



REPUBLIC OF GHANA

DEPARTMENT OF FEEDER ROADS

OF THE

MINISTRY OF ROADS AND HIGHWAYS

FOURTH QUARTER REPORT

FOR 2019

JANUARY, 2020

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Acronyms and Abbreviations

DFR	:	Department of Feeder Roads
DFID	:	Department for International Development
GOG	:	Government of Ghana
GIS	:	Geographical Information System
MRH	:	Ministry of Roads and Highways
DCRIP	:	District Capital Roads Improvement Project
GHA	:	Ghana Highway Authority
DUR	:	Department of Urban Roads
AFD	:	Agence Francais de Developement
SIDA	:	Swedish International Development Agency
TSPS	:	Transport Sector Programme Support
DANIDA	:	Danish International Development Agency
MOFA	:	Ministry of Food and Agriculture
KfW	:	Kreditanstalt für Wiederaufbau
AfDB	:	African Development Bank
EMQAP	:	Export Marketing and Quality Awareness Project
TSP	:	Transport Sector Programme
IFAD	:	International Federation for Agricultural Development
JICA	:	Japan International Cooperation Agency
MMDAs	:	Metropolitan, Municipal and District Assemblies
MDAs	:	Ministries, Departments and Agencies
MoF	:	Ministry of Finance
LSDGP	:	Local Service Delivery and Governance Programme
LBT	:	Labour Based Technology
DWD	:	District Works Department
RSDP	:	Road Sector Development Programme
VOC	:	Vehicle Operating Cost
KNUST	:	Kwame Nkrumah University of Science and Technology
KTC	:	Koforidua Training Centre
RAI	:	Rural Accessibility Index

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CHAPTER ONE: EXECUTIVE SUMMARY

1.0 Mission and Vision of DFR

1.0.1 Mission

To ensure the provision of safe, all weather accessible feeder roads at optimum cost, to facilitate the movement of people, goods and services and to promote socio-economic development, in particular agriculture.

1.0.2 Vision

To ensure that 80% of rural communities in Ghana can access a feeder road within 2km radius at optimum cost under a decentralized system.

1.0.3 Functions

The functions of the DFR are as follows;

1. Plan, develop and maintain feeder road networks and related bridge works.
2. Undertake research to support DFR's planning, development and maintenance activities.
3. Undertake route location and design studies for development of feeder roads
4. Classify and set up design standards on different classes of feeder roads.
5. Ensure an effective information management system on feeder roads.
6. Procure the services of contractors for the construction of feeder roads and related bridge works.
7. Ensure that Labour standards, environmental, health and safety related issues are adhered to during execution of feeder road contracts.
8. Initiate the development and implementation of human resource management policies, systems and programs consistent with the requirements of the sector to enhance service delivery.
9. Facilitate the implementation of capacity building activities for DFR staff, contractors and other stakeholders to attain efficiency in DFR's functions.
10. Collaborate with other MDAs to provide technical backstopping on feeder road related issues.

1.1 Road Network and Condition Mix

The total feeder road network as at December, 2018 was 42,550km (confirmed after road condition survey as at December, 2019 to be **42,428.56km**)

Comprehensive condition survey on the network was carried out on the network in all the regions to enable an analysis and update of the network. The field data collection exercise was completed with data transmission to head office for the database update. The data transmission process suffered some challenges including breakdown of equipment (especially server) in some regions.

However, efforts were made to overcome the challenges leading to the successful completion of the update of the network condition. Therefore the feeder roads network condition mix as at December, 2019 is presented as follows;

Good	37%
Fair	31%
Poor	32%

Details of the surface types are as follows:

Bituminous surface	:	3,051.65km	(7%)
Gravel roads	:	26,223.05km	(62%)
<u>Earth roads</u>	:	<u>13,153.85km</u>	<u>(31%)</u>
TOTAL	:	42,428.56km	

The breakdown of the network is as follows:

Engineered network	:	26,526.36km	(63%)
Partially engineered network	:	6,225.91km	(14%)
<u>Un-engineered network</u>	:	<u>9,676.29km</u>	<u>(23%)</u>
		42,428.56km	

1.2 DFR Policy and Strategy for network Maintenance and Economic Development

The ultimate aim of the DFR is to achieve a network condition mix of 70%, 20%, 10% good, fair, poor respectively in the long term in a progressive manner.

As a means to working towards the aim, it has become DFR's policy to always keep the engineered and partially engineered feeder roads in good or fair condition through routine/recurrent activities. The rationale is to provide continual access to rural communities, agricultural enclaves and tourist attraction sites while upgrading the poor network under periodic and minor rehabilitation activities. This strategic decision is in line with the Road Sector Strategies under the Sector Medium Term Development Plan (SMTDP, 2018 – 2021) under which the sector wide strategy for Road and Bridge Maintenance (section 3.1.2.1 of SMTDP document) identifies the following;

- Prioritising Routine Maintenance above all other activities
- Achieve 100% Routine Maintenance
- Achieve 50% of Periodic and Minor Rehabilitation needs
- Contribute to increase percentage of paved roads from 26% to 30% by the end of 2021

- Achieve National road condition mix of 50%, 40%, and 10%, good, fair, poor respectively by the end of 2021

Thus in order for the DFR to contribute effectively to the achievement of the set condition mix by 2021, the department's operations or activities will be targeted at improving the upon the condition for 2018 as follows;

- Reduce the current 40% poor by 30% through upgrading
- Improve upon the 33% fair by 23% through upgrading and
- Ensure 100% maintenance of the eventual good percentage.

However the current level of contract portfolio and delay in payment for work done (including routine maintenance, which has a net effect on contractor performance and therefore the road condition, could be a major hindrance to the achievement of the set condition mix target by 2021.

1.3 Historical Overview of Condition Mix

The historical overview of Condition Mix of the feeder road network has changed from 35% good, 37% fair and 28% poor in December 2007 to 27% good, 33% fair and 40% poor as at the end of December, 2018

The historical overview of the condition mix is shown below:

	2007	2008	2009	2013	2014	2015	2017	2018	2019
GOOD	35%	38%	39%	30%	30%	34%	37%	27%	37%
FAIR	37%	32%	30%	38%	38%	34%	38%	33%	31%
POOR	28%	30%	31%	32%	32%	32%	25%	40%	32%

The observed trend between 2009 and 2018 shows a fall and rise in the percentage of good surface condition roads with the worst case occurring in 2018. This is attributed to a number of factors, major among which is the failure of contractors to execute routine maintenance works as a result of delay in payment for work done and lack of financial capacity of some routine maintenance contractors. This situation is reflected in the low achievement in physical progress within the first and second quarters of 2019.

1.4 Targets and Achievements as at 31st December, 2019

The planned activities for 2019 included the continuation of spill over contracts from 2018 (including on-going contracts awarded in or before year 2016) and new contracts awarded between year 2017 and year 2019.

Table 1.1 shows the planned (approved) programme and achievement as at 31st December, 2019 while Table 1.2 shows the financial programme and disbursements by DFR for both GOG and Donor projects as at 31st December, 2019.

Table 1.1: Physical Target and Achievements (January – December, 2019)

ACTIVITIES	APPROVED ANNUAL PROGRAMME	PHYSICAL ACHIEVEMENT	% ACHIEVED
	Km/No	Km/No	
Routine Maintenance - (Reshaping)	16,000.00	7,200.00	45.00%
Sub-Total	16,000.00	7,200.00	45.00%
Periodic Maintenance			
Spot Improvement	200.00	106.40	53.20%
Minor Improvement			
Upgrading of Gravel to Bituminous Surface (Town Roads)	20.00	14.20	71.00%
Upgrading of Gravel to Bituminous Surface	150.00	111.00	74.00%
Upgrading of Earth to Gravel Surface (Rehabilitation)	150.00	109.50	73.00%
Sub-Total	520.00	340.70	65.52%
Bridge Programme			
Bridges	18.00	4.00	22%
Grand Total	16,538.00	7,544.70	45.62%

Table 1.2: Financial Programme and Disbursement (January - December, 2019)

ACTIVITY	BUDGET FOR 2019			EXPENDITURE FOR JAN. – DEC., 2019			REMARKS
	TOTAL (GOG)	TOTAL (DONOR)	TOTAL (DONOR & GOG)	TOTAL (GOG)	TOTAL (DONOR)	TOTAL (DONOR & GOG)	
	AMOUNT (GH¢m)	AMOUNT (GH¢m)	AMOUNT (GH¢m)	AMOUNT (GH¢m)	AMOUNT (GH¢m)	AMOUNT (GH¢m)	%
ROUTINE MAINTENANCE	45.000	0.000	45.000	4.676	0.000	4.676	10.39%
PERIODIC MAINTENANCE							
Spot Improvement	16.672	10.021	26.693	1.295	0.000	1.295	4.85%
MINOR IMPROVEMENT							
Surfacing	100.035	60.124	160.159	119.305	0.000	119.305	74.49%
Rehabilitation	50.017	30.062	80.079	15.001	0.000	15.001	18.73%
BRIDGES							
Bridges	15.463	100.794	116.257	6.188	0.000	6.188	5.32%
Consultancy services	0.841	0.000	0.841	3.251	0.000	3.251	386.56%
Institutional sup, Road Safety & Env	1.973	0.000	1.973	0.000	0.000	0.000	0.000%
GRAND TOTAL	230.001	201.001	401.002	149.716	0.000	149.716	37.34%

Table 1.3: Department of Feeder Roads Programme and Achievement (January- December, 2019)

ACTIVITIES	APPROVED ANNUAL PROGRAMME			APPROVED BUDGET			FINANCIAL EXPENDITURE			PHYSICAL ACHIEVEMENT			
	GOG (Km/No.)	DONOR (Km/No.)	TOTAL (KM/No.)	GOG GH¢(M)	DONOR GH¢(M)	TOTAL GH¢(M)	GOG GH¢(M)	DONOR GH¢(M)	TOTAL GH¢(M)	GOG (Km/No.)	DONOR (Km/No.)	TOTAL (KM/No.)	% ACHIEVED
Routine Maintenance	16,000.00	-	16,000.00	45.000	0.000	45.000	4.676	0.000	4.676	2,630.55	-	2,630.55	16.40
Periodic Maintenance													
Spot Improvement	200.00	-	200.00	16.672	10.021	26.693	1.295	0.000	1.295	113.40	-	113.40	56.70
Minor Improvement													
Surfacing	170.00	-	170.00	100.035	60.124	160.159	119.305	0.000	119.305	117.14	-	117.14	68.82
Rehabilitation	150.00	-	150.00	50.019	30.062	50.079	15.001	0.000	15.001	103.00	-	103.00	68.67
Bridge Programme													
Bridges	18.00	-	18.00	15.463	100.794	116.257	6.188	0.000	6.188	4.00	-	4.00	22.00
Consultancy services				0.841	0.000	0.841	3.251	0.000	3.251	-	-	-	-
Institutional sup, Road Safety & Envir				1.973	0.000	1.973	0.000	0.000	0.000	-	-	-	-
Grand Total	16,538.00	0.0	16,538.00	230.001	201.001	401.002	149.716	0.000	149.716	2,968.09	0.0	2,968.09	17.95

NB: Expenditure on consultancy is for payment of arrears only.

