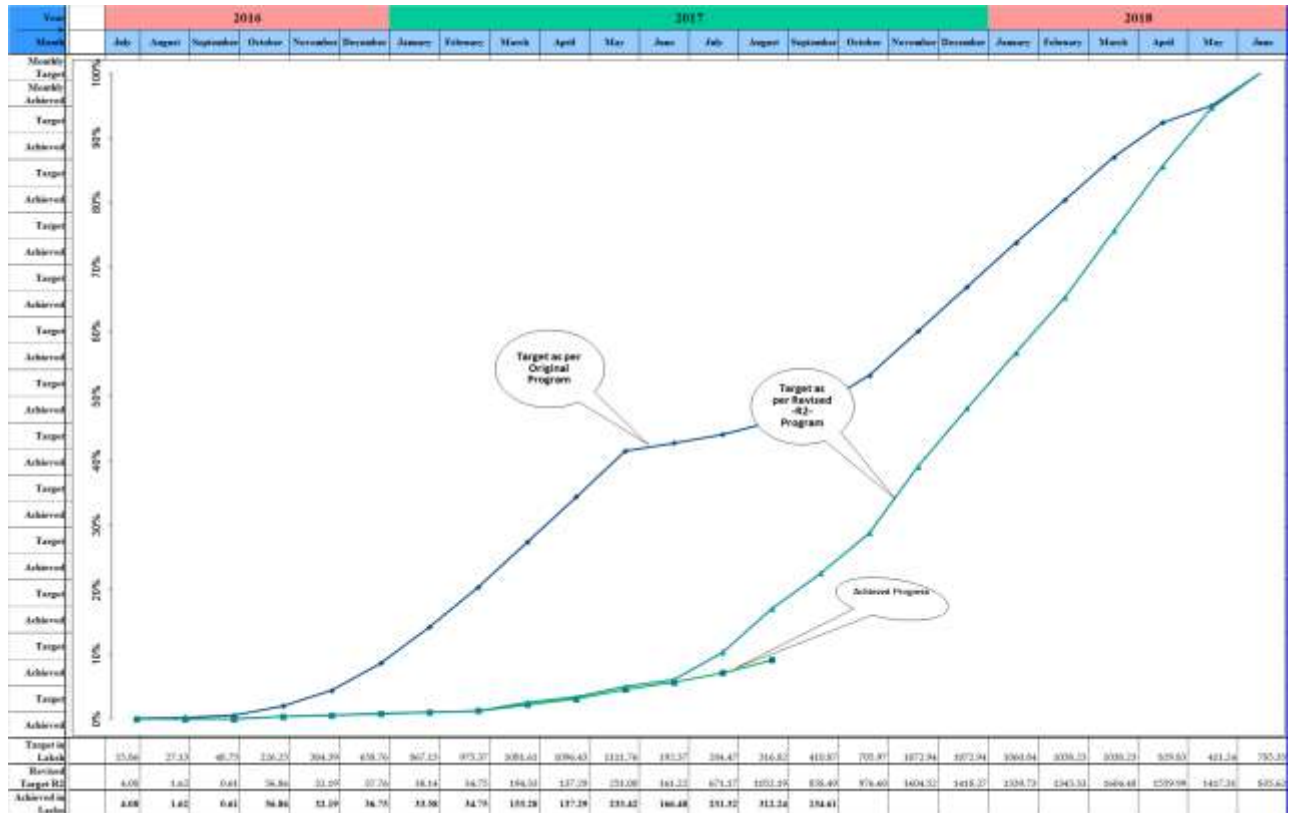
#### 4.4 Progress considering contract price (Financial) as per revised work

Up to end of previous quarter (Rs. Cr)		This quarter		Cumulative Financial to end of this quarter (Rs. Cr)		Physical
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
6.076%	5.699%	16.515%	4.338%	22.591%	10.037%	20%

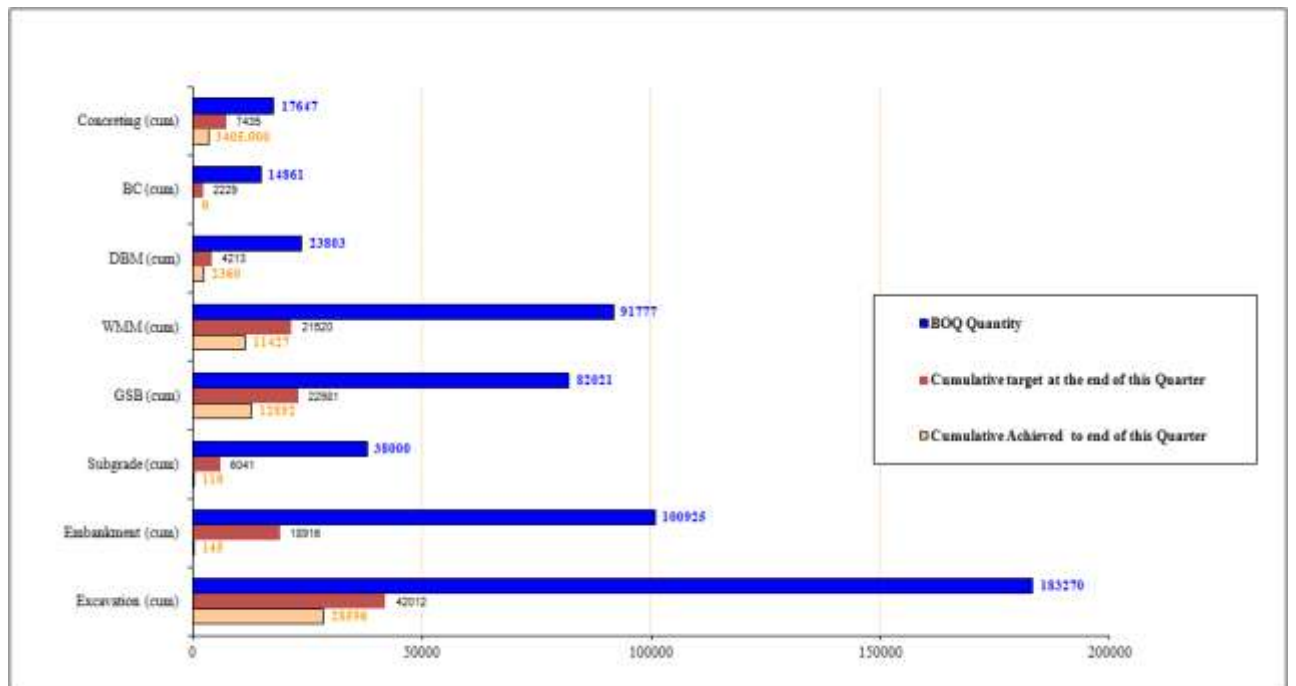
### 3.3 Schedule of culvert drainage

Nature of work	Total number	No. dwgs approved	Number completed	Number in progress	Number remaining	Total Number	No. dwgs approved	Number completed	Number in progress	Number remaining
<b>Culverts</b>	<b>Milestone - I (1+200 to 11+200Km )</b>					<b>Milestone - II (11+200 to 30+000 Km.)</b>				
Box Culverts	13	13	13	-	-	24	10	6	2	16
Slab Culvert	13	13	13	-	-	12	6	3	1	8
Pipe culvert	3	3	3	-	-	2	-	-	-	2
<b>Total culverts</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>-</b>	<b>-</b>	<b>38</b>	<b>16</b>	<b>9</b>	<b>3</b>	<b>26</b>
Bridges/ROB Retained**	-	-	-	-	-	-	-	-	-	-
Bridges Widening ***	-	-	-	-	-	-	-	-	-	-
New Bridges/Viaduct*	1	-	-	1	-	3	3	2	1	-
Precast drainCasting	5424 m completed									
Precast drain Laying	3701 m completed									

### 3.4 S-Curve



### 3.5 Bar Chart of Physical Progress



### 3.6 Strip map

[illegible]

## 3.7 Payments to the Contractor

The contractor has been paid Rs. 19.69 crores (mobilization advance)

## 3.8 Implementation of EMP

### 3.6.1. General

Mobilization completed. Batching plant, WMM plant, HM plant commissioned. The basic amenities for staff and labours at base camp have been provided. Contractor has obtained the required consents from PCB and local panchayat. Contractor also informed that aggregate required for the project is proposed to be purchased from local crusher. Contractor submitted EHS plan for the project work and the same was approved.. A safety officer and an assistant safety person are appointed. Contractor has to appoint an environmental engineer.

Fire extinguishers and first aid box has been provided in all vulnerable locations but the same thing is required in kitchen and accommodations. Additional numbers are required in accommodations. Lighting is to be provided inside the camp.

Contractor has to arrange a base line air and water quality monitoring through an accredited agency.

Contractor submitted work zone traffic management plan for milestone 1. Improvement in management of traffic at road cutting location is required.

Compliance with Statutory Requirements

Unit	Status of Compliance	Remarks
Crusher	No crusher proposed. Materials purchased from existing crusher . consent copy to Operate from Kerala State Pollution Control Board to be obtained. Building permit obtained from Grama Panchayat.	Copy of the consent submitted. Issue date 28/3/2017 , valid till 23/1/2018
Hot Mix Plant	Hot Mix Plant erected at vellivelicham near Kuthuparamba	Commissioned. cosent from PCB valid till 23/1/2018
WMM Plant & Batching Plant	Consent to Establish and Consent to Operate from Kerala State Pollution Control Board is to be obtained.	Commissioned consent valid till 23/1/2018.
Batching plant	Commissioned. Applied for combined consents for establishment and operation.	Commissioned. Consent valid till 23/1/2018.

The work zone safety has to be improved. Stretches are opened for long time and the safety arrangements provided has to be maintained regularly.The housekeeping inside the base camp has to be improved. World bank team visited site on 6th June and noticed that the progress of work is not satisfactory. The appointment of environmental engineer is critical and it is a requirement as per contract. Contractor has to mobilize the

person urgently. The cut earth disposal is an issue contractor has to find out disposal site urgently.

## 3.9 Quality Control Tests

### 3.9.1 Materials for Structures

Tests Performed	Standard used	Standard limits	Test Frequency	Total tests up to Previous Month			Tests during this Month			Total tests up to end of this Month		
				Tested	Passed	Failed	Tested	Passed	Failed	Tested	Passed	Failed
<b>STONE</b>	<b>MOST 1004</b>											
Water Absorption	IS:1124	Max 2%	lot									
<b>CEMENT</b>	<b>MOST 1006</b>		lot									
Fineness	IS:269-1976		" "	26	26		3	3		29	29	
Standard Consistency	" "		" "	26	26		3	3		29	29	
Soundness	" "		" "									
Compressive Strength	" "		" "									
3 day strength test	" "	27 Mpa		25	25		3	3		28	28	
7 day strength test	" "	37 Mpa		25	25		2	2		27	27	
28 day strength test	" "	53 Mpa		24	24		4	4		28	28	
Initial Setting time	IS:4031(Part 1)	< 30 min		22	22		3	3		25	25	
Final Setting time	IS:4031(Part 5)	> 600 min	" "	22	22		3	3		25	25	
<b>COARSE/FINE Aggregates</b>	<b>MOST 1007/1008</b>											
Gradation	IS:2386(Part 1)		lot	338	338		32	32		370	370	
Flakiness Index	" "	Min 35%	" "	23	23		2	2		25	25	
Deleterious Mat./Organic Imp.	" (Part 2)		" "									
Water Absorption/Spec.Grav.	" (Part 3)	Max 2%	" "									
Bulk Density	" "		" "									
Impact or crushing Aggr.Value	" (Part 4)	Max 30%	" "	23	23		2	2		25	25	
Los Angeles Abrasion Value	" "		" "									
Soundness	" (Part 5)		" "									
Alkali Aggregate Reactivity	" (Part 7)		" "									
Surface Moisture Content	" (Part 3)		" "									
Fineness Modulus of FA				321	321		32	32		353	353	
<b>STEEL</b>	<b>MOST 1009</b>											
Verification of conformity( Yield stress,U.T.S., % Elg.Unit Wt.Dia. Test. Etc	IS:432/1030/1785/1786		lot	48	48		5	5		53	53	
	2004/2062											
<b>WATER</b>	<b>MOST 1010</b>											
Verification of conformity	IS:3025		lot	2	2		1	1		3	3	
<b>CONCRETE ADMIXTURE</b>	<b>MOST 1012</b>											
Verification of conformity	IS:1199/6925/9103		lot	3	3					3	3	
<b>MINING CONCRETE (Trial</b>	<b>MOST 1700</b>											
3 Test Cubes/Slump test	IS:516/1199		MOST:1700-8									
Grade15: 7 Days	" "		" "	6	6					6	6	
28 Days	" "			6	6					6	6	
Grade 20: 7 Days	" "		" "	3	3					3	3	
28 Days	" "			3	3					3	3	
Grade 25:(RCC) 7 Days	" "		" "	6	6		1	1		7	7	
28 Days	" "		" "	9	9		1	1		10	10	
Grade 20:(Drain) 7 Days	" "		" "	6	6					6	6	
28 Days	" "		" "	6	6					6	6	
Grade 30:(RCC) 7 Days	" "		" "	3	3		1	1		4	4	
28 Days	" "		" "	3	3		1	1		4	4	
Grade 35:(RCC) 7 Days	" "		" "	6	6		1	1		7	7	
28 Days	" "		" "	6	6		1	1		7	7	
Grade 35:(PILE) 7 Days	" "		" "	3	3					3	3	
28 Days	" "		" "	3	3					3	3	
Grade 40:(RCC) 7 Days	" "		" "	3	3					3	3	
28 Days	" "		" "	3	3					3	3	
Grade 45:(RCC) 7 Days	" "		" "									
28 Days	" "		" "	3	3					3	3	



CONCRETE CUBE STRENGTH		MOST 1700/900									
M-15 : 7 Days		10.5 N/mm2	set	41	41		17	17		58	58
28 Days		15 N/mm2	" "	38	38		9	9		47	47
M-20 : 7Days		14 N/mm2	" "	81	81		7	7		88	88
28 Days		20 N/mm2	" "	88	88		5	5		93	93
M-25 : 7 Days		17.5 N/mm2	set	103	103		5	5		108	108
28 Days		25 N/mm2	" "	104	104		14	14		118	118
M-20(Drain): 7 Days		17.5 N/mm2	" "	184	184		23	23		207	207
28 Days		25 N/mm2	" "	189	189		29	29		218	218
M-30: 7 Days		24.5 N/mm2	" "	4	4					4	4
28 Days		35 N/mm2	" "	5	5		1	1		6	6
M-35: (Pile) 7Days		24.5 N/mm2	" "								
28 Days		35 N/mm2	" "								
M-35: (Pile Cap) 7 Days		24.5 N/mm2	" "								
28 Days		35 N/mm2	" "								
M-35: (RCC ) 7 Days		24.5 N/mm2	" "	29	29		1	1		30	30
28 Days		35 N/mm2	" "	39	39		3	3		42	42
M-40: 7 Days			" "	1	1					1	1
28 Days			" "	1	1					1	1
STONE MASONRY		MOST 1400									
JTest Mortar Cubes		IS:2250		MOST :1407							
HUME PIPE		MOST 2902									
Three-edge Bearing/		IS:458/3597		20/900mm	1	1				1	1
Hydrostatic Test					1	1				1	1
Absorption/Straightness tests					1	1				1	1

## 3.7.2 Materials for Pavements

Common Tests Performed	Indian / Foreign Standard	Standard limits	Test Frequency test per	Total tests up to end of Previous Month			Tests during this Month			Total tests up to end of this Month		
				Tested	Passed	Failed	Tested	Passed	Failed	Tested	Passed	Failed
<b>EARTHWORK</b>												
Gradation/Sand content	MOST 305/903.3 IS:2720(Part 4)		Emb. /Subgrade 1500 cum	97	97					97	97	
Atterberg Limits	" (Part5)	LL = max 70% & PI = max 45%	" "	100	97	3				100	97	3
Proctor	" (Part 8)		" "	97	97					97	97	
CBR	" (Part 16)	Min 8%	1000 cum	75	75					75	75	
Free Swell Index	" (Part 40)	Max 40%	" "	100	97	3				100	97	3
Field Density/Compaction	" (Part 28)	95% and 97%	500/1000 sqm	829	829	1	153	153		982	982	1
<b>SUBBASE (GSB) granular material</b>												
Gradation	MOST 401/900.3.1 IS:2720(Part 4)		200 cum	85	85		15	15		100	100	
Atterberg Limits	" (Part5)	LL = max 25% & PI = max 6%	" "	85	85		15	15		100	100	
Proctor				14	14					14	14	
Deleterious content												
10% fine value		Min 50 K/N		1	1					1	1	
Water Absorption		Max 2%		1	1					1	1	
Field Density/Compaction	" (Part 28)	98%	500 sqm	430	430		87	87		517	517	
CBR @ gradine (II or III)		Min 30%		1	1					1	1	
Site moisture				203	203		15	15		318	318	
<b>BASE (WMM)</b>												
Gradation	MOST 406/900.3.4 IS 2386 (Part 4)		200 cum	120	120		28	28		148	148	
Flakiness/Elongation Value	" (Part1)	Max 30%	" "	81	81		18	18		99	99	
Aggregate Impact Value / LAAV	" (Part4)	Max 30%	" "	77	77		18	18		95	95	
Atterberg Limits	" (Part6)	LL = max 25% & PI = max 6%	100 cum	81	81		18	18		99	99	
Los Angeles Abrasion Value	" (Part1)	Max 35%	" "	95	95		28	28		123	123	
Proctor				2	2					2	2	
Water Absorption		Max 2%		4	4					4	4	
Field Density/Compaction	" (Part 28)	98%	500 sqm	389	389		141	141	4	530	530	4
Site moisture				322	318		18	18	4	340	336	4
CBR				1	1					1	1	
<b>PRIME/TACK COAT</b>												
Rate of Spread	IS:217/8887	Prime - 7 kg / 10 Sqm Tack coat - 2.5 kg / 10 sqm	500 sqm	139	139		43	43		182	182	
Quality of Binder												
<b>DENSE BITUMINOUS</b>												
Aggregate Gradation (Individual+ Mix)	MOST 504/900.4.4 " (Part 1)			67	67		6	6		73	73	
Aggregate Impact Value (AIV)/ LAAV	IS 2386(Part 4)	Max 27%	50 cum	42	42		6	6		48	48	
Flakiness/Elongation Value	" (Part 1)	Max 30%	" "	38	38		6	6		44	44	
Los Angeles Abrasion Value				38	38		6	6		44	44	
Bitumen penetration				14	14		4	4		18	18	
Softening point				1	1					1	1	
Ductility				1	1					1	1	
Quality of Binder	IS-73											
Coating and Stripping	IS 6241											
Binder Content (ASTM - 2172-95)		Min 4.5%		38	38		6	6		44	44	
Marshall Test	ASTM D1559-62T	Min 9 KN	Set	50	50		6	6		56	56	
Specific Gravity /Water Absorption	IS 2386(Part-3)	Max 2%		16	16		4	4		20	20	
Soundness	IS 2386(Part-5)		2 per day									
Bulk Density	IS 2386(Part 3)		" "									
Field Density/Compaction (core density)	ASTM D 2041-95	98%		153	153		25	25		178	178	
Seed Equivalent/Value for FA												
Plasticity Index												
<b>BITUMINOUS CONCRETE</b>												
Aggregate Gradation (Individual+ Mix)	MOST 504/900.4.6											
Aggregate Impact Value / LAAV	IS 2386(Part 4)	Max 24%	50 cum									
Flakiness/Elongation Value	" (Part 1)	Max 30%	" "									
Marshall Stability	ASTMD 1559	Min 9 KN	2 per day									
Quality of Binder												
Coating and Stripping												
Specific Gravity /Water Absorption		Max 2%										
Stone polishing Value		Min 55										
Soundness												
Seed Equivalent Test												
Binder Content	IS 2386(Part 4)	Min 5	" "									
Field Density/Compaction	Core Samples	98%	250 sqm									
Plasticity Index												

### 3.10 Photographs



**WMM 1<sup>ST</sup> LAYER ROLLING AT 9+700**



**CULVERT SLAB REINFORCEMENT WORK AT 20+746**



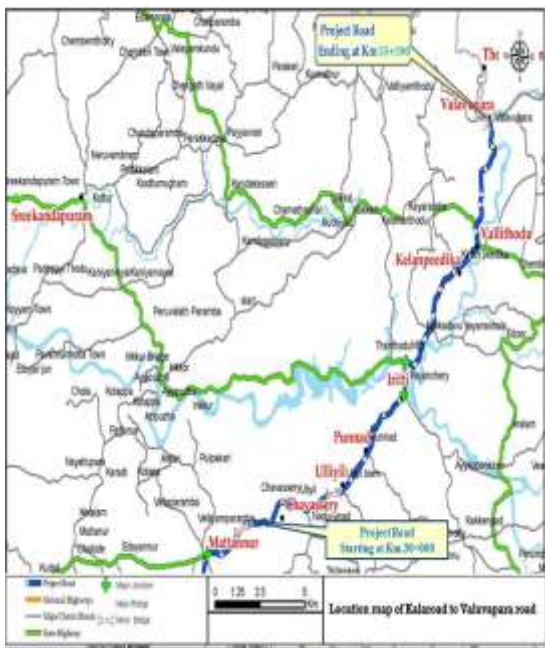
**DECK SLAB COMPLETED AT 29+578 MINOR BRIDGE**



**DECK SLAB COMPLETED AT 29+578 MINOR BRIDGE**



**5. KSTP/PMT/UG – III-B**  
(Kalaroad – Valavupara) 25.20 km



- |    |                          |   |                   |
|----|--------------------------|---|-------------------|
| 1. | Contract value in crores | - | Rs. 209.69 crores |
| 2. | Name of Contractor       | - | M/s GHV-EKK (JV)  |
| 3. | Date of Agreement        | - | 27.09.2016        |
| 4. | Letter to Commence       | - | 26.09.2016        |
| 5. | Time of Completion       | - | 24 months         |
| 6. | Length                   | - | 25.20 km          |
| 7. | Milestone – I            | - | 10 km             |
| 8. | Milestone – II           | - | 25.20 km          |
| 9. | Milestone – III          | - |                   |

## Executive Summary

The contract of Package IIIB (Kalarode – Valavupara) has been awarded to M/s GHV-EKK (JV) on 29th April 2016.

