



## MONTHLY PROGRESS REPORT (JULY) -2020

### KERALA STATE TRANSPORT PROJECT –II UNDER WORLD BANK ASSISTANCE-LOAN NO 8254

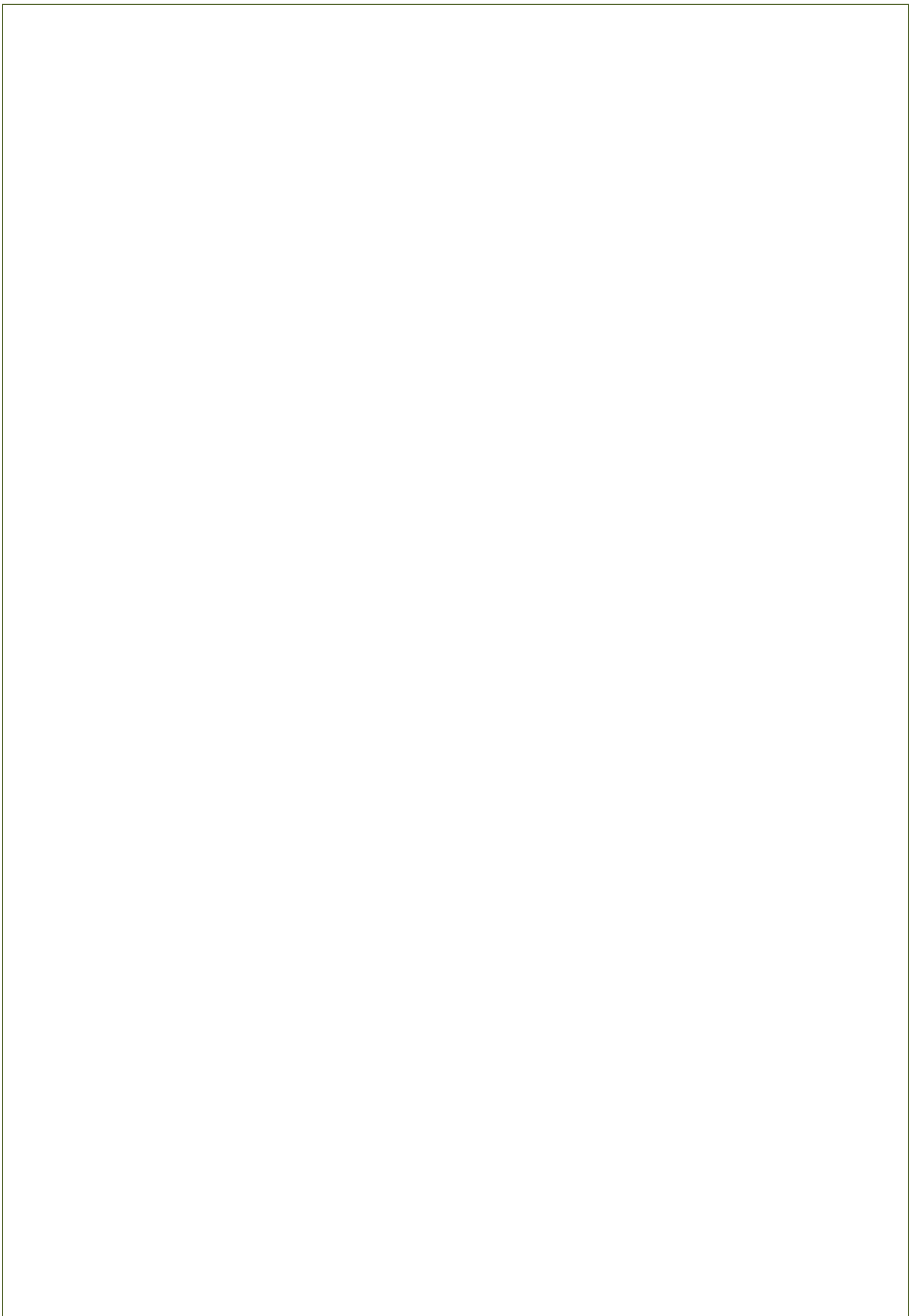


**PROJECT MANAGEMENT TEAM**  
KERALA STATE TRANSPORT PROJECT  
T.C.11/339, SREE BALA BUILDING, KESTON ROAD, KOWDIAR P.O  
THIRUVANANTHAPURAM-6295003

Prep By:  
PROJECT MANAGEMENT CONSULTANTS



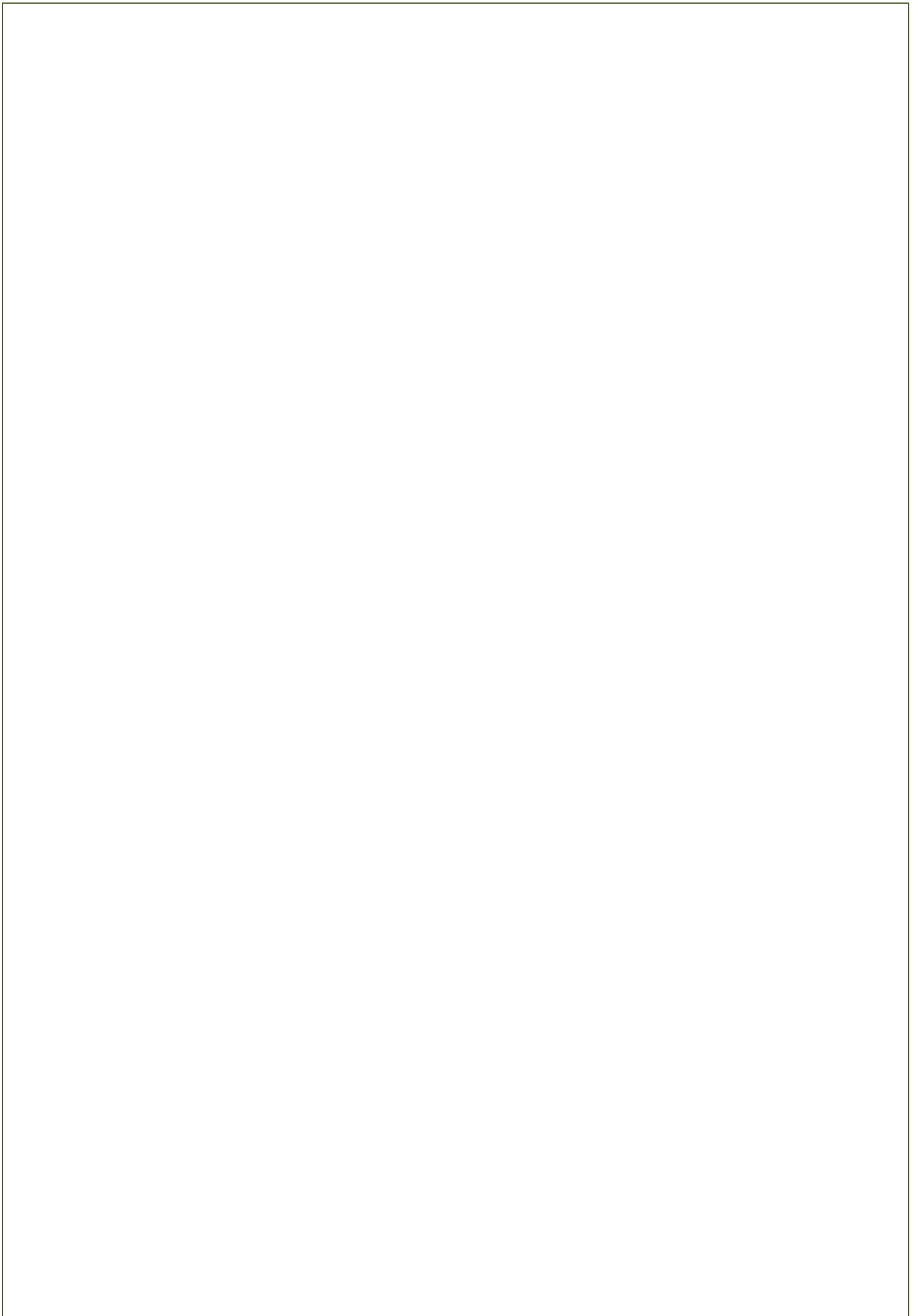
EPTISA SERVICIOS DE INGENIERIA.S.L.  
II floor, T.C.11/339, SREE BALA BUILDING, KESTON ROAD, KOWDIAR P.O  
THIRUVANANTHAPURAM-6295003



## Table of Contents

<b>1 EXECUTIVE SUMMARY.....</b>	<b>1</b>
1.1 INTRODUCTION.....	1
1.2 PROJECT DEVELOPMENT OBJECTIVES .....	1
1.3 PROJECT COMPONENTS .....	1
<b>2 PLANNING &amp; OVERALL IMPLEMENTATION: .....</b>	<b>2</b>
2.1 PROJECT STAFFING:.....	2
2.2 PROJECT CO-ORDINATION:.....	2
2.3 COMPONENT A 1 IMPLEMENTATION.....	2
2.4 SUB COMPONENT A2 IMPLEMENTATION .....	2
2.5 COMPONENT B – ROAD SAFETY MANAGEMENT IMPLEMENTATION .....	2
2.6 COMPONENT C – INSTITUTIONAL STRENGTHENING IMPLEMENTATION .....	3
2.7 COMPONENT D – RKI FLOOD WORK IMPLEMENTATION BY KfW& WORLD BANK .....	4
2.8 SIX POINT ACTION PLAN AND ACTION TAKEN– IMPLEMENTATION .....	4
2.9 QUALITY ASSURANCE: .....	5
2.10 COMPLIANCE OF LEGAL COVENANTS.....	6
<b>3 PROJECT KEY MAP .....</b>	<b>9</b>
<b>4 FUNDING &amp; DISBURSEMENT.....</b>	<b>10</b>
4.1 CURRENT DISBURSEMENT STATUS.....	10
4.2 PROGRESSIVE EXPENDITURE AND AMOUNT REIMBURSED – STATUS AS ON 31ST JULY 2020 .....	11
4.3 RESTRUCTURING.....	12
<b>5 CURRENT PROJECT STATUS.....</b>	<b>14</b>
5.1 <b>COMPONENT A1:</b> .....	14
5.2 DETAIL OF THE SUPERVISION CONSULTANTS FOR THE PACKAGES UNDER THIS COMPONENT IS AS BELOW .....	15
5.3 SUMMARY AND STATUS OF THE WORKS UNDER COMPONENT A 1, A 2, B & C.....	16
5.4 PACKAGES UNDER COMPONENT A1 STATUS .....	18
5.5 PACKAGE 2 -PILATHARA -PAPPINISSERY-SH-67 .....	20
5.6 PACKAGE 3A– THALASSERY TO KALAROAD -SH-30 .....	22
5.7 PACKAGE 3B – KALAROAD -VALAVUPARA .....	25
5.8 PACKAGE4– CHENGANNUR - ETTUMANOOR – MUVATTUPUZHA – SH1 .....	27
5.9 PACKAGE 4A – THIRUVALLA BY PASS .....	28
5.10 PACKAGE 4B– THIRUVALLA TOWN .....	33
5.11 PACKAGE5– ETTAMANOOR- MUVATTUPUZHA.....	34
5.12 PACKAGE6-PONKUNNAM – THODUPUZHA – SH 8 .....	35
5.13 PACKAGE 7 -PERIMPILAVU -PERINTHALMANNA.....	36
5.14 <b>COMPONENT A 2:</b> .....	37
5.15 <b>COMPONENT B: ROAD SAFETY COMPONENT.....</b>	<b>45</b>
5.16 MC ROAD - KAZHAKKOOTTAM – ADOOR 78.65 KM.....	54
5.17 ROAD SAFETY CHALLENGE FUND .....	56
5.18 <b>COMPONENT C: INSTITUTIONAL STRENGTHENING COMPONENT – CURRENT STATUS.....</b>	<b>57</b>
5.19 <b>COMPONENT D: REBUILD KERALA INITIATIVE (FLOOD CONTROL) .....</b>	<b>64</b>
5.20 <b>RKI FLOOD WORKS KFW LOAN &amp; WORLD BANK LOAN.....</b>	<b>71</b>
<b>6 PROJECT DEVELOPMENT INDICATORS – RESULTS FRAMEWORK .....</b>	<b>79</b>
<b>7 SOCIAL SAFEGUARD .....</b>	<b>84</b>
7.1 LAND ACQUISITION STATUS (LA) PENDING ISSUES TO BE RESOLVED .....	84
7.2 TREE CUTTING.....	84
7.3 MANAGEMENT OF CONSTRUCTION INDUCED ISSUES .....	84
<b>8 GRIEVANCE MANAGEMENT REPORT .....</b>	<b>86</b>
8.1 COMPLIANCE OF MISSION RECOMMENDATION .....	87
8.2 PAYMENT TO THE CONSULTANTS AND CONTRACTORS AS ON END OF JULY 2020: .....	88
<b>9 COMPLIANCE GOVERNANCE IMPROVEMENT ACTION PLAN.....</b>	<b>89</b>
9.1 (MICRO LEVEL IMPLEMENTATION WILLBEDONE WITH HELP OF PMC) .....	89
9.2 KEY CONTROLS AS PART OF THE ACTION PLAN: .....	89
<b>10 ACCIDENT REPORT.....</b>	<b>93</b>

10.1	ACCIDENT REPORT PKG-3A .....	93
10.2	ACCIDENT REPORT OF PKG-3B .....	93
10.3	ACCIDENT REPORT PKG-8C.....	93
<b>11 SITE WORK PROGRESS PHOTOGRAPHS.....</b>		<b>97</b>
11.1	PACKAGE -1 –PHOTOGRAPHS.....	97
11.2	PACKAGE -2 –PHOTOGRAPHS.....	98
11.3	PACKAGE -3A –PHOTOGRAPHS .....	99
11.4	PACKAGE -3B –PHOTOGRAPHS.....	100
11.5	PACKAGE -4A –PHOTOGRAPHS .....	101
11.6	PACKAGE -4B –PHOTOGRAPHS.....	102
11.7	PACKAGES-8B-PHOTOGRAPHS .....	103
11.8	PACKAGE -8C–PHOTOGRAPHS .....	104
11.9	RKI 4 ROAD –( ADOOR TO CHENGANNUR) PHOTOS .....	105
11.10	RKI 3 ROAD –( PAINAVU-ASHOKAKAVAL ROAD) PHOTOS.....	106
11.11	SCDP ROAD –COMPONENT B –PHOTOGRAPHS.....	107



# 1 Executive Summary

## 1.1 Introduction

Government of Kerala has decided to take up Phase-II upgradation component of KSTP as a standalone project vide the "KSTP-II" with assistance from World Bank. 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 was five years, upto 31<sup>st</sup> December 2018, but now stands extended to April 2021 and the expected loan closing date 30.04.2021.

## 1.2 Project Development Objectives

The Project Development objective under initial stage was to improve road condition, traffic flow and road safety with a focus on vulnerable road user on Kerala State Core road Networks comprising of about 450.00 Km of major roads and state highways. The main beneficiaries of the Project will be the users living along the Project corridors mainly the pedestrians, motorist, agricultural and industrial producers, consumers and local community. The main benefits under this implementation would be 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.

## 1.3 Project Components

It was decided jointly by World Bank and KSTP to divide the entire project into the following main components under KSTP-II

### 1.3.1 Road Upgrading Works:

These works named as Component A1 and A 2 will include upgrading of about 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.

### 1.3.2 Road Safety Management:

This component named Component B & C 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.*

### 1.3.3 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 and improving Public Communication and User Engagement in Road Development.

### 1.3.4 RKI Flood works

These works named as Component D will include upgrading of about 800kms due to rehabilitation of affected road infrastructure in 2018 floods in Kerala under Rebuild Kerala Initiative, of strategically important State Highways to complete network connectivity in the state with the objective of reducing travel time between key socio-economic centers.

## 2 Planning & Overall Implementation:

### 2.1 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 Consultant. 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.

### 2.2 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 Principal Secretary (Finance), Secretaries to Government, PWD, Law Department, Revenue, Chief Engineer, R&B, Project Director, KSTP, Chief Engineer (Projects) KSTP. The second is an **Evaluation Committee** headed by the Principal Secretary PWD 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.

### 2.3 Component A 1 implementation

Under this component, 2 supervision consultancies CSC1 and CSC 2, Independent engineering services, and Transaction Advisory Service for EPC are included. Contract Agreement for Consultancy for CSC 1 for 190 Km of upgradation road was 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 office is functioning for Package 3A & 3B at Kuttuparamba in Kannur District for package – III, Thiruvilla Town in Pathanmitta District for Package 4A & 4B.

### 2.4 Sub Component A2 implementation

Ground Truthing and updation of DPR for this sub component (Punalur – Ponkunnam – 82 Km under EPC) was carried out by M/s L&T Infrastructure. The bids invited were split into three packages and tender notification issued. Clearance has been received from World Bank for the bid documents. Contract Agreement for Consultancy for CSC for 82.17 Km of upgradation road was executed with M/s Consulting Engineers Group Ltd on 01.11.2019 and mobilized and in place. Work under this is in progress and more detailed description of each package is listed further in this document.

### 2.5 Component B – Road Safety Management implementation

Under this component following works were initiated:



1. Strengthening of KRSA is completed
2. Challengefund proposal received from Kozhikode DRSC through KRSA
3. Safe Corridor Demonstration Project (SCDP)
4. Implement Five other roads as SCDP on the guidelines of the SCDP road

Activity 1 & 2 are completed while 3 is almost on the completion stage. Activity 4 is in progress where in DPR preparation by Consultant is in advanced stage of submission. These works are proposed to be tendered by end of May 2020.

## 2.6 Component C – Institutional strengthening implementation.

### 2.6.1 Consultancy Services

The following Consultancy services are completed.

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. Preparation of design under Green Building concept for PWD, Head Quarters Building. This was completed and forwarded to Chief Engineer, Buildings for obtaining AS
6. 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 – undertaken by PWD*
  - *Consultancy Services for Project Management of PMT*
  - *Consultancy for Post Construction road audit of works*
  - *Integration of labour laws and compliance in World Bank funded Project*
  - *Appointing Probity Advisor in PMT*
7. The Public Information Management System will be developed by the Chief Engineer Road and Bridges, Public Works Department.
8. The Project Management Software has been installed and training given to CSC and KSTP Engineers. The PMS is operationalized.
9. A Community liaison officer was appointed in PMT to assist in the implementation of SCDP.
10. The periodical Road User Satisfaction Survey is arranged and in progress.



## 2.7 Component D – RKI Flood work implementation by KfW& World Bank

After the assessment of flood damages of August 2018, Gok decided to rebuild these damaged roads from assistance of World Bank and KfW Bank. Accordingly a new Component as “**Component D**” was formalised in June 2019 to take up these flood damaged roads. PWD is now considering developing a more sustainable and climate resilient asset stock in the medium to long term (especially during the planned rehabilitation of affected road infrastructure in 2018 floods in Kerala). The Government of Germany pledged to support the Governments Kerala in its rebuilding efforts with due attention to “building back better” principles, by providing via KfW Loan. Around 700km of roads has been finalised by DPR Consultants. More details are further described in following chapters elsewhere in this document.

## 2.8 Six Point Action Plan and Action Taken– Implementation

A six-point action plan and governance improvement action plan for strengthening fiduciary arrangements, quality assurance and contract management was drawn and agreed during the Interim Mission held in August 2017. It was then agreed that the plan be fully complied by January 2018. Although late, the action plan has now been fully complied and continues to be in compliance, as mentioned below

Sl. No.	Details of the Action Plan agreed with GoK	Assessment during mission
1	Develop a mutually agreed Governance Improvement Action Plan including Strengthening Fiduciary Arrangements, Quality Assurance and Contract Management by end September 2017 and fully comply with the plan by January 2018	Complied. PMC fully mobilized.
2	Ensure continuity of Project Director and key project staff till end of the project	Complied. PMU staffing, however, needs enhancement in view of expanded mandate.
3	Engage experienced contract management specialist and quality assurance specialist in the PMT	Complied. Engaged through PMC consultants. M/s EptisaServiciosIngenieraS. L appointed on 5 <sup>th</sup> March 2019 for a period of 15 months and fuctional. However, in the light of World Bank closer date being extended, the PMC services has been extended till April 2021.
4	Take final decision on way forward for Component A2	Award of works for Package 8 A, B and C completed in November 2019. Works are in progress in these packages under EPC Mode of Contract. Completion time for these works are 24 months.
5	Ensure full commitment of Component B and at least 80% for Component C	Complied for Component C. For Component B, however, 100% compliance can be achieved after remaining 10% commitment (Challenge Fund). DPR Consultants awarded & DPR preparation is in Progress.and work expected to commence from September 2020
6	Sustain the progress in Component A1 and reach overall progress of 89.33 % contributing to at least 20 % project disbursements in the next 3 months	Complied. Current physical progress is 89.33% and disbursement is 85.78%.

## 2.9 Quality Assurance:

The KSTP had engaged a Construction Supervision Consultant for quality certification at the primary level. Their functions on quality assurance will be monitored by deepening the involvement of the KSTP Divisional Engineers. At the second level of quality monitoring KSTP had engaged an Independent Quality Monitoring Consultant. The final quality monitoring including review of all quality monitoring activities, KSTP has formed a Quality Review Committee chaired by the Chief Engineer KSTP, who is arranging reviews. Further, actions to appoint a Consultant for closure audit of the roads before taking over is in progress.

### **Bill Processing and Variation Management:**

The bills for works certified by the Supervision Consultants are processed through the KSTP field Divisions as envisioned in the Finance Manual. Also, variations approval procedure has been outlined and the approvals are put through this protocol. Further, in order to improve the cash flow conditions of the contractors to speed up the pace of implementation an Accelerated Payment System was introduced by which 75% of the amount due will be paid as soon as the bill is received at PMT prior to detailed scrutiny.

### **Project Management Consultant (PMC) and Probity Advisor:**

To augment the capabilities of the existing staff to effectively manage the Project activities, including implementing the Governance Improvement Action Plan, the KSTP had initiated the selection process for the Project Management Consultant. M/s Eptisa finalized and appointed and was on board from 5<sup>th</sup> March 2019.

#### **1. Ensure continuity of Project Director and key Project staff till end of the Project.**

The State has posted a full-time officer from the Indian Administrative Service as Project Director and the positions of Social, Environmental and other positions are also filled.

#### **2. Engage experienced professional in Quality Management and Contract Management Specialists in the PMT and organize monthly management meetings on Quality Assurance and Contract Management**

The Quality Management and Contract Management Specialists are included in the PMC team was mobilized by 1st week of March 2019. The quality review committee with Chief Engineer KSTP as Chair Person has been reviewing Quality and Organization meetings regularly in the PMT Head Quarters. An independent Technical Auditor was also appointed to carryout Quality Audit. A Consultant for Post Construction Technical has been selected.

#### **3. Sustain Progress in Component A1 and reach overall progress of 89.33% to at least 40% Project Disbursement.**

As on end of July 2020 the physical progress is 89.33 % on Sub Component A1 (Road up gradation in 4 Packages). The financial progress is 85.78%. The overall disbursement as on July 2020 is 107.62 Million USD which is 88.94 % of the overall loan amount of US\$ 121 million committed in component A1.

#### **4. Sustain Progress in Component A2, including preparation of revised engineering design.**

Due to time constraints to complete the formalities like financial closure and then implement the Project (Punalur – Ponkunnam road) before the loan closure period, the Government of Kerala decided to change the mode of procurement to EPC in Consultation with the Bank. The State has also recommended extension of loan period. The bidding documents are prepared by M/s L&T and tenders have been floated which ends April (mid) 2019. Bids have been received for all these packages, evaluation done and has been awarded in Month of July & August - 2019 except One package and mobilised on site in month of December-2019. Details of these packages are explained more in detail in following chapter of the document.

**Commitment of Component B and at least 80% for Component C:**

**Component B**

Out of US\$ 22 million (Rs. 12 crore) allocated so far, KSTP has arranged works on SCDP, (Road Safety Interventions), the Capacity Building and the proposals of Challenge Fund program are under scrutiny. 100 % has been committed and DPR consultants for Challenge Fund work has been finalised & others such as Trauma Care, Road Safety Enforcement, etc has been initiated.

**Component – C: Institutional Strengthening**

Under the Road Sector Modernization, KSTP had already arranged a few Consultancy assignments such as Design of Green Building for PWD Head Quarter and others. Further to this, KSTP has initiated procurement for the assignments in consultation with the Bank.

In the Sub Component Active User Engagement in Project Design, implementation, Screening and Asset Management, the KSTP has arranged the Periodic Road User Satisfaction Surveys, another assignment for Community Participatory Road Safety and User Management Program was dropped as individual experts have been engaged for CommunityLaiison works.

**Component – D: Flood Control works**

Under this component US\$ 26 million(out of 216) due to time constraints to complete the formalities like financial closure and then implement the three RKI Roads Package, Project before the loan closure period, the Government of Kerala decided to change the mode of procurement to EPC in Consultation with the Bank.The State has also recommended extension of loan period. Bids have been received for all these packages, evaluation done and has been awarded in Month of January -2020 mobilised on site in month of April-2020 except One package which was awarded in month of April-2020.Details of these packages are explained more in detail in following chapter of the document.