CHAPTER TWO: DEVELOPMENT PARTNERS ASSISTED PROGRAMME

2.1 Transport Sector Improvement Project (TSIP)

2.1.1 Introduction

Background

The main development objective of the proposed TSIP is to support Government of Ghana: (i) reduce travel time on selected parts of the classified road network in Northern Ghana through the introduction of Performance Based Contracts; (ii) promote road safety and (iii) strengthen the institutional management of the transport sector. The project include the following components:

2.1.2 Component 1: Road Asset Preservation:

This Component covers improving the sustainable management of Ghana's road network with support for the establishment of a network-wide Road Asset Management System and the introduction of performance-based contracting, in the form of long-term performance-based roads contracts based on design-build-operate-maintain-transfer principles. The Project will introduce PBCs on selected parts of the networks managed by the Ghana Highway Authority (GHA) and DFR.

The PBC- methodology will use World Bank's Bid Document for Output and Performance-based Road Contracts (OPRC) on both paved and unpaved roads. These PBCs will include the initial rehabilitation works and the long-term maintenance services in lump sum contracts where payments are based on achieving performance targets. The duration of the paved and unpaved roads are 5 years each.

The Project activities will be spread over two main road networks (trunk and feeder/farm roads) allowing the respective responsible Agencies to gain experience with this new contracting arrangement after which the Government could replicate and rollout the methodology with similar, but domestically-funded contracts.

2.1.3 Component 2: Improved Road Safety:

This Component will support the activities related to improving road safety in Ghana with particular support to the National Road Safety Authority (NRSA), and Driver &

Vehicle Licensing Authority (DVLA) to engage in activities including operationalizing the crash database, mainstreaming road safety in school curricula and driver training in general, as well as roll out private sector driven vehicle inspection facilities.

2.1.4 Component 3: Institutional Strengthening and Capacity Building:

This components aims to support government's vision of modernizing the Transport Sector so that the respective Road Agencies can become more effective road asset managers and can also more efficiently respond to the changing demands in the transport sector. The component also include Local and Overseas short courses as well as limited Postgraduate courses for the implementing agencies.

2.1.5 Improved Asset Management of the Feeder Road Network:

- a. Consulting services to undertake the Assessment Study and develop the bid documents for the road network in five prioritized geographical areas.
- b. PBC works contract for the improvement of the selected road network in the Atebubu District of the Bono East (formally part of the Brong Ahafo) Region.
- c. Monitoring Consultancy services
- d. Socio- Economic Impact Assessment (SEIA) to determine the long-term impact of using PBCs on rural development initiatives such as the Ghana Agricultural Sector Improvement Programme (GASIP) activities

2.1.6 Project Components and Cost

The project has three (3) main components and is estimated to cost One Hundred and Fifty Million United States Dollars (US\$150million). The project is 100% funded by the IDA (inclusive of taxes and duties). Details of the project components and cost are outlined in the tables below:

Table 2.1: Project Components and Estimated Costs

Project Components	Project Cost (US\$ M)	IDA Financing	IDA Financing (%)
Component 1: Road Asset Preservation (About US\$125 million)			
1.1. Development of a Road Asset management System	3.0	3.0	100%
1.2 Improved Asset Management on the Trunk Road Network	100.0	100.0	100%
1.3 Improved Asset Management on the Feeder Road Network	22.0	22.0	100%
1.4 Improved Asset Management on the Urban Road Network	0.0	0.0	0%
Component 2. Improved Road Safety (About US\$8 million)			
2.1. Support to NRSC	6.0	6.0	100%
2.2. Support to DVLA	2.0	2.0	100%
Component 3: Institutional Strengthening and Capacity Building (about US\$17.0 million)			
3.1. Institutional Strengthening	8.0	8.0	100%
3.2. Support Capacity Building	5.0	5.0	100%
3.3. Support Project Implementation	4.0	4.0	100%
Total with taxes	150.0	150.0	100%

2.1.7 Assessment Study Consultancy (UWP Consulting)

This Consultancy assignment commenced in April, 2017. Ghana Highway Authority (GHA) are the client for this assignment. This service combines the GHA road and DFR Packages in Bono East, Northern Region, Upper West and Upper East region.

Five (5) Addenda have been issued on the project so far. Addendum No. 3 specifically requested the Consultant to prepare Assessment study report, Concept design and bidding documents for the project in Upper West region. EU has provided a grant of Euro 35 million for the roads in upper West region through the Ministry of Food and Agriculture under the Savannah Ecological Zone 6 programme.

The following have been achieved under this component;

- a. Concept Design Report
- b. Assessment study report including (Gender and Poverty, Environmental Social Impact Assessment, Citizen Engagement report)
- c. Bidding documents for Package 3 (Selected Feeder Roads in Atebubu District), Package 4 (Selected Feeder Roads in East Gonja District) Package 5 (Selected Feeder Roads in Builsa North and Builsa South Districts) and Package 6 (Selected Feeder Roads in Zabzugu District)
- d. Tendering for the Package 3 in Atebubu district is ongoing. The Technical evaluation report is being finalized to be submitted to the World Bank for no-objection to enable financial proposal to be opened.

2.1.8 Socio-economic Baseline Studies on Selected Feeder Roads in Brong Ahafo, Northern, Upper East and Upper West Regions

Request for Expression of Interest (REOI) was issued and appeared in the Ghanaian Times Newspaper edition of 3rd December, 2015. Four (4) firms were short-listed and Request for Proposal (RFP) issued to all of them on 13th July, 2016.

Messrs Ablin Consult was awarded the contract for the Assignment. Addendum No.1 to the contract was signed on 19th April, 2017 to grant an extension of time (EoT).

Addendum No.2 was issued to Messrs Ablin Consult to undertake socio-economic baseline studies to include roads in final prioritized list for the OPRC network.

Addendum No. 3 has been prepared and submitted to the Bank for similar assignment to be carried out on the three (3) packages in the Upper West region to be funded by the European Union. This assignment will take-off when the European Union trust fund administered by the World Bank is operational through the finalization of the Additional Financing agreement between the World Bank and the EU.

2.1.9 GH-MRH-8885-CW-RFB: Works contract for upgrading to gravel surface of selected Feeder Roads in Atebubu District of the Bono East Region.

Evaluation of Technical Proposals is ongoing.

2.1.10 GH-GHA-8777-CS-QCBS: Consultancy services for the Assessment studies of Tatale-Zabzugu-Yendi-Tamale, Zabzugu-Bimbila road and selected Feeder Roads in Brong Ahafo, Northern and Upper East Regions

Request for Expression of Interest (REOI) was issued on the UNDB and World Bank websites on 5th October, 2015. The REOI was subsequently published in the Ghanaian Daily Graphic of 14th September, 2015. An addendum was, therefore, issued on 28th September, 2015.

Request for Proposal (RFP) documents were issued to short-listed firms on 17th August, 2016.

Contract for the assessment studies assignment was signed with Messrs UWP Consulting Limited on 11th April, 2017 to be completed in Nine (9) calendar months.

Contract Amendment No. 1 was signed on 13th June, 2017 to include Environmental, Gender, Poverty, Citizen Engagement, RAP and Yendi Urban (Township) link in the assignment.

Contract Amendment No. 2 was also signed on 8th December, 2017 to grant an Extension of Time (EoT) of 2.25 months to the consultants.

The consultants have submitted all deliverables. All final bidding documents, Assessment study reports, Resettlement Action Plans for all the packages in the parent assignment received.

The individual candidate roads under the TSIP with respect to feeder roads is provided on the table below;

TSIP FEEDER ROADS LIST

Road No.	Road Name (per Rd Network)	Region	District	Start (Location Name)	End (Location Name)	Start - End (Location Name)	Length (km)	Intervention
8	DFR00980	Brong Ahafo	Atebubu/Amanten	Amanten	Dawuda	Amanten - Dawuda	11.7	Rehabilitation
9	DFR00987	Brong Ahafo	Atebubu/Amanten	Amanten	Kwadwo Kuma	Amanten - Kwadwo Kuma	16	Rehabilitation
10	DFR00991	Brong Ahafo	Atebubu/Amanten	Akokoa	Kumfia	Akokoa - Kumfia	25.4	Rehabilitation
2015	DFR01019	Brong Ahafo	Atebubu/Amanten	Duabone No 1	Pruso Aworoso	Duabone No 1 - Pruso Aworoso	15.7	Improvement
2016	DFR01020	Brong Ahafo	Atebubu/Amanten	Issifu Akura	Masando	Issifu Akura - Masando	18.6	Rehabilitation
2017 (a)	DFR01021	Brong Ahafo	Atebubu/Amanten	Atebubu	Matehuso Jn.	Atebubu - Matehuso Jn.	13.3	Rehabilitation
2017 (b)	DFR01021	Brong Ahafo	Atebubu/Amanten	Matehuso Jn.	Bakyase	Matehuso Jn. - Bakyase	10.2	Improvement
2018	DFR01047	Brong Ahafo	Atebubu/Amanten	Atebubu	Asebu Yerewuho	Atebubu - Asebu Yerewuho	7.9	Improvement
2019	DFR01048	Brong Ahafo	Atebubu/Amanten	Boniafo	Asebu Yerewuho Jn.	Boniafo - Asebu Yerewuho Jn.	4.9	Improvement
2020	-	Brong Ahafo	Atebubu/Amanten	Kokofu	Asebu Yerewuho	Kokofu - Asebu Yerewuho	8.4	Improvement
2022	-	Brong Ahafo	Atebubu/Amanten	Dawuda	Kwadwo Kuma	Dawuda - Kwadwo Kuma	7.2	Rehabilitation
2023	DFR01008	Brong Ahafo	Atebubu/Amanten	Mem	Seinti	Mem - Seinti	11	Rehabilitation
2025	-	Brong Ahafo	Atebubu/Amanten	Matehuso Jn.	Matehuso	Matehuso Jn. - Matehuso	8.1	Rehabilitation
2026 (a)	DFR01020	Brong Ahafo	Atebubu/Amanten	Nyomoase	Trohwe Kotope	Nyomoase - Trohwe Kotope	5.5	Improvement
2026 (b)	DFR01020	Brong Ahafo	Atebubu/Amanten	Nyomoase	Bakyase	Nyomoase - Bakyase	7.9	Improvement
R047-003	R047-003	Brong Ahafo	Atebubu/Amanten	Atebubu	Kumfia	Atebubu - Kumfia	28.35	Improvement
11	DFR91038a	Northern A	East Gonja	Makango	Landing Site	Makango - Landing Site	2.04	Rehabilitation
12	DFR00267	Northern A	East Gonja	Bau	Kafaba	Bau - Kafaba	19	Improvement
13	DFR009016	Northern A	East Gonja	Kakoshie	Kalampru	Kakoshie - Kalampru	11.1	Improvement
14	DFR00271	Northern A	East Gonja	Bagabaga	Kunshie Jn	Bagabaga - Kunshie Jn	29.4	Improvement
15	DFR00267	Northern A	East Gonja	Salaga	Bau	Salaga - Bau	12.4	Improvement
18	DFR91038b	Northern A	East Gonja	Gbetekpo Jn	Gbetekpo	Gbetekpo Jn - Gbetekpo	15.1	Improvement
22	DFR00279	Northern A	East Gonja	Bunjai	Kadin Kura	Bunjai - Kadin Kura	23.4	Improvement
23	DFR00268	Northern A	East Gonja	Bau	Accrape	Bau - Accrape	21.3	Improvement
24	DFR00261	Northern A	East Gonja	Kulupi	Seneyiri	Kulupi - Seneyiri	29.3	Rehabilitation
2009	DFR00253	Northern A	East Gonja	Salaga	Kulupi	Salaga - Kulupi	19.9	Rehabilitation
57	DFR00081	Northern C	Zabzugu	Nakpali	Lahatoh	Nakpali - Lahatoh	17.9	Improvement
58	DFR06577a	Northern C	Zabzugu	Chichagi	Gbullung	Chichagi - Gbullung	8.45	Improvement
59	DFR00084	Northern C	Zabzugu	Kukpaligu	Kolikoli	Kukpaligu - Kolikoli	13.4	Rehabilitation
60	DFR00086	Northern C	Zabzugu	Gbandi	Jankum	Gbandi - Jankum	10.6	Rehabilitation
61	DFR00085	Northern C	Zabzugu	Ojoja Jn	Ochadindo	Ojoja Jn - Ochadindo	10.3	Rehabilitation
62	DFR90061a	Northern C	Zabzugu	Woribogu	Egambo	Woribogu - Egambo	16.7	Improvement
63	DFR90060a	Northern C	Zabzugu	Nakpali	Chichagi	Nakpali - Chichagi	11.5	Rehabilitation
2001	DFR06577	Northern C	Zabzugu	Nakpali	Bagmane	Nakpali - Bagmane	17.6	Rehabilitation
2002	DFR00064	Northern C	Zabzugu	Gor-Kukani	Wongolon	Gor-Kukani - Wongolon	10.8	Improvement
2003	DFR00082	Northern C	Zabzugu	Gor-Kukani	Binyimkumdo	Gor-Kukani - Binyimkumdo	18.5	Rehabilitation
2004	DFR06717	Northern C	Zabzugu	Dazuilgibini	Laribanga	Dazuilgibini - Laribanga	16.6	Improvement
2005	DFR00066	Northern C	Zabzugu	Zabzugu	Kukpaligu	Zabzugu - Kukpaligu	22.2	Improvement
2027	-	Northern C	Zabzugu	Kinagbik	Landerdo	Kinagbik - Landerdo	3.64	Rehabilitation
2028	DFR02315	Northern C	Zabzugu	Kokuokpang No. 2	Sabondjidai	Kokuokpang No. 2 - Sabondjidai	6.32	Improvement
2029	-	Northern C	Zabzugu	Kolikoli	Ojoja	Kolikoli - Ojoja	4.1	Improvement
R029-005	R029-005	Northern C	Zabzugu	Oti River	Zabzugu	Oti River - Zabzugu	58	Rehabilitation
44	DFR02316	Upper East	Mamprugu/ Moaduri	Jadima	Fumbisi Jn	Jadima - Fumbisi Jn	19.5	Improvement
45	DFR00666	Upper East	Mamprugu/ Moaduri	Kunkwa	Fumbisi	Kunkwa - Fumbisi	23.2	Improvement
48	DFR02310	Upper East	Builsa South	Bachesa	Fumbisi	Bachesa - Fumbisi	5.74	Improvement
49	DFR02309	Upper East	Builsa South	Fumbisi	Kanjarga	Fumbisi - Kanjarga	9.82	Improvement
50	DFR02312	Upper East	Builsa North	Wiaga	Kom	Wiaga - Kom	9.09	Improvement
53	DFR92325a	Upper East	Builsa North	Wiaga	Kadema	Wiaga - Kadema	7.93	Improvement
54	DFR02320	Upper East	Builsa North	Kadema	Asibalik Valley	Kadema - Asibalik Valley	15.7	Rehabilitation
1002	DFR02318	Upper East	Builsa South	Fumbisi	Zamsa	Fumbisi - Zamsa	12.5	Improvement
2007	DFR02311	Upper East	Builsa South	Uwasi	Kadema	Uwasi - Kadema	12	Improvement
2008 (I-011-008)	I-011-008	Upper East	Builsa South	Wiasi	Jadima	Wiasi - Jadima	20.4	Improvement
2012 (I010-006)	I010-006	Upper East	Builsa South	Wiasi	Wiaga	Wiasi - Wiaga	37.2	Improvement
2013 (I-011-008)	I-011-008	Upper East	Builsa South	Jadima	Kunkwa	Jadima - Kunkwa	9.87	Improvement
46+47	-	Upper East	Builsa South	Fumbisi	Gbedembilisi	Fumbisi - Gbedembilisi	15.4	Improvement

