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IDA/R2017-0166/1

May 17, 2017

Closing Date: Tuesday, June 6, 2017 at 6 p.m.

FROM: Vice President and Corporate Secretary

Ghana - Transport Sector Improvement Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed credit to Ghana for a Transport Sector Improvement Project (IDA/R2017-0166), which is being processed on an absence-of-objection basis.

Distribution:

Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC and MIGA

Document of
The World Bank

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Report No: PAD1721

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR110.6 MILLION
(US$150 MILLION EQUIVALENT)

TO THE

REPUBLIC OF GHANA

FOR A

TRANSPORT SECTOR IMPROVEMENT PROJECT

MAY 15, 2017

Transport & ICT Global Practice
Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective {March 31, 2017})

Currency Unit	=	New Ghanaian Cedi (GHS)
US$ 1	=	GHS 4.3151
US$ 1	=	SDR 0.73700114

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
AIT	Agency Implementation Team
ARAP	Abbreviated Resettlement Action Plan
BA	Beneficiary Agency
CE	Citizen Engagement
CPS	Country Partnership Strategy
DBB	Design-Bid-Build
DBST	Double Bituminous Surface Treatment
DFR	Department of Feeder Roads
DUR	Department of Urban Road
DVLA	Driver and Vehicle Licensing Authority
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ESA	Environmental and Social Assessment
ESIA	Environmental (and Social) Impact Assessment
ESMP	Environmental and Social Management Plan
GASIP	Ghana Agriculture Sector Investment Program
GBV	Gender-based Violence
GDP	Gross Domestic Product
GHA	Ghana Highway Authority
GIS	Geographical Information System
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GSGDA	Ghana Shared Growth and Development Agenda
HDM	Highway Development and Management Model
HIV	Human Immunodeficiency Virus
ICR	Implementation Completion and Results Report
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
M&E	Monitoring and Evaluation
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MRH	Ministry of Roads and Highways
MTR	Midterm Review
MoT	Ministry of Transport

NCB	National Competitive Bidding
NGO	Nongovernmental Organization
NMMTMP	National Multimodal Transport Master Plan
NMTDP	National Medium-Term Development Plan
NRSC	National Road Safety Commission
NTP	National Transport Policy
OPRC	Output and Performance-based Road Contracting
PAP	Project-Affected Person
PBC	Performance-based Contract
PC	Project Coordinator
PDO	Project Development Objective
PEIR	Public Expenditure and Institutional Review
PIM	Project Implementation Manual
PPP	Public-Private Partnership
PSC	Project Steering Committee
PVTS	Private Vehicle Test Station
RADMS	Road Accident Database Management System
RAMS	Road Asset Management System
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
SBD	Standard Bidding Document
SDS	Social Development Specialist
SDR	Special Drawing Rights
SEIA	Socioeconomic Impact Assessment
SMTDP	Sector's Medium-Term Development Plan
SSS	Social Safeguard Specialist
STD	Sexually Transmitted Disease
TEU	Twenty-foot Equivalent Units
TSP	Transport Sector Project
TSDP	Transport Sector Development Project
VLTC	Volta Lake Transport Company

Regional Vice President:	Makhtar Diop
Country Director:	Henry G. R. Kerali
Senior Global Practice Director:	Jose Luis Irigoyen
Practice Manager:	Benedict L.J. Eijbergen
Task Team Leader:	Petrus Benjamin Gericke

REPUBLIC OF GHANA
Transport Sector Improvement Project

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PAD DATA SHEET

Ghana

Transport Sector Improvement Project (P151026)

PROJECT APPRAISAL DOCUMENT

AFRICA

Transport & ICT Global Practice

Report No.: PAD1721

Basic Information			
Project ID P151026	EA Category B - Partial Assessment		Team Leader(s) Petrus Benjamin Gericke
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ]		
	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date 7 June-2017	Project Implementation End Date 30-Jun-2023		
Expected Effectiveness Date 7 Sep-2017	Expected Closing Date 30-Jun-2023		
Joint IFC No			
Practice Manager/Manager Benedict L.J. Eijbergen	Senior Global Practice Director Jose Luis Irigoyen	Country Director Henry G. R. Kerali	Regional Vice President Makhtar Diop

Borrower: Ministry of Finance			
Responsible Agency: Ministry of Transport			
Contact:	Twumasi Ankrah-Selby	Title:	Chief Director
Telephone No.:	+233302685637	Email:	taselby@hotmail.com
Responsible Agency: Ministry of Roads and Highways			
Contact:	Godwin J. Brocke	Title:	Chief Director
Telephone No.:	+233302661575	Email:	aboretum@hotmail.com

Project Financing Data (in US$, millions)			
[ ] Loan	[ ] IDA Grant	[ ] Guarantee	
[X] Credit	[ ] Grant	[ ] Other	

Total Project Cost:	150.00	Total Bank Financing:	150.00
Financing Gap:	0.00		

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Financing Source	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	150.00
IDA Grant	0.00
Total	150.00

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Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023			
Annual	15.00	35.00	60.00	15.00	10.00	15.00			
Cumulative	15.00	50.00	110.00	125.00	135.00	150.00			

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Institutional Data

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Agriculture

Project Development Objective(s)

The Project Development Objectives are to: (i) reduce travel time on selected parts of the classified road network in Northern Ghana, (ii) promote road safety, and (iii) strengthen the institutional management of the transport sector.

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Components

Component Name	Cost (US$, millions)
Component 1: Road Asset Preservation	125.00
Component 2: Improved Road Safety	8.00
Component 3: Institutional Strengthening and Capacity Building	17.00

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Systematic Operations Risk-Rating Tool (SORT)	
Risk Category	**Rating**
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	High
8. Stakeholders	Moderate
OVERALL	Substantial

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Compliance		
Policy		
Does the project depart from the CPS in content or in other significant respects?	Yes [ ]	No [x]

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Does the project require any waivers of Bank policies?	Yes [ ]	No [x]
Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [x]
Does the project meet the Regional criteria for readiness for implementation?	Yes [x]	No [ ]

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Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36	**X**	
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10		**X**
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

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Legal Covenants

Name	Recurrent	Due Date	Frequency
Project Coordinator and Social Development Specialist. Schedule 2, Section I, A, 1 (b) of the Financing Agreement		March 7, 2018	

Description of Covenant

The Recipient shall ensure that not later than six (6) months from the Effective Date that the MRH and MoT jointly select a Project Coordinator to carry out the coordination and implementation of the project and that the GHA appoint a Social Development Specialist to carry out the coordination and supervision of the gender and social aspects of the project.

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Team Composition

Bank Staff

Name	Role	Title	Specialization	Unit
Petrus Benjamin Gericke	Team Leader (ADM Responsible)	Lead Transport Specialist	Team Leader	GTI07
Charles John Aryee Ashong	Procurement Specialist (ADM Responsible)	Senior Procurement Specialist	Procurement	GGO01
Thomas Kwasi Siaw Anang	Procurement Specialist	Senior Procurement Specialist	Procurement	GGO01
Josphine Kabura Kamau	Financial Management Specialist	Senior Financial Management Specialist	Financial Management	GGO31
Anil H. Somani	Safeguards Specialist	Consultant	Social Safeguards	GSURR
Anita Bimunka Takura Tingbani	Safeguards Specialist	Environmental Specialist	Environment	GEN01
Asferachew Abate Abebe	Safeguards Specialist	Senior Environmental Specialist	Environmental Safeguards	GEN01
David T Silcock	Road Safety Expert	Consultant	Road Safety	GTI07
Demba Balde	Safeguards Specialist	Senior Social Development	Social Safeguards	GSU01

		Specialist		
Desta Wolde Woldearegay	Team Member	Program Assistant	Team Support	GTI01
Nightingale Rukuba-Ngaiza	Counsel	Senior Counsel	Legal	LEGAM
Gloria Malia Mahama	Safeguards Specialist	Social Development Specialist	Social Safeguards	GSU01
Haeyoung Lee	Team Member	Private Sector Development Specialist	Transport Specialist	GTI07
Raman Krishnan	ICT Specialist	Senior ICT Policy Specialist	ICT	GTI09
John Kobina Richardson	Team Member	Senior Transport. Specialist	Transport Engineer	GTI07
Salli Wondergem	Team Member	Senior Executive Assistant	Team Support	AFCW1

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Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Ghana	Northern Region	Tamale-Yende-Tatale road link	Yes	Yes	Regional road link
Ghana	Northern Region	East Gonja District	Yes	Yes	Feeder and farm road network

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I. STRATEGIC CONTEXT

A. Country Context

1. **Despite setbacks due to the 2008/2009 financial crisis, Ghana experienced strong economic growth over the past decade, resulting in substantial progress with poverty reduction.** The 2012/2013 Ghana Living Standards Survey shows that the national poverty headcount declined from 39.1 percent of the population in 2005 to 24.2 percent in 2013. Ghana also transitioned into lower-middle-income country status in 2011. The gross national income per capita (Atlas method) was US$1,660 in 2014, a slight decrease from US$1,770 in 2013.

2. **Falling commodity prices from 2012 to 2015 had a negative impact on Ghana's economy,** resulting in substantially lower gross domestic product (GDP) growth and a rapid increase in the net public debt stock, rising from 38.7 percent of GDP in 2011 to 65 percent of GDP in 2014. In 2015, Ghana entered into a three-year program, with the support of the World Bank and the International Monetary Fund (IMF), to restore debt sustainability and to implement structural changes to strengthen public financial management and expenditure controls.

3. **Even with this impressive progress, income inequality remains significant between regions and between urban and rural areas, with the Northern regions having the highest poverty incidence.** There are also significant regional and urban/rural disparities in access to economic opportunities and social services. Ghana's recent medium-term economic plans[1] have focused on addressing these challenges, including generating employment and improving living standards.

4. **Agriculture contributed 22 percent (as of 2015) of Ghana's GDP.** However, farming activities remain the biggest employment creator and income provider in most regions. Ghana's rapid urbanization and the growth of employment opportunities in the informal sector reduced dependence on the agricultural sector in the South and Central regions. In the North, agriculture remains the major employer for up to 50 percent of the labor force, mostly as small landholders.[2]

B. Sectoral and Institutional Context

Sectoral Context

5. **Ghana has well-developed regional connections with neighboring countries, through the North-South corridors and the East-West corridors along the coast in the South.** The East-West corridors in the Central and Northern parts of Ghana currently serve predominantly as internal connecters between the national North-South corridors because of inadequate customs and immigration facilities on the borders with Côte d'Ivoire and Burkina Faso in the West and Togo in the East. The establishment of an operational border post at Tatale with Togo will lead to increased utilization of the Central East-West corridor, which is already improved west of Tamale.

[1] Ghana Shared Growth and Development Agenda, (GSGDA); 2010–2013, draft GSGDA II, 2014–2017; National Medium-Term Development Plan (NMTDP) 2014–2017.
[2] Ghana Poverty and Inequality Profile, June 2015.

6. **The Ghana Poverty and Inequality Profile (June 2015) shows a high correlation between the presence of road infrastructure and poverty rates, based on plots of poverty information to the proximity of roads and maize yields, respectively.** Southwestern Ghana, where poverty is below 20 percent in most districts, has the best road network; the nearest road is, on average, less than an hour away from the rural poor. In the North, the average distance to the nearest road increases for the rural poor, in some areas to more than 3.3 hours.

7. **Road transport is the predominant mode of transportation in Ghana, carrying over 95 percent of passenger and freight traffic.** The road network grew considerably from 47,824 km in 2002 to 72,381 km in 2016, of which about 23.7 percent is paved. It provides good national coverage, consisting of 14,873 km of trunk roads, 15,463 km of urban roads, and 42,045 km of feeder roads. Farm roads, providing the last mile connections between the feeder road network, farms, and villages, are poorly developed with little network-wide data available. Currently, in 2016, 39 percent of the road network is in good condition, 32 percent is in fair condition, and 29 percent is in poor condition. The trunk road network links all districts and regions as well as most population centers and is considered adequate to meet the minimal requirements for sub-regional integration. The feeder and farm road networks are in a poorer condition overall.

8. **The strong economic growth of Ghana has resulted in an increase in vehicle ownership and demand for freight and passenger services.** In response, the Government has invested primarily in road capacity expansion, especially in urban areas where traffic congestion became more acute over time. However, much still needs to be done to improve road infrastructure to accommodate the existing demand. Road users experience long travel times due to delays and congestion in major urban centers, faster deterioration because of weak maintenance practices, and limited connectivity in rural areas where more than 50 percent of the rural population lives within 2 km of an all-season road.