**2.10 Compliance of legal covenants**

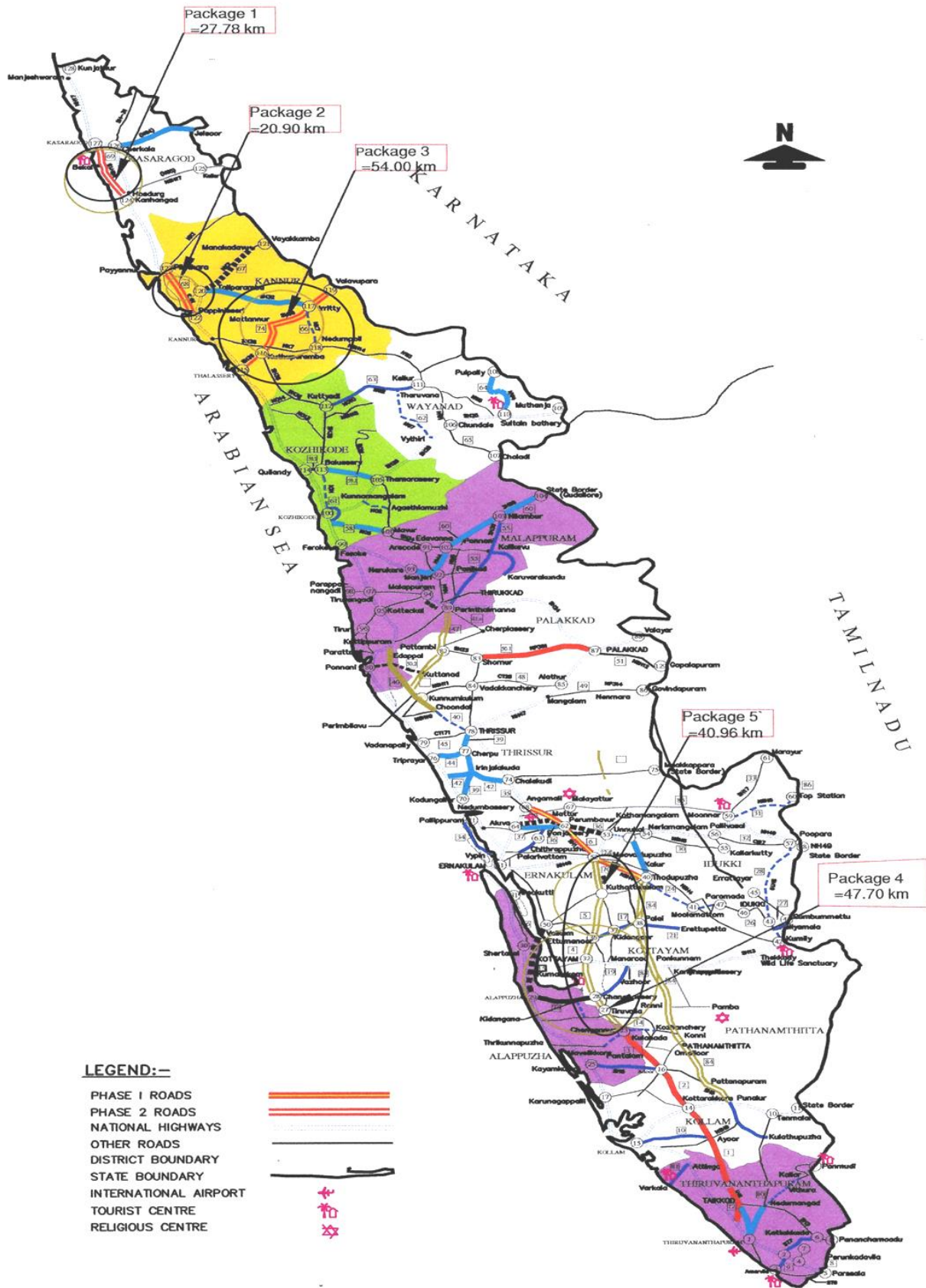
Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
<b>A. Institutional Arrangements</b>		
1.	The Project Implementing Entity shall maintain, throughout the period of implementation of the Project:	
	a. A Project Steering Committee (“the PSC”): (i) headed by Chief Secretary of Kerala, and comprised of representatives of Project Stakeholders and line department of the Government of Kerala, in numbers, manner and substance acceptable to the Bank	a. Steering Committee in place
	b. A Project Management Team (the “KSTP”) within the PWD: (i) headed by a Project Director in the rank of a senior level Chief Engineer and assisted by competent staff	b. Project Management Team in place
	c. An Evaluation Committee (“the Evaluation Committee”) within the PWD	c. The Evaluation Committee in place
	d. An Environmental and Social Management Cell (the “ESMC”) within the PWD with competent, experienced and qualified staffed in sufficient numbers and under terms of reference satisfactory to the Bank, vested with powers, financial resources, functions and competencies,	d. Environmental and Social Management Cell in place

Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
	acceptable to the Bank. Monitor and evaluate contractors' and consultants' compliance therewith; and carryout any necessary updates thereto	
2.	The Project Implementation Entity shall throughout the period of implementation of the Project the services of a supervision consultant (the "Construction Supervision Consultant"), with qualifications and experience and under terms of reference acceptable to the Bank.	- Construction Supervision Consultant in place
3.	The Project Implementation Entity shall engage: a. by no later than twelve (12) months after the effective date, and thereafter maintain throughout the period of implementation of the Project, the service of an independent engineer (the "Independent Engineer")	a. It is proposed to convert PPP mode to EPC / Item rate Authority Engineer will be appointed
	b. By no later than six (6) months after the effective date, and thereafter maintain throughout the period of implementation of the Project, the services of a firm of Chartered Accountant with qualification and experience, and under terms of reference, acceptable to the Bank	b. Internal Audit firm appointed for audit of accounts
<b>B. Project Document</b>		
	The Project Implementation Entity shall: a. Implement the Project in accordance with the Project Implementation Plan, the FM Manual, the GAAP and the Safeguard documents	This is complied
<b>C. Anti-corruption</b>		
	The Project Implementation Entity shall ensure that the Project is carried out in accordance with the provisions of the anti-corruption guidelines and the GAAP	Complied
<b>D. Challenge Fund</b>		
1.	For purposes of carrying out under Component B2 of the Project, the Project Implementing Entity shall, through the coordinated and cooperative effort of the PWD and the RSA, mobilize local stakeholders, including District Road Safety Councils, GramaPanchyats and / or non-governmental organizations	The Challenge Fund proposal for Kozhikode has been awarded.
<b>E. Safeguards</b>		
1.	The Project Implementing Entity shall: • Carryout the Project in accordance/ compliance with the Environmental Impact Assessment ("EIAs"), the Environmental Management Plans ("EMPs"), the Environmental Management Framework ("EMF"), the Resettlement Action Plan ("RAP"), and the instruments	This is complied
3.	The Project Implementing Entity shall ensure that, prior to commencing any civil works on a particular road, or section thereof, under the Project: (i) All necessary governmental permits and clearances for such civil work in the relevant road, or section, shall have been obtained from the competent governmental authority/ies and submitted to the Bank	All permits from statutory authorities obtained
4.	The Project Implementing Entity shall ensure that each contract for civil works under the Project includes the obligation of the relevant contractor to comply with the relevant Safeguard Document applicable to such civil work commissioned/ awarded pursuant to said contract.	EMP followed during construction
5.	The Project Implementing Entity shall: a. Furnish to the Bank, throughout the period of Project implementation: i. Quarterly reports prepared by KSTP, with the assistance of the ESMC, on the general	Complied with

Sl. No.	LEGAL COVENANTS	COMPLIANCE STATUS
	<p>compliance with the Safeguard Documents, the Social and Environmental Impact of Project activities, and the results of the mitigation or benefit-enhancing measures applied thereto, during the period preceding the date of each such report</p> <p>ii. Quarterly reports prepared by: (A) the Construction Supervision Consultant in respect of Sub-Component A1 of the Project; and (B) the Independent Engineers, in respect of Component A2 of the Project, said reports to assess the respective contractor's general compliance with the Safeguard Documents, the Social and Environmental Impact of Project activities, and the results of the mitigation or benefit-enhancing measures applied thereto, with particular emphasis on the implementation and results of resettlement activities, during the period preceding the date of each such report.</p>	
<b>F. Suggestion and Complaint Mechanism</b>		
	<p>The Project Implementing Entity shall maintain and operate throughout the period of implementation of Project activities, a district-level grievance redressal mechanism for resettlement and rehabilitation and a State level grievance redressal mechanism for all other aspects of the Project, which systems shall be subject to guidelines and procedure, acceptable to the Bank.</p>	<p>District level GRC of KSTP meetings are held once a month chaired by District Collector. State level GRC is included in the SLEC chaired by Chief Secretary once a month. Status of GRC is attached to the report under Social Safeguard Management.</p>
<b>G. Project Surveys</b>		
	<p>The Project Implementing Entity shall carryout at least two (2) Road User Surveys with scope, methodologies, and terms of reference satisfactory to the Bank, in order to assess road user's satisfaction with Project results and its implementation, their opinions regarding current and potential sector targets, and their behavioral/ attitudinal changes.</p>	<p>Baseline RUSS done and next survey arrangement completed Survey on completed roads in progress.</p>
<b>SECTION II PROJECT MONITORING, REPORTING AND EVALUATION</b>		
<b>A. Project Reports</b>		
1.	<p>The Project Implementing Entity shall monitor and evaluate the progress of the Project and prepare Project Reports for the Project in accordance with the provisions of Section 5.08(b) of the General Conditions and on the basis of indicators as agreed with the Bank. Each such Project Report shall cover the period of one calendar quarters</p>	<p>The monthly and quarterly Projects Reports are submitted regularly with details</p>
<b>B. Financial Management, Financial Reports and Audits</b>		
1.	<p>The Project Implementation Entity shall maintain a Financial Management System and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Bank</p>	<p>Complied</p>
2.	<p>The Project Implementing Entity shall prepare and furnish to the Bank, by not later than fortyfive (45) days after the end of each calendar quarter, interim financial reports for the Project covering the calendar quarter, inform and substance satisfactory to the Bank</p>	<p>Complied</p>
3.	<p>The Project Implementing Entity shall ensure that the audited Financial Statements for each period shall be:</p> <p>a. Furnished to the Borrower and the Bank not later than ten (10) months after the end of the period, and</p>	<p>Complied</p>
	<p>b. made publicly available in a timely fashion and in a manner acceptable to the Bank.</p>	<p>Document is open to public</p>



### 3 Project Key Map



## 4 Funding & Disbursement

The total disbursement at the end of July-2020 from World Bank was 128.43 USD Millions

KSTP-II commenced operations in the year 2013 and funding details are as below

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 April 30.2021
Expected closing date (Loan)	-	30.04.2020

### 4.1 Current Disbursement Status

SI No	Claim	Date	EXPENDITURE	AMOUNT	DISBURSED	BALANCE
			in Lakh	CLAIMED	USD in	FUNDS
			TOTAL	TOTAL	TOTAL	AVAILABLE
						FOR CLAIM
						(MUSD)
						TOTAL
	Front end fee				0.54	216.00
1	Retroactive	15.06.12 to 15.06.13	1,863.95	1,043.00	1.69	215.46
2	1 <sup>st</sup> Quarter					213.77
3	2 <sup>nd</sup> Quarter	01.07.13 to 30.9.13	1,355.79	764.00	1.23	212.54
4	3 <sup>rd</sup> quarter	01.10.13 to 31.12.13	1,906.01	1,071.00	1.71	210.82
5	4 <sup>th</sup> quarter	01.01.14 to 20.03.14	2,696.00	1,510.00	2.50	208.32
6		21.03.14 to 31.03.14	53.79	30.00	0.05	208.27
7	1 <sup>st</sup> Quarter	01.04.14 to 18.06.14	1,826.41	1,023.00	1.70	206.57
8		19.06.14 to 30.06.14	14.69	8.00	0.02	206.55
9	2 <sup>nd</sup> Quarter	01.07.14 to 30.09.14	1,405.61	787.00	1.27	205.28
10	3 <sup>rd</sup> quarter	01.10.14 to 31.12.14	3,790.21	2,124.00	3.44	201.84
11	4 <sup>th</sup> quarter	01.01.15 to 28.02.15	3,706.35	2,076.00	3.32	198.52
12	4 <sup>th</sup> quarter	01.03.15 to 31.03.15	3,704.89	2,076.00	3.32	195.20
13	1 <sup>st</sup> Quarter	01.04.15 to 16.06.15	3,534.14	1,992.00	3.14	192.06
14		17.06.15 to 30.06.15	154.40	86.00	0.14	191.92
15	2 <sup>nd</sup> Quarter	01.07.15 to 30.09.15	3,527.06	1,977.00	3.04	188.89
16	3 <sup>rd</sup> quarter	01.10.15 to 31.12.15	10,338.17	5,790.00	8.51	180.38
17	4 <sup>th</sup> quarter	01.01.16 to 13.03.16	6,413.18	3,592.00	5.38	175.00
18		14.03.16 to 31.03.16	2,861.91	1,603.00	2.41	172.59
19	1 <sup>st</sup> Quarter	01.04.16 to 10.06.16	2,037.40	1,141.00	1.69	170.90
20		11.06.16 to 22.06.16	2,957.89	1,657.00	2.45	168.45
21	2 <sup>nd</sup> Quarter	23.06.16 to 31.08.16	4,786.10	2,680.00	4.01	164.44
22		01.09.16 to 30.09.16	3,981.82	2,230.00	3.26	161.18
23	3 <sup>rd</sup> quarter	01.10.16 to 31.12.16	4,079.22	2,284.00	3.40	157.78
24	4 <sup>th</sup> quarter	01.01.17 to 31.03.17	9,237.79	5,173.00	8.04	149.74
25	1 <sup>st</sup> Quarter	01.04.17 to 31.05.17	4,292.74	2,404.00	3.72	146.02
26		01.06.17 to 30.06.17	3,933.36	2,203.00	3.44	142.58
27	2 <sup>nd</sup> Quarter	01.07.17 to 30.09.17	5,897.52	3,303.00	5.10	137.48
28	3 <sup>rd</sup> quarter	01.10.17 to 31.12.17	5,319.40	2,987.00	4.69	132.79
29	4 <sup>th</sup> quarter	01.01.18 to 28.02.18	6,770.27	3,791.00	5.82	126.97
30		01.03.18 to 22.03.18	3,935.30	2,204.00	3.39	123.58
31		23.03.18 to 31.03.18	1,241.57	695.00	1.04	122.54
32	1 <sup>st</sup> Quarter	01.04.18 to 31.05.18	1,925.29	1,086.00	1.61	120.93
33		01.06.18 to 20.06.18	1,114.33	627.00	2.02	118.91
34		21.06.18 to 22.06.18	1,344.42	753.00		118.91
35		23.06.18 to 30.06.18	89.25	50.00	0.07	118.84
36	2 <sup>nd</sup> Quarter	01.07.18 to 18.09.18	7,104.38	3,982.00	5.49	113.35
37	3 <sup>rd</sup> quarter	19.09.18 to 31.12.18	5,817.34	3,258.00	4.59	108.76

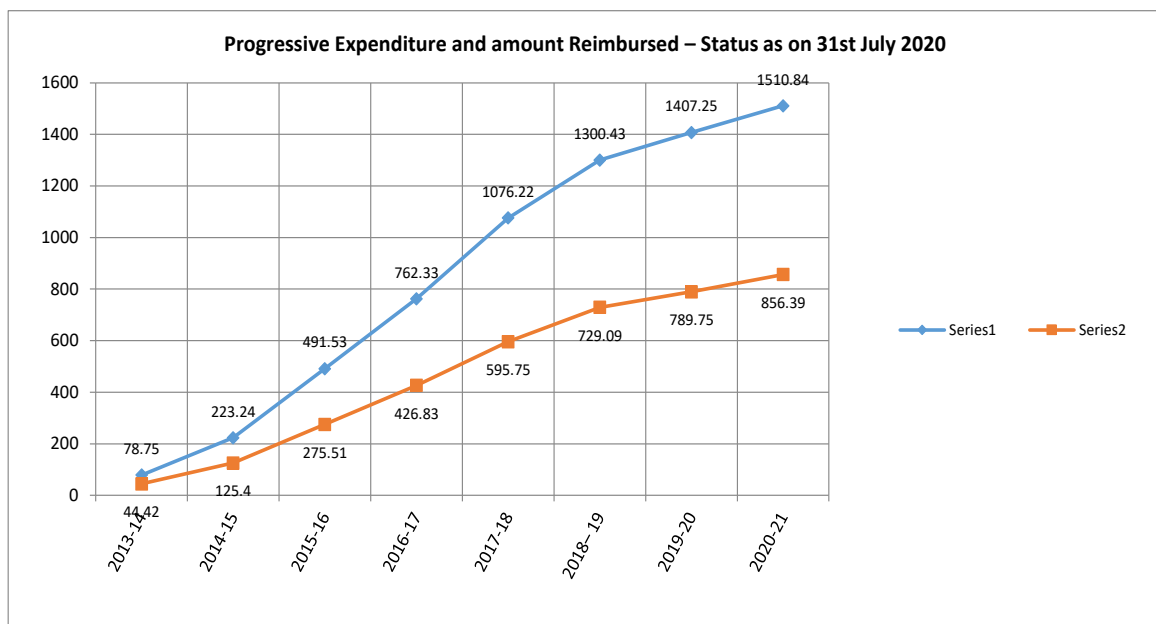


38	4 <sup>th</sup> quarter	01.01.19 to 28.02.19	3,075.19	1,722.11	2.49	106.27
39		01.03.19 to 31.03.19	1,950.03	1,127.00	1.63	104.64
40	1 <sup>st</sup> Quarter	01.04.19 to 30.04.19	2,420.03	1,355.22	1.93	102.71
41		01.05.19 to 20.06.19	1,522.48	853.00	1.23	101.48
42		21.06.19 to 27.06.19	2,247.92	1,303.00	1.89	99.59
43	2 <sup>nd</sup> Quarter	28.06.19 to 30.09.19	2,961.19	1,689.00	2.35	97.24
44	3 <sup>rd</sup> Quarter	01.10.19 to 31.12.19	1530.80	865.00	1.22	96.02
45	4 <sup>th</sup> Quarter	01.01.20 to 31.03.20	1513.75	875.00	1.23	94.79
46	1 <sup>st</sup> Quarter	01.04.20 to 30.06.20	-	2553.86	3.59	91.2
			<b>142,239.34</b>	<b>79,849.56</b>	<b>128.43</b>	

\*excluding front end fee

#### 4.2 Progressive Expenditure and amount Reimbursed – Status as on 31st July 2020

Year	Cumulative Expenditure (INR Crores)	Progressive Amount Reimbursed (INR Crores)
2013-14	78.76	44.18
2014-15	223.24	125.12
2015-16	491.53	275.52
2016-17	805.26	451.21
2017-18	1076.23	603.04
2018– 19	1300.43	729.09
2019-20	1407.25	789.75
2020-21	1510.84	856.39



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

Fiscal Year	2014	2015	2016	2017	2018	2019	2020	2021
	July 2013- June 2014	July 2014- June 2015	July 2015- June 2016	July 2016- June 2017	July 2017- June 2018	July 2018- June 2019	July 2019- June 2020	July 2020- June 2021
Annual	22	43	45	54	32	20		
Cumulative	22	65	110	164	196	216		
Actual	8.92	14.62	23.48	25.86	23.75	19.25	12.44	0.11*
Cumulative	8.92	23.54	47.02	72.88	96.63	115.88	128.32	128.43*

\*excluding front end fee

### 4.3 RESTRUCTURING

Through their letter dated May 11, 2018, the Department of Economic Affairs, Ministry of Finance, and Government of India had submitted a request for restructuring of the loan.

Considering the floods and damages witnessed by the state in August 2018, through their letter dated November 15, 2018, the DEA submitted a revised request for utilizing the savings (USD 45 million) from KSTP II Loan for rebuilding Kerala initiative

A new Component "D" was introduced, the funds of which were to be utilized for PWD /LSGD and RKI roads. Under this component, roads affected during the floods of Aug 2018 identified by PWD and further prioritized by Transaction Advisors M/s LNTIEL, based on World Bank suggestions shall be taken up for DPR preparation. The details are more fully described in this report in following chapters.

No.	Activity	Cost (in Million \$ By Gok)	Bank financing (in Million\$)
1	PWD roads	40.00	23.00
2	LSGI roads and other Infrastructure	33.00	19.00
3	Support to RKI	6.00	3.00
	TOTAL	80.00	45.00

However, Gok decided to remove LSGI roads under this and instructed that this be used by KSTP only. Hence 19 Million USD is added in Component A2 taking that to a total of 33 M USD + 19 M USD = 52 M USD under RKI roads of PWD, the funds of 23 M USD + 3 M USD = 26.0 M USD for Component D is proposed.

<b>Component</b>	<b>Original Loan Allocation (Million USD)</b>	<b>Revised Loan Allocation (Million USD)</b>	<b>Completed Loan in (Million USD) till July-2020</b>
<b>Component A1: Road Network Upgrading and Safety Improvement (282 Kms Upgrading)</b>	166	121	107.62*
<b>Component A2: Road upgrading and safety Improvement (EPC) (82.04 Kms)</b>	33	52	3.65*
<b>Component B: Road Safety Management</b>	12	12	10.25*
<b>Component C: Institutional Strengthening</b>	5	5	6.03*
<b>Component D: RKI Roads</b>		26	0.88
<b>Total</b>	<b>216.0</b>	<b>216.0</b>	<b>128.43</b>

## 5 Current Project Status

### 5.1 Component A1:

The upgrading works under the initial stage hereinafter referred to as **Component A1** for seven roads were identified and taken up under the KSTP-II. The major items of works included were improvement to gradient, widening and strengthening the roads including minor realignments wherever essential, reconstruction of narrow bridges and culverts and improvements to drainage system. The carriageways proposed are generally 2 lane roads with width of 7.0 m and hard shoulders of 1.50 mts. on either side. The Right of Ways generally 15.0 Meters and required acquisitions at some locations. The specification adopted for civil works is as per MORTH-Rev 5 & IRC standards. All these seven packages were tendered under World Bank Procurement guidelines and as Item Rate Contracts. The details of these roads are summarized under table 1

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

Package 3 was further split it into two packages and accordingly Package 3A and 3B were tendered.

Two additional stretches of Thiruvalla Town and Bypass were taken up as Package 4A and 4 B.

In total there are 10 Packages under Component A1 as shown in the table covering a total length of **285.01** kms. Out of these, Packages 4, 5, 6 & 7 are completed while six are in progress. Package 1 and 2 are almost completed and in "defect liability period" with ongoing pending works under road furniture items, snag list and additional junction improvement works. These works were undertaken as there was savings in the estimated tendered cost.

Table 1

Sl.No	Package No	Stretch of the Project Road	Type of Contract	Length (Km.)
1	KSTP-2/UG/1	Kasargod-kanhangad	Item Rate BOQ	27.78
2	KSTP-2/UG/2	Pilathara-Pappinssery	Item Rate BOQ	20.90
3	<b>KSTP-2/UG/3A</b>	Thalassery-Kalaroad	Item Rate BOQ	28.80
4	<b>KSTP-2/UG/3B</b>	Kalaroad-Valavupara	Item Rate BOQ	25.20
5	KSTP-2/UG/4	Chennaganoor-Ettamanoor	Item Rate BOQ	47.70
6	<b>KSTP-2/UG/4A</b>	Thiruvalla by pass (rearranged from Package 4)	Item Rate BOQ	2.30
7	<b>KSTP-2/UG/4B</b>	Thiruvalla town (rearranged from Package 4)	Item Rate BOQ	2.00
8	KSTP-2/UG/5	Ettamanoor-Muvattupuzha	Item Rate BOQ	40.96
9	KSTP-2/UG/6	Ponkunnam-Thodupuzha	Item Rate BOQ	50.00
10	KSTP-2/OL/7	Perimpilavu-Perintalamanna	Item Rate BOQ	39.37
<b>Total Length under this Component in Km is</b>				<b>285.01</b>

All 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.

**5.2 Detail of the Supervision Consultants for the Packages under this component is as below**

Name of consultant	Contract signed	Contract Period	Commencement Date	Contract Amount (Rs.) revised amount as per Variation 4	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	53,35,97,277/-	IIIA , III B , IVA, &IVB ( 137.07km)

Package VII is under KSTP and supervision monitoring was done by Divisional Office PWD SE

M/s Egis International in JV with M/s Egis India Pvt. Ltd have been given Extension of time up to 31-12-2020 to facilitate the completion of works under Component A 1.

5.3 SUMMARY AND STATUS OF THE WORKS UNDER COMPONENT A 1, A 2, B & C

Project Details of KSTP-2 under Sub Component A 1 Date: (31.07.2020)																		
Sl.No	Package No	Stretch of the Project State Highway / Road Number	Type of Contract	Contractor's Name	Supervision Consultant	Proposed Length (Km.)	Original Completion date	EOT-3 (Date)	Extended Completion date (Latest)	DLP	Awarded Cost of the Project (Cr.)	Value upto IPC submitted /Final Payment done as on date in Crores	Additional Works	Saving / Overbudget/ Running Bills	Status of the project	TOC /Completion certificate issued	Remarks / Reasons	Variation Order/ Supplementary Agreement Status
1	KSTP-2/UG/1	Kasargod-kanhangad-SH-57	Item Rate BOQ	M/s.RDS Projects Limited	EGIS India	27.78	23.04.2015		31-07-2020	31-07-2021	133.05	122.85	6.15	4.05	Physical progress : 99.00 % Financial progress : 99.00 %	Section 1 : 0+000 to 23+180 & 23+350 to 27+780 (TOC 01-04-2018) Section 2 :23+180 to 23+350 (01-07-2018)	Numbering of culverts in progress (Under DLP period)	6.15 Cr additional works Variation in progress
2	KSTP-2/UG/2	Pilathara-Pappinssery-SH-67	Item Rate BOQ	M/s.RDS Projects Limited	EGIS India	20.90	22.04.2015		25-08-2020	25-08-2021	118.29	101.62		16.67	Physical progress : 99.00 % Financial progress : 99.00 %	Section 1 : Except Ramapuram bridge and Thavam ROB (01-04-2018) Section 2 :Ramapuram Bridge and Thavam ROB (01-09-2018)	DLP extension given (15-06-2020) DLP extension given (30-08-2019)	Contractor has started the work on Oxbow land as approved.
3	KSTP-2/UG/3A	Thalassery-Kalaroad-SH-30	Item Rate BOQ	M/s.Dinesh chandra R.Agarwal Pvt.Ltd.,	EGIS India	28.80	26.06.2018	31.10.2020	30-10-2020	30-10-2021	156.33	100.015		56.32	Physical progress : 64.61 % Financial progress : 64.46%	Section 1 : Road works other than Eranholi Bridge Section 2 :Eranholi Bridge Work	In progress In progress	VO 8 & VO 9 has certified by Employer IPC 23 Certified by Employer
4	KSTP-2/UG/3B	Kalaroad-Valavupara-SH-30	Item Rate BOQ	M/s.GHV-EKK Infrastructure & Co.	EGIS India	25.20	25.09.2018		31-07-2020	31-07-2021	209.68	191.46	5.06	13.16	Physical progress : 86.82 % Financial progress : 86.27 %	Section 1 : Except Iritty Bridge and Kootupuzha Bridge Section 2 :Iritty Bridge & Kootupuzha Bridge	In progress (Slope protection for PAP) In Progress (Kootupuzha Bridge held up due to forest clearance)	VO 1 to VO 20 has certified by Employer IPC-35 Certified by Employer
5	KSTP-2/UG/4	Chennaganoor-Ettamanoor-SH-1	Item Rate BOQ	M/s Delma Sreedhanya Jv.	EGIS India	47.70	24.11.2017		31-03-2018	31-03-2019	293.58	278.18		15.40	Completed	TOC issued 01.04.2018	Closure reports to amend and resubmit by EGIS . (Accident Report pending )	
6	KSTP-2/UG/4A	Thiruvalla by pass (rearranged from Package 4)	Item Rate BOQ	M/s.GHV India Pvt Ltd	EGIS India	2.30	06.10.2019		30-09-2020		37.03	17.12		19.91	Physical progress : 53.79 % Financial progress : 46.03 %	EOT-03 Approved by 113 steering Committee	Extra claim for PSC Girder with Semi Integral girder in dispute	VO-3 has been submitted for approval/ IPC-06 Has been certified by Employer & IPC-07 has been submitted for Approval in July-2020
7	KSTP-2/UG/4B	Thiruvalla town (rearranged from Package 4)	Item Rate BOQ	M/s.EKK Infrastructure Ltd.,	EGIS India	2.00	06.10.2019	15-12-2019	30-09-2020		7.77	4.84	0.93	2.93	Physical progress : 90.0 % Financial progress : 63.06 %	EOT-02 Approved by 113 steering Committee	IPC-03 has been approved by Employer	VO-2 submitted for approval of additional work of MC road
8	KSTP-2/UG/5	Ettamanoor-Muvattupuzha	Item Rate BOQ	M/s.NAPC Ltd.,	EGIS India	40.96	03.08.2016		25-02-2018	25-02-2019	171.49	163.68		7.81	Completed	Performance certificate issued Section 1 : 06.02.2019 Section 2 :25.02.2019	Closure reports to amend and resubmit by EGIS / Excess soil issue to be resolved	
9	KSTP-2/UG/6	Ponkunnam-Thodupuzha	Item Rate BOQ	M/s.GHV-EKK Infrastructure & Co.	M/s MSV International USA	50.00	09.12.2016		28-03-2017	28-03-2018	227.13	223.25		3.88	Completed		Closure Report to be prepared	
10	KSTP-2/OL/7	Perimpilavu-Perintalamanna	Item Rate BOQ	M/s Nath constructions	Under KSTP	39.37	02.03.2017		02-03-2017	02-03-2018	8.11	8.11		0.00	Completed		Closure Report to be prepared	
Total Length under this Component in Km is						285.01					1362.46	1211.13		140.13				

