

ROADS FUND BOARD
MONITORING AND
EVALUATION
MANUAL-
TECHNICAL PART

2015



ROADS FUND BOARD MONITORING AND EVALUATION MANUAL

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FOREWORD

ACKNOWLEDGEMENT

This Monitoring and Evaluation Manual-2015 has been developed as a component of the Improving Rural Access in Tanzania (IRAT) programme. The programme aims at helping improvement of rural access in Tanzania through repairing and improving rural roads, helping to improve value for money, managing fiduciary risk and maximising the impact of rural roads in Tanzania. The IRAT programme has been financed by UK's Department for International Development (DFID). The recipient of the programme is the Government of Tanzania – PMORALG and the Roads Fund Board.

This Manual has been developed for the Roads Fund Board by Consultants: Cardno IT Transport (UK) in association with Cordial Solutions Ltd (Tanzania) under the supervision of the Roads Fund Secretariat.

The Roads Fund Board also acknowledge the Japan International Cooperation Agency (JICA) through which the formerversion of the Technical Audit Manual-2008 was prepared and several individual consultants who were involved at different times in developing former versions of the Value for Money Instrument, VfMI User Guide, Terms of Reference for Technical Audits and the Draft Financial Monitoring Manual. This Monitoring and Evaluation Manual - 2015 has been developed from these documents.

ACRONYMS AND ABBREVIATIONS

DFID	Department for International Development
FY	Financial Year
IA	Implementing Agency
INTOSAI	International Organization of Supreme Audit Institutions
MoW	Ministry of Works
NAO	National Audit Office
OECD	Organisation for Economic Cooperation
PMORALG	Prime Minister's Office – Regional Administration and Local Government
RFB	Roads Fund Board
TANROADS	Tanzania National Roads Agency
TOR	Terms of Reference
VfM	Value for Money
VfMA	Value for Money Auditor
VfMI	Value for Money Instrument

BACKGROUND

The Roads Fund Board was established under section 5(1) of the Road and Fuels Tolls Act Cap 220 (revised edition of 2006) with mandate to collect, disburse and monitor the Roads Fund. The Boards' mission is to provide adequate and stable flow of funds for road works and monitor its utilisation by implementing agencies.

The Board is required under Section 5(4) (h), (i) and (k) of the Act to carry out the following functions related to monitoring of the Roads Fund:

- To ensure that the operations of TANROADS, local authorities, other road agencies and the Fund are technically and financially sound;
- To monitor the use of the funds disbursed to TANROADS, local authorities or other agencies for the purpose and objects of the Fund; and
- To appoint, subject to approval by the Controller and Auditor General, an auditor or auditors to carry out the audit of the Fund.

Monitoring the use of the funds is one of the key responsibilities of the Board. This is effected through (i) receipt and review of progress reports (ii) inspections by the RF Secretariat and (iii) financial and technical auditing by the National Audit Office (NAO) in collaboration with appointed consultant(s). Section 5(6) of the Act further states that the *“Board shall, within three months, after the end of each financial year, submit to the Minister an annual report based upon its own activities, the activities of TANROADS, local authorities and other agencies together with copies of their audited statements of accounts and copies of the reports made on them by the auditors.”* In order to verify that users who pay road user charges, fuel levy and other charges get value for money, the Board conducts Financial, Technical and VfM audits of road projects it finances through the Roads Fund and other sources. Such audits have been carried out annually since FY 2000/01.

The objective of developing this Monitoring and Evaluation Manual is to improve and consolidate the various tools and components previously used in isolation into one document whose parts are synchronised and linked.

This RFB Monitoring and Evaluation Manual consists of two main parts: (i) The Technical Part and (ii) The Financial Part. The Technical Part consists of the following components:

- Technical Audit Manual
- Value for Money Instrument (VfMI)

- Value for Money Instrument User Guide
- Terms of Reference (TOR) for Conducting Technical Audits

The Financial Part consists of the following components:

- Part A: General Introduction to RFB
- Part B: The Roads Fund Board activities and its revenues
- Part C: Monitoring of RFB revenues and disbursements

The RFB Monitoring and Evaluation Manual is intended to be used by staff of the Board, NAO, consultants (auditors) and Implementing Agencies responsible for road maintenance in Mainland Tanzania, including TANROADS, PMORALG and MoW.

The Technical Part

The *Value for Money Instrument* is a tool or device used by the RFB to determine Value for Money. The tool is an excel based worksheet used by VfM auditors in processing auditor's assessment of different VfM performance indicators for road projects that are being executed by IAs utilizing Road Fund or other funds administered by RFB. The instrument replaces the one prepared by the Board in 2011.

The *Value for Money Instrument User Guide* provides assistance to Value for Money Auditors (VfMA) when using Value for Money Instrument (VfMI) while conducting Value for Money (VfM) audits. The guide is intended to: (i) Promote consistent, economical, efficient and effective VfM audit practice while applying the instrument; (ii) Assist VfMA to correctly and accurately use the instrument; and (iii) Set out a basic framework within which VfMA can make sound decisions in analysing VfM and reporting conclusions for each project or implementing Agency.

The *Technical Audit Manual* provides standardized procedures for conducting a technical audit and reporting its findings. It replaces the one prepared by the Board in 2008.

It is intended to be used by staff of the Board, consultants (auditors) and Implementing Agencies responsible for road maintenance in Mainland Tanzania, including TANROADS, PMORALG and MoW. The Manual provides basic concepts and procedures for undertaking technical audits of road projects.

The *Terms of Reference* for conducting technical audits is a set of conditions and formal modalities issued to technical auditing firms or consultants appointed to carry out technical audits.

The Financial Part

Part A provides the legal general background to the functions of Roads Fund Board; the objectives of monitoring and evaluation and purpose of the manual; Part B sets out activities of the Board and its sources of revenue and how it is collected and disbursed, while Part C details the process of monitoring of both revenue due to the Fund and disbursements to implementing agencies.

Best Practice in Road Fund Monitoring

In preparing this manual, a survey of best practices from around the world regarding Technical Monitoring and Evaluation Manuals was conducted with a view to adapting the existing RFB documents to a comprehensive Monitoring and Evaluation Manual.

Our survey of best practices around the world revealed that there are not so many published Technical Monitoring Manuals. Most related publications are in areas of road and bridge design manuals, road signs manuals, road maintenance manuals, road safety manuals and road markings manuals. However, the following publications/ manuals were spotted and found to be useful during the survey of best practices from around the world:

- i) Botswana Guideline 7 - Technical Auditing of Road Projects (2001) - Roads Department, Ministry of Works, Transport & Communications
- ii) DFID's Approach to Value for Money (July 2011)
- iii) Measuring and Maximizing VfM in Infrastructure Programmes (British Aid) - Adam Smith International
- iv) Value-for-Money Audit Manual (Auditor General, Canada)
- v) Guidelines on Best Practice for the Audit of Public-Private Finance and Concessions - INTOSAI
- vi) Performance Audit Manual, Standards and Implementation Guide I&II - Federal Government of Ethiopia
- vii) Road Monitoring for Maintenance Management Volume I, Manual for Developing Countries (OECD/ World Bank,
- viii) Manual for Technical Audits on Works Contracts, Hong Kong- The Government of the Hong Kong Special Administrative Region

The main attributes adopted from most of these manuals/ publications include:

- (a) The Importance of VfM in roads as an asset
- (b) The concept of the 3Es Framework: Economy, Efficiency and Effectiveness

- (c) Criteria for determining Value for Money and application of VfM through the project cycle

Importance of VfM in roads

Literature review shows that Value for Money does not have a standardised definition. However, irrespective of the definition used, the core of Value for Money auditing is the framework of a combination of economy, efficiency and effectiveness (the 3Es).

Roads are an asset to the nation. Considering the sums of money involved in the construction and maintenance of roads, the critical role the road infrastructure plays in poverty reduction, and the unique level of penetration the road infrastructure has to rural accessibility, it is essential that roads fund agency maximize and measure VfM in the road infrastructure provision and sustainability. The main rationale for directing such high volumes of funding to roads is that a well-functioning road infrastructure provides the foundation for the development of other sectors and overall economic growth. Economies are literally and figuratively built on transport infrastructure.

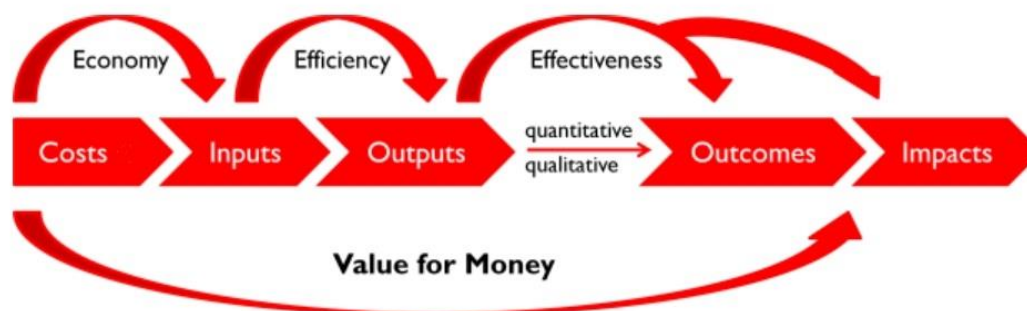
The concept of the 3Es Framework: Economy, Efficiency and Effectiveness

Economy means minimizing the cost of resources used for an activity, programme or project without compromising quality.

Efficiency refers to the relationship of inputs and outputs. It means delivering the same output for less cost, time and effort or getting a better return for the same amount of expense, time and effort.

Effectiveness is an ends oriented concept that measures impact or the degree to which predetermined goals and objectives of a particular activity, programme or project are achieved. The figure below illustrates the concept of 3Es in VfM monitoring.

Figure 1: Conceptualisation of Value for Money



Corollary to the figure above, the Value for Money Instrument contained in this Manual entails the following main stages:

Planning, Design and Tender Documentation Stage: This stage examines and assesses the project identification and options considered in assessing alternatives to minimize input *costs*.

Procurement stage entails procurement processes, methods and contractual arrangements to ensure the project is awarded to the most capable economic bidder. It therefore looks at obtaining an *efficient* contractor/ service provider at minimal input cost to the project.

Construction Stage embraces processing of project inputs in the most *cost-efficient* manner ensuring the output or product is of the required standard and quality.

Project Completion and Closure Stage encompasses the overall operational and economic *efficiency* of the service provider and operational managers of the process, including the fitness for purpose of the finished product (*effectiveness* of the project) and whether the *outcomes* of the project have been achieved in qualitative, quantitative and contractual terms.

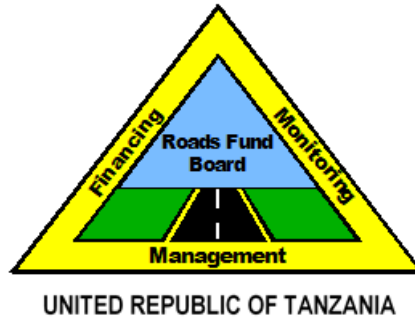
Executed Works stage looks at overall qualitative and quantitative achievement of the expected *outputs* of the project. This includes achievement of the required project *output* indicators e.g. road geometric characteristics, roughness and other road-user driven performance indicators.