9. **Ghana has a poor road safety record with high accident rates.** This is because of poor road conditions caused by faster deterioration due to weak maintenance practices and lack of enforceable road safety measures. The National Road Safety Commission (NRSC) is the lead agency for road safety in Ghana, established by Act of Parliament in 1999. The NRSC's 2015–2017 Action Plan gives high priority to pedestrian safety, as well as bus and heavy goods vehicle safety interventions, reflecting the high numbers of deaths and serious injuries associated with these road users. In 2014, there were 1,836 road crash fatalities, about 40 percent being pedestrians, and 23 percent of the total pedestrian deaths were children under 16, with the initial 2015 data showing a similar trend.

10. **The Road Fund contribution to road maintenance does not cover the cost of sustainable maintenance and the maintenance backlog is steadily increasing.** Until 1997, when the Road Fund was established, the Ministry of Roads and Highways (MRH) was responsible for road maintenance that was funded from the ministry's annual budget. As more roads were constructed as part of the economic recovery program launched by the Government in the 1980s, cost of maintenance began to rise beyond the competence of annual budgetary provisions. The funding sources of the Road Fund are derived from a fuel levy, road and bridge tolls, and various road-related tariffs (vehicle registration fees, license fees); however, the mobilization of funding through the Road Fund is not a guarantee that the Government will

prioritize maintenance over the extension of its road network. Although the current toll rates, established in 2010, reflect a significant increase from the levels that were set in 1999, these rates are barely sufficient to recover the maintenance costs and/or costs associated with major rehabilitation or expansion programs, thereby resulting in a maintenance backlog with the road network condition deteriorating over time. A recent increase in the fuel levy in January 2016 to GHS 0.40 per liter (approximately US$0.10 per liter) is an attempt to restore the level of funding available for maintenance, but the immediate impact remains to be seen, given the current arrears to the contractors.

11. **While continued expansion of the network is desirable, more attention needs to be given to improving and maintaining road quality through proper asset management.** The current approach of separate rehabilitation/improvement and routine maintenance contracts result in a lack of timely maintenance and, consequently, increased pavement deterioration and higher costs. The project will introduce performance-based contract (PBC) on selected, prioritized sections of the road network and will complete the establishment of a road asset management system (RAMS) for at least the trunk and feeder road networks. These actions will provide opportunities for the establishment of asset management principles as the basis for network management.

12. **Public-Private Partnerships (PPPs) options are actively explored.** Because of increased transportation demand and the costly investments required for transport infrastructure improvements, the Government adopted and is studying further PPP options in the port, railway, and road subsectors. In the Port of Tema, concessions are already in place and are one of Ghana's most successful examples of PPPs. The World Bank is currently supporting several feasibility studies under the ongoing PPP project,[3] most notably, the expansion of the Accra-Tema Road, the Accra-Takoradi Road, Takoradi Port, Boankra Inland Port, and the Eastern Railway Line.

13. **The Maritime sector is managed by the Ghana Port and Harbours Authority and is dominated by two main deep-sea ports on the Atlantic Ocean at Tema and Takoradi.** Both ports are currently undergoing expansion and upgrading to accommodate the increasing trade volumes and to maintain their competitive position for regional traffic. Most of the container traffic in Ghana is gateway traffic (import/export) to Ghana and to the landlocked countries (Burkina Faso, Mali, and Niger). The Tema Port, one of the five largest ports in West Africa region (Lagos, Tema, Pointe Noire, Abidjan, and Dakar), handling 94 percent of the country's container volumes, is strategically located close to the country's main consumption centers. The container volumes at Tema Port grew at a compound annual growth rate of 8 percent between 2005 and 2014 (870,000 twenty-foot equivalent units [TEUs] in 2014) and are expected to grow at an average rate of 5 percent until 2030. The Port of Takoradi, Ghana's second port, handling 4.3 million tons of cargo (75,000 TEUs) in 2014, is located 229 km from Accra, making it less competitive in terms of transport costs versus the Tema Port. However, it remains Ghana's primary export port, accounting for about 70 percent of outbound seaborne trade, partly because it is the major port for bulk cargoes and is located closer to Ghana's main export producing areas (cocoa, gold, bauxite, manganese, and oil). The Takoradi Port caters mainly to dry and liquid bulk cargo and is positioning itself as the oil and gas hub for the country.

[3] Ghana - PPP Project (P125595); World Bank.

14. **Inland water transportation focuses largely on Volta Lake**, providing 1,125 km of arterial and feeder waterways, where the Volta Lake Transport Company (VLTC), owned by the Volta River Authority, is responsible for the management of all inland transport. The freight and ferry services of the VLTC deteriorated significantly over time due to insufficient investment and maintenance.

15. **The Ministry of Transport (MoT) provides policy oversight over civil aviation** and the Ghana Civil Aviation Authority is responsible for development, maintenance, and operation of aviation infrastructure. It provides navigational services and operates three international airports (Accra, Kumasi, and Tamale) and several domestic airports. International civil aviation demand decreased over the last few years. However, the ongoing investment in new terminals and related infrastructure at the Kotoka International Airport in Accra will accommodate future demand based on the 2.4 million passengers (1.7 million international and 720,000 domestic passengers) and about 162,000 tons of cargo handled in 2014. Domestic air traffic rose with increased scheduled services between Accra, Takoradi, Kumasi, and Tamale airports. The expansion of scheduled airline services is restrained by high airport usage charges.

16. **Rail transport is the only alternative to roads for the movement of bulk commodities from collection centers to/from the ports.** The existing railway network has limited coverage and is made up of three narrow gauge lines, the Western (Takoradi Port to Kumasi), Eastern (Accra-Kumasi), and Central lines (Huni Valley to Kotoky) that, together with some branch lines, extend for approximately 940 km. Only 14 percent (133.6 km) of the entire rail network is currently operational due to lack of utilization and maintenance. The southern part of the Eastern line is open for urban passenger services and a part of the Western line is used for manganese export shipments.

17. **Overall, Ghana is positioning itself as a competitor for international transit traffic to and from the landlocked countries to its north.** Competition comes from the transport corridors and ports in neighboring Coté d'Ivoire and Togo. The World Bank assisted with the improvement of the Abidjan-Lagos[4] and Central (Accra-Burkina Faso border)[5] corridors with the Government investing in the Eastern and Western corridors. However, Ghana still has a long way to go to become truly competitive. Its Logistics Performance Index (quality of trade and transport-related infrastructure) has changed little over the last 10 years (2005–2015), from 2.3 to 2.7 out of a maximum score of 5.0.

Institutional Context

18. The transport sector is managed and overseen by four ministries (two established and two recently created ministries):

(a) **The Ministry of Transport (MoT) is responsible for policy and oversight of the sector in general.** The MoT also has the responsibility for managing the outcomes of several agencies: Ghana Ports and Harbours Authority; Ghana Shippers Authority; Driver and Vehicle Licensing Authority (DVLA); and, the National Road Safety Commission (NRSC), among others.

[4] Abidjan-Lagos Trade and Transport Facilitation Program (P116323).
[5] West Africa Regional Transport and Transit Facilitation Project (P079749).

(b) **The MRH is responsible for the provision and maintenance of the classified road network.** The Ghana Highway Authority (GHA) is responsible for the trunk road network, and the Departments of Feeder (DFR) and Urban Roads (DUR) are responsible for the feeder and urban roads networks, respectively. Government's decentralization policy will have a major impact on the responsibilities of, especially, the DFR and DUR with the management of many road links earmarked for transfer to the local authority level. The Road Fund, responsible for providing funds for maintenance and rehabilitation of classified roads, also reports to the MRH. The Road Fund has been able to fund only about 60 percent of the maintenance needs and a small part of the rehabilitation needs from the various road user charges.

(c) **The Ministry of Railways Development is responsible for the provision and maintenance of the railway network** through the Ghana Railway Development Authority for regulation and asset-management and the Ghana Railway Company Limited for operations.

(d) **The Ministry of Aviation is responsible for the regulation and oversight of the civil aviation sector.** Two prominent agencies are the Ghana Civil Aviation Authority, responsible for regulation and safety oversight of the civil aviation sector, and the Ghana Airports Company Limited, responsible for the development and maintenance of the airports assets of Ghana.

19. **Several Sector Policy Documents are in need of updating**. The National Transport Policy (NTP) (2008) guides the management of the transport sector and the Integrated Transport Plan (2010) was initially used to guide the development and rehabilitation of transport infrastructure. Currently, the Government does not have an up-to-date National Multimodal Transport Master Plan (NMMTMP) to guide overall strategy leading to overlapping sub-sectorial development initiatives, and the Road Tolling Policy requires an update to support the proposed PPP arrangements mentioned earlier.

20. Drawing from the NMTDP, both the MRH and the MoT developed their Sector's Medium-term Development Plans (SMTDPs) for 2014–2017. The SMTDP for the MRH outlines the following priorities: (a) asset preservation; (b) road rehabilitation and international corridor development; (c) improved financing and cost recovery; (d) installation and utilization of planning and budgeting systems; (e) improvement in road management; (f) capacity building; (g) mainstreaming of cross-cutting issues such as climate change; (h) pro-poor programs; and (i) collaboration with other sectors. The SMTDP of the MoT seeks to remove operational and policy bottlenecks in the transport sector in support of economic growth and to facilitate and promote the development of transparent policy instruments.

C. Higher Level Objectives to which the Project Contributes

21. The project is consistent with two of the three pillars of the Ghana Shared Growth and Development Agenda II (GSGDA) (FY14–FY17).

(a) Pillar 2 aims to build a strong and resilient economy. The accelerated modernization of agriculture is identified as a key thematic area.

(b) Pillar 3 aims to expand infrastructure as an enabler of economic development. This includes the introduction of PPP for the provision of transport infrastructure; prioritizing the maintenance of existing road infrastructure; improving accessibility to key centers of population, production, and tourism; and institutional strengthening of the transport sector agencies for enhanced delivery of infrastructure and services.

22. **The proposed project is aligned with the World Bank's Country Partnership Strategy (CPS) for Ghana (FY13–FY16) (Report Number 76369).** The CPS was extended by two years (FY13-18) following the approval of the recommendations of the Performance and Learning Review Report (Report No. 105606-GH of October 20, 2016). Both the CPS and PLR are closely aligned to the Government's GSGDA and seeks to respond to Government's priorities of more inclusive economic growth, job creation, delivery of decentralized public services, better accountability to citizens, and provision of skills and education to the population.

23. Pillar 2 of the CPS focuses on improved competitiveness and job creation through, among others, more efficient delivery of infrastructure services. The CPS calls for processes and systems to monitor and provide implementation support for all major public infrastructure projects with roads and energy sectors in the lead. This pillar supports Government's goal of increased liberalization of markets, especially in the more deprived areas, through improved road, rail, air, and maritime services.

24. **The World Bank's twin goals.** The World Bank Group's twin goals of ending extreme poverty and promoting shared prosperity are closely associated with that of the Government's GSGDA II. The project's target area is Northern Ghana, identified in the 2014 Household Survey as being consistently poorer than the rest of the country. The area derives most of its income from agriculture with a mix of irrigation along the major rivers and dryland farming. The current state of the road infrastructure is a key contributor to low income growth and poor access to services and growth opportunities. The project aims to improve regional connectivity with the central part of Togo and to improve road infrastructure supporting ongoing agricultural development and improving accessibility in one of the poorest agricultural production areas of Northern Ghana.

D. Value added of World Bank's support

25. **The World Bank's support to the project includes the introduction of PBC methodologies to the road subsector in Ghana and facilitation of a deeper coordination between the different road agencies.** The main activities will be development of a computerized RAMS, benefiting more than one agency, and the integration of road safety programs with the road infrastructure improvements.

26. The project will benefit from the World Bank's global knowledge of comprehensive sector reforms which no other donor is supporting in Ghana. The project will build on the World Bank's extensive prior experience with road reform gained in the transport sector in Ghana and

globally by supporting key areas such as road asset management (preservation), transport planning, and road safety.[6]

27. The World Bank's involvement in the road sector in Ghana over the past three decades gives it a unique basis to help address these pressing issues with specific and tested solutions, including multiyear PBCs, strengthening road safety management, improvement of road sector management, and increasing the involvement of the private sector.