2.2 Bridge Development Programme

The Department of Feeder Roads under its Bridge Development Programme has identified 5,000 water crossing points that hamper the provision of basic access to rural communities. Out of this number 1,200 sites have been classified as critical for the effective functioning of the rural road network.

The Department through the assistance of some development partners including Japan International Corporation Agency (JICA), Department for International Development (DFID) of United Kingdom, Agience Francais de Developement (AFD) of France, ACROW Corporation of United States of America (USA), the Spanish Government and the Government of the Royal Netherlands have constructed 170 bridges and major box culverts so far out of the 1,200 critical river crossing points identified.

The DFR Bridge Development Programme forms part of the Ministry of Roads and Highways' programme under the Ghana Poverty Reduction Strategy which aims at improving the socio-economic life of the rural dwellers.

The provision of the bridges have facilitated the safe and more economical movement of people, goods and services in the rural communities due to the elimination of long detours and making the network more coherent and interactive. This has also contributed to the reduction of travel times in some instances.

Table 3.2: SUMMARY OF STATE OF BRIDGE PROJECTS AS AT 31ST DECEMBER, 2019

Description	Dutch Bridges	Acrow Bridges	Spanish Bridges (Phase 1)	Spanish Bridges (Phase 2)	Belgium Bridges
No. Awarded	94	44	21	13	5
No. completed & opened to traffic	81	33	14	8	0
No. Launched but not opened to traffic	6	3	0	4	3
No. Awarded as Box Culverts	16	3	3	Nil	Nil
No. of Culverts completed & opened to Traffic	16	3	3	Nil	Nil
REMARKS	13no. terminated, 1no ongoing. 13no. by direct labour/variation to existing contracts	12no. terminated, 1no ongoing. 9no. by direct labour/variation to existing contracts. 9no. under emergency situations	7no. terminated, 6no. by direct labour/variation to existing contracts. 1no to be re-awarded	Funding under Ghana-Spain Debt Swap Programme	Civil works Supervision by Private Consultant. Slow progress partly due to financial challenges

2.2.1 Ghana/Dutch Bridges Project

2.2.1.1 Background

The Government of Ghana received a credit facility of Euro 16.5 million (with 65% credit and 35% grant) from the Netherlands Government for the supply of steel bridge components for the construction of ninety-two (92) bridges on selected feeder roads in Ghana under the “Ghana/Dutch Bridge Project”.

GOG provided a counterpart fund for the provision of the following:

- i. Construction of reinforced concrete bridge substructure.
- ii. Clearance and transportation of steel bridge components from Tema Port to the bridge sites.
- iii. Assembling and launching of steel bridges.
- iv. Construction of both the approach and access roads to the bridges and
- v. Construction of sixteen (16) major box culverts in tandem with the bridge project.

The project, which is in three phases, is as detailed below:

Phase I – 31 bridges and 14 major box culverts

Phase II – 30 bridges and 1 major box culvert

Phase III – 33 bridges and 1 major box culvert

2.2.1.2 Status

A total of ninety-two (92) bridges were planned under this programme. As at 31st December, 2019, eighty-seven (87) bridges have been launched with eighty-one (81) being opened to traffic and in service. The remaining five (5) which were constructed up to the launching level have been terminated due to excessive delay in completion. The uncompleted contracts numbering thirteen (11) were terminated.

The eleven (11) terminated contracts have been repackaged for future award or are being considered for installation under direct labour since substantial works were carried out before termination.

Sixteen (16) major box culverts were also awarded as part of the bridge programme and have been completed and opened to traffic. The overall progress of work under the programme is thus currently 100%.

Table 2.3 shows the regional distribution of the bridges and the number completed as at 30th June, 2019.

Table 2.3: Regional Distribution of Dutch Bridges and Number Launched/Completed

Region	BRIDGES		MAJOR BOX CULVERTS	
	No. Awarded	No. Launched/ Completed	No. Awarded	No. Completed
Greater Accra	4	4/2	2	2
Volta	9	9/9	0	0
Eastern	8	7/7	4	4
Central	10	10/9	1	1
Western	11	10/10	2	2
Ashanti	13	13/13	3	3
Brong Ahafo	13	13/12	1	1
Northern	11	9/9	0	0
Upper East	8	8/7	2	2
Upper West	5	4/2	1	1
TOTAL	94	87/80	16	16

2.2.2 Ghana-ACROW Bridges Project

2.2.2.1 Background

The Ghana-ACROW bridge project involved a total amount of US\$47.7 million. This consisted of a loan amount of US\$37.7 million for the supply of bridge components for 100 bridges. A grant amount of US\$7.0 million was also provided as seed money for the cost of the civil works and filling of approach roads to the bridges which is to be funded by GoG.

A contract for the supply of the bridge components was also signed as part of the project. The project was planned to be executed in three phases.

2.2.2.2 Status

A total of forty-seven (47) bridges were awarded under Phase One of the project but three (3) out of that number were redesigned as major box culverts due to the prevailing site conditions. In addition 10nos. bridges of various spans were executed under emergency situations which were completed successfully.

As at 31st December, 2019 a total of forty-three (43) bridges had been completed and opened to traffic. Three (3) of the box culverts have also been completed. In all thirty-three of the PH. 1 ACROW Bridges have been completed and the overall progress of work is about 98%.

Five of the uncompleted bridges under ACROW PH. 1 have been repackaged for re-award or they would be issued as variations to other running contracts for completion. The remaining six (6) have been put under Direct Labour and as and when resources are made available they would be completed.

The bridge components are currently stockpiled at DFR Stores in Koforidua and the Koforidua Training Centre (KTC) from where they are transported to the various sites as and when the sites are ready for assembly and launching.

The cost of the civil works for the phase 1 contracts was estimated at GH¢ 27,981,976.34.

Table 2.4 shows the regional distribution of the (Phase I) bridges.

Table 2.4: Regional Distribution of ACROW Bridges and Number Launched/Completed

Region	BRIDGES		MAJOR BOX CULVERTS	
	No. Awarded	No. Launched/ Completed	No. Awarded	No. Completed
Greater Accra	2	2/2	0	0
Volta	7	5/5	2	2
Eastern	4	5/4	1	1
Central	5	3/3	0	0
Western	5	5/5	0	0
Ashanti	6	4/3	0	0
Brong Ahafo	5	4/4	0	0
Northern	3	3/3	0	0
Upper East	3	3/3	0	0
Upper West	4	2/1	0	0
TOTAL	44	36/33	3	3

2.2.3 Ghana - Spanish Bridges Project

The Spanish bridge programme involves the construction of fifty two (52) bridges throughout the country.

This involves a facility of Euro 10.0 million under the Second Ghana-Spain Protocol for the supply of components. The supply of the components is in two lots of 26 each. The Government of Ghana is to fund the cost of the civil works and filling of approach road to formation level.

2.2.3.1 Status of Supply Contracts

Two supply contracts were awarded to Two (2) Spanish firms for the supply of the bridge components; M/s Makiber for Lot 1 and M/S Schwart-Hautmont for Lot 2.

Lot 1

M/s Makiber supplied twenty-six (26) bridge components which are stockpiled at the DFR Regional Office yard in Koforidua.

Lot 2

Under the Lot 2 supply contract, M/S Schwart-Hautmont also supplied 26 bridge components which are stockpiled at DFR Stores in Accra.

Progress

Phase 1

Contracts for 24 bridges under Phase 1 was awarded at a total cost of GH¢ 15,359,267.33. The design of three (3) of the 24 bridges under Phase 1 were revised due to the prevailing site conditions and were thus constructed as major box culverts.