Project Details of KSTP-2 under Sub Component A 2																		
Sl.No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultat	Length (Km.)	Estimated Cost	Original completion Date	Appointed date	Revised Appointed date	Awarded Cost of the Project (Cr.)	Actual Unt Cost /km in Crores	Additional Works	Saving / Overbudget/ RunningBills	Status of the project	TOC /Completion certificate issued	Remarks / Reasons	Variation Order/ Supplementary Agreement Status
1	KSTP-2/OL/8A	Punalur-Konni	Engineering Procurement Construction (EPC)	To be decided by Steering Committee	M/s ConsultingEngineeringServices	29.84	226.61	Not yet Awarded			237.94	7.97						
2	KSTP-2/OL/8B	Konni - Placherry	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s ConsultingEngineeringServices	30.16	274.74	29-10-2021	09-10-2019	01-11-2019	279.00	9.25			2.94 % C & G, Embankment Filling work is in Progress	Mobilisation advance taken	8.37 Cr pending for approval	
3	KSTP-2/OL/8C	Placherry -Ponkunnam	Engineering Procurement Construction (EPC)	J V of M/s Sreedhanyaand Nath Constructions	M/s ConsultingEngineeringServices	22.17	236.79	21-12-2021	06-09-2019	23-12-2019	248.5	11.21			10.81 % C &G, Embankment Filling work is in Progress, Culvert work is in progress	Mobilisation advance taken	12.43 Cr pending for Approval	
						82.17	738.14				765.4405							

Safe Corridor Demonstration Project (Under Component B & C)																		
Sl. No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultant	Length (Km.)	Original Completion date	EOT	DLP		Awarded Cost of the Project (Cr.)	Revised cost of the Project (Cr.)	IPC Payment in Cr	Saving / Overbudget/ Running Bills /Balance	Status of the project	Completion certificate issued	Remarks / Reasons	
									Completion date	Duration from Completion date								
4	KSTP-2/OL/8	Kazhakuttom-Adoor	Item Rate BOQ	M/s.GHV-EKK Infrastructure & Co.	under KSTP (AEE/AE/EE)	78.65	27.04.2018	31.12.2019	30.09.2020		146.67	138.23	122.51	8.44	Physical progress :93.36% Financial progress: 88.81%	EOT proposed upto 30-09-2020	SCDP project under Component of B & C	Revised cost is 138.23 Cr
<b>Overall Length in Km</b>						<b>445.83</b>												

Challenge Fund of KSTP																				
Sl. No	Package No	Stretch of the Project Road	Type of Contract	Contractor's Name	DPR Consultant	Length (Km.)	Date of Commencement	Completion date	DL P		Estimated Cost of the Project (Cr.)	Awarded Cost in Lakhs	Revised Cost of the Project (Cr)	Status of the project	Completion certificate issued	Remarks / Reasons				
									Completion date	Duration from Completion date										
1	Single Package for DPR's	Vypin-Munambam	Item Rate Contract or EPC to be Decided	M/s EGIS India Pvt Ltd		25.00	Final DPR Submitted and Bid Doc is in progress			10.02		37.11	Draft DPR Reviewed by PMC and Commented by PMC on 30.04.2020							
2		Medical College-Kannamoola-Pallimukku-Pettah				5.00				7.50		7.74								
3		Thrissur-Kunnamkulam State Highway				24.30				4.00		39.08								
4		Kottiyam-Kundara Road				11.60				5.00		23.55								
5		Pavangad-Korapuzha				5.500				10.00		5.65								
						<b>71.40</b>													<b>36.52</b>	<b>113.13</b>

Component D (RKI Roads Flood control)																				
Sl. No	Package No/Type	Stretch of the Project Road	Type of Contract	Contractor's Name	Supervision Consultant	Length (Km.)	Estimated Cost	Original completion Date	Appointed date	Duration of the Project	Awarded Cost of the Project (Cr.)	Actual Unit Cost /km in Crores	Addition al Works	Saving / Overbudget/ Running Bills	Status of the project	TOC /Completion certificate issued	Remarks / Reasons	Variation Order/ Supplementary Agreement Status		
1		Chemmannar Gap road Km.0/00to31/500(except km.10.650)	Engineering Procurement Construction (EPC)	M/s DRAIPL – GREENWORTH (JV)	M/s Consulting Engineering Services	29.94	127.55	LoA Issued on 7 <sup>th</sup> May		12 Months	146.67	4.90								
2		Painavu-Thannikandom	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s Consulting Engineering Services	21.00	86.82	29.04.2021	30.04.2020	12 Months	95.40	4.54			Survey work is in progress					
3		Adoor- Chenganoor	Engineering Procurement Construction (EPC)	M/s.EKK Infrastructure Ltd.,	M/s Consulting Engineering Services	23.8	93.59	29.03.2021	30.03.2020	12 Months	98.1	4.12			Survey work and mobilisation of machineries & manpower deploying					
						<b>74.74</b>	<b>301.39</b>													<b>193.5</b>

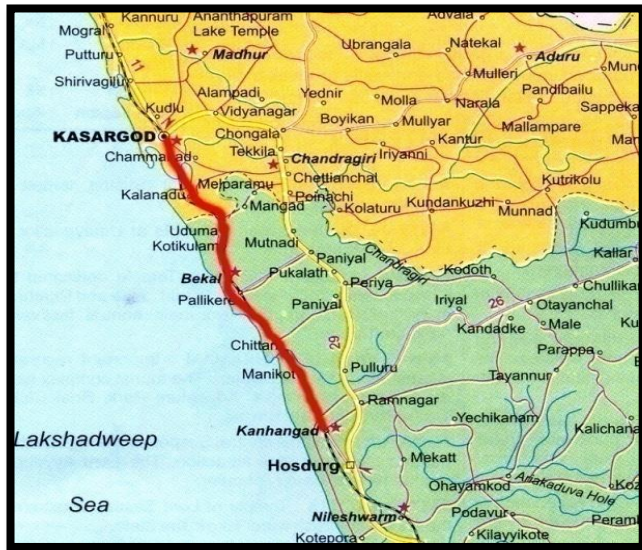


**Details below as per MPR submitted by EGIS -July- 2020**

**5.4 Packages under Component A1 Status**

**5.4.1 Kasargod to Kanhangad Road –SH-57**

This stretch of Length - 27.76 km. Covers Kasargod, Pallikkara, Manikoth and Kanhangad areas and Tourist destinations at Bakel Fort and Ezhimala come under this stretch.



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Upto July-2020)	Financial Progress in % (Upto July-2020)
M/s RDS Projects Pvt Ltd	23-04-2015	133.05	99 %	99%
EOT Date	DLP completion date	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till the end of July-2020 in Crores
28-02-2018	27-02-2019	21.66	121.99	122.86

The Taking-Over Certificate issued for Sections:

- Except for Kanhangad town w. ef 01<sup>st</sup> April 2018
- For Kanhangad town w.e.f 01<sup>st</sup> July 2018
- Performance Certificate has been issued on 25.02.2020

Work as per Snag list has been completed. However, since the as-built drawings, PAP works & additional works proposed have not been completed, Defect Liability Period has been extended.

• Initial Contract Value (Rs.)	-	1,33,05,79,485/-
• Contract value of works executed (Rs.)	-	92,86,10,752/-
• Value of works as per VOs (Rs.)	-	21,66,82,406/-
• Price adjustment as finalized(Rs.)	-	2,57,41,802/-
• Additional works proposed	-	4,88,93,909/-
• Total Value including Price Adjustment	-	1,21,99,35,883/-
• Saving in Project Cost	-	Rs. <b>11,06,43,602/-</b>

## Construction Activities

Works as per Snag list completed. Based on the instructions from Employer, Contractor has performed certain additional works during DLP. Additional works proposed for Kanhangad town, Palakkunnu widening work have been completed. Status of additional works for Bekkal Road is furnished below:

Due to Elec. Pole not Shifted , the balance work has been pending from 14+ 550 to 14+590 LHS.

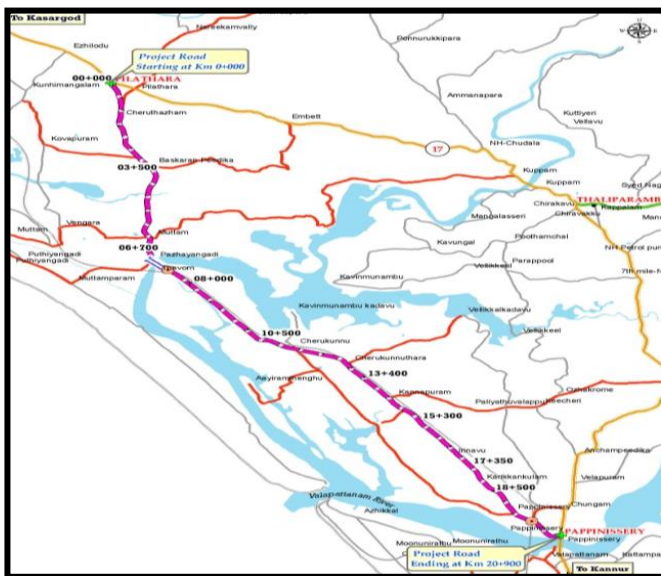
Performance Certificate issued. As-built drawings submitted are under review and reconciliation of quantities are in progress. Draft Final Statement has to be submitted.

<b>Additional Work Status</b>						
<b>KANHANGAD TOWN ADDITIONAL WORK (CHAINAGE :- 24+870 TO 26+400 BHS)</b>						
Sl	Chainage		Side	Description of Work	Status	Remarks
	From	To				
1	24+870	26+400	BHS	Interlocking Tiles	Completed	
<b>PALLAKUNNU WIDENING WORK (CHAINAGE :- 10+310 TO 10+610 BHS)</b>						
1	10+300	10+610	RHS	BC	Completed	
2	10+300	10+635	LHS	BC	Completed	
<b>BEKAL FORT WORK (CHAINAGE :- 14+220 RHS)</b>						
1	00+020	00+295	BHS	GSB & WMM	Completed	
2	00+060	00+295	BHS	DBM & BC	Completed	
3	00+000	00+280	BHS	Drain Work +Cover Slab	Completed	
4	00+030	00+280	BHS	Foot Path Kerb	Completed	
5	00+000	00+230	BHS	Water pipe line relaying	Completed	
6	00+000	00+230	BHS	Electrical Utility	Completed	
<b>PALLIKKARA ROB SERVICE ROAD WORK (CHAINAGE :- 14+600 RHS)</b>						
1	14+600	Service Road	RHS	Embankment Filling, SG, GSB & WMM, DBM & BC	Embankment filling Completed and stopped	Stopped due to Public against petition filed against KSTP (Case registered)
<b>Cast Insitu Drain near Pallikkara Toll Booth 14+400 TO 14+530 LHS</b>						
1	14+240	14+545	RHS	Drain Excavation	Completed	
2	14+240	14+545	RHS	PCC	Completed	
3	14+240	14+545	RHS	Raft	Completed	
4	14+240	14+545	RHS	Wall	Completed	
5	14+240	14+545	RHS	Cover Slab	Completed	
6	14+430	14+590	LHS	Water Utility Work	Completed	
7	14+430	14+590	LHS	Excavation for Cast Insitu Drain Laying	Completed	Due to Elec. Pole not Shifted , the balance work has been pending from 14+ 550 to 14+590 LHS
8	14+430	14+550	LHS	Raft	Completed	
9	14+430	14+550	LHS	Wall	Completed	
10	14+430	14+550	LHS	Cover Slab	Completed	

5.4.2 Key Issues /Delays in July-2020

- Contract for Rehabilitation of existing Bridges at Pazhayangadi on PP road and for Bridges at “Bakal” and “Chandragiri” on KK road through E-tendering has been awarded to M/s PADMAJA SPECIALITIES, Kochi and Agreement executed. Rehabilitation Works pertaining to Chandragiri Bridge has been completed and the works for Bakal Bridge and Pazhayangadi Bridge are in progress. The progress of Works is very slow and Employer has extended the time of completion till July 2020 with the imposition of Liquidated damages. Contractor has stopped the work in Month of April 2020 due to Covid-19 Pandemic Spread announced by Government of India.

5.5 Package 2 -Pilathara -Pappinissery-SH-67



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Upto July-2020)	Financial Progress in % (Upto July-2020)
M/s RDS Projects Pvt Ltd	22-04-2015	118.29	99 %	99 %
EOT Date	DLP completion date	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till the end of July-2020 in Crores
31-03-2018	31-03-2019	15.96	98.330	101.62

The Taking-Over Certificate issued for Sections:

- Except Ramapuram Bridge and Thavam ROB w.e.f 01<sup>st</sup> April 2018
- For Ramapuram Bridge and Thavam ROB w.e.f 01<sup>st</sup> September 2018

Since the work as per Snag List has not been completed, Defect Liability Period has been extended for Section – 1.

**SUMMARY OF PROJECT COST**

- Initial Contract Value (Rs.) - 1,18,29,77,833/-
- Contract value of works executed (Rs.) - 82,36,71,794/-
- Value of works as per VOs (Rs.) - 15,96,32,324/-
- Price adjustment as finalized (Rs.) - 22,68,74,96/-
- Additional Works proposed - 1,56,78,061/-
- Total Value including Price Adjustment - 98,33,04,118/-
- Saving in Project Cost - Rs. 19,96,73,715/-

### Construction Activities

During DLP, instructions were issued by KSTP and Supplementary Agreement executed to carry out certain additional works like reconstruction of Old Ramapuram Bridge Approach and development of Oxbow land at Ramapuram as proposed by the MLA. Later, certain modifications again suggested by MLA and accordingly Contractor submitted the revised design and Cost Estimate. This has been forwarded to Employer for approval. The application for Extension of time for Oxbow land development up to 30.07.2020 and for construction of Approaches to old Ramapuram bridge upto 25.08.2020 have been recommended to the Employer. The contractor is not progressing the works as planned due to non availability of labour and skilled workers due to Covid19 pandemic situation. the works are in progress below table

Table 1

PROJECT	Upgradation of the Road from Pilathara (Km 0+000) to Pappinissery (Km 20+900) of SH-67						
CLIENT	Project Director Kerala State Transport Project Phase II						
CONSULTANT	M/s Egis Interntional SA IN JV with Egis India Consulting Engineers Pvt Ltd						
CONTRACTOR	M/s RDS Project Ltd						
Proposed Development of Oxbow land							
STAUTS OF WORK							
Project cost	Cost of Work	% of BOQ	Works completed	% Completion (BOQ)	% Completion individual	Remarks	
Landscape+ Green Room+ Retaining wall	46,20,419	43%	25,93,474	24%	56%		
Café ( Restaurant)	37,30,487	35%	12,02,310	11%	32%		
Entracne Arch+ Ticket Counter	5,68,470	5%	1,98,710	2%	35%		
Compound wall	11,97,595	11%	9,12,906	8%	76%		
Open Theatre	6,43,721	6%	2,90,814	3%	45%		
	1,07,60,693	100%	51,98,215	48%	48%		
Physical Status	Foundation	Substructure	Superstructure	Electrical & Plumbing	Flooring	Finishing	Remarks
Landscape+ Green Room+ Retaining w	Completed	Completed	Roof Truss Work in progress	Conduit completd + Underground cable laying Completed+ Garden light fixing in progress	CC flooring comple	( Interlock works for foot path and sitting arrangement in progress)	Planting of trees 30 Nos, Planting of hedges ( border plant- 202 mtr completed) turfing ( 800 Sqm) completed and balance in progress + Laying of UG Cables for electrification Completed+ Fixing of Garden lights started
Café ( Restaurant)	Completed	Completed	Roof Truss works in progress	Conduit completed	CC flooring completed	Balance Plastering in progress	Material for Roof work ( Mangalore tiles & Steel tubes ) proccured and reached at site. Started the roof truss works on 25.07.2020 and completed the outside verandha & open sitting area
Entracne Arch+ Ticket Counter	Completed	Completed	Roof Truss works in progress	Conduit completed			Truss work started
Compound wall	Completed	Completed	Completed	Conduit completed	Nil	Painting in Progress	
Open Theatre	Completed	Completed	Completed	Conduit completed	CC flooring completed		Completed the Roof truss and Palsterign works

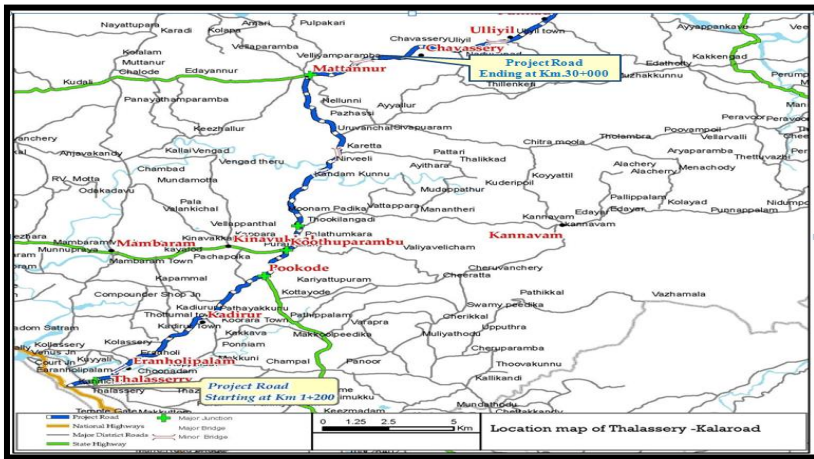
PROJECT	Upgradation of the Road from Pilathara (Km 0+000) to Pappinisserly (Km 20+900) of SH-67					
CLIENT	Project Director Kerala State Transport Project Phase II					
CONSULTANT	M/s Egis International SA IN JV with Egis India Consulting Engineers Pvt Ltd					
CONTRACTOR	M/s RDS Project Ltd					
<b>Proposed cellular type Approach at Ramapuram Old River Bridge ( 4+260)</b>						
<b>STATUS OF WORK AS on 31.07.2020</b>						
Item	Cost of Works	%	Works completed	% Completion		Remarks
Foundation	45,80,395	43%	31,72,412	30%		Pile cap PCC ( 4 nos completed) - Pile cap works in progress at A1 side
Substructure	26,00,481	24%		0%		
Superstructure	26,87,716	25%		0%		
Highways	8,64,269	8%		0%		
<b>Total</b>	<b>1,07,32,861</b>	<b>100%</b>	<b>31,72,412</b>	<b>30%</b>		
Pile completed	14		11	79%		
<b>A1 SIDE</b>						
SI No		Completed	In progress	Dia	Depth	Remarks
1	P1	1		0.75	17.708	Completed
2	P2	1		0.75	16.03	Completed
3	P3		1	0.75	17.25	Boring started 29.07.2020
4	P4	1		0.75	17.48	Completed
5	P5			0.75		
6	P6			0.75		
<b>A2 SIDE</b>						
7	P7	1		0.75	14.627	Completed
8	P8	1		0.75	15.058	Completed
9	P9	1		0.75	16.407	Completed
10	P10	1		0.75	15.508	Completed
11	P11	1		0.75	15.427	Completed
12	P12	1		0.75	16.562	Completed
13	P13	1		0.75	16.787	Completed
14	P14	1		0.75	16.747	Completed
<b>TOTAL</b>	<b>14</b>	<b>11</b>	<b>1</b>			

### Key Issues/ Delays in July-2020

- Contract for Rehabilitation of existing Bridges at Pazhayangadi on PP road and for Bridges at “Bakal” and “Chandragiri” on KK road through E-tendering has been awarded to M/s PADMAJA SPECIALITIES, Kochi and Agreement executed. Rehabilitation Works pertaining Pazhayangadi Bridge is in progress.
- The progress of Works is very slow and Employer has extended the time of completion till July 2020 with the imposition of Liquidated damages.

### 5.6 Package 3A– Thalassery to Kalaroad -SH-30





Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (Upto July-2020)	Financial Progress in % (Upto July-2020)
M/s.DineshChandra R Agrawal Pvt.Ltd	26-06-2018	156.33	64.61	64.46
<b>EOT-03 (For Road Work &amp; Eranholi Bridge - Approved)</b>	<b>EOT-04 (Approved)</b>	<b>Variation Order Value in crores (VO-01 to VO-09)</b>	<b>Anticipated Revised Project Cost</b>	<b>Billed Amount made till the end of July-2020 (Net Amount)</b>
31 <sup>st</sup> October-2019 31 <sup>st</sup> Dec-2019	31 <sup>st</sup> March -2020	19.96 Cr	152.29	102.46 Cr

EOT-03 for Extension of time:

- a) Eranholi Bridge Approaches and Service Road and whole project road from Km 1+200 to Km 30+000 - 31.10.2019
- b) Commissioning of Eranholi Bridge - 31.12.2019,

EOT-05 has been approved for Extension of Time for whole project including Eranholi Bridge and approaches up to 30.10.2020 has been approved by Employer in 111<sup>th</sup> Steering Committee Meeting On 29<sup>th</sup> April-2020.

**Work Progress**

Cumulative Physical progress achieved is 64.61% as per original contract value with 66.90% with respect to assessed revised estimate of 152.29 Crores

Sl No.	Item	Monthly Progress	Cumulative Progress	Balance Work
<b>Main Carriageway</b>				
1.	Exc up to SG	0.020 Km	26.870 Km	1.930 Km
2.	GSB	0.020 Km	26.850 Km	1.950 Km
3.	WMM	0.170 Km	26.805 Km	1.995 Km
4.	DBM	0.400 Km	26.780 Km	2.020 Km

SI No.	Item	Monthly Progress	Cumulative Progress	Balance Work
5.	BC	-	21.153 Km	7.648 Km
<b>Structures</b>				
6.	Major Bridge @ 2+910	One girder casting completed & Pile cap bottom PCC completed at Abutment A2	<p>Bridge has been redesigned by giving 5m vertical clearance conforming to the standards of Inland Navigation Department and the drawings approved by Client. The design has been proof checked by IIT, Palakkad.</p> <p>Pier work completed at P1, P2 &amp; P3. Pedestal concrete and Fixing of Elastomeric Bearing on Pier P2 &amp; P3. Girder Launching completed between Pier P2 &amp; P3. Piling work completed at Abutment A1 &amp; A2 location.</p> <p>3Nos out of 3Nos of PSC Girder casting completed. Pile load test completed at both Abutments. Pile cap bottom PCC completed at Abutment A2.</p>	
7.	Minor Bridge @ 21+162		Bridge completed and opened for Traffic.	
8.	Major Bridge @ 19+758		Bridge completed and opened for Traffic.	
9.	Minor Bridge @ 29+570		Bridge completed and opened for Traffic.	
<b>Culverts</b>				
10.	Pipe Culvert		Pipe Culverts - 6 Completed out of 6 Nos	
11.	Box Culvert		Box Culverts –30 Completed out of 30 Nos	
12.	Slab Culvert	-	Slab Culverts – 28 Completed out of 30 Nos and 1 culvert work is in progress.	
13.	Drain- Placing	563 Lm	22483 m Completed out of 23890 m	
14.	Gabion Wall	130 Cum	4499.4cum Completed out of 4995 Cum	

**Financial Progress**

Up to end of previous Month		This Month		Cumulative to end of this Month	
Target	Achieved	Target (as per Rev. Wp)	Achieved	Target	Achieved
67.174%	63.812%	6.882%	0.652%	74.057%	64.46%**



\*As per the revised programme Revised work programme after incorporating the CSC’s observation is yet to be submitted by the Contractor.

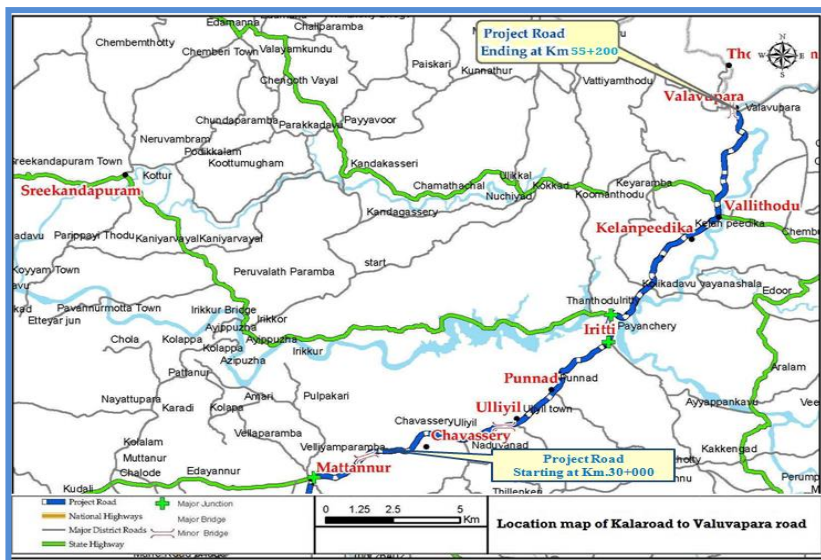
\*\*Cumulative Financial progress achieved is 64.46 %. The assessed revised cost of project is Rs.152.29 crores and based on this, the financial progress will be 66.17%.

- o Further details may be found in: Annexure - 5.4, 5.5, 5.6, 5.7 & 5.8 are enclosed for details regarding Progress of Work.

5.6.1 Key Issues in July-2020

- Due to COVID-19 outbreak, the migrant laborers were returned to their home, acute shortage of laborers is being by the Contractor.
- Delay in Acquisition of Additional Land for Eranholi Bridge due to Revision of Design.
- Delay in shifting of BSNL & Electric poles due to shortage of BSNL staff to supervise the works and delay in getting permission for shut down.

5.7 Package 3B – Kalaroad -valavupara



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (July-2020)	Financial Progress in % (July-2020)
M/s.GHV-EKK Infrastructure & Co	25-09-2018	209.68	86.82	86.27
EOT-04- for Road Works & Major Bridges (Approved)	TOC Issued for Road works	Variation Order Value in crores (V0-1 to V0-19)	Anticipated Revised Project Cost	Billed Amount made till end of July-2020 (Net Amount)
15 <sup>th</sup> July-2019	16 <sup>th</sup> July-2019	9.242	205.22	191.46Cr
31 <sup>st</sup> Dec-2019				

EOT-04 has been granted to complete the works on 15<sup>th</sup> July 2019 and time of completion for Iritty and Koottupuzha Bridges along with approaches as 31.12.2019.

Taking over certificates have been issued for a) Km. 30+000 to Km.40+000 with effect from 16<sup>th</sup> March 2019 and b) Km. 40+000 to Km.55 +200 (except Bridges & its Approaches of Irrity and Koottupuzha) from 16<sup>th</sup> July 2019. Contractor has submitted application for Performance Certificate. However, certain works as per Snag list and defects notified are remaining to be completed and therefore, DLP has been extended.

Extension time has been granted for completion of Irrity Bridge upto 31.07.2020 & Koottupuzha Bridge and their approaches upto 30.04.2021 has been approved by Employer in 111<sup>th</sup> Steering Committee Meeting On 29<sup>th</sup> April-2020.

### Work Progress

**Cumulative Physical progress achieved is 86.82 % till July-2020**

Sl. No.	Item	Monthly Progress	Cumulative Progress
1	GSB	-	23.60 Km
2	WMM	-	23.56 Km
3	DBM	-	23.56 Km
4	BC	-	23.56 Km
<b>Structures</b>			
5	Minor Bridge Ch. 35+405 Uliyil bridge.		completed
6	Major Bridge Ch. 42+198 Irrity bridge.	N-truss erection/ shifting work completed for P1-P2 span	Revised drawing for piles (6nos), Pile cap and piers for piers P1 and P2 approved. Foundation & Substructure – Completed. A1-P1 and A2-P2 superstructure work completed except crash barrier and wearing coat. N truss erection / shifting work completed for P1-P2 span
7	Major Bridge ch. 53+865 Kootupuzha bridge		Deck slab of A1-P1 & P1-P2 span completed. Crash barrier and kerb for A1-P1 and P1-P2 completed. Works of P3, P4, A2 stopped by Karnataka Forest Department. The case has been resolved and the contractor was asked to restart the work.
8	Culverts	Nil	Box culvert- 49 Nos completed out of 50 nos. Pipe Culvert- 22 Nos completed out of 22 nos. Widening / slab culvert – 14 Nos completed out of 14 nos.
9	Pre cast Drain - Casting		29842m out of 30922 m.
10	Drain (Precast + Cast in situ) placing	Nil	33380 m out of 36730m.