II. PROJECT DEVELOPMENT OBJECTIVES (PDO)

A. PDO

28. The PDOs are to (i) reduce travel time on selected parts of the classified road network in Northern Ghana; (ii) promote road safety; and (iii) strengthen the institutional management of the transport sector.

29. Annex 1 lists the PDO-level and intermediate-level results indicators for the project.

B. Project Beneficiaries

30. The project is expected to bring important benefits to the Government, the road users, and the local populations and businesses along the Tamale-Yendi-Tatale section of the East-West corridor and the targeted feeder road networks.

31. **Government**. The implementation of the NTP and the Tolling Policy, as well as the development of an NMMTMP will provide a sound base to align sector objectives and strategies with the Government's development agenda, generating efficiency gains in a sector that is a major contributor to growth and poverty alleviation.

32. **Road users and general population.** The direct beneficiaries of the road works would be the users of the corridor and the populations of the area where feeder roads are to be improved. These include farmers needing improved access to both bring farming inputs and extension services to their farms and to transport their produce to their value chain buyers and local communities needing improved access to social services such as schools, clinics, and markets. Smaller towns, villages, and rural settlements within the targeted rural areas will also benefit directly from smaller socioeconomic improvements to the respective villages.

33. The measures to improve road safety programs at selected schools and to expand the vehicle inspection system to private garages will also directly benefit all road users near these new facilities. The improved vehicle crash data system will identify and justify targeted road safety investments and traffic management interventions to make roads safer and reduce the overall fatalities and injuries.

[6] The World Bank has extensive experience in fostering road safety policy in Africa, including through its contributions to the Africa Road Safety Corridor Initiative, the Global Road Safety Facility, and the Sub-Saharan Africa Transport Policy Program. Most Bank-financed Transport Projects also include road safety implementation activities. The proposed Project benefits from this combined knowledge.

34. **Local residents would benefit from direct employment through the civil works** (PBCs) funded under the project, while the private sector will participate in new opportunities to inspect vehicles and to participate in long-term PBCs as either subcontractors or contractors' employees.

35. The project may have negative impacts especially on women and girls, resulting from both the planned works and the improved connectivity associated with the project design. In some countries, women and girls reported feeling insecure while walking in isolated areas or after dark because of the risk of personal attacks. Local women and girls are often survivors of gender-based violence (GBV), including physical and sexual violence. The increased connectivity will provide opportunities for increased interactions between road users, local residents, and transient construction workers, and these new interactions might translate in an increase in the incidence of commercial sex workers, GBV, and Human Immunodeficiency Virus (HIV) infections.

36. **Given this context, the project will promote a gender-sensitive approach to address selected gender-based concerns and facilitate an inclusive and equal development.** To this end, three main areas of intervention have been identified, including more equitable employment creation, and strengthening of HIV/Acquired Immunodeficiency Syndrome (AIDS) and GBV awareness. The project will contribute to the creation of short-term employment opportunities in the construction sector for men and women. Based on the potential risks of the increase of HIV and GBV cases related to new interactions, extensive awareness raising interventions on HIV/AIDS prevention and GBV will be conducted among beneficiary communities.

III. PROJECT DESCRIPTION

A. Project Components

37. The project has three components. The following paragraphs describe the major activities included in each component. Minor activities that will not have a direct or significant impact on the outcome of the project are excluded here.

Component 1: Road Asset Preservation (Estimated cost: US$125 million equivalent)

38. This component aims at improving the sustainable management of the Ghana roads network with support for the establishment of a network-wide RAMS and the introduction of PBC, in the form of long-term performance-based road contracts based on design-build-operate-maintain-transfer principles.

39. The PBC methodology will use the 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. Based on experience gained elsewhere, the duration of these contracts and associated World Bank projects would be between seven and ten years for the paved roads and about five years for the unpaved roads.

40. The project activities will be spread over two main road networks (trunk and feeder/farm), allowing the respective responsible agencies to gain experience with this new

contracting arrangement, after which the Government could repeat and roll out the methodology with similar but domestically funded contracts.

Subcomponent 1.1: Development of a Road Asset Management System

41. The project will continue support, commenced in the World Bank-funded ongoing Transport Sector Project (TSP) (P102000), for the development and implementation of an RAMS to be used by the GHA, DFR, and DUR. The support will include expanding the Geographical Information System (GIS) already in place to cover all the classified roads and verifying and uploading key road information data.

Subcomponent 1.2: Improved Asset Management on the Trunk Road Network (managed by the GHA)

42. This subcomponent aims at improving the weak implementation results, both in terms of delayed completion and cost overruns that the GHA has experienced in the recent past with the more traditional approach of design-bid-build (DBB) contracts. The introduction of PBCs, based on lump-sum payments for providing and maintaining (preserving) the selected road links, will provide the GHA the opportunity to assess the benefits and value for money of this contracting methodology compared to the current DBB contracts.

43. The selected road link from Tamale to Yendi and Tatale on the Eastern border with Togo, is an integral part of the Central East-West corridor linking the three North-South corridors in the country. The road link consists of about 103 km of paved and about 67 km of unpaved roads.[7]

44. This subcomponent will also provide support to operationalize the border post at Tatale, currently manned but not operational because of lack of Internet connectivity. The Government has established north-south running fiber-optic infrastructure along the Central and Eastern corridors. The project will support the expansion of this network with an East-West link from the Eastern corridor at Yendi as well as linking of the border post at Tatale. This new link will provide Internet connection opportunities for all communities along the corridor.

45. This subcomponent will finance the following activities:

(a) **Consulting services to undertake the Assessment Study and develop the bid documents for the Tamale-Yendi-Tatale Road link.** The Assessment Study includes the following requirements:

(i) To develop a concept design for any improvements/rehabilitation works, including the set of road asset performance standards to be used to manage the contractor's performance on the entire road link.

(ii) To determine the type and extent of the works to be included in PBCs. These include potential road realignments to improve road safety on the section west of Yendi, a recommendation on the best horizontal alignment through Yendi

[7] The GHA recently upgraded the section west of Tamale with support from the African Development Bank (AfDB).

either by expanding capacity of the existing urban roads or by constructing a green field bypass.

(iii) To develop, following community consultations, measures to improve road safety for pedestrians and non-motorised transport users and to minimize the potential negative impacts of labor influx associated with the works contracts and guidelines for effective community consultations and engagement for the duration of the contracts. These will include measures to maximize the employment of local labor and focusing on creating employment opportunities for women.

(iv) To identify, after community consultations, the basic local socioeconomic infrastructure and improved public transport and pedestrian access to improve the livelihood of these communities.

(v) To undertake a climate assessment on the selected road corridor.

(vi) To identify and assess the risk of disaster events along the road link. While the Bimbila-Zabzugu Road is currently unfunded, it makes sense to include this link in the Assessment Study, as it will provide both additional access to the border post at Tatale and the Oti river crossing will provide a second crossing of the Oti River. This option will provide network redundancy should the current bridge crossing between Yendi and Zabzugu be compromised in a disaster event. Such an event will cut off the entire part of Ghana east of the Oti River from the rest of Ghana.

(b) **The PBC works contract and monitoring services for the improvement of the Tamale-Yendi-Tatale Road link.** While the intention is to both improve and maintain the entire road link to uniform levels of service (for example, providing a paved surface throughout), the Assessment Study will determine the type and extent of the works to be supported. The PBCs will also include any socioeconomic infrastructure agreed with the respective communities and fiber-optic infrastructure.

(c) **Support to the axle load control program** with the procurement of equipment for two permanent weigh stations at Akatsi and Jema and four additional portable axle weighing units.

Subcomponent 1.3: Improved Asset Management of the Feeder Road Network (Managed by the DFR)

46. **The project will support the improvement/rehabilitation and long-term maintenance, carried out under the PBC principles, of about 200 km of feeder and farm roads in a prioritized geographical area in the Northern part of Ghana**. The final length will be determined based on the following actual works inputs required.

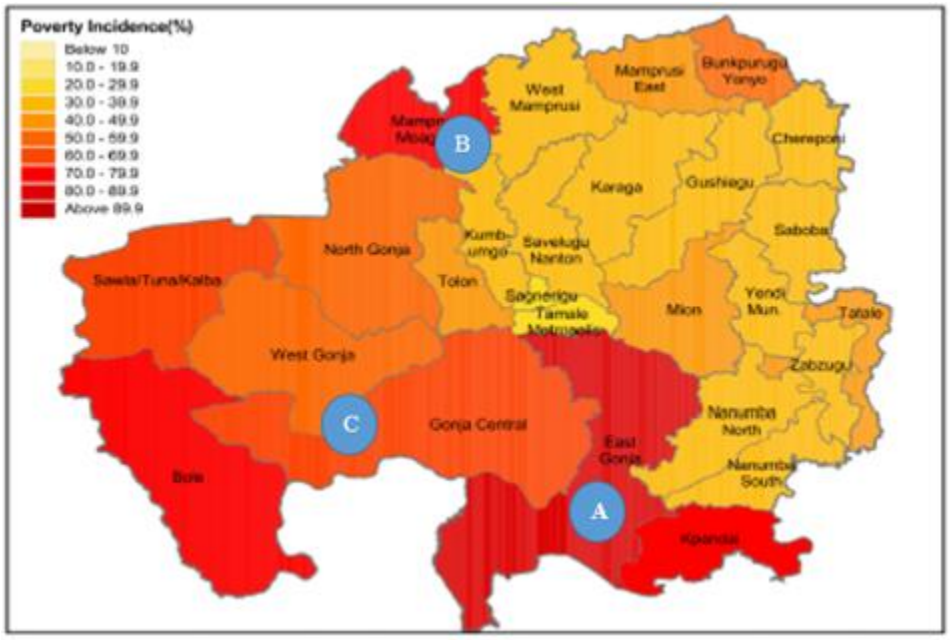
47. The project combined the latest poverty information and the presence of active agricultural value chains to determine the geographical areas of potential support.

- Firstly, the prioritization methodology used the Poverty Maps based on the 2014 Household Survey to highlight, for each of the Northern, Brong Ahafo, and Upper East Regions, the districts with the highest poverty incidence.

- Secondly, Government identified and overlaid the influence areas of all active agricultural value chains to the poverty maps. Government has several agricultural support programs funded by, among others, the International Fund for Agricultural Development (IFAD), European Union, and the World Bank. The IFAD-funded Ghana Agriculture Sector Investment Program (GASIP) is developing support programs for these existing active value chains. These active value chains include areas where farmers have agreements with specific producers to purchase their produce. While other interventions will deliver on-farm support, the project will provide financing to improve and maintain the much needed road network connectivity over the duration of the contracts.

- This prioritization process identified districts within all the regions where the package of feeder and farm roads will support both ongoing agricultural development and the improvement of the livelihoods in the poorest areas of each region. Figure 1 shows the poverty incidence map of the Northern region with active value chains in circles, marked A, B, and C, in order of priority for support.

Figure 1. Poverty Incidence - Northern Region[8]



48. This subcomponent will finance the following activities:

(a) **Consulting services to undertake the Assessment Study and develop the bid documents for the road network in five prioritized geographical areas.** Given

[8] Ghana Poverty Mapping Report, May 2015, Ghana Statistical Service

the interest from other donors to provide support for similar feeder road activities, the Assessment Study will cover all four Regions. In total, the study will include five areas, one for support under the project and the other four available for support by others. The Assessment Study includes the following requirements:

(i) To develop a concept design for any improvements/rehabilitation works, including the set of road asset performance standards to be used to manage the contractor's performance on the entire road link.

(ii) To determine the type and extent of the works to be included in PBCs. These include potential road realignments to improve road safety.

(iii) To develop, following community consultations, measures to minimize the potential negative impacts of labor influx associated with the works contracts and guidelines for effective community consultations and engagement for the duration of the contracts. These will include measures to maximize the employment of local labor and focusing on creating employment opportunities for women.

(iv) To identify, after community consultations, the basic local socioeconomic infrastructure and improved public transport and pedestrian access to improve the livelihood of these communities.

(v) To undertake a climate assessment on the selected road networks.

(vi) To assess the improvement of the road sections within villages to paved standard to reduce the negative impacts of dust generated by traffic and to provide for improved pedestrian safety within the villages.