Fourteen (14) bridges have been installed and opened to traffic. The remaining seven (7) bridges have been terminated. The overall progress of work for those opened to traffic is 100%.

Table 2.4 shows the regional distribution of the (Phase I) bridges.

Table 2.4: Regional Distribution of Spanish Bridges and Number Launched/Completed

Region	BRIDGES		MAJOR BOX CULVERTS	
	No. Awarded	No. Launched & Completed	No. Awarded	No. Completed
Greater Accra	0	0	0	0
Volta	1	1	0	0
Eastern	5	4	0	0
Central	2	2	2	2
Western	3	0	0	0
Ashanti	2	2	1	1
Brong Ahafo	2	2	0	0
Northern	2	2	0	0
Upper East	1	1	0	0
Upper West	3	0	0	0
TOTAL	21	14	3	3

2.2.3.2 Phase 2 Spanish Bridges

Thirteen (13no.) bridges were awarded in the last quarter of 2016 but works commenced in June 2017. They are located in Volta, Central, Eastern and Northern Regions. Abutments for all the thirteen (13) bridges have been completed. Twelve (12) of the thirteen (13) bridges have been launched with five (5) fully completed and opened to traffic.

Table 2.4b: Regional Distribution of Spanish Bridges and Number to Launching level

Region	No. Awarded	Foundations completed	Bridges launched	Bridges opened to traffic
Volta	4	4	3	2
Eastern	3	3	3	0
Central	3	3	3	3
Northern	3	3	3	3
TOTAL	13	13	12	8

2.2.4 Belgium Bridges

The supply of the bridge components for a total of 490m span over five (5) water crossing points have been received and stockpiled. As at 30th June, 2019 components for bridge installation have been supplied to three (3) of the sites and installed.

Table 2.5 shows roads, river names and regions within which the bridges are located and the individual progress of work as at this reporting quarter.

Table 2.5: Bridge Locations, River Names and Spans

No.	Road Name	River Name	Span of Bridge (m)	Region	District	% Progress	Remarks
1	Kpando Agbenoxoe – Kpando Dafor	Tributary to Volta	175	Volta	North Dayi	36%	Two abutments and two piers completed
2	Galo – Sota – Bomingo	Angor	70	Volta	South Tongu	97%	Foundation works completed. Bridge Installed
3	Anlo Jn. – Nsese No. 1 – Nsese No. 2	Pra	70	Eastern	Akyemansa	8%	Site clearance and access road in progress
4	Mankessim – Suprudo – Amissano	Okyi	105	Central	Mfantsiman	88%	Foundation works completed. Bridge Installed
5	Asempaneye – Kushea – Hwidiem	Pra	70	Central	Assin North	78%	Foundation works completed. Bridge Installed

Supervision of the works under this bridge programme is being undertaken by a Consultant. All the concrete works on the two (2) bridges in Central region and one (1) in the Volta region have been completed with bridge installation works currently on-going. The Contractors working at the Agbenoxoe site has completed the abutments and two piers and are working on the remaining two piers before any installation can begin. The Contractor working on the bridge located in the Eastern Region however is not showing the expected commitment to work progress.

CHAPTER THREE: GHANA GOVERNMENT PROGRAMME

3.1 Road Fund

3.1.1 Background

A total amount of GH¢150million was approved for DFR in 2019 by the Road Fund Board for routine/recurrent and periodic maintenance projects, training, monitoring and supervision of projects, and vehicle maintenance etc.

Routine/Recurrent maintenance	:	GH¢41.59million
Periodic Maintenance	:	GH¢33.16 million
Arrears	:	GH¢66.94million
<u>Ancillary Services (Others)</u>	:	<u>GH¢08.31million</u>
Total	:	GH¢150.00 million

3.2 Status

3.2.1 Routine / Recurrent Maintenance

The routine maintenance was planned to cover 16,000km (revised target) of feeder roads with an approved budget of GH¢41.59million. The total length achieved from January to December, 2019 is 2,630.55km, representing 16.40% of the total length of roads planned for maintenance. The target length (planned) was reviewed from 25,000km to 16,000km during the midyear due to the low level of achievement observed during the first quarter. The disbursement as at the end of December, 2019 is GH¢73.715million.

3.2.2 Periodic Maintenance

- (a) An estimated amount of GH¢33.16million was programmed for periodic maintenance for the year 2019.
- (b) Total disbursement made for Road Fund contracts including payments of some arrears as at 31st December, 2019 was GH¢73.715million.

3.2.3 Ancillary

No disbursement for support services i.e., training, supervision, consultancy, etc. was made under this reporting period.

3.2.4 Summary of Releases from January to December, 2019

Routine/Recurrent maintenance	:	GH¢ 1.845million
Periodic Maintenance	:	GH¢ 71.870million
Others	:	GH¢ 0.00million
Total release		GH¢73.715million

3.3 Consolidated Fund (Investment)

3.3.1 Background

The Budgetary allocation under investment for 2019 was **GH¢ 80.00million**. This budgetary allocation is appropriated under the ABFA.

3.3.2 Status

Assets: GH¢80.00million

A total of **GH¢71.043million** has been disbursed as at the end of March, 2019. The disbursements include payment for work done on on-going and completed contracts. Some of the contracts are substantially completed while others are at various stages of completion. It should be remarked that the progress of work at various sites continue to be discouraging due to the challenges of payment for work done in addition to the onset of the raining season.

3.4 Rural Roads in Cocoa Growing Areas

The Ghana Cocoa Board (COCOBOD) has collaborated with the Department of Feeder Roads since 1985 in the rehabilitation, upgrading and maintenance of roads critical to its operations, particularly, the supply of agro-inputs to cocoa farmers and the haulage of cocoa to the ports for export. These roads are termed Cocoa Roads under the programme. The collaboration was expanded to cover the full mandate of COCOBOD to include coffee and sheanuts cultivation areas.

The Government of Ghana (GoG) is funded the initial programme in two (2) tranches.

3.4.1 Tranche 1 - CRIP

Background

The name of the programme under the Tranche 1 was Cocoa Roads Improvement Project (CRIP). GoG made provision for US\$100million for the surfacing of 600km of cocoa roads in the six cocoa producing regions in the country namely: Eastern, Ashanti, Brong Ahafo, Central, Volta, and Western regions.

The total length of roads covered under the three (3) phases of Tranche 1 are as follows:

PH1	211.60km
PH2	221.5km
PH3	252.1km

A total of 685.2km of roads were to be completed at an estimated cost of US\$100M. Table 3.1 shows the achievement of the programme as at the end of June, 2019.

Status

Table 3.1: Summary of Achievements as at 30th June, 2019:

ACTIVITY	TARGET (KM)	ACHIEVEMENT (KM)	PERCENTAGE COMPLETED (%)
PHASE 1	211.6	171.95	81%
PHASE 2	221.5	227.8	103%
PHASE 3	252.1	99.25	39%
TOTAL	685.2	499	73%

The cumulative length executed since the start of the programme was 499km. Tables 3.2 and 3.3 show the regional distribution of Tranche 1 for the three phases and the physical and financial summaries, respectively.

Table 3.2: Regional Distribution of Projects

REGION	PH1		PH2		PH3		TOTAL
	LOTS (No)	LENGTH (KM)	LOTS (No.)	LENGTH (KM)	LOTS (No)	LENGTH (KM)	LENGTH (KM)
WR	5	33.3	17	123.1	11	91.6	248
ASR	7	52.2	11	67.3	8	56	175.5
ER	4	28	2	8	5	29.8	65.8
BAR	6	39.2	5	23.1	2	26.7	89.0
CR	4	33.5	0	0	4	40	73.5
VR	5	25.4	0	0	2	8.0	33.4
TOTAL	31	211.6	35	221.5	32	252.1	685.2

Table 3.3: General Summary

NO.	PHASE	LENGTH (KM)	CONTRACT PRICE (GH¢)
1	PHASE 1	211.6	27,196,508.90
2	PHASE 2	221.5	39,288,210.06
3	PHASE 3	252.1	55,187,573.12
TOTAL		685.2	121,672,292.08

3.4.2 Tranche 2 - CFRIP

Under the Tranche 2 the name of the programme was modified to COCOBOD Funded Roads Improvement Project (CFRIP) because other roads located within the Coffee and Sheanuts growing areas were included. The GoG, through the Ministry of Roads and Highways provided funds for the maintenance, rehabilitation and upgrading of roads in order to augment the achievement of the full mandate of COCOBOD within the cocoa, coffee and sheanuts growing regions of Ghana.

Table 3.4 shows summary of regional distribution of the roads.

Table 3.4: Tranche 2 Regional Summary

NO	REGION	SURFACING			SPOT IMPROVEMENT			REHABILITATION		
		NUMBER OF PROJECTS	KM	COST (GH¢)	NUMBER OF PROJECTS	KM	COST	NUMBER OF PROJECTS	KM	COST (GH¢)
1	EASTERN	12.00	75.19	27,339,184.68	28	87.59	5,330,478.98	0.00	0	0.00
2	VOLTA	14.00	71.30	45,131,192.52	21	69.70	4,919,571.54	0.00	0	0.00
3	CENTRAL	9.00	79.45	21,078,556.04	21	127.35	6,392,166.83	5	26.1	2,819,354.73
4	WESTERN	14.00	130.60	62,105,249.81	30	267.5	14,728,440.18	3.00	55	2,545,380.85
5	ASHANTI	14.00	75.84	24,605,339.84	28	149.0	1,991,734.27	0.00	0	0.00
6	BRONG AHAFO	11.00	48.60	20,099,818.76	46	360.10	13,705,909.95	0.00	0	0.00
7	GREATER ACCRA	11.00	38.60	12,741,689.80	9	57.20	3,331,864.37	0.00	0	0.00
8	NORTHERN	3.00	15.50	5,601,254.12	15	214.72	7,141,572.15	5.00	34	3,489,922.42
9	UPPER EAST	6.00	28.00	20,392,335.78	7	58.3	2,698,832.74	1.00	16	800,000.00
10	UPPER WEST	5.00	17.10	8,973,146.85	17	140.75	5,500,220.61	1.00	7	711,933.34
TOTAL		99.00	580.18	248,067,768.20	222	1532.21	65,740,791.62	12.00	118	9,166,386.42

The physical achievement of the projects under the Tranche 2 as at end of 2016 is as follows;

Table 3.5: Physical Achievement

ACTIVITY	TARGET (KM)	ACHIEVEMENT (KM)	% ACHIEVEMENT
Surfacing	481.69	263.57	54.7
Spot Improvement	1,061.14	351.74	33.1
Rehabilitation	81.1	23.00	28.4
Total	1,623.93	638.3	Average 39.3

No significant progress has been observed in respect of the progress of works at site since December, 2016.

TRANCHE 3: COCOBOD FUNDED PROJECTS

The contracts under Tranche 3 was awarded in 9 phases. The total lots and lengths per region is as shown in table 3.6 below whiles the contract costs are indicated in Table 3.7 below.