Application of VfM through the project cycle

One of the common principles from the best practice is that for VfM approach to be effective, it should be applied throughout the project life; although the focus and methods of analysis need to reflect the successive stages of the cycle. There are four main stages of the project cycle: (i) Identification, (ii) Design, (iii) Implementation and (iv) Monitoring & Evaluation. The table below defines and illustrates the relationship of project cycle stages and the RFB VfM Instrument contained in this manual.

The RFB VfM Instrument in the application of VfM through the Project Cycle		
Stage in Project Cycle	Key VfM tasks	Relevant Stage in the RFB VfM Instrument
Identification: ➤ Establishing the rationale for commitment of resources to project	Economy: ➤ Identify all the costs	Stage A: Planning, Design and Tender Documentation
	Efficiency: ➤ Identify the outputs and benchmarks	
	Effectiveness: ➤ Identify the outcomes and the costs of achieving them	
Design: ➤ Defining scope of project, choice of technology and project management processes required to achieve intended outputs and outcomes with optimal use of resources	Economy: ➤ Find ways to minimize costs	
	Efficiency: ➤ Identify options for implementation and delivery of outputs	
	Effectiveness: ➤ Identify and assess options for ensuring project outputs	
Implementation: ➤ Ensuring mobilisation of the right resources and procurement of inputs to achieve project outputs	Economy: ➤ Monitor procurement and costs	Stage B: Procurement Stage
	Efficiency: ➤ Monitor progress	Stage C: Construction Stage
	Effectiveness: ➤ Monitor potential impact of progress in implementation on achievement of outcomes	Stage D: Project Completion and Closure Stage
Monitoring & Evaluation: ➤ Assessment of performance of ongoing projects and/or completed projects in delivering intended outcomes with optimal use of resources	Economy: ➤ Evaluate against costs and targets	Stage E: Executed Works
	Efficiency: ➤ Assess extent to which project met cost efficiency targets, and were those realistic	
	Effectiveness: ➤ Assessing the entire project's viability, effectiveness, and value	

TECHNICAL AUDIT MANUAL



ROADSFUNDBOARD

TECHNICALAUDITMANUAL



ROADSFUND BOARD

Technical Audit Manual

Note on the Expression Used in the Manual

In this Manual, there are sentences written in the boxes and sentences written outside of boxes. The sentences written in the boxes are the “basic rules” or “stipulations”. What are written in boxes are supposed to be observed/ followed as the standard procedures.

On the other hand, what are written outside of the boxes are “explanations”. Therefore, they should be read for better understanding of the basic reason behind, meaning, background, detailed procedure, etc. of what are written in the corresponding box. Readers or users of the Manual are recommended to carefully read the explanations outside of the boxes to properly apply what are stipulated in the boxes and achieve the best result of Technical Auditing.

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ACRONYMS AND ABBREVIATIONS

BOQ	Bills of Quantities
CQ	Competitive Quotations
DROMAS	District Road Management System
EC	Evaluation Committee
EM	Environmental Management
EMP	Environmental Management Plan
GCC	General Conditions of Contract
GN	Government Notice
HDM	Highway Design and Maintenance
IA	Implementing Agency
ICT	International Competitive Tendering
IFT	Invitations for Tenders
INA	Information Not Available
INTOSAI	International Organization of Supreme Audit Institutions
IS	International Shopping
LOA	Letters of Acceptance
LGA	Local Government Authority
MOW	Ministry of Works
MVP	Minor Value Procurement
NCT	National Competitive Tendering
NS	National Shopping
PA	Performance Agreement
PBC	Performance-Based Contract (similar to PMMR)
PE	Procuring Entity
PMMR	Performance-Based Management and Maintenance of Roads (similar to PBC)
PPA 2011	Public Procurement Act, 2011
PPRA	Public Procurement Regulatory Authority
PMORALG	Prime Minister's Office – Regional Administration and Local Government
PM	Periodic Maintenance
PMU	Procurement Management Unit
RFB	Roads Fund Board
RMMS	Road Maintenance and Management System
RT	Restricted Tendering
SCC	Special Conditions of Contract
SIC	Supervising Independent Consultant
SI	Spot Improvement
SS	Single Source Procurement
TANROADS	Tanzania National Roads Agency
TB	Tender Board
ToR	Terms of Reference
VfM	Value for Money
VO	Variation Order
VfM	Value for Money
VfMA	Value for Money Auditor
VfMI	Value for Money Instrument

SECTION 1: INTRODUCTION

1.1 Application and Objective of the Manual

Clause 1.1.1: Application

This Technical Audit Manual is applied to technical audits conducted by the Roads Fund Board on road works implemented in accordance with the Performance Agreement between the Roads Fund Board and Implementing Agencies

This Manual is designed for use in technical audits conducted by Roads Fund Board (RFB). The main users of this Manual are assumed to be the RFB staff, consultants engaged by the RFB for the purpose of technical audit, the road authorities including TANTOADS, local road authorities and the relevant officials of PMORALG.

Clause 1.1.2: Objective of the Manual

The objective of the Manual is to show the basic concepts and standard procedures for technical audit conducted by RFB.

This manual describes the basic concepts and standard procedures. Detailed parts of actual technical audit may vary depending on the actual conditions of road works to be audited. Therefore, this Manual should not be rigidly applied. Those who are involved in the technical audit should carefully examine if each stipulation can be simply applied. Wherever necessary for attaining the objective of the technical audit, any part of this Manual needs to be modified.

Like any other manuals, this manual is intended to be used by relatively inexperienced auditors. Once an auditor accumulates sufficient experience, he/she may be allowed not to refer to, or even deviate from, the procedures prescribed in this Manual, provided that such deviation is expected to lead to better result.

Standardization of procedures and/or formats of reports/documents is very effective to prevent errors as well as easy understanding of the readers. Therefore, the procedures and formats shown in this Manual should be adhered to as much as possible, in spite of what is written in the above.

Clause 1.1.3: Pertinence of This Manual

This Manual has been prepared considering the current environment surrounding road maintenance/improvement in Tanzania. Thus, this manual needs constant review and revision/improvement as appropriate.

The environment surrounding road maintenance/development may change any time. What is important now may not be so next year. Therefore, this Manual needs to be constantly reviewed and revised as necessary.

1.2 Legal Basis and Objective of Technical Audit

The legal and organizational framework within which Technical and Value for Money audits take place involves three parties: the Roads Fund Board, Implementing Agencies and Technical Auditing firms or consultants appointed by the Board. The Board is mandated to collect, disburse and monitor the use of the Roads Fund. Implementing Agencies, namely TANROADS, Local Government Authorities (LGAs) through Prime Minister's Office for Regional Administration and Local Government (PMORALG) and Ministry of Works (MoW) are the main beneficiaries of the Road Fund. Before disbursing funds, the Board executes annual performance agreements with TANROADS, PMORALG and MoW which commit these Agencies to legally enforceable arrangements that clearly define their respective roles and responsibilities.

Clause 1.2.1: Legal Basis of Technical Audit

Technical Audit is conducted in accordance with the stipulations of Section 5(4) of *The Road and Fuels Tolls Act, Revised Edition 2006* and Performance Agreements between RFB and recipients of the road fund.

The basic objective of Technical Audits conducted by RFB is to ensure that the road users who pay the road user charge, or fuel levy and other charges, get "value for money". RFB is responsible for "accountability" of this "value for money".

Under Article V, Performance and Quality Targets of Performance Agreements between RFB and IAs, one clause stipulate that:

"The quality of all road maintenance works (or road development works financed by the RF) shall be in accordance with the Maintenance Standards, relevant specifications as agreed and safety standards as per recognized....."

And another clause states that:

"The BOARD reserves the right of inspecting and overseeing the performance of an Implementing Agency (IA) in connection with maintenance works (or road development works financed through the RF) in order to verify and for the purpose of generally monitoring the performance of the IA against the agreed norms and standards."

Further, Section 5(4) (h) to (i) of the Road and Fuels Tolls Act, Revised Edition 2006 stipulates that:

"The function of the Board with respect to the Fund shall be:-

- (h) to ensure that the operation of Implementing Agencies and the Fund are technically and financially sound;*
- (i) to monitor the use of the funds disbursed to Implementing Agencies for the purpose of the objects of the Fund;"*

These stipulations constitute the legal basis for Technical Audits. The Audit Team should always keep in mind this legal basis and the basic objective of Technical Audits. At the end of the audit, the Audit Team needs to be confident that it can clearly explain to the Board or the road users to what extent the audited works satisfy the demand of road users.

Value for Money and Technical Audit

In broad terms, 'Value for Money' is a measure of how cost-effectively project resources are acquired and utilised (*economy*), how resourcefully project inputs are converted into outputs and subsequent outcomes (*efficiency*), and how successfully the project intervention achieves its intended outcomes and subsequent impacts are realised (*effectiveness*).

Clause 1.2.2: Value for Money and Technical Audit

The term 'Value for Money' is used in this Technical Audit Manual to mean the achievement of cost-effective acquisition and utilisation of financial, human and material resources, and efficient conversion of these resources into the intended outputs of the required quantity and quality in line with what is stipulated in the contract. Thus the objective of the Technical Audit is to assess achievement of Value for Money.

The 'value for money' is often discussed in ways different from that defined in the above box. One of the examples of such as impact on the regional development. It is more appropriate that this kind of 'value of money' be discussed in occasions other than technical audit.

Clause 1.2.2: Objective of Technical Audit

The main objective of Technical Audit conducted by RFB shall be to provide an independent assurance to the Board, the Government, Development Partners and other interested parties that resources earmarked for road maintenance activities (or development) funded through the Roads Fund or Development Partners are judiciously applied for the intended purpose and realized Value for Money.

Implementing Agencies are supposed to conduct their own internal technical audits, whatever the terminology may be, to ensure that the works have been executed in accordance with the conditions set forth in the contract. The primary responsibility for this task rests with the Implementing Agency. The RFB Technical Audit therefore checkson these technical audits.

1.3 Professional Ethics and Governance

Clause 1.3.1: Professional Ethics as the Basic Principle

It is assumed that the concerned personnel of both the Implementing Agency and Contractor practice professional ethics to the highest degree. This concept constitutes the basis for stipulating the procedures prescribed in this Manual.

Professional ethics is assumed as the basis of the condition of the contract. Likewise, professional ethics is assumed in conducting Technical Audits. This concept is very important since Technical Audit cannot cover every detail of the planning, procurement process and road works. Majority of the tasks to ensure the value for money is inevitably vested upon the staff of

the Implementing Agency, especially those of the regional/ LGA office which is responsible for administration of the project. This Manual assumes that staff of the Implementing Agency exert every effort, in accordance with his/her professional ethics, to attain the best value for money for the project. Nevertheless, the VfM Instrument 2015 has introduced some steps in an attempt of checking as to whether there are serious shortcomings with regard to ethics and integrity in project implementation. This is found in Part 'Z' of the VfM Instrument version 2015.

A further step in assessing governance is the application of 'Red Flags' of Corruption in Projects as published in a World Bank Policy Research Working Paper¹ No. 5243 of March 2010. A total of Thirteen 'Red Flags' were identified as commonly accepted red flags. The 13 red flags and their definitions are listed below.