Notice to Proceed has been issued to the contractor vide letter No. ET/1A/PJ/1842 dt 16th August 2016 and thereby instructed to commence the work with effect from 18th August 2016. Date of commencement was revised to 26th September 2016 for completion of work by 25th September 2018, based on the date of release of mobilization advance vide letter No. ET/1A/PJ/2163 dated 17<sup>th</sup> February 2017.

Contractor submitted the revised work programme on 23rd September-16 and approved vide Team Leader letter No. ET/1A/PJ/1980 dated 5th November 2016.

## 5.1 Pre-Construction Activities

### 5.1.1 Utilities

Joint inspection conducted along with utility consultant, KSEB and Kerala Water Authority and list finalized. Joint inspection conducted along with utility consultant, KSEB and Kerala Water Authority and list finalized.

#### (A) STATUS OF SETTING OUT INCLUDING CENTRE LINE AND OGL SURVEY

Traverse for entire Stretch completed.

TBM Fixing Completed for entire stretch.

Centerline Coordinates Marking and OGL recording Completed.

#### (B) STATUS OF ELECTRICAL UTILITY SHIFTING

Materials Procurement 90% Completed.

Poles and OH Line Shifting MS-I, 82% Completed. Balance work is in Progress.

MS-II work in progress.

#### (C) STATUS OF WATER UTILITY SHIFTING

Procurement of UPVC pipes Completed. Variations Quantity yet to be Procured

Procurement of DI pipes Completed. Variations Quantity yet to be Procured

Water Utility shifting work is in progress at Ch. 30+000 to 42+000, and about 75% completed.

#### (D) SUB SOIL INVESTIGATION

Soil investigation is completed at Major Bridge Ch. 42+198. Test Report of P2 submitted.

Soil investigation Completed for Major Bridge Ch. 53+865. Test Reports are submitted.

OGL Sampling and testing completed for the entire stretch.

## 5.2 Work Progress

Sl. No.	Item	Quarterly Progress	Cumulative Progress
1	GSB	5.40 km	7.76 Km
2	WMM	3.69 km	6.55 Km
3	DBM	3.63 km	6.395 Km

Sl. No.	Item	Quarterly Progress	Cumulative Progress
	<b>Structures</b>		
4	<b>Minor Bridge Ch. 35+405</b>	Nil	Girder and deck slab concrete completed.
5	<b>Major Bridge Ch. 42+198</b>	Nil	Abutment A1 and A2 Side construction of Abutment cap completed. Out of 4 No's of pile at pier P1 location, 2 No's casting completed. Test pile casting completed at Pier P2 location. Work stopped due to heavy rain. Cofferdam washed away in flood and subsequently, test pile tilted. Contractor was asked to verify their submitted design by a foundation expert.
6	<b>Major Bridge Ch. 53+865</b>	Nil	Sub soil investigation work completed and working drawing submitted.
7	<b>Culverts</b>	Box culvert- 7 Nos completed Pipe Culvert- 5 Nos in Completed Widening / slab culvert – 6 culvert completed	Box culvert- 32 Nos completed Pipe Culvert- 10 Nos completed Widening / slab culvert – 9 Nos completed
8	Pre cast Drain - Casting	2763 m	24021 m
9	Pre cast Drain – Placing	1317 m	12737 m

PCC retaining wall works completed between km 36+000 and 38+000

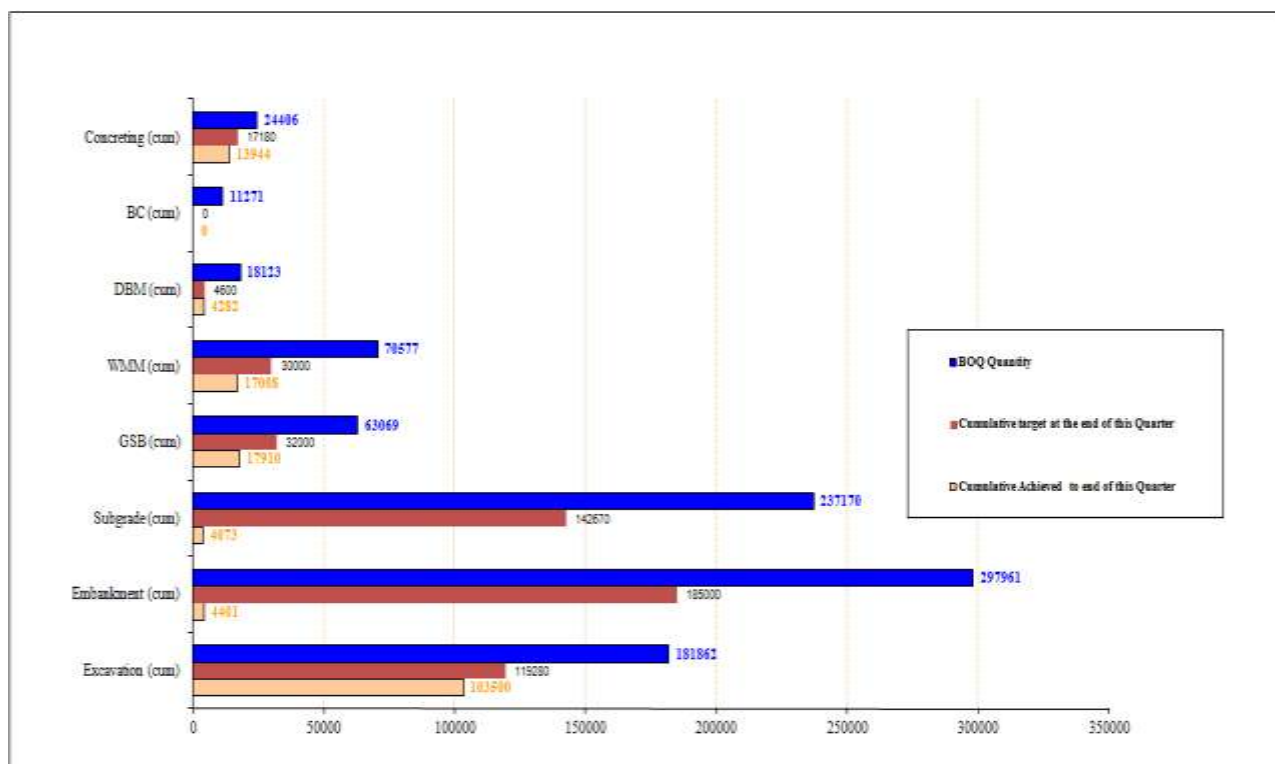
RCC retaining wall started at km39+500 and 35+110

Gabion wall work is in progress from km 33+315 to 33+580, km 35+242, km 44+215 to km 44+245 and from km 44+815 to km 44+860.

### 5.3 Financial Progress

Up to end of previous quarter (Rs. Cr)		This quarter		Cumulative to end of this quarter (Rs. Cr)		Physical Progress
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
38.48%	18.804%	10.702%	6.92%	46.673%	25.724%	26.85%

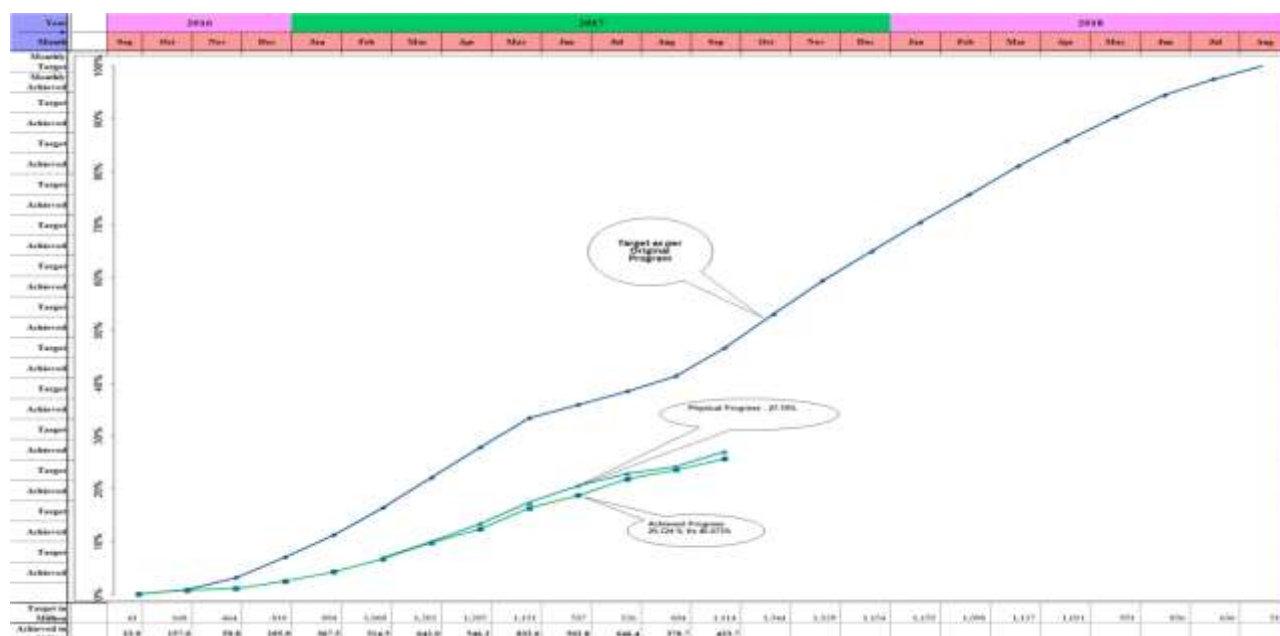
## 5.4 Physical Progress



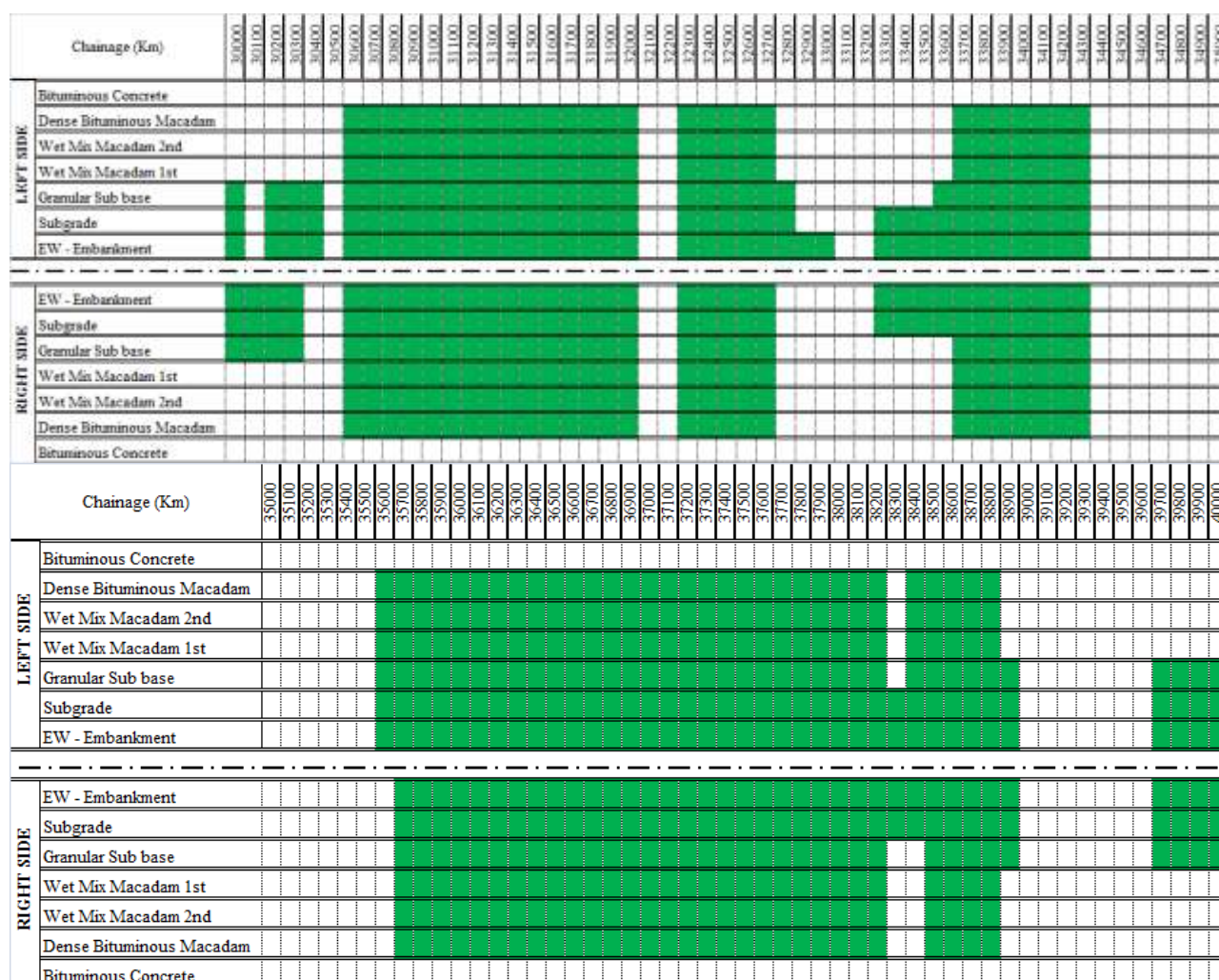
## 5.5 Schedule of Culverts and Drainage Works

Nature of work	Original number	Number completed	Number in progress	Number remaining	Original number	Number completed	Number in progress	Number remaining	Remarks
<b>Culverts</b>	<b>Milestone - I (30+000 to 40+000 -10km)</b>				<b>Milestone - II (40+000 to 55+200- 15.2Km)</b>				
Slab Culverts	6	5	1	-	9	4	-	5	
Box Culvert	20	18	2	-	29	14	8	7	
Pipe Culvert	9	8	1	-	15	2	8	5	
Major Bridges	-	-	-	-	2	-	-	2	
Minor Bridges	1		1	-	-	-	-	-	
<b>Total Structures</b>	<b>36</b>	<b>31</b>	<b>5</b>	<b>-</b>	<b>55</b>	<b>20</b>	<b>16</b>	<b>19</b>	

## 5.6 S-Curve



## 5.7 Strip Map





Unit	Status of Compliance	Remarks
Crusher	No crusher proposed. Materials purchased from existing crusher. Consent copy to Operate from Kerala State Pollution Control Board to be obtained.	Copy of consents submitted.
Hot Mix Plant	Hot Mix Plant is planned at Padiyoor near Iritty for which Consent to Establish and Consent to Operate from Kerala State Pollution Control Board is to be obtained.	Mobilised, ready for operation. Consent from PCB obtained.
WMM Plant & Batching Plant	Consent to Establish and Consent to Operate from Kerala State Pollution Control Board is to be obtained.	Mobilised
Batching plants At base camp and at chevayur(2 nos)	Commissioned. Applied for combined consents for establishment and operation.  Commissioned.	Applied for consents.

Contractor has erected a bio gas plant for treating kitchen waste and the gas from the plant is used for cooking. A RO plant has been installed to meet the drinking water requirements of the people inside the base camp. The contractor has also installed an activated carbon and filter unit to treat the waste water from wash rooms and kitchen for reuse. This will be reused for dust suppression and gardening purpose. The effort taken by the contractor is to be appreciated and can be a model for other contractors.

The base camp at Chavessery in which the contractor installed batching plant , WMM plant, and casting yard are also in operation. Contractor has using a mobile crusher for making GSB. The PCB clearance for the plant has also to obtained.

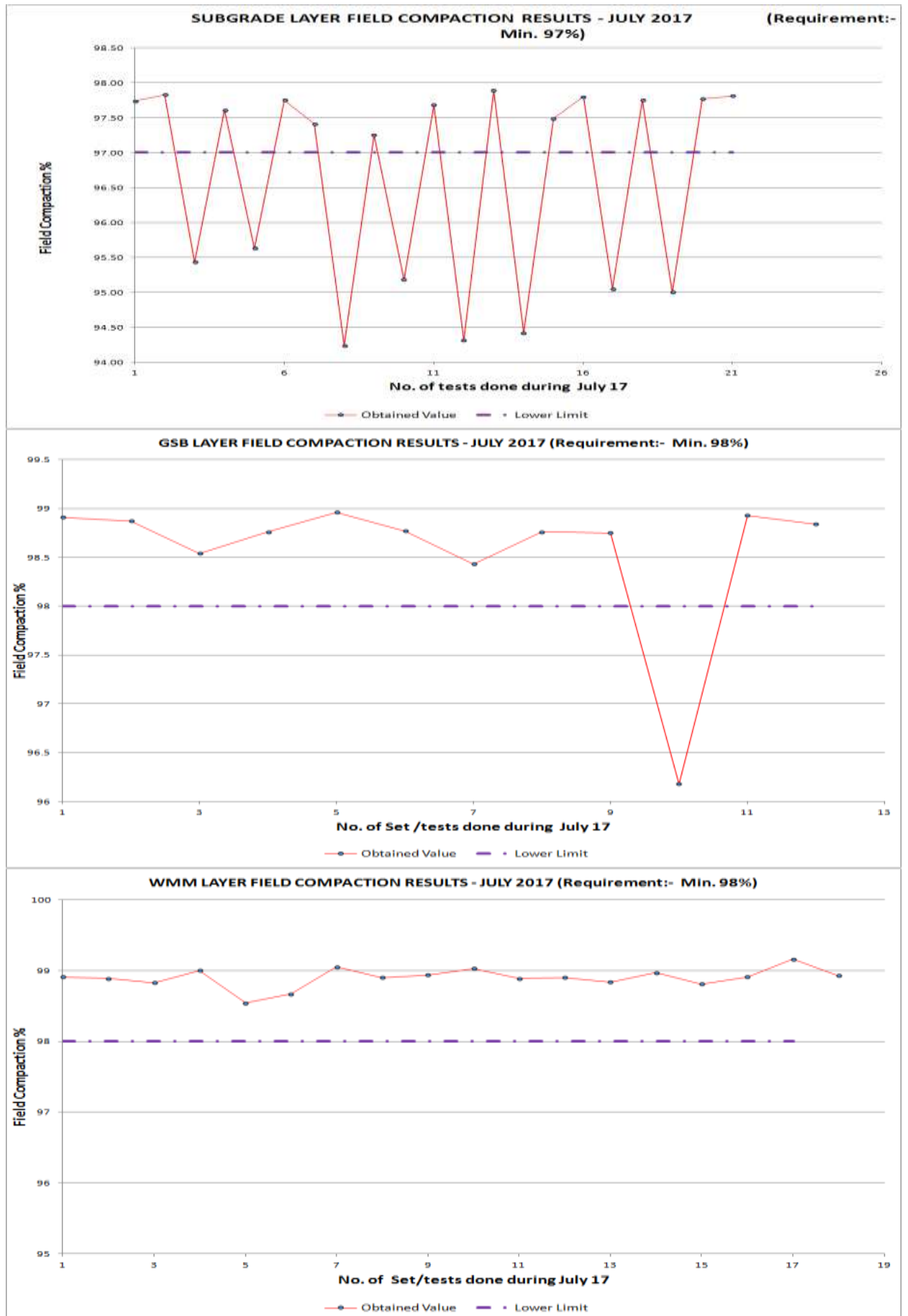
The panchayat road to the base camp is in a bad shape; this may be repaired and to be maintained by the contractor.

Toilet facility is not provided to the workers at the bridge site. A temporary site office is to be constructed at the site and space for rest and dining this is a pending issue.

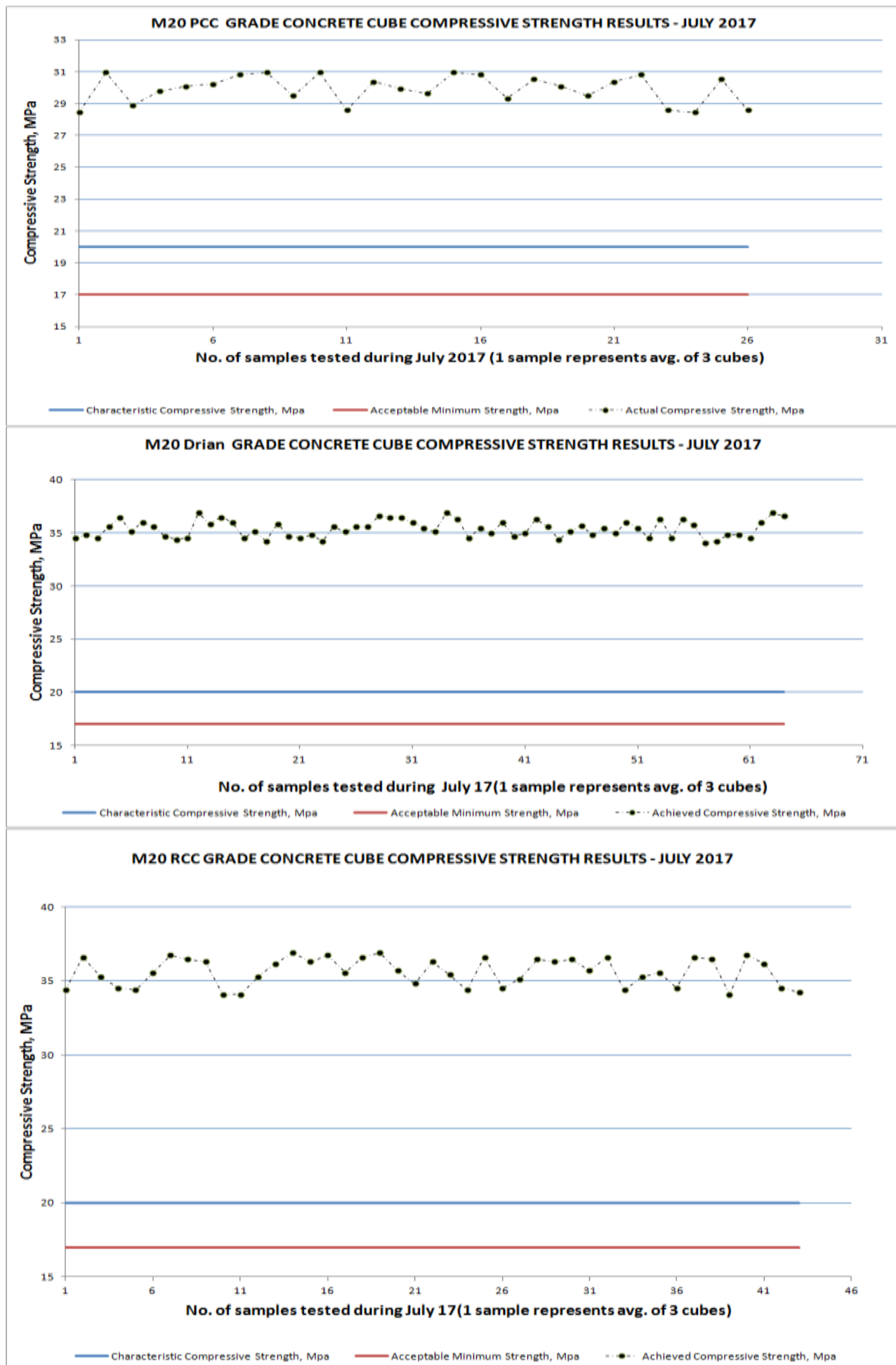
Contractor has maintained registers for accident reports and complaints from public. Direction has been issued to collect report on accidents from police stations on a weekly basis and report to the consultant monthly.