(b) **The PBC works contract and monitoring services for the improvement of the selected road network in the East Gonja District of the Northern Region.** While the intention is to improve and maintain the entire road network to uniform levels of service, the Assessment Study will determine the type and extent of the works to be supported. The PBCs will also include any socioeconomic infrastructure agreed with the respective communities.

(c) **The MRH will undertake a comprehensive Socio-Economic Impact Assessment (SEIA)** to determine the long-term impact of using PBCs on rural development initiatives such as the GASIP activities. This SEIA study will include the development of an initial baseline, before the commencing of works contracts and two community surveys, one about one year after and the second survey about three to four years after the initial rehabilitation works have been completed**.**

Subcomponent 1.4: Improved Asset Management of the Urban Road Network (Managed by the DUR)

49. Should the implementation of the other Components and Sub-components generate sufficient savings on the already agreed activities, the project will support the improvement and

supervision of 3-7 km of lower order urban roads and associated socio-economic infrastructure in poor areas of Tamale and Bolgatanga in Northern Ghana. The concept design study will prioritise such proposed improvements and the final length of road will be determined based on the ability to achieve the desired impact and the availability of funds.

50. The works contracts will introduce Design-Build contracting methodology for urban road infrastructure to test this contracting methodology against the current contracting practices.

51. The project will incorporate Ghana's Decentralisation Policy and the findings of the road reclassification study. These findings will most likely result in the transfer of the lower order roads to the respective District Assemblies. The project will incorporate such changes and will support the respective Assemblies with institutional strengthening to manage these contracts, if required.

Component 2: Improved Road Safety (Estimated cost: US$8 million equivalent)

52. This component supports activities implemented by both the NRSC and the DVLA.

Subcomponent 2.1: Supporting the National Road Safety Commission

53. This subcomponent will comprise the following set of activities approximately half of which will directly support the NRSC and the rest will be linked to the road safety activities of the Roads Agency components in the project.

(a) **Road Accident Database Management System (RADMS).** An important recent investment by the NRSC is the purchase of the RADMS, a state-of-the-art suite of crash database, analysis, and reporting software, using police crash reports as input. It is not in active use yet. The project will support the implementation of the system, including upgrading of the software for the use of smartphone apps and GIS for reporting, the purchase of equipment such as computers and data entry devices for the traffic police, training on the system, and processing and analysis of crash data in real time. The implementation is planned in phases, starting with the centers with larger vehicle populations, eventually linking all traffic police stations with Internet connectivity with the system.

(b) **Lollipop program at about 500 schools (making pedestrian road crossings safer).** The project will support the wider deployment of the ongoing Lollipop program, targeting road crossing by children attending primary and junior secondary schools. Initially piloted in Volta region by the NRSC and expanded to some schools in Greater Accra, the project will support its further expansion based on already identified national demand. This program provides roadside stands containing handheld 'stop' signs that children wishing to cross the road hold out to encourage drivers to stop. The project support will focus on complementary, low-cost engineering measures such as painted and raised pedestrian crossings and other traffic calming measures to improve safety at the targeted crossings. Combined with the planned volunteer wardens and supportive teachers who train the children in proper use, the approach provides a comprehensive solution. The funding will support awareness building among all stakeholders, printing and distribution of materials, and the design and implementation of the associated traffic calming

measures on the pedestrian crossings serving the respective schools. The project will support schools interested in implementing this program throughout Ghana with a focus on project roads, urban areas, and schools in settlements divided by major roads.

(c) **Training needs assessment.** Under the ongoing TSP, the NRSC received support to enhance its capacity. The project will continue to support the strengthening of the NRSC with a focus on professional development and training programs for the NRSC and other Agency staff engaged in road safety, starting with a training needs assessment and thereafter supporting some of the identified actions.

(d) **Other activities agreed for support.** In addition to its coordination role, the NRSC is directly responsible for raising awareness of road safety issues among road agencies and road users and preparing public education campaigns and materials for use in schools. As part of the project, the NRSC will receive support for:

(i) Pedestrian and child safety education activities closely coordinated with traffic police enforcement programs that will be directed at about 116 districts, including those containing the roads to be improved under other project components. Specific actions will include; printing and distributing posters, handbills, road safety stickers, road safety textbooks and teachers' guides (this activity is an extension of an existing program);

(ii) Providing additional enforcement equipment to the traffic police to increase activities targeting drinking and driving, and speeding;

(iii) Road safety research activities and strengthening monitoring and evaluation (M&E) of progress made with the implementation of the NRSC Action Plan.

Subcomponent 2.2: Supporting the Driver and Vehicle Licensing Authority

54. The subcomponent will finance the following activities:

(a) **Rollout of vehicle inspections to private garages.** The project will support the development and rollout of a system to utilize private garages for vehicle inspections in smaller towns. The DVLA commenced with a program to transfer the responsibility of vehicle inspections to the private sector. This decision follows an assessment that the in-house testing facilities lack resources to undertake vehicle inspections as required. The DVLA program focuses on the larger population areas where the private garages could be constructed and operated using a PPP-model. Cost recovery is possible through the allocation of part of the inspection fee revenue generated at each of these Private Vehicle Test Stations (PVTS). This model does not work in urban and rural areas with low vehicle populations.

(b) **The project support will include the feasibility study** that will review the current capacity and assess the willingness of the private garages to take on this responsibility, including developing a robust quality monitoring system for the DVLA, and support with the initial rollout of the system.

(c) **Develop and implement an integrated system for driver and vehicle licensing.** The DVLA will replace its current freestanding software systems for vehicle registration, drivers' licensing and education, authorized test center databases, and so on with an integrated software system open for online use by others, such as the traffic police, the Ghana Revenue Authority, and the Road Fund. The project will finance the feasibility study and, depending on funds availability, will support the initial implementation activities.

(d) **Institutional strengthening.** The project will support training and capacity building of the driver testing and PVTS oversight responsibilities of the DVLA through a combination of international and on-the-job training of the DVLA staff.

Component 3: Institutional Strengthening and Capacity Building (Estimated cost: US$17 million equivalent)

55. The Government has a vision to modernize the transport sector in general while improving the management efficiency of the road subsector, in particular, in response to the rapidly increasing demands for reliable and safer road infrastructure. The MoT and the MRH will coordinate the agreed activities under the project to review and assess the status of transport sector management in Ghana and make robust recommendations to improve, especially the management of the road subsector. These findings will identify opportunities to improve the management of the transport sector through internal reforms and restructuring of the current agencies and ministries, where necessary.

56. The project will support the implementation of the several updated policies, the most important being the updated NTP and Tolling Policy. A central part of the institutional strengthening will be the assessment of the Road Sub-sector Agencies and the support earmarked to implement the initial restructuring and recommendations of the assessment.

57. **The Government is completing a Public Expenditure and Institutional Review (PEIR) of the transport sector.** The PEIR reviewed and analyzed the performance of fourteen departments and agencies under the MoT and four under the MRH against their mandate and responsibilities and assessed the efficiency of the sector in its planning and implementation of planned programs. The initial outcomes of the PEIR point to weak policy formulation and oversight functions and inadequate financial reporting capacity within most of the departments and agencies while there is a tendency to overcommit funds. The final analysis of the institutional and financial efficiency is a building block for the review of the NTP, the road subsector institutional review, and the development of the NMMTMP.

Subcomponent 3.1: Institutional Strengthening

58. These studies will be completed within the first three years of project implementation. This will leave sufficient time for implementation of the initial restructuring and reform activities. The results indicators reflect this timeline.

59. **Institutional review of the road subsector agencies.** This study will review the current functions and responsibilities of the MRH and its two departments, the DUR and DFR, the local government agencies managing the urban and feeder road networks, respectively; the GHA; and

the Road Fund. The core function of the Road Fund is to manage the revenues of the Road Fund and to allocate such funding for both road maintenance and improvement. Funding allocation for road maintenance has been inadequate, as about half of the Road Fund is spent in road development, construction, and rehabilitation. Related to its core function, there is a need to reassess its mandate to improve its efficiency and effectiveness in road financing. The initial findings of the PEIR show that all road agencies require improvement of their planning and execution capacity and strengthening of their operational functions.

60. The outcome of this study will define the restructuring options and implementation actions required to improve and modernize the road subsector. These actions would include amendments to current legislation, to develop a more sustainable funding system and to limit the cost of managing and implementing works.

61. Future World Bank support will build on the outcome of this study and will support Government to operationalize the recommended improvements.

62. **Support the implementation of road subsector reform.** Following the Government's approval of the recommendations of the institutional review of the road subsector, the project will support some of the initial restructuring and its implementation activities, the extent to be agreed once the accepted study recommendations are known. Follow-on transport projects will focus on supporting the remaining reform implementation activities.

63. **Disseminate and implement the revised NTP.** The project will support the dissemination and implementation of the revised NTP, currently being updated under the ongoing TSP. The updated NTP will include, for the first time, the impact of climate change, regional integration and decentralization, regulation of transport services, and improved management by and oversight of the respective agencies. First-order priorities would be to strengthen the respective agencies to implement the new requirements of the NTP.

64. **Develop the NMMTMP for Ghana.** This study will build on the recommendations of the NTP review. The outcome of this study will provide Ghana with a comprehensive, integrated multimodal master plan that, with regular updates, could provide the basis for sustainable long-term investment decisions, incorporating their environmental and social implications, in the transport sector and in response to future transportation demand.

65. **Assist the MoT to implement and operationalize a comprehensive, nationwide Transport Sector Monitoring and Data Management System.** The MoT/MRH has already designed a sector wide M&E system. The project will support the implementation of this system on a software platform, inclusive of the cost of the software development, supporting hardware, training, and the first data collection activities. The project will finance a review of the system two years after project implementation and will provide support for the implementation of some of the recommendations.

66. **Implement the Ghana Tolling Policy.** The Government is currently updating an earlier draft Tolling Policy. The new Tolling Policy will address and modernize general toll collection methods for national roads, as well as providing policy guidance to introduce PPP-concessions, currently planned for the Accra-Tema and Accra-Takoradi Road links and other future PPP

roads. Following approval of the policy by the Government, the project will support the dissemination and implementation of the policy.

Subcomponent 3.2: Supporting Capacity Building

67. **The project will support limited capacity building across the different agencies benefitting from the project.** This will include a mix of short-term international and local courses as well as specific, agreed postgraduate training programs, if considered essential. The agreed approach will be for the MRH/MoT to prepare an annual training program for review and agreement by the World Bank. Once agreed, the respective agencies will implement the program. The Government will provide regular feedback through the agreed project reporting on the status of implementation and impacts of the training.

Subcomponent 3.3: Supporting Project Implementation

68. This subcomponent will provide support to the Government for technical assistance, equipment, training and operating costs for:

(a) Project management and implementation oversight;

(b) Project monitoring and evaluation; and

(c) Operating costs of the Project Office including the three Agency Implementation Teams (AITs).

69. Project implementation support will specifically include implementation of citizen engagement (CE) mechanisms, HIV/AIDS prevention, and gender-targeted activities as following:

(a) Awareness raising and behavior change interventions on HIV/AIDS and sexually transmitted disease (STD) prevention among beneficiary communities to both increase awareness and knowledge of HIV/AIDS and STD and to reduce HIV-affected people's discrimination and stigma.

(b) Awareness raising and behavior change interventions on GBV among female and male beneficiaries to minimize GBV. This will include trainings on GBV prevention, care, and report mechanisms to community health workers.

(c) Increase the use of community monitoring committees in each beneficiary community to bring back citizens' ownership on project development and implementation as well as to promote a constant dialogue and collaboration between communities, Government, and campsite workers.

(d) Ad hoc mechanisms allowing beneficiaries to report any questions and concerns associated with project's development and including these in the grievance redress system.

B. Project Cost and Financing

70. The estimated project costs, inclusive of taxes, are presented in Table 1. The project will be financed exclusively with IDA resources.