<i>Red Flag Definitions</i>		
	The definition of warning signs	Acceptable range
<i>Advertising/ Bid opening</i>		
1	Time between advertising of the contract and bid opening (weeks)	Greater than 6 weeks for ICB, greater than 4 weeks for NCB
2	Time between bid opening and bid evaluation	Less than 3 months
3	Number of submitted bids	At least 4 bids
4	Ratio of submitted bids to the number of companies that bought Bidding documents (%)	Soft Threshold: Greater than 50 % Rigid Threshold: Greater than 30 %
<i>Bid evaluation/ contract award</i>		
5	Time between bid award and actual contract signing date	Less than 3 months (~92 days)
6	Ratio of non-responsive bidders to all bidders	Soft Threshold: Greater than 50 % Rigid Threshold: Greater than 30 %
7	Was the lowest bidder considered non-responsive?	Yes
8	For ICB contracts: did international companies bid in the auction?	Yes
9	If the winner is the lowest bidder, what is the percent gap between 1 st and 2 nd bid quotes?	Soft Threshold: Greater than 20% Rigid Threshold: Greater than 30%
10	Were any two bids submitted within 1 % (Rigid Threshold) or 2.5 % (Soft Threshold) of each other?	No
11	Difference between contract estimate and winning bid	Less than 30%
12	Difference between contract award and final contract amount	Less than 30%
13	Thresholds for procurement methods and prior review	Threshold exceeded by less than 30%

'Red flags of corruption' is a tool that can be utilized by RFB Audit teams to attempt to uncover potential issues regarding governance failure, collusion or corruption in projects. If applied, the red flags could be part of a larger effort by RFB and the government as a whole to learn about approaches to improve governance and reduce corruption in the construction industry.

1.4 Definition of Terms used in this Audit Manual

Unless the context otherwise specifies or requires, the meaning of the following terms shall be as defined below:

¹'Red Flags of Corruption' in World Bank Projects, Charles Kenny & Maria Musatova - 2010

Audit shall mean, when written with the capital letter of A, Technical Audit as defined in this Manual.

Auditor shall mean a person or persons duly appointed by the Road Fund Manager, or any other official of Roads Fund Board authorized in accordance with the rules of Roads Fund Board, to conduct Technical Audit as defined in this Manual.

Audit Team shall mean a team consisting of Auditors.

Board shall mean, when written with the capital letter of B, the Roads Fund Board.

Chief Auditor shall be the member of the Audit Team so designated by the Roads Fund Board. Usually the Chief Auditor is a staff member of RFB. The Chief Auditor shall be the Team Leader of the Audit Team and assume overall responsibility for the audit conducted by the Audit Team.

Contract (or the Contact) shall mean the contract for the works under discussion.

Contractor shall mean a natural person or legal person who execute road maintenance works under contract with Implementing Agency.

Employer shall mean the Implementing Agency or its division or staff under whose name the Contract is signed.

Engineer shall mean the person who acts on behalf of the Employer as stipulated in the Contract.

Implementing Agency shall mean any institution legally stipulated in the Road Act 2007 to be responsible for the maintenance of roads and enter contract with RFB to maintain roads and receive the fund for this maintenance.

Manual shall mean, when written with a capital letter M, this Technical Audit Manual.

Performance Agreement shall mean the agreement agreed upon between RFB and any of Implementing Agencies to be in charge of road maintenance.

Periodic Maintenance shall mean all maintenance works carried out at intervals of several years. Some activities included here are also referred to as Preventive Maintenance. Typical activities on paved roads include resealing, overlays of less than 100 mm, fog sprays and shoulder reforming. Pavement layer reconstruction or the addition of a pavement layer must not be included.

Routine Maintenance shall mean all maintenance works required continuously or at interval on every road whatever its engineering characteristics or traffic volume, and comprises activities such as grass cutting, drain cleaning, culvert and bridge cleaning and maintenance, road furniture and bridge guard rails maintenance, paved road patching, edge repair, crack sealing, and

line marking, and also unpaved road grading, shaping and pothole repair.

Roads Fund Board shall mean the institution duly established by the Road Toll (Amendment) No. Act, 1998 as revised in the 2002, with the mission to ensure adequate and stable flow of funds to implementing agencies and monitor its utilization for sustainable road maintenance.

Technical Audit shall mean the act of assessing achievement of Value for Money for road maintenance works (or development works) funded through the RF.

1.5 Types of Technical Audit and Methodology

There are two types of technical audits: 'Preventive' and 'Post-completion' Audits. In the past, the main type of Technical Audit conducted by RFB was '*post-completion*' audit but emphasis has changed to '*preventive*' audits in recent years. This was brought about by the recognition of the importance in using preventive audit findings as corrective intervention while project implementation is still in progress. The VfM Instrument (2015) is applicable to both '*preventive*' and '*post-completion*' audits. The former type of audit is conducted while road works contracts are in progress, while the latter is performed after works have been completed.

Clause 1.5.1: Preventive Audit

The main type of Technical Audit conducted by RFB is 'Preventive' audit. However, RFB may sometimes conduct technical audit on completed works (Post-Completion audit) for the purpose of evaluation of project performance in an institution or purely as an investigative audit.

When dealing with a '*post-completion*' audit, the Auditor has to work through the entire VfMI from Indicator A to E and covers Part Z of the VfMI as appropriate, ending up with a full conclusion /opinion on the audited project. When dealing with '*preventive*' audits, the Auditor has to work through part of the VfMI starting from Indicator 'A' up to an Indicator or parameter where the project progress is at that material time. The Auditor then ends up with conclusions/ opinions on indicators covered by the project progress but cannot make any conclusions/ opinion on the whole project because the project has not been completed.

While the pre-2015 VfMI was good at dealing with projects of periodic maintenance/ major improvement works, it had significant limitations in dealing with projects of routine maintenance nature. The VfMI version 2015 has been enhanced to accommodate both periodic maintenance/ improvement works and simple routine maintenance works. In this version, an audit of a pure routine maintenance contract entails assessing parts of Indicators A to D and some parameters under Indicator E: Executed works which are specific for Routine maintenance contracts. It should be born in mind that non-applicable parameters that are skipped by the auditor are also internally ignored by the VfMI in the overall assessment of Indicators. Parameters and sub-parameters which are not relevant to routine maintenance works would therefore not contribute to the overall assessment and has no effect to the overall performance results.

Clause 1.5.2: Methods of Technical Audit

A Technical Audit conducted by RFB shall consist of review of documents and inspecting of the project site. The objective of Document review shall be to verify that proper procedures project identification, planning, procurement; contract administration and project management have been practiced as required. The objective of Site inspection shall be to verify that works have been actually executed in accordance with conditions stipulated in the

Both Document review and Site Audit are essential components of Technical Audit. The purpose of Technical Audit can be achieved through effectively conducting the two components.

SECTION 2: PREPARATION

2.1 Annual Technical Audit Plan

Clause 2.1.1 Preparation of Annual Technical Audit Plan

The Roads Fund Manager shall prepare an annual plan of Technical Audit not later than the end of July every year.

As soon as a new financial year starts, the Roads Fund Manager and his/her assistants should prepare the annual plan of technical audit for the previous financial year. This annual plan should be sent to the Implementing Agencies for their information. The Annual Technical Audit Plan shall include, in principle, the following:

- Region/District to be Audited in Each Quarter of the Year
- Indicative Time Schedule
- Preliminary Estimation of Required Manpower and Cost

The Annual Audit Plan should also include audits conducted by in-house RF staff. It is normal for RFB to conduct financial and technical audits by forming a single in-house audit team consisting of appropriate experts.

Annual Audit Plan may be revised, as necessary, to adjust to the change of conditions which may occur after it is prepared and approved.

2.2 Selection and Appointment of Audit Team

Clause 2.2.1: Composition of Audit Team

Audit Team shall typically consists of;

- (i) One Team Leader
- (ii) One to four members of the Audit Team

Since various aspects need to be audited, the Audit is to be conducted by a team of experts. The number of experts and the expertise required varies depending on the project to be audited.

The Team Leader, or Chief Auditor, is to give overall direction to the other team members. He/she shall assume the overall responsibility of the Audit. He/she take charge of some tasks of Technical Auditing depending on his/her expertise.

Time to time FRB may dispatch other technical auditor(s) comprising of its staff, as necessary. The objective of such technical audit may be different from those of the Technical Audit conducted by the engaged consultants.

The table below summarizes the typical composition of an Audit Team and major tasks of the members of the Team.

Typical composition of an Audit Team	
Position in the Team	Main Task
Team Leader/Chief Auditor	<ul style="list-style-type: none"> ▪ Lead other Team Member(s) in conducting the technical audit ▪ Responsible for preparation of draft Audit Plan ▪ Conduct Technical Audit according to the TOR given by RFB ▪ Responsible for preparation of draft Audit Report ▪ Conduct Technical Audit on the subject of his expertise
Auditor	<ul style="list-style-type: none"> ▪ Conduct Technical Audit under the overall supervision of the Team Leader/Chief Auditor ▪ Assist Team Leader/Chief Auditor in preparing draft Audit Plan, draft Audit Report and other documents

Clause 2.2.2: Selection of Consultant

The consultant(s), as the team, shall have sufficient experience to cover most of the following areas of expertise:

- (i) road network planning and management,
- (ii) procurement of works and consultancy services,
- (iii) road works management,
- (iv) quality control, materials testing and road condition survey
- (v) contract management and administration.

Consultants with the necessary expertise should be selected by following the current Public Procurement Act and Regulations.

Consultants are engaged to carry out Technical audit as described in the Terms of Reference for Technical Audit prepared by RFB. As a standard, audit consultants should use the VfM Instrument obtained from RFB in conducting Technical audits. The consultants to be engaged should be selected considering the above and factors including knowledge of local conditions.

Clause 2.2.3: Appointment of Auditor and Provision of Letter of Introduction

Each member of the Audit Team shall be appointed by the Road Fund Manager. Letter of Introduction for Audit shall be issued and given to each member of the Audit Team.

Road and Fuels Tolls Act Cap 220 (revised edition of 2006), Section 5 subsection(4)(k) stipulates that;

“The function of the Board with respect to the Fund shall be:-

- (k) to appoint, subject to approval by the Controller and Auditor General, an auditor or auditors to carry out the audit of the Fund;”*

This paragraph constitutes the legal basis of appointment of auditors.

The letter of Introduction is particularly important for the consultants engaged as the members of the Audit Team to let him/her have authority and dignity.

Clause 2.3.1: Selection of Projects to be audited

Projects to be audited shall be selected at random basis, but to cover at least 20 % of the projects contracted in the financial year. Also, the selection shall be made for different classes of contract amount, type of works, and regions.

The project to be audited are selected considering the following:

- (i) The regions which has not undergone audit in the recent years should be given high priority.
- (ii) The number of regions to be audited shall be as equally distributed among zones as possible.

If RFB finds any special reason, RFB may conduct Technical Audit to a particular Region which underwent Technical Audit in the previous financial year. Such special reasons include, but not limited to, the following:

- (i) Poor quality of works
- (ii) Poor quality of project/ procurement documentation.

2.3 Timing of Auditing**Clause 2.4.1: Timing of Auditing**

Auditing shall be conducted not more than 2 months from the closure of financial year.

It is desirable to audit as soon as the project has been completed to see the condition of the road as the project has been completed. However, there may be various constraints to conduct auditing shortly after the completion of works, such as time needed for the report of completion of the works reach to RFB and RFB start preparation of audit, such as arranging the travel to the region. Accordingly, certain time lag between the completion of works and implementation of audit needs to be tolerated.