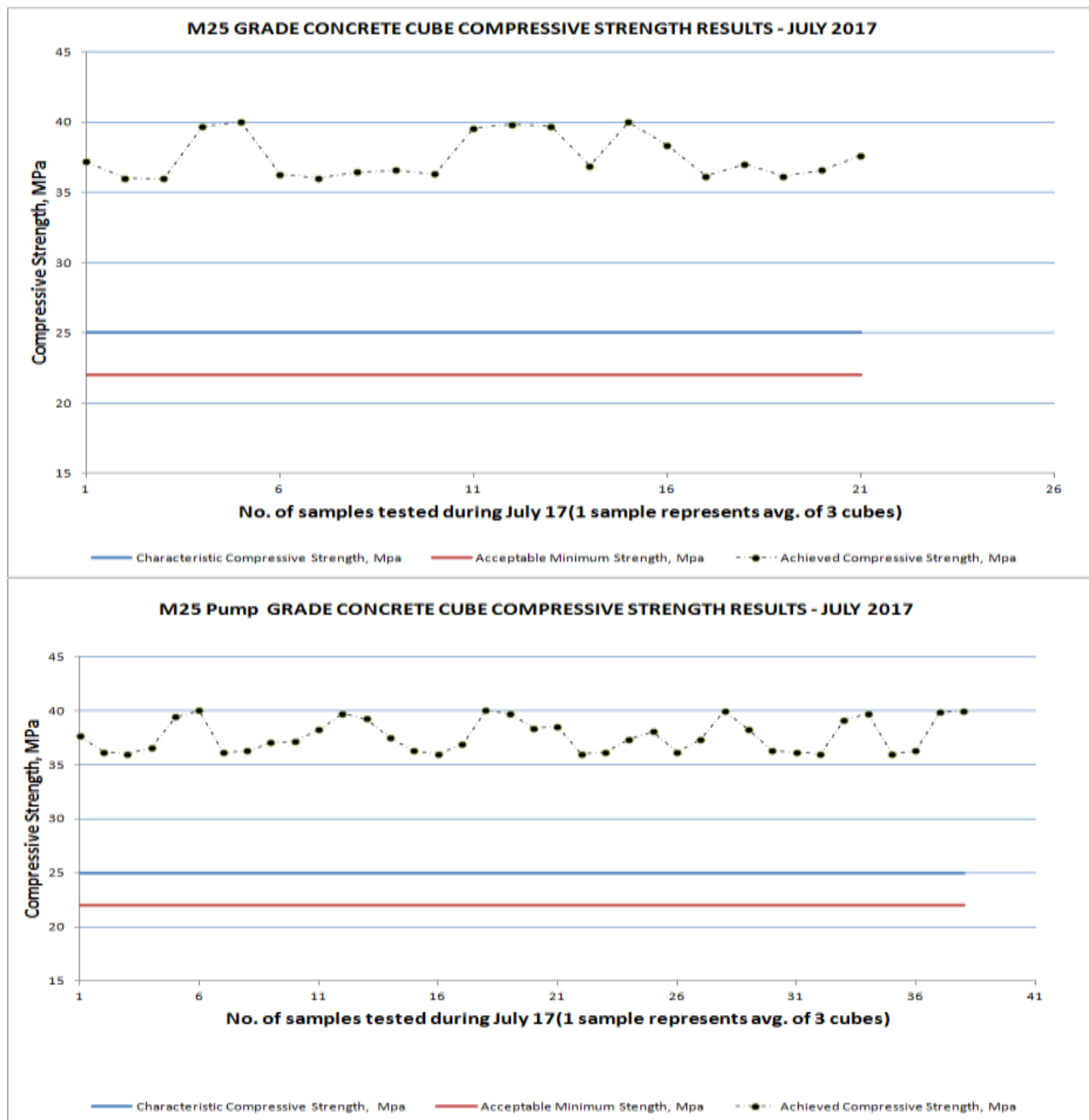
Training has to be provided to all workers, staff and operators as per the EHS plan by the safety officer, this is pending.

## 5.11 Quality Assurance Checklist









## 5.12 Photographs



**DBM LAYING BETWEEN KM 32+000 TO 33+000**



**WMM LAYING BETWEEN KM 33+000 TO 34+000**



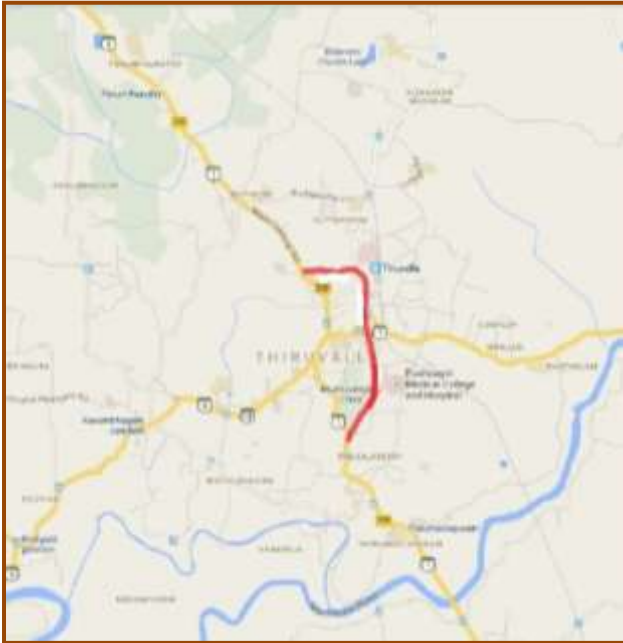
**COUNTERFORT RETAINING WALL WORK IN PROGRESS AT  
42+198 (A1-IRITY BRIDGE )**



**RR MASONRY WALL CONSTRUCTION @ 39+500**

## 6 Contract Package IVA (Work held up)

Construction of **Thiruvalla Bypass** along Chengannoor - Ettumannoor Road (SH-1) from chainage 7+390 to 9+400



### Scope of Works

Major Bridges	- Nil
Minor Bridge	- 1 no.
Flyovers	- 1 no.
Culverts	- 8 nos.
Pipe Culverts	- 2 nos.
Solar lights	- 1380 nos.

### 6.1 Contract Details

Letter of Acceptance Date	:: 29.10.2013
Agreement Date	:: 29.11.2013
Name of Contractor	:: M/s EKK & Co, Kochi
Contract Price	:: Rs. 31,80,45,071/-
Notice to Commence	:: 19.12.2013
Total Length	:: 2.3 Km
Contract Period	:: 24 months
Completion Date	:: 06 August 2014 revised to September 6, 2016
Defect Liability Period	:: 365 days

Work is at stand still position due to design and contractual issues

## 6.2 Work Progress

### 6.2.1 Summary of the progress of the ending May 2017 (Work held up)

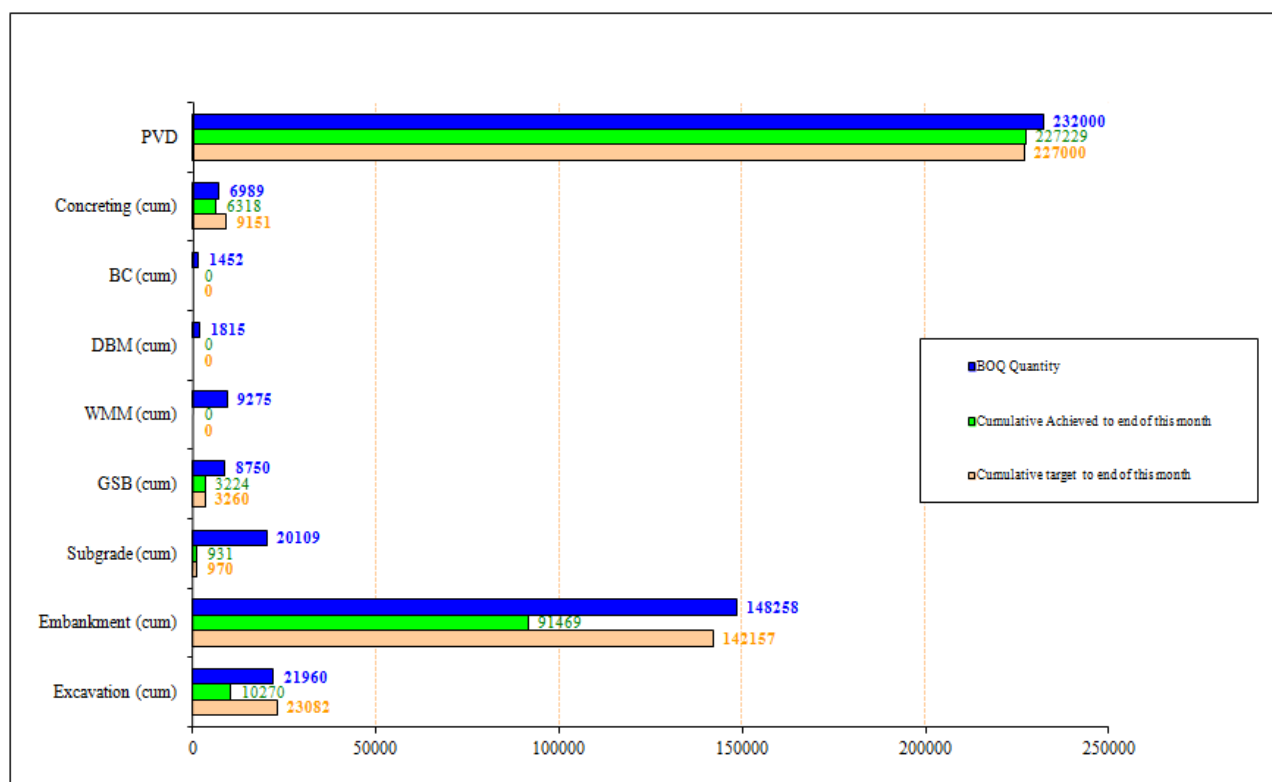
SI No.	Item	Monthly Progress	Cumulative Progress
1	PVD		PVD from 0+080 km to 0+370km, 0+410km to 0+880km completed and earthwork in progress. PVD installation commenced in February 2015 and completed in May 2015
2	Flyover @ km 1+350		<ul style="list-style-type: none"> <li>• Substructure completed</li> <li>• Deck slab &amp; Crash barrier of A1-P1,P1-P2 &amp; P3-P4 span completed.</li> <li>• Retaining wall at A2 side of flyover completed.</li> <li>• Two Girders of P4 A2 have been cast. Concreting of A2 retaining wall of flyover 6 lifts completed.</li> <li>At P3-P4 span 3 girders stressing and grouting completed.</li> <li>P3-P4 deck slab completed.</li> <li>P4-A2 span 2 girders &amp; diaphragm completed.</li> <li>Flyover works completed.</li> <li>Approach work pending</li> </ul>
3	Minor Bridge @ km0+380	2nd lift concreting of Minor bridge A1 & A2 dirt wall of minor bridge completed A2 side coconut pile driving in progress	<ul style="list-style-type: none"> <li>• All 24 no's of pile completed.</li> <li>• A1 pilecap cast.</li> <li>• Abutments A1 &amp; A2 completed.</li> <li>Work on superstructure in progress.</li> <li>Bund preparation at Minor bridge completed.</li> <li>Minor bridge A2 pilecap excavation &amp; PCC completed.</li> <li>4 girders completed.</li> <li>Deck slab completed</li> <li>Hand rail for crash barrier completed</li> <li>2nd lift concreting of Minor bridge A1 &amp; A2 dirt wall of minor bridge completed</li> </ul>
4	RE Wall		<ul style="list-style-type: none"> <li>• Casting of precast panel units completed.</li> <li>• Casting of Precast friction slab is in progress.</li> <li>• Ground improvement at RE wall location completed</li> <li>RE wall levelling pad PCC completed.</li> <li>RE wall levelling pad PCC completed.</li> <li>Embankment construction at RE wall portion (3rd &amp; 4th layer) in progress</li> <li>Erection of RE wall panels in progress</li> <li>Paraweb layed after filling of 5th layer of embankment at RE wall portion.</li> <li>Embankment construction at RE wall portion (15th layer)</li> <li>Erection of RE wall panels.</li> </ul>
5	Retaining wall		<ul style="list-style-type: none"> <li>• RHS &amp; LHS side of Pathanamthitta road completed.</li> <li>• RHS &amp; LHS side of Thiruvalla road is in progress.</li> <li>• At 0+885 km is completed.</li> <li>• At RHS side of Ch: 1+040 – 1+115 km completed.</li> <li>• At LHS side of Ch: 1+060 – 1+112 km completed.</li> </ul>

			<ul style="list-style-type: none"> <li>At LHS side of Ch: 1+060 – 1+112 km completed.</li> <li>The retaining wall at LHS of 1+120 Jn. (0+003-0+036.5km) LHS completed</li> <li>At LHS side of Ch: 1+060 – 1+112 km completed.</li> <li>The retaining wall at LHS of 1+120 Jn. (0+003-0+036.5km) LHS completed</li> </ul>
6	Drainage		<ul style="list-style-type: none"> <li>At RHS of Ch: 0+920-1+057 km completed.</li> <li>At LHS &amp; RHS of 0+980 culvert completed</li> <li>At LHS of Ch: 1+060 – 1+107 km completed.</li> <li>At LHS of Ch: 1+121 – 1+150 km completed.</li> <li>At LHS of Ch: 1+060 – 1+107 km completed.</li> <li>At LHS of Ch: 1+121 – 1+150 km completed.</li> </ul>

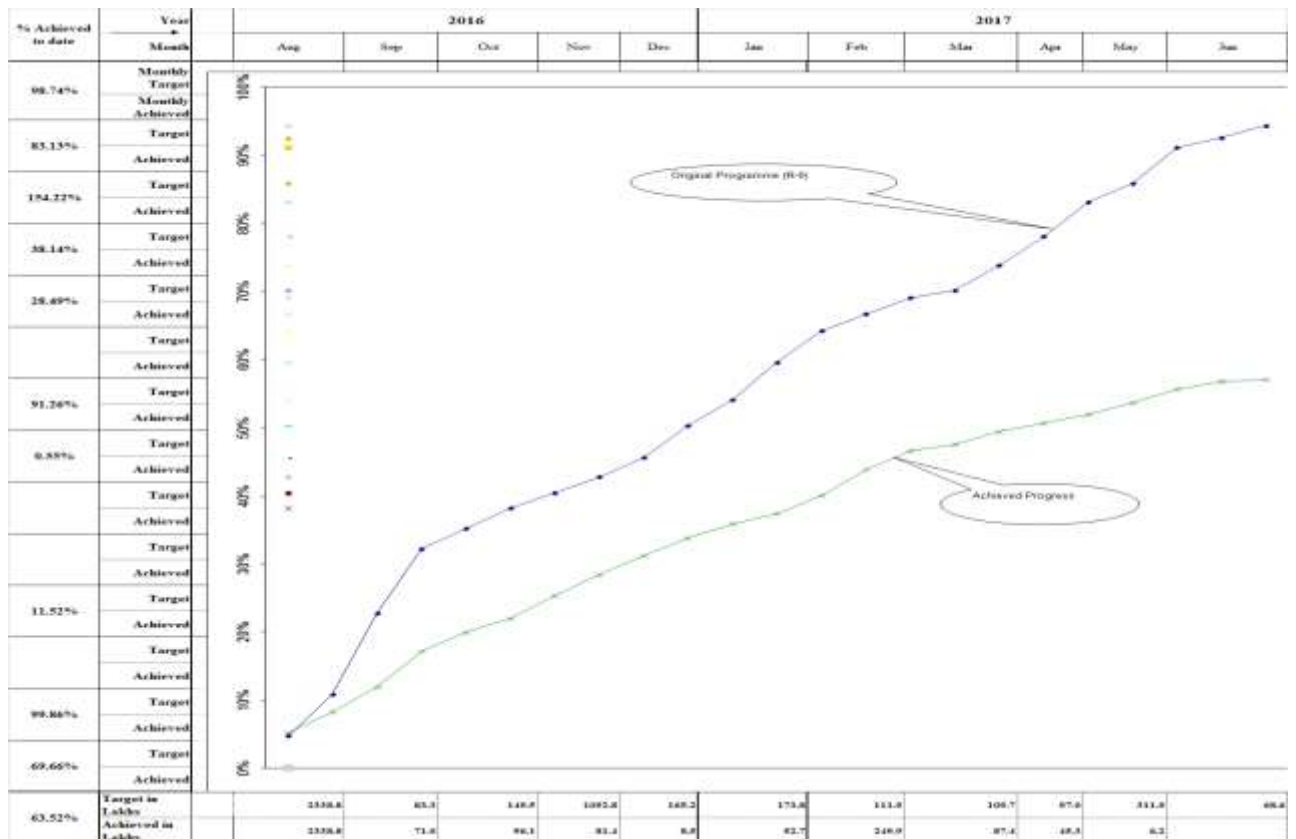
Progress up to month ending May 2017 is as follows (work held up)

Up to previous month		This month		Cumulative to end of this month (gross)		Cumulative Physical
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
9.40%	63.39%	6.52%	0.13%	96.90%	63.52	63%

### 6.3 Physical Progress



## 6.4 S-Curve



## 6.5 Schedule of culverts and drainage works

Nature of work	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining	Remarks
<b>Culverts</b>						
Pipe culvert	4	4	2		2	
New Box Culvert	8	4	4		4	
<b>Total culverts</b>	12	8	6		6	
Fly over and Minor bridge	2	2	2			Almost completed

## 6.6 Potential Issues

The following issues are very critical which may have adverse impact on the timely completion of the Project.

Finalisation of Extension of Time

Finalisation of Variations



## 6.7 Payment

Upto IPC-13 has been paid to the contractor Rs. 17.12 crore

## 6.8 Implementation of EMP

### 6.8.1 General

No activities at site. Contractor submitted request for termination of the contract due to non-decision of the balance works and pending payments. The construction of minor bridge proper completed and approach road remaining. The RE wall work is in a slow pace. No activities on the date of inspection. Environmental expert visited site on 19<sup>th</sup> April 2017 and observation forwarded to the contractor.

Contractor was asked to submit the action taken report on the site visit observation of the environmental expert.

### 6.8.2 Environment Management at Project Ancillary Facilities

The contractor has establishing a base camps at the locations detailed in Table below. Details of Construction Camps

Camp identity	Location	Village
Camp 1 Batching Plant precast yard ,Labour camp, store, laboratory	About 50 cents of land owned by Thiruvalla Municipality, and it is beside the project site.	Thiruvalla Town.
Debris Disposal site	Thiruvalla municipal area approved by municipality.	Thiruvalla
Labour Camp	Thiruvalla Town rented building.	At Thiruvalla Town.

Environment management facilities adopted at these ancillary facilities are detailed in.