Table 3.6 Regional Distribution of Projects as at 30th June, 2019

REGION	PHASE 1		PHASE 2		PHASE 3		PHASE 4		PHASE 5		PHASE 6		PHASE 7		PHASE 8		PHASE 9A		PHASE 9B		TOTAL LEN
	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	LOT	LEN	
	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	(NO.)	(KM)	
WR	3	51.2	12	103.7	4	23	1	12.0	1	11.2	1	11.3	2	27.4	2	33.8	0	0	0	0	(KM)
ASR	2	35.2	8	87.4	7	52	1	29.5	4	37	1	7.0	3	40.09	2	23	2	21.1	3	42.7	374.9
ER	4	43.7	15	100.2	4	22.4	0	0	1	10.5	0	0	0	0	0	0	0	0	1	14.4	191.2
BAR	4	44.4	6	68.9	7	101.4	2	24.4	0	0	1	10.7	2	36.5	0	0	0	0	0	0	286.3
CR	5	30.3	9	76.3	0	0	1	5.3	0	0	0	0	0	0	2	27.5	0	0	0	0	218.9
VR	4	37.3	0	0	1	1.8	1	15.9	2	39.5	0	0	3	24.3	1	8.0	1	12.50	1	20	159.3
TOTAL	22	24.2	50	436.5	22	200.6	6	87.1	8	98.2	3	29	10	128.3	7	92.3	3	33.6	5	77.1	1,424.8

Table 3.7 phase, length and estimated contract price as at June, 2019

NO	PHASE	LENGTH (KM)	CONTRACT PRICE (GH¢)
1	PHASE 1	242.1	240,149,634.16
2	PHASE 2	436.5	317,683,167.07
3	PHASE 3	200.6	335,688,468.86
4	PHASE 4	87.10	141,228,814.77
5	PHASE 5	98.2	147,347,374.25
6	PHASE 6	29	29,682,161.82
7	PHASE 7	128.3	85,292,305.47
8	PHASE 8	92.3	176,516,705.11
9	PHASE 9A	33.6	54,103,873.83
10	PHASE 9B	77.1	85,069,830.69
TOTAL		1,424.8	1,612,762,336.03

CHAPTER FOUR: COLLABORATIVE PROGRAMMES

4.1 WESTERN CORRIDOR INFRASTRUCTURE PROJECT

4.1.1 Introduction

The Atuabo Gas Processing Plant in the Western Region has been constructed to produce Liquefied Petroleum Gas (LPG) in commercial quantities as part of the natural gas prospecting activities for the nation. The initial design proposal was to transport the LPG via subsea through Camp Buoy but due to time constraint, it is desired that the LPGs be transported by road.

However, in view of the general poor condition of the selected LPG transporting road corridor in the Western Region, the Ministry of Energy and Petroleum arranged with the Jubilee Partners to solicit financial support to facilitate the construction of the road network in the gas production zone.

A feasibility assessment was therefore carried out to ascertain the conditions of the existing road network within the corridor and proposed a suitable route that will enable the safe transportation of LPG with limited impact on the environment.

To this effect, the Department of Feeder Roads (DFR) was contacted to assist in the upgrading of part of the road network to facilitate the transportation of the LPG. A total of 34.00km of the road network was seeded to the department to supervise. Due to the urgency of the work, the road was divided into two phases and awarded to two construction firms. The total cost of the two (2) contracts is GH¢24.368m.

The two phases commenced in April and May, 2014 respectively under the supervision of a team of DFR personnel selected from four (4) regions of the country and were expected to be completed in February 2016. However, there has been additional works as a result of which the Contract durations have been extended. The scope of additional works include additional roads or additional quantity of certain items.

A third contract with the description of Bitumen Surfacing of Half Assini – New Town Road (20.0km) was awarded on 26th July, 2016 for completion over a 12 months period.

4.2.2 Status

The physical progress of work for the Lot 1 and lot 2 contracts are 100% and 82% respectively while the third contract is at 22% physical progress. The total certified amount of work done as at 30th June, 2019 is GH¢**70,987,529.35**million. Table 4.3 shows the detailed progress data on the three contracts.

Table 4.3: Western Corridor Gas Infrastructure Project

Department of Feeder Roads

Western Corridor Gas Infrastructure Project

Progress Report- June, 2019														
Region	District	Lot No	Road name	Length (km)	Name of contractor	Award Date	Commencement Date	Revised Completion Date	Contract Sum (GHC)	Revised Contract Sum (GHC)	Certified Payment to Date	Planned/ Scheduled progress (%)	Actual Progress (%)	REMARKS
Western	Ellembele/ Jomoro	1	Bituminous Surfacing of Alabokazo-Ekwei-Tikobo No.1 Ph.1 (12.90 KM)	24.7	M/s Memphis Metropolitan Ltd	21/5/2014	08/04/2014	04/02/2018	12,539,950.22	41,062,016.92	39,768,213.88	100	100	Work completed on 10/10/2018, Defects Liability period in force
Western	Ellembele/ Jomoro	2	Bituminous Surfacing of Alabokazo-Ekwei-Tikobo No.1 Ph.2 (19.80 KM)	41.4	M/s Kingspok Company Limited	21/5/2014	08/05/2014	02/08/2018	11,827,619.17	48,596,623.63	40,079,527.74	100	82	Works in progress
Western	Ellembele/ Jomoro	1	Bitumen Surfacing of Half Assini – New Town	20.50	M/s Memphis Metropolitan Ltd	26/07/2016	10/11/2016	09/11/2017	20,527,290.12	20,527,290.12	4,564,404.24	100	22	Works in progress
			TOTAL	86.6					44,894,859.51	104,773,200.58	70,987,529.35			

All the contracts are currently at stages as indicated in the remarks column of Table 4.3 above.

CHAPTER FIVE: Financial Implication in the Implementation of DFR Planned Programmes and Activities for 2019 Fiscal Year

5.1 Summary Estimates of DFR's activities from first to fourth quarter of 2019 Fiscal Year

The summary of estimates and expenditure for the 2019 fiscal year (up to the 4th quarter) is shown on Table 5.1. The total amount approved for DFR programmes and activities for 2019 is GH¢440.496million. Out of this GH¢290.496million representing 65.95% is from the Consolidated Fund for wholly GOG projects and other administrative expenses. Donor support matching fund appropriation is estimated at GH¢201.00million which also represents 45.63% of the total budget.

The Road Fund Board approval under the 2019 budget is GH¢150.000million representing 34.05% of the total GOG budget approved for DFR for 2019

Total disbursement for the period January – December, 2019 was GH¢174,004.36million including payment of some road arrears. This expenditure includes employee compensation, goods and services and road asset payments for work done.

Table 5.1: SUMMARY OF BUDGETTED AND DISBURSEMENTS AS AT 31ST DECEMBER, 2019

S/N	BUDGET PROGRAMME	APPROVED BUDGET (AS PER APPROPRIATION) 2019	SOURCE OF FUNDS	ACTUAL EXPENDITURE (AS AT DEC, 2019)	% EXPENDITURE
1	Management and Administration	9,156.16	GoG	9,156.21	100.00
		300.00	GOODS & SERVICES (GoG)	203.92	67.97
			ABFA (GoG)		-
			Capex (GoG)		-
			DONOR (CAPEX)		-
			DONOR (G&S)		-
			IGF		-
			GOODS & SERVICES (IGF)		-
			ROAD FUND		-
2	Road Construction		GoG		-
		15,462.71	ABFA(GoG)		-
			GOODS & SERVICES (GoG)*		-
		100,000.00	DONOR (CAPEX)		-
		794.20	DONOR (G&S)		-
		27.72	GOODS & SERVICES (IGF)	42.27	152.49
		11.88	IGF	11.88	100.00
			ROAD FUND		
3	Road Rehabilitation & Maintenance		GoG		
		61,723.54	ABFA(GoG)	36,597.49	59.29
			GOODS & SERVICES (GoG)		
		100,000.00	DONOR (CAPEX)	3,160.56	3.16
		205.80	DONOR (G&S)	0.00	-
			GOODS & SERVICES (IGF)		
			IGF		
		150,000.00	ROAD FUND	124,832.03	83.22
4	Road Safety and Environment		GoG		
		2,813.75	ABFA(GoG)		-
			GOODS & SERVICES (GoG)		
			DONOR (CAPEX)		
			DONOR (G&S)		
			IGF		
			ROAD FUND		
	TOTAL	440,495.76		173,800.44	39.46

CHAPTER SIX: CROSS CUTTING ISSUES

6.1 Road Safety

6.1.1 Action Plan

As part of the National Road Safety Strategy III (NRSS III) covering 2011-2020, DFR submitted its Safety Implementation Status as well as its Road Safety Actions Plan to the National Road Safety Commission. The main objective for the NRSS III is to halt the unacceptable levels of road traffic fatalities and injuries by 2015 and thereafter reduce accidents by 50% by the end of 2020.

The action plan submitted by DFR took the form of outlining some road safety strategies to be implemented on feeder roads to address safety problems at bridge approaches as well as safety problems at intersections and curves. Additionally a Road Safety Desk has been created at DFR Head office to oversee the implementation of road safety activities.

These strategies have been set to enhance safety on feeder roads for all road users especially the vulnerable road users like pedestrians, cyclists and motorcyclist (pillion riders).

Some of the safety activities to be carried out included:

- Undertaking safety audit on heavily trafficked feeder roads;
- Erection of warning signs at intersections and dangerous sharp curves as well as at bridge approaches.
- Provision of pedestrian crossings/ speed humps/ rumble strips within communities traversed by bituminous surfaced feeder roads.

The department plans to undertake the following additional action plans subject to availability of funds:

- Erection of informative and directional signs in towns and villages where required for safety enhancement;
- More than 1 frequency of vegetation control to improve sight distance on feeder road especially in sharp curves; and
- Undertaking road line markings on all bituminous surfaced feeder roads.

6.1.2 *Targets set for 2017 - 2020 action plans*

As part of the continual effort to reduce road crashes fatalities on feeder roads, the following action plans have been developed for the period 2017 to 2020. The achievement of this targets however will depend on the following;

- Availability of adequate funding for road safety activities within the period
- Ensuring safety consciousness among road engineers both at head office and in the regions
- Community education on the importance of road safety (such as pedestrian crossings, road line markings and warning signs)
- Driver education at community level on the importance of safety consciousness whiles behind the wheel.