2.4 Notice to the Implementing Agency**Clause 2.5.1: Notice to the Implementing Agency**

The Auditee Implementing Agency shall be notified at least two weeks before the arrival of the Audit Team.

Prior notice is essential to let the Implementing Agency be informed of the Technical Audit and prepare relevant documents and other matters. The notice should be sent to the headquarters of the Implementing Agency with a copy to the appropriate regional/ branch office.

2.5 Review of the Quarterly Report and Other Relevant Documents

Clause 2.6.1: Review of the Quarterly Report and Other Relevant

The Audit Team shall obtain the Quarterly Report and other relevant documents of the Implementing Agency, review it and try to understand the picture of the project to be audited.

- Good understanding of the project to be audited is indispensable for effective and efficient auditing. Therefore the Audit Team shall review and grasp the features of the project to be audited. For this purpose, it is advised that the Audit Team review the Quarterly Report, in case of TANROADS to know the outline of the Projects.

Audit Team should summarize the result of the review of documents listing the points of attention for the planned technical audit and attach such summary to the Audit Plan.

2.6 Preparation of Audit Plan and Schedule

Clause 2.7.1: Preparation of Audit Plan and Time Schedule

After reviewing the contract and relevant documents and understanding the Project, the Audit Team shall prepare an Audit Plan and Time Schedule for each project to be audited so that the Technical Audit can be conducted effectively and efficiently. The Audit Plan and Schedule shall be approved by the Road Fund Manager prior to the departure of the Audit Team. The Audit Team shall bring the Audit Plan to the location of the Audit and refer to ensure that the Audit is done in accordance with the Plan.

The Audit Plan shall typically include, but not limited to, the following items.

- Particular points to be looked into, such as process of tendering/procurement, design and cost estimate
- List of documents to be audited
- Scheme of site inspection

After the draft of Audit Plan and Time Schedule has been prepared, it is advisable to convene a meeting of the members of Audit Team and allocate the tasks to be carried out by each member.

After the Audit Plan and Time Schedule is approved, the Time Schedule shall be sent to auditee Implementing Agency for their information and preparation. In the cover letter for sending the Time Schedule, the Implementing Agency should be requested to get prepared for the Technical Audit. The preparation done by the Implementing Agency include the following:

- Preparation of all the documents relevant to the Project
- Preparation of tools apparatus and/or equipment needed for Site Audit.

SECTION 3: DOCUMENT EXAMINATION

3.1 Meaning of Document Examination

One of the purposes of Document Examination should be understood as one of the means to ensure that the works have been executed in accordance with the standard procedures and the conditions stipulated in the Contract. As for the procurement, standard procedure is stipulated in the Public Procurement Act. Naturally, the Implementing Agencies are supposed to observe these stipulations.

Standard Technical Specification, for example, stipulates the required laboratory tests and field tests. These tests are designed to assure the required quality of the works. Conducting these required tests and properly filing the tests results are the first step of quality control. Missing of these tests result implies low consciousness for importance of quality control.

Checking the data of such tests is the easiest and most commonly adopted means of checking the quality of works. Therefore, documents examination is conducted not only to check that the required documents are properly filed but also to check that the works were executed in accordance with the stipulations of the Contract. Document Examination is very important in Technical Audit of RFB which is conducted after the works have been completed and the actual manner of execution of works cannot be observed.

3.2 Documents to be examined

Clause 3.2.1: Verification of All Documents

The Audit Team shall, in principle, obtain two main sources of information: (i) Procurement file(s) and (ii) Project implementation file(s). He/she shall then examine and verify that all of the following documents are properly filed and maintained.

- (i) Procurement documents
- (ii) The signed contract and its appendices/ attachment
- (iii) Documents supposed to be submitted by the Contractor in accordance with the signed contract
- (iv) Documents related to contract payments
- (v) Documents supposed to be prepared by the IA and/or its consultant for the purpose of contract administration, quality control and other purposes.
- (vi) Documents related completion of works and handover.
- (vii) Any document(s) which may have affected any part of the works.

As explained in Subsection 3.1 above, a good filing system and maintenance of documents shows diligence of the Implementing Agency in discharging their duties.

Documents prepared and filed in procurement files include but not limited to the following:

- Approval by TB of Tender advertisement and Tender documents
- Tender advertisement
- Tender documents
- Record of bid opening
- Bid evaluation report

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- Notification of intention to award the contract as per Regulation 231(2) and 231 (3) of GN. No. 446
 - Minutes of Tender Board meeting that awarded the contract
 - Record of contract negotiation

The above list is not exhaustive. The IA is supposed to keep on file all procurement records as required by the PPA and its regulations.

The documents to be submitted by the Implementing Agency (Employer of the contract) are stipulated in the Contract, including the Technical Specifications and quality control/ laboratory tests conducted by the Implementing Agency or its consultant. The Audit Team shall review the Contract documents and prepare a checklist of the documents to be examined.

Generally, the following documents are required from the Contractor:

- Programme of Works
- Materials Plan and records of Material Testing (Soil, Aggregate, Bituminous Material, Cement, Ready Mixed Concrete, Guard Rail, Traffic Sign, Paint for Pavement Marking)
- Monthly Progress Report

It should be noted that many of the above documents need to be approved by the Implementing Agency as the Employer. Also, some of the tests as listed above need attendance/witness of the Implementing Agency. The Audit Team needs to be satisfied that these approvals have been properly given and recorded and tests results have been signed by the attended staff/consultant of the Implementing Agency.

Generally, the following tests are conducted by the Implementing Agency or its consultant:

- Field Tests
- Measurement sheets and Quantity calculations (for certifying the completed activities/works)

Also variation orders or instructions are issued by the Employer to the Contractor. They also should be filed in a chronological order so that the process of change of design etc. are easily traced.

At the time of completion of works and handover the project, certificate of completion of work and other documents are issued. These documents need not be examined in detail for the purpose of Technical Audit conducted by RFB.

There are various kinds and large volume of documents as listed above. Filing all these documents in an orderly manner is an essential part of quality control or site management. If this has not been done, one might suspect the diligence of the Engineer on quality control/site management. Therefore, inspecting that all the required documents have been submitted or prepared (by the supervision consultant engaged by the Implementing Agency) on designated time and filed in an orderly manner is one of the effective and efficient method for examining the effort of the Implementing Agency on quality control/site management.

It is advised that RFB issue a letter to the Implementing Agency requesting the documents as described above be filed in a chronological order and by subjects, such as laboratory tests data, field density data etc.

Clause 3.2.2: Sampling of Documents for Detailed Examination

After the verification of the documents as stipulated in Clause 3.2.1 above, the Audit Team shall examine that individual documents have been prepared and submitted in accordance with the stipulations of the Contract. If the number of documents to be examined is very high with respect to available time, this examination may be conducted on a random sampling basis, but the rate of sampling should not be less than one per five documents.

After it is verified that all the required documents are properly submitted/prepared and filed, detailed audit of these documents shall be conducted.

The results of auditing of the documents should be recorded and summarised in relevant Audit Report Tables contained in the Appendix to this Technical Audit Manual.

3.3 Methodology of Document Examination

Clause 3.3.1: Items to be examined in the Detailed Examination of Documents

The Audit Team needs to be satisfied with the data presented in the relevant documents. For this purpose, the Audit Team should carefully examine if the intension/objective of the document is proper and the data/information recorded in the document is correct.

Examination of documents needs considerable knowledge and experience on the subject of the said documents. Therefore, consultants who are engaged as members of the Audit Team are required to have rich experience in site management/quality control so that any data indicated in the documents are not overseen.

The items to be carefully audited may vary depending on the problems of the Project to be specifically examined. In some case, some documents may be examined after some particular problems are found in the Site Inspection.

(Useful technique for inspecting material test/quality control test data is to see if there is checkmark (v) beside the measured data. Checkmark indicate that the measured data have been compared to the specified value.)

3.4 Evaluation

Clause 3.4.1: Evaluation of Documents

Evaluation of documents shall be made from the viewpoint of completeness in both kinds of required documents and quality of the documents, including timeliness and other aspects.

First whether or not the required documents are filed is inspected as stipulated in Clause 3.2.1. At this stage, the completeness is evaluated based on the number of missing documents. If any

important documents, such as approval of material, are missing, they shall be evaluated as noted defects. On the other hand, missing of some documents with relatively small significance, such as a few out of nearly one hundred data sheets of field density tests shall be regarded as relatively minor defects in the filing of documents, provided that such missing data can be verified during the Site Audit.

Quality of each document should be examined to check if the data or information included in the documents are clear and fit to the purpose of the requirement of the document. If the data/information shown in a document do not satisfy the objective of the document, the said document shall be evaluated as “unsatisfactory” and regarded as equivalent to “missing”.

SECTION 4: SITE INSPECTION

4.1 Meaning of Site Inspection

Site Inspection is the main part of the Technical Audit. Importance of Site Inspection may be self-explanatory. It is conducted to inspect the actual conditions of the executed works.

Firstly, the road conditions should be good enough after the contracted works are executed. If the road conditions are not good, the Audit Team should seek explanation by the Implementing Agency.

Secondly, it needs to be verified during Site Inspection that the works have been executed in accordance with the conditions stipulated in the Contract.

4.2 Preparation

Most site inspections may involve survey of site condition, field tests, laboratory testing of materials, quantity surveying, and other tests/surveys. The Audit Team should make prior arrangement with established Materials Laboratories for conducting the required tests. If the Implementing Agency happens to have some testing facilities e.g. Gravel Test Kits, the Audit Team, prior to departure (from Dar es Salaam), should request the Implementing Agency to prepare the tools and equipment needed. The Audit Team should make sure that common basic tools/equipment needed for routine site inspections are readily available. Common tools/equipment typically needed in site audit are as listed below:

4.2.1 Common to All Types of Works

- Camera (for recording what is observed by the Audit Team)
- Field Notebook and Pencil/Pen
- Measuring tape; one with maximum length of 20 – 30 m and one with length of 2- 3 m
- The RFB VfM Instrument. This is synonymous to a check list of activities to done.
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These tools should be carried to the site regardless of the type of the works to be inspected. Since these tools are used repeatedly and are easy to carry, Auditors should procure and bring to the site of audit.

Check list should be prepared before departure to the site considering the features of the Contracted works, based on the result of Document Examination. Examples of checklist and ribbon chart to be prepared before going to the site are shown in Form – 3.

A camera is used to take photos of the conditions of the roads at the time of Site Inspection. The photos taken during the Site Inspection should be included in the Audit Report to show the road condition. A field notebook (clipboard) and pencil/pen are used to write field notes. A tape measure may be needed any time at site to measure something. Therefore it is advisable to carry it to the site.

Wearing **work wear** is strongly recommended so that the members of Audit Team do not hesitate to step into dirty places covered by grasses etc. for the purpose of close observation.

In addition to the above three tools/equipment, the following tools/equipment should be prepared, depending on the work items included in the Contract:

- 5 m Straight Edge (used in measurement of flatness/smoothness of road surface)
- Small hammer (so-called “test hammer”) (used in checking of quality of concrete, tightness of bolts, and any hollow in the material)
- Ladder (needed to go high or low place such as bridge, culvert, or cut slope.)
- Flash light (needed to check dark place like inside of culvert.)