71. The Government will finance the cost of resettlement.

Table 1. Estimated Project Cost and Financing (in US$ millions)

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	100%
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%

C. Lessons Learned and Reflected in the Project Design

72. The long-standing experience of the World Bank in implementing transport projects in Ghana share common characteristics. These are:

(a) Strong client ownership and successful collaboration with the World Bank;

(b) Adequate project design and scope with adequate quality at entry and implementation readiness;

(c) Weak project management capacity and high turnover of key project-related staff, resulting in poor oversight of works and consultancy services contracts;

(d) With multiplicity of stakeholders, coordination is crucial to minimize the implementation delays between various implementing ministries and its departments and agencies;

(e) Strong compliance with the World Bank's financial and procurement management policies and requirements;

(f) Weak compliance with the World Bank's social and environmental policies and requirements, especially with completion of land acquisition and substantial implementation of Resettlement Action Plans (RAPs) and Environmental and Social Management Plans (ESMPs) before the start of the construction works; and

(g) Works contracts are associated with cost overruns and implementation delays generally citing inadequate designs as the main reason.

73. The preparation and design of the project largely incorporates these key lessons with experience gained on similar and other projects in other countries. The key design improvements are listed in the following paragraphs.

74. **Improve project management capacity.** The recently completed and ongoing road projects, both financed by the World Bank and the AfDB, all utilized in-house staff to implement project activities in addition to their existing Government responsibilities. The project will have a dedicated (full-time) team consisting of the Project Coordinator (PC) and the AIT managers with additional project staff, either full time or part time, as the workload requires.

75. **Minimize the negative financial impact of cost overruns and delays associated with works contracts.** To date, road works contracts utilized the DBB approach where the works associated with an approved design is contracted out and paid for based on inputs and outputs. Any design change invariably leads to a change in works contract scope and implementation duration. Following the Government's request, the project will support the introduction of PBC where the contractor is responsible for the design, implementation, and maintenance of the works, and contract payment is based on lump sums after achievement of specified levels of service. Based on the experience gained in other countries, this contracting methodology would result in substantial cost savings achieved from integration between design, engineering, construction, and maintenance by the same contracting entity throughout project schedule, timely infrastructure delivery, improved quality control through better risk management associated with works, and promotion of good road asset management practices.

76. **Improve social and environmental oversight and include lessons learned on labor influx and GBV.** The introduction of PBCs provides additional opportunities to strengthen social and environmental oversight.

77. The project will incorporate the following implementation improvements to strengthen oversight. Section VI, subsections E and F, includes more detailed information on each of the following measures:

(a) **Reducing works implementation delays.** The project design is based on a Resettlement Policy Framework (RPF) and an Environmental and Social Assessment (ESA). The Assessment Study will complete the concept design for all the road works and will develop, for each works package, an Environmental and Social Impact Assessment (ESIA)/ESMP and a RAP based on the respective concept designs. Government will implement these RAPs prior to works contract award. This is a change to the practice to date where the implementation of the RAP was delayed until the full impact of the final design was known. The project approach will complete resettlement along substantial sections of the works site, as the final design, to be submitted by the contractor, should not require major changes in the horizontal road alignment.

(b) **Speeding up land valuation processes to decrease the time required to develop the RAPs associated with the works contracts.** Under the ongoing World Bank-financed projects there were considerable delays to complete the land valuation process. The project supports the inclusion of a Land Valuation Expert in both the Assessment Consultancy and Contracting Entity teams. This additional capacity will work with Government and will liaise with staff of the Land Valuation Board to ensure that the information, required to review and validate the respective RAPs, is provided on time.

(c) **Strengthening contractual requirements.** The ESIA and RAPs, based on the concept designs of the roads, will lead to the early identification of and development of mitigation measures for any safeguards issues associated with the works. These mitigation measures will be built into the works contract specifications with a requirement that the contractor must incorporate these in his final design and the associated ESIA/ESMP and RAP. Works will not commence until the updated ESIA/ESMP and the updated RAP have been cleared, disclosed, and fully implemented.

(d) **Lessons learned from the recent Transport Sector Development Project (TSDP) (Uganda) (P092837) related to labor influx on local communities.** The project will implement lessons learned from the TSDP. The Assessment Study to implement PBCs includes an assessment of the distributional impacts of the labor influx on local communities. The Gender and Poverty Assessment shall form a separate chapter of the Assessment Study Report in which the consultant will apply a gender lens throughout the project analysis. As part of the Gender and Poverty Assessment, the consultant will include a specific analysis on potential social risks associated with the arrival of external labor force, including child labor and marriage, GBV, human trafficking, and health-related issues, such as STDs and adolescent pregnancy. The consultant will also propose measures to mitigate the impact of the project on vulnerable groups such as women, girls, children, and the aged in the settlements close to the roads. During the consultations with the beneficiaries, the consultant shall hold separate discussions with the female and male population to ensure that equal opportunities are given to both women/girls and men/boys to express their views and possible concerns.

The respective works contract bid documents will include specific, detailed requirements, and procedures to strengthen the participation of all affected groups and to mitigate the negative distributional impacts of labor influx and child/gender based violence. These will include the use of a robust Grievance Redress Mechanism (GRM) and a code of conduct for contractors and their staff.

(e) **Additional project oversight.** The responsible AITs will employ a local Social Safeguard Specialist (SSS) with extensive experience on gender issues and child protection to coordinate and supervise the project's gender and social aspects.

(f) **Additional works contract implementation requirements.** The project will implement the following additional mitigation measures during works implementation:

(i) The Government and the World Bank will clear the award of a works contract only after clearance of the concept design-ESIA/ESMP and RAP.

(ii) Works on a contract will commence only after clearance of the final design ESIA/ESMP and full implementation of the final design-RAP. Where road links or substantial portions thereof do not require resettlement activities, the World Bank and Government will mutually agree on an approach where the contractor would be given sectional Notices to Proceed with works.

(iii) Grievance Redress Mechanism (GRM) is fully functional.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

78. **The MRH shall have overall responsibility for project implementation.** The MRH developed a Project Implementation Manual (PIM), reviewed and accepted by the World Bank, that includes (a) institutional coordination and day-to-day execution arrangements of the project; (b) disbursement and financial management; (c) procurement; (d) environmental and social safeguards; (e) monitoring, evaluation, reporting, and communication; and (g) other administrative, financial, technical, and organizational arrangements and procedures as may be required.

79. **The Government adopted an implementation structure** consisting of (a) a Project Steering Committee (PSC); (b) a dedicated, full-time PC; and (c) three AITs headed by full-time managers and complemented by additional full-time or part-time staff, as implementation requires.

80. **The PSC is responsible for reviewing and approving the project's annual work plans and budgets, providing policy and program guidance to the PC, overseeing implementation progress, and ensuring communication and cooperation among stakeholders**. The PSC will be co-chaired by the Chief Directors of the MRH and MoT and will include officials from the MRH, MoT, Ministry of Finance (MoF), Ministry of Food and Agriculture (MoFA), GHA, DFR, DUR, DVLA, and NRSC. It is expected to meet on a regular basis (quarterly) and, at any other time, should the project require it.

81. **The PC is responsible for coordinating and implementing the project activities, and will be selected competitively and be appointed by the MRH and MoT.** The PC will report directly to the PSC and will be supported by a Project Office adequately staffed and housed in the MRH. The PC will be responsible for the overall coordination of the project subcomponents. More specifically, the PC will (a) lead the preparation of annual work plans and budget for the project for consideration and approval by the PSC and clearance by the World Bank; (b) coordinate the procurement actions taken by the three AITs for all agreed activities; (c) ensure that the agreed implementation schedules are followed by the AITs; (d) provide overall

management of the financial accounts, including external financial audit; (e) arrange independent technical audits of the works and procurement audit of all project components; (f) prepare and distribute aggregated quarterly implementation progress reports for all project stakeholders; (g) consolidate agency updates for review by implementation support missions by the World Bank; and (h) lead the preparation of a midterm review (MTR) report and the Implementation Completion and Results Report with assistance from the implementing agencies, beneficiary agencies (BAs), key stakeholders, and the World Bank.

82. **The three AITs shall report to the PC in all matters of project implementation, coordination, and reporting.** The three AITs are the MRH, also responsible for specific DFR and DUR activities; the GHA; and, the MoT, also responsible for the DVLA and the NRSC activities. The AITs shall assist the PC with project implementation and shall, among others, be responsible for (a) preparing AIT annual work plans, Procurement Plans, and budget as part of the project's annual work plans and budgets; (b) providing implementation progress updates; (c) implementing the procurement process and deliverables including liaison with the respective Agency Entity Committees under Ghana Law to secure procurement clearances and payment for eligible activities; (d) ensuring quality control of procurement-related activities and assessment of suppliers outputs including evaluation of technical design and specifications; (e) ensuring compliance of agency activities with the World Bank fiduciary (including safeguards policies) policies, in liaison with relevant agency departments; (f) quarterly reporting on the progress of agency activities; and (g) preparing ad hoc project updates on agency components for review by the PC.

83. Table 2 summarizes the areas of responsibility for the respective AITs by component and funding allocation. The BAs, which will be responsible for providing technical inputs to the AITs during implementation, are the MoFA, Motor Transport and Traffic Department, and the local assemblies responsible for the selected feeder roads.

Table 2. Implementation Responsibility by Component and by AITs

Component/Subcomponent	Agency Implementation Team (AIT)		
	MRH	**MoT**	**GHA**
Component 1: Road Asset Preservation (Estimated US$125.0 million)			
1.1 Road Asset Management System	3.0		
1.2 Improved Asset Management on the Trunk Road Network			102.0
1.3 Improved Asset Management on the Feeder Road Network	20.0		
1.4 Improved Asset Management on the Urban Road Network	0.0		
Component 2: Improved Road Safety (Estimated US$8.0 million)			
2.1: Supporting the NRSC	0.5	5.0	0.5
2.2: Supporting the DVLA		2.0	
3. Institutional Strengthening and Capacity Building (Estimated US$17.0 million)			
3.1 Institutional Strengthening	5.0	3.0	
3.2 Support Capacity Building	1.5	1.0	2.5
3.3 Support Project Implementation	1.5	1.0	1.5

Estimated Implementation Responsibility in terms of US$	**31.5**	**12.0**	**106.50**

84. During project implementation, the PC will arrange monthly implementation meetings with the AITs to review progress and address any implementation-related issues. The monthly reports will be aggregated into a quarterly report to be submitted to the PSC for discussions and critical decision making on the project.

85. The PC will share these monthly reports and the monthly progress reports generated under the individual activities with the World Bank.

86. All components will be managed in line with the World Bank fiduciary and safeguards requirements. In those areas where the Government expertise would require strengthening during implementation, short-term consulting specialists (contract management, engineering, procurement, financial management, environmental and social safeguards management) would be employed to enhance performance and project implementation. The short-term specialists would be financed as part of the capacity building component of the MRH and MoT.

87. **MTR.** The Government and the World Bank will undertake an MTR about three years after project approval to review the continued relevance of the PDO and results framework against the actual implementation progress at that time. The outcome of the MTR could either confirm the original design of the project or recommend project restructuring, the extent to be agreed by both the Government and the World Bank.

B. Results Monitoring and Evaluation

88. The project's M&E indicators are presented in Annex 1. The PC is responsible for reporting on the progress made with achieving the outcomes included in the results framework. The PC will require the respective AITs to assist with data collection, compilation, and analysis. The PC may also co-opt staff of the respective departments of M&E of the MoT and MRH for data collection and analysis.

89. The PC will include a comprehensive update of the results framework in the biannual progress reports that would be submitted to the World Bank within 45 days from the end of each reporting period.

C. Sustainability

90. The project will support long-term PBCs for the planned improvement/rehabilitation works and maintenance services. These contracts require the contractor to provide and maintain road assets at a minimum level of service over the duration of the contracts, thereby ensuring sustainability during the contract phase. These contracts will be used as a learning phase and a basis to assist the Government to implement similar contracts funded entirely with domestic funding.

91. The project will also support the establishment of an RAMS that will lead to improved maintenance planning and execution, thereby providing additional opportunities for extending the useful life of the road networks.

92. The planned road reform could provide long-term sustainability. While this contracting methodology will provide sustainability over the duration of the contract, two factors remain uncertain: how the Government will incorporate and finance the next PBCs with domestic funding and how the recommended options of the agreed institutional review of the road agencies will be fully implemented to generate more sustainable financing for the Road Fund and thereby create a more guaranteed flow of funds for the road maintenance. The idea of having a self-financing road sector will not be achieved during the implementation period of one project. Future World Bank-financed projects will therefore support the Government and the strengthened road agencies with a programmatic approach; ideally progressing from requiring limited domestic funding and gradually increasing this domestic funding requirement over time.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

93. The overall risk for the project is considered Substantial, and will remain substantial after mitigation.

94. **Political and Governance risks are Moderate.** The December 2016 general elections resulted in a change of Government. The political risk of delaying approval of the project did not materialize and will remain moderate.