Sl. No.	Item	Monthly Progress	Cumulative Progress
11	LED Solar Street Lighting	Nil	247Nos.
12	<b>OV Road</b>		
	DLC		806 m
	PQC		806 m
	Drain		1256 m
	DBM & BC		200 m
	Paver Block		2045 Sqm
	Pazhassi Park		Work in progress

### Financial Progress

Up to end of previous Month		This Month		Cumulative to end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
100.00%	85.83%*	*	0.44%	100.00%	86.27%**

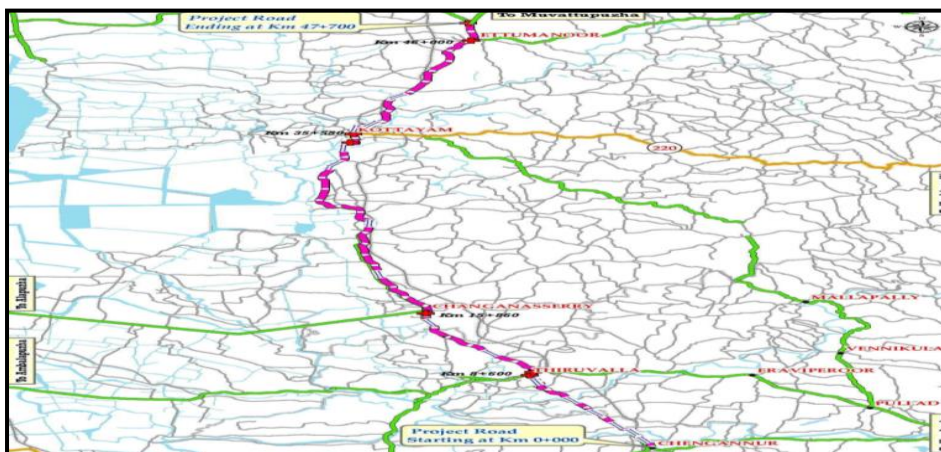
\*\*Cumulative Financial progress with respect to the revised Estimate cost of Rs. 205.22 crore is 88.15 %.

Contractor has stopped the work on 23<sup>rd</sup> March 2020 due to Covid-19 Lockdown announced by Government.

### Key Issues July-2020

- Stock yard for excess earth stacking to be finalised.

### 5.8 Package4– Chengannur - Ettumanoor – Muvattupuzha – SH1



ChengannurEttumanoorMuvattupuzha stretch of SH-1, MC (Main Central) Road, one of the most important and oldest roads in Kerala, passing through Thiruvalla, Changanasserry, 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 of Kumarakom and Thekkady.13 bridges will be constructed in this stretch.

The improvement for this road portion is proposed in three construction packages, Chengannor-Ettumanoor (41km), Ettumanoor-Muvattupuzha (47km) and Thiruvalla Bypass (2.30 km). Reconstruction of three Major Bridges and Nine Minor Bridges are included in this stretch.

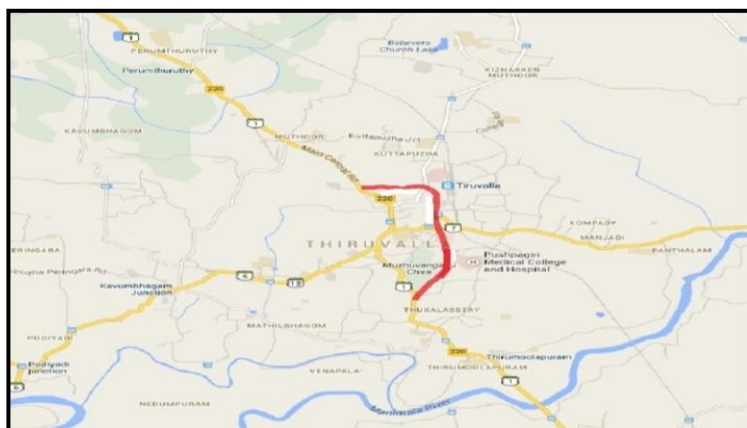
Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
M/s Delma SreedhanyaJv	24-11-2017	293.58	completed	completed
EOT Date (Approved)	TOC Issued date	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till date
31-03-2018	01.04.2019			

**Salient Features of this Package**

**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
- Foot path, solar lights

**5.9 Package 4A – Thiruvalla by pass**



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (July-2020)	Financial Progress in % (July-2020)
M/s.GHV-EKK Infrastructure & Co	06-10-2019	37.03	53.79	46.03
Date of commencement	EOT-01 – Approved	Variation Order Value in crores	Anticipated Revised Project Cost	Billed Amount made till end of July-2020 (Net Amount)
07.01.2019	31.12.2019	1.80 Cr		15.25 Cr

The date of commencement of this project is 07<sup>th</sup> January 2019 and date of completion is 6<sup>th</sup> October 2019. Works are not completed and EOT-1 issued by Employer for the whole project upto 30-04-2020. Further EOT-02 recommended to Employer for approval till 30 September 2020.

### Work Progress

**Cumulative Physical progress achieved is 53.79%**

Sl. No.	Item	Monthly Progress	Cumulative Progress
1	GSB	0.00 km	1.630 Km
2	WMM	0.00 km	1.490 Km
3	DBM	0.00 km	1.490 Km
4	BC	0.00 km	1.700Km
5	Roadwork Details		<ul style="list-style-type: none"> <li>BC work from Km:0+000 to Km:1+710 has been completed.</li> <li>Construction of islands of road junction at start point (0+000) of bypass is partially completed. Work stopped due to public protest.</li> <li>GSB Work completed from Km:2+150 to Km:2+220.</li> </ul>
	<b>Structures</b>		

Sl. No.	Item	Monthly Progress	Cumulative Progress
6	Minor Bridge at km 0+390		<ul style="list-style-type: none"> <li>• Minor bridge structure completed by the previous contractor.</li> <li>• Construction of cellular box approaches on both sides of the minor bridge has been completed.</li> <li>• BC completed over the bridge and both approaches</li> <li>• Quartering work by providing gabion walls completed.</li> <li>• Footpath tiling work completed over the bridge.</li> </ul>
7	Viaduct from km 1+780 to km 2+016	<ul style="list-style-type: none"> <li>• Pier cap completed at P1</li> <li>• 3 Nos of PSC girders has been cast</li> <li>• prestressing work has been completed on 3 Nos of girders.</li> <li>• Reinforcement work for P3 piercap and Reinforcement work for 2 girder is in progress.</li> </ul>	<ul style="list-style-type: none"> <li>• Piling works completed. Total 60 Nos Done.</li> <li>• Pile caps completed at all locations.</li> <li>• Pier completed at all locations and pier cap completed at P4, P5, P6, P7, P8 and abutment cap completed at A1 &amp; A2.</li> <li>• The work on precasting of PSC girders is very slow and this would prolong the time required for completion of viaduct. So far, only 20 Nos of PSC girder has been cast out of 36 Nos required for the superstructure and prestressing work has been completed on 15 Nos of girders.</li> <li>• Reinforcement work for P3 piercap and Reinforcement work for 2 girders is in progress.</li> </ul>
8	Flyover at 1+300		<ul style="list-style-type: none"> <li>• Bridge proper completed by previous contractor.</li> <li>• Work on RE wall and friction slab over RE wall at A1 side approach of flyover and BC laying work on both approaches has been completed.</li> <li>• Wearing coarse over Bridge, crash</li> </ul>

Sl. No.	Item	Monthly Progress	Cumulative Progress
			barrier, expansion joint works and crash barrier painting works completed on flyover.
<b>Drain and Protective Works</b>			
<b>9</b>		<ul style="list-style-type: none"> <li>• RR Massonry work under flyover is in progress.</li> <li>• Reinforced earth wall casting for Viaduct A2 approach is in progress.300 sqm cast out of 364 sqm</li> <li>• RCC Deep drain work completed from Km:2+250 to Km:2+300, RHS.</li> <li>• Widening of Culvert at 2+300, RHS is in progress. Raft and wall work in progress.</li> <li>• L wall Raft at 1+780RHS is in progress</li> </ul>	<ul style="list-style-type: none"> <li>• RCC Breast wall completed from Km:1+460 to Km:1+480</li> <li>• Stone Masonry Retaining wall Completed from Km:1+393 to Km:1+402, Flyover A2 side.</li> <li>• Gabion wall works completed from Km 0+050 to Km:0+700 B/s. 1100m has been completed.</li> <li>• PCC Retaining wall Work completed at Km:1+120(B1-B1 Jn)</li> <li>• RCC drain work completed at Km:0+000 (towards Chengannoor) for a length of 87.5m and from Km: 0+000 to Km:0+012 for a length of 11.5m.</li> <li>• Turfing work from Km: 0+080 to Km:0+600 B/S has been completed and from Km0+600 to Km:0+800 it is partially completed.</li> <li>• Metal Beam crash Barrier fixing work from Km:0+050 to Km:0+800 B/S has been partially completed.1200mdone.</li> <li>• Cross Culvert works completed at 1+420</li> <li>• Footpath work partially completed at 0+100 and flares of B1-B1 Junction</li> <li>• V drain work completed from Km:1+410 to Km:1+500 B/s</li> <li>• RCC drain work is partially</li> </ul>



Sl. No.	Item	Monthly Progress	Cumulative Progress
			<p>completed at 1+410, LHS (A2 side approach to municipal road connection under bridge). Work stopped.</p> <ul style="list-style-type: none"> <li>• RR Masonry work under flyover is in progress.</li> <li>• Reinforced earth wall casting for Viaduct A2 approach is in progress.300 sqm cast out of 364 sqm</li> <li>• RCC Deep drain work completed from Km:2+250 to Km:2+300, RHS.</li> <li>• Widening of Culvert at 2+300, RHS is in progress. Raft and wall work in progress.</li> <li>• L wall Raft at 1+780RHS is in progress.</li> </ul>

Progress achieved up to 31st<sup>th</sup> July 2020 in comparison with original programme is given in the table below:

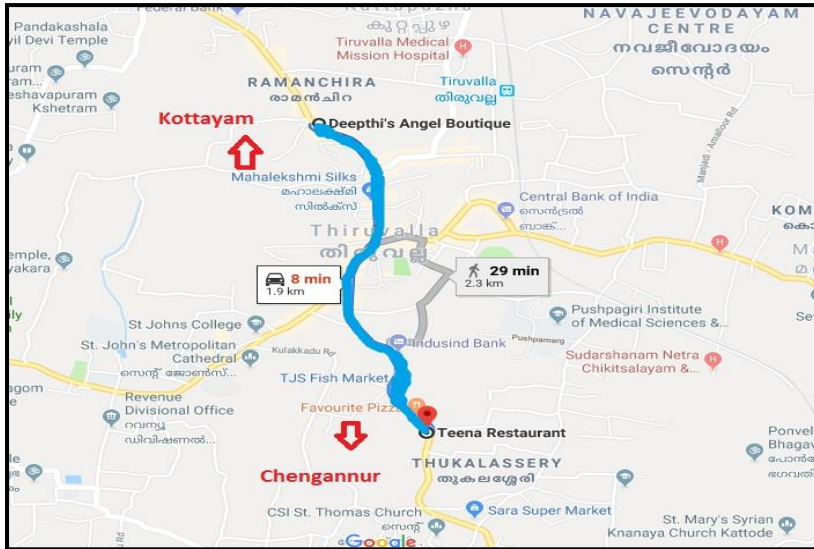
### Financial Progress

Up to Previous Month		This Month		Cumulative upto end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
100%	41.33 %	-	4.70%	100%	46.03%

### Key Issues/ Delays in July-2020

- The work on precasting of PSC girders is very slow and this would prolong the time required for completion of viaduct. So far, only 17 Nos of PSC girder has been cast out of 36 Nos required for the superstructure.
- Due to public protest, gaps left on Metal Beam crash barrier. However, this to be completed considering the road safety.
- Contractor needs to deploy adequate resources for execution of balance road works and the work on viaduct with in the Time extension granted.
- Construction of islands of road junction at start point (0+000) of bypass is partially completed. Work stopped due to public protest.

### 5.10 Package 4B– Thiruvalla town



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in % (July-2020)	Financial Progress in % (July-2020)
M/s.GHV-EKK Infrastructure & Co	06-10-2019	7.77	90.00	63.06
Date of commencement	EOT-01 – Approved	Variation Order Value in crores VO-01	Anticipated Revised Project Cost	Billed Amount made till end of July-19 (Net Amount)
07.01.2019	15 <sup>th</sup> Dec-2019	0.202 Cr		<b>4.84 Cr</b>

The date of commencement of this project is 07<sup>th</sup> January 2019 and date of completion is 6<sup>th</sup> October 2019. Works are not completed and Contractor has requested for EOT-01.

The work has been provisionally completed on 15<sup>th</sup> December 2019 and the certificate of completion has been issued on 29<sup>th</sup> May 2020. The balance work as per the snag list to be completed during early part of DLP, by 15<sup>th</sup> June 2020.

Contractor has stopped the work on 23<sup>rd</sup> March 2020 due to Covid-19 issues. The work has been restarted on 13<sup>th</sup> May 2020.

#### 5.10.1 Work Progress

**Physical progress achieved is about 90.00% and financial progress achieved is 63.06% against 100% as per original programme.**

Sl. No.	Item	Monthly Progress	Cumulative Progress

Sl. No.	Item	Monthly Progress	Cumulative Progress
1	Roadwork (Total Length 2.010 Km)		<ul style="list-style-type: none"> <li>BC works completed from 7+440 to 9+230. Balance 50m of interlock tile laid area will be relayed under Pkg-4A.</li> <li>Kerb Fixing work for footpath completed. 3200m completed.</li> <li>Interlock Footpath Laying work completed. 4200Sqm completed.</li> <li>Road marking and stud fixing and sign board fixing works completed</li> <li>PCC Retaining wall completed at 7+600 (22m done)</li> </ul>
<b>Structures</b>			
2	Culverts		<ul style="list-style-type: none"> <li>New RCC Box Culvert work Completed at Rejinamundi.</li> </ul>
3	Drain		<ul style="list-style-type: none"> <li>Cast-in-situ drain work completed for 372m</li> <li>Drain cleaning works completed at site. Total 1124m done.</li> <li>Cover slab replacement work completed.</li> </ul>

Progress achieved up to 31st July- 2020 in comparison with original programmeas given above.

### Financial Progress

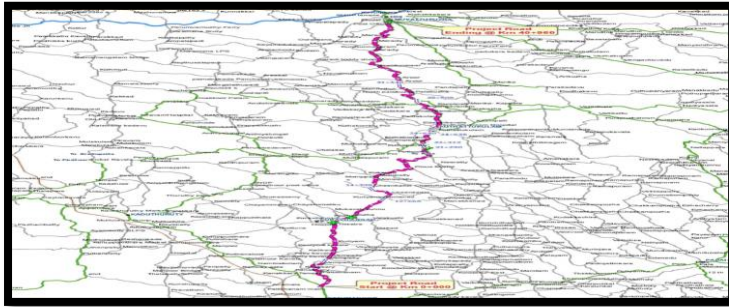
Up to Previous Month		This Month		Cumulative upto end of this Month	
Target	Achieved	Target	Achieved	Target	Achieved
100%	63.06%	*	0 %	100%	63.06%

*\*Revised programme yet to be submitted by the Contractor.*

### Key Issues/Delays in July-2020

- Completion of water utility shifting has been delayed.

### 5.11 Package5– Ettamanoor- Muvattupuzha

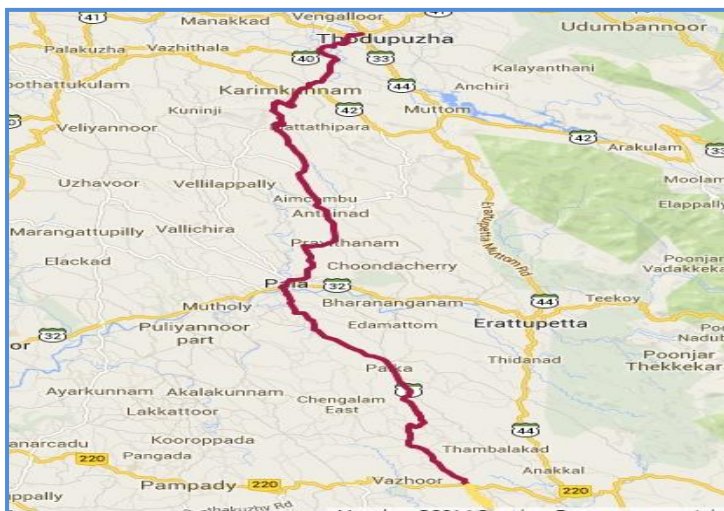


Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
M/s.NAPC Ltd	03-08-2016	171.49	100%	100%
EOT Date	DLP completion date	TOC Issued date	Savings in Crores	Billed Amount made till date in Crores
25-02-2018	25-02-2019	NA	15.28	156.21

This work was completed including the DLP which ended on 25-02-2019. Closure report was re-submitted by CSC and is under review by PMC for further submission to World Bank for compliance.

**5.12 Package6-Ponkunnam – Thodupuzha – SH 8**

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



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
M/s.GHV-EKK Infrastructure & Co	09-12-2016	227.13	Completed	Completed
EOT Date	DLP completion	Variation Order	Savings in Crores	Billed Amount made till

	<b>date</b>	<b>Value in crores</b>		<b>date in Crores</b>
28-03-2018	28-03-2019	NA	15.90	211.23

**Salient Features**

Scope of work (46.363 km)

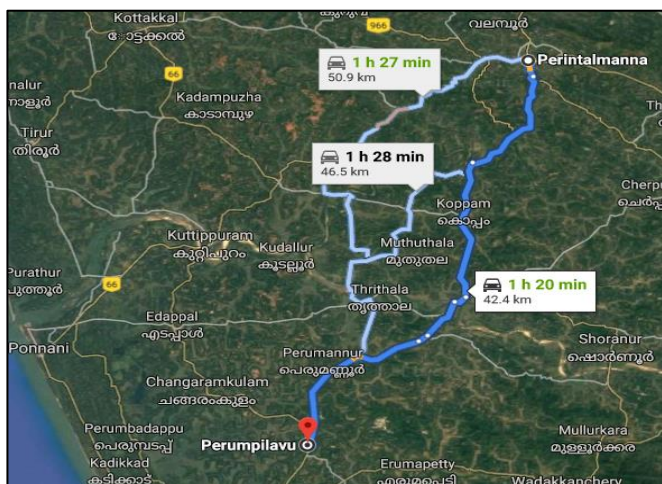
Minor Bridge reconstruction - 1 no.

Culvert:

- Reconstruction - 109 nos.
- Widening - 44nos.
- New Construction - 7 nos.
- Drain - 65 km
- Foot Path -
- Solar Street Light

This work was completed including the DLP which ended on 28-03-2018. Closure report submitted by CSC was not in accordance to World Bank requirement. The same is being re submitted.

**5.13 Package 7 -Perimpilavu -Perinthalmanna**



Name of Contractor	Original date of completion	Contract Value in Crores	Physical Progress in %	Financial Progress in %
M/sNathconstructions	02-03-2017	8.11	100 %	100 %
EOT Date	DLP completion date	Variation Order Value in crores	Savings in Crores	Billed Amount made till date in Crores
NA	02-03-2018	NA	NIL	8.11

This work was completed including the DLP which ended on 02-03-2018. Closure report submitted by CSC was not in accordance to World Bank requirements and hence needs to be re submitted with all data.

## 5.14 Component A 2:

### 5.14.1 Authority Engineers for Packages 8 A , B and C & Three RKI Roads

The RFP for appointing **Authority Engineers** for Packages 8 A, B and C are also uploaded and bids called for. In addition to these three roads, three additional roads from “Rebuild Kerala Initiative “(RKI) have also been added in the scope of works for the AE role. The additional three roads are complimented under **Component D** which is a newly added component under World Bank funding and are a part of the 59 roads identified by PWD under Rebuild Kerala Initiative.

Steering Committee has given approval in their 108 MOMS dated 17-09-2019 for awarding to M/s CEG Ltd and accordingly the agreement between KSTP and CEG Ltd was signed on the 16<sup>th</sup> of October 2019. The consultants were instructed to mobilise and commence their services as per Contract Agreement.

### 5.14.2 Upgradation of Road from Punalur to Ponkunnam (82.17 km)

The Component A2 of the KSTP –II was proposed between Punalur and Ponkunnam roads as PPP hybrid annuity mode. For this purpose, the KSTP had appointed a Transaction Advisor (TA) M/s L&T Infrastructure Engineering Ltd, Chennai to assist in designing the annuity concession.

Government of has obtained a loan of 33 USD millions in this component from the International Bank for Reconstruction & Development as financial assistance for the construction cost of the KSTP-II, which aims at Upgrading Punalur to Ponkunnam road (SH 8) from Km 0+000 to Km 82+173 (Package 8A, Package 8B & Package 8C) of State Highway. The Construction Supervision and contract administration of the contracts being procured under EPC modality in three packages is the subject of this Terms of Reference (ToR). In addition to the above, Government of Kerala has proposed for the rehabilitation of many roads under ‘Rebuilt Kerala Initiatives’.

Works: The EPC Contract works in KSTP-II are procured/ being procured in 3 packages along with Three RKI Roads. These packages are as below:

Sl. No.	Category	Contract Package	Name of Work	Length (Km)	Construction Period	Maintenance Period
1.	Category A	KSTPII/PMT/UG 8A	Punalur to Konni	29.840	24 Months	60 Months
		KSTPII/PMT/UG 8B	Konni to Placherry	30.160		
		KSTPII/PMT/UG 8C	Placherry to Ponkunnam	22.173		

### 5.14.3 Package 8 B - Konni – Placherry

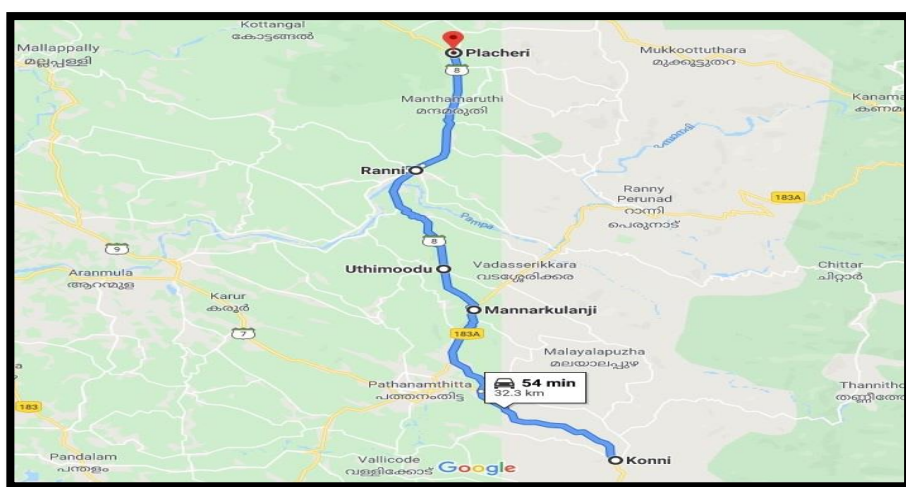
This road is proposed to be taken up as Package 8 B with a project length of 30.16 kms. The DPR for this was prepared by M/s LNTIEL with an estimated cost of 274.24 Crores. The Bid



process was done under NCB, Single Stage, and Two-envelope Bidding Process using E-procurement.

Approval from World Bank was received for this Package 8 B work on 01-07-2019. LOI to M/s EKK Infrastructure Limited on 08-07-2019. On submission of the performance security Environmental, Social, Health and Safety (ESHS) performance security by the contractor in accordance with the bidding document, agreement was signed with the contractor on 22.08.2019. The duration of the construction works is 24 months with maintenance period of 5 Years. Initial preparatory work on this stretch has been commenced by the Contractor and work is in progress on 01.11.2019.

5.14.4 Package 8B Status –Konni to Plachery



<b>Project Name</b>	<b>Upgrading Punalur to Ponkunnam road (SH 8) Package 8B: Km 29+840 (Konni) to Km 60+000 (Placherry)</b>
<b>Length of the Road</b>	<b>30.160 Km</b>
<b>Name of Contractor</b>	<b>M/s EKK Infrastructure Limited</b>
<b>Type of Contract</b>	<b>Engineering, Procurement, Construction (“EPC”)</b>
<b>Agreement No &amp; Date</b>	<b>22.08.2019</b>
<b>Date of Award (LOA Date)</b>	<b>03.07.2019</b>
<b>Appointed Date</b>	<b>06.09-2019</b>
<b>Reappointed Date</b>	<b>01.11.2019</b>
<b>Construction Period (in Days)</b>	<b>730</b>
<b>Maintenance Period (in Months)</b>	<b>60</b>
<b>Scheduled Date of Completion</b>	<b>29.10.2021</b>

<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>AE Agreement Date</b>	16-10-2019
<b>AE Mobilization Date</b>	04-11-2019
<b>Chainage of the Project (in Km)</b>	km 29.840 to 60.000
<b>Total Project Cost (in Cr)</b>	279.00

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Delay (No. of months)	Current Status
		Physical Progress (%)	Scheduled Date	Physical Progress (%)	Revised Date		
Milestone I	290	20%	15.08.2020	Nil			
Milestone II	440.	55%	12.01.2021				
Milestone III	585	75%	06.06.2021				
Scheduled Completion	730	100%	29.10.2021				

### Physical Progress till July-2020 is 2.94%

- Survey work -- TBM traversing, Centre line marking & OGL recording completed.
- Traffic survey, Axle load survey, FWD completed.
- Bore logs/ Geo technical investigation completed.
- BM traversing completed, verified by AE.
- Inventory work- -Road Inventory & Structure inventory work completed.
- **Structure Work** --
  - ✓ Pre-cast Box culverts segments casting work in progress at Contractor's Base camp. Total 11 Nos. Completed.
  - ✓ Pre-Cast Drina casting work in progress at casting yard. Total Length of pre-cast drain completed-999 m.
  - ✓ Box Culvert No completed at km 44+960 & 2 Nos. RHS side completed at km.47+055 & 47+320.
  - ✓ Toe wall work in progress. Km.32+200 to 260 RHS Wall completed and 40+323 to 40+340 LHS PCC completed.
  - ✓ RCC Drain laying completed for a length of 140m.
- Structural Work-- 80 No's of Box Culverts Design and Drawings Approved. Pre-cast Box Culverts casting work in progress at Contractor's Base camp.
- Earth work excavation @ 45+000 to 49+000 on BHS and 4.0 km Embankment filling work in progress.

- Clearing and Grubbing is in progress about 5 km length finished.