4.3 Methodology

Clause 4.3.1: Method of Site Inspection of the Work Items for Which Records of Quality Control Tests or Quantity Surveys are Available

Basic method of site audit shall be, in principle, verification of the inspection sheets and record of field tests prepared by the Implementing Agency. However, the Audit Team may conduct any test or survey or any necessary action wherever any doubt arises.

The primary responsibility of quality control and quantity survey rests with the Implementing Agency. The position of RFB is to examine/confirm the quantity surveys and quality control tests are properly done and payments have been made in accordance with the conditions of the Contract. From this viewpoint, Site Inspection aims at verifying data on quality control tests and quantities. Materials testing may be done at the existing Materials laboratories in the area, neighbouring region or at Central Materials Laboratory.

Therefore, the procedure of site inspection may be as follows:

- (i) Request a photocopy of the record of the quality control tests and inspection sheets.
- (ii) At the site, measurement/survey the items shown in the above records at the location shown in the above record and write the figures obtained by the measurement/survey in red ink on the photocopy of the record.
- (iii) Compare the figures measured/surveyed during the execution of works and those measures/surveyed at the time of audit.
- (iv) If the difference is within the range of error, the data of Implementing Agency shall be evaluated to be acceptable. If there is a large discrepancy between the two figures, ask the Implementing Agency to explain the cause of the difference.

If there is no record of measurement/survey done by the Implementing Agency, the warning should be issued to the Implementing Agency and this fact needs to be later stated in the Audit Report.

Also measurement should be done at locations other than those where measurements were done at the time of completion of works at random basis. This measurement will provide the Auditor with additional information to confirm the degree of accuracy of measurement/survey done by the Engineer.

Clause 4.3.2: Method of Site Audit of the Work Items for Which Records of Quality Control Tests or Quantity Surveys are not available

In case of the works items for which quantity surveys or quality control tests are not required, such as in case of grass cutting and drainage cleaning, the condition of the work shall be judged by the Auditor based on the condition at the time of Site Inspection.

Some work items, such as grass cutting and cleaning of drainage do not require quality control tests or quantity surveys. Therefore, such data do not exist. In such case, the Auditor is forced to judge if the works were properly executed based on the observation of the existing conditions of the items of the said work.

The condition as of the completion of works cannot be adequately verified when certain time period elapses after the execution of some work items, such as grass cutting, cleaning of drains and reshaping of the surface of gravel road. To verify the manner of the execution of such works, it is proposed to stipulate in the contract that the Contractor take photos showing (i) the condition before execution of work, (ii) the manner of works during execution, and (iii) condition after execution and submit them to the Executing Agency.

Clause 4.3.3: Inspection of General Conditions of Road

During Site Inspection, general conditions of the road shall be inspected to assure that the road is suitable for the passage of the vehicles and pedestrians.

Although the details figures of measurement are examined, inspection on the general conditions of the road so as to appropriateness for passage of vehicle should not be forgotten.

Clause 4.3.4: General Inspection of Quality of Works

Audit Team shall fully utilize its expertise to inspect the quality of the works during Site Audit.

Poor quality of works can be detected by an experienced road engineer without sophisticated tests/surveys. The point that an experienced road engineer would look at include, but not limited to, the following.

- General appearance of the executed work
- Smoothness of the road surface (shows the degree of diligence of surface work)
- Cleanness of the site (If debris etc. are remaining, diligence of works is doubted.)
- Settlement of road surface as a heavy vehicle passes, in case of unpaved road (Large settlement occurs if the compaction or material is not adequate.)

4.4 Verification of Data Recorded by the Implementing Agency

Referring the checklist prepared before departure from the place of Document Examination, the various dimensions of works, such as road (pavement) width, section length, size of drainage

facilities, are measured and compared with the data measured by the Implementing Agency for verification of the data.

4.5 Recording

The raw data obtained as the result of measurement/survey done in the Site Inspection shall be recorded on the data sheet and attached to the original of the Audit Report.

4.6 Evaluation

Clause 4.6.1: Evaluation of the Result of Site Inspection

Evaluation of the result of site audit shall be made from viewpoint of compliance with the conditions of the Contract.

Actually, there are no criteria to judge “pass/fail” or “satisfactory/unsatisfactory” of the maintenance works. Evaluation needs to point out the serious problem(s) found in the Site Inspection. Examples of serious problems which may be found in the Technical Audit include, but not limited to, the following:

- (i) Discrepancies between what are recorded in BOQ for payment and what have been actually executed
- (ii) Discrepancies of kind of works between the Contract (BOQ) and what have been actually executed
- (iii) Lack of proof of quality of works

If any serious problems for the subjects as exemplified in the above are found, such problems should be clearly presented in the Audit Report to draw attention of the Board.

4.7 Entry Meeting

An entry/ kick-off meeting shall be held between the Audit Team and the Auditee (IA) with a view to introducing the Auditor to the Auditee and briefing the Auditee of the audit objectives, scope, and audit approach. The audit timeframe and logistical arrangements may be outlined during the meeting. These may include office space for the Audit Team, contact person on the side of the IA and the likelihood of interviews with relevant IA officers. Minutes of the meeting shall be recorded.

4.8 Flash Reports

For long term Preventive audits it is important to prepare ‘Flash Reports’ for reporting significant irregularities and serious issues noted that warrant IMMEDIATE reporting and subsequent timely remedial interventions.

4.9 Wrap-up Meeting

Clause 4.7.1: Wrap-up Meeting

After the Document Examination and Site Inspection have been completed, a wrap-up meeting shall be held attended by the head of the office audited, his/her relevant staff and the Audit Team, and the tentative evaluation of the result of the audit shall be explained by the Audit Team.

The Audit Team shall summarize the discussions of the Wrap-up Meeting, including the comments/response of the audited office and minutes of the meeting shall be recorded.

SECTION 5: EVALUATION AND REPORTING

5.1 Evaluation

Clause 5.1.1: Evaluation of the Result of Technical Audit

The result of Technical Audit shall be evaluated using the RFB Value for Money Instrument.

Evaluation of Value for Money should be done using the RFB Value for Money Instrument as explained in the VfMI User Guide contained in this Manual.

Clause 5.1.2: Evaluation of Value for Money

Evaluation of VfM is based on three concepts of economy, efficiency and effectiveness (the 3Es).

- **Economy** looks at whether the resources available have been used economically, and if the quality and the quantity of the inputs are optimal and suitably coordinated.
- **Efficiency** is mainly focused to the question of whether the resources have been put to optimal use.
- **Effectiveness** is a measure of how well an audited project has achieved its objective. These objectives may be specifically stated or they may be the outputs of the project.
- Finally we have to assess as to whether ethics and integrity in project implementation was observed.

As defined in Clause 1.2.2, the term ‘Value for Money’ is considered to be assured if the works are/have been executed in accordance with the Performance Agreement and the Contract in cognisance of Economy, Efficiency, and Effectiveness as defined above.

5.2 Reporting

Clause 5.2.1 Preparation of Reports

The Audit Team shall prepare Audit Reports as required in the relevant Terms of Reference for the specific audit and submit them to Road Fund Manager.

A detailed format of the Technical Audit Report shall cover the following items shown in the Reporting chapter of the VfMI User Guide of this Monitoring Manual:

- (i) General Information
 - Dates of auditing and time schedule
 - List of Audit Team members
 - Name of Region (in case of TANROADS) or local government responsible for the audited project
 - List of audited projects
- (ii) Summary sheet of audited project
 - Name of the project
 - Type of work
 - Contract Number

- Name of Contractor
 - Original Contract amount
 - Final Contract amount
 - Dates of start and completion of work (and dates and contents of revision of contract, if any)
 - Total length of road section included in the contract
 - Major work items and quantities
- (iii) Result of Technical Audit and Evaluation of Each Project
- General information of the project (name of project, type of work, contract amount, length of road section, contract amount)
 - Result of document audit (raised issues, explanation by the Implementing Agency and view of the Auditor)
 - Result of site audit (raised issues, explanation by the Implementing Agency and view of the Auditor)
 - Photos showing the conditions of the audited sites (general condition and the matters of issue)
- (iv) Summary and Conclusion
- Major issues found through the audit
 - Problems common to all the projects

Overall evaluation and recommendation for improvement

A detailed format of the Technical Audit Report is shown in the Reporting chapter of the VfMI User Guide of this Monitoring Manual. The audit report shall be summarised in accordance with Audit Tables shown as Appendices (Table I to VIII) of this Technical Audit Manual.

Clause 5.2.2: Recommendation of Actions by the Board

The Technical Audit Report shall state recommendation/observation for the Board's consideration on any necessary actions.

The Technical Audit Report needs to state any recommendation/observation which needs Board's consideration on any actions since it is important function of the Board. The Road Fund Manager may add comment(s) to what is stated in the Technical Audit Report prepared by the consultant.

Clause 5.2.3: Transmission of Draft Technical Audit Report to the Implementing Agency

The Draft Technical Audit Report, after being approved by the Roads Fund Manager shall be sent to the headquarters of the Implementing Agency for its comments. The Implementing Agency shall be informed that its comments, especially to defend its position on some issues, need to be received by RFB within one month after it has received the draft report.

Before the Technical Audit Report is submitted to the Board, the Implementing Agency should be allowed to defend itself on some of the issues for which it does not agree to the view of the

Audit Team. The headquarters of the Implementing Agency shall consult with its branch office, or local government in case of PMOLARG, which is responsible for the audited works, as necessary.

Clause 5.2.5: Finalizing Technical Audit Report

After receiving comments from the Implementing Agency, the Draft Technical Audit Report shall be finalized with necessary revision. The finalization is the responsibility of the Road Fund Manager. The finalized Technical Audit Report together with comments made by the Implementing Agency shall be presented to the Board, regardless of revisions made to the report based on the comments by the Implementing Agency.

It shall be the discretion the Roads Fund Manager to instruct the Chief Auditor any revision of the Draft Technical Audit Report after receiving comments from the Implementing Agency. As appropriate, Roads Fund Manager may prepare a document separate from the Final Report to state his/her view on the necessary issues. However, the comments received from the Implementing Agency shall be explicitly presented to the Board as reference when the finalized Technical Audit Report is presented to the Board.

The final Technical Audit Report shall be prepared within one month after the closure of comments by the Implementing Agency but not later than three months after the completion of the Technical Audit.

Clause 5.2.6: Submission of Finalized Technical Audit Report to the Board and Reflection of Comments of the Board in Future Technical Audits

The finalized Technical Audit Report (the Report) shall be presented in the first Board Meeting after the finalization of the Report. Comments by the Implementing Agency, if any, shall be presented together with the Report. Comments subsequently made by the Board shall be transmitted to the Implementing Agency and/or reflected in the planning and/or implementation of future Technical Audits.

The Report approved by the Board now shall be called “Approved Technical Audit Report”

Clause 5.2.7: Transmission of Approved Technical Audit Report to Relevant Parties and Disclosure

Copies of the Approved Technical Audit Report (the Approved Report) shall be sent to relevant parties including the Controller and Auditor General, and the Implementing Agency. The Approved Report shall be kept ready for review of the general public upon request.