95. In recently completed, as well as in the ongoing projects, contractors generally experience long payment delays because of the lengthy payment certificate review processes within the Government. The project agreed to three Designated Accounts, one each for the MRH, MoT, and GHA, to shorten the internal payment approval processes.

96. **Macroeconomic risk is Substantial** because of the negative impact on Ghana's economy due to falling commodity prices from 2012 to 2015. This led to Ghana agreeing to implement a three-year program, supported by the IMF and the World Bank, to restore debt sustainability, among others. The fiscal consolidation efforts are showing progress and it is expected that the GDP growth rate would reach about 8 percent in 2017 and 2018, if the fiscal consolidation remains on track.

97. The road agencies made substantial over-commitments for works contracts over the last years, leading to substantial arrears in contract payments. Intermittent and often lower-than-budgeted transfers from the MoF further exacerbate the situation. While this risk is mitigated for the project activities by providing 100 percent World Bank-financing, the continuing arrears in payments to contractors negatively impact growth within this subsector.

98. For this reason, the project will support a series of studies and the implementation of updated and new policies to modernize the road agencies. Among these, the assessment of the operations of, among others, the Road Fund and the GHA will identify and recommend options to improve the management and financing of the subsector.

99. **Technical Design risks are Moderate**. The project will mitigate potential risks related with the introduction of PBCs through workshops for the GHA, MRH, and all participants in the Ghanaian consulting and contracting industry. The workshops will focus on the contractual

details and responsibilities of all parties under these contracts. In addition, the project will accommodate the impact of decentralization—where the DFR will transfer road links included in the project to local assemblies—through additional capacity building and transfer of project management skills, as required. The impact of this transfer will be minimal with majority of road links, identified for inclusion, remaining with the DFR.

100. The extension of implementation responsibility to the MoT will have positive impacts, as staff of the MoT will be able to strengthen their project management skills during implementation of the agreed activities.

101. **Mitigating bidding risks associated with the introduction of PBCs.** The introduction of PBCs increases the potential payment risk for interested bidders given their longer duration compared to the traditional contracts, especially in countries such as Ghana that do not have a mature longer-term contracting environment. Moreover, the Government has substantial arrears in contract payments to contractors. This risk becomes more acute with longer-term contracts with bidders, leading to either increasing their prices or withdrawing interest, if they are to carry this payment risk. The World Bank mitigated this risk in other countries with the approval of project durations that incorporate the entire contract duration or provide the World Bank payment guarantees if the project duration is shorter than the contract period. This provides the 'guarantee' to prospective bidders that the funds required to pay for the expected works would be available throughout the contract period. Under the project, the project duration is set at six years, allowing sufficient time for the completion of the feeder/farm roads contracts and about five years of the seven-year Tamale-Yendi-Tatale works contract. The project will finance the final two years of the contract either through specific contractual arrangements or through an escrow account. The project will further finance capacity building within the GHA to properly manage and oversee the last two years of the contract.

102. **Introduction of PBCs to domestic construction firms.** PBCs require a different works implementation philosophy. While this experience is available within larger international contractors, the size of the works contracts under the project may not be large enough to attract sufficient international interest. Thus, it is likely that these contracts would be awarded to domestic contractors with little experience of the PBC methodology or lack necessary engineering capacity for PBCs. The pre-bid workshops mentioned above will assist before bidding. Similar experiences in other countries led to the establishment of regular technical meetings, attended by the Government, the monitoring consultant, and the contracting entities. These meetings would discuss and agree on solutions for contract implementation issues with workshop minutes shared with the World Bank. The project will support this approach throughout implementation.

103. **Institutional Capacity for Implementation risk is Substantial,** as past experiences point to weak project implementation capacity. While the PBC has various merits as its approach allows contracting entities to implement technical works and take operational decisions during the contract period, the AITs have to be well prepared at all stages on the technical designs, selection of applicable levels of maintenance services, proposed terms and conditions of the bidding documents, among others. For these reasons, the introduction of PBCs in Ghana may increase the implementation risk.

104. However, the MRH and MoT have a long history of implementing World Bank-funded projects, and they will continue to be the implementing ministries under the project. To mitigate the implementation risk and improve implementation and timely management of project-related issues, the MRH/MoT decided to place a project team led by a dedicated, full-time PC and three AITs. In addition, an external monitoring consultant will be appointed throughout the PBC duration to monitor and ensure the delivery of quality services (construction and maintenance) as per terms of conditions of PBCs.

105. **Sustainability risk is Substantial** and is associated with the Government's partial commitment to maintain the road network sustainably, leading to faster deterioration of roads in good and fair condition. While the introduction of long-term PBCs, including rehabilitation and maintenance, will mitigate this risk during the contract period, the Government's contribution to a future PBC rollout program is not guaranteed. As a mitigation measure, the ongoing road sector institutional review, which focuses on the sufficient funding provision for road maintenance under the Road Fund, and the implementation of the NTP will support the mitigation of the sustainability risk. The long-term mitigation actions are described in Section IV.C earlier.

106. **Fiduciary risk is considered Substantial** even though the implementing ministry has a history of sound procurement and financial management under the recently closed and ongoing World Bank-financed projects. Measures to reduce the procurement risk to an expected Moderate rating are described in Section VI.D, making the overall Fiduciary Risk Rating Moderate after implementation.

(a) **The Financial Management risk for the earlier transport projects has been Moderate** and the lessons gained will be brought to bear on the project. In addition, all the agencies involved in the project have functional internal audit units with appropriate and relevant accounting and auditing manuals to guide accounting and auditing procedures.

(b) **The Procurement risk is Substantial.** The value, nature, volume, complexity, and coordination of the procurements under the project pose inherent challenges. The key risks for procurement include (i) the inherent complexity of OPRC; (ii) possible coordination difficulties in the procurement implementation across the three AITs; (iii) lessons learned during TSP implementation arising from the lack of use of the Procurement Plan as a monitoring, evaluation, and management tool, therefore lacking updates to reflect procurement performance; (iv) possible delays by the AITs in preparing procurement documents, evaluation of bids and technical proposals, and possible weakness in ensuring contract management (supervision/administration, monitoring) during contract implementation to completion. Procurement risk mitigation measures are listed in section VI.D.

107. **Environment and Social risks are rated High** and would reduce to Substantial during implementation.

(a) The Government has in the past not been able to release all the funding to implement the RAPs/Abbreviated Resettlement Action Plans (ARAPs) associated with several

World Bank-funded infrastructure projects, leading to extensive implementation delays and additional claims by the affected contractors and supervision consultants. Management has been working with the Government to ensure that RAPs are properly financed and compensation paid as promptly as possible.

(b) The inclusion of a Land Valuation Experts as part of the teams of both the Assessment Consultant and the Contracting Entity would likely reduce the land valuation process and would result in the early development and implementation of the RAPs/ARAPs. The introduction of PBCs will shift the approval and clearance of the final RAP, ESIA, and ESMP to the design stage of the works and after the specific works contracts have been awarded. Experience from similar contracts implemented in other countries shows that there could be significant delays in implementing the RAP, thereby significantly delaying the commencement of the works.

The project will support the implementation of the RAP/ARAP based on the concept design of the roads. This will clear large portions of the road alignment for works commencement, given that most of the roads could be rehabilitated without major changes in the horizontal alignment. This approach would allow works to commence on road sections where the final design does not require additional resettlement activities and would allow time to review, clear, and disclose the updated RAP (based on the final works design) and complete the resettlement activities.

The project will update the appraisal-stage ESA with a more detailed ESIA/ESMP based on the concept design for each package. These requirements will be included as minimum requirements in the works contract with contract award being contingent on clearance of the concept design ESIA/ESMP.

The works contracts will require additional commitments from contractors through instruments such as simple codes of conduct for their staff as well as specific works commencement and payment clauses to ensure compliance before works commencement and during contract implementation.

(c) The project will introduce actions to promote the gender policies of Government and will minimize the impact of labor influx by placing additional responsibility and expertise on implementing teams of PBC contractors.

(d) The project will finance additional implementation capacity within the Government's implementation team and the required additional commitments from contractors. These will include the employment of a local Social Safeguard Specialist (SSS) with extensive local knowledge and experience on gender issues, child protection and HIV/AIDS awareness to coordinate and supervise the project's gender and social aspects, including social safeguards and CE interventions.

VI. APPRAISAL SUMMARY

A. Economic Analysis

108. The primary economic impacts of the project have been identified as the following: (a) a reduction in journey time for passengers and freight along the road links and networks reflecting the improved infrastructure; (b) a reduction in vehicle operating costs; (c) a reduction in the unpredictability of journey times; and (d) a reduction in the costs of death and injury on the roads. Over the medium term, the impacts should contribute to (a) a reduction in the cost of transportation and hence prices for goods; (b) an improvement in the quality of transport; and, (c) a reduction in the size and cost of goods inventories. In the long term, the program is expected to contribute to trade expansion.

109. The optimum level of service for a specific road link is based on the principles of minimum total costs to the road users. These will be finalized as part of the concept design and the works contracts will specify these as minimum levels of service for all phases of the works.

110. The Highway Development and Management Model-IV (HDM-IV) analysis of the Tamale-Yendi-Tatale Road compared two options for rehabilitation of the road link, either a 25 mm thick Double Bituminous Surface Treatment (DBST) or a 50 mm asphalt concrete surface. Based on the current traffic volumes and the expected future demand, the DBST is the recommended solution with an Economic Internal Rate of Return (EIRR) ranging from 26 percent to 36 percent over the three contiguous road sections. Robust sensitivity analysis showed that the DBST solution remains viable with a 50 percent reduction in traffic volumes, reducing the EIRR to 11.6 percent.

111. The feeder road networks carry very low traffic volumes. The initial selection methodology, described in Section III, focuses on providing general connectivity and access to agricultural development in some of the poorest districts in Northern Ghana. The project assessed and agreed to the inclusion of a sample of roads in each district based on combining three weighted factors: high-value agricultural production (0.5), cost effectiveness (1,000 people per million U.S. dollar works costs [0.25]), and access to health facilities (0.25).

B. Technical

112. **Road improvements.** The Assessment Study for the main road investments under the project will produce the concept designs and bid documents to be used to contract the first year works.

113. The pavement concept designs would be based on expected traffic on the selected roads. For the Tamale-Yendi-Tatale corridor, the first 103 km is already paved, with the road through Yendi encroached on both sides, and the last sections to the border are unpaved. The Assessment Study will review and recommend, as part of the concept design, the actual works and associated need for land acquisition and resettlement to provide the expected levels of service. The main items requiring finalization for inclusion in the bid document are the following:

(a) Review and amend the horizontal alignment of the paved road between Tamale and Yendi to improve road safety and ease of travel for all road users. This includes the rural and urban sections.

(b) Determine the best alignment either through or around Yendi. The urban road section through Yendi is heavily encroached with buildings extending too close to the edge of the existing road and informal sellers using both the sidewalk and road space. A bypass for through-traffic would reduce the current congestion and would also minimize the need for costly resettlement along the urban section.

(c) Determine the preferred option from several technically viable pavement solutions for the section, currently unpaved with suppressed traffic volumes close to the border with Togo. The initial economic analysis shows that paving would be feasible.

114. The most viable technical option will become the minimum standard to be provided by the contractor.

115. The feeder/farm roads carry very low traffic volumes (mostly, less than 50 vehicles per day), and the final pavement design is expected to be gravel road standard. International experience showed that where rural roads are rehabilitated to all-weather road standards, traffic volumes increase significantly, especially because of both latent demand and traffic diversion when only specific road links within a road network is improved. The project will support the improvement of the entire networks serving the geographical area, thereby minimizing the impacts of diverted traffic. Road designs will provide for pedestrian safety.

116. **Safe roads design**. Both the concept designs and the final designs will be subject to road safety audits undertaken by independent road safety experts. These reports will present the findings of the audits and how the recommendations of the road safety expert have been incorporated in the respective designs.

117. **Contracting methodology**. The works will be implemented under the PBC principles where the contractor would be responsible for the design of the initial works, construction of the agreed design, and maintaining the road at predefined levels of service for the entire contract period of either five or seven years. These contracts will be lump-sum contracts with the contractor taking responsibility for the design and quality of construction and maintenance. Should the contractor not maintain the levels of service during a specific period, the Government will reduce the relevant lump-sum payment based on the extent of the non-compliance.