Some of the details of the current work front available (As per Authority Engineer’s Report) is as below

1. Work front			2. Length completed by layer (MCW)			3. Length completed by layer (RCC drain and Foot path cum Drain )		
	Length (km)	% Total Length		Length (km)	% Total Length		Length (km)	% Total Length
<b>Total Length</b>	30.160	100%	<b>Total Length</b>	30.160	100%	<b>Total Length</b>	19.70 BS	100%
<b>Total Work front available</b>	29.585	98.09%	<b>Total Length Completed (Till Date)</b>	Nil	Nil	<b>Total Length Completed (Till Date)</b>	Nil	Nil
<b>Pending Land Acquisition</b>	0.575	1.91%	<b>BC</b>	Nil	Nil			
			<b>DGBM</b>	Nil	Nil			
<b>Pending Clearances</b>			<b>WMM</b>	Nil	Nil			
<b>Encumbrance</b>			<b>GSB</b>	Nil	Nil			
<b>Forest Area</b>			<b>Sub-Grade</b>	Nil	Nil			
			<b>Embankment</b>	Nil	Nil			

### Current issues and recommended actions by AE

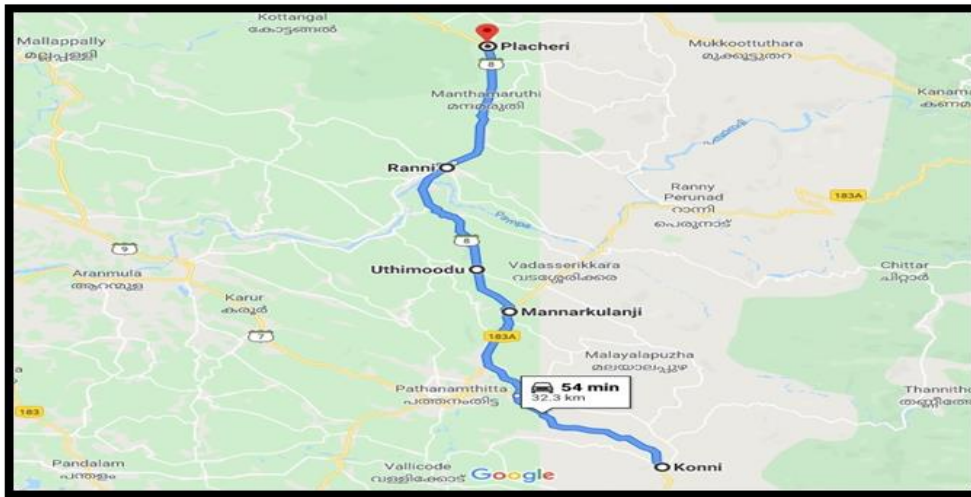
1. The contractor needs to expedite the approval of designs and drawings duly proof cheked and audited by proof consultant & safety consultant for timely submission of compliances of AE’s observations , so that works can be commneced early in all fronts.
2. The process for utility shifting needs to be done expeditiously ,so that works are not be hindered for want of shifting of utilities.
3. Some of the Applicable permits not submitted till date.
4. Commencement of Construction Activities delayed due to Covid 19 Lockdown.
5. Most of the Designs and Drawing submitted by the Contractor have reviewed by the AE, Balance will also be reivewed as and when Contractor submits the compliance.
6. Slow Progress of works due to Poor & Improper Planning and Programme.

#### 5.14.5 Package 8 C- Placherry to Ponkunnam

Three bids were received against this tender as per table below.

Accordingly, a revised Bid price of Rs 248.62, crores vide their letter to Chief Engineer KSTP dated 07-08-2019 was submitted by the Contractor. This offer was accepted by KSTP and LOI was issued to the Contractor on 13-08-2019. Due to Election and Moral Code of Conduct, the Agreement was signed with the Contractor on 24.09.19. Initial preparatory work on this stretch has been commenced by the Contractor and work is in progress since December-2019.

5.14.6 Package 8 C Status –Plachery-PonKunnum



<b>Project Name</b>	<b>Upgrading Punalur to Ponkunnam road (SH 8)) Package 8C: Km 60+000 (Plachery) to Km 82+170 (Ponkunnam)</b>
<b>Length of the Road</b>	<b>22.170 Km</b>
<b>Name of Contractor</b>	<b>M/s Sreedhanya Construction Company and M/s Nath Infrastructures</b>
<b>Type of Contract</b>	<b>Engineering, Procurement, Construction (“EPC”)</b>
<b>Agreement No &amp; Date</b>	<b>24.09.2019</b>
<b>Date of Award (LOA Date)</b>	<b>13.08.2019</b>
<b>Appointed Date</b>	<b>09.10-2019</b>
<b>Reappointed Date</b>	<b>23.12.2021</b>
<b>Construction Period (in Days)</b>	<b>730</b>
<b>Maintenance Period (in Months)</b>	<b>60</b>
<b>Scheduled Date of Completion</b>	<b>21.12.2021</b>
<b>Authority Engineer</b>	<b>Consulting Engineers Group Ltd, Jaipur</b>
<b>AE Agreement Date</b>	<b>16-10-2019</b>
<b>AE Mobilization Date</b>	<b>04-11-2019</b>
<b>Chainage of the Project (in Km)</b>	<b>km 60.000 to 82.173</b>
<b>Total Project Cost (in Cr)</b>	<b>248.630</b>

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Delay (No. of months)	Current Status	Remarks
		Physical Progress (%)	Scheduled Date	Physical Progress (%)	Revised Date			

<b>Milestone I</b>	290	20%	07.10.2020	Nil				
<b>Milestone II</b>	440.	55%	06.03.2021					
<b>Milestone III</b>	585	75%	29.07.2021					
<b>Scheduled Completion</b>	730	100%	21.12.2021					

**Physical Progress till July-2020 is 10.81 %**

- Survey work -- TBM traversing, Centre line marking & OGL recording completed.
- Traffic survey, Axle load survey, FWD completed.
- BM traversing completed, verified by AE.
- Inventory work- -Road Inventory & Structure inventory work completed.
- Structural Work-- 19 No's of Box Culverts & 5 No's of Pipe Culverts Design and Drawings Approved.
- 8 Nos. Box culverts completed, 20 Nos. of Box culverts work in progress & 4 Nos. of Pipe culverts work in progress.1 completed
- Pre-Cast Drina casting work in progress at casting yard. Total Length of pre-cast drain completed- 1547 nos m.
- Clearing and Grubbing is in progress about 5 km length finished.
- GSB completed from Ch:62+960 to 63+040=80 m.
- Earth work excavation and Embankment filling work in progress at Ch 60+400 & 70+050Km =180 m
- Site clearance 19.0 Km completed out of 22.173 km as on 30-06-2020.
- Casting of RCC Drain work in progress at casting yard in Basecamp & Casting completed for a length of 711m out of 7398m.
- Retaining wall of 0.345 m completed
- Gabion wall work is in progress Ch 70+800.

. Some of the details of the current work front available (As per Authority Engineer's Report) is as below

1.Work front Unavailable & reason for Unavailability			2.Length completed by layer (MCW)			3.Length completed by layer (RCC drain and Foot path cum Drain )		
	Length (km)	% Total Length		Length (km)	% Total Length		Length (km)	% Total Length
<b>Total Length</b>	22.173	100%	<b>Total Length</b>	22.173	100%	<b>Total Length</b>	7.398 (BS)	100%
<b>Total Work front available</b>	22.173	100%	<b>Total Length Completed (Till Date)</b>	Nil	Nil	<b>Total Length Completed (Till Date)</b>	Nil	Nil
<b>Pending Land Acquisition</b>	Nil	Nil	<b>BC</b>	Nil	Nil			

			<b>DGBM</b>	Nil	Nil			
<b>Pending Clearances</b>			<b>WMM</b>	Nil	Nil			
<b>Encumbrance</b>			<b>GSB</b>	Nil	Nil			
<b>Forest Area</b>			<b>Sub-Grade</b>	Nil	Nil			
			<b>Embankment</b>	Nil	Nil			

### Current issues and recommended actions by AE

1. The contractor needs to expedite the approval of designs and drawings duly proof checked and safety audited by timely submissions and quickly compliance to the observations of the AE, so that works can be commenced early on all fronts.
2. The process for utility shifting needs to be expeditiously so that works are not hindered for want of shifting of utilities.
3. Some of the Applicable permits not submitted till date.
4. Commencement of Construction Activities delayed due to Covid 19 Lockdown.
5. Most of the Design and Drawings submitted the Contractor are reviewed by the Authority's Engineer, Balance will be reviewed as and when Contractor submitted.
6. Slow Progress of works due to Poor & Improper Planning and Programme.
7. Contractor not providing proper safety at working locations.
8. **Grivence management for the PAP works not been initiated by the contractor.**

#### 5.14.7 Package 8 A Status

Five Bids were received for this package from Bidders as per table below

Sl. No.	Name of Bidder	Nationality	Whether technical bid opened/ not opened	Remarks
1	M/s RDS Project Limited and M/s Cherian Varkey Construction Co. Pvt. Ltd. (Joint Venture)	Indian	Opened	JV with M/s RDS Project Limited as lead member
2	M/s. EKK Infrastructure Limited	Indian	Opened	Single Entity
3	M/s Sreedhanya Construction Company and M/s Rudraanee Infrastructure Ltd. (Joint Venture)	Indian	Opened	JV with M/s Sreedhanya Construction Company as lead member
4	M/s Dinesh Chandra R. Agrawal Infracon Private Limited	Indian	Opened	Single Entity
5	M/s Ranjit Buildcon Limited	Indian	Opened	Single Entity



After technical evaluation of the bids received, it is concluded that Turnover requirement for M/s. EKK Infrastructure Limited is Rs. 520 Cr as per Clause 2.3.2 (Average Annual Construction Turnover) of Section III: Evaluation and Qualification Criteria of RFP, since M/s. EKK Infrastructure Limited has awarded with Package 8B. But the average annual turnover of M/s. EKK Infrastructure Limited is Rs. 287.52 Cr only. As per the letter received from M/s. EKK Infrastructure Limited vide letter no. EKK/TNDR/2019/330 dated 07/05/19; they are not eligible for Package 8 C if Package 8 B is awarded to them. Hence, the bid of M/s. EKK Infrastructure Limited, shall be rejected as per Clause 32.3 of Instruction to Bidders as Non-responsive

While M/s. Sreedhanya Construction Company and M/s Nath Infrastructures (Joint Venture – 80%:20%) who are the only qualified bidders for Package 8 C and likely to be awarded this work. For Package 8 A, M/s. Sreedhanya Construction Company has submitted their bid along with M/s Rudranee Infrastructure Limited as Joint Venture (51%:49%), in which Sreedhanya Construction Company is the lead member. M/s. Sreedhanya being lead member for both packages, their eligibility criteria to meet the turnover requirement is 60% of aggregate turnover i.e., Rs. 282 Cr (60% of Rs. 470 Cr), whereas the turnover of M/s. Sreedhanya Construction Company is Rs. 96.48 Cr., hence they are not eligible for Package 8 A. So, bid of M/s. Sreedhanya Construction Company and M/s Nath Infrastructures (Joint Venture) shall be rejected as per Clause 32.3 of Instruction to Bidders (Non-responsive)

Accordingly, the Evaluation Committee reviewed the technical bids and recommends financial bid opening of the remaining three bidders only I; e

- 1) M/s RDS Project Limited and M/s Cherian Varkey Construction Co. Pvt. Ltd. (Joint Venture)
- 2) M/s Dinesh Chandra R. Agrawal Infracon Private Limited and
- 3) M/s Ranjit Buildcon Limited as technically responsive for opening of their price bid

Accordingly, the Financial Bids of these three firms were opened and scrutinized.

The Bid Price quoted by M/s RDS Project Limited in JV with M/s Cherian Varkey Construction Co. Pvt. Ltd., was Rs 221.04 crores, M/s Dineshchandra R Agrawal Infracon Private Limited was Rs. 225.50 crores and Ranjit Buildcon Limited was Rs. 240.14 crores against the estimated price of 226.61 crores. The Final Evaluation report was submitted to World Bank recommending rejection of M/s RDS Project Limited in JV with M/s Cherian Varkey Construction Co. Pvt. Ltd. by stating the FIR filed against the company by Vigilance and Anti-Corruption Bureau on 21<sup>st</sup> August 2019. But World Bank vide the replied dated 27<sup>th</sup> August 2019 has informed that the Bank would not accept blacklisting/debarment based on State rules/procedures even if the case is concluded. As such the Bank returned the Final Evaluation Report to review the decision of The Evaluation Committee and to consider the offer of M/s RDS Project Limited in JV with M/s Cherian Varkey Construction Co. Pvt. Ltd.

The matter was placed before the Steering Committee on the 4th Of Septemeber 2019 and the steering committee decided to award the work to L2 - M/s Dinesh chandra .R. Agrawal Infracon Private Limited,using state share of KSTP since they are willing to take up the work at the quoted rate of L1 amounting to Rs.221.04crores. Since the Appeal has now shifted to Court, the decision from the Court is waited for further necessary action.

In addition to these three roads, the following three roads under Rebuild Kerala Initiative were taken up under Component A 2.

#### 5.15 **Component B: Road Safety Component**

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

- a. 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.
- b. 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. This work is in progress and is further detailed in following chapter under 16 further.
- c. Road Safety Capacity Building of the institutions responsible for managing Road Safety in the State.
- d. 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

KSTP appointed M/s VicRoads, Australia, an internationally experienced consultant to support in implementing the above programs. The consultant has conducted stake holders' 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 complted. Appointment orders were issued by the Transport Department through a Government order and the incumbents have formed. The remuneration of the specialist for the project period is to be paid from the KSTP funds. The TSG is now examing the Challenge Fund proposals and co-ordinating activities of SCDP.

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, and daily variations of traffic volume during festivals etc.

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 activities completed.

The procurement of consultancy services for appointment of firms for Traffic Safety Enforcement and Post Crash Training (truuma care) for the Safe Corridor are in progress aimed at training the Police personnel and for enhancing trauma care facilities in Hospitals in the near by areas of the SCDP.

This was agreed in a meeting held in the room of the Secretary to Government, Transport. Since the progress of activities were slow, 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 was reconsidered. This was revoked and the mobilization of key professionals continued. However, as their term of service is over, alternate arrangements are made through M/s NATPAC. NATPAC has submitted their report for Road Safety treatments (interventions) and are being implemented.

To validate the effectiveness of road safety improvements and under Component B, KSTP decided to implement a project exclusively as "Safe Corridor Demonstration Project" here in after referred as SCDP. The stretch selected was Khazakuttom- Adoor Section running a length of 78.65 kms. This work involved resurfacing of the pavement to acceptable standards with DBM /BC layers, drainage improvements, road markings, street lightings, crash barriers road studs, footpaths and many other safety related items. This work was scheduled to be completed by 2018. It includes a five-year maintenance period in the awarded Contract which will be ending in the year 2024 along with a Defects Liability period of 1 year. This work is being executed under "Item Rate Contract" and is supervised by the SE Divisional Office.

#### 5.15.1 Under Road Safety Capacity Building of the institutions responsible for managing Road Safety in the State

Kerala State Transport Project intends to develop post crash care, which includes both medical emergency services and crash victim extraction as a pilot initiative in the Safe corridor Demonstration Project from Kazhakoottam to Adoor stretch of MC road (80 km).For which,

KSTP is developing the hospitals in the geographical proximity to the demonstration corridor as resourced trauma care facility and procuring ALS ambulances. The development of Level I and Level II hospital includes both infrastructure development and procurement equipments while in Level III hospital, only procurement of equipments is included. The Department of Health and Family Welfare, Government of Kerala prepared the proposal of Strengthening Trauma Care Services as part of Safe Corridor Demonstration Project.

Accordingly, the proposal received through Health and Family Welfare as below is under implementation by KSTP.

<b>Proposal from Health and Family welfare Department</b>				
<b>Sl. No</b>	<b>Name of the Institution</b>	<b>Infrastructure cost (in lakhs)</b>	<b>Additional Equipment cost (in lakh)</b>	<b>Total (Activity)</b>
<b>Equipment</b>				
<b>Level I</b>				
1	Govt. Medical College, Trivandrum	-	1877	<b>18.77 Cr.</b>
<b>Level II &amp; Level III</b>				
2	Taluk Headquarters Hospital, Kottarakara	25	168	<b>6.306 Cr.</b>
3	General Hospital, Adoor	25	418	
4	Community Health Centre, Kanyakulangara	-	22.3	
5	Block Primary Health Centre Vamanapuram	-	22.3	
6	ALS Ambulances		63.9	<b>63.9 lakhs</b>
7	Comprehensive stroke Centre at Govt. Medical College, Thiruvananthapuram	200		
	Total	<b>250</b>		<b>2.5 Cr.</b>
<b>Total Budget proposal (in Lakh)</b>				<b>28.21. Cr.</b>

The proposal is taken up as four activities as follows and approved by World Bank.

- Strengthening Trauma Care Services in Level I and Level II hospitals along SCDP** – Procurement of equipment like Ventilator, Centralized Medical Gas System, Anesthesia Work Station, CT Scan, Ultrasound with Colour Doppler, Flash Autoclave etc. -Rs 18.77 Cr
- Upgradation of Emergency Trauma Care in Medical College, Thiruvananthapuram**  
Procurement of equipment like Neuro Navigation System, CT Scanner, Operating microscope, High and Ultrasound, Surgical Instruments and 30 other medical equipment - Rs 6.306Cr

3. *Procurement of Advanced Life Support Ambulances* (2 nos.) equipped with multiple state of the art lifesaving equipment for General Hospital, Aoor and Taluk Head Quarters Hospital, Kottarakara - Rs63.9 Lakhs
4. *Strengthening Trauma Care Infrastructure* (SCDP) – Developing Infrastructure for Comprehensive Trauma Care Centre at Govt. Medical College, Trivandrum, Trauma area modification at THQH, Kottarakara in the existing casualty at GH, Adoor–Rs.2.50cr

All the activities are coming under Post Review Threshold of World Bank.

The current status of the proposal is shown in the table below:

	Medical Equipments for Level I, II and III hospitals	Cost in Lakhs	Status as on May -2020
1	High end equipments	1487.81	<ul style="list-style-type: none"> <li>• Bid opened on 28-10-2019 byKMSCL.</li> <li>• Evaluation Completed and KMSCL submitted the evaluationreport.</li> <li>• 1 item needed retender as not meeting criteria. KMSCL retendered the work.</li> </ul>
2	Other items	292.52	<ul style="list-style-type: none"> <li>• Bid opened on 16-10-19 by KMSCL.</li> <li>• Evaluation Completed and KMSCL submitted the evaluationreport.</li> <li>• 20 items got zeroresponse. Retenderrequired.</li> <li>• KMSCL retenderdthework.</li> </ul>
3	Procurement of ALS Ambulances	63.9	<ul style="list-style-type: none"> <li>• Entrusted KMSCL for procurement throughGEM.</li> </ul>

#### INFRASTRUCTURE:

Sl No	Work	Estimate amount (L) excluding taxes	Status
<b>1</b>	Infrastructure development at Govt. Medical College, Thiruvananthapuram		
i	Civil Works-Providing False Ceiling and aluminium windows in the Trauma Care wards 7 & 8of Medical College Hospital	59.82	<ul style="list-style-type: none"> <li>• Agreement executedon 07.01.2020</li> </ul>
	Electrical works		
ii	Providing AC in trauma care	38.44	<ul style="list-style-type: none"> <li>• Tender opened on 18-1019.Exorbitantly rate quoted.</li> <li>• Retendered three times. No response</li> </ul>
iii	Electrification works of trauma care	48.42	<ul style="list-style-type: none"> <li>• Agreement executed on 07.01.2020</li> </ul>

iv	Works related to Biomedical equipments	32.11	• Entrusted KMSCL for procurement.
2	Infrastructure development of Taluk Headquarters Hospital Kottarakkara		

i	Civil Works	13.92	• Bid opened on 1/1/2020.9% above rate quoted. LoA to be issued.
	Electrical works		
ii	Providing AC in trauma care	4.30	• Agreement executed on 07.01.2020
iii	Electrification works of trauma care	3.20	• Agreement executed on 07.01.2020.
3	Infrastructure development of General Hospital Adoor		
i	Civil Works	25.00	• Agreement executed on 03.02.2020

As part of Strengthening of Trauma care facility at General Hospital, Kottarakkara renovation of Trauma care building of the hospital is proposed for an estimated amount of Rs.13,92,798/-. The work was tendered on 08.08.2019 and since there was no response, the work was re-tendered on 27.09.2019. The bids were opened on 11.10.2019. Since the bidders have quoted exorbitantly high rates, the work was again retendered on 21/12/2019 and were opened on 01.01.2020. The evaluation details are as follows :

Sl No	Name of Bidder	Quoted Amount in Rs	Estimate PAC	% above/below
1	<b>Bid No: 818116 KS Chandralal, Karthika Ezhukone PO, Kollam</b>	<b>15,28,267.30</b>	<b>13,92,798.00</b>	<b>9.73% above</b>
2	<b>Bid No: PC Saji MadathilPadikkal (H), KS Mangalam PO, Vaikkom, Kottayam</b>	<b>19,01,210.75</b>	<b>13,92,798.00</b>	<b>36.50% above</b>

As the bidders have quoted higher rates than estimated rate, comparative statement with Local market rate is prepared and found that, the lowest bidder Sri. KS Chandralal, Karthika, Ezhukone PO, Kollam has quoted a rate of 6.63% below LMR.

1. Package 1 to 3 to be awarded by KMSCL after following their procedures.
2. The work - Providing False Ceiling and aluminum windows in the Trauma Care wards 7 & 8 of Medical College Hospital, Thiruvananthapuram to be awarded to Sri. JABEER.U, the L1 - bidder for an amount of Rs. 51,57,703/- excluding taxes.
3. The work - Electrification in Trauma Care units Ward No 7 and 8 at MC Tvpm -Part-I-Strengthening of Existing Panel Boards to be awarded to DSKElectric Power, the L1 - bidder for an amount of Rs. 45,81,430/- excluding taxes.
4. The work - Electrification of Trauma Care ICU and Oxygen Gas Plant at THQ-



Hospital, Kottarakkara - Part 1 Electrical work to be awarded to N Siva Prasad, the L1 –bidder for an amount of Rs3,18,775/- excluding taxes.

5. The work - Electrification of Trauma Care ICU and Oxygen Gas Plant at THQ- Hospital, Kottarakkara - Part II- SITC of 3 Tr Verticool Air Conditioner to be awarded to M/s Maxsel Agencies, the L1 -bidder for an amount of Rs. 4,16,792/- excluding taxes.

#### 5.15.2 Traffic Enforcement & Crash Data Management System

##### 5.15.2.1 Traffic Enforcement:

The Safe Demonstration Corridor Project (SCDP) from Vetturoad Junction near Kazhakoottam to Adoor on MC Road (SH1) is identified as high risk and high volume corridor for implementing the programme. It envisages a number of road safety interventions and counter-measures to reduce fatalities and injuries due to road crashes in “4E” concepts i.e., Engineering, Enforcement, Education and Emergency Trauma Care. The programme will implement multi-sectoral road safety initiatives by associating with other stake holding departments like Police, MVD, PWD and Health in establishing a sustainable road safety model which can be replicated elsewhere in the state with the view of achieving reduction in number and trauma severity of road crashes.

For developing an efficient Enforcement strategy, analysis of statistical data collected from the actual incidents recorded from each scene is inevitable. A reliable crash data is necessary for implementing target oriented multi-sectoral interventions. The information derived from the crash data analysis will enable a data led approach to Road safety Enforcement.

With the objective to reduce the road crash, KSTP has appointed an international consultant M/s TRL-JP Research JV to develop and implement an evidencebased road safety enforcement strategy.

The consultant had reviewed various available reports such as iRAP study, baseline study conducted by NATPAC, seatbelt and helmet study by Vic Roads, overtaking study, etc. The consultant had also visited the police stations in the vicinity of the corridor to gather information of crash locations and profile of blackspot and vulnerable locations, road user category, enforcement programs, equipment's etc. Based on the baseline study and observation of current road use practices, an enforcement strategy plan was prepared by the consultant. For this purpose, a focus group discussion was held with the various stakeholders.

In order to manage and control traffic in the safest and most effective manner in the corridor through scientific application of systems and techniques, a two day training for 27 Police officers and 7 MVD officers as trainers from southern range was given by M/s TRL on 7th and 8th May at Police Training college Trivandrum and 2 day training for selected 151 Police officers and 21 officers from MV department respectively from 9 Police stations and 5 MVD

offices having jurisdiction over the project area was given by TRL from 13th May to 18th June (9batches) at Jubilee Mandiram , Kottarakkara.

### 5.15.3 Crash Data Management Sysytem:

For developing an efficient Enforcement strategy, analysis of statistical data collected from the actual incidents recorded from each scene is inevitable. A reliable crash data is necessary for implementing target oriented multi-secotral interventions. The information derived from the crash data analysis will enable a data led approach to Road safety Enforcement.

With the objective to reduce the road crash, KSTP has appointed M/s TRL to develop and implement an evidencebased road safety enforcement strategy. The police department has informed that as part of the outcomes related to Safe Corridor Demonstration Project, M/s TRL has provided two software licenses for the State Police to access the Crash Data Analysis and road safety management solution (iMAAP) for the 85km stretch from Kazhakoottam to Adoor. The crash data collected from the 9 police stations along the corridor has already been exported to the iMAAP. The crash data management system provided for SCDP has been deployed across the State of Himachal Pradesh for over 3 years now by TRL.

It is also informed by the Police department that, M/s TRL has offered unlimited license for multiple stakeholders in Kerala to access the software at an annual fee to the State Government (the SAAS model) and host the iMAAP solution on the Ministry of Electronics and Information Technology approved cloud server. The Police department would like to have a modern Road Accident Data Management System to enable robust data analysis and data-led and targeted interventions to reduce road accidents and improving road safety. For that, Police department has forwarded the details of iMAAP solution received form M/s TRL to consider under KSTP II.

M/s TRL has offered a proposal for iMAAPcloud based solution on a Software-as-a-Service (SAAS) model which is having the key elements as follows.

- I. The iMAAP solution would be hosted on a Ministry of Electronics and Information Technology (MEITY) certified cloud server by TRL.
- II. The maintenance and upkeep of the software for the smooth functioning of software will be provided by TRL, along with any updates to the software.
- III. License and access to the product will be provided for up to 1000 users amongst authorized employees of the Government of Kerala subject to standard log-in credentials.

The SAAS package is being offered to the Government of Kerala at an Annual Subscription Fee. The expected fee, subjected to confirmation through our Techno-Commercial offer expected to be less than or equal to Rs 40 Lakhs per annum to the Government of Kerala.

Whether the proposal one-year subscription may be considered as a variation to the existing contract of M/s TRL for Consulting Services for Traffic Management and Road Safety Enforcement Program on Safe Corridor Demonstration Project-Engaging Traffic and Road Safety Enforcement Specialists.

**Staus:** TRL has submitted the draft final report with crash data analysis, Traffic enforcement plan and specifications for enforcement equipments. KRSA has to review this draft and revert.

**Purchase of enforcement equipments:**

Procurement of Enforcement Equipments for police on SCDP-Electrical to submit through tender notice such as Light Baton Signal, LED Portable Flood Lights & Traffic Signs Collapsible.

5.15.4 **Road Safety Education, Community Awareness and Training Programme and Outdoor campaign on the Safe Conidor Demonstration Project (SCDP)**

This supplementary agreement is executed on this the day 28<sup>th</sup> of June 2019 BETWEEN the ProjectDirector, Kerala State Transport Project, PMT, Thirubananthapuram AND the Director, KSCSTE, National Transportation Planning and Research Centre - A unit of Kerala State Council for Science, Technology and Environment (KSCSTE), Government of Kerala.

SCDP envisages a number of road safety interventions and counter measures to reduce fatalities and injuries due to road traffic crashes. One of the sub-components of the project would be to impart knowledge in Traffic rules Road Safety and basics of First aid and Life support among local community School Children, Drivers and youth within and outside the protect area This Programme is expected to bring about good road sense and qualitative changes in road user behaviour of diffe-rent categories of roadusers and their attitude towards the accident victims in helping them giving Frrst aid and transportation to hospital in time.