Environment Management Facilities at Ancillary facilities

Sl. No.	Details of Camp/Plant	Environment Management Facilities Provided
1	Construction Camp	<p>Provided sanitation facilities, drinking water supply, and solid waste collection facilities.</p> <p>Internal roads developed partially by utilizing the construction debris.</p> <p>Generators are provided, vertical stack of adequate height provided , but no enclosure for DG set used by the sub-contractor.</p> <p>The site drainage is to be improved by construction of collection tanks.</p> <p>Fencing only partially done, complete fencing around the camp is required.</p>

## 6.9 Quality Control Tests

### 6.9.1 Materials for Structures

Tests Performed	Standard used	Test Frequency	Total tests up to previous month			Tests during current month			Total tests up to end of this month			Quantity of work done up to the end of the month	Test to be done up to the end of the month	Remarks
			Tested	Passed	Failed	Tested	Passed	Failed	Tested	Passed	Failed			
<b>STONE</b>	<b>MORTH 1004</b>													
Water Absorption	IS:1124	lot												
<b>CEMENT (Bag)</b>	<b>MORTH 1006</b>													
Fineness	IS:269-1976	" "	36	36					36	36				
Standard Consistency	" "	" "	29	29					29	29				
Soundness	" "	" "												
Compressive Strength	" "	" "												
3 day strength test	" "	" "	23	23					23	23				
7 day strength test	" "	" "	905	905	1	6	6		911	911	1			
28 day strength test	" "	" "	1447	1447		12	12		1459	1459				
Initial Setting time	IS:4031(Part 1)		38	38					38	38				
Final Setting time	IS:4031(Part 5)	" "	38	38					38	38				
<b>CEMENT (Bulk)</b>	<b>MORTH 1006</b>	lot												
Fineness	IS:269-1976	" "												
Standard Consistency	" "	" "												
Soundness	" "	" "												
Compressive Strength														
3 day strength test	" "	" "												
7 day strength test	" "	" "												
28 day strength test	" "	" "												
Initial Setting time	IS:4031(Part 1)													
Final Setting time	IS:4031(Part 5)													
<b>COARSE/FINE Aggregates</b>	<b>MORTH 1007/1008</b>													
Gradation	IS:2186(Part 1)		281	281		2	2		283	283				
Flakiness/Elongation Index	" "	" "	223	223		2	2		225	225				
Deleterious Mat./Organic Imp.	" (Part 2)	" "												
Water Absorption/Spec Grav.	" (Part 3)	" "	9	9					9	9				
Bulk Density	" "	" "												
Impact or crushing Aggr. Value	" (Part 4)	" "	159	159		2	2		161	161				
Los Angeles Abrasion Value	" "	" "												
Soundness	" (Part 5)	" "												
Alkali Aggregate Reactivity	" (Part 7)	" "												
Surface Moisture Content	" (Part 3)	" "	119	119					119	119				
Fineness Modulus of FA		" "	23	23					23	23				
Petrography		" "	2	2					2	2				
<b>STEEL</b>	<b>MORTH 1009</b>													
Verification of conformity( Yield stress, U.T.S, % Elg. Unit Wt.Dia. Test. Etc.	IS:432/1030/1785/1786 2004/2062	lot							8	8				
<b>WATER</b>	<b>MORTH 1010</b>													
Verification of conformity	IS:3028	lot	2	2					2	2				
<b>CONCRETE ADMIXTURE</b>	<b>MORTH 1012</b>													
Verification of conformity	IS:1199/6925/9103	lot	1	1					1	1				
<b>MIXING CONCRETE</b>	<b>MORTH 1700</b>													
3 Test Cubes/Slump test	IS:516/1199	MOST-1700-B	274	266	8				274	266	8			
Compressive Strength	IS:516/1200													
Grade 15: 7 Days(Nos.)	" "	" "	58	58					58	58				
28 Days(Nos.)	" "	" "	100	100					100	100				
Grade 20: PCC 7 Days(Nos.)	" "	" "	12	12					12	12				
28 Days(Nos.)	" "	" "	24	24					24	24				
Grade 20: RCC 7 Days(Nos.)	" "	" "	57	57					57	57				
28 Days(Nos.)	" "	" "	41	41					41	41				
Grade 25: 7 Days(Nos.)	" "	" "	78	78					78	78				
28 Days(Nos.)	" "	" "	130	130					130	130				
Grade 30: 7 Days(Nos.)	" "	" "	18	18					18	18				
28 Days(Nos.)	" "	" "	36	36	12				36	24	12			
Grade 35: 7 Days(Nos.)	" "	" "	143	143					143	143				
28 Days(Nos.)	" "	" "	346	346	27				346	319	27			
Grade 40: 7 Days(Nos.)	" "	" "	18	18					18	18				
28 Days(Nos.)	" "	" "	12	12	12				12		12			
Grade 45: 7 Days(Nos.)	" "	" "	18	18					18	18				
28 Days(Nos.)	" "	" "	48	42	6				48	42	6			
<b>STONE MASONRY</b>	<b>MORTH 1400</b>													
3 Test Mortar Cubes	IS:2250	MOST 1407												
<b>RUMI PIPE</b>	<b>MORTH 2902</b>													
Three-edge Bearing	IS:458/3597	20/90mm												
Hydrostatic Test														
Absorption/Straightness tests														

## 6.9.2 Materials for Pavement

Common Tests Performed	Indian / Foreign Standard	Test Frequency 1 test per	Total tests up to previous month			Tests during current month			Total tests up to month		
			Tested	Passed	Failed	Tested	Passed	Failed	Tested	Passed	Failed
<b>EARTHWORK(BORROW AREA)</b>	<b>MORTH 305/903.2</b>	<b>OGL</b>									
Gradation/Sand content	IS2720(Part 4)	1 test/200mtr	26	26					26	26	
Atterberg Limits	" (Part5)	1 test/200mtr	26	26					26	26	
Proctor	" (Part 8)	1 test/200mtr	26	26					26	26	
CBR	" (Part 16)	As reqd	6	6					6	6	
Free Swell Index	" (Part 40)	1 test/200mtr	26	26					26	26	
Dynamic Cone Penetration (DCP) test		1 test/10mtr	15	15					15	15	
<b>EARTHWORK (OGL)</b>	<b>MORTH 305/903.2</b>	<b>Emb./Subgrade</b>									
Gradation/Sand content	IS2720(Part 4)	1500 cum	5	5					5	5	
Atterberg Limits	" (Part5)	" "	12	12					12	12	
Proctor	" (Part 8)	" "	9	9					9	9	
CBR	" (Part 16)	3000 cum	7	7					7	7	
Free Swell Index	" (Part 40)	" "	5	5					5	5	
Field Density/Compaction	" (Part 28)	500/1000 sqm	185	185					185	185	
<b>SUBBASE (GSB) granular material</b>	<b>MORTH 401/900.3.1</b>										
Gradation	IS2720(Part 4)	200 cum									
Atterberg Limits	" (Part5)	" "									
Proctor											
Deleterious content											
10% fine value											
Water Absorption											
Field Density/Compaction	" (Part 28)	500 sqm									
CBR if grading (II or III)											
<b>BASE (WMM)</b>	<b>MORTH 406/900.3.4</b>										
Gradation	IS 2386 (Part 4)	200 cum									
Flakiness/Elongation Value	" (Part1)	" "									
Atterberg Limits	" (Part4)	100 cum									
Los Angeles Abrasion Value	" (Part1)	" "									
Proctor											
Water Absorption											
Field Density/Compaction	" (Part 28)	500 sqm									
<b>PRIME/TACK COAT</b>	<b>MORTH 502/503/900.3.4</b>										
Rate of Spread	IS 217/8887	500 sqm									
Quality of Binder											
<b>BITUMINOUS MACADAM (BM)</b>											
Aggregate Gradation (Individual+ Mix)											
LA AV											
Flakiness/ Elongation Value											
Quality of Binder											
Binder Content (ASTM - 2172-95)											
Coating and Stripping											
Soundness											
Water Absorption											
Field Density/Compaction											
<b>DENSE BITUMINOUS</b>	<b>MORTH 504/900.4.4</b>										
Aggregate Gradation (Individual+ Mix)	" (Part 1)										
Aggregate Impact Value (AIV)/ LA AV	IS 2386(Part 4)	50 cum									
Flakiness/Elongation Value	" (Part 1)	" "									
Quality of Binder	IS- 73										
Coating and Stripping	IS 6241										
Binder Content (ASTM - 2172-95)											
Marshall Test	ASTM D1559-62T										
Specific Gravity /Water Absorption	IS 2386(Part-3)										
Soundness	IS 2386(Part-5)	2 per day									
Bulk Density	IS 2386(Part 3)	" "									
Field Density/Compaction	ASTM D 2041-95										
Sand Equivalent Value for FA											
Plasticity Index											
<b>BITUMINOUS CONCRETE</b>	<b>MORTH 504/900.4.6</b>										
Aggregate Gradation (Individual+ Mix)											
Aggregate Impact Value/ LA AV	IS 2386(Part 4)	50 cum									
Flakiness/Elongation Value	" (Part 1)	" "									
Marshall Stability	ASTMD 1559	2 per day									
Quality of Binder											
Coating and Stripping											
Specific Gravity /Water Absorption											
Stone polishing Value											
Soundness											
Sand Equivalent Test											
Binder Content	IS 2386(Part 4)	" "									
Field Density/Compaction	Core Samples	250 sqm									
Plasticity Index											
<b>SURFACING (MSS)</b>	<b>MORTH 504/900.4.3</b>										
Aggregate Impact Value	IS 2386(Part 4)	50 cum									
Flakiness/Elongation Value	" (Part 1)	" "									
Aggregate Gradation	IS 2720(Part 4)	25 cum									
Binder Content	IS 2720(Part 4)	2 per day									

## 6.10 Compliance report on observations of World Bank Mission

Discussion of issues affecting progress and causing huge variation

S No	Item/ Component	Attributed to
	Land acquisition and related court matters	Processing for land acquisition cases and stay orders by court caused considerable delay. This continues to be a serious hindrance
	Constructing a minor bridge in place of a box-culvert	This substitution has caused additional cost and time period
	Increase in length of the piles	Affected both cost and time
	Constructing viaduct instead of doing earthwork	Due to poor soil conditions, construction of protection walls for earthwork was not possible and provision of viaduct became an obvious option
	Cost of transportation of soil from Package IV	Affected the project cost
	Improving bearing strength of soil under strip footings by GSB material	Affected both cost and time
	Increase in the PVD quantity	Affected both cost and time

Sl No.	Site works - Observations	Action taken
a	In concrete crash barrier on deck slab holes left due to use of PVC sleeves for fixing of formwork would have to be properly sealed.	Complied
b	Sample prestressing records for the main girders used in decks were checked in which locking pressure mentioned as about 75 p.c of jack pressure could not be reconciled. The same should be referred to Design Engineer of EGIS.	Complied
c	At location of minor bridge with one span of 18m due to existence of very soft top soil and heaving noticed it was suggested that sub-soil investigating agency be consulted for value of coefficient of compressibility of top layers of soil and recommendation for depth of coconut piles proposed and extent of length along embankment on either side up to which such piles should be installed to limit settlement.	Complied

## 6.11 Photographs



**PROVIDING HAND RAIL FOR MINOR BRIDGE CRASH BARRIER (CH: 0+380 KM)**

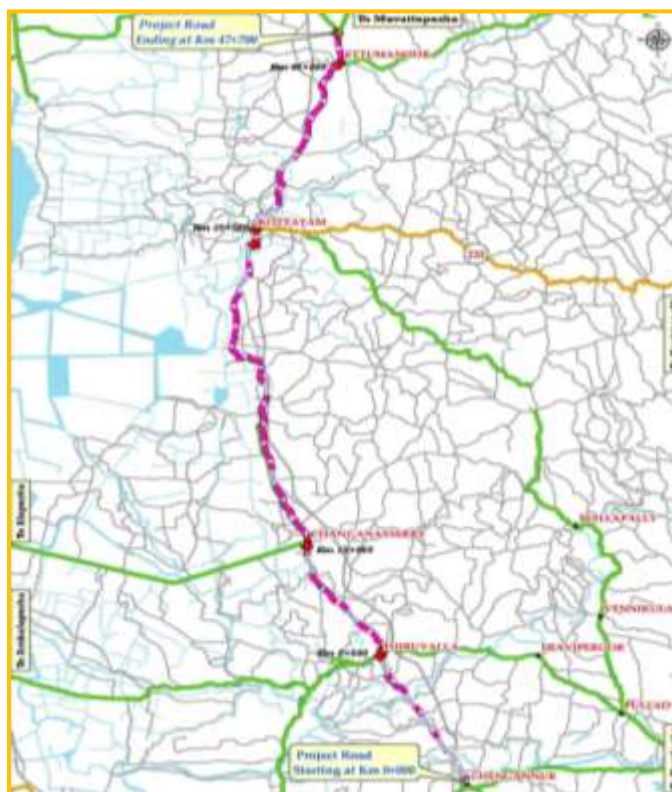


**EMBANKMENT CONSTRUCTION AT PATHANAMTHITTA JN. (CH: 1+120 KM)**



## 7 Contract Package IV

### Upgradation of Road from Chengannoor to Ettumanoor of SH-1



#### **Scope of Works (45.40 Km):**

Construction of Major Bridges	–	3
Construction of Minor Bridge	–	5
New Box culverts	-	9
Widening Slab culverts	–	8
Reconstruction of Culverts	-	59

#### **7.1 Contract details:**

Letter of Acceptance	::	21.08.2014
Agreement date	::	15.09.2014
Name of contractor	::	M/s Delma-Sreedhanya JV
Contract amount	::	Rs. 293,58,17987
Notice to commence	::	November 25, 2014
Total length	::	45-80
Contract period	::	36 months
Completion date	::	24.11.2017
Defect liability period	::	365 days
I milestone	::	10 km upto BC level 18 months from commencement date
II milestone	::	25 km upto BC level 25 months from commencement date
	::	
III milestone	::	47.80 km upto BC level 36 months from commencement date

## 7.2 Pre-Construction Activities:

### 7.2.1 Utilities

Utilities such as water lines, telephone cables and associated accessories, electrical lines and associated accessories and trees are being removed / shifted. Removal of stumps of trees cut by agencies engaged by KSTP is also the responsibility of the Contractor.

Relocation of Electrical lines and Waterlines are included in the Contract. 3279 lm of 700mm, 5246 lm of 200mm & 15248.75 lm of 300mm DI pipe and 500mm  $\phi$  6048.5 m laid. 58062 lm of 160mm PVC pipe laid. Work in progress.

Electrical Utility shifted for approximately 44.22 km. Work in progress.

### 7.2.2 Progress of work so far

SI No.	Item	Monthly Progress/ Quarterly progress	Cumulative Progress	Balance Work
1	GSB	0 km/0.21 km	39.510 Km	1.710 km
2	WMM	0 km/0.26 km	39.350 km	1.870 km
3	DBM	0 km/0.240 km.	39.340 km	1.880 km
4	BC	1.06 km/2.69 km	37.970 km	3.25km

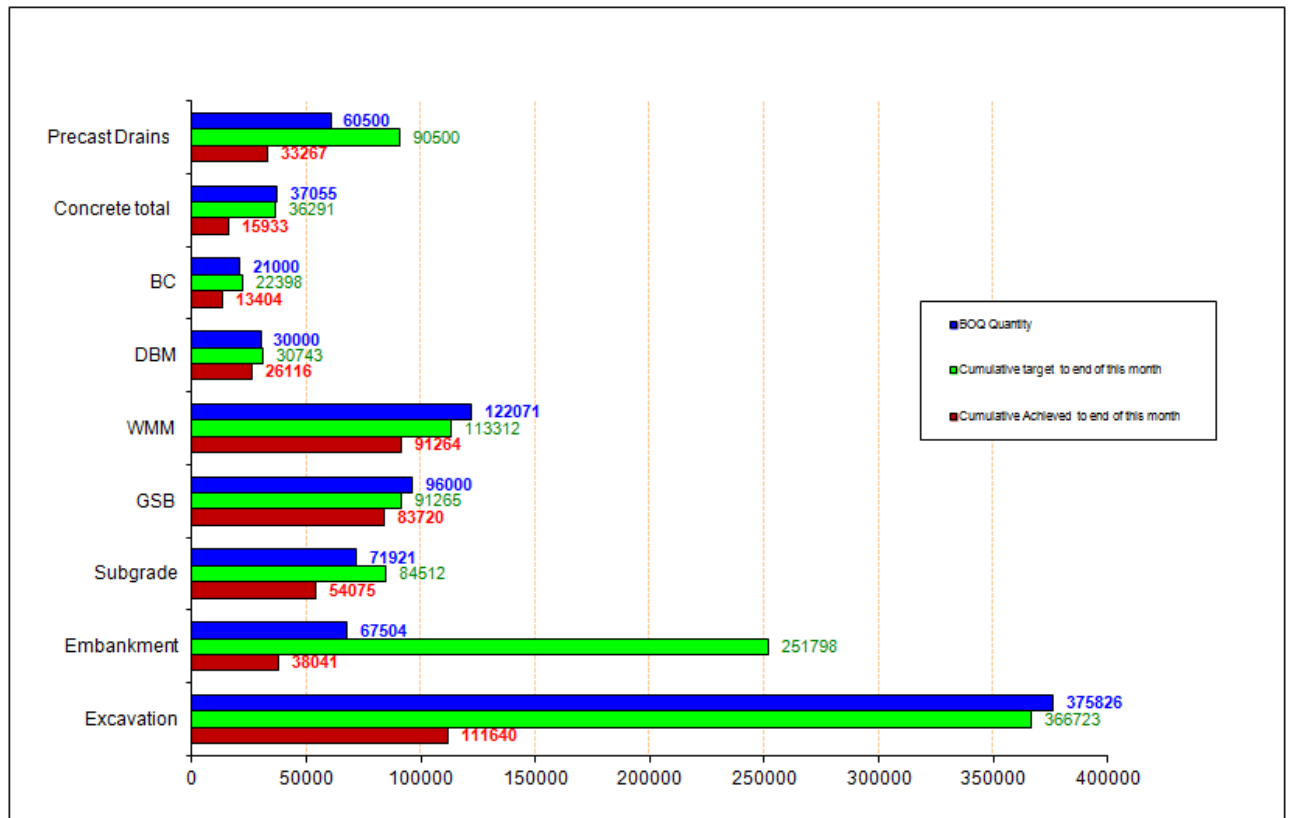


Sl No.	Item	Quarterly	Cumulative Progress
	<b>Structures</b>		
6	Bridge @ km 0+740 (Puthanveetilpadi)		New Bridge completed and commissioned
7	Bridge @ km 1+558 (Kallissery)		Bridge completed. Approach on kottayam side nearing completion.
8	Bridge @ km 4+008 (Varattar)		Bridge completed.
9	Bridge @ km 5+213 (Thondra)	P1-P2 2nd girder stressing completed .P2-P3 2 <sup>nd</sup> Girder stressing completed.P3-P4 3 <sup>rd</sup> Girder stressing completed.& 4 <sup>th</sup> girder concrete completed.	<ul style="list-style-type: none"> <li>• P1P2 1st &amp; 2nd Girder upto stressing completed [Last Qr. P1,P2, completed up to hammer head and shuttering for girder started]</li> <li>• P2P3 1st &amp; 2nd Girder upto stressing completed[Last Qr. P2,P3, completed up to hammer head and shuttering for girder started] [</li> <li>• P3P4 1st 2nd &amp; 3rd girder upto stressing completed and 3rd girder concrete completed.[ last quarter 1st girder completed]</li> <li>• P4-A2 &amp; A1-P1 Deck slab completed.[Do.]</li> </ul>
10	Bridge @ km 11+235 (Pannikuzhi)		New Bridge completed and commissioned
11	Minor Bridge @ km 20+018(Palathra)		<ul style="list-style-type: none"> <li>• Work completed &amp; opened to traffic</li> </ul>
12	Bridge @ km 24+965 (Puthanpalam)		Work completed & opened to traffic
13	Bridge @ km 39+709 (Neelimangalam)		Bridge completed & to be opened after approval of load test results [ re test is to be carried out]
14	Retaining Wall	0m / 136m.	10655 Lm completed.
15	Culverts	culverts work in progress/ 8No.	78
16	Drain -	165 m/ 760m.	50014 m

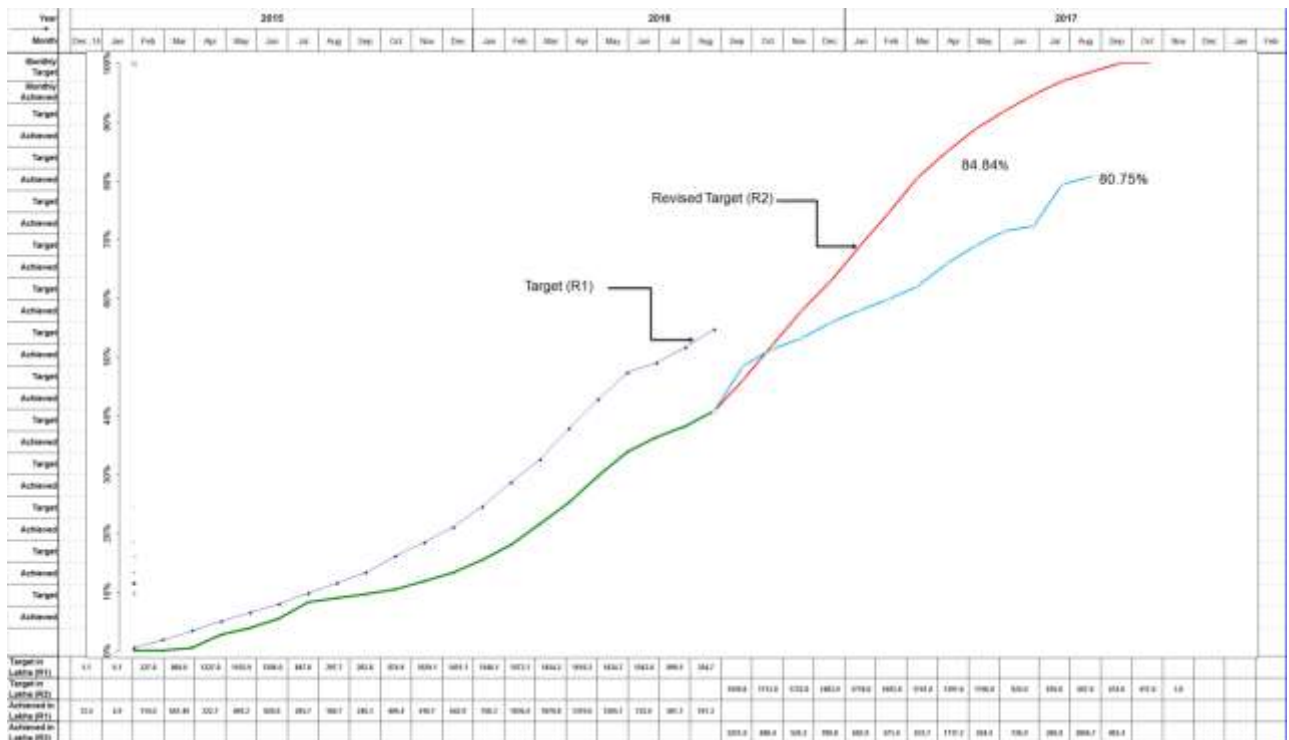
Progress up to quarter ending September 2017 is as follows:

For previous quarter (Rs. Cr)		This quarter (Rs. Cr)		Cumulative to end of this quarter (Rs. Cr)		Cumulative Physical
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
94.68%	71.63%	3.89%	9.12%	98.57%	80.75%	80.20%

## 7.3 Physical Progress



## 7.4 S-Curve



## 7.5 Schedule of culverts and drainage works

Nature of work	Total number	No. dwgs approved	Number completed	Number in progress	Number remaining
<b>Culverts</b>					
Pipe culvert	1	1	1		
New Box Culvert	78	78	77	1	
<b>Total culverts</b>	79	79	78	1	
<b>Major Bridge</b>	2	2	1	1	
<b>Minor Bridge</b>	4	4	4		
<b>Widening Bridge</b>	3	3	3		

## 7.6 Payments

The contractor has been paid Rs. 207.61 crores

## 7.7 Implementation of EMP

### 7.7.1 General

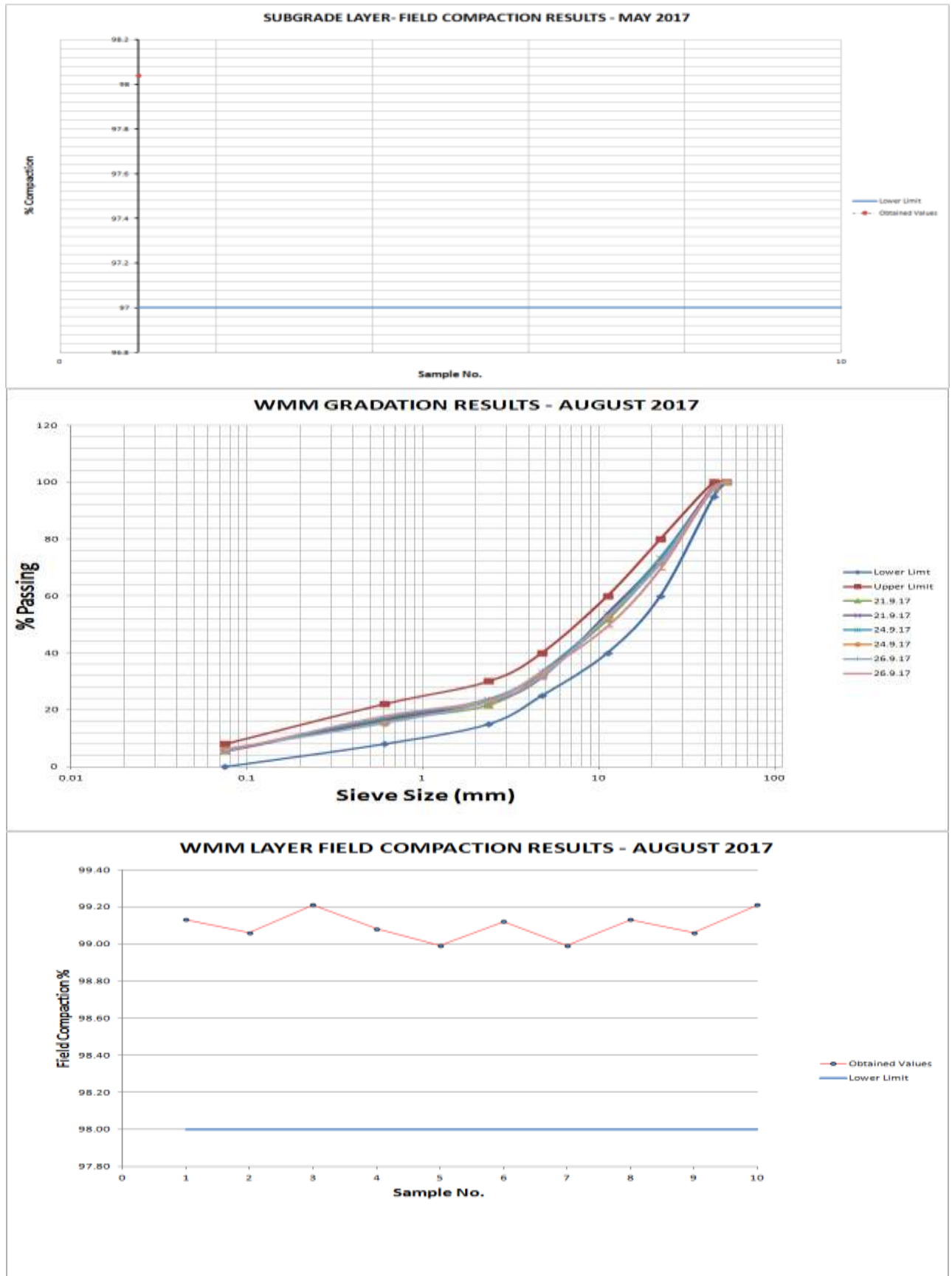
Most of the road work completed. The bridges at Thondara and Kallissery remaining. The road marking is done for 20 km. The load test of Neelimangalam bridge completed and opening of bridge expected soon.