OBJECTIVE 1										
Activity 1: Improved Capacity of Key Stakeholder Agencies										
1.1. Improved Road Safety Capacity Among Stakeholders										
Description		Target 2018 – 2020	Variable indicators	Budget GHC	Achievement 2018 - 2020				Remark	Comment
					Date of implementation	Evidence Implementatio n	Expenditure GHC	Physical Target/Achievem ent (%)		
In house capacity building	Undertake in-house capacity building in road safety	50No.	No of staff to be trained	180.00			.	.		
Training in road safety	Collaborating with other road agencies to train engineers in road safety audit	20No.	No of staff to be trained	100.00						
Capacity development for road traffic signs and markings workshop	Liase with GHA on standards for road line marking Disseminate information to engineers Join other roads agencies to negotiate at policy level for road marking and signage to be accorded high priority in all road contracts	2No. workshop	No of workshop	100.00						Collaboratio n to be handled by the Ministry

Activity 2: Build a centralised data base										
2.1 Develop a comprehensive road safety information database needed for operating effective safety management system and programmes at the National, Regional, Metropolitan, Municipal and District level										
Development of Feeder road database on hazardous road sections	Continue with database development by BRRRI	1No. database	Length of road in database	150.00						Database has been developed by BRRRI
Improve storage and accessibility of all data relevant to road traffic crashes	Link DFR to MAAP BRRRI	1No. database	Length of road	100.00						Database has been developed by BRRRI
Activity 3 Increase research on road safety issues										
3.1. Promote road safety research initiative to guide policy formulation and intervention										
Study of pedestrian safety at signal crossings in rural centres	Joint research framework with other road agencies to be implemented at the ministerial level Adapt knowledge disseminated by DUR on pedestrians safety for town road sections	100km	Length of road with research	50.00						Collaboration with BRRRI to research on the appropriate materials to be used on unpaved roads for road safety interventions
Research into materials to be used for road signage	Collaborating with other road agencies into possible use of something made of plastic other non-combustible materials		Type of material to be used	50.00						Collaboration with BRRRI for research
Objective 2										
Activity 1: Increase budgetary allocation for road safety engineering										
1.1 Stakeholders to incorporated dedicated line in their budgets purposely for road safety engineering										
Budget line item for road safety	Inclusion as a line item on the bill of quantities in contracts for contractors to price for		Target Amt							Budget to be updated yearly
Activity 2: Road safety in road design and construction										
2.1: Hazardous spot improvement programmes										
Ensure vegetation control	Incorporate grass cutting to defect liability period of road contracts	20,000km	Area							

Ensure the control of bill boards	Form a joint task force to deal with bill boards obstructing road safety		No of bill boards to be controlled							
Improve junction design		150km	No of junctions							
Road warning signs	Erect warning signs at intersections and curves, at bridge approaches and construction sites	500No.	No of road warning signs							
Road line markings	Undertaking road line marking of bituminous surfaced	450km	Length of road marked							
2.2. Incorporate pedestrian safety facilities in road planning, design, construction and operation to provide for their special needs and requirement										
Provision of pedestrians crossing, speed humps/ rumble strips facilities	Provide pedestrians crossings on town roads	200No.	No of pedestrian crossing							
	Provide speed humps on town roads	100No	No of speed humps							
2.3. Education of community members and road users										
Sensitization on road safety measures	Educate community members and road users on the importance and appropriate use of road safety measures along the road corridor	250km	Kilometres covered	50.00						
GRAND TOTAL										

CHAPTER SEVEN: HUMAN RESOURCE MANAGEMENT

7.1 Staffing

The Department of Feeder Roads has a total staff strength of Three Hundred and Fourteen (314), including the Head Office and the Regions as at 31st December, 2019. This is made up of both technical and non-technical staff of various professional backgrounds. One senior officer was 'lost' during the last quarter of 2019.

The Department is headed by a Director with three Deputy Directors in charge of Planning, Development and Maintenance.

The Department operated in all the ten (10) regions of Ghana but with the creation of six (6) more regions, new offices are yet to be established in the new regions. However, the Regional heads of the former regions which have been subdivided continue to exercise oversight responsibilities over these new regions and provide technical support to the District Works Departments of the MMDAs.

7.1.1 Gender Ratio

The gender distribution of staff of the Department is as follows;

Staff Categorization					
Gender	Male		Female		Total
Staff Levels	Senior	Junior	Senior	Junior	
	109	135	32	38	314

7.1.2 Age Distribution

The age distribution of the Staff of the Department is shown in the Table below.

<u>Age Distribution</u>							
Gender	Age Range	20-30yrs	30-40yrs	41-50yrs	51-60yrs	60yrs+	TOTAL
MALE		8	53	75	106	0	242
FEMALE		4	24	21	23	0	72
SUB-TOTAL		12	77	96	129	0	314

7.1.3 Staff Establishment

The staff establishment levels of DFR as at 31st December, 2019 is indicated on table 3 below.

The total staff requirement against the number at post shows a variance of 394 personnel which implies that the Department is under staffed.

This deficiency is particularly noticed to be with respect to required technical staff and drivers.

This situation has currently led to officers driving themselves whiles on official assignment bot at the head office and in the regions.

Table 7.1: STAFF ESTABLISHMENT

No	GRADE/POSITION	NUMBER AT POST	NUMBER OF OFFICERS RECOMMENDED	VARIANCE
1	Chief Engineer	7	20	13
2	Principal Engineer	16	25	9
3	Senior Engineer	18	25	7
4	Engineer	14	30	16
5	Assistant Engineer	13	35	22
6	Chief Quantity Surveyor	2	3	1
7	Principal Quantity Surveyor	5	13	8
8	Senior Quantity Surveyor	4	15	11
9	Quantity Surveyor	8	20	12
10	Assistant Quantity Surveyor	13	20	7
11	Chief Planning Officer	0	1	1
12	Principal Planning Officer	0	1	1
13	Senior Planning Officer	0	1	1
14	Planning Officer	0	2	2
15	Assistant Planning Officer	1	2	1
16	Chief Staff Training Officer	1	1	0
17	Chief Technician Engineer	8	15	7
18	Assistant Chief Technician Engineer	10	15	5
19	Principal Technician Engineer	8	20	12
20	Senior Technician Engineer	8	20	12
21	Technician Engineer	5	20	15
22	Chief Technical Officer	5	12	7
23	Assistant Chief Technical Officer	5	12	7
24	Principal Technical Officer	5	15	10
25	Senior Technical Officer	5	15	10
26	Technical Officer(Grade I & II)	4	20	16
27	Chief Works Superintendent	6	10	4
28	Principal Works Superintendent	7	15	8
29	Senior Works Superintendent	5	15	10
30	Works Superintendent	7	20	13
31	Foreman	5	20	15
32	Junior Foreman	5	20	15
33	Chief Technical Assistant	3	10	7
34	Principal Technical Assistant	5	10	5
35	Senior Technical Assistant	6	15	9
36	Technical Assistant	8	15	7
37	Chief Executive Officer	2	2	0
38	Assistant Chief Executive Officer	3	3	0
39	Principal Chief Executive Officer	5	8	3
40	Senior Executive Officer	6	6	0
41	Higher Executive Officer	3	5	2
42	Executive Officer	5	5	0
43	Chief Records Supervisor	2	2	0
44	Principal Records Supervisor	0	1	1

45	Senior Records Supervisor	0	1	1
46	Senior Records Assistant	1	1	0
47	Principal Estates Manager	0	1	1
48	Senior Estates Manager	1	1	0
49	Operations Control Manager	2	2	0
50	Operations Computer Supervisor	0	2	2
51	Principal Computer Operator	0	2	2
52	Assistant Programming Officer	1	2	1
53	Supply Officers	2	4	2
54	Senior Private Secretary	4	5	1
55	Private Secretary	4	5	1
56	Stenographer Secretary	3	5	2
57	Stenographer Secretary Grade I	5	6	1
58	Stenographer Secretary Grade II	5	8	3
59	Senior Typist	7	8	1
60	Yard Foreman	8	20	12
61	Heavy Duty Driver	7	25	18
62	Driver Grade I	6	20	14
63	Driver Grade II	6	15	9
64	Driver Grade III	4	15	11
	TOTAL	314	708	394

7.1.4 Training and Development

The Training needs and Programmes for the Staff of DFR for the year 2019, as planned, is indicated on Table below. This is to ensure adequate capacity building to enhance efficiency and effectiveness in the execution of the core mandate of the department.

Table 7.2: PLANNED TRAINING PROGRAMME FOR 2019

S/NO	COURSE NAME	TARGET GROUP	ORGANISERS/	NO. OF	PROGRAM	PROGRAM	FUNDING
			VENUE	PART.	DATE	DURATION	SOURCE
1	Tyre Safety Training	Selected Staff	Puncture Seal W/A Ltd	40	5th March, 2019	1 Day	Road Fund
2	Senior Management Development Programme	Chief Engineer	OHCS/ GIMPA	1	11th March-3rd May, 2019	2 Months	OHCS
3	Public Financial Management Act 2016 (Act 921)	Selected Staff	In-House	50	11th April, 2019	1 Day	Road Fund
4	Executive Leadership	Selected Staff	GIMPA	10	4th -6th June, 2019	3 Days	Road Fund
5	Monitoring and Evaluation	Selected Staff	Knowledge Tree International	12	11th -13th June, 2019	3 Days	Road Fund
6	Monitoring and Evaluation	Selected Staff	Knowledge Tree International	13	25th -27th June, 2019	3 Days	Road Fund
7	Withholding VAT Training	Head office/Regional Staff	In-House	250	10th -28th June, 2019	3 Weeks	Road Fund
8	Contract Claims Management	Engineers/Quantity Surveyors	KTC	20	1st -6th July, 2019	1 Week	Road Fund

9	Performance Management	Selected Staff	GIMPA	2	8th -10th July, 2019	3 Days	Road Fund
10	Determination of Drainage Structures	Engineers/ Quantity Surveyors	In-House	15	10th -12th July, 2019	3 Days	Road Fund
11	Use of GPS Civil 3D Software for Survey and Design	Surveyors	Consultant	15	15th -19th July, 2019	1 Week	Road Fund
12	Hydraulic and hydrological calculations	Engineers/ Quantity Surveyors	In-House	20	16th -18th July, 2019	3 Days	Road Fund
13	Monitoring and Evaluation	Director	GIMPA	1	16th -19th July, 2019	4 Days	Road Fund
15	Managing Teams to achieve Change	Deputy Director, Planning	Setym International, Montreal, Ca	1	29th July-9th August, 2019	2 Weeks	World Bank
17	Project Management Monitoring and Control	Deputy Director Development	Setym International, Montreal, Ca	1	29th July-9th August, 2019	2 Weeks	World Bank
19	Project Preparation	Selected Staff	KTC	15	5th -9th August, 2019	1 Week	Road Fund
21	Safer Roads by Design: Safety Audit and Control	Deputy Director, M'tce	International Road Federation, US	1	19th -23rd August, 2019	1 Week	World Bank
23	Optimizing Learning and Development Function	Chief Training Officer	Crown Agents, UK	1	2nd -13th September, 2019	2 Weeks	World Bank
25	Technical Supervision	Selected Staff	In-House	20	10th -12th September, 2019	3 Days	Road Fund
26	Cabinet Memorandum Writing	Selected Staff	CSTC	4	16th -18th September, 2019	3 Days	Road Fund
27	Diploma in Information Management	Programmer	Springs College	1	March-August, 2019	6 Months	Road Fund
28	MSc Estates Management	Senior Estates Manager	KNUST	1	September, 2018-September, 2019	1 Year	Road Fund
29	MSc Procurement and Supply Chain management	Senior Supply Officer	KNUST	1	September, 2019-September, 2019	1 Year	Road Fund
30	Negotiation and Influencing Skills for Executives	Selected Staff	GIMPA	3	15th -17th October, 2019	3 Days	Road Fund
31	Public Sector Management	Selected Staff	GIMPA	5	21st -23rd October, 2019	3 Days	Road Fund
32	HRM and Psychology	Secretary	UG, Legon	1	September, 2019-	1 Year	Road Fund

					September, 2020		
33	Advanced Arbitration and Mediation	Principal Engineer	International Law Institute	1	4th -15th November, 2019	2 Weeks	World Bank
34	Pre& Post Contract Administration	Selected Staff	KTC	20	8th -14th December, 2019	1 Week	Road Fund
35	Safer Roads by Design: Black Spot Solutions & Road Safety Audit	Chief Engineer, Planning	International Road Federation, US	1	9th -13th December, 2019	1 Week	World Bank

7.1.5 Training Achievement 2019:

The training achievement for the categories of staff planned for 2019 as at end of December, 2019 is presented on Table below;

S/NO	COURSE NAME	TARGET GROUP	ORGANISERS / VENUE	NO. OF PART.	PROGRAM (DATE)	PROGRAM DURATION	FUNDING SOURCE
1	Tyre Safety Training	Selected Staff	Puncture Seal W/A Ltd	40	5th March, 2019	1 Day	Road Fund
2	Senior Management Development Programme	Chief Engineer	OHCS/GIMPA	1	11th March-3rd May, 2019	2 Months	OHCS
4	Monitoring and Evaluation	Selected Staff	Knowledge Tree International	12	11th -13th June, 2019	3 Days	Road Fund
5	Monitoring and Evaluation	Selected Staff	Knowledge Tree International	13	25th -27th June, 2019	3 Days	Road Fund
6	Diploma in Information Technology	Programmer	Springs College	1	8th July-27th Sept, 2019	3 Months	Road Fund
7	Leadership and Management in International Dev't	Director	ILI, Washington DC, USA	1	19th -23rd August, 2019	5 Days	World Bank
8	Scheme of Service Training for Promotion	Selected Staff	Civil Service Training Centre	28	16th -27th September, 2019	2 Weeks	Road Fund

CHAPTER EIGHT: AFCAP AND RECAP PROGRAMMES IN GHANA

8.1 Overview

8.1.1 AFCAP

The Africa Community Access Programme (AFCAP) is a programme of research and knowledge dissemination under the Research in Community Access Partnership (ReCAP) funded by the UK government through the Department for International Development (DFID). AFCAP is promoting safe and sustainable rural access in Africa through research and knowledge sharing between participating countries and the wider community in order to make a vital contribution to the sustainable socio-economic development of the more remote regions, and in particular their disadvantaged groups, in terms of access to markets, schools, health facilities and employment opportunities.