It is proposed to carry out six Programmes one each at the following six police stations with 50 participants per Programme :( i) Pothencode, ii) Venjaramoodu, iii) Kilimanooriv) Chadayarmangalarnv) Kottarakkar. & vi) Adoor

**Objective of the program is:**

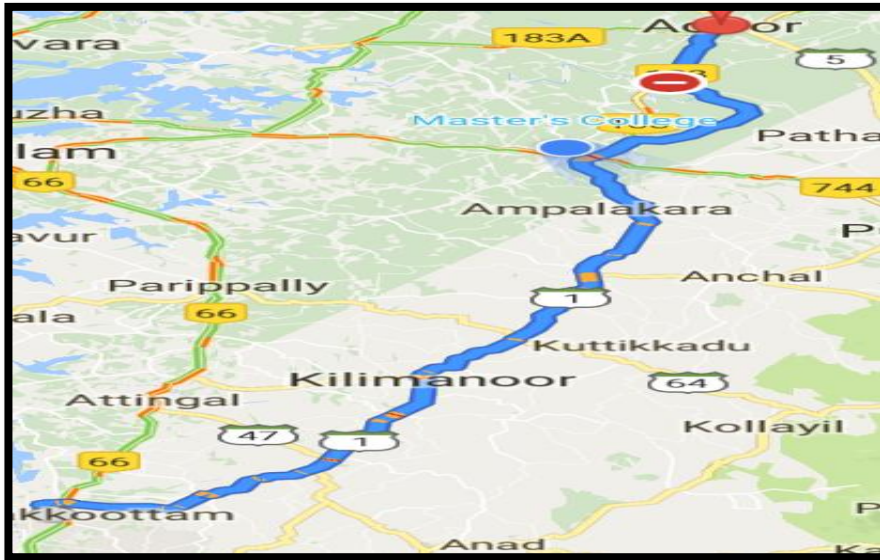
- a) To provide road major safety education / awareness by film shows, stickers and distributions of pamphlets at major junctions.
- b) Toorganise public meeting in association with LSGD and police and NGOs in the respective area/ tatk/audio visual shows on road safety and safety measures/traffic control devises in major junctions, accident prone areas and town ships in road stretch.
- c)To display banners /wall posters depicting road safety slogans in public places, offices, educational institutional and bus stands.

The total duration project is 12 months as per ToR which is estimated cost around 32 lakhs.

**KSCSTE-NATPAC**-has expertise in providing road safety education to various categories of road users. As part of the present assignment, it is decided to conduct 40 Programmes covering four inputs groups.

Monthly report needs to submit following programmes in 2 months and Review and Draft final report of all programmes in categories wise should be submitted on /before on 28th May 2020. Final report should be submitted on/before 27th June-2020 as per ToR.

**5.16 MC ROAD - KAZHAKKOOTTAM – ADOOR 78.65 KM**



<b>Project Name</b>	KSTP-II – MC Road - Safe Corridor Demonstration Project – BC-Overlay & Road Safety Works from Kazhakoottam 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, Ernakulam, 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>Date of Commencement</b>	28 <sup>th</sup> December 2016
<b>Time of Completion as per agreement</b>	16 months from the date of commencement – 27.04.2018
<b>Extended Time of Completion</b>	Up to 30.09.2020 with LD
<b>Contract Amount</b>	Rs 146,67,38,745/-
<b>Revised Project Cost</b>	Rs .137,88,30,271/-

**5.16.1 Financial Progress.**

The Financial progress is 88.81% as on 31-07-2020.in respect to Revised Estimate of 137.82 Cr. As Per Original Contract Price Financial Progress is 83.49%. It is expected to close at around 137.82 crores after final completion of project. Total amount paid to Contractor till July 2020 is 122.51 Cr.

SCDP - PHYSICAL PROGRESS OF MAJOR CIVIL WORKS -JULY 2020									
SI No	Item	Unit	Quantity					Balance	Remarks
			As per BoQ	As per variation	Anticipated Qty	Completed	Ongoing		
1	Drain	m	6274	14488	15100	15760		-660	On going Quantity Increase
2	Culvert	No							
	New- Box		10	14	14	14	0	0	
	Hume Pipe			1	1	1	0	0	
	Widening			3	5	5	0	0	
	Minor Bridge			1	1	1	0	0	
	<b>Total</b>			<b>19</b>	<b>21</b>	<b>21</b>	<b>0</b>	<b>0</b>	
3	Retaining Wall	m <sup>3</sup>							
	R R		8847	1543	2847	2663	0	184	
	Gabion		0	6085	6085	5890	0	195	
4	DBM	m <sup>3</sup>	9524	9818	11100	11225	0	-125	On going Quantity Increase
5	BC	m <sup>3</sup>	39396	39396	42000	42734	0	-734	On going Quantity Increase
6	Interlocking blocks	m <sup>2</sup>	58988	16723	13707	11490	0	2217	

SCDP - PHYSICAL PROGRESS OF MAJOR ROAD SAFETY WORKS - JULY 2020									
SI No	Item	Unit	Quantity				Balance	Remarks	
			As per BoQ	As per variation	Anticipate d Qty	Completed			
1	Drain cover slab	m <sup>3</sup>	7141	6791	8414	8265	149		
2	W Beam Crash barrier	m	15015	8295	9141	9019	122		
3	Road Marking	m <sup>2</sup>	81726	70523	57061	51212	5849	On going	
4	Road Studs	E	56437	56654	68950	71950	-3000	On going Quantity Increase	
5	Sign Boards	E	9873	9873	3931	2940	991	On going	
6	LED Solar Street light	E	2000	1127	890	844	46	On going	
7	Kerb 250 mm	m	211052	16747	31000	30733	267	Ongoing at junctions	
8	Kerb 100 mm	m	42211	46775	12500	11471	1029	Ongoing at junctions	
9	Antifungal Designer T	m <sup>2</sup>	23610	68420	43000	43021	-21	Ongoing at junctions	
10	Hand Rail	m	21400	20900	19328	20023	1377	Ongoing at junctions	

5.16.2 Physical Status:

The Physical Progress is 93.36% as on 31.07. 2020 as per Revised Estimate of 137.82 Cr. Progress is 87.45 % as per Original Contract Price of 146.67. EOT has been approved upto 30-09-2020 with LD to complete all the balance works. The same has been finalized under the 111<sup>th</sup> Steering Committee approval on 29-04-2020.

5.16.3 Key Issues in July-2020



## 5.17 Road safety Challenge Fund

In continuation with Safe corridor Development Project, and under 5.16 d, where in the lessons learnt from SCDP will further be replicated and additional 10 roads will be developed as safe corridors.

Currently under the Road Challenge Fund, five roads as identified by KRSA (Kerala Road Safety Authority) vide letter No A2/283/KRSA/2018 Dated 08.03.2019 a field visit to all these roads was conducted by the PMC along with the Traffic Safety Group as desired by World Bank in their Minutes of Meeting held on 12th April 2019 to further reconform the adequacy of the proposals submitted and finalise the TOR for DPR's.

Three roads were visited on the 25th and 26th April 2019 and the balance two road visits were completed on 6th of May 2019. List of roads selected and their costs are mentioned in Draft DPR By Egis India Pvt Ltd tabulated in Table 4 below.

Table 4

Sl. No	Name of Road	Estimated Cost in Crores	Revised Cost in Crores	Length in Kms	District
1	e-Yatra Project -corridor between Vypin-Mannambam	10.02	37.11	25.0	Ernakulam
2	Safe Road Project-Trivandrum Medical college -Kannamoola, Pallimukku-Pettah	7.50	7.74	5.0	Trivandrum
3	Thrissur-Kunnamkulam State Highway	4.00	39.09	24.30	Trivandrum
4	Kottiyam-Kundara Road	5.00	23.50	11.60	Thrissur
5	Pavangad-Korapuzha	10.00	5.65	5.50	Kollam
	<b>Total</b>	<b>36.52</b>	<b>113.134</b>	<b>71.40</b>	

In this Circumstances, it was awarded **“Preparation of Detailed Project Report (DPR) for safe corridor projects in different regions of Kerala under the world bank assisted Challenge Fund of KSTP-II”** to the H1 firm i.e. M/s EGIS India Consulting Engineers Pvt Ltd for an amount excluding tax for Rs. INR 58,95,795/-.

The matter placed before Steering committee for approval and the same has been approved by Steering committee in the 109<sup>th</sup> meeting. The agreement was signed on 2<sup>nd</sup> Dec-19.

The Consultants M/s EGIS India Pvt Ltd submitted the Inception Report on 24 -12-2019. It was reviewed and comments issued by PMC and Kerala Road Safety Authority which again was incorporated.

### Status of the project for month of July-2020

- Field investigation completed
- Topographic survey for 25 major junctions.

- Road Inventory survey
- Turning Movement Count surveys for 25 major junctions.
- Speed and Delay survey for all the five corridors.
- Parking survey for all the five corridors.
- LUX meter survey for all the five corridors.
- Accident data for all the five corridors.
- Strip Plan preparation completed for all the Five Corridors.
- Improvement Proposals as per the scope of work completed for two roads.
- Field Study Report – will be submitted on 05.03.2020
- Draft DPR – was submitted on 18.03.2020
- PMC has reviewed and passed comments of Draft DPR on 30.04.2020.
- Final DPR submitted.
- Bid Document preparation is under progress.

## 5.18 **Component C: Institutional Strengthening Component – Current Status**

### 5.18.1 **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), and 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:

Consultancy services for Institutional Strategy and Action Plan for Centre of Excellence for Kerala Road Sector across five identified Thematic areas.

### 5.18.2 **Institutional Strategy and Action Plan for Centre/s of Excellence/s for Kerala Road Sector across five identified thematic areas (KSTP – II)**

Accordingly, KSTP, under PWD, GoK has appointed Deloitte Touche Tohmatsu India LLP, in joint venture with Consulting Engineers Group Ltd., to provide consultancy services for developing an Institutional Strategy and Action Plan for creation of "Centre/s of Excellence/s" for the Kerala Road Sector across five identified thematic areas. The five thematic areas are as follows:

1. Innovation in design/ construction practices
2. Road asset management
3. Road safety management

4. Quality assurance & contract management.
5. Promoting indigenous research and development.

This report is the final report of this engagement and it consolidates all aspects of this study.

#### Overall Approach and Methodology

A multidimensional, consultative approach was adopted during the execution of this study. As part of this study, the steps carried out were a) a detailed diagnostic of the processes of PWD and the associated entities, b) an in-depth study of KHRI and NATPAC, c) a benchmarking study across national and international Centres of Excellence in the related sector and d) consultations with stakeholders during the course of the study. Based on all inputs obtained, recommendations have been made on the proposed Centre of Excellence.

As part of this study, eight reports (including this report) have been submitted and these are as summarised below:

S.N.	Deliverables
1	Inception Report
2	Report on Diagnostic Review
3	Draft Report on Institutional Options
4	Report on Institutional Review –KHRI & NATPAC
5	Report on 1st Stakeholder Workshop
6	Report with recommendations on the proposed CoE
7	Report on 2nd Stakeholder Workshop
8	Final Report on Institutional Framework & Action Plan for COE
9	Preparation of Cabinet Note and presentation to PWD/ GoK – to be submitted based on final discussions with KSTP team.

The Contract Agreement was signed on 16th February 2019 and the Consultant’s Team was mobilized on 1st March 2019.

The Consultancy services shall be provided in two phases:

Phase I: Institutional Review and COE/s Conceptualization Phase	06 Months
Phase II: Implementation Support	12 Months

In between Phase I & II, a transition phase of 1-2 Months is expected for decision making/processing on COE by GoK.

Consultant have submitted the following reports.

#### 1) Inception Report

The Report covers the understanding of envisaged scope of work, the methodology for undertaking the specific activities under the engagement, the progress of preparatory work undertaken, and the way forward to successfully execute the assignment.

- 2) Report on Review of Sector Themes and Institutional Arrangement.
- 3) An assessment of existing knowledge and capabilities, the detailed processes that pertain to each of the themes, and the institutions that are involved in executing these processes have been captured.
- 4) Based on the study of the as-is processes and the ideal state scenario, gaps have been identified.
- 5) The need for the CoE(s) and the possible roles that the CoE(s) can play in each of the themes has been discussed.
- 6) Consultant has to submit the deliverables from S.No 3 to 9 as per the time frame mentioned in the above table.

A review of the policies pertaining to Kerala PWD has been provided. Subsequently, a discussion on the institutional arrangements that exist in Kerala, that are carrying out functions pertaining to the five themes of this project has been provided

They were also asked to prepare a concept note on Core Road Network authority or State Highway Authority of Kerala (SHAK) and roadmap for planning & execution of climate resilient Road infrastructure as these are prior and post action points agreed to by the PWD as part of Programme under loan of Resilient Kerala Initiative (RKI). A presentation of the same was done by Deloitte Touché Tohmatsu India LLP in JV with Consulting Engineers Group Limited on 11<sup>th</sup> of Nov 2019. The proposal to implement their strategic plan is to be put up to GoK for approval as Maturity Level 1 inducting a Task Force.

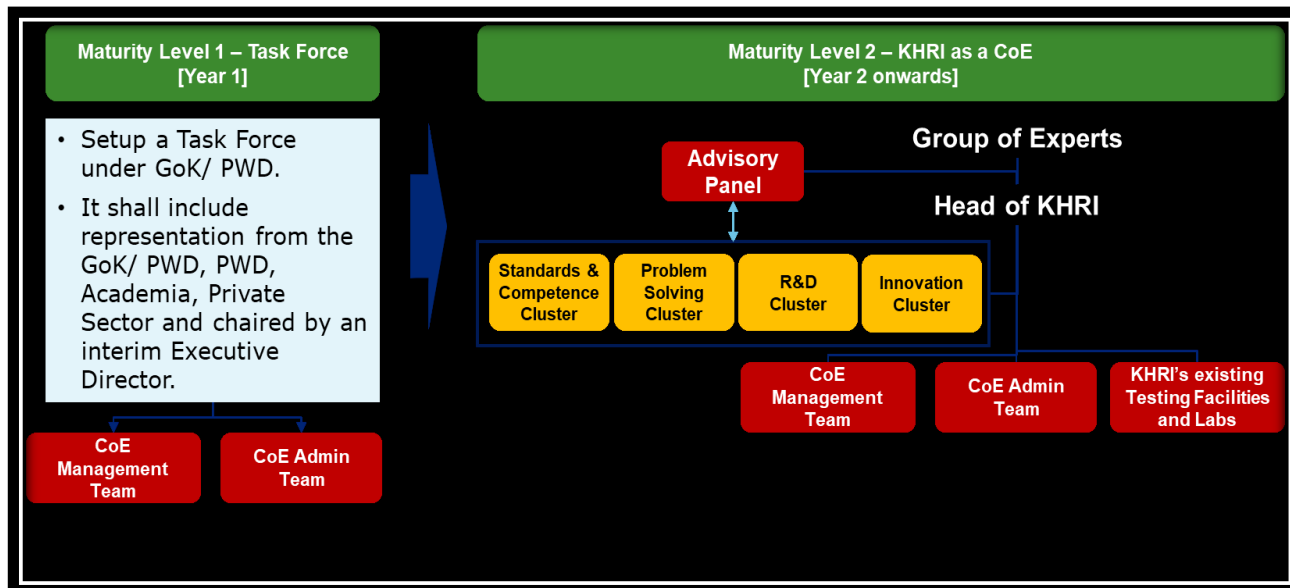
### **Generic Activities of CoE**

- Mapping of emerging issues and requirements
- Developing a Foresight & Vision
- Identification of Strategic Research Agenda [continual]
- Implementation Plan [from time to time]
- Developing and promoting researchers
- Facilitation technological innovation system to apply research results into applications
- Dissemination of Research & Innovation Results [manual, periodic updates through publications]
- Creating Knowledge Sharing Platform
- Ensuring Stakeholders Participation

It is recommended that the entity be established in phases – i.e. it first begins as a Task Force and then over time evolve into a full-fledged autonomous entity. The governance model of the CoE also would therefore follow this maturity model. In the exhibit below, a two-level maturity setup is shown. It is to be noted that the two levels are not time dependent but are dependent on the success of the CoE and decision by Government of Kerala with recommendation from Task Force.

## Structure of CoE

The CoE is proposed to be a lean, thin and almost virtual entity, to be developed and expanded in phases of maturity, the first being as a Task Force, which will run over the first one year<sup>3</sup>. The composition of this Task Force is depicted in the chart at Annex 1.



The setting up of CoE involves expenditure of fixed and variable nature; the fixed cost will remain almost fixed subject to normal annual increase, while variable expenses will be related to the volume and nature of works undertaken by CoE. The total expenditure envisaged over a period of 5 years is Rs. 31 Crore. This includes a research fund of Rs. 7 Crore that is also envisaged.

8th deliverable & 9th deliverable sent to GoK on 15.05.2020

### 5.18.3 Road Maintenance & Management Services

Under the Institutional Strengthening Component C, a proposal to implement RMMS was considered

**Objective:** The overall objective of the proposal was to establish an enhanced and user friendly Web-based Road Information System and Road maintenance management system for the State PWD roads and to ensure that PWD is able to effectively plan and prioritize its road improvement and maintenance works and to prepare realistic proposals for budgetary allocations. This will improve the quality and delivery of PWD services in the maintenance of road networks. To implement this, it was decided to get the Detailed Project Report done through Central Road Research Institute (CSIR-CRRI) New Delhi.

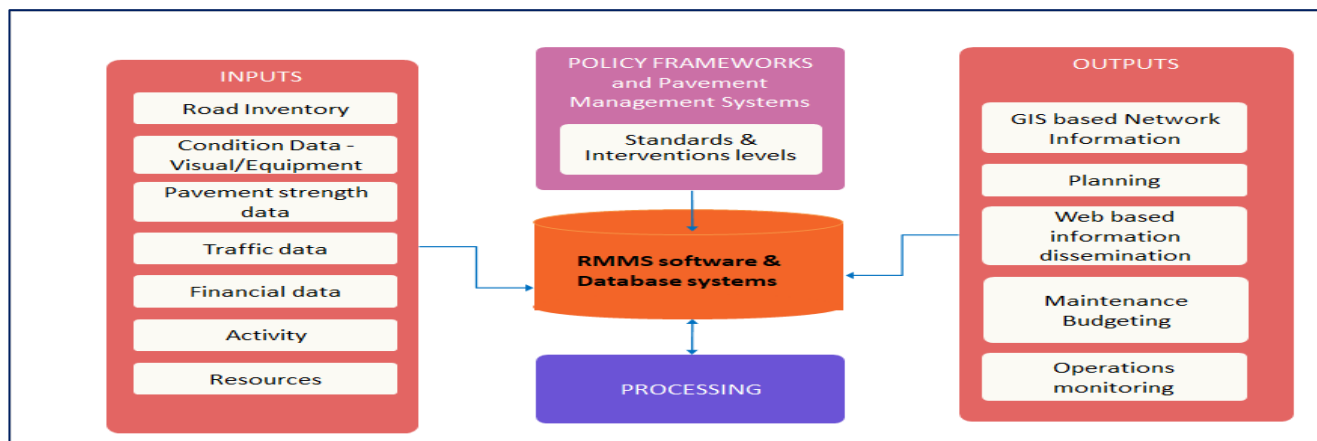
The contract with CRRI was signed vide Contract No 305/KSTP/PMT/PWD/2019-20 Dated 19.06.2019. The entire task will be completed in 18 months.

Even though Kerala PWD have established a GIS based Road Information system and HDM-4 based Road Maintenance management System (RMMS) way back in 2007, the same could not be used as it was envisaged due to various reasons and are now outdated and redundant. Apart from this there were no established frame work and expertise in the Department to have

a sustained data collection of the inventory and condition data of road assets in a systematic manner. Hence, as part of the revival and up-gradation of the existing RMMS systems, the Department approached the Central Road Research Institute New Delhi to explore the possibility of setting-up a working Road Asset Information and Management System with an initial data collection of condition and inventory data for a selected road length using the advanced network survey vehicle of CRRI. Based on the detailed discussions and deliberations the CRRI has given a proposal for the setting-up a working RMMS for the Department with data collection of 4000 KM of selected roads using the network survey vehicle along with technical assistance for establishing related software requisites and trainings.

E-Governance wing of Kerala PWD has proposed to have an effective working **Web and GIS based** Road Information and Road Maintenance management System capable of delivering all required asset management information and analysis and outputs suitable for use in the Pavement Management Systems like HDM-4 thereby Public Works Department would be able to generate realistic road maintenance plans and budget. It is also envisaged that after establishing such a system in PWD, the concerned Field engineers of the Road Maintenance Wing and Engineers in charge of the Central RMMS unit would be trained in data collection and inputting, usage of the RMMS system and HDM-4 software so that the Department would be able to sustain and scale the RMMS system for all PWD roads in the State.

**RMMS- GENERAL ARCHITECTURE:**



The procurement of this was hosted on E –portal of Kerala Government as single stage Bid document On 19-10-2019 and subsequently a pre bid meeting was held on 5<sup>th</sup> Nov 2019. Queries were received from various prospective bidders and replies to these are currently being finalized. **The proposed submission date is on 30<sup>th</sup> Nov 2019 for which requests for extension have been sought.** This is under consideration and shall be communicated soon to the prospective bidders. The bids for the Supply, Installation, Testing and Commissioning of a Web based Software for Road Maintenance Management System for the Kerala Public Works Department were published in the dailies The Hindu and Malayala Manorama on 20.10.2019. The period of assignment is 8 years and 6 months (6 months implementation, 5 years warranty period and 3 years extended period of service). The bids were opened on 23.12.2019. The



bids were invited on a single stage system. Three bidders responded to the tender. The details are as follows:

TRL Professional JV with Experian Technologies (India) Pvt Ltd has been awarded contract. Letter of Award has been issued to Bidder on 07.05. 2020. Agreement was signed on June 5<sup>th</sup> with Bidder with Estimated price of 4.54 Cr.

TRL was Mobilised on 1<sup>st</sup> July-2020. They need to submit Project Management plan (PMP) after 15 days of Commencement of services.

5.18.4 **E.Governances support for prices 2.0 Implementation:**

The Chief Engineer, Roads & Bridges and the Chief Engineer, Road Maintenance have submitted a note to KSTP for inclusion of e-Governance activities under ISAP (Institutional Strengthening Action Plan) of KSTP (Annexure 1)

PWD has over 500 Section Offices, 190 Sub Division Offices, 50 Division Offices, 12 Circle Offices and 7 Chief Engineer Offices State-wide. Even though computers and peripherals were supplied to these offices over the last 10 years, the number of computers provided was restricted due to budgetary constraints. The present status of IT infrastructure available at various PWD offices from Section office level to Circle office level state-wide are listed below:

No. of offices	No. of staff using e-Governance Applications	Avg. No of Computers available per office	Multi function printers	Laptops
Sections	495	4	1 no. issued in 2011 (Mostly dysfunctional)	One laptop issued to all office heads as part of PRICE software implementation
Sub Divisions	199	9	4	
Divisions	54	22	10 to 12	
Circles	12	25	15	

As evident from the above table, the IT infrastructures at various PWD offices are highly inadequate to cope up with the requirements for the implementation of total e-Governance System.

In a PWD Division office where about 20 staffs are required to work using computers, we have provided only 10 to 12 computers on an average and many of them are in non-working condition now. The multifunction printer devices are allotted to Sub Division, Division and Circle offices in the year 2010. PWD IT Cell has arranged annual maintenance contract for these devices till December 2016. After that the manufacturers has informed their inability to provide AMC support as the model is outdated. The Section offices of PWD are the most important unit of PWD in which all the projects are initiated and are executed. On an average, infrastructure projects costing over 10 to 15 crores are executed through each Section office in every financial year. This is expected to increase further when the execution of KIIFB projects starts in full swing.

Apart from this, on the spot M-Book preparation is envisaged in PRICE software which requires provision of hand held tablets with internet connection facilities, one each for each Section Office of PWD. It is also proposed the online Rest house reservation and management software as part of WINGS up-gradation, which also requires providing necessary computer allied infrastructure in each rest house. The PRICE-2.0 and online Rest house reservation are proposed to be implemented from 1st April 2019.

Under KSTP-II, there is an allocation of US \$10 million (Rs. 70 Crores) in Component C (Institutional Strengthening) out of which Rs. 30.80 Crores is the State share. The World Bank's procurement procedure takes much time. When discussed with the World Bank, they informed that sole sourcing KELTRON using Bank finance is not possible. As per the Government order vide G.O.(Rt) No.25/2018/ITD dated, Thiruvananthapuram,01/02/2018, Government accorded sanction for implementing a Centralized Procurement System in Government for the purchase of commonly used hardware items such as desktops, laptops, printers, scanners, etc. through an online Government portal (<http://cprcs.kerala.gov.in/>) developed for this (Annexure - 4).M/s KELTRON is entrusted as the service provider, who will derive rates for the commonly used IT equipments, through competitive bidding process. As World Bank has expressed its unwillingness for single source funding, it is proposed to procure the hardware using State funds as per the centralized procurement system of Government of Kerala.

The Budget estimate 2019-2020 has an allocation of Rs.2.70 Crores under the head of account 5054-80-80-82 for e-Governance in PWD (Annexure -3) .Its estimated cost around 18.5 Cr approved in 106th Steering committee.

#### 5.18.5 Post Construction Technical Audit for Ongoing Work ( A1 & B Component)

Government of Kerala intendsto constitute a "Technical Audit Committee" for reviewing theOutputDeliverables of the Audit orsanddetermine necessary acltons, as may be required thereof,The need for further technical inspectrons and quality tests, if any, required and recommended by theAuditor shall be considered along with suitable funding arrangements made for the same either from the KSTP budget or elsewhere These reports shall be rnadeavailade 10 the Aud(or The TechnicalAudilCommjttee" shall be headed by Secretary-PwD, KSTP-PD and a senior level representatrve from Finance Department The committee shall be staffed with technical specialists either fromResearch or Academjclnstitution 1 Bridge Expert 2. Pavement Expert and 3 a representalivefromKSDMA or Revenue Department Involved in 2018 flood disaster assessment for RoadsTheremunerationofthese experts shall be borne by KSTP

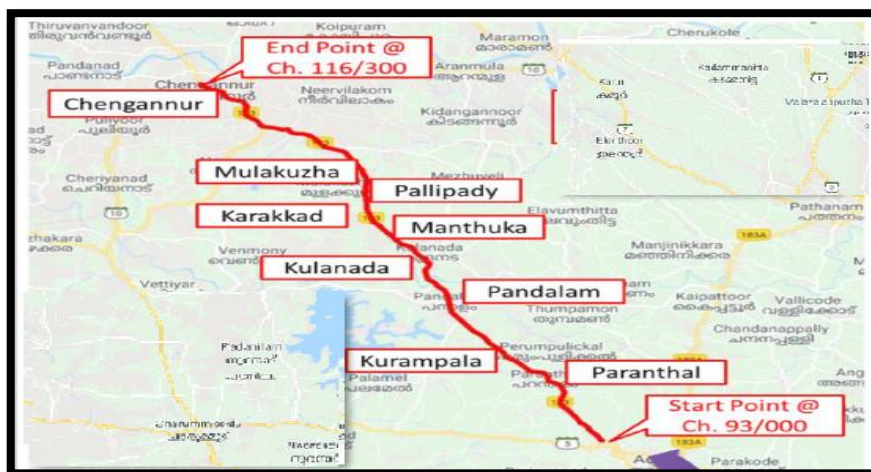
A copy of each reportdeliverable of Technical Audit along with Records of Discussions of "TechnicalAudit Committee" meelings shall be made available to the World Bank's TTL for review, as soon as it is received.