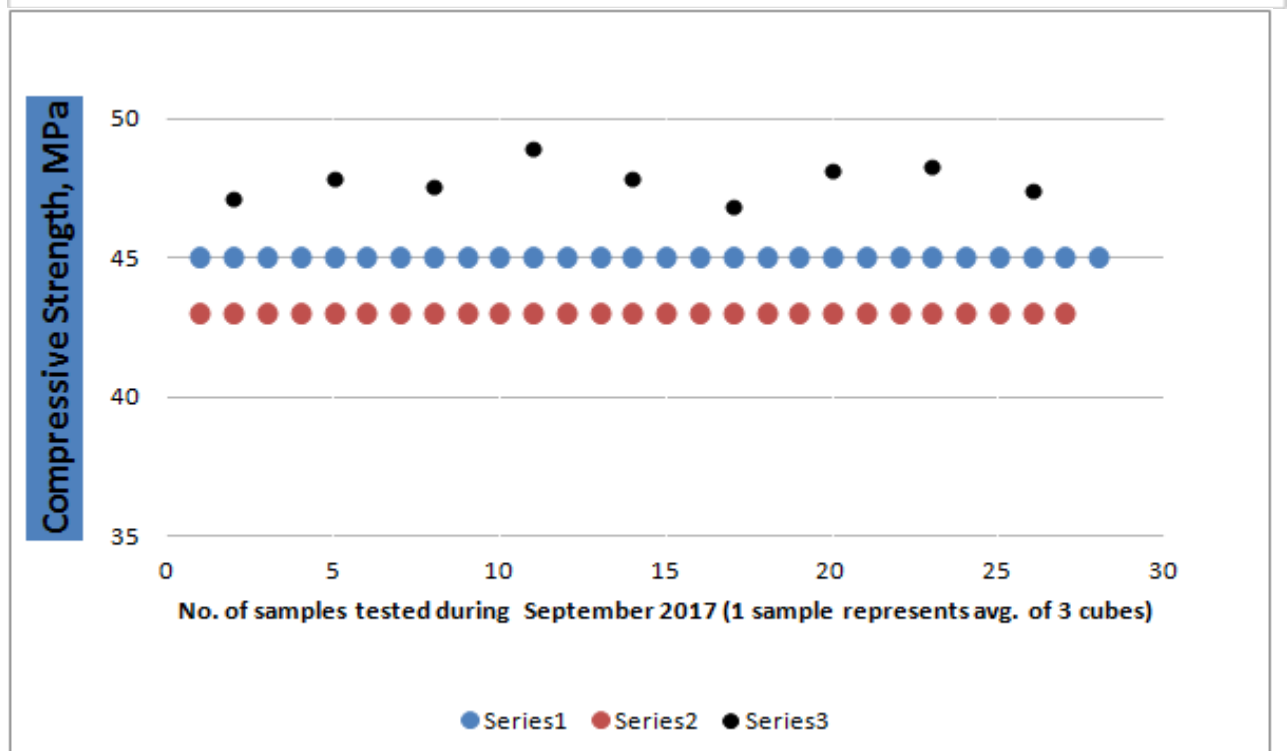
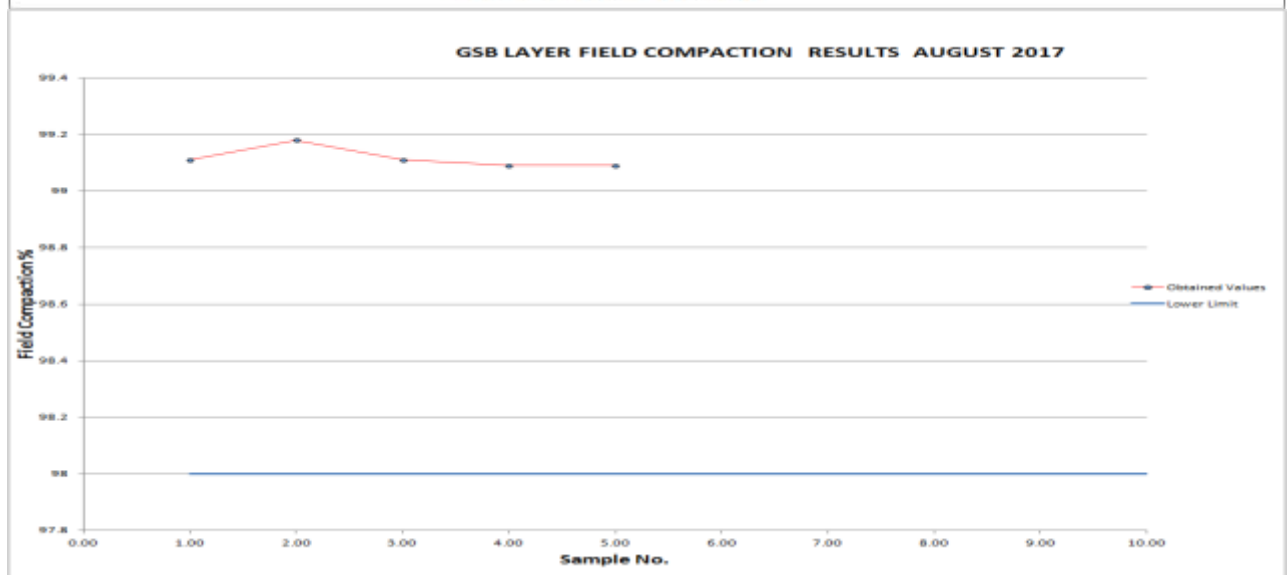
Constructions of bus shelters, parking area development are not started. Pedestrian crossing in front of schools marked and sign boards to be placed as the road works are completed. The environmental expert visited project on June 8th June 2017 along with world bank team 2017 and observation forwarded.

Tree planting works, land scape, cultural property rehabilitation works are to be started. The waste materials dumped at site has to be disposed at designated places in Changanassery Municipality. Contractor has to submit a base camp closure management plan for the closed WMM plant at Vembally.

Housekeeping of Batching plant, HM plant are to be improved. Water stagnation noticed inside the batching plant site. The cultural property on the approach of the Kallessery Bridge is to be relocated since it is a long pending issue. Contractor has to initiate actions to carry out safety works, tree planting works and construction of bus shelter. The design approved earlier for bus shelter has been revised

## 7.8 Quality Assurance Checklist





## 7.9 Accident Report (01 Sept 2017 to 31 Sept 2017)

Project	KSTP Chengannur (KM 0+000)-Ettumnoor Project (47+700)																	
S.NO	Operational Date	Time of Accident (Hrs)	A	B	C	D	E	F	G	H	Vehicle Responsible	No of affected persons					Remarks	
			Accident Location	Nature of Accident	Classification of Accident	Causes	Road Feature	Road condition	Intersection Type And Control	Weather Condition		Fatal	Grievous	Minor	Non injured	No of animals Killed of Any		Help Provided by Ambulance/Patrolling Vehicle
1	1/9/2017	18.30	Parakkal	3(Car+MC)	2	2,3,4	2	1	1	1	KL05 AK 8802	0	1	0	0	0	yes	
2	1/9/2017	17.30	Chavinnur	3(scooter+Pedestrian)	2	2,3	2	3	3	1	nil	0	1	0	0	0	yes	
3	3/9/2017	16.45	Parakkal	3(Car+Pedestrian)	2	4	2	2	4	1	nil	0	1	0	0	0	yes	
4	2/9/2017	17.00	Intoor	3(Car+MC)	2	4	2	3	4	1	nil	0	1	0	0	0	yes	
5	2/9/2017	8.30	Mission pulli	2(Mc+Pedestrian)	2	2	2	1	4	1	nil	1	0	0	0	0	yes	
6	3/9/2017	16.00	Nattakom	3(Traveller+MC)	2	2,4	2	1	1	1	KL 31 H 9654	0	1	0	0	0	yes	
7	3/9/2017	11.45	Kodimatha	5(AR +MC)	1	2,3	2	1	3	1	KL 35 B 2691	0	1	0	0	0	yes	
8	4/9/2017	13.10	Ceminaripuli	3(Car+MC)	2	2,4	2	2	3	1	nil	0	1	0	0	0	yes	
9	4/9/2017	19.00	Mandiram Kavala	3(Car+Mc)	2	4	2	1	2	1	KL 7 BV 8023	0	1	0	0	0	yes	
12	5/9/2017	18.52	Pakkil	3(Car+Scooter)	2	2,3,4	2	1	1	1	KL 29 H 1900	0	1	0	0	0	yes	
13	7/9/2017	17.45	Peranna	3(Scooter+Pedestrian)	2	4	2	1	1	1	nil	0	1	0	0	0	yes	
16	8/9/2017	21.00	Mission pulli	3(Mc+Pedestrian)	2	2,3,4	2	1	1	1	KL 27 E 9527	0	1	0	0	0	yes	
17	9/9/2017	12.00	SH mount	3(Lorry+Pedestrian)	2	4	4	1	1	1	KL3 AN 8456	0	1	0	0	0	yes	
18	11/9/2017	19.30	Kumaranalloor	2(MC+Pedestrian)	1	2,3,4	2	1	1	1	KL 5 AM 1862	0	1	0	0	0	yes	
19	11/9/2017	17.00	Adichea	2(Lorry+Van)	2	2,4	2	2	3	1	KL 26 C 5588	0	1	0	0	0	yes	
20	11/9/2017	18.30	Chingavannam	2(Bus+Pedestrian)	2	2,4	2	2	3	1	KL 5 W 3351	1	0	0	0	0	yes	
21	13/9/2017	15.00	Central in chengannur	2(Car+bike)	2	2,3	2	1	1	1	KL 48 1214	0	1	0	0	0	yes	
22	13/9/2017	10.30	Asan pulli	2(Car+Pedestrian)	2	2,3,4	2	1	1	1	KL29 H 1900	0	1	0	0	0	yes	
23	14/9/2017	7.45	Nagambadam	2(Lorry+Scooter)	2	2,3,4	2	1	1	1	nil	1	0	0	0	0	yes	
24	15/9/2017	19.30	Mavilangu	3(Lorry+pedestrian)	3	2,3	2	1	1	1	KL 01 BC 3983	0	1	0	0	0	yes	
25	15/9/2017	14.30	Kodimatha	2(Car+Mc)	2	2,3,4	2	1	1	1	KL 5 Y 5661	0	1	0	0	0	yes	
26	17/9/2017	4.30	Perumthazhi	3(Car+MC)	2	2,3	2	1	1	1	nil	0	1	0	0	0	yes	
27	18/9/2017	11.15	Peranna	3(Scooter+Pedestrian)	2	2,3,4	2	1	1	1	KL 48 1214	0	1	0	0	0	yes	
28	18/9/2017	19.45	Pravincood	6(Scooter)	1	2,4	2	1	1	1	nil	1	0	0	0	0	yes	
29	18/9/2017	6.30	Thiruvathy	2(Bus+Tree+ Katic)	2	2,3	2	1	1	1	nil	0	5	0	0	0	yes	
30	22/9/2017	14.30	Berna JN	2(Car+MC)	2	2,3,4	2	1	1	1	TN 38 BS 2572	0	1	0	0	0	yes	
31	23/9/2017	17.45	Nagambadam	2(Car+Scooter)	2	2,3,4	2	1	1	1	KL 5 AK 3428	0	1	0	0	0	yes	
32	23/9/2017	10.30	Mariyapuli	2(MC+Pedestrian)	2	2,3,4	2	1	1	1	KL 7 W 8146	1	0	0	0	0	yes	
33	23/9/2017	18.10	Berna JN	2(MC+Pedestrian)	2	2,3,4	2	1	1	1	nil	0	1	0	0	0	yes	
34	24/9/2017	12.00	Baker JN	3(Bus+Scooter)	2	2,3	2	1	1	1	nil	0	1	0	0	0	yes	
35	28/9/2017	9.00	Lakkadu	2(Katic+AR)	2	2,3,4	2	1	1	1	nil	0	1	0	0	0	yes	
A		Urban/Rural and details of surrounding land use								E		1-Single lane, 2-Two lane, 3-Three Lanes or more without central divider(Median), 4- Four Lanes or more with central divider(Median)						
B		1- Overtaking, 2- Head on collision, 3-Rear End Collision, 4-Collision Brush/Side Wipe, 5- Right Turn Collision, 6-Skidding, 7-Right Turn Collision, 8-Others(Pl Specific)								F		1-Straight road, 2-Slight curve, 3-Sharp curve, 4- Flat road, 5-Gentle incline, 6-Steep incline, 7- Hump, 8-Dip 9) T/Y Junction						
C		1 Fatal, 2-Grievous injury, 3- Minor injury 4- Non injury								G		1- T-Junction, 2- Y-Junction, 3- Four arm junction, 4- Staggered junction, 5- Junction with more than four arms, 6- Round about junction, 7- Manned Rail crossing, 8- Unmanned Rail Crossing						
D		1-Drunken driving, 2- Over speeding, 3- Vehicle out of control 4- Fault of driver of motor vehicle/driver of other vehicle/cyclist/pedestrian/passenger 5-Defect in mechanical condition of motor vehicle/road condition																
										H		1-Fine, 2-Mist/Fog, 3-Cloudy, 4-Light rain, 5-Heavy rain, 6-Hail/Sheet, 7-Snow, 8- Strong Wind, 9-Dust storm, 10-very hot, 11-very cold, 12-other extraordinary weather condition						



## 7.10 Photographs



**FOOTPATH WORK @ 15+880 TO 16+100**



**LAYING OF BC @ 19+400 BYEPASS**



**LAYING OF BC @ 19+980 TO 20+040(LHS)**



**5+213 P3P4 GIRDER 4 CONCRETE**



## 8 Contract Package V

Upgradation of Road from Ettumanoor to Muvattupuzha of SH 1



### Scope of Works (40.96 Km):

Construction of Major Bridges	–	0
Construction of Minor Bridge	–	4
New Box culverts	-	3
Widening Slab culverts	–	14
Reconstruction of Culverts	-	75
Foot path, Solar Lights		

### **Contract details:**

Letter of	::	29.11.2013
Acceptance Date		
Agreement Date	::	30.12.2013
Name of Contractor	::	M/s NAPC Ltd.,
Contract Price	::	Rs. 171.49
Notice to	::	04.02.2014
Commence		
Total Length	::	40.60 km
Contract Period	::	30 months
Completion Date	::	03.08.2016 (original)
Defect Liability	::	365 days
Period		
1 <sup>st</sup> Milestone	::	10 km – BC level 02.05.2015
2 <sup>nd</sup> Milestone	::	30 km – 05.10.2016
3 <sup>rd</sup> Milestone	::	whole works by 23.03.2017 (extended)

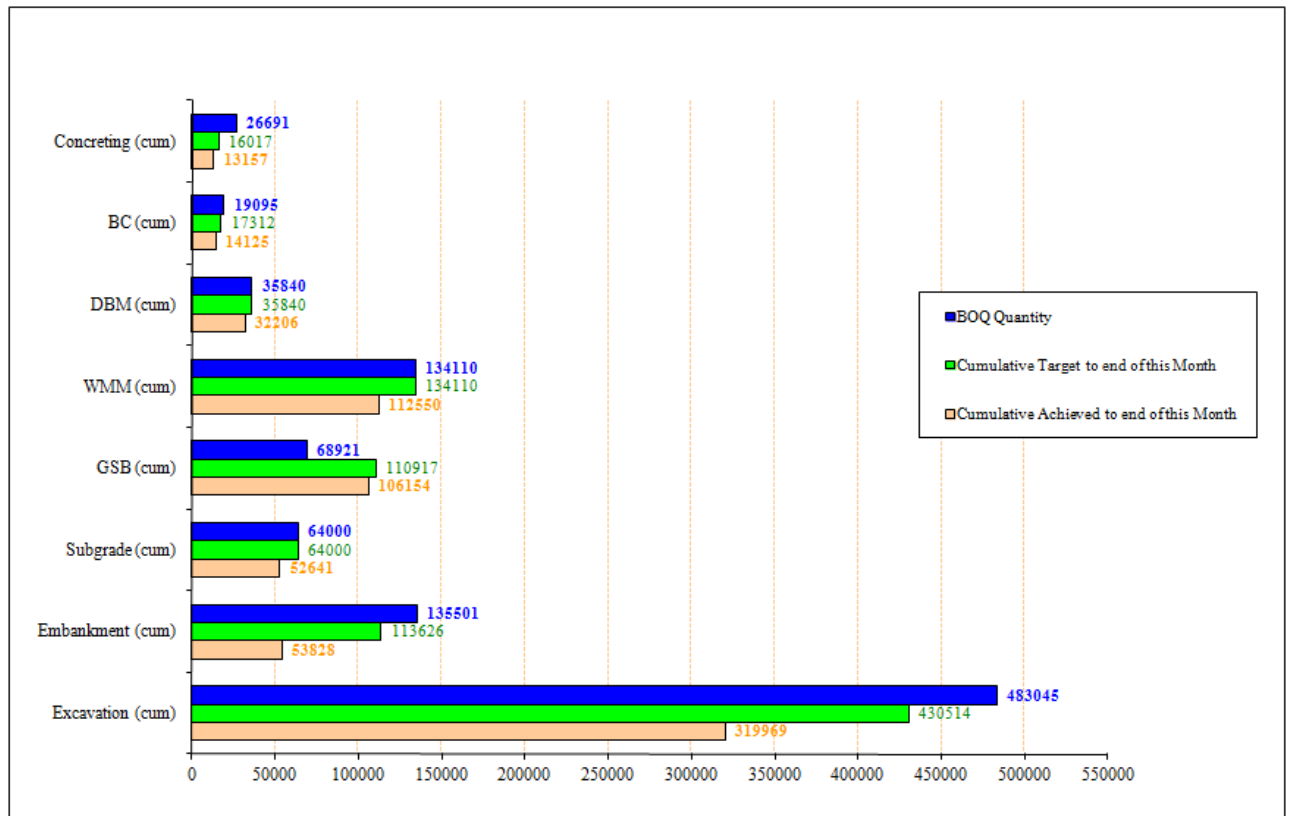
## 8.1 Work Progress

### 8.1.1 Progress Achieved

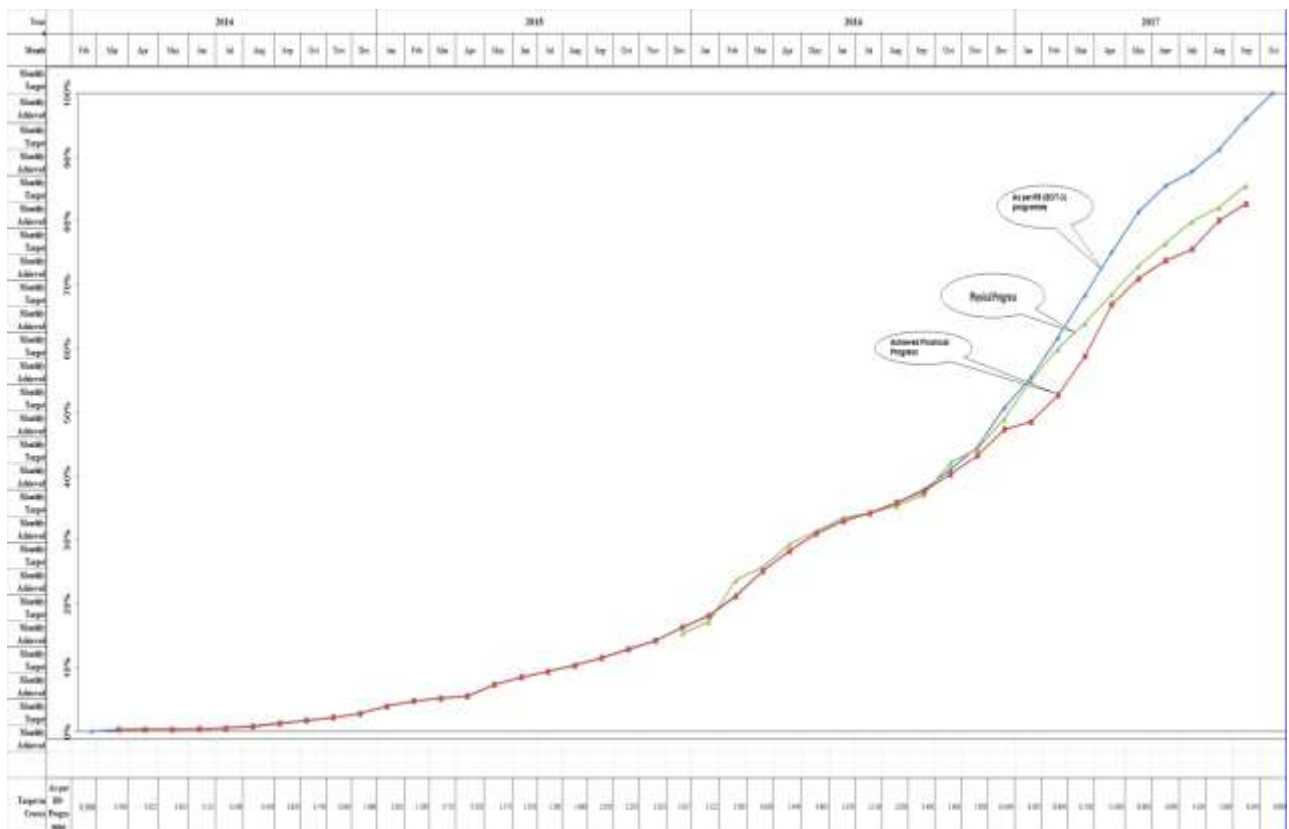
Sl No.	Item	July to September 2017 Progress	Cumulative Progress	Balance Work (Actual length 40.123km)
1	GSB	0.956 km	39.915 km	0.208 km
2	WMM	0.755 km	39.550 km	0.573 km
3	DBM	1.130 km	39.030 km	0.963 km
4	BC	0 km	31.580 km	8.543 km
Structures				
5	Bridge @ km 3+877		Widening work completed.	Aprons, reconstruction of old handrails and repair of existing bridge
6	Bridge @ km 12+524		Widening work completed.	Aprons and repair of existing bridge
7	Bridge @ km 22+187		Reconstruction of bridge completed	Side Protection works and drain connection works.
8	Bridge @ km 24+506		Widening completed on both sides.	Aprons, and repair of existing bridge
9	Bridge @ km 28+361		Reconstruction of bridge completed	U/S and DS aprons, and other finishing works
10	Culverts	5 are in progress	113 completed	
11	Drain	3294	46096 m	