APPENDICES

Audit Report Tables

- Table I: Project Data for each Audited Project
- Table II: Summary of Audited Projects
- Table III: Key Findings/ Observations, Management Response and Recommendations
- Table IV: Value for Money Scores for each Project
- Table V: Weighted Value for Money Score for each IA
- Table VI: Summary of Value for Money Scores for the Implementing Agencies
- Table VII: Quality Control Tests/ Confirmatory Tests
- Table VIII: Dates of Entry and Exit meetings

LIST OF ATTACHMENTS

- Attachment 1 (a): Signed Minutes of Entry Meetings
- Attachment 1(b): Signed minutes of Exit Meetings.
- Attachment 2: Signed Site visit Forms
- Attachment 3: Dated Site Photographs
- Attachment 4: Filled VfM forms

ANNEXES

- Some Hints for Site Inspection

AUDIT REPORT TABLES

Audit Report Tables**Table I: Project Data for each Audited Project**

Client	
Supervising Engineer/Consultant	
Works Contractor	
Date of contract signing	
Commencement date	
Contract Duration	
Initial Completion date	
Revised Completion date	
Actual Completion date	
Contract Amount	
Amount paid and percentage of contract sum	

Table IV: Value for Money Scores for each Project

Name of IA	Project Name	Planning, Design and Tender Documentation	Procurement Stage	Construction Stage	Project Completion and Closure Stage	Executed Works	VfM Score

*** VfM score is placed after completion of all 5 stages of the project.**

Table V: Weighted Value for Money Score for each IA

Name of IA	Project Name	Planning, Design and Tender Documentation	Procurement Stage	Construction Stage	Project Completion and Closure Stage	Executed Works	VfM Score	Contract sum	Weighted VfM Score for IA

Table VII: Quality Control Tests/ Confirmatory Tests

Name of Implementing Agency: _____

S.No	Project	Tests Conducted by IA			Tests Conducted by Auditor			Conclusion and Recommendation
		Type	Result	Specification	Type	Result	Specification	

Table VIII: Dates of Entry and Exit meetings

S/No.	Region	Name of Implementing Agency	Date of Entry meeting	Date of Exit meeting
1				

LIST OF ATTACHMENTS

Attachment 1 (a): Signed Minutes of Entry Meetings

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Attachment 2: Signed Site visit Forms

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Attachment 4: Filled VFM forms

ANNEX

SOME HINTS FOR SITE INSPECTION

Introduction

Inspecting and finding problems in execution of road works is not easy unless one has considerable experience in quality control and site supervision. There is no ‘magic formula’ to detect defects of works without working knowledge on quality control/material testing. Therefore, anyone who wishes to acquire the skill for inspection/monitoring of road works which are being executed should completely master what are written in the relevant textbooks, such as Road Maintenance Handbook prepared by TANROADS/ JICA or various Road Notes published by TRL of the UK. Therefore, it is strongly recommended to carry such textbook(s) to the site and refer when inspecting the site.

However, the followings may be some hints.

1. General Matter

(i) Cleanness of the site and/or camp

If the site during execution of works looks not clean, it usually means that the site is not managed well. The cause of messy site is often poorly planned/organized placement of materials and equipment. It may be also caused by poor preparation of the site before the works start. Similar observation/evaluation can apply to the condition of the camp. (As a saying goes: *“The works are 80% completed if a good work plan and schedule is prepared”*.)

(ii) Marking stakes and other markings

Often marking stakes and/or other markings are effective for accurate execution. They are the signs of well-planned, well-organized execution. Setting such marking should be encouraged. (See any textbook on execution of road works on this subject.)

2. Earth Work (including Base Course and Sub-base Course works)

(i) Checking compaction during execution

The most important and essential key is to secure good material and appropriate moisture content. Therefore, grab the material used and judge, based on the experience, whether the material fits to the specification. Especially, check the following, by grabbing the material used at the site:

- Is content of the fine particles (which pass 0.075 mm sieve) within the range stipulated in the specification?
- Is the moisture content in the range stipulated in the specification?

To judge the above matters by ‘grabbing’ the material, of course, needs substantial experience of soil compaction tests. Therefore, someone who has such experience is needed to capture the problem of soil compaction during the execution.

(ii) Speed of Roller

The roller should not run at high speed to obtain good compaction. A good operator would run the roller at the speed of walking or slower.

(iii) Checking degree of compaction of completed base course

Strongly press (kick) the surface of base course with the edge of heel of your leather shoe. If evident dent is made, the surface is not hard enough, implying that the compaction is not sufficient.

(iv) Proof rolling

Proof rolling is very practical method for checking the degree of compaction of Subgrade, Sub-base and Base Course combined. Prepare a large truck with some payload so that the rear axle load becomes 10 tons. Let it run on the surface of Sub-base course or Base course at the speed of walking and observe the deflection (sinking) of the wheel. If noticeable deflection (say more than 5 mm) is observed, some insufficiency in the bearing capacity of either or all of Subgrade, Sub-base and Base course is suspected.

3. Asphalt Works

The key to control quality of asphalt works is material used and the temperature at the time of execution.

(i) Check the bitumen

Before going to the site, check the maker, production No. etc. of the bitumen approved for the work. At the site, first check the bitumen actually used is identical to the approved one.

(ii) Check the temperature of asphalt or asphalt mix at the time of spraying or placing.

The temperature needs to be within the specified range. Use thermometer which can measure up to 200 degree Celsius. If **smoke** is coming out, often temperature is too high. Excessively high temperature leads to oxidization of bitumen and bitumen becomes brittle and fragile.

(iii) Minimizing application of oil to roller drum

This is one of the examples written in many textbooks of asphalt works. Applying too much oil to the roller drum (to prevent adhesion of asphalt to the roller) results in ‘cutting-back’ of bitumen and asphalt mix becomes weak.

4. Concrete Works

(i) Slump test

Basic test for fresh concrete is 'slump test'. To secure the required strength, the slump value needs to be within the specified range. Often, workers prefer fresh concrete with high 'workability' which is 'watery'. They may add water after properly produced concrete is brought to the site. Bring a set of slump test tools (cone bucket and scale) if the quality of concrete is important.

(ii) Proper casting method

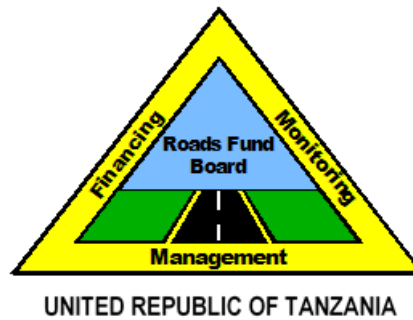
There are several rules to be observed in casting concrete. For example, fresh concrete should not be moved horizontally. Horizontal movement, including use of inclined chute, causes segregation of aggregate and mortar resulting in honeycomb. To minimize horizontal movement, fresh concrete need to be carried to as near as possible to the place of casting in bucket or cart. Such basic rules are found in the textbooks of concrete works. Always bring such textbook to the site and refer. After a few years, one can become the expert of concrete casting.

(iii) Checking hardened concrete

Use so-called test hammer (small hammer) to check the general strength of the cast concrete after hardening. However, the strength of concrete which can be checked is limited to the zone very near to the surface because the impact of the hammer penetrates only to very limited depth. Same can be said for 'Schmidt Hammer'. The strength shown by Schmidt Hammer is only indicative one. True strength cannot be known unless a test piece is taken by 'core boring' and tested in the laboratory.

.....

VALUE FOR MONEY INSTRUMENT



ROADSFUNDBOARD

VALUE FOR MONEY INSTRUMENT (VfMI)

Please press 'CTRL' and click the link below to open the VfM Instrument Excel worksheet



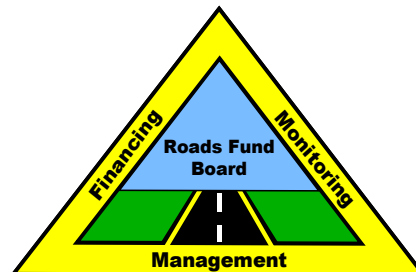
[RFB Value for Money Instrument-2015.xlsx](#)

AUGUST 2015

VALUE FOR MONEY INSTRUMENT (VfMI) USER GUIDE

United Republic of Tanzania

ROADS FUND BOARD



UNITED REPUBLIC OF TANZANIA

VALUE FOR MONEY INSTRUMENT (VfMI) USER GUIDE

August 2015

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ACRONYMS AND ABBREVIATIONS

BOQ	Bills of Quantities
CQ	Competitive Quotations
DROMAS	District Road Management System
EC	Evaluation Committee
EM	Environmental Management
EMP	Environmental Management Plan
GCC	General Conditions of Contract
GN	Government Notice
HDM	Highway Design and Maintenance
IA	Implementing Agency
ICT	International Competitive Tendering
IFT	Invitations for Tenders
INA	Information Not Available
INTOSAI	International Organization of Supreme Audit Institutions
IS	International Shopping
LOA	Letters of Acceptance
LGA	Local Government Authority
MOW	Ministry of Works
MVP	Minor Value Procurement
NCT	National Competitive Tendering
NS	National Shopping
PA	Performance Agreement
PBC	Performance-Based Contract (similar to PMMR)
PE	Procuring Entity
PMMR	Performance-Based Management and Maintenance of Roads (similar to PBC)
PPA 2011	Public Procurement Act, 2011
PPRA	Public Procurement Regulatory Authority
PMORALG	Prime Minister's Office – Regional Administration and Local Government
PM	Periodic Maintenance
PMU	Procurement Management Unit
RFB	Roads Fund Board
RMMS	Road Maintenance and Management System
RT	Restricted Tendering
SCC	Special Conditions of Contract
SIC	Supervising Independent Consultant
SI	Spot Improvement
SS	Single Source Procurement
TANROADS	Tanzania National Roads Agency
TB	Tender Board
ToR	Terms of Reference
VfM	Value for Money
VO	Variation Order
VfM	Value for Money
VfMA	Value for Money Auditor
VfMI	Value for Money Instrument

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CHAPTER 1

INTRODUCTION TO VALUE FOR MONEY AUDIT INSTRUMENT USER GUIDE

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CHAPTER 1: INTRODUCTION TO VALUE FOR MONEY AUDIT

INSTRUMENT USER GUIDE

1.1. Purpose of the User Guide

This User Guide provides assistance to Value for Money Auditors (VfMA) when using Value for Money Instrument (VfMI) while conducting Value for Money (VfM) audits. The aim of the guide is to:

- Promote consistent, economical, efficient and effective VfM audit practice while applying the instrument;
- Assist VfMA to correctly and accurately use the instrument; and
- Set out a basis framework within which VfMA can make sound decisions in analysing VfM and reporting conclusions for each project or implementing Agency (IA).

Frequently VfMAs are faced with considerable varieties of projects/contracts in their auditing work and are often placed in a position where they need to exercise their professional judgment with care in making conclusions and constructing appropriate recommendations. It is imperative for auditors to become familiar with VfMI which outlines chronologically the aspects/ indicators to be assessed for each project/contract executed by the Implementing Agencies (IAs). They need the ability to assess each project/ contract and conclude whether VfM has been achieved or not. The findings and reports prepared by the auditors should be consistent with the parameters indicated in the instrument. Furthermore, the reports should be in the manner that can be understood by the stakeholders and in the way that findings, conclusions and recommendations can be made for each project/contract within IA and among IAs. This will not only assist in highlighting the stages which are rendering poor performance in the project/contract but also in formulating strategies/plans geared to improve performance in the audited entity or project. This User Guide will therefore provide and maintain standardization of conducting VfM audits and drawing of standardized findings and recommendations across all projects and IAs.