M/s HAKS Engineers, Architects & Land Surveyors PC in JV with M/s Info Trans Engineers Pvt Ltd and M/s ECORYS NEDERLANDS Bv has been awarded contract on 07.03.2019. The Cost of Tender is 1.64 cr in 2 Phases. Status: HAKS Engineer Need to Submit Final Technical Audit Closure Report.

**5.19 Component D: Rebuild Kerala Initiative (Flood Control)**

Sl. No.	Category	Contract Package	Name of Work	Length (Km)	Construction Period	Maintenance Period
1	Category B	KSTP-II/PMT/RKI-4	Adoor- Chengannur	23.23	12 Months	60 Months
		KSTP-II/PMT/RKI-3	Painavu-Thannikandom-Asoakkavala road	21.0		
		KSTP-II/PMT/RKI-2	Chemmannar Gap road	19.45		

**5.19.1 Adoor – Chengannur Road Status**



The bid invitation was published on 15.08.19 with the date of bid submission date as 17.09.19 which was extended up to 04.10.19. Only one bid received for this package from bidders, the details are as per below.

On evaluation of the technical bids by the evaluation committee, the above Single bid received from M/s EKK Infrastructure limited were found responsive to the requirements of the bidding documents and were recommended to be invited for opening of their price bids for further evaluation. Accordingly, the Financial Bids of these one firm were opened on 25.10.19 and scrutinized. The Bid price quoted by M/s EKK Infrastructure Ltd was Rs.98.10 Cr. The price quoted by the bidder is Rs.98.10 Cr against the estimated cost of Rs.93.59 Cr. This is 4.82% above the estimated amount. The evaluation report was placed before Steering committee approval and the same has been approved by committee. LOA Issued to the contractor. The agreement signed on 24-01-2020 and construction period is 12

months from the Appointed date. LoA has been issued to Contractor on 07.05.2020.

### Progress of The Work

<b>Project Name</b>	<b>Upgrading Adoor- Chenganoorroad (RKI 4) Package: Km 0+000 (Adoor) to Km 23+800 (Chenganoor)</b>
<b>Length of the Road</b>	<b>23.800 Km</b>
<b>Name of Contractor</b>	<b>M/s EKK Infrastructure Ltd</b>
<b>Type of Contract</b>	<b>Engineering, Procurement, Construction (“EPC”)</b>
<b>Agreement No &amp; Date</b>	<b>24.01.2020</b>
<b>Date of Award (LOA Date)</b>	<b>22.11.2019</b>
<b>Appointed Date</b>	30.03-2020
<b>Construction Period (in Months)</b>	12 Months
<b>Maintenance Period (in Months)</b>	60
<b>Scheduled Date of Completion</b>	29.03.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>Chainage of the Project (in Km)</b>	km 0.000 to 23.800
<b>Total Project Cost (in Cr)</b>	98.10

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Delay (No. of months)	Current Status	Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date			
Milestone I	145	20%	22.08.2020	Nil				
Milestone II	220.	55%	05.11.2020					
Milestone III	295	75%	19.01.2021					
Scheduled Completion	365	100%	29.03.2021					

### Physical Progress

1. Site Inventory Memorandum :-

- Joint Inventory conducted along with Authority, Site Inventory Memorandum has been finalized and signed on 07.02.2020.

2. Mobilization of Manpower & Machinery : - Due to Covid 19 Lock down,the Contractor not mobilized any Man Power & Machinery,

3. Base Camp Construction: -

- The Contractor identified 2.7 acre land for Base camp construction at location Km.103.50 LHS adjacent to our project road. The Construction of Base camp yet to Start.
4. Laboratory Constructions :-
    - The Contractor planned to establish the Laboratory at the Base camp location in already existed old buildings. The Lab Equipment's yet to be mobilized and erected.
  5. Erection of Plants
    - a) Batching Plant : - Erections of Batching Plant work in progress (60% Completed)
    - b) WMM Plant :-The Contractor is planning to mobilize the WMM Plant in the month of August-2020.
    - c) HM Plant :- The Contractor not yet Mobilized HM plant.
    - d) Quarry & Crusher :- Contractor planning to procure from outside source.
  6. Survey works –Centre line marking, TBM Traversing, OGL Recording :-
    - a) Topo survey for Design purpose completed.
    - b) Centre line marking completed in the month of March-2020.
  7. Utility Shifting Status: - Estimation of Water & Electrical Utility shifting not received by the Contractor from the concern Authority.
  8. Status of Applicable permits: - Work in progress.
  9. Structure Inventory: - Joint Structure inventory not conducted till date.
  10. Verification of Existing crust thickness: - Not yet Started.
  11. Physical Progress :-

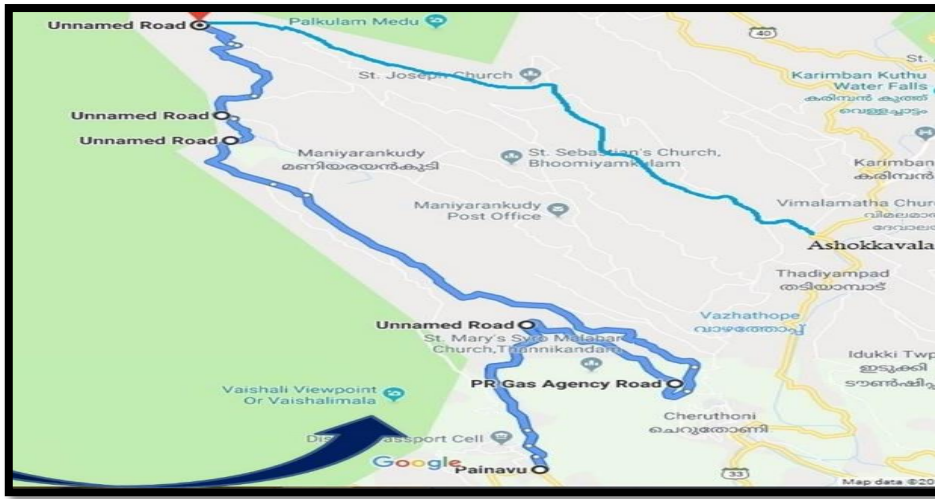
The contractor started pre monsoon activities i.e., Vent Cleaning of Drains & Culverts and Road Maintenance works in progress.

The Contractor not yet started major road activities up to date

### **Key Issues**

- Work Programme for Mobilization and Pre-Construction activities not submitted by the Contractor.
- The Contractor has submitted CESMP and the shortfalls are communicated to the contractor. contractor needs to resubmit C-ESMP with duly incorporating the shortfalls.
- The Contractor needs to expedite the approval of designs and drawings duly proof checked and safety audited by timely submissions and quickly compliance to the observations of the AE, so that works can be commenced early on all fronts
- Some of the Applicable permits are not yet submitted by the contractor till date.
- The Contractor has not informed about his planning for mobilization of the Manpower and Machinery.

### 5.19.2 **Painavu-Thannikandom-Asoakkavala Status**



The bid invitation was published on 15.08.19 with the date of bid submission date as 17.09.19 which was extended up to 04.10.19. Only one bid received for this package from bidders, the details are as per below.

On evaluation of the technical bids by the evaluation committee, the above Single bid received from M/s EKK Infrastructure limited were found responsive to the requirements of the bidding documents and were recommended to be invited for opening of their price bids for further evaluation. Accordingly, the Financial Bids of this one firm were opened on 25.10.19 and scrutinized. The Bid price quoted by M/s EKK Infrastructure Ltd was Rs.95.40 Cr. The price quoted by the bidder is Rs.95.40 Cr against the estimated cost of Rs.86.82 Cr. This is 9.88% above the estimated amount. The evaluation report sent to Steering committee approval and the same has been approved by committee. LOA Issued to the contractor. The agreement signed on 24-01-2020 and construction period is 12 months from the Appointed date.

**Progress of The Work**

<b>Project Name</b>	<b>Upgrading Painavu –Asokawalaroad (RKI 3)) Package: Km 0+000 (Painavu) to Km 21+000 (Asokawala)</b>
<b>Length of the Road</b>	<b>21.000 Km</b>
<b>Name of Contractor</b>	<b>M/s EKK Infrastructure Ltd</b>
<b>Type of Contract</b>	<b>Engineering, Procurement, Construction (“EPC”)</b>
<b>Agreement No &amp; Date</b>	<b>24.01.2020</b>
<b>Date of Award (LOA Date)</b>	<b>22.11.2019</b>
<b>Appointed Date</b>	<b>30.04-2020</b>
<b>Construction Period (in Months)</b>	<b>12 Months</b>
<b>Maintenance Period (in Months)</b>	<b>60</b>



<b>Scheduled Date of Completion</b>	29.04.2021
<b>Authority Engineer</b>	Consulting Engineers Group Ltd, Jaipur
<b>Chainage of the Project (in Km)</b>	km 0.000 to 21.000
<b>Total Project Cost (in Cr)</b>	95.40

Project Milestone	Description (Days from Appointed Date)	Planned		Actual		Delay (No. of months)	Current Status	Remarks
		Financial Progress (%)	Scheduled Date	Financial Progress (%)	Revised Date			
Milestone I	145	20%	22.09.2020	Nil				
Milestone II	220.	55%	06.12.2020					
Milestone III	295	75%	19.02.2021					
Scheduled Completion	365	100%	29.04.2021					

### Physical Progress

1. Survey work: - Centre line marking work completed for a length of 10km & remaining work is in Progress.
2. Contractor Not Started mobilization of manpower and preconstruction activities due to Covid-19

### Key Issues

- Work Programme for Mobilization and Pre-Construction activities not submitted by the Contractor.
- The Contractor has submitted CESMP and the shortfalls are communicated to the contractor. contractor needs to resubmit C-ESMP with duly incorporating the shortfalls.
- The Contractor has submitted Taraffic Management Paln (TMP), the shortfalls are communicated to the contractor, contractor needs to resubmit TMP with duly incorporating the shortfalls.
- Contractor has not informed about his planning for mobilization of the Manpower and Machinery.
- Contractor not Identified any location for Base camp construction and Erection of Plants
- Applicable Permits not submitted till date.

#### 5.19.3 Chemmanar Gap Road Status

The bids were called for the above project on 09.08.19 and pre bid meeting held on 26.08.19 and last date of submission of bids was 09.10.19. No bids received and called for retender on 10.10.19 and last date of bid submission is 11.11.19.

Accordingly, the Contractor has submitted an undertaking stating that M/s Cherian Varkey Construction Company Pvt. Ltd. would deploy the key personnel and the key equipments as per clause 2.6 and 2.7 of Section III, Evaluation & Qualification Criteria respectively in

accordance with the requirements as per the RFB before executing the agreement if the work is awarded to them. Considering the fact that this is a re-tender and that too a single response, this is being accepted. Now the Committee recommends M/s Cherian Varkey Construction Co. Pvt. Ltd. as technically responsive for opening of their price bid. After opening the financial bid, the contractors quote was 24.00 % higher than the estimate and hence committee recommended for re tendering. This has been retendered and bid opening date is on 13-03-2020 and Deadline for submission of original documents like bid security, cost of bid document etc. was 23.03.2020. Due to Pandemic situation and Lockdown being announced, the bid opening date was changed to 27-04-2020.

The clearance from the World Bank for the opening of financial bids of the above work was received on 24.04.2020. The bidders whose Technical Part have been evaluated as substantially responsive were notified regarding the responsiveness and invited them for the opening of the financial part. The Financial part of the bids were opened on 27.04.2020. The details are as follows:

Sl. No.	Name of bidder	Quoted price (Rs.)
1	M/s DRAIPL – GREENWORTH (JV)	146,67,25,000/-
2	M/s EKK-KNM (JV)	155,80,00,000/-
3	M/s. Cherian Varkey Construction Co. Pvt. Ltd.	1,59,40,00,000/-

Price quoted by the lowest evaluated responsive bidder, M/s DRAIPL – Greenworth (JV) is Rs.146.67 Cr, which is 14.99% more than the estimated cost of Rs. 127.55 Cr may be accepted & awarded considering the fact that this is a 2<sup>nd</sup> re-tender, and the work being an EPC contract, to be executed in a **hilly terrain** with five years maintenance period, retendering again may not yield a better offer. LoA was issued to Contractor on 07-05-2020 but Contractor has asked for EOT for Appointed date. Agreement is expected in 1<sup>st</sup> week of Aug-2020.

5.19.4 **Other Procurement Details in Progress as:**

SNo	Details of Others Procurement Details	Status
1	<b>OPBRC Works</b>	SBD has finalised & DPR Under Progress by KSTP Division for cost of 84.83 Cr Package I Chengannur-Angamaly of 122.07 Km. Maintenance work period of 7 years. Funded by GoK. It was tendered on 27-07-2020. Bid opening date is 27-08-2020

2	<b>Long Term PMC Evaluation KfW (RFP to be sent to Shortlisted Consultants)</b>	LoA was issued on 29.07.2020 and expected Agreement in 2 <sup>nd</sup> week of August-2020
3	<b>Four CSC to be selected for RKI Supervision works. EOI for shortlisting in progress.</b>	AE-1 Consist of 4 roads of Pkg-II was tendered for selcected Consultants & AE-2 consists of 6 roads of Pkg-I & Pkg-II has been Tendered expecting in 2 <sup>nd</sup> week of Aug-2020
4	<b>BID Docs for Contract works of RKI to finalise (Item rate or EPC) Balance roads</b>	In Finalization stage
5	<b>SKYWALK: PROPOSED TIME LINE FOR DEVELOPMENT OF SKY WALK IN THIRUVANANTHAPURAM</b>	ARKITECHNO in JV with DESIGN FORUM has been Awarded with highest score. LoA has been issued to Bidder on 28.07. 2020.Expected Agreement in Aug-2020
6	<b>Vulnarilibity Assesment</b>	EOI bids Received & REP to prepare and Final ToR under progress.
7	<b>AC road/Upgradation of Alappuzha-Changanssery road into Semi Elevated Highway</b>	It was Tendered on 24-06-2020 but Bid submission date is 07-09-2020. Under procurement stage

## 5.20 **RKI FLOOD WORKS KFW LOAN & WORLD BANK LOAN**

During the 2018 natural disaster, most of the roads built under the World Bank funded KSTP Phase I and II (Kerala State Transport Project) performed well and suffered only limited damage. Engineers of the Public Works Division (PWD) believe that this is primarily due to the enhanced design standards, climate proofing specifications and enhanced supervision developed and implemented within the Project. Hence, PWD is now considering developing a more sustainable and climate resilient asset stock in the medium to long term (especially during the planned rehabilitation of affected road infrastructure). The Government of Germany pledged to support the Governments Kerala in its rebuilding efforts with due attention to “building back better” principles, by providing via KfW: a) Two interest-reduced loans of up to EUR 170 million for climate-resilient reconstruction of flood affected roads and bridges; and b) A grant of EUR 3 million for an accompanying measure to provide project related capacity building and institutional strengthening. The GoK has committed to provide an own contribution of 30 % (EUR 51 million) of the total costs of the Project, raising the total financing volume of this Project to EUR 221 million. Loan agreements were signed in November 2019 by KfW and the GoK. In addition, the World Bank sanctioned two Development Policy Operations (DPOs) totaling to US\$250 million in May 2019 with an objective to mainstream disaster risks and climate change impacts information across the State’s key areas of development including the roads sector. Part of this budget will finance the present programme.

The approval was given by steering Committee in the 108<sup>th</sup> MOM dated 17-09-2019. KSTP has hired 4 consultancy firms, one for each cluster, to produce Detailed Project Reports (DPR) including detailed designs, draft tender documents and Environmental and Social Impact Assessment (ESIA). Reports are expected to be finalised in April 2020. Based on the DPR a final list of roads will be drawn up to be financed by the KfWprogramme for Central and South areas and by KSTP for the North area.

Package -01, 02 & 03 Agreement signed on 17.10.19 and Package-04 signed on 30.10.19.

### **Deliverables**

The study will come up with Detailed Project Report and Drawings for the redevelopment of road under item rate contract. The following will be the deliverables for the proposed assignment

- Submission of Inception Report – within 15 days of receipt of work order.
- Submission of Survey and Investigation Report – within 2 months of receipt of work order.
- Submission of pilot DPR (incl. ESIA and ESMP) and Bidding Documents – for one road within 3 months of receipt of work order.

- Submission of Draft DPR (incl. ESIA and ESMP) and Bidding Documents– within 5 months of receipt of work order
- Submission of Final DPR (incl. ESIA and ESMP) and Bidding Documents – Within 6months of receipt of work order.

The formal submissions will be reviewed and commented by KSPT together with PMC and KfW. Consultants shall in addition generally keep KSTP/PMC informed on and seek approvals for any specific design recommendations to be incorporated in the final detailed designs. KSTP shall also be informed immediately of any new data, factors or events which might significantly affect the viability or selection of a particular project road.

#### 5.20.1 RKI Package 1

**M/s Feedback Infra Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below:

- They have Submitted Survey & Investigation Report of all Roads on 23.03.2020. PMC has reviewed & Comments on 11.04.2020.
- They have submitted Draft DPR for 2 road i.e (20.04.2020). Resubmission of the DDPR's after compiling all the individual chapters is waited for further review.
- Consultant resubmitted with compliance of all Survey & Investigation Report on 21.05.202 & 30.05.2020.
- Other 3 roads of Draft DPR submitted in June.
- Road 1 & 2 has been tendered on 27-07-2020, Last Bid date submission is 11-09-2020.
- Other 3 roads of Revised DPR is Final stage.

#### 5.20.2 RKI Package 2

**M/s LNTIEL** has submitted the Inception report as per deliverables schedule. It has been agreed to standardize the submissions of all the DPR's to avoid differences in implementation. PMC will be coordinating with these Consultants and prepare a **DBR (Design Basis Report)** to World Bank and on further concurrence the same shall be communicated to the DPR consultants. Emphasis on Climate Resilient Roads incorporating Geo Tech and Hydrology in particular will be a crucial part of the reports to ensure durability and connectivity in severe conditions. The Status of RKI roads mentioned below.

- They have Submitted Survey & Investigation Report of all Roads on 28.02.2020. PMC has reviewed & Comments on 20.03.2020.

- They have submitted Pilot DPR for 1 road i.e (30.04.2020) &PMC has reviewed& Comments on 24.04.2020.
- They have submitted Draft DPR for all 5 roads i.e (07.03.2020) &PMC has reviewed& Comments on 03.04.2020.
- They have submitted Final DPR for all 5 roads i.e (15.03.2020) &PMC has reviewed& Comments on 29.04.2020.
- Revised Final DPR submitted on 05.05.2020 for Reducing Cost of utilities.
- 4 Roads has been Tendered on 16-05-2020
- Bids Received for Road 1 was 3 Bids, Road 2 was 2 Bids, Road 3 was 2 bids and Road 4 was 5 bids on 06-07-2020.
- 1 Road has been Tendered on 17-07-2020.

#### 5.20.3 **RKI Package 3**

**M/s Louis Berger Consulting Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below:

LBI has submitted DDPR's of all the roads. However, since these roads are co-financed by KfW. Pilot DPR's of two roads has been reviewed by KfW and resubmission based on these Comments are expected shortly. The other DPR's shall follow pilot DPR's and hence minimize reviewing all DPR's for same issues.

#### 5.20.4 **RKI Package 4**

**M/s Egis India Consulting Engineers Pvt Ltd** has submitted the Inception report as per deliverables schedules and the same has been checked and comments given for necessary improvements. The Status of RKI roads mentioned below.

EGIS has submitted DDPR's of all the roads except one road in Ranni District, which was awarded as an additional work in January 2020. However, since these roads are co-financed by KfW Pilot DPR's of Road No 4, has been reviewed by KfW and resubmission based on these comments are expected shortly. The other DPR's shall follow pilot DPR's and hence minimize reviewing all DPR's for same issues.



## Status of Roads under Package 1

Package-1 (North Cluster -RKI)-M/s FEEDBACK INFRA as Revised DPR Details								
Road No	Name of road	District	Category of Road SH/MDR	Length of road Proposed in km	Actual Length as per Site	Estimate Cost of Project - (Excluding GST and maintenance cost) in (Cr)	Revised Cost Including GST & maintenance cost in Cr	Unitcost per/km
1	Edoor – Companynirath - Anapanthy - Angadikkadavu– Vaniyappara - Charal - Valavupara - Kacherikkadavu - Palathumkadav road in Peravoor constituency	Kannur	MDR	24.45	24.4	253.16	135.08	10.38
2	Uruvachal Manakkayi valayal (including bridge pallel to aqueduct at valayal)-Keezhallur Therur Palayod-Vellaparamba Karimbala Colony Maruthaayi Road	Kannur		20.43	20.5	205.67	81.9	10.03
3	Kumbla- Badiadka-Mulleria road	Kasargod	MDR	29.55	29.0	223.27	223.27*	7.70
4	Koyilandy Thamrassery Mukkam Areekode Edavanna	Kozhikode	SH -34	52.50	51.2	355.14	243.15	6.94
5	Vythiri-Tharuvana road	Wayanad	MDR	20.75	21.56	230.66	90.35	10.70
	<b>Total</b>			147.68	146.66	1267.90	550.48	9.15

### Status of Roads under Package 2

Package-2 (North Cluster -RKI)- M/s LNTIEL as Final DPR Details							
Road No.	Name of road	District	Category of Road SH/MDR	Length of road Proposed in km	Actual Length as per Site	Tender Cost (Cr)	Unitcost per/km
1	Perumbilavu-Nilambur Road B/W Km30/700 to 42/780 and 50/000 to 62/320 including upgradation of 53/000 to 54/000, 54/000 to 54/800 and 56/000 to 57/200.	Malappuram	SH	24.4	30.88	139.4	4.51
2	Quilandy - Edavanna road between Km 51/200 to 70/000 & Areekode - Manjeri road Km 0/000 to 13/700	Malappuram	SH/MDR	32.5	31.53	165.28	5.30
3	Palakkad -Perinthalmanna Road	Palakkad	SH	36.8	37.38	373.47	9.99
4	Thavalam Mully Road CH 0/000 to 28/800	Palakkad	MDR	28.8	28.5	121.92	4.28
5	Mananthavady - Vimalanagar - Kulathada - Valad HS - Periya road between km2/500 to 27/300 in Wayanad District	Wayanad	MDR	24.8	27	93.02	3.45
				<b>147.3</b>	<b>155.29</b>	<b>893.09</b>	<b>5.51</b>

### Status of Roads under Package 3

#### Package-3 (Central Cluster -RKI)- M/s Louis Berger Consulting P Ltd

Road No	Name of roads/ Package No 3	District	Category of Road SH/MDR	Length of road Proposed in km as per TOR	Actual Length as per Site	Estimate Cost of Project - (Excluding GST & Maintaence cost) in Cr	RevisedCost of Project - (Excluding GST & Maintaence cost) in Cr	Unitcost per/km
1	Mookannoor Ezhattumugham Rd ch 0/000 to 14/200 and Blachippara Palissery Rd ch 0/000 to 6/000	Ernakulam	MDR	20.30	20.02	108.65	88.82	5.43
2	Kakkadassery - Kaliyar road Ch. 0/000 to 20/000	Ernakulam	MDR	20.60	20.18	84.12	68.91	4.17
3	Muvattupuzha - Theni SH (Ch. 0/000 to 15/750)	Ernakulam	SH-43	15.75	16.18	86.83	79.33	5.37
4	Kumarakom Nedumbassery (proposed SH) from Peruva to Peruvammuzhi	Ernakulam	MDR	21.03	21.40	105.09	93.5	4.91
5	Neyyassery Thokkumbansaddle road	Idukki	MDR	28.50	33.15	184.48	184.48	5.57
6	Nenmara - Nelliampathy road km 0/00 to 30/714	Palakkad	MDR	30.71	30.47	101.03	90.8	3.32
7	Kodungallur- shornur SH (SH 22)	Thrissur	SH	34.00	34.35	246.99	175.67	7.19
8	Vazhakkodu Plazhy road Km.0/000 to 22/642	Thrissur	SH	22.64	22.72	139.60	93.59	6.14
9	Thrissur Kuttippuram Road (SH 69) 4 stretches (Many stretches inbetween in progress by other agency KIIFB)	Thrissur	SH	29.98	33.00	266.33	210.98	8.07
10	Aarakunnam- Amballoor -Poothotta – Piravam road	Ernakulam		7.00	7.98	22.86	26.94	2.86
<b>Total</b>				<b>230.51</b>	<b>239.45</b>	<b>1345.98</b>	<b>1113.02</b>	<b>5.30</b>

### Status of Roads under Package 4

Package 4 (Southern Cluster -RKI)-M/s Egis India Consulting Engineers Pvt Ltd								
Road No	Name of road	District	Category of Road SH/MDR	Length of road Proposed in km as per ToR	Length as per site	Total Cost of Project- (Including GST + ES+ Conti+) in Cr	Revised Cost in Cr	Unitcost per/km
1	Gandhinagar-Medical College-Babu Chazhikadan Road-Kottayam-Parippu Road-Athirampuzha Liessue-Kaippuzha-Mannanam-Pulikkuttissery-Parolickal-Muttappally Road	Kottayam	MDR	21.95	20.38	145.39	111.38	7.13
2	Vadayar Chandappalam- Mulakkulam Road and Vadayar Kallattippalam Muttuchira Road	Kottayam	MDR	24.70	22.48	117.08	103.48	5.21
3	Pathanamthitta Ayroor-Muttukudukka illathupadi - Muttukudukka prakkanam - Parakkanam Elavumathitta - Kulanada Ramanchira - Thanikkuzhy Thonnamala	Pathanamthitta	MDR	28.12	28.17	124.48	107.90	4.42
4	Mallapally, Komalam Paduthodu Kalloopara Chengaroor Komalam Kavungumprayar Pattakala, TMV road	Pathanamthitta	MDR	22.65	23.37	136.59	106.82	5.84
5	Malamekkara Kunnathukala Chala Puthenchanda factory Jn Azad Jn road 0/00 to 8/600	Pathanamthitta	MDR	8.60	7.86	30.65	28.85	3.90
6	Thiruvananthapuram Ponmudi road (From Nedumangad to Ponmudi)	Thiruvananthapuram	SH	41.00	41.75	248.16	212.13	5.94
<b>Total</b>				<b>147.02</b>	<b>144.01</b>	<b>802.35</b>	<b>670.56</b>	
<b>Additional Roads</b>								

7	Thattararnbalam-Michael Junction-Kochalumood-Mangankuzhy-Pandalam	Allapuzha		21.10	18.66	129.49	115.62	6.94
8	Veeyapuram-Edathua-Puthukarry-Marnbuzhakkary-Kidangara-Kunnamgary-Kumarangary-Valady-Mullakarthuruthy	Allapuzha		21.36	21.45	153.73	143.06	7.17
9	Vayuttupuzha-Potheppad Road	Pathanamthitta		35.00	0.00			
<b>Total</b>				224.48*		<b>1085.57*</b>	<b>929.24*</b>	

**Note:** \* denotes Changes in Future

## 6 Project Development Indicators – Results Framework

SI. 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	13.90 million 7.10 million	14.15 million 7.35 million	14.80 million 7.7 million	CSC	
	2	Reduction in Travel Time	MINUTES	CAR							CSC	
				1.	Kasaragod – Kanhangad road	19 45			Ch: 0-14 Car: 33%	Ch: 0.000 to 23.185 Time- 30'7"-31%		
				2.	Pilathara – Pappinisser road	21			Only very limited length done	Ch: 0+000 to 17+900 (3 stretch), 16+290 km Car-Time-19'13"-10%		
				3.	Thalassery – Valavupara road	58						
				4.	Chengannur – Ettumanoor road	95			Ch: 20-45 Car: 35%	Ch: 0.0-47.0 Car:78'0"-17.8%		Increase traffic



SI. 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
				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%	

SI. 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			
				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	224	340	CSC		
	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 – Valavupararoad (54+000)		Work not progressed for assessment						
					4	UG-4 Chengannur – Ettumanoor road (47+700)						13		

SI. 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	
				5	UG-5 Ettumanoor – Muvattupuzha road (40+960)				6			
COMPONENT -A – ROAD UP GRADATION												
	5	State Highways upgraded			Km	-	-			216 km	340	CSC
	6	Financial closure achieved on PPP project			Y / N	-	-	-		N		
COMPONENT -B - ROAD SAFETY												
	1	Pilot Safety Corridors Developed			Km improved	0	-	-		Work in progress	80	KSTP (work started)
	2	Number of District Level Road Safety Improvement Schemes implemented through challenge funds			Number	1	-	-	-	1	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		KSTP CoE in place
	2	Functioning Road Asset Management System			Y / N	No		-	-		Annul Maintenance Plans disclosed	PWD reports

SI. 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	
	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 conducted	Final survey under progress	KSTP

## 7 Social Safeguard

Acquisition of 121.5 Ha of land for upgradation of 7 roads covering 322 km which affected 20696 households including titleholders and non-titleholders. As per R&R policy of KSTP, entitlements of all PAPs have been disbursed as part of pre-construction activities linked with land acquisition, rehabilitation and resettlement. As construction works started, 61 missing properties were identified in different packages most of which is required to link the two new bridges at Eranholi and Iritty. Action is being taken for acquisition of those properties under LA process and through negotiated purchase and rehabilitation of the affected PAPs.