C. Financial Management

118. The financial management assessment, undertaken as per the guidelines of the Financial Management Practices Manual (March 2010), covered the following areas to determine if (a) adequate financial management arrangements (staffing, budgeting, accounting, internal control, reporting, external audit) are in place to ensure that the project funds will be used for their intended purposes in an efficient and economical way; (b) financial reports will be prepared accurately, reliably, and timely; and (c) the project's assets will be properly safeguarded. The outcome of the assessment shows a moderate financial management risk for the project. The

assessment is based on the reviews of current ongoing IDA-funded projects in the sector and regular interaction with the staff in the Finance and Accounts Departments of the MRH, MoT and GHA.

119. The three AITs will be responsible for coordinating the activities of the various departments and agencies assigned to them as per the implementing arrangements. The overall financial management responsibility will be handled by the respective Heads of Account at the MRH, MoT, and GHA. The responsibility of the Heads of Account is primarily to ensure that, throughout implementation, there are adequate financial management systems in place in all the agencies, thereby reporting properly on the use of project funds.

120. **Disbursement arrangements.** Project proceeds will be used for eligible expenditures as defined in the Financing Agreement. Disbursement arrangements have been designed in consultation with the Government, after considering the assessments of the respective agency's financial management capacities, and anticipated cash flow needs of the operation. The division of the funds between the three AITs, in Table 3, is based on the combined cost estimates of the activities each AIT is responsible for.

Table 3. Funding allocation by Disbursement Category

Category Description	Amount (US$)	Percentage of Eligible Financing (%)
Goods, works, non-consulting services, and consultants' services, training and operating costs under Parts 1(a), 3(a)(ii), 3(b)(i) and 3(c)(i) - activities supported by the MRH.	30,550,000	100
Goods, works, non-consulting services, and consultants' services, training and operating costs under Parts 2, 3(a)(i), 3(b)(ii), and 3(c) (ii) - activities supported by the MoT.	11,050,000	100
Goods, works, non-consulting services, and consultants' services, training and operating costs under Parts 1(b), 3(b)(ii), and 3(c) (iii) - activities supported by the GHA.	105,550,000	100
Refund of Preparation Advance	2,850,000	Amount payable pursuant to section 2.07 of the General Conditions
Total	**150,000,000**	**100**

121. There will be three Designated Accounts for the entire project and they will be allocated to the three key implementing agencies:

(a) Designated Account A - MRH

(b) Designated Account B - MoT

(c) Designated Account C - GHA

122. Based on the assessment of financial management, the proceeds for credit will be disbursed to each of the Designated Accounts using Statements of Expenditures (SoE) disbursement procedures.

123. **Conclusion of the assessment**. The MRH, MoT, and GHA have fully functioning finance and accounting units with dedicated project accounts teams, and, as such, the overall financial management residual risk for the project is rated Moderate**.**

124. Additional details on financial management and disbursement arrangements are described in the Financing Agreement and the PIM.

D. Procurement

125. **Applicable guidelines.** Given that the Project Concept Note was cleared in August 2015, procurement will be carried out in accordance with the World Bank's (a) 'Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers' dated January 2011, revised in July 2014; (b) 'Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers' dated January 2011, revised in July 2014; (c) 'Guidelines on Preventing and Combating Fraud and Corruption in projects financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006, revised in January 2011; and (d) the provisions stipulated in the Legal Agreement.

126. The procurement risk is rated Substantial due to the following reasons: (a) the inherent challenge of introducing and implementing the PBC methodology and the need for technical and contractual support from the assessment study through to implementation; (b) potential coordination gaps on procurement implementation among the three AITs; (c) lessons learned during TSP implementation arising from the lack of use of the Procurement Plan as a monitoring, evaluation, and management tool, therefore lacking updates to reflect procurement performance; (d) potential delays by the AITs in preparing procurement documents, evaluation of bids, and technical proposals, and (e) weakness in ensuring contract management (supervision)/administration (monitoring) during contract implementation to completion.

127. **Procurement capacity assessment.** The procurement capacity assessment, in accordance with the Operations Core Services Procurement guidelines and Procurement Risk Assessment and Management System (P-RAMS), on the three AITs and their implementing agencies under them considered their procurement attributes, in light of the Public Procurement Authority Act, 2003 (Act 663) and the Public Procurement Authority (Amendment) Act, 2016 (Act 914). The assessment generated the following action measures to be taken by the respective AITs to mitigate the procurement risk to moderate.

(a) To address the special challenges of OPRC procurement, dedicated, qualified, and experienced procurement staff are being delegated to the AITs, void of frequent replacement and coupled with continuous training and capacity enhancement.

(b) To facilitate procurement coordination and minimize potential delays, the PIM spells out clear procurement procedures and responsibilities, set up standard processing times, and require regular and continuous meetings with all AITs on procurement. In addition, a contract management and monitoring team, led by the PC and focal point persons in each AIT will be operationalized.

(c) To optimize the benefits of procurement planning, a detailed Procurement Plan for the first 18 months of the project life is in place; continuous updating of the Procurement Plan will be required; and close monitoring of the Procurement Plan and quality control on all aspects of the procurement process will be conducted.

128. **Procurement Plan**. The Borrower prepared and the World Bank cleared the Procurement Plan which covers the first 18 months of project implementation. The Procurement Plan is available in the project's database and a summary of it will be disclosed on the World Bank's external website once the project is approved by the Board. The Procurement Plan will be updated in agreement with the World Bank project team at least annually or, as required, to reflect the actual project implementation needs and improvement in institutional capacity.

129. Systematic Tracking of Exchanges in Procurement (STEP) will be the primary software or platform to be used to submit, review, and clear all Procurement Plans and prior review procurements. For each contract to be financed by the project, the different procurement methods, or consultant selection methods, the need for prequalification, estimated costs, prior review and methods requirements, and time frame would be agreed between the Government and the World Bank in the Procurement Plan. In preparing the Procurement Plan, the prior review and methods thresholds associated with the recommended/prevailing procurement risk rating are applicable at all times.

130. **Procurement using National Competitive Bidding (NCB) approach.** The procurement will be done using the World Bank's Standard Bidding Documents (SBDs) for International Competitive Bidding or national SBD agreed with or satisfactory to the World Bank, with the following exceptions: the project must ensure that (a) foreign bidders shall be allowed to participate in NCB procedures without any restrictions; (b) bidders shall be given at least one month to submit bids from the date of the invitation to bid or the date of availability of bidding documents, whichever is later; (c) no domestic preference shall be given for domestic bidders; and (d) in accordance with paragraph 1.16(e) of the Procurement Guidelines, each bidding document and contract financed out of the proceeds of the financing shall provide that (i) the bidders, suppliers, contractors, and subcontractors shall permit the association, at its request, to inspect their accounts and records relating to the bid submission and performance of the contract, and to have said accounts and records audited by auditors appointed by the association; and (ii) the deliberate and material violation by the bidder, supplier, contractor, or subcontractor of such provision may account to an obstructive practice as defined in paragraph 1.16(a)(v) of the Procurement Guidelines.

131. **Operating cost procedures.** Operating costs financed by the project are incremental expenses related to the implementation of the project, including incremental staff cost, office supplies, operation and maintenance of vehicles, maintenance of equipment, communication, rental, utilities, consumables, transport and accommodation, travel costs, and per diem. The procedures for implementing and managing these expenditures will be governed by the principles outlined in the enhanced accountability framework under the project. However, this should not be presented on the Procurement Plan.

132. **Procurement implementation arrangements.** Three AITs are identified as follows: (a) the MRH, covering the DFR and the DUR with their input; (b) the MoT, covering the DVLA and

the NRSC with their input; and (c) the GHA. These three AITs will be responsible for their procurement as well as that for the agencies they cover and the identified beneficiaries such as the MoFA. The agencies covered by the AITs may provide input to procurement process or may undertake the procurement process themselves with the agreement and supervision of the AITs. These AITs will be responsible for quality and progress on all procurement actions assigned to the AITs even for agencies such as the DFR, DUR, DVLA, and NRSC, declared as procurement entities by the Ghana Public Procurement Authority.

133. **The procurement cycle will incorporate the Safeguards risk mitigation measures** and will, among others, require the following.

(a) The bid documents will be based on the Standard Bid Document, recently updated for stronger Occupational Health and Safety oversight, including requirements like simple Codes of Conduct for the contractors and other labor-related requirements;

(b) The works bid documents will be advertised once the concept design ESIA/ESMP is cleared; and

(c) Works on a specific road link will commence only after both the RAP, if required, for that link is implemented and the Contractor's ESMP is accepted.

134. Additional details on procurement arrangements are described in the Loan Agreement and the PIM.

E. Social (including Safeguards)

135. **With regards to social safeguards, the project triggers OP/BP 4.12 on Involuntary Resettlement** as physical displacement and economic displacement of Project-Affected Persons (PAPs) would be involved. This will include land acquisition and resettlement compensation for lost assets and/or loss of livelihoods because of the investments as well as mitigation measures that take account of potential social risks and impacts of the projects.

136. **The project includes the lessons learned from the TSDP** through various measures described below.

137. The RPF addresses requirements under the World Bank's social safeguard policies on Involuntary Resettlement (OP/BP 4.12) as well as the Government's Laws and Regulations on social safeguards. The RPF provides clear guidance on minimizing land acquisition and resultant physical or economic displacement; compensating PAPs; rehabilitating livelihoods; addressing grievances; and, implementing the RPF through location-specific RAPs, as needed, by fully detailing the operational process of undertaking resettlement. In this context, the RPF includes specific guidance on dealing with labor influx, GBV, strengthening community consultations, and providing a functioning grievance redress system.

138. The RAPs or ARAPs will be prepared for each of the specific works packages following the guidelines set out in the RPF. The Government will finance the resettlement costs. The resettlement process will encompass any vulnerable social groups, if identified in the community consultations related to each subproject, and guarantee that all affected people receive equitable

treatment. The RPF and RAPs, or ARAPs, will be consulted upon, reviewed, and cleared by the Government and the World Bank, and disclosed publicly at the World Bank Infoshop and in-country.

139. The bid documents for these contracts will be based on the requirements of a concept design and the following measures will strengthen social safeguards oversight.

(a) **Reducing implementation delays.** The project will require the completion and implementation of a RAP based on the concept design for each works package. This will clear road sections where the final design would not require additional resettlement for construction.

With the concept design-RAP implemented and known, the development of the final design-RAP would represent the additional requirements only resulting in a shorter clearance process.

(b) **Additional works contract implementation requirements.** The project will require that the final design-RAP must be fully implemented before any works along the associated road link or portion thereof can commence.

(c) **Strengthening community consultations and mitigate the negative distributional impacts of labor influx and child/gender based violence.** The concept design for each works package will incorporate the results of an extensive community consultation process and a Gender and Poverty Assessment. The respective works contract bid documents will include specific, detailed requirements and procedures to strengthen the participation of all affected groups and to mitigate the negative distributional impacts of labor influx and child/gender based violence through measures such as a robust grievance mechanism and a code of conduct for contractors and their staff. The works contract bid documents will require the contractors to provide training to all workers on the code of conduct under PBCs. The community consultations with beneficiary communities and their leadership would take place before and during the implementation of the works, and these consultations will include discussions with specific focus groups such as women, girls, children, and the aged in the settlements close to the roads. The outcome of the consultations would determine the type and extent of basic socioeconomic infrastructure to be supported by the project.

140. **Gender inclusion**. In the context of the project, the Borrower will have to review the existing national policy directives of the Government on gender that are applicable to the envisaged works. Ghana has demonstrated a strong commitment to mainstream gender issues in various sectors of development with the development of a National Gender Policy in 2015. Gender issues would be critical to the implementation of the project and in its approach to (a) increase women's economic opportunities; (b) provide appropriate support to women; and (c) establish a gender disaggregated baseline data against the impacts and results of the project. In addition, much can be achieved by mainstreaming gender and social inclusion in the project and mitigate the negative impacts such as HIV transmission and women's sexual abuse. Hence, the

project aims to promote the inclusion of gender policies in all the project's activities, where applicable and necessary.