The User Guide should therefore be regarded as just a starting point in developing competence of VfMA and other Institution. Since this User Guide provides guidelines to facilitate VfM audits and to assist Roads Fund Board (RFB) to conduct consistent and effective VfM audit to the roads construction projects executed by MOW, TANROADS and Local Government Authorities (LGAs), the guide will certainly be a vital tool to RFB and the auditors to publish credible audit reports.

1.2. VfM Auditing Mandate and Objective

Established under Section 5 subsection 1 of the Road and Fuels Tolls Act Cap 220 (revised edition 2006), the Roads Fund Board is mandated to collect, disburse and monitor the Roads Fund. The Board is required under Section 5 subsection (4) (h), (i) and (k) of the Act to carry out the following functions related to monitoring of the Fund:

- *“To ensure that the operations of TANROADS, local authorities, other road agencies and the Fund are technically and financially sound;*
- *To monitor the use of the funds disbursed to TANROADS, local authorities or other agencies for the purpose of the objects of the Fund; and*

- *To appoint, subject to approval by the Controller and Auditor General, an auditor or auditors to carry out the audit of the Fund.”*

Monitoring the use of the funds is a key responsibility of the Board. This is being monitored through receipt of progress reports from IAs, inspections by the Secretariat and also through financial and technical audits. Section 5 subsection (6) of the Act further states that the “*Board shall, within three months, after the end of each financial year, submit to the Minister an annual report based upon its own activities, the activities of TANROADS, local authorities and other agencies together with copies of their audited statements of accounts and copies of the reports made on them by the auditors.*”

TANROADS, LGAs (through PMORALG) and MOW are the beneficiaries of the Roads Fund; they receive 63 percent, 30 percent and 7 percent, respectively, of funds from RFB. PMORALG gets the 30 percent of which 29 percent is for the LGAs. TANROADS is responsible for managing and maintaining trunk and regional roads nationwide in Tanzania mainland. LGAs are responsible for managing and maintaining district, urban and feeder roads in local councils. MOW is responsible for development of new trunk and regional roads.

Prior to disbursing funds, the Board enters into performance agreements (PAs) with IAs which clearly spell out the roles of the parties. The agreements include targets of works to be achieved, total yearly financial allocation and how it will be used, performance qualities and targets, and progress reporting requirements. The main responsibility of IAs is to execute road maintenance and development works in accordance with their respective performance agreements and respective contracts. In this respect, they are solely responsible for:

- Procurement of design professionals or consultants to design, specify and supervise road maintenance and development projects;
- Procurement of contractors to construct road maintenance and development works, and
- Managing the procurement contracts of design professionals, consultants and contractors.

VfM Audit is conducted in accordance with the relevant provisions (Clause 5.3 and Clause 5.6) of Performance Agreement and Clause 5 Subsection (4) of Roads Tolls (Amendment) No. 2 Act, 1998. The basic objective of VfM audit conducted by RFB is to assure that the road users, who pay the road user charges, or fuel levy and other charges, get “value for money”. RFB is responsible for “accountability” of this “value for money”. The Performance Agreement stipulates, in Clause 5.3, that; “*The quality of all road maintenance works shall be in accordance with the Maintenance Standards, relevant specifications as agreed and safety standards as per recognized what?.*” And Clause 5.6 stipulates that; “*The BOARD reserves the right of inspecting and overseeing the performance of TANROADS in connection with maintenance works in order to verify ... and for the purpose of generally monitoring the performance of TANROADS against the agreed norms and standards.*”

These provisions constitute the legal basis for the VfM Audit. The Auditor should always keep in mind this legal basis and the basic objective of VfM Audit. The Auditor needs to be confident, after audit, that the Auditor can clearly explain to the Board or the road users to what extent the audited works satisfy the demand of road users.

1.3. Value for Money Instrument and its Application

1.3.1. VfM Instrument

In 2011 the RFB developed an excel worksheet based Value for Money Instrument for assessing VfM in the road projects that are being executed by IAs utilizing Roads Fund. Since its

establishment, the instrument has been used by RFB staff and Auditors. Feedbacks from users prompted the preparation of this User Guide on how to correctly apply the instrument. The instrument also strives to standardize VfM audit procedures and reporting.

Design of the Instrument is based on the Value for Money criteria and principles. VfM audit is an audit of the economy, efficiency and effectiveness with which the implementing agency uses its resources in carrying out its responsibilities. According to INTOSAI, VfM is an independent examination of the efficiency and effectiveness of government undertakings, programs or organization with due regard to economy, and the aim of leading to improvements. The instrument has been prepared by taken into consideration the three concepts of *economy*, *efficiency* and *effectiveness (the 3Es)*.

Effectiveness: Although all three concepts are often confused. The overriding objective of any project is effectiveness. Effectiveness is a measure of how well an audited project has achieved its objective. These objectives may be specifically stated or they may be the outputs of the project. Effectiveness generally involves not just producing some sort of deliverables but doing so in a way that optimizes the expenditure of public funds; considers all applicable regulations and other requirements; processes and reports on financial transactions of the projects. For examination of effectiveness, it is generally necessary to assess the outcome or impact of the project. The auditor will usually need to obtain sufficient substantive evidence of the impact of the road project. Likewise, in order to assess the impact of the road project, it is in general always necessary to collect information not only on the audited road projects but also on the stakeholders within and along the area.

Efficiency: The other elements of VfM audit are logically, subsets of effectiveness and are the objectives of the project that are often undeclared. Any expenditure on the project should be done in the most **efficient** manner. The project outputs being produced using the least amount of resources as possible to produce outputs of the required standard – making the most of available resources. The concept of efficiency is mainly restricted to the question of whether the resources have been put to optimal use. Consequently, efficiency is mostly specified in two ways; whether the same output could have been achieved with fewer resources or if the same resources could have been used to achieve better results in terms of quantity and quality of the output.

Economy: Economy is concerned with costs of inputs and keeping the cost low. According to auditing standards economy means minimizing the cost of the resources used for the project having regarding the appropriate quality. Even though the concept of economy is well defined, an audit of economy is not that easy to conduct. It is sometimes a challenging task for an auditor to assess whether the inputs chosen represent the most economical use of public funds, whether the resources available have been used economically, and if the quality and the quantity of the inputs are optimal and suitably coordinated.

1.3.2. Instrument Development

Basically the instrument has been designed based on the Value for Money criteria and principles discussed under item 1.3.1 above. The instrument has high level indicators that:

- Adequately capture those aspects of performance that are vital to VfM determination in the implementation of a road rehabilitation and maintenance project;
- Reflect best practices as a recognized way to achieve VfM;
- Are relevant, easy to measure, and focused on vital outcomes;
- Promote professional ethics as a basic principle in implementing road rehabilitation and maintenance projects;
- Standardize audit findings and reporting; and

- Motivate a culture of continuous improvement and innovation.

The excel worksheet based Instrument is divided into five VfM performance indicators namely:

- Indicator A : Planning, design and tender documentation
- Indicator B : Procurement process
- Indicator C : Construction stage
- Indicator D : Project completion and closure stage
- Indicator E : Executed works

NOTE

Part Z of the VfMI is not an indicator but a stand-alone stage for assessing integrity of project implementation. Assessment of this item is treated separately as elaborated in Chapter 7.2 of this guide.

Each performance indicator is assigned a percentage weighting that reflects its relative significance in the determining VfM for the project. Furthermore, each performance indicator is broken down into sub-indicators or parameters to be assessed under an indicator. These indicators and parameters are posed as statements that are evaluated and rated on a scale of 1 to 3 signifying good, fair, and poor performance respectively. Table 1 below shows details of the five performance indicators in terms of purpose, their relative weightings and number of parameters for each indicator.

Ref	Indicator	Purpose	%ge Weighting	No. of Parameters
A.	Planning, design, and tender documentation	To assess project feasibility and adequacy of design and specification for purposes of tendering and project execution	20	8
B.	Procurement process	To assess compliance with PPA and its regulations	10	6
C.	Construction Stage	To assess adequacy of project monitoring and control, and compliance with contract conditions and specifications	20	13
D.	Project completion and closure	To assess project completeness and handing over	10	8
E.	Executed Works	To assess quality, quantity and workmanship of executed works on site and their compliance with technical specifications	40	9

The Instrument has five VfM performance indicators as indicated in Table 1 above. Quality of executed works is the most important performance indicator of VfM. It is assigned the highest percentage weighting of 40%, followed by planning, design and tender documentation (20%), Construction Stage (20%), procurement process (10%), and project completion and closure (10%).

VfM parameters are equally weighted within an indicator. Each parameter should be evaluated on a three-points scale ranging from 1 to 3; where a score of 3 signifies **good** performance, a score of 2 signifies that performance is rated as **fair**, and a score of 1 signifies **poor** performance.

Where information is not available on a particular parameter, a zero score should be assigned to that parameter, which also signifies poor performance. This should not be confused with parameters or sub-parameters which might be 'not applicable'.

Some VfM parameters have got sub-parameters. These are listed below:

- i) A1 has 3 sub-parameters
- ii) B2 has 6 sub-parameters
- iii) B3 has 7 sub-parameters
- iv) C10 has 9 sub-parameters
- v) E1 has 13 sub-parameters, and
- vi) E2 has 6 sub-parameters

It should also be noted that sub-parameters have the same weighting within a parameter. Their assessment simply contributes to an aggregated assessment value of the main parameter.

1.3.3. Instrument Application

The VfM parameters and sub-parameters are assessed as 'Good', 'Fair' or 'Poor' by performing the following actions in the VfMI excel worksheet:

- If an item is scored as "GOOD", the Auditor should enter a '1' under column label 3 in the VfMI.
- If the score is "FAIR", the Auditor should enter a '1' under column label 2.
- If the score is "POOR", the Auditor should enter a '1' under column label 1.

ATTENTION

- 1) The Auditor should make sure that no single item is scored more than once; i.e. A parameter or sub-parameter cannot be assessed as being simultaneously 'good' and 'fair' or 'good' and 'poor'. The Auditor should always check his/ her filled VfMI for this anomaly.
- 2) If an item is not applicable to a specific project, the assessment for that item should be left blank.

Evaluation assessment values assigned by the Auditor to *sub-parameters* are internally aggregated by excel worksheet formulas and logical relationships into **parameter** evaluation assessment values which in turn are aggregated internally into *indicator* evaluation assessment values. These are ultimately aggregated internally into overall **project** performance score.

NOTE:

It is important that Auditors should always use a fresh copy of the VfMI spreadsheet obtained from the RFB for each audited project to avoid the possibility of accidentally reusing data from a previous project or using a corrupt version of the spreadsheet.

The Instrument is applicable to both in-projects and post-projects VfM audits. The former type of audit is conducted while the road works contracts are in progress, and is also often referred to as **preventive audit**, while the latter is performed after completion of the works contracts. Every Value for Money assessment should produce an aggregate score rating the overall performance of the specific project. As a matter of principle, each auditor should give an opinion on the achievement of VfM for each project audited. The Table 2 below shows applicable VfM opinions for individual projects based on ranges of aggregate score of performance indicators for that project.