Up to previous quarter (Rs. Cr)		This quarter		Cumulative up to end of this quarter (Rs. Cr)		Physical
Target	Achieved	Target	Achieved	Target	Achieved (gross)	Achieved
85.50%	73.79%	10.50%	8.92%	96.00%	82.71%	85.60

## 8.2 Physical Progress



## 8.3 S-Curve



## 8.4 Schedule of Cross Drainage

Nature of work	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining	Original number	No. dwgs approved	Number completed	Number in progress	Number remaining
<b>Culverts</b>	<b>Milestone - I</b>					<b>Milestone - II</b>					<b>Milestone - III</b>				
Widening Slab Culverts	5	5	5			6	6	5	1	0	1	1	0	1	0
Slab Culvert retained	2		2			2				0	2	2	2		0
Reconstruction Slab/Box	24	24	24	0		40	40	40	0	0	19	19	17	2	0
New Box Culvert	3	3	3		0	3	3	3		0	2	2	2	0	0
Additional Box Culvert							2	2		0					
New Pipe Culvert	0					6	5	5		0	3	3	2	1	0
<b>Total culverts</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>56</b>	<b>56</b>	<b>1</b>	<b>0</b>	<b>27</b>	<b>27</b>	<b>23</b>	<b>4</b>	<b>0</b>
Bridges Retained	0					2				1	1	1	1		0
Widening Bridges	1		1	0	0	2	2	2	0	0	0				0
Reconstruction Bridges	0					2	2	2	0	0	0				0
<b>Total Bridges</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>

## 8.5 Strip Map

[illegible]









[illegible]

## 8.6 Key issues:

The following issues are very critical which may have adverse impact on the timely completion of the Project. Since LA is delayed at Ch: 39+00 - 39.00, the contractor was directed to follow existing route. Adequate resources available at site however improper planning delayed the progress. Occurrence of hard rock has delayed the progress.

## 8.7 Payment to the contractor

The contractor has been paid Rs. 129.72 crores

## 8.8 Implementation of EMP

### 8.8.1 General

Contractor has obtained consent to operate for all the plants except crusher. The works are spread over to Km 30 to 42. The camp management is to be improved. Contractor has mobilized a environmental engineer at site. The environmental expert visited site 7<sup>th</sup> june along with world bank team.

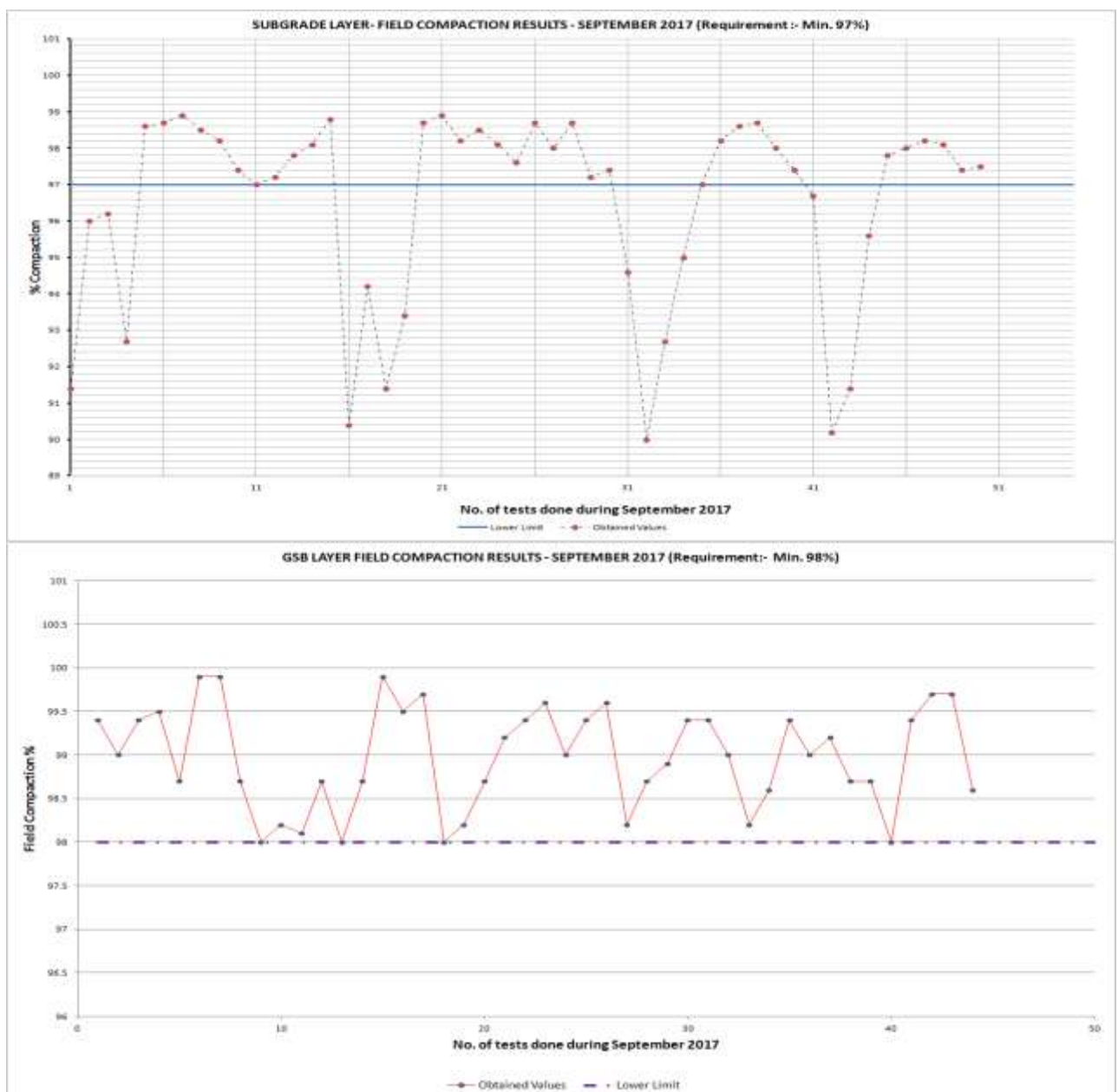
The access lost at ch 37+300 to the house at RHS is to be re constructed with ramp and retaining wall. The road work at CH 34+420 completed and safety arrangements has to be provided by constructing a footpath at RHS, approval has been issued to start the work. Temporary safety measures are required at this point.

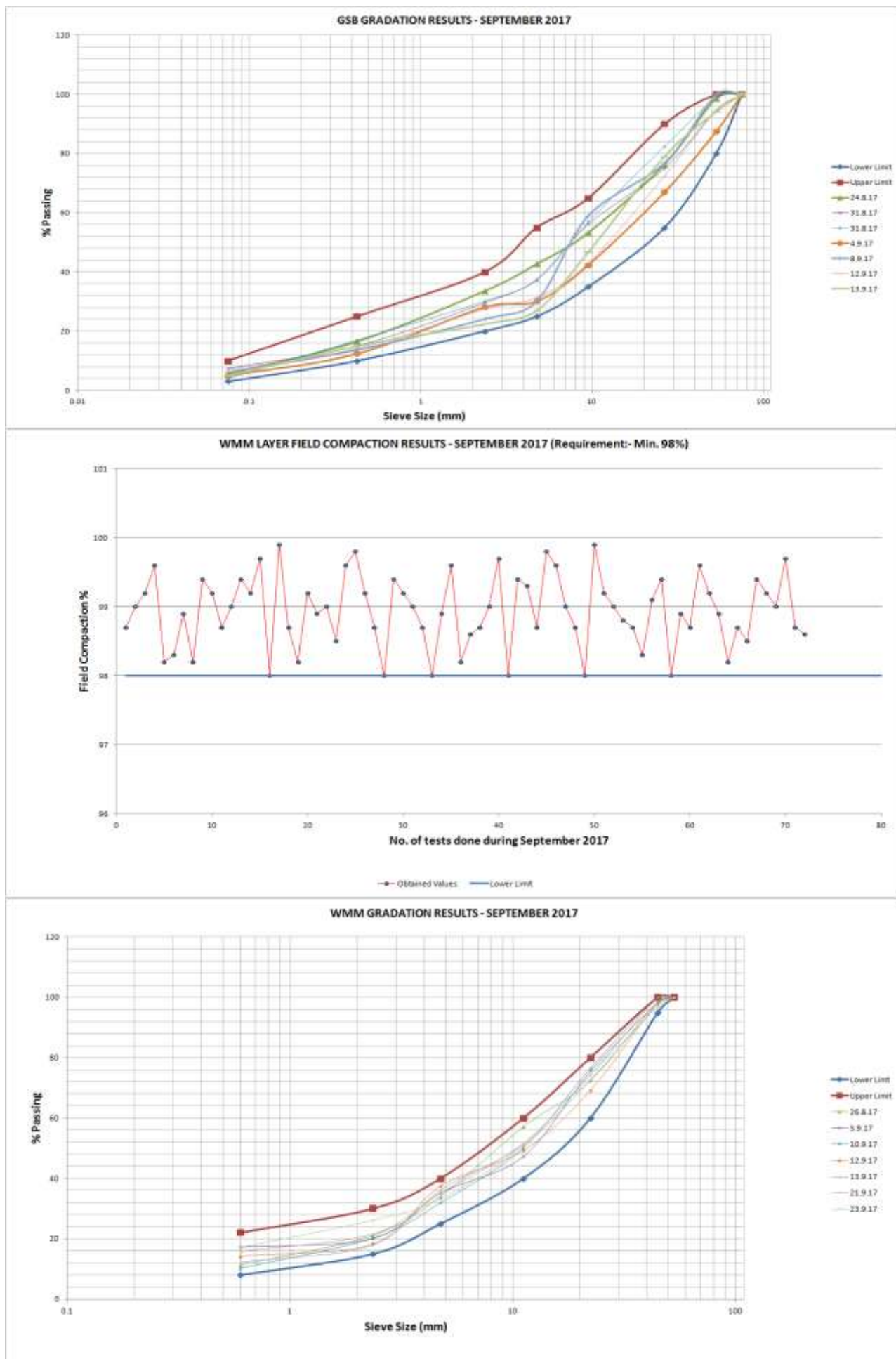


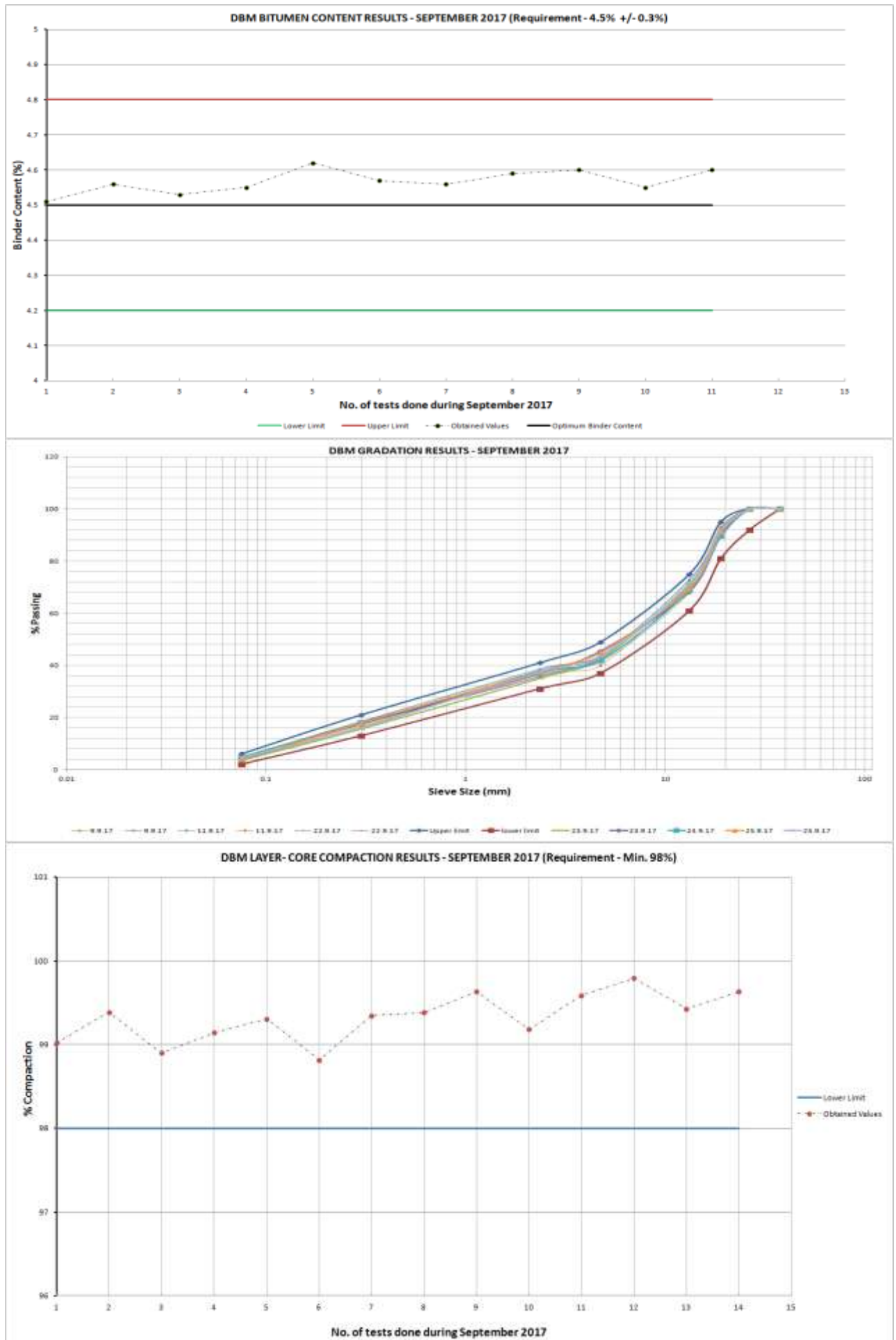
## 8.8.2 Traffic Management and Road Safety Measures

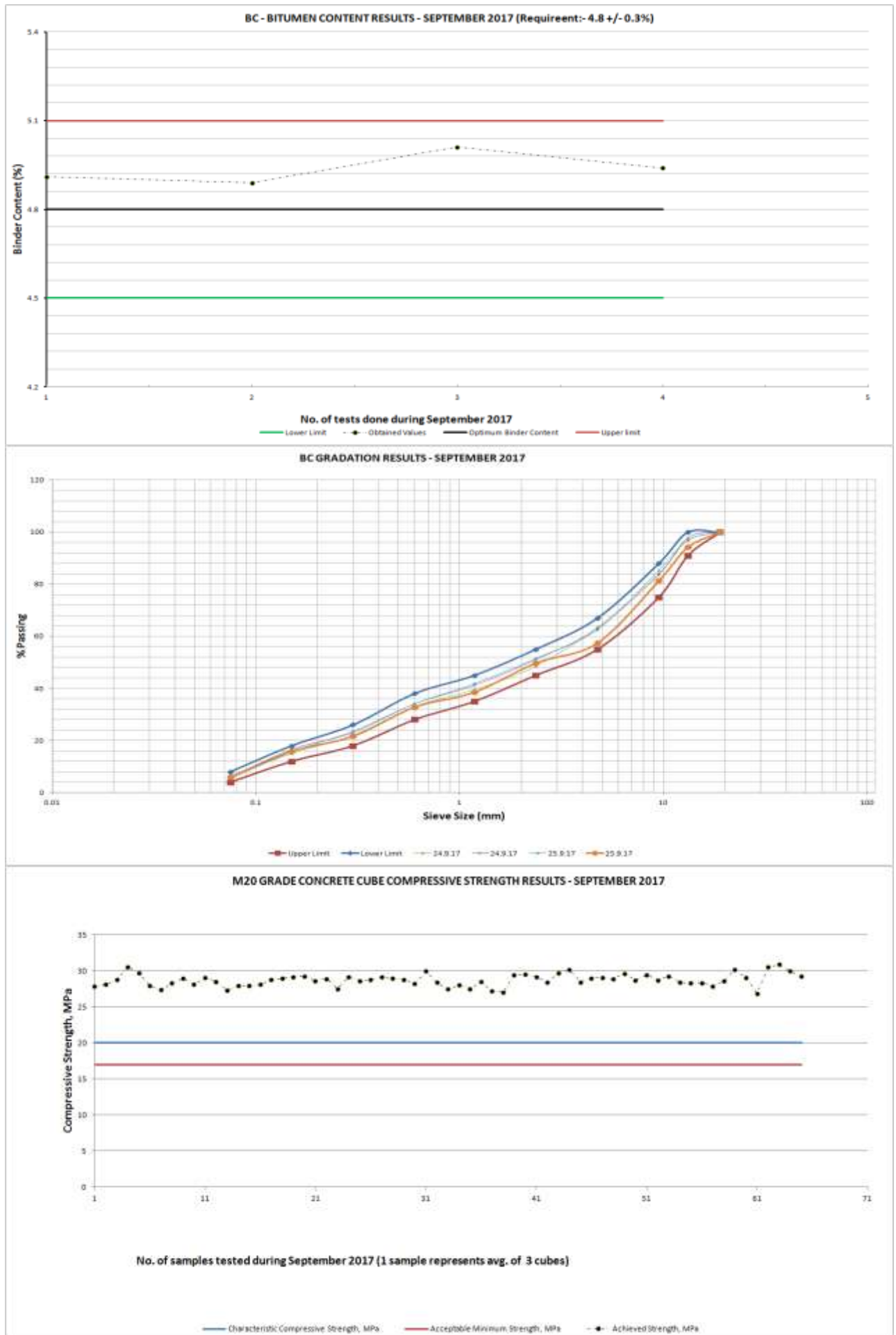
Contractor has submitted a traffic management plan for the balance works including Kuthattukulam town. Traffic safety management at site has to be improved in locations where high cutting and in the realignments where rock blasting is anticipated, safety provisions is to be increased. Contractor was asked to prepare site specific work zone traffic management plan. Contractor has arranged a health checkup for the labor and report awaited. The removal of waste material is an issue. Contractor has to remove all construction waste from the site, drain and to be disposed to the disposal site. The bus shelter constructed is not as per approved contract plan and a revised version has been issued for construction.