The first phase of AFCAP was implemented from June 2008 to July 2014 and the second phase commenced in 2014 for a period of 6 years. Ghana was selected to be a beneficiary of the second phase programme.

On 2nd December, 2015, a Memorandum of Understanding (MoU) was signed between the Ministry of Roads and Highways and Research for Community Access Partnership (ReCAP) to contribute information to low volume road and transport services related national and regional policies and strategies with the aim of establishing high quality research in low volume and transport services in Ghana that is managed and resourced locally.

The Department of Feeder Roads (DFR) was selected by MRH as the Agency to collaborate with AfCAP on the research and knowledge sharing programme.

8.1.2 Progress of Research Activities

DFR and the West African Regional Manager of ReCAP in consultation with other stakeholders within the transport sector scoped and selected twenty one (21) research needs for the country. Out of this, as at the end of March 2019, six (6) projects had been successfully completed and Seven (7) are ongoing as shown in Table 1 and Table 2, respectively.

Table 8.1: Completed Project

No.	Project	Objectives	Start Date	End Date	Outcomes	Comments
1.	Training and application of the DCP-DN Pavement Design Method in Ghana	To build on existing knowledge and expand the appropriate use of the DCP DN method in the design of low volume rural roads in Ghana To introduce and integrate local content in the application of the DCP method in Ghana for cost effectiveness and ease of accessibility to the DCP equipment to facilitate the use of the proposed method.	8 th February 2016	19 th February 2016	The Trainees had a good grasp of the DCP-DN design method and use of the software for producing an environmentally optimised pavement design	Recommended the need for ToT for selected engineers
2.	Training of Trainers (including the design of trial sites for technology transfer) using the DCP DN in Ghana	To train six (6) trainers from Ghana and two (2) from Sierra Leone to an advanced level to allow for widespread training in the DCP-DN design method throughout Ghana and Sierra Leone using the AfCAP LVR DCP-DN design software To allow current trainers (who were also involved in the development of the software) to standardise training interventions and ensure consistency for further roll-out of the method and software.	12 th Sept. 2016		Two of the trainers of trainers trained in the use of the DCP DN method have qualified as key trainers qualified to train as international trainers in the DCP DN method. 20 Materials technicians from all regions in Ghana have been trained	Demonstration Site completed and monitoring being undertaking by DFR.
3.	Alternative surfacing for steep hill section phase 1	To identify the factors that have impact on steep sections of Feeder Roads To identify options for mitigating factors in terms of pavement surfacing and/or effective drainage that can provide an acceptable level of service Propose a programme to demonstrate and try our suitable range of the identified pavement surfacing and drainage options on steep ill sections of feeder roads in Ghana.	15 th January 2016	15 th May 2016	Eighteen (18) pavement options comprising three alternative surfacing and two base/sub-base materials were recommended for steep hill sections	Recommended the need for field trials which was approved for phase II
4.	Identification of Hazardous Spots and Recommendation of remedial measures on	To develop an Accident Blackspot Management System (ABMS) which will form the basis of a coordinated approach to road safety on the rural road network	6 th June 2016	20 th January 2017	Costs Effectiveness of remedial measures on the basis of FYRR	DFR now has two dedicated computers with iMAAP software for the analysis of accident

No.	Project	Objectives	Start Date	End Date	Outcomes	Comments
	Selected rural roads					blackspots and all hazardous sites identified by the pilot study have been mitigated and expanded to an additional region
5.	Rural Transport Diagnostic Study	To explore the current state of rural transport in Ghana in light of the changing rural environment, identify gaps in our understanding of current rural transport practices and highlight opportunities for evidence-gathering, policy and practical efforts to improve the rural access experience of Ghanaians	15 th Dec. 2016	22 nd May 2017	Improved rural transport services and identified new areas for further research	A forum was held by the Ministry of Transport to integrate the findings into the ongoing review of the National Transport Policy
6.	The use of appropriate high-tech solutions for road network and condition analysis, with a focus on satellite imagery	To develop a methodology for using satellite imagery to assess road condition To explore other high-tech solutions for network assessment, such as big data, mobile phones, UAVs (drones) etc	April 2016	March, 2017	This project is handled at the regional level A framework for the application of satellite imagery from road inventory and others have been developed for Ghana	Demonstrations on validation of the results from the use of satellite imagery was validated with a ground routing process using two demonstration sites in two regions in Ghana
7.	Climate Adaptation: Risk Management and Resilience Optimisation for Vulnerable Road Access	Deliver research programme on activities relevant to climate adaptation and resilience strategies to enable national governments to take both short and longer term, policy-making action Develop an appreciation and awareness within African Road and Transport ministries, departments and agencies of current and future challenges associated with the effects of climate change on rural access, and increase ability to deal with more unpredictable and extreme climate effects Trial and optimize best cost-benefit and return-on-investment approaches to demonstrate optimal resilient rural access and	April 2016	March 2018	This project is handled at the regional level Three Key Manuals developed: Change Management Guidelines Risk/Vulnerability Guidelines Engineering Guidelines The study has provided vital contributions to the review of the National Transport Policy	

No.	Project	Objectives	Start Date	End Date	Outcomes	Comments
		minimal impact on national economic progress Produce Climate Adaptation guidelines Implement a knowledge dissemination and capacity building programme				
8.	Investigation into the suitability of Roller Compacted Concrete as pavement material in Ghana	To develop a suitable mix design for RCC with optimal compressive strength suitable for road pavement construction in Ghana making use of local materials; To monitor and evaluate its performance over time to enable standard specifications to be developed	7 th July 2016	15 th July 2018	The construction phase of the study has been merged with the study on steep hills for cost effectiveness	
9.	Development of Low Volume Roads Design Manuals and update of Standard Specifications and detailed drawings for the three AfCAP member countries in West Africa	The purpose of this project is to prepare similar design manuals for LVRs for three AfCAP member countries in the West African sub-region, namely Ghana, Sierra Leone and Liberia.	July, 2017	March, 2019	First Workshop completed Second workshop completed Manuals launched in July, 2019 and in use by MRH and its agencies	
10.	Development and Recommendations for alternative surfacing for low volume roads in Ghana, Sierra Leone and Liberia	To recommend alternative surfacing technologies that may be viable for low volume roads in terms of lifecycle cost savings compared to traditional gravel surfacing in AfCAP countries in the West African Sub Region.	October, 2017	March, 2019	Manuals launched in July, 2019 and in use by MRH and its agencies	
11.	Enhancing understanding on safe motorcycle and three-wheeler use for rural transport	The overall aim of the project is to improve knowledge and understanding concerning effective ways of enabling rural people to benefit from the safe use of motorcycles and three-wheelers, with emphasis on rural motorcycle taxis, rider training, appropriate regulatory frameworks and realistic enforcement methods	18 th September 2017	31 st October 2018	Contributed towards the Consultative process for the lifting on the ban on motorcycle taxi	

Table 8.2: Status of ongoing Research Projects

No.	Project	Objectives	Start Date	Anticipated Completion Date	Progress/Comments
1.	Alternative Surfacing for Steep Hill Sections in Ghana-Phase 2	To define and demonstrate appropriate surfacing options as alternatives to the current gravel wearing courses on the steep hill sections of feeder roads in Ghana, and To offer sustainable solutions to address drainage and erosion problems experienced by those steep sections.	24 th January, 2017	29 th June, 2020	Contractor completed sub base construction Drainage works ongoing
2.	Establishment of LTPP Monitoring Programme in Ghana, incorporating Capacity Building and Mentorship for research personnel		18 th February, 2019	31 st December, 2019	Base data collected, 2 nd monitoring data collection ongoing
3.	Rural Access Index (RAI)	Review the status of RAI/SDG Indicator 9.1.1 and make recommendations to support more rapid and more extensive measurement of RAI in the future		June 2019	Ongoing
4.	Development of Guidelines and Specifications for Low Volume Sealed Roads through Back Analysis	Provide a database of existing LVSRs that have been investigated related to pavement type and materials, performance and environmental conditions Provide a base level of information on the performance of			Ongoing

No.	Project	Objectives	Start Date	Anticipated Completion Date	Progress/Comments
		non-standard designs and materials specifications when compared with traditional designs and specifications for roads carrying higher volumes of traffic (> 300 vpd)			

8.1.3: Research Uptake and Embedment

The completed research project has contributed immensely to the road transport sector. The prominent examples of uptake and embedment of ReCAP research projects are the:

- Use of DCP-DN Design Method to design selected roads
- Application of DCP DN to thin asphalt project under JICA funding
- Training of other engineers in the DCP DN design method
- Training of Burkina Faso in DCP DN Method
- Identification of Black Spots using IMAP
- Inclusion of Climate Change and Climate Adaptation research into transport policy
- Integration of Transport Diagnostic Study into policy
- Contribution towards the consultative process for the lifting on the ban on motorcycle taxi
- Adoption of design manuals by DFR, GHA, DUR, Local Government
- Expansion of the capacity of engineers from all stakeholder entities including the academia in the use of design manuals

8.1.4: Contribution of Ghana to the Overall Research Community

As a result of Ghana's participation in the ReCAP research activities, the ReCAP community has accredited two of the trainers of trainers trained in the use of the DCP DN method as qualified as key trainers to train as international trainers in the DCP DN method. Furthermore,

the National ReCAP Coordinator has been appointed as part of the committee of experts to develop a Rural Road Notes on Pavement Design Methods for Low Volume Rural Roads which seeks to replace the Overseas Road Notes

8.1.5: Recommendations under AfCAP

The AFCAP programme in Ghana has so far been successful, the Department of Feeder Roads has also effectively spearheaded all the projects directly under its purview and all the collaborative agencies have been supportive where necessary. The programme comes to a closer in June 2020 and it is the hope that MRH makes funds available to the contractor to successfully complete the research of the steep hills section.

It is also recommended that some of the outcomes of the ReCAP research findings be integrated into new projects such as the TSPI. e.g. the application of the DCP DN method should be considered for implementation on the improvement of some of the low volume roads alongside the conventional design methods.

Furthermore, following the workshop held on 22nd August, 2017 in conference room of MRH to disseminate and solicit opinions on strategies for the uptake and embedment of ReCAP research findings, it is recommended that MRH develop a comprehensive implementation strategy of the entire research programme.