141. The project will include a gender assessment that seeks to reveal the differences and inequalities in the project areas by examining the situations and relationships between women and men in the context of the project activities. The assessment will provide a more informed understanding of the potential impacts of the project and will guide actions to promote the requirements of the National Gender Policy.

142. **CE**. CE is particularly important in the case of transport development with citizens and civil society organizations being key partners in the planning and implementation of works. The Government will undertake a series of citizen consultations to include, among others, the following activities: (a) gender-representative consultations in all beneficiary communities every six months; and (b) selection of several gender representatives from each affected community as part of the consultation meetings to serve as community monitors. The GHA, DFR, and DUR will inform the beneficiaries of the status of the works and other project-related activities, and will provide monthly updates regarding the planned works in their communities, and report any issues or problems associated with the implementation of these works on the ground. This community monitoring system will complement the GRM, allowing the project beneficiaries to submit questions, complaints, or suggestions through e-mail, phone, text message, or regular mail.

143. The project will incorporate a comprehensive CE strategy, developed during community meetings before any works identification, which will include semiannual consultations throughout the project duration to share project progress and identify problem areas. The CE will identify and prioritize small socioeconomic works for project support.

144. **Strengthening environmental and social safeguards capacity.** The project requires that qualified environmental and social specialists should be available at all times during the implementation of the project and as part of the AITs. The ESA included an assessment of the capacity within the two relevant AITs (MRH and GHA), identifying several implementation capacity constraints. As mitigation, the project will set aside about US$1.50 million to finance specific institutional strengthening measures. These include the appointment of a full-time, local SSS with experience in gender issues, the use of a nongovernmental organization (NGO) to assist communities and oversee the Grievance Redress Service (GRS), focusing on training programs and managing operational costs. These measures will enable regular site visits and require consistent and continuous implementation oversight.

145. **The AITs will contract an independent monitoring consultant to oversee the works contracts.** This consultant will have specific, qualified key staff to oversee compliance with environmental and social mitigation measures. Terms of References for the consultant will cover monitoring of the contractors on labor issues and the prevention of gender/sexual abuse. This would include analyzing and reporting all occupational health and safety concerns brought about by activities during all phases of the contracts. The consultant's environmental and social safeguards team will prepare regular reports on the contractors' compliance with all social and environmental mitigation plans.

F. Environment (including Safeguards)

146. The project triggers the World Bank policies on Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), and Physical and Cultural Resources (OP/BP 4.11). Because of moderate impacts of the project activities on the environment, the project safeguard category is B. The Integrated Safeguards Data Sheet (ISDS)[9] provides more information about the associated safeguards risks and impacts, key safeguard policy issues and their management, and compliance with disclosure requirements.

147. To mitigate potential environmental and social risks, the Government prepared an ESA, and disclosed in Ghana and in the World Bank InfoShop on April 5, 2017. The ESA addresses requirements under the World Bank's environmental safeguard policies on OP 4.01 Environmental Assessment and the Ghana Environmental Laws LI1652. The ESA provides clear guidance for site-specific assessment and the preparation of the ESIA and ESMP or Environmental Management Plans (EMPs). The ESMP/EMPs will spell out the most salient environmental aspects and impacts and fully detailed mitigation measures. The ESIA will also provide for alternatives to minimize any adverse environmental impacts that might arise. The ESIA will be prepared by the Borrower and cleared by the World Bank before the commencement of works under the project. These instruments will provide guidance for the supervision responsibilities that are specific to PBC arrangements in this project.

148. The contractor is responsible for the day-to-day implementation of the mitigation measures, and this will be supervised by the project monitoring consultant.

149. The bid documents for these contracts will be based on the requirements of a concept design, and the following measures will strengthen environmental safeguards oversight.

(a) **Reducing implementation delays.** An ESA has been prepared for the Tamale-Yendi-Tatale Road. The Government will update the ESA to an ESIA/ESMP based on the concept design for each works package. The concept design-ESIA/ESMP will become part of the works contract specifications and would be the minimum environmental and social mitigation requirements the works contractor must adhere to.

With the concept design-ESIA/ESMP requirements known, the final design-ESIA/ESMP will be an update of the concept design-ESIA/ESMP listing the additional requirements related to the final design. This should result in a shorter clearance process.

(b) **Requirement for additional works contract implementation.** The project requires that the award of a works contract would only take place after clearance of the concept design-ESIA/ESMP; and works would commence only after clearance of the final design-ESIA/ESMP prepared by the contractor.

[9] https://hubs.worldbank.org/docs/ImageBank/Pages/DocProfile.aspx?nodeid=25258766

150. The project's environmental safeguards officers, employed as part of the AITs, have the oversight responsibility for environmental safeguards, and this includes periodic site visits and supervision missions to ensure that mitigation measures, as agreed and included in the Legal Agreement with the contractor, are satisfactorily implemented and to advice on corrective actions where the need arises.

151. **Climate and disaster risk screening.** Adaptation to the adverse impacts of climate change is a priority for the Government. A climate and disaster risk screening, implemented during project preparation by using the Climate and Disaster Risks Screening Tool, flagged moderate climate impacts associated with more frequent droughts, higher temperatures, and periods of flooding in the project areas.

152. **The project will assess the impact of climate change on the selected road networks.** The key climate issues are higher and extreme temperatures, changes in rainfall patterns with shorter duration and higher rainfall intensity storms. The works packages, especially with regards to drainage structures and type of paving materials, will incorporate such measures to address these impacts while general recommendations shall be made for further resilient and/or adaptation strategies for the road transport sector.

153. **Greenhouse gas emissions.** Carbon dioxide (CO_2) emissions are estimated based on aggregated composition of traffic, existing travel conditions, and possible impacts from project interventions.[10] The evaluation compares the anticipated baseline without project emissions, when there are no project interventions, with project scenario emissions expected at completion. Baseline emissions are estimated from the existing traffic, allowing for annual growth, while the 'with-project' scenario accounts for changes in emission levels of (a) the normal traffic, because of improved ride quality conditions and speeds; and (b) the added induced traffic with the project.

154. Using the same parameters and assumptions as the above economic analysis, the HDM-IV model calculated that the volume of emissions will reduce because of the project intervention. Using the DBST option, CO_2 emissions are estimated to reduce by 141,000 tons over the 20-year design life along the Tamale-Yendi-Tatale Road. Other types of pollutants are also expected to reduce, but the changes will be relatively small. As far as CO_2 emissions are concerned, the social value of emission reduction is estimated at about US$4.24 million, when the World Bank's recommended social value of carbon, that is, US$30 per ton, is used.[11]

155. For the feeder road works packages, emission reductions would likely be much smaller because of the much lower expected traffic volumes with CO_2 reductions estimated at about 300 tons for the 20-year analysis period.

G. World Bank Grievance Redress

156. **Grievance Redress Mechanism (GRM)**. Communities and individuals who believe that they are adversely affected by the project may submit complaints to existing project-level

10. Evaluation conducted using the HDM-IV model.
11. World Bank. 2014. "Social Value of Carbon in Project Appraisal: Guidance note to the World Bank Group staff."

grievance redress mechanisms or the World Bank's GRS. The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may also submit their complaint to the World Bank's independent Inspection Panel, which determines whether harm occurred or could occur, as a result of the World Bank's non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and the World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit http://www.inspectionpanel.org.

157. The MRH will be responsible for a functioning GRM, allowing project beneficiaries to submit questions, complaints, or suggestions via email, phone, text message, or regular mail.

VII. RESULTS FRAMEWORK

Project Development Objectives (PDO)													
The PDO are to: (i) reduce travel time on selected parts of the classified road network in Northern Ghana; (ii) promote road safety; and (iii) strengthen the institutional management of the transport sector.													
					Project Level								
Project Development Objective Indicators													
					Cumulative Target Values								
Indicator Name	**Definition**	**Core**	**Unit**	**Baseline**	**YR1**	**YR2**	**YR3**	**YR4**	**YR5**	**YR6** (End Target)	**Frequency**	**Data Source**	**Responsibility for Data Collection**
International Roughness (IR) for the paved sections of the Tamale-Yendi-Zabzugu-Tatale Road	Improving the IR to reduce travel time and transport costs for the paved sections of the Tamale-Yendi-Zabzugu-Tatale Road	☐	m/km	7.5	7.5	6.0	3.5	3.5	3.5	3.5	Yearly	Progress Report by AIT-GHA	PC/AIT-GHA
Travel time on the Tamale-Yendi-Zabzugu-Tatale Road (as a percentage reduction of the before-works travel time).	Reducing the total vehicle travel time along the Tamale (Chambuligu)-Yendi-Zabzugu-Tatale Road (170 km) from beginning to end.	☐	%	0	0	0	15	25	25	25	Yearly	Progress Reportby AIT-GHA	PC/AIT-GHA
Travel time on selected Feeder road links (as a percentage reduction of the before-works travel time)	Reducing the total combined travel time in East Gonja District on the two longest feeder roads links included in the road network.	☐	%	0	0	10	20	20	20	20	Yearly	PPR by AIT-DFR	PC/AIT-DFR

Review of road subsector institutions	Submission of final recommendations for road sector reform to Cabinet.	☐	Yes/No	No	No	Yes	Yes	Yes	Yes	Yes	Yearly	Annual Report of AIT-MRH	PC/AIT-MRH
. Use of nationwide vehicle crash data recorded online	Percentage of data recorded online for crashes, fatalities and injuries.	☐	%	0	10	25	50	75	80	80	Yearly	Annual Report of the NRSC	PC/AIT-MoT
Intermediate Results Indicators													
					Cumulative Target Values								
Indicator Name	**Definition**	**Core**	**Unit**	**Baseline**	**YR1**	**YR2**	**YR3**	**YR4**	**YR5**	**YR6** (End-Target)	**Frequency**	**Data Source**	**Responsibility for Data Collection**
Roads rehabilitated, Rural	Length of roads rehabilitated under PBC: • Trunk • Feeder • Farm	☒	Km	0 0 0	0 0 0	190 60 100 30	440 170 200 70	440 170 200 70	440 170 200 70	440 170 200 70	Yearly	Progress Report by GHA and DFR	PC/AITs-GHA and MRH
Introduction of PBCs	Number of PBCs awarded.	☐	No	0	2	2	2	2	2	2	Yearly	Progress Report by GHA and DFR	PC/AITs-GHA and MRH

Implementation of RAMS for trunk and feeder roads	Annual asset management reporting for: • Trunk roads • Feeder roads	☐	Action	No No	No No	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yearly	Progress Report by MRH and GHA	PC/AITs-GHA and MRH
Job opportunities created under PBCs	Total wo/man-month of jobs generated under PBC (Share of work force created for women in percentage) */1*	☐	Wo/man Month (%) **	0 (0%)	0 (0%)	8,750 (5%)	21,350 (5%)	23,450 (10%)	25,550 (10%)	27,650 (10%)	Yearly	Progress Report by GHA and DFR	PC/AITs-GHA and MRH
Update National Transport Policy (NTP)	Submission of the Updated NTP to Cabinet.	☐	Yes/No	No	No	Yes	Yes	Yes	Yes	Yes	Yearly	Progress Report by MoT	PC/AIT-MoT
Update National Tolling Policy	Submission of Draft National Tolling Policy to Cabinet.	☐	Yes/No	No	No	Yes	Yes	Yes	Yes	Yes	Yearly	Annual Report of MRH	PC/AIT-MRH
Pedestrian crossings at schools under Lollipop program	Increased total number of schools included in the nationwide Lollipop program.	☐	Number	25	50	100	200	300	400	500	Yearly	Annual Report of NRSC	PC/AIT-MoT
Private garages used for vehicles inspections	Number of licensed private operational garages linked into vehicle inspection system in the targeted areas.	☐	Number	0	0	3	6	10	10	10	Yearly	Annual Report of DVLA	PC/AIT-MoT
Number of rural people with access to an all-season road	The number of rural people with access to an all-season road.		Number	98,960	98,960	118,700	148,400	197,200	197,200	192,720	Yearly	Progress Report by MRH, and GHA	PC/AITs-MRH and GHA

Beneficiaries interviewed and consulted along the road corridor	Total number of biannual citizen engagement consultations conducted by a local, SDS and NGO		Number	0	500	500	500	500	500	500	Bi-annual	Progress Report by GHA and DFR	PC/AIT-GHA and MRH

Note" /1 - Figure in bracket represents % of women employed under PBCs.

VIII. PROJECT LOCATION MAP