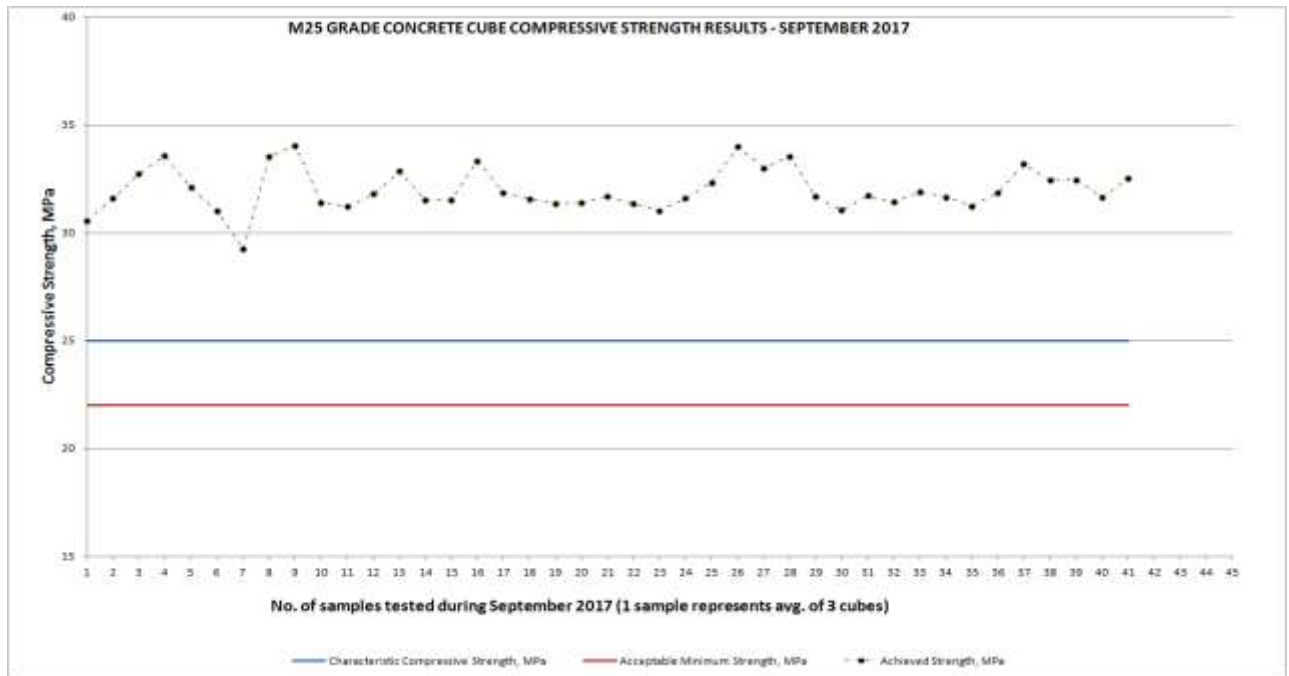
## 8.9 Quality results











## 8.10 Accident Report (July – Aug 2017)

July'2017	Koothattukulam	01.07.2017	Saturday	12.15	Fine	Koathamkulam (23+480Km)	1	0	0	Due To Rash riding of Motorcycle	Motorcycle & Pedestrian
July'2017	Movattupuzha	06.07.2017	Tuesday	18.00	Raining	Marady (35+700Km)	0	1	0	Due To Rash riding of Motorcycle	Motorcycle & Pedestrian
July'2017	Kurvalingad	08.07.2017	Saturday	12.00	Fine	Mosogally (15+680Km)	1	0	0	Due To Rash riding of Scooterist	Scooter & Pedestrian
July'2017	Koothattukulam	15.07.2017	Saturday	7.12	Raining	Pakalathottam (7+150Km)	1	0	0	Due To Rash riding of M/C	Motor Cycle with Auto
July'2017	Koothattukulam	15.07.2017	Saturday	7.12	Raining	Kera (09+850 Km)	0	1	0	Due To Rash riding of M/C	Car with M/C
July'2017	Koothattukulam	16.07.2017	Sunday	7.10	Raining	Palakurtha (29.650km)	1	0	0	Due To Rash riding of M/C	Car with Motorcycle
July'2017	Kurvalingad	19.07.2017	Wednesday	13.00	Raining	Kuninadu (12+550 Km)	1	0	0	Rash driving	KSRTC Bus with Auto
July'2017	Kurvalingad	23.07.2017	Sunday	15.45	Raining	Kuriam (06+570Km)	1	0	0	Over Speed of Motorcycle	M/C with Pedestrian
July'2017	Koothattukulam	26.07.2017	Wednesday	15.00	Raining	Vembally (03+700Km)	0	1	0	Due To Rash riding of Car	Car with scooter
August'2017	Kurvalingad	8/6/2017	Sunday	12.30	Fine	Pattithanam	1	0	0	Due To Rash riding of Scooterist	Auto with Motor Cycle
August'2017	Kurvalingad	8/8/2017	Tuesday	20.15	Raining	Kuninadu	1	0	0	Due To Rash riding of M/C	MOX with Pedestrian
August'2017	Koothattukulam	8/12/2017	Saturday	15.45	Raining	Koothattukulam (Manny School)	0	0	0	Due To Rash riding of Car	Car with Car
August'2017	Koothattukulam	8/19/2017	Saturday	6.30	Raining	Uppukandam	0	0	0	Due To Rash riding of Car	Car
August'2017	Kurvalingad	8/19/2017	Saturday	12.00	Raining	Cheenkalliel	0	1	0	Due To Rash riding of M/C	Car with Pedestrian
August'2017	Kurvalingad	8/19/2017	Saturday	19.30	Raining	Kurvalingad	1	0	1	Due To Rash riding of car	Car with pedestrian
August'2017	Kurvalingad	8/23/2017	Wednesday	11.15	Raining	Pattithanam	1	0	0	Rash driving of Car	KSRTC Bus with Pedestrian
August'2017	Kurvalingad	8/23/2017	Wednesday	20.15	Raining	Vembally (03+700Km)	1	0	0	Over Speed of Motorcycle	Car
August'2017	Koothattukulam	8/26/2017	Saturday	11.30	Fine	Chorakuzhi	1	0	0	Rash driving of Car	Car with Omni
August'2017	Koothattukulam	8/26/2017	Saturday	11.30	Fine	Ramapuram Junction	1	0	0	Rash driving of Car	Car with Car
August'2017	Koothattukulam	8/28/2017	Monday	6.30	Fine	Uppukandam	0	0	0	Rash driving of Goods Vehicle	Elcher
August'2017	Kurvalingad	8/29/2017	Tuesday	5.15	Raining	Vembally	0	0	1	Due To Rash riding of car	Car with Motor Cycle
August'2017	Kurvalingad	8/29/2017	Tuesday	15.00	Raining	Kurvalingad	0	1	0	Due To Rash riding of car	Lorry with Pick up



## 8.11 Photographs



PAVEMENT MARKING & METAL BEAM CRASH BARRIER  
@ KM 11+450



SIGN BOARDS & PAVEMENT MARKING @ KM 2+900



SOLAR STREET LIGHT @ KM 2+190



OVER HEAD GANTRY SIGN BOARD @ 0+290KM

## 9 Contract Package VI

Upgradation of Road from Ponkunnam to Thodupuzha

**(Work completed and hence previous month Progress Report is provided)**

### Scope of work (46.363 km)

Minor Bridge reconstruction - 1 no.

#### Culvert:

Reconstruction - 109 nos.

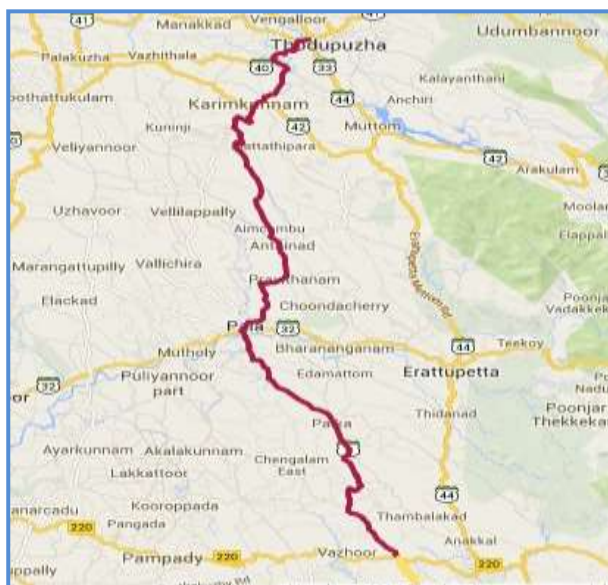
Widening - 44nos.

New Construction - 7 nos.

Drain - 65 km

Foot Path -

Solar Street Light -



### **Contract details:**

Letter of Acceptance	::	04.02.2014
date		
Agreement date	::	05.05.2014
Name of Contractor	::	M/s GHV-EKK (JV)
Contract price	::	Rs. 227,13,73,548
Notice to Commence	::	10.06.2014
Total Length	::	46.363 km
Contract Period	::	30 months
Completion date	::	09.12.2016
Defect Liability Period	::	365 days
1 <sup>st</sup> Milestone	::	10 km
2 <sup>nd</sup> Milestone	::	25 km
3 <sup>rd</sup> Milestone	::	Completion of full stretch & Thodupuzha Bypass



## 9.1 Physical Progress:

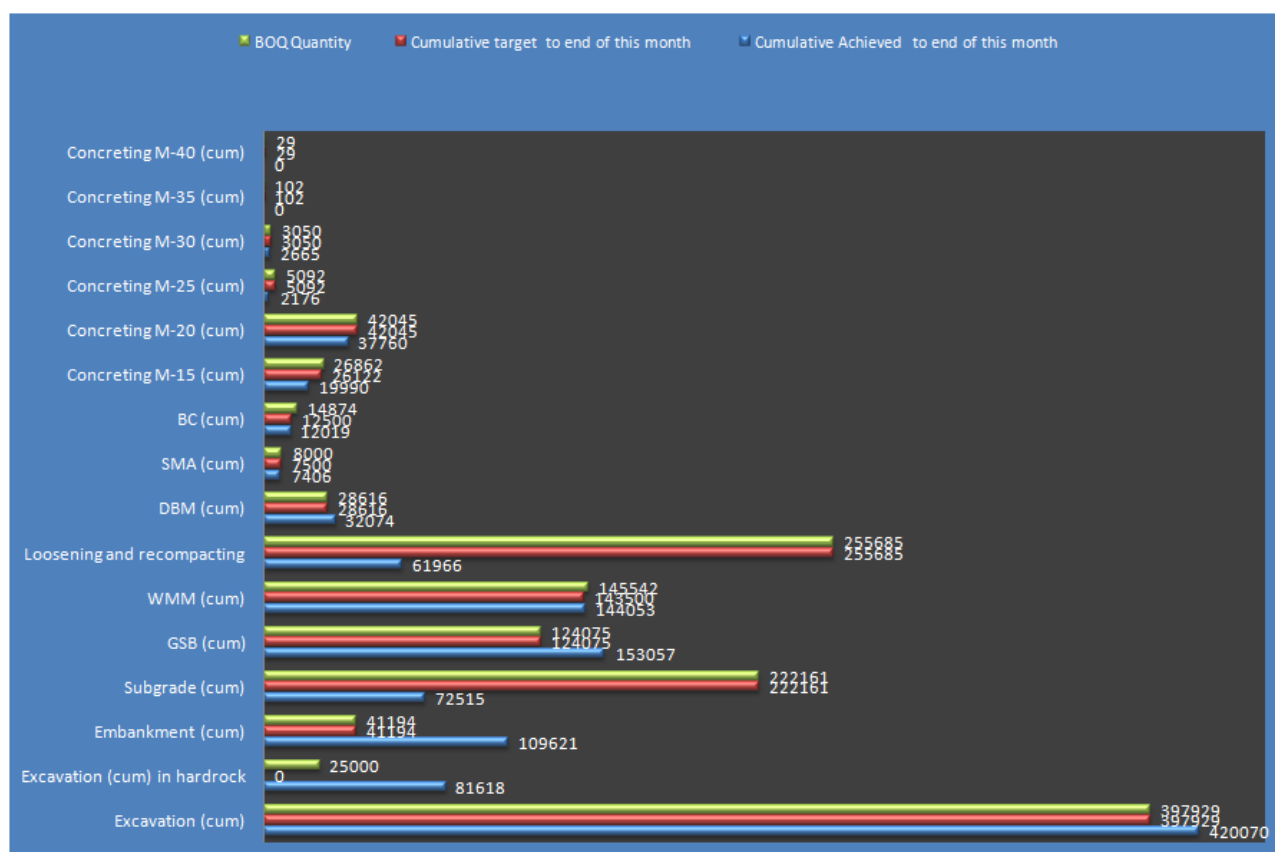
Summary of progress for major items is as follows:

Milestone	I (85+000 to 95+000)		II (84+000 to 85+000) Bypass 2.57 km (106+000 to 117+430)*		III (95+000 to 106+000)* (117+430 to 131+015)	
Length in km	10.000		15.000		24.585	
Side	LHS	RHS	LHS	RHS	LHS	RHS
GSB completed in km	10.00	10.00	15.00	15.00	23.60	23.60
WMM completed in km	10.00	10.00	15.00	15.00	23.50	23.50
DBM completed in km	10.00	10.00	15.00	15.00	23.50	23.50
SMA completed in km	NIL	NIL	5.94	5.94	10.49	11.67
BC completed in km	10.00	10.00	9.06	9.06	12.37	12.37
CD works completed in No.'s	20/20		43/43		79/79	

### Work progress considering the contract price:

Up to previous quarter		This quarter		Cumulative (till end of this quarter)	
Target	Achieved	Target	Achieved	Target	Achieved (gross)
98.84%	114.28%	5.94%	4.96%	103.80%	119.63%

## 9.2 Bar Chart of Physical Progress:



## 9.3 S-Curve



## 9.4 Schedule of Cross Drainage Works

S. No.	Work Description	Total No	(85+000 to 95+000)				(84+000 to 85+000) Bypass 2.57 km (95+000 to 106+400)				(106+400 to 117+430) (117+430 to 131+015)			
			10 Km				15				24.615			
			Scope	Work in Progress	Half completed	Full completed	Scope	Work in Progress	Half completed	Full completed	Scope	Work in Progress	Half completed	Full completed
1	Pipe culvert	32	6	0	0	6	7	0	0	7	19	0	0	19
2	Precast box culvert	79	12	0	0	12	16	0	0	16	51	0	0	51
3	Box Culvert cast-in-situ	18	1	0	0	1	5	0	0	5	12	0	0	12
4	Box culvert widening	7	1	0	0	1	4	0	0	4	2	0	0	2
5	Cast-in-situ New	2	0	0	0	0	0	0	0	0	2	0	0	2
6	Box culvert retained	4	0	0	0	0	3	0	0	3	1	0	0	1
Total For each		142	20	0	0	20	35	0	0	35	87	0	0	87

S. No.	Work Description	Scope in No.s	Upto Previous		Current Month		Upto Date		Targeted For April 2016
			Targeted	Achieved	Targeted	Achieved	Targeted	Achieved	
1	Pipe culvert	32	32	32	0	0	32	32	0
2	Precast box culvert	79	79	79	0	0	79	79	0
3	Box Culvert cast-in-situ	18	18	18	0	0	18	18	0
4	Box culvert widening	7	7	7	0	0	7	7	0
5	Cast-in-situ New	2	2	2	0	0	2	2	0
6	Box culvert retained	4	4	4	0	0	4	4	0
Total For each		142	142	142	0	0	142	142	0

## 9.5 Implementation of EMP

<b>B. Physical Progress Report</b>						
<b>S. No.</b>	<b>Enhancement/ Mitigation Measures</b>	<b>Physical target / (Achieved) (No's.)</b>	<b>Units carried over from previous month</b>	<b>Units started in reporting month</b>	<b>Units completed in reporting month</b>	<b>Units carried over to next month</b>
			<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>
1.	Noise Barrier	19/ (7)	1	0	0	1
2.	Hand pumps	6/(6)	0	1	1	0
3.	Bus Shelter	35	17	0	0	17
4.	Sign Boards	1445/(889)	0	47	47	0
5.	Preserving and landscaping the cultural properties like shrines and hyundi	7/(2)	0	0	0	0
6.	Constructing new well	3/(1)	0	1	0	1
7.	Providing new water taps	33	0	0	0	0
8.	Parking space for auto rickshaws, cars and jeep	<b>Quantity not estimated</b>				
9.	Landscaping of type C Oxbow lands	28/(2)	2	2	0	4
10.	Planting trees along road side	864/(584)	0	0	224	224
11.	Planting trees on inner side of sound insulating wall	440/(83)	0	0	0	0
12.	Providing 1.2 m high fencing under via duct	<b>Quantity not estimated</b>	0	0	0	0
13.	Concrete flooring with slope drains and oil interceptors	3/(1)	0	0	0	0
14	Water Sprinkling	1800 hrs / (1162 Approx.)	0	0	90	0
15	Air Quality Monitoring	36/(34)	0	0	0	0
16	Water Quality Monitoring	30/ (27)	0	0	0	0
<b>C. Details of Sites for Project Ancillary Facilities</b>						
<b>S. No.</b>	<b>Type of Camp/Site</b>	<b>Cumulative No of sites opened</b>	<b>No of sites operational</b>	<b>Cumulative No of sites redeveloped</b>	<b>Cumulative No of sites Closed*</b>	
1.	Construction Camp	2	2	0	0	
2.	Labour Camp	2	2	0	0	
3.	Quarry & Stone crusher unit	1	1	0	0	
4.	Borrow Area	0	0	0	0	
5.	Debris Disposal Site	0	0	0	0	
6.	Water Sources	3	3	0	0	

## 9.6 Payment to contractor

Payment up to December 2016 is Rs. 210.16 crore

## 9.7 Photographs



Oxbow land turfing was in progress at Ch:91+100 (LHS)



Information Board installed in Pala town



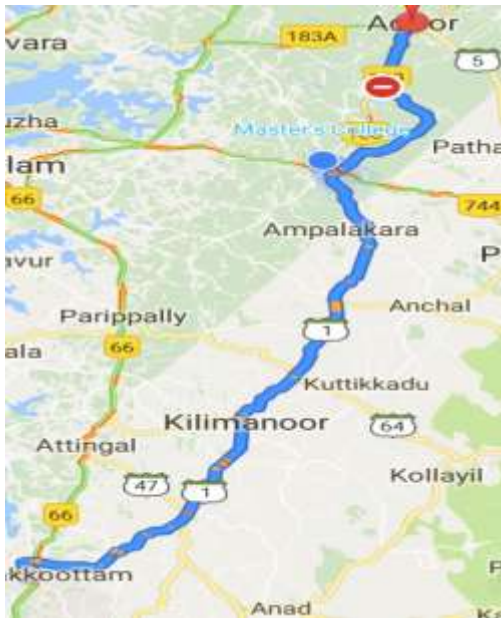
LED Solar street light functionality monitored



Rumble strips and go slow markings done

## 10 Model Safe Corridor Demonstration Project

[MC ROAD - KAZHAKKOOTAM - ADOOR 82 KM]



<b>Project Name</b>	KSTP-II – MC Road - Safe Corridor Demonstration Project – BC- Overlay & Road Safety Works from Kazhakkootam to Adoor (0/000 to 12/600 (Bye pass) and from 25/250 to 93/000)
<b>Name of Contractor</b>	M/s GHV-EKK (JV), Second Floor, Municipal building, Perumbavoor, Ekm, Kerala
<b>Agreement No &amp; Date</b>	Agreement. No. 276/KSTP/PMT/PWD /2016 dated 05/12/2016 (Contract. No. KSTP/ PMT/BCO&RS)
<b>Commencement Date</b>	28 <sup>th</sup> December 2016
<b>Time of Completion</b>	16 months
<b>Milestone -I</b>	Kazhakkootam to Ayoor Marthoma College (0/000 to 12/600 (Bye pass) and from 25/250 to 53/000) – 40.35 Km
<b>Milestone-II</b>	- 9 months Ayoor Marthoma College to Adoor( 53/000 to 93/000) – 38.3 Km - 7 months
<b>Contract Amount</b>	Rs 146,67,38,745/-

## 10.1 Details of works

Sl. No.	Description	Details of works carried out
1	Drain cleaning	Drain cleaning works are 85% completed except junctions in the stretch from Ch: 0/000 (Thycaud) and 12/600 (Vetturoad) & Ch: 25/250 (Thycaud) and 93/000 (Adoor).
2	Culvert Cleaning	2725 m completed in the entire stretch
3	Clearing and grubbing	Clearing and grubbing works completed in the stretch from Ch: 25/250 and 93/000
4	Drain construction works  Construction of drain in progress at following locations  As per DPR - 6274 mtr  Locations identified - 8993 mtr  Drain completed - 2725 mtr	Link 72 - Ch: 7/300 to 7/450 RHS. 75 m completed
		Pulimath - Ch: 33/680 to 34/100 RHS - ongoing
		Nilamel Puthuserry - Ch: 45/772 to 45/898
		Arattukadavu, Chadayamangalam (LHS) - 51/841 - 52/168- Completed
		Arattukadavu, Chadayamangalam (RHS) - 51/620 - 51/838 - Ongoing
		Akamon - 55/211 to 54/472 (RHS) - Completed
		Kampancode - 55/850 - 55/981 (LHS)
		Kampancode - 56/115 - 56/416 (LHS) - ongoing
		Kampancode Jn - 56/660 - 56/980 - LHS - ongoing
		Policode - 58/660 - 59/120 (LHS) - to be completed
		Valakom - 60/760 - 61/062 (LHS) - Completed except 5m for electric post shifting - electric post shifted
		Valakom - 61/870 to 62/600 RHS - ongoing
		Sadanandapuram - 65/442 to 65/600 - to be completed
		Pentacostal Jn - Ch: 70/330 to 70/800 RHS - to be completed
		a) Inchakkadu - 77/000 LHS & RHS - Completed b) Inchakkadu - 76/150 LHS - Completed
		Kalayapuram - 79/100 LHS - Work in progress
5	Retaining wall works  Construction of retaining wall are in progress at following locations	1. Porunthamon - Ch: 35/570 to 35/700 - Total length 128 m - Work in progress
		2. Puthoormukku - Ch: 80/000 - Total length 95 m - not completed
		3. Kilivayal - Ch: 87/000 - Total length 100 m - In progress
		4. Adoor Bypass - Ch: 90/380 - work in progress - 650 m completed
6	Culvert works  As per DPR - 10 Nos  Completed - 4 No  Ongoing - 4 Nos	Velavoor - Ch: 1/270 - work in progress
		Pothencode - Ch: 5/995 - half portion completed
		Ch: 7/400 - Half portion completed, balance in progress
		Ch: 10/070 - Half portion completed, balance in progress
		Nilamel (Ch: 44/910) -Completed



	To be executed – 4 Nos	Near Silpa Hotel Ayoor – 53/505 – Completed.
		Kottarakara 73/316 LHS - Extension completed
		Vadakkadathukavu-88/650 –Completed
7	Bridges	
1)	Enathu Bridge –	Rehabilitation work - completed
2)	Ayoor Bridge – Rehabilitation works	Jungles cleared at abutments, piers and approaches
3)	Widening of Chadayamangalam Bridge	LHS upto slab completed. RHS Rubble packing completed. River training works going on
8	Establishing TBMs	Establishment of TBM from 25/250 to 93/000 completed. Checked and approved
9	Cross section details	Out of 68 Kms, 36 Kms verified and approved. Balance 32 Kms under scrutiny
10	Pot hole measurements	List containing pothole locations submitted on 03.03.2017 for the Ch: 0/000 to 12/600 and 25/250 to 93/000
		Limited to BOQ and approved.
11	Erection of Crash Barrier As per BOQ – 15015 m Identified – 8745 m Completed – 1642.50 m	1. Velavoor – Ch: 1/365 RHS 2. Thycode – Ch: 0/300 LHS 3. Keezhayikonam Ch: 29/500 LHS 4. Keezhayikonam Kurisadi 31/250 -LHS 5. Pulimath Ch: 34/350 LHS 6. Kilimanoor Ch: 38/750 RHS 7. Kuravankuzhy Ch: 40/000 8. Vazhodu Ch: 43/000 9. Polikode – Ch: 59/000 RHS 10. Valakom Ch: 60/000 RHS 11. Kottarakara Ch: 73/000 RHS 12. Puthoormukku Ch: 79/000 – LHS & RHS 13. Kalayapuram Ch: 80/000 LHS 14. Kalayapuaram Ch: 81/000 LHS
12	FDR Areas-	Verified at site and approved, work started at approved locations
13	Footpath	Foot path locations were verified and approved.
14	LED Street light	Foundation details submitted
15	Bus Bay/Bus shelter	List of locations for Bus bay/Bus shelter submitted and approved.