CHAPTER NINE: LABOUR-BASED BITUMINOUS SURFACING TECHNOLOGY STUDIES

9.1 The Importance of the Technology

In order to address the problem of low durability of unpaved feeder roads, the Department of Feeder Roads (DFR) under the Ministry of Roads and Highways has solicited support from Japan International Cooperation Agency (JICA) to assist in the development of Labour-Based Bituminous Surfacing technology (LBST) for feeder roads. This concept has become critical to DFR because it will be the means by which the DFR can support the Government of Ghana in its fight against the increasing rate of unemployment among the youth.

The method also has the advantage of using cold bitumen since heating of bitumen in the conventional bitumen preparation for hot spraying has its own associated risks and cost.

JICA has been requested to assist in a pilot project to establish methodology and application of the LBST through field trials in the Eastern Region of Ghana. When the field trials is successful then the technology will be replicated nationwide by DFR as a tool to protect the easily erodible surfaces of gravel roads at cheaper costs.

9.2 Memorandum of Understanding (MoU)

In a MoU, DFR is supposed to make available a road that has been constructed up to subbase with all the needed concrete structures in place using labour-based technology. JICA on the other hand will provide funds for the cost of laying of base material, provisions of bitumen and chippings, provision of a set of simple bituminous surfacing equipment, cost of labour, and the provision of Japanese experts to assist in the project. At the end of the pilot project JICA will develop a Guideline (manual) to be used as a working document on the technology for future use.

9.3 Status of the Project

The preparatory stage of the project started in 2015 and spilled into 2016. The JICA Team has so far been working closely with the management of DFR as well as the Koforidua Training Centre (KTC). In order to ensure success of the Project, a Steering Committee and a Technical Working Group was formed for that purpose.

The selected Project Site is Obomofodensua - Akote feeder road (2.7km). In the Phase 1 trial, the project site was divided into sections where cold asphalt and chip seal were applied at different spray rates. The Phase 1 has successfully been completed while the preparation towards the Phase 2 is underway.

An adjoining site has been earmarked for extension of the trial project as Phase 2. A total length of 2.85km is thus under preparation for commencement in January, 2018. The Government of Ghana is funding the project up to the sub-base at a contract sum of GHC 2.90m which has been awarded.

The JICA funded part of the project was completed by December 2018 with the preparation of an operational manual on the use of the technology.

The extension of the phase 2 which is wholly funded under GOG is currently on-going.

CHAPTER TEN: MONITORING OF DFR PROJECTS IN 2019

The annual monitoring of site activities in the Regions by Teams from the Head Office has been the norm to ensure that projects are executed in accordance with specifications and contract management procedures and controls are appropriately ensured in order to achieve value for money. The Monitoring Teams are headed by Chief Engineers from the Head Office.

The monitoring of projects in 2019 will continue as previous except that physical movement to sites are contingent on contractors being active at site. Planned trips to the regions on monitoring of activities which were scheduled for 2019 commenced during the second quarter.

Monitoring visits have so far been undertaken to the Ashanti Region, Volta and Central Regions. The table below gives a general summary of the monitoring outcome.

Monitoring Outcome of Ashanti Region

CONTRACT NAME	CONTRACT SUM (GHc)	PROGRESS TO DATE (%)	OBSERVATION/RECOMMENDATION
Rehab of Pakyi No. 2 – Antoakrom Feeder Road	12,744,265.44	71.3	Work quite satisfactory. RM to ensure that prescribed gravel material for culvert approaches are used
Surf of Effiduase – Motokrodua feeder Road	18,416,798.86	13.9	Work progress very slow. RM to ensure that prescribed gravel material for base is placed. Also ensure regular site meetings
Surf of Abenase – Asonsuaso – Boamah Odumase Feeder road	29,579,053.22	2.0	Work progress very slow. RM to ensure that contract improves upon progress.
Surf of Mpasaso – Wioso Feeder Road	17,007,499.40	35.0	Progress of work fairly acceptable. RM to check the size of chippings and ensure that prescribed chipping sizes are employed at each stage of the sealing works
Surf of Ahinsan – Asokore Feeder Roads	19,840,731.52	15.0	Progress of work fairly acceptable. RM to ensure that contractors adheres to site health and safety standards. All personnel at site should be in appropriate safety gear.
Surf of Kumeso – Banka feeder Road	14,960,639.20	13.7	Progress of work fairly acceptable. RM to ensure that contractors adheres to site health and safety standards. All personnel at site should be in appropriate safety gear.

Surf of Ahodwo Jn – Ahodwo Feeder Road	92,036,414.20	20.0	Progress of work fairly acceptable. Site safety measures employed is commendable. RM to ensure that contractors take measures to check excessive bleeding during sealing works.
Surf of Pokukrom – Ahwerewam - Sabronum	21,859,757.71	81.0	Progress is quite impressive despite payment issues with COCOBOD. RM to ensure that contractors adheres to site health and safety standards. All personnel at site should be in appropriate safety gear

Monitoring outcome of Central Region

CONTRACT NAME	CONTRACT SUM (GHc)	PROGRESS TO DATE (%)	OBSERVATION/RECOMMENDATION
Bit. Surf of Ekwamkrom – Manso Feeder Road	9,469,159.60	45.0	Work quite satisfactory. RM to ensure that demolished existing u-drain debris are removed and disposed off-site. Also ensure backfilling of new drains constructed
Surf of Nyinase – Kayireku – Ahire Jn and Others Feeder Road	51,874,224.56	51.0	Work quite satisfactory. RM to ensure that demolished existing u-drain debris are removed and disposed off-site. Also ensure the establishment of traffic management signs at site together with provision of safety gear for personnel.
Surf of Sankor – Gyahadze & Gyatekrom – Osubonpanin Feeder Road	26,100,903.60	6.0	Work progress quite satisfactory. RM to ensure that backfilling to constructed drains are adequately provided. Also Concrete batching at site should be in conformity with mix design approved by RM. Contractor should be encouraged to begin the filling and sub-base works in order to prevent possible damage to long stretch of drains constructed.

The internal monitoring of road contract activities in the regions will continue during the ensuing quarter.

Monitoring outcome of Volta & Oti Region

CONTRACT NAME	CONTRACT SUM (GHc)	PROGRESS TO DATE (%)	OBSERVATION/RECOMMENDATION
Bit. Surf of Bodada-Kute-Dzolu Feeder Road	45,854,343.87	75.0	Work quite satisfactory. 9.80km primer sealed. Site was active and contractor was commended as well as encouraged to keep up the performance.
Bit. Surf of Anfoega – Akukome – Wadamaxe Feeder Road	18,187,245.20	47.0	Site is vacant and inactive. RM was advised to get the contractor back to site to continue the works.
Bit Surf of Yorkitikpo – Kpoviadzi – Trepe Feeder Road	14,314,301.40	46.0	Work progress quite satisfactory. Current length of contract ends in the middle of nowhere. RM to seek approval to review the contract such that the length beyond the community can be used to solve the flooding situation by provision of more culverts.
Bit Surf of Vakpo-Tsrukpe-Botoku Ph III	14,209,868.76	18.0	Site not active, RM to impress upon contractor to reactivate work

CHAPTER ELEVEN: CHALLENGES AND THE WAY FORWARD

The Department have the capacity and knowhow to perform creditably, however, it faces internal and external challenges.

10.1 Key Challenges and Recommendations for mitigating the Challenges

- **Large portfolio of running contracts;** Recommended that an administrative decision be taken on measures to reduce the number of on-going contracts with a limit set per year. This will enable effective contract supervision and management as well as reduction in incidents of interest on delayed payments.
- **Inadequate project preparation;** Proposed projects should be selected, adequately prepared and technically validated procurement not less than 4 to 6 months before the procurement process for such works begin. This will reduce the incidence of huge variations.
- **Large variations in original contract sums of certain contracts;** The situation where variations of whole contracts are issued on on-going contracts defeats the purpose of the provision for contract variations under the Public Procurement Law. The situation often raises Audit Inspection queries. In order to avoid such situations those contracts should be executed as separate contracts or in phases.
- **Large backlog of Routine Maintenance activities leading to rapid deterioration of existing engineered roads;** Routine maintenance activities should be given priority over all other activities with respect to payment from the road fund. There should be a progressive programme towards achieving 100% routine maintenance of all engineered roads not under any upgrading or rehabilitation contract. At least a frequency of reshaping per year at a regular interval.
- **Absence of regular staff training;** New personnel recruited to replace exited staff needs to be trained on various aspects of effective supervision, monitoring and evaluation to boost their technical confidence during decision making at project sites. This will reduce the incidence of error of technical judgement when such decisions have to be taking at a critical moment.
- **Absence of contractor training;** A lot of new road construction companies have appeared on the scene of road construction but most of them lack the requisite

knowledge, skill of ability to interpret contract documents, drawings of designs in order to translate onto the ground. The situation is leading to mistakes or errors that raises concern with respect to the technical specifications, and brings frequent altercations between contractors' reps and DFR supervisory staff.

- **Low staffing levels and logistical support, especially, supervision vehicles;** there is the need for the increase in staff recruitment quotas for DFR staff in order to be able to cope with the large portfolio of on-going contracts. This will require a corresponding increase in the logistics for effective supervision.
- **The need for a clear direction on the future role of DFR Head Office under a fully decentralized system.** There is the need for a strategic plan into the future to guide the DFR on the new role under the current decentralization process.

10.2 Way Forward

- Decentralization
 - 1) *DFR should constitute an **Adhoc team to examine the new role of DFR Head Office (Policy, Planning, Monitoring & Evaluation) and the Regional Offices (as Departments under the RCC) and their new (eventual) role of Monitoring, Technical backstopping** in accordance with the provisions of the Decentralization Act (2016) under a fully decentralized Local Governance system*
 - 2) DFR should begin engaging MRH and other stake holders on retaining its responsibility in the **bridge development programme and also to be the repository of the GIS/Road Database** on feeder roads for the purpose of policy guidance and decision making
 - 3) The need for DFR to examine the actual levels of administrative interactions between the Head Office and the Regional DFR offices as they become Departments under the RCC's with the maintenance of the mother department name (DFR) (Section 196, 197 and Schedule Thirteen of Local Governance Act, 2016, (Act 936)). This will aid in the transition into the new roles and responsibilities.
- Other areas for consideration;
 - 1) Capacity building for Contractors/Consultants and DFR Staff
 - 2) Strategic increase in the use of Labour Based Technology for road works
 - 3) Adequate time to be given to project preparation, supervision and monitoring with improved logistical support

- 4) Limit overloading of contractors
- 5) Use of the Road Prioritization Methodology in road selection for development.

10.3 Conclusions

The first two quarters of 2019 have been quite a challenge for the DFR with respect to contract progress and for that matter contractor performance. Funding of road construction and related activities has been quite inadequate and also not released on time.

The situation affects budget performance since some of the releases made are for road arrears and therefore does not provide a true performance of DFR's budget.

Routine Maintenance, which is supposed to be the first priority on DFR maintenance strategy continues to suffer with very discouraging progress (due to delay in payment) although the target set of 16,000km was achievable.

Continual training of both technical and non-technical staff is one of the major priorities of DFR in capacity building and will continue to be pursued in order to maintain a high level of personnel with the requisite technical capacity to manage the feeder roads network asset in Ghana. This is in support of the strategies provided under the Sector Medium Term Development Plan.

The effort by Government to pay the road arrears during this quarter is encouraging some contractors to reactivate their dormant sites. However, the response seem to be quite slow and therefore not yet reflecting in progress of work.