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

#### 7.1.1 Package UG-III-A – Thalassery - Kalarode 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.	2.950	3.230	KSTP Kannur and LA Tahsildar, LAO Thalassery	Nov 2017	SIA conducted. Experts' review completed. Award by 31.06.2019	0.7100

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

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				
42.300	42.660	KSTP Kannur & LAO, Thalassery	Oct 2017	SIA conducted Experts' review completed. Valuation in progress. Award by 31.12.2018	0.5500
<b>Total</b>					<b>0.5500</b>

### 7.2 Tree Cutting

Total number of trees to be cut combining the Packages VIII B and C is 1486 Numbers and currently 250 under Progress

### 7.3 Management of Construction induced Issues

Grievance Redressal Committees (GRC) constituted at the district level is functioning effectively under the Chairmanship of the District Collector. All grievances that cannot be resolved locally or at the site are referred to the GRC which meets once a month making effective decisions followed by actions in the field. Loss of access, protection of wells and

houses abutting the road, retaining walls to prevent land slide, prevention of water logging and provision of drainage are the most common issues during construction phase. These are included in the BOQ and in PAP works for implementation. Those issues concerning land value or higher compensation are referred to the State level Committee.

## 8 Grievance Management Report

(1<sup>st</sup> Jan 2013 – 30<sup>th</sup> April 2018) \*

Sl. No	Nature of Grievance	Total no. of petitions	Total No. of cases settled	Remarks
		01.01.2013 to 30.04.2018	30.04.2018	
1	2	3	4	5
1	Land Acquisition/ Alignment change	13	13	10 settled through participatory interaction between KSTP officials and PAPs. Three cases were settled by the High Court.
2	Inadequate compensation of land/ Category change of the land	4	4	Category changes effected after re-examination by the Revenue authorities and payments made accordingly. .
3	LAR Cases	323	312	11 Cases pending in the Sub Courts
4	Variation in the extent of land	12	12	Resurvey done in all cases and 2 were compensated by enhanced award.
5	Acquisition of missed structure/ Part/Full	12	12	Valuation of 12 missed out structures taken and compensation paid.
6	Inadequate compensation for structure	3	3	Rechecked the valuation at site in the presence of the PAP and convinced the veracity.
7	Provision of retaining wall to protect structure	144	144	Retaining wall provided to protect structures/ properties.
8	Protection of well	83	83	All wells have been protected by diverting drains and by providing concrete slabs/covers/ side walls as required at each site.
9	Conversion of part valuation of structure to full or vice versa	4	4	Changes effected as requested by the PAP and payment released
10	Inadequacy of R&R assistance	201	201	All cases settled in GRC and payment released.
11	Extension of time limit for demolition	12	12	Stay vacated and all structures demolished
12	Restoration of access to property	523	5965	Total number of access restored is 5965 including 523 who presented their grievance on the subject.
13	Providing new access	45	45	Provided access to all
14	Water logging issues	44	44	All cases settled
15	Drainage	156	156	All cases settled
16	Encroachment by contractor	18	18	Encroachment evicted and sites cleared restoring the condition as before
17	Damage to adjacent property	83	83	Damages in all 83 cases repaired and rectified
18	Shifting Transformer	1	1	Resettled
19	Non-payment of compensation	25	7	G.O. withdrawn and settled the issue
20	Reconstruction of cross drainage	10	10	Provided cross drainage in all 10 cases

\*Data from 1<sup>st</sup> May 2018 to August 31<sup>st</sup> 2019 is being sought from division offices and will be updated shortly.



## 8.1 Compliance of Mission Recommendation

### 8.1.1 Responsibilities of Sociologist in the Division

The role and responsibilities of sociologist in division is to implement resettlement action plan (RAP) – ensuring that affected person/family gets right information about land acquisition, process and procedures, compensation details and date of payment, persons responsible for grievance redress and counselling when rehabilitation required. S/he should ensure that PAP gets all entitlements/benefits in due time and without delay, refer all grievances to the Grievance Redressal Committee (GRC) and see that those are brought to the notice of the GRC within 15 days and resolved in one month. Disbursement should be made in each village and not in the KSTP office. If any payment pending analyse factors preventing and search for solutions and report facts and figures to EE and PMT. Regarding pending land acquisition, sociologist should function as a strategic planner, advise EE on the nature and process of different types of acquisition and monitoring; suggest measures in the form of notes, to speed up. If there is lack of knowledge, get it through reading and consultations with the right persons. Case studies of each affected individual/family complete with socio-demographic and economic backgrounds should be readily available and presented when called for.

Wherever construction is in progress, the sociologist must focus his/her attention on mitigation of construction induced negative impacts. Identification and reporting of loss of access from road to homes, establishments and properties, dangerous excavations without protective measures and barricades, threat or damage to adjacent properties, encroachment by contractor, waste dump in adjacent land, threat to buildings and wells and other utilities (water, electricity, telecom & cable services requiring protection from damages, prevention of flooding, water logging in front of habitations and establishments, and any activity that can cause harm to human beings and animals. Should ensure that no excavation or demolition done without reasonable advance notice and without providing temporary measures to provide access.

Temporary measures should be replaced by permanent solution within a couple of weeks or at least in one month. Daily and weekly reports in writing should be given to the appropriate forum for necessary action based on the urgency.

A third angle of sociologist's responsibility is to monitor the welfare of the workers in camps and worksite. Living conditions in the camp should be hygienic, working conditions secure, with proper gears and tools, availability of toilets and safe drinking water at work site. If anything is lacking it should be brought to the EE immediately and to PMT in the monthly report.

Responsibilities remain incomplete without monthly reporting which should be comprehensive and regular. The report and case studies should be substantiated well with the details of subject matter with date and time of each activity spliced with relevant photos. The project is time bound. Action Plan should specify dates for each of the activities. The statement

commonly used, such as, “*Action being taken or attended to*” does not mean anything. It should be specific, what activity will start and when – it should begin on a day and end on a particular date. The proforma for social audit circulated a month ago must be completed and returned to PMT for analysis and final reporting before taking over roads from contractors. It should include all mitigation measures done at site for each PAP. Hence verification at site is necessary.

## 8.2 Payment to the consultants and Contractors as on end of July- 2020:

Sl. No	Firm/Organisation	Works Services	Amount in INR
1	M/s Egis India JV -	CSC For Packages I, II, IIIA, III B, IVA, IV B, V,	53,35,97,277/-
2	M/s MSV International	CSC for Package VI	4,67,41,766 /-
3	M/s VicRoads		11,07,89,698 /-
4	M/s L&T Ramboll	Transaction Advisors	4,22,10,480 /-
5	M/s EptisaServicios De Ingeieria	PMC for KSTP-II Project	1,87,40,307 /-

### Contractors

Sl. No	Name of Contractor	Project/Pkg No	Amount in INR
1	M/s.RDSProjects Limited	Kasargod-kanhangad-SH-57 KSTP-2/UG/1	1,22,85,65,038 /-
2	M/s.RDS Projects Limited	Pilathara-Pappinssery-SH-67 KSTP-2/UG/2	101,62,22,268 /-
3	M/s.Dinesh Chandra R. AgarwalPvt.Ltd.,	Thalassery-Kalaroad-SH-30 KSTP-2/UG/3A	102,46,22,949 /-
4	M/s.GHV-EKK Infrastructure & Co.	Kalaroad-Valavupara-SH-30 KSTP-2/UG/3B	1,91,46,23,541 /-
5	M/s.GHV-EKK Infrastructure & Co.	Thiruvalla by pass KSTP-2/UG/4A	15,25,17,276 /-
6	M/s.EKK Infrastructure Ltd.,	Thiruvalla town KSTP-2/UG/4B	4,83,87,988/-
7	M/s.GHV-EKK Infrastructure & Co.	Kazhakuttom-Adoor KSTP-2/OL/8	122,51,26,101 /-

## 9 Compliance Governance Improvement Action Plan

### 9.1 (Micro level implementation will be done with help of PMC)

<b>1. Take Swift Punitive Action</b>	
<ul style="list-style-type: none"> <li>Blacklist relevant companies and terminate officials per government rules have engaged in misconduct</li> </ul>	: Will be done on receipt of evidence
<ul style="list-style-type: none"> <li>Address any performance issues among PMT officials and consultants</li> </ul>	: Will be addressed
<b>2. Address outstanding contractor Related Matters</b>	
<ul style="list-style-type: none"> <li>Clear the backlog of payments and variation order requests</li> </ul>	: Cleared except disputed variation in Package VI
<ul style="list-style-type: none"> <li>Follow-up on quality issues and conduct tests where relevant</li> </ul>	: Being followed up. Arrangement for verification of all newly constructed bridges done
<ul style="list-style-type: none"> <li>Exercise where warranted contractual remedies vis-à-vis contractors, design and supervision consultants</li> </ul>	: This will be exercised when required
<b>3. Build a New Foundation</b>	
<ul style="list-style-type: none"> <li>Develop an action plan to strengthen integrity risk management w/oversight by stable management team</li> </ul>	: All managerial positions filled
<ul style="list-style-type: none"> <li>Clearly delineate PWD's role (also make the KSTP the incubator of new approaches)</li> </ul>	: This will be done. Already directions towards PWD role is given
<ul style="list-style-type: none"> <li>Augment as required the PMT staffing</li> </ul>	: <ul style="list-style-type: none"> <li>i. Project Management Consultant being engaged– bidding in progress</li> <li>ii. Probity Advisor being posted</li> <li>iii. Community liaison officer being posted</li> </ul>
<ul style="list-style-type: none"> <li>Communicate GoK's zero tolerance vis-avis PMT and PWD officials as well as contractors and the public</li> </ul>	: This will be done

### 9.2 Key controls as part of the Action Plan:

<b>A. Approval of variation orders and payments</b>	
<b>B.</b>	
<ul style="list-style-type: none"> <li>Reduce the number of officials involved in assessing and signing off on IPCs and variation orders</li> </ul>	: This was done
<ul style="list-style-type: none"> <li>"Force" contractors and supervision consultants to explicitly certify compliance with contractual obligations</li> </ul>	: Orders issued
<ul style="list-style-type: none"> <li>Revise the Financial Management manual</li> </ul>	: This is being done

to detail the process and individual accountabilities		
<ul style="list-style-type: none"> <li>Consolidate in a decision memo to the Project Director the view of engineers and finance staff</li> </ul>	:	This is being arranged
<ul style="list-style-type: none"> <li>Establish a service standard for the timeliness of approvals</li> </ul>	:	This is already in place
<ul style="list-style-type: none"> <li>Don't allow consultants and contractors to take advantage of savings by adding what is not truly needed</li> </ul>	:	This will be followed strictly
<ul style="list-style-type: none"> <li>Update regularly an "exception report" with all outstanding payment requests and variation orders; identified quality issues; planned and how tests; unavailability of machinery and of PMT, SC and contractor staff; any shortfall in PMT liquidity compared to received and expected payment before next tranche; and revised cost estimate compared to the contract price and original estimate</li> </ul>	:	Will be done
<i>C. Procurement of Goods, Works and Services</i>		
<ul style="list-style-type: none"> <li>Undertake a market survey of road contractors to improve competition and reduce collusion risks</li> </ul>	:	This is being arranged through experts being mobilized – bidding is on
<ul style="list-style-type: none"> <li>Develop more precise cost estimate so you can gauge if collusion risks are elevated</li> </ul>	:	This will be done
<ul style="list-style-type: none"> <li>Require independent bid certificates</li> </ul>	:	This is being insisted
<ul style="list-style-type: none"> <li>Institute a code of conduct for PMT and PWD officials re-reporting of misconduct, conflicts of interest etc.,</li> </ul>	:	Will be instituted
<ul style="list-style-type: none"> <li>Apply an integrity due diligence checklist to spot in bids red flags of fraud, collusion and unbalanced bidding</li> </ul>	:	This will be followed
<i>D. Quality Assurance</i>		
<ul style="list-style-type: none"> <li>Operationalize the committee recently constituted to review compliance with quality control</li> </ul>	:	The committee chaired by the Chief Engineer, KSTP is reviewing the quality of works periodically
<ul style="list-style-type: none"> <li>Create a quality assurance protocol with clear escalation mechanism with specific focus on structural/ bridge works</li> </ul>	:	This has been developed and passed on to the field Engineers. Quality audit as per the Quality Assurance protocol is underway
<ul style="list-style-type: none"> <li>Organize monthly review meetings and quality clinics and discuss the exception report and assess compliance</li> </ul>	:	This is arranged
<ul style="list-style-type: none"> <li>Make full use of the existing IT based</li> </ul>	:	Quality Specialists position is included in the PMC. This

quality assurance system to enhance system to enhance transparency on quality assurance system	:	will be developed with the help of PMC
<ul style="list-style-type: none"> <li>Manage carefully integrity risks associated with failed tests</li> </ul>	:	Non conformance are recorded and re-tests arranged after rectification
<b>E. Performance Management</b>		
<ul style="list-style-type: none"> <li>Develop a scorecard to track the quality, timeliness, and price of the PMT's work, and make it public –significant fraud and corruption always impact these indicators</li> </ul>	:	This is being arranged

9.2.1 **SUMMARY OF ACTIONS SINCE WB MISSION IN March 2020**

Action	By whom	By when	Status/Action taken
<b>Component A1-Road Network Upgrading and Safety Improvement</b>			
<ul style="list-style-type: none"> <li><b>LA for Eranholi and Iritty Bridge approach</b></li> <li><b>Forest and Wildlife Clearance for Kootupuzha Bridge</b></li> </ul>	GOK, contractor	<ul style="list-style-type: none"> <li>April 31 2020</li> <li></li> <li></li> <li></li> <li></li> <li>April 30, 2020</li> </ul>	Eranholi Bridge – Land to be acquired after disbursements. Under Revenue department final stage. Iritty Bridge –To complete the entire structure by september 2020. Kootupuzha bridge – forest clearance given by Karnataka Govt. Final clearance from Centre to be taken.
<ul style="list-style-type: none"> <li><b>Completion of all works in Pkg 4 A.</b></li> </ul>	Contractor, CSC, GoK	Designs finalized and handed over in June 30, 2019. Completion by June 2020.	All Piles completed till date and Sub structure up to 90 % completed. EOT up to 30-04-2020 (approaches including Km 7+390 to 9+400 given). Superstructure erection and girder casting in progress.6 Girders cast out of 36 totals required.
<ul style="list-style-type: none"> <li><b>Complete Slope protection works for contract 3B</b></li> </ul>	Contractor, CSC, GoK	Protection works Completed in Jan 2020. Iritty Bridge and Kootupuzha Bridge to be completed. All civil works completed.	Clearance for Kootupuzha Bridge from Centre to be pursued and cleared. Before April 30 anticipated.
<ul style="list-style-type: none"> <li><b>Finalize monitoring arrangement for two Integral Bridges and Neelimangala Bridge in package 4</b></li> </ul>	GoK	July 31, 2019	CSC started monitoring (Tell plates) and recording of reading from 1st Aug 2019 and as such no settlement has been observed. Monitoring in progress.
<b>Component A2-Road Network Upgrading and Safety Improvement (EPC)</b>			
<ul style="list-style-type: none"> <li><b>Award contracts for packages 8A</b></li> </ul>	Gok, consultant	June 30, 2019	Under High Court decision for further action by KSTP. Awaiting court's decision.
<ul style="list-style-type: none"> <li><b>Award contracts for packages 8B</b></li> </ul>	Gok, consultant	June 30, 2019	Package 8B- Agreement with M/s EKK Infrastructure Ltd on 22-08-2019 and preliminary works in progress.
<ul style="list-style-type: none"> <li><b>Award contracts for packages 8C</b></li> </ul>	Gok, consultant	June 30, 2019	Package 8B- Agreement with M/s J V of M/s Sreedhanya and Nath Constructions on 24-09-

			2019 and preliminary works in progress.
<ul style="list-style-type: none"> <li><b>Award contract for Independent Engineer</b></li> </ul>	CSC, GoK	September 15, 2019	Work awarded to M/s CEG Engineering Services Ltd and agreement signed on 16-10-2019 Consultants Mobilized.
<b>Component B- Road Safety</b>			
<ul style="list-style-type: none"> <li><b>Issue all remaining drawings (4 Junctions) to contractor for SCDP</b></li> </ul>	Gok, NATPAC	June 30, 2019	<b>All Short-term</b> drawings for implementation given to Contractor in Jan 2019. Base map of 3 junctions for <b>long term</b> forwarded to NATPAC and Drawings will be submitted by first week of Aug, 2019. Implementation at site is Short term Jn Improvements.
<ul style="list-style-type: none"> <li><b>Submit ToR for M&amp;E consultant for SCDP</b></li> </ul>	Gok	June 30, 2019	Draft Report on M & E on SCDP prepared by KRSA and submitted.
<ul style="list-style-type: none"> <li><b>Submit ToR for DPR consultant for Challenge Fund</b></li> </ul>	Gok	June 7, 2019	TOR Finalized and Work awarded to M/s EGIS India Pvt Ltd and draft DPR expected by March 31 2020.
<b>Component C- Institutional Strengthening</b>			
<ul style="list-style-type: none"> <li><b>Share final RUSS report with the Bank</b></li> </ul>	Gok	June 7, 2019	Report submitted to Bank on 06.07.19 and found satisfactory.
<b>Component D- Flood Damage Rehabilitation</b>			
<ul style="list-style-type: none"> <li><b>Finalize the RPF-TDF, disclose and organize public consultation</b></li> </ul>	Gok	September 15 <sup>th</sup>	RFP's finalized and Issued. Bidding Process completed for 800 Kms of DPR under Package 1 2 3 and 4. agreement signed on 17-10-2019. All Works of DPR preparation in Progress and expected by April 31-2020.
<ul style="list-style-type: none"> <li><b>Finalize Bid Document for 3 PWD Roads</b></li> </ul>	Gok	July 15, 2019	Bidding completed and two works awarded to M/s EKK Infrastructure Ltd. Third Bid retendered and received. Technical Evacuation in process.
<ul style="list-style-type: none"> <li><b>Award DPR consultancy for LSGD Roads</b></li> </ul>	Gok	August 15, 2019	LSGD Dropped from KSTP And informed World Bank.
<ul style="list-style-type: none"> <li><b>Award PMC for RKI</b></li> </ul>	Gok	July 31, 2019	Bids received and evaluation done and submitted to KfW / WB for final approval.
<b>Financial Management</b>			
<ul style="list-style-type: none"> <li><b>Submit Statutory Audit Report for FY 18-19</b></li> </ul>	Gok	September 30,2019	Audit report submitted to WB in the last week of September 2019.
<ul style="list-style-type: none"> <li><b>Submit Internal Audit Report for Second half of FY 18-19</b></li> </ul>	Gok	June 30, 2019	Report expected to be submitted by 10-12-2019 as discussed by FM with WB on 21 <sup>st</sup> Nov 2019.
<b>Safeguards</b>			
<ul style="list-style-type: none"> <li><b>Submit revised and updated RAP for 8A,B,C and Idukki and Eranholi Bridge</b></li> </ul>	GoK	July 15, 2019	Updated RAP uploaded and updated in the Bid Documents tendered and awarded.

## 10 ACCIDENT REPORT

World Bank expressed the necessity to analyse the accident database with respect to the data base before upgradation of these roads. CSC has been instructed to collect the data from Police stations for these roads before implementing the upgradation and compare this with the same after the roads are opened for road users.

Monthly accident report for the Period of July-2020 is as below for Package III A and III B. Since work is not going due to Covid-19 pandemic in the Packages IV A and IV B, no accident data is provided as of now. However, after completion of these two roads and allowing the road users, the past and present data shall be collected and analysed. There were no accidents data July-2020 in Pkg 3A & 3B was available.

### 10.1 Accident Report Pkg-3A

Nil

### 10.2 Accident Report of Pkg-3B

Nil

### 10.3 Accident Report Pkg-8C

#### ANNEXURE 3.34 REPORTING FORMAT OF ACCIDENTS AND IT'S REPORTING

A	Project Details	Date of reporting:
1	Name of project stretch and link no.	Upgrading Punalur to Ponkunnam Road (SH8) Package 8C: Km 60+000 (Placherry) to Km 82+173 (Ponkunnam)" EPC
2	Name and address of the Contractor	M/S SREE DHANYA-NATH JV TC 31/747, Sasthamangalam PO, Thiruvananthapuram – 695 015
3	Contract date and duration	24.09.2019 and 24 Months
4	Status and completion of the project	
B	Details of Accident and People Involved in Accident	
1	Name of site where accident happened	Nil
2	Name and address of people involved in the accident	Nil



3	Whether Contractor's personnel or General public			<b>Nil</b>
4	Details of Injury			<b>Nil</b>
5	Details of Treatment given			<b>Nil</b>
6	Details of compensation given			<b>Nil</b>
<b>C</b>	<b>Type of Accidents (√)</b>			
1	Fall of person from a height		11	Explosion
2	Slip, trip or fall on same level		12	Fire
3	Struck against fixed objects		13	Contact with hot or corrosive substance
4	Struck by flying or falling objects		14	Contact with poisonous gas or toxic substances
5	Struck by moving objects		15	Hand tool accident
6	Struck / caught by cable		16	Vehicle/Mobile plant accident
7	stepping on nail, etc.		17	Machinery operation accident
8	Handling without machinery		18	Other (please specify)
9	crushing / burying			
10	Drowning or asphyxiation			
<b>D</b>	<b>Agent involved in Accidents (√)</b>			
1	Machinery		10	Stair edge
2	Portable power appliance		11	Excavation/ underground working
3	Vehicle or associated equipment/machinery		12	Ladder
4	Material being handled, used or stored		13	Scaffolding/gondola
5	Gas, vapor, dust, fume or oxygen		14	Construction formwork, shuttering and false work.
6	Hand tools		15	Electricity supply cable, wiring switch board and associated equipment

7	Floor edge		16	Nail, splinter or chipping	
8	Floor opening		17	other (please specify)	
9	Left shaft				
<b>E</b>	<b>Unsafe Action Relevant to the Accidents (√)</b>				
1	Operating without authority		10	Failure to use proper footwear	
2	Failure to secure objects		11	Failure to use eye protector	
3	Making safety devices inoperative		12	Failure to use respirator	
4	Working on moving or dangerous equipment		13	Failure to use proper clothing	
5	Using un-safety equipment		14	Failure to use warn others or given proper signals	
6	Adopting unsafe position or posture		15	Horseplay	
7	Operating or working at unsafe speed		16	No unsafe action	
8	Unsafe loading, Placing, mixing		17	Other (please specify)	
9	Failure to use helmet				
<b>F</b>	<b>Lack of Safety Measures Relevant to the Accidents (√)</b>				
1	No protective gear		8	Unsafe layout of job, traffic etc.	
2	Defective protective gear		9	Unsafe process of job methods	
3	Improper dress/ foot wear		10	Poor house keeping	
4	Improper guarding		11	Lack of warning system	
5	Improper ventilation		12	Defective tool, machinery or materials	
6	Improper illumination		13	No unsafe condition	
7	Improper procedure		14	Other (please specify)	
<b>G</b>	<b>Personal Factor Relevant to the Accidents (√)</b>				
1	Incorrect attitude/motive		3	No unsafe personal factor	
2	Unsafe act by another person		4	Other (please specify)	



## 11 Site Work Progress Photographs

### 11.1 Package -1 –Photographs



Chandrigiri Bridge Expansion Joint



Bekal Port Auto parking



Bekal fort Road



11.2 Package -2 –Photographs



Oxbow land



Ramapuram Existing bridge approach



11.3 Package -3A —Photographs



**DBM LAYING @ CH 21+680-21+900 LHS**



**GSB LAYING @ CH 28+670 – 28+720 LHS**



**WMM 2<sup>nd</sup> LAYER @ CH 27+270 – 27+440 RHS**



**SHUTTERING WORK IN PROGRESS FOR 32m DECK SLAB @ CH 2+910 P2-P3**



**GABION WALL WORK IN PROGRESS @ CH 29+680-29+800 RHS**



**DRAIN LAYING @ 25+950-25+970 RHS**



### 11.4 Package -3B —Photographs



Iritty Bridge N- truss shifting for P1-P2 span



Paver block and footpath at km 42+320.



50+740 RHS retaining wall work in progress



50+750 RHS RHS retaining wall work in progress.



RHS retaining wall back filling work in progress



Oxbow land work in progress at km 46+850 LHS



11.5 Package -4A —Photographs



**Precast Girder Erection at P8-P7, Viaduct**



**Girder concreting, Viaduct**



**Wall concreting, Culvert widening at 2+300**



**RE wall casting work at casting yard for Viaduct A2 side.**



### 11.6 Package -4B —Photographs



**Jolly Silks Junction, Thiruvalla Town**



**Footpath work in progress at 1+180**



**Mavelikkara Junction, Thiruvalla Town**



**View of Thiruvalla Town**



11.7 Packages-8B-Photographs



**DRAIN WORK IN PROGRESS AT CH 45+350 LHS**



**DRAIN WORK IN PROGRESS AT CH 40+100 RHS**



**DRAIN WORK IN PROGRESS AT CH 40+100 RHS**



**DRAIN WORK IN PROGRESS AT CH 45+350 LHS**



**TEAM LEADER VISIT THE LAB & CASTING YARD**



**TOE WALL WORK IN PROGRESS AT CH 32+240 RHS**



### 11.8 Package -8C—Photographs



Box culvert Reinforcement work in progress



Back filling Work in progress



Pipe laying work



Toe wall Work in Progress



Gabion wall 1<sup>st</sup> lift work in progress



Gabion wall work in progress



11.9 RKI 4 Road –( Adoor to Chengannur) Photos



Survey work in progress



Survey work in progress



Survey work in progress



Drain Cleaning work in progress



Drain Cleaning work in progress



Drain Cleaning work in progress

11.10 RKI 3 Road –( painavu-Ashokakaval road) Photos



Survey work in progress



Survey work in progress



Executive Engineer, Muvattupuzha visited the site along with EPC Contractor



Survey work in progress



11.11 **SCDP Road –Component B –Photographs**



Ladder hatching & hatch marking



School Zone Treatment

-----End of Report-----