**Progress (Physical) as on 27/09/2017 comes to 6.01% against target of 33.1%**

## 10.2 Key plant & equipment mobilized at end of reported period

Sl No.	Machinery Description	Unit	Mobilised to site till date	Shortfall if any	Condition Working Broken down	Date mobilized
<b>Production Units</b>						
1	Batching Plant/hr(18 Cum/Hr)	No	1		Working	
2	Batching Plant/hr(30 Cum/Hr)	No	1		Working	
3	Hot Mix Plant Mini 160 TPH	No	2		Working	
<b>Rollers, Pavers, Graders and Dumpers</b>						
1	Transit Mixer	No	4		Working	
2	Paver with sensor	No				
3	Roller PTR (24T )	No				
4	Soil Compactor (15T)	No				
5	Tandem Roller (2.7 T)	No				
6	Grader	No				
<b>Loaders, Dozers, Excavators and Dumpers</b>						
1	JCB 3DX /0.3 cum	No	4		Working	
2	Dumper 8 cum	No	2		Working	
3	Dumper 15 cum	No	2		Working	
4	Water Tanker (12KL)	No	1		Working	
5	Hydra Crane (12T)	No	1		Working	
6	Platform Lorry	No	1		Working	
<b>Concreting Equipment</b>						
1	Needle vibrator(20mm)	No	2		Working	
2	Needle vibrator (40mm)	No	6		Working	
3	Needle vibrator (60mm)	No	2		Working	
4	Water Pump (5hp)	No	5		Working	
5	Bar bending meachine	No	1		Working	
6	Steel Cutting meachine	No	2		Working	
<b>Auxiliary equipment</b>						
1	LMV	No	8		Working	
2	Mini Bus	No	1		Working	

## 10.3 Payment to contractor

The contractor has been paid Rs. 15.01 crores

## **11. Contract Package VIII**

### **Upgradation of Road from Punalur to Ponkunnam**

Work has to be arranged under PPP mode (Modified Annuity). DPR submitted by M/s CDM Smith Associates is under review. The Transaction Advisory has been selected and assignment commenced. The Transaction Advisory is M/s L&T Ramboll in JV with M/s Fortress. The review of DPR and RFQ, RFP and Financial modal are completed. Bidding documents were placed before the Steering Committee and endorsed. The Government had expressed willingness to include the project in the Infrastructure Investment Fund being mobilized. Government has further informed that a "line item" in the State Budget will also be included. The pre-qualification bids were published and eight bids received. The pre-qualification of eight bidders has been approved by the World Bank and Steering Committee. The RFP to the bidders will be forwarded on receipt of approval to the document from the World Bank.

## **12. Contract Package VII**

### **Upgradation of Road from Perumbilavu – Pattambi – Perintalmanna**

Horizontal alignment finalized and boundary stone planted for land acquisition. The original proposal was to upgrade the project under EPC mode. But due to the delay anticipated in acquiring the land invoking the provisions of the new LA Act for which rules are finalized by the Government, it has been decided to provide a modest level of improvement to the surface. It is also proposed to make use of the savings due to the change in the improvement proposals for providing overlay to the SCDP road. Accordingly proposals have been submitted to the Government and to the Bank after obtaining approval of the Steering Committee on 28<sup>th</sup> July 2014. The work has been awarded. Due to a case before the Lok Ayukt filed by another contractor (bidder), the work was held up earlier and this is now ordered by the court in favour of the Department. The notice to commence issued and work has been completed. The total length completed is 18 km of BC work and the payment is Rs. 8.10 crore.

## **13. Road Safety Component – Current Status**

### ***Road Safety Capacity Building and Program Management Project***

The focus of Road Safety Program Comprises of the following tasks:

To strengthen the capacity of Kerala Road Safety Authority and Road Safety Cell of PWD to introduce Sustainable International Best Practice in designing, implementing and Evaluation on Road Safety.

Development of Safe Corridor Demonstration Project (SCDP) by implementing the Multi-sectoral interventions to demonstrate the effectiveness of Road Safety Best Practices. The Kazhakkootam – Thaikod – Kottarakara – Adoor Corridor (80 km) improved during KSTP-I is identified for this purpose having high density of traffic.

Road Safety Capacity Building of the institutions responsible for managing Road Safety in the State.

To replicate the lessons learned from the Safe Corridor Demonstration Project to develop another 10 safe corridors across the State through local partnerships using the challenge fund and the matching fund from the KRSA

The KSTP appointed M/s VicRoads, Australia, an internationally experienced consultant to support in implementing the above programs. The consultant has conducted stakeholders meetings and trained the Engineers and others in designing various Road Safety interventions in the SCDP. The bid has been approved by the Steering Committee and the works awarded. The overlay works and Road Safety interventions are clubbed. Work commenced and in progress. The proposals for enhancing the existing facilities in the Kottarakara, Adoor, Kesavapuram and Government Medical Collage, Trivandrum are under consideration now.

The proposal for strengthening the Kerala Road Safety Authority has been accepted by the Executive Committee and the actions for procuring specialists, to various positions was initiated. 33 nos. of applications received are evaluated and 22 applicants shortlisted. The Final Evaluation (interview) of the candidates was held in the presence of the KRSA authorities and selection of four out of five TSG members done. The appointment orders will be issued by end October 2017 by the Kerala Road Safety Authority. The advertisement to select one member is being published.

Traffic counters were procured and installed at five locations, one in NH and four in location in the project roads. These counters shall be utilized for planning of future road geometrics requirements, capacity analysis, seasonal variations, daily variations of traffic volume during festivals etc.,

The KSTP has entrusted the consultant to take actions for the procurement of Market Research firms. The market research would support Development of the publicity and education programs, including future campaigns. Establishing benchmarks on

knowledge, attitudes, perception of road safety issues and self-reported behaviors of road users for monitoring the impact of future road safety activities and to effectively support the task of the Road Safety Capacity Building and Program Management Consultant. The firms are in place and the activities are on.

The project proposals for utilizing the challenge fund is awaited from the KRSA. This was agreed in a meeting held in the room of the Secretary to Government, Transport.

Since the progress of activities were slow, the KSTP had earlier decided to terminate the services of M/s VicRoads, but as the consultant had further agreed to speed up the activities, revocation of the decision to terminate is being considered.

## **14. Institutional Strengthening Components – Current Status**

### **Road Sector Modernization**

Under this Component, KSTP have already arranged and completed studies and DPR preparation for Road Rehabilitation Projects, Strategic Option Studies for improving MDRs (newly taken over from Panchyat), Design of Green Building for KSTP and PWD Head Quarters, Review of IT system in PWD and other small studies with Bank's approval. The amount spent is Rs. 4.70 crore.

Further, KSTP has streamlined the activities under the Road Sector Modernization in the Institutional Strengthening component considering, the current priorities of the State, in lieu of Strategic Road Network Program which include:

#### ***New Consultancy assignment for which ToR have been prepared***

*Public Information and Management System*

*Strengthening Kerala Highway Research Institute for Development in to a Centre of Excellence for Road Safety and Asset Management – Stage I*

*The ToR for PIMS was prepared in consultation with the World Bank Representative and the PWD IT Cell M/s C-DAC, a research agency in this field has expressed interest to undertake the task. The final ToR is being processed to World Bank for review and approval for Single Source Procurement.*

Bidding process already in progress (evaluation completed) for the following consultancy services.

*Selection of consultant for Road User Satisfaction Survey*

*Selection of consultant for Community Participatory Road Safety and User Engagement*

*The RFP for these assignments are also prepared. The RFP for the assignment Sl.No. 2 is being forwarded to Bank for review.*

## **15. Public Information Cell:**

Total calls received for the month of September: 1327

On September 14th Thursday the Hon'ble Minister, PWD and Registration Department inaugurated the public information cell after software up gradation. It was decided that the Hon'ble Minister would attend call from the public on first Wednesday of every month from 3.30 p.m. to 4.30 p.m. On the inauguration day, also he attended the calls from public, around fifteen calls.

TVPM	152
KOLLAM	97
PATHANAMTHITTA	91
ALAPPUZHA	114
KOTTAYAM	86
IDUKKI	72
ERNAKULAM	153
TRISSUR	95
PALAKKAD	89
MALAPPURAM	103
KOZHIKODE	115
WAYANAD	62
KANNUR	51
KASARGOD	47
<b>TOTAL</b>	<b>1327</b>



## **16. Payment to the consultants as on end June 2017:**

M/s Egis India JV	-	Rs. 301213458
M/s MSV International	-	Rs. 46741766
M/s VicRoads	-	Rs. 85560520
M/s L&T Ramboll (TA)	-	Rs. 3041450

## **17. Meetings, Site visits & Inspection**

### **Package – I**

Workshop was conducted at Thiruvananthapuram with World Bank delegates, KSTP Officials, Contractors and CSC on 23rd August 2017.

Secretary (PWD), Project Director (KSTP) and Team leader (CSC) inspected the Project site on 01st August 2017.

Dispute Board Chairman and members conducted a meeting at Executive Engineer's Office Kannur on 26th July 2017.

Progress review meetings held on 04th July 2017 at PMT, KSTP Thiruvananthapuram.

Environmental Engineer, KSTP visited the Project site on 03rd July 2017 and 11th August 2017.

Mr.Devbrat, Safety Expert, Egis visited the project on 11th July 2017.

### **Package – II**

World Bank delegates inspected the project site on 21st August 2017 along with KSTP officials.

Workshop was conducted at Thiruvananthapuram with World Bank delegates, KSTP Officials, Contractors and CSC on 23rd August 2017.

Secretary (PWD), Project Director (KSTP) and Team leader (CSC) inspected the Project site on 01st August 2017.

Chief Engineer (projects) along with MLA Sri. T.V.Rajesh and KSTP officials visited the project site on 22nd September 2017.

Progress review meetings were held on 04th July 2017 and 25th September 2017 at PMT, KSTP Thiruvananthapuram.

Dispute Board Chairman and members inspected the package on 26th July 2017 along with senior officials of KSTP, CSC and Contractor and held review meeting at Executive Engineer's Office Kannur.

Ms. Deepa Nair, Environmental Engineer, KSTP visited the Project site on 04th July 2017 and 10th August 2017.

Mr. Devbrat, Environmental Engineer, Egis visited the project on 11th July 2017.

### **Package – III A**

Progress review meeting held on 19th July-2017 at RE office, Kuthuparamba.

Safety meeting conducted at RE office, Kuthuparamba on 19th July -2017.

Progress review meeting held on 11th August-2017 at RE office, Kuthuparamba.

Safety meeting conducted at RE office, Kuthuparamba on 11th August-2017.

World Bank mission visited the site on 22nd August-2017.

Project Director,KSTP and Secretary, PWD Visited the site with Team Leader on 1st August-2017.

Environmental Engineer from PMT Visited the site on 9th August-2017.

### **Package – IIIB**

Chief Engineer (Projects) along with KSTP officials visited the Project site on 08<sup>th</sup> September 2017.

IIT Rtd. Professor Dr. Nainan P Kurian visited the Irity Bridge site on 14<sup>th</sup> September.2017.

A meeting was held on 23<sup>rd</sup> September 2017 at PMT, KSTP, Thiruvananthapuram to discuss the issue related with Irity Bridge.

World Bank team inspected the Project site on 22<sup>nd</sup> August 2017 and conducted work shop at Thiruvananthapuram on 23<sup>rd</sup> August 2017 with KSTP officials, Contractor and Consultant.

Safety Officer, KSTP visited the Project site on 07th July2017.

Environmental Engineer, KSTP visited the Project site on06th July2017 and 09<sup>th</sup> August 2017.

Secretary (PWD), Project Director (KSTP) and Team leader (CSC) inspected the Project site on 01<sup>st</sup> August 2017.

Progress review meeting was held on 16<sup>th</sup> July 2017 at PMT, KSTP, Thiruvananthapuram.

Mr. Devbrat, Safety Expert, Egis sited the project on 12<sup>th</sup> July 2017

### **Package-IV**

Review meeting held on 28 06 2017

Mobilization advance first and second installment has been paid to the Contractor based on their application.

IPC-20 for the works executed up to the end of 15th June 2017 has been certified

## Package-V

MLA Sri Mons Joseph convened a meeting on 11th August 2017 at office of the District Collector Kottayam.

Superintending Engineer KSTP visited the site on 11th August 2017 to ascertain variation quantities

Workshop convened by World Bank on 24th August 2017 at Muscat Hotel Thiruvananthapuram

Superintending Engineer KSTP visited the site on 19th September 2017 to ascertain variation quantities

DB board and Team Leader of Consultant visited the site on 27th September 2017.

## 18. Social Safeguard

### KSTP II Grievance Management Report (1<sup>st</sup> Jan 2013 – 30<sup>th</sup> Sept 2017)

Serial No	Nature of Grievance	Petitions received		Cases settled	Action Taken
		1 <sup>st</sup> Jan 2013 - 31 July 2017	1 August 2017 - 30 Sept 2017	Total cases settled on 30.09.2017	
1	2		5		6
1	Land Acquisition/ Alignment change	13	0	12	10 settled through participatory interaction between KSTP officials and PAPs. Two cases were settled by the High Court. One case pending judgment.
2	Inadequate compensation of land/ Category change of the land	4	0	4	Category changes effected after re-examination by the Revenue authorities and made payments.
3	LAR Cases	323	0	309	14 cases pending in the Sub Courts
4	Variation in the extent of land	7	5	11	Resurvey done in all cases and 2 were compensated by enhanced award. One case pending resurvey.
5	Acquisition of missed structure/ Part/Full	11	1	12	Valuation of 12 missed out structures taken and compensation paid.
6	Inadequate compensation for structure	3	0	3	Rechecked the valuation at site in the presence of the PAP and convinced the veracity.
7	Provision of retaining wall to protect structure	139	5	137	Retaining wall provided to protect 137 structures and the remaining 7 will be done as the work progresses. RE to attend to.
8	Protection of well	77	6	78	78 wells have been protected by diverting drains and by providing concrete

Serial No	Nature of Grievance	Petitions received		Cases settled	Action Taken
		1 <sup>st</sup> Jan 2013- 31 July 2017	1 August 2017- 30 Sept 2017	Total cases settled on 30.09.2017	
1	2		5		6
					slabs/covers/ side walls as required at each site. Work in 5 cases pending
9	Conversion of part valuation of structure to full or vice versa	3	1	4	Changes effected as requested by the PAP and payment released
10	Inadequacy of R&R assistance	201	0	201	All cases settled in GRC and payment released.
11	Extension of time limit for demolition	12	0	11	The stay granted by the High Court in 1 case is yet to be vacated.

## 19. Land Acquisition Status (LA) pending issues to be resolved

### Package UG-III-B – Kalarode – Valavupara road:

Sl. No.	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	43.350	43.355	KSTP Kannur & LAO, Thalassery	Nov 2016 Notice under section 11(1) Published	31.03.2018	0.0017
2.	43.960	44.100				0.0009
3.	44.230	44.240				0.0448
4.	48.080	48.085				0.0016
5.	48.430	48.480				0.0002
6.	48.600	48.650				0.0067
7.	48.771	48.781				0.0006
8.	48.790	48.795				0.0018
9.	49.200	49.205				0.0059
10.	51.350	51.380				0.0003

### Package UG-IV – Chengannur - Ettumanoor road:

Sl. No.	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	26.400	26.430 (LHS)	KSTP Muvpa & SLEC (for approval of land value for DP)	March 2016	31.12.2017	0.0040
2.	26.420	26.440 (RHS)				0.0019
3.	36.760	36.880				0.0014
4.	45.850	45.860				0.0017

### Package UG-IVA – Thiruvalla Bypass road:

Sl. No.	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	588	1.680	LAO Ranni & KSTP Muvattupuzha	June 2016	31.12.2018	0.2703

**Package UG-V – Ettumanoor - Muvattupuzha road:**

Sl. No.	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	2.920	2.925	KSTP Muvpa & SLEC (for approval of land value for DP)	-	31.12.2017	0.0031
2.	11.960	12.010				0.0050
3.	14.000	14.050				0.0369
4.	36.940	36.960	LAO Kakkanad & KSTP Muvpa	Jan 2015	31 Dec 2018	0.0020
5.	38.450	39.570				1.1524

**Package UG-VI – Ponkunnam - Thodupuzha road:**

Sl. No.	Chainages of the road where LA required		The officer at whose level case is pending	Date since when such case is pending	Targeted date of finalization	How much land area is to be acquired (Ha)
	From	To				
1.	103.820	103.900	AG, High Court Kerala and KSTP Ponkunnam	LA completed but the stay to be vacated WP(C)3134/15	-	0.0236

## 20. Project Development Indicators – Result Framework

Sl. No.		Indicators	Unit	Baseline		Cumulative Achievement				End Target	Source	
						Yr-1	Yr-2	Yr-3	Yr-4			
1	2	3	4	5		6	7	8	9	10	11	
A		UPGRADATION										
	1	Direct Project Beneficiaries of which female	NOS.	13.4 million			1.1		7.30 (3.20)	14.80 million 7.7 million	CSC	
	2	Reduction in Travel Time	MINUTES	CAR							CSC	
				1.	Kasaragod - Kanhangad road	90			Ch: 0-14 Car: 33%	Ch: 0.000 to 23.185 Time- 30'7"-66%		
				2.	Pilathara - Pappinissery road	45			Only very limited length done	Ch: 0+000 to 17+900 (3 stretch), 16+290 km Car-Time- 19'13"-57%		
				3.	Thalassery - Valavupara road	56	Only limited stretch completed up to DBM. Hence assessment cannot be made this stag					
				4.	Chengannur - Ettumanoor road	95			Ch: 20-45 Car: 35%	Ch: 0.0-47.0 Car: 78'0"-17.8%		Increase traffic
				5.	Ettumanoor - Muvattupuzha road	60			Car: 33%	Ch: 0 to 30 Car: 39'0"-35%		
				6.	Thiruvalla Bypass							
				7.	Ponkunnam - Thodupuzha road	90			(37 km) Car: 20%	48 km Car 25%		
				8.	Punalur - Ponkunnam road							
				9.	Perumpilavu - Perintalmanna road							
	3	Improved Riding Quality of Project Road	KM		No. of KM with IRI-4	363		20	68	363	CSC	
1				UG-1 Kasaragod - Kanhangad road (27+80)	Km IRI (Av)				25.965			
									2.08			



Sl. No.		Indicators	Unit	Baseline		Cumulative Achievement				End Target	Source				
						Yr-1	Yr-2	Yr-3	Yr-4						
1	2	3	4	5		6	7	8	9	10	11				
				2	UG-2 Pilathara - Pappinissery road (20+900)	Km				16.78					
						IRI (Av)				2.36					
				3	UG-3A, 3B Thalassery - Valavupara road(54+000)	Km	Work not progressed for assessment								
						IRI (Av)	-Do -								
				4	UG-4 Chengannur - Ettumanoor road (47+700)	Km				37.500					
						IRI (Av)				2.45					
				5	UG-5 Ettumanoor - Muvattupuzha road (40+960)	Km				31.53					
						IRI (Av)				2.50					
				4	Reduction in Annual Fatality (Details for the last 6 months. Fatal)			No. of fatalities/year -	80					56	CSC
								Venerable -	49					34	
	1	UG-1 Kasaragod - Kanhangad road (27+80)								6					
	2	UG-2 Pilathara - Pappinissery road (20+900)								9					
	3	UG-3A, 3B Thalassery - Valavupara road(54+000)					Work not progressed for assessment								
	4	UG-4 Chengannur - Ettumanoor road (47+700)								13					
	5	UG-5 Ettumanoor - Muvattupuzha road (40+960)								6					
Component -A - Road Up Gradation															
	5	State Highways upgraded			Km	-	-			184 km	363	CSC			
	6	Financial closure achieved on PPP project			Y / N	-	-	-		N					

Sl. NO.		INDICATORS	UNIT	BASELINE		CUMULATIVE ACHIEVEMENT				END TARGET	SOURCE	
						YR-1	YR-2	YR-3	YR-4			
1	2	3	4	5		6	7	8	9	10	11	
COMPONENT -B - ROAD SAFETY												
	1	Pilot Safety Corridors Developed			Km improved	0	-	-		Work arranged & in progress	80	KSTP (work started)
	2	Number of District Level Road Safety Improvement Schemes implemented through challenge funds			Number	0	-	-	-	-	10	Road Safety Consultant
COMPONENT -C - INSTITUTIONAL STRENGTHENING												
	1	Modernization of PWD			Y / N	No	Review of existing IT system undertaken and recommendations adopted			Decided to take up other assignments under this program and arrangements are in progress. -Establishing Centre of Excellence in Road Safety and Asset Management		
	2	Functioning Road Asset Management System			Y / N	No	-	-		-	Annul Maintenance Plans disclosed	PWD reports
	3	Communications Strategy and Interfaces for Public Engagement Implemented			Y / N	No		PI Cell functioning		-PIMS being arranged -Community Participatory Road Safety & Asset Safeguard Program	At least 2 consultants/ stakeholder forums held	PWD/ KSTP
	4.	Regular Road User Surveys conducted			Y / N		Baseline survey under taken			Mid-term survey under arrangement	Final survey under taken	PWD