Aggregate Score	Value for Money Opinion	
2.6 – 3.0	GOOD	Executed works generally comply with contract conditions and specifications and Value for Money has been achieved
1.7 – 2.5	ADEQUATE	Executed works generally comply with contract conditions and specifications but important improvements could have been made to enhance Value for Money
Below 1.7	INADEQUATE	Executed works have no Value for Money

You will note that if the VfM opinion is “**INADEQUATE**”, the VfMI automatically formats the phrase “**INADEQUATE**” to ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain unformatted. This is intended to alert the reader (the RFB, IA or Stakeholder) that the aggregated performance for the particular indicator or project leaves a lot to be desired and needs particular attention.

Table 3 below shows applicable VfM opinions applicable for assessment of Implementing Agencies resulting from aggregated scores of audited projects. Note that scores are weighted by contract prices as shown in section 7.4. of this guide.

Aggregate Score	Value For Money Opinion	
2.6 – 3.0	GOOD	Management organization and operations are conducive to achieving Value for Money and only minor improvements are needed.
1.7 – 2.5	ADEQUATE	Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made.
Below 1.7	INADEQUATE	Management organization and operations are not considered to be conducive to achieving Value for Money.

NOTE:

While “GOOD”, “FAIR” and “POOR” are used in assigning scores in the VfMI, Auditor’s opinion should be expressed as “GOOD”, “ADEQUATE”, or “INADEQUATE” performance.

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CHAPTER 2

PLANNING, DESIGN AND TENDER DOCUMENTATION

(This is Indicator 'A' of the of the VfM Instrument)

1. *What does this VfM indicator aim to examine and establish?*
2. *Which documents must be requested from the Implementing Agency / Roads Fund Board and reviewed by the Auditor under this indicator in order to fill in the VfM Instrument under planning, design and tender documentation stage?*
3. *How does the Auditor arrive at conclusion and giving opinion?*

2.1 Project Planning

Which documents must be requested from the Implementing Agency and reviewed by the Auditor under this stage in order to fill in the VfM Instrument under planning aspect?

The list of documents to be reviewed includes, but not limited to, the following:

- a) Approved Budget of the Implementing Agency (IA) for the year under audit
- b) Performance Agreement (PA) between RFB and IA for the year under audit
- c) Annual Procurement Plan (APP) of the IA for the year under audit
- d) General Procurement Notice (GPN) of the IA for the year under audit
- e) Specific Procurement Notice (SPN) of the IA for the year under audit
- f) Road inventory and road condition survey and rake-off measurement sheets (justifications of quantities in the BoQs)
- g) For in-house supervised projects, the Auditor should request the name and qualifications of the designated Project Manager (PM)
- h) Contract documents (should copy signed by both parties)

From the above documents, the Auditor should be able answer the following questions:

- 1) Was the project in the PA and approved budget? He / she should establish whether it is the same project name, same type of intervention (periodic maintenance, routine maintenance, rehabilitation etc.), same scope and same location or position
- 2) Was the project included in the APP, GPN and SPN?
- 3) Was the road inventory done and BoQs prepared based on the inventory data collected?
- 4) At what stage was the designated supervising engineer appointed by the AO?
- 5) For externally supervised projects, was the Supervisor engaged before selection of the Contractor for the works? And is there a formal appointment letter and was the contractor informed accordingly? The auditor should note that indicating in the SCC that Project Manager (PM) will be Regional Manager (for TANROADS Projects) or District /Council Engineer (for LGAs projects) is not sufficient to confirm that PM was formally appointed. There should be a designated staff who is responsible for day to day supervision of the project, formally appointed.

2.2 Compliance of project planning with requirements of the Performance Agreement:

(This is parameter A1 of the of the VfM Instrument)

This is parameter A1 of the VfM Instrument. This parameter has three sub-parameters.

2.2.1 Assessment of competing alternatives based on updated road inventory and condition survey

(Sub-parameter A1 (1) of the of the VfM Instrument)

It is brought to the attention of the Auditor that the objective of roads inventory and condition survey is to establish the extent of the existing road network and its condition. The surveys include collection of detailed physical road condition (length, cross-section, soil type, terrain traversed, road furniture, surface type, road width) and drainage structure (pipe culverts, Drifts (vented & solid) box culverts, bridges to establish their conditions, dimensions and type of the required intervention), source of materials, traffic volume and visual condition surveys (classified as good, fair, poor and impassable).

The criteria for selecting the eligible road or structure, the desired level of access, the intervention strategy/type and the actual selection of the road links to be improved are fundamental to how the road/structures improvement resources will be allocated. On the basis of the prioritization, it is important to assess the cost of the required intervention for each candidate road or structure. The costs are useful in the prioritization process and also the budgeting process. The IAs are supposedly using at least one road maintenance and management systems such as RMMS, HDM 4, or DROMAS. The Auditor should examine whether these systems were actually used as road maintenance management tools.

Assessment of sub-parameter A1 (1) is done as follows:

- a) If roads inventory, condition survey (including drainage structures condition where relevant) and traffic surveys were taken during the planning stage of the financial year and used in maintenance planning, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If roads inventory, condition survey and traffic surveys were partially taken or partially used in maintenance planning, or inaccurately used in maintenance planning, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If neither roads inventory, condition survey nor traffic surveys were taken or, roads inventory, condition survey and traffic surveys were taken but not used, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

2.2.2 Analysis of feasibility based on appropriate road maintenance software (such as HDM 4, DROMAS, or RMMS)

(Sub-parameter A1 (2) of the of the VfM Instrument)

Road maintenance software is a computer program related model which simulates total life cycle conditions and costs for a road, a group of roads with similar characteristics, or an entire network of roads, for maintenance strategies, and provides the economic decision criteria for evaluating the strategies being analysed. The primary cost set for the life cycle analysis includes the costs of road maintenance and vehicle operating costs, to which travel time costs can be added. The costs of construction related traffic delays, accidents and environmental pollution can be entered in the model based on separate estimates. The software can be coupled with the Expenditure Budgeting Model to find the best way of using IA’s road management and maintenance funds under budgetary constraints.

Within the planning, budgeting and programming functions of an Implementing Agency, the model may therefore be used to establish:

- i) desired budget levels that would minimize the total costs of road maintenance;
- ii) Appropriate policies and standards for construction and maintenance programs that are consistent with minimizing total transport costs under existing resource constraints;
- iii) long and medium-term investment and expenditure programs; and
- iv) Appropriate, economically derived intervention criteria to develop short-term programs and annual budgets, based on an appropriate pavement management system.

An important feature of the model is the analytical support; it provides a convincing case to the legislature and top decision-makers for allocation of adequate maintenance funding to preserve the road infrastructure as an asset.

Assessment of sub-parameter A1 (2) is done as follows:

- a) If a known prioritization/feasibility system (RMMS/ DROMAS/ RONET/ HDM4/ RED) was used as basis of justification or allocation of road improvement/ development resources, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If a known prioritization/feasibility system was partially/ inaccurately used, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If no known prioritization/ feasibility system was used (where relevant), the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

NOTE

Analysis of feasibility [sub-parameter A1 (2)] is only applicable to development projects i.e. maintenance works do not generally require feasibility analysis. The Auditor should therefore state in the comments column that the indicator is “Not applicable”.

2.2.3 Timely appointment of in-house/ independent design professional or Consultant

(Sub-parameter A1 (3) of the of the VfM Instrument)

For In-house designed projects, the Auditor should examine whether the designs were carried out by a professionally registered engineer from the IA and in line with Regulation 128 of GN No. 97;

For externally supervised projects, determine whether the supervisor was appointed before engaging the contractor.

Assessment of sub-parameter A1 (3) is done as follows:

- a) If a designated supervising engineer was appointed in writing by the AO before signing of the works contract, or if an independent consultant/ consulting firm was engaged before signing of the works contract and in any case the Contractor was subsequently formally notified of the appointment of the supervising engineer, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If a designated supervising engineer/ independent consultant/ consulting firm was appointed/ engaged in writing by the AO after signing of the works contract and the appointment was officially communicated to the contractor before the works commencement date, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If no designated supervising engineer/ independent consultant/ consulting firm was appointed/ engaged in writing by the AO, or the appointment was done after the works

commencement date, or the appointment was timely but communicated to the contractor after the works commencement date, the score is “POOR” The Auditor should enter a ‘1’ under column label 1.

- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

Overall Assessment of Parameter A1:

Assessment of Parameter A1 is automatically generated in the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not manually enter the assessment in the locked yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under A1 are in full compliance, the score is “GOOD”. The VfMI displays a ‘1’ under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is “FAIR”. The VfMI displays a ‘1’ under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is “POOR”. The VfMI displays a ‘1’ under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a ‘1’ under column label 0.

2.3 Design

The list of documents to be reviewed under design includes, but not limited to, the following:

- 1) Designs Reports (where relevant)
- 2) Design calculations (where relevant)
- 3) Specifications
- 4) Drawings
- 5) Engineer’s estimates
- 6) Road inventory records
- 7) Bridge / structure inventory records
- 8) Tender Documents

The critical documents to be reviewed under this audit aspect are tender documents which comprise of Instruction to Tenders, Tender Data Sheet, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Bill of Quantities and Standard Forms and Anti-bribery Declaration.

It is brought to the attention of the Auditor that most of the interventions are of maintenance in nature; hence assessment of design adequacy should take this into account. This fact is hinged into section 4 subsection (3) and (4) of Road and Tolls Act Caps 220 (Revised edition 2006) which established the Roads Fund Board.

Section 4(3)(a) & (b) state, in part, that at least ninety percent of the money deposited in the Fund shall be used for maintenance and emergency repair of classified roads and related administrative costs in Mainland Tanzania in accordance with approved operational plans made (a) initially by the Ministry responsible for roads until such time as the TANROADS is established in respect of trunk and regional roads; and (b) by the responsible local authorities in respect of district and urban roads, in accordance with the budgets approved by Parliament.

Section (4) further stipulates that not more than ten percent of the money deposited in Fund shall be used for roads development and related administrative costs in Mainland Tanzania in accordance with the plans and budgets approved by Parliament.

However, for any type of interventions, there are relevant and necessary design requirements which must be fulfilled for such standards to be used or attained, locations where interventions are planned and specifications to be used. For major interventions such as major bridge repairs / reconstruction, periodic maintenance or rehabilitation, design calculations, both horizontal and vertical alignments and mix designs are mandatory. Strip maps and other drawings are relevant to almost all types of interventions regardless of the scope, type of intervention or value. Emergency should however be treated separately because there is no time to prepare detailed and elaborate design analysis.

2.4 Accuracy and Completeness of Design Calculations

(Parameter A2 of the VfM Instrument)

Assessment of Parameter A2 is done as follows:

- a) If there are accurate and complete design calculations (where applicable), or complete standards and drawings (strip maps, take-off sheet & other drawings) (where design calculations are irrelevant), the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If there are design calculations (where applicable), or complete standards and drawings (strip maps & other drawings) (where design calculations are irrelevant) but inaccurate, and / or incomplete, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If there are neither design calculations (where applicable), nor complete standards and drawings (strip maps & other drawings) (where design calculations are irrelevant), the score is “POOR”. The Auditor should enter a ‘1’ under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

2.5 Accuracy, Appropriateness and Completeness of Technical Specifications

(Parameter A3 of the VfM Instrument)

Assessment of Parameter A3 is done as follows:

- a) If there are technical specifications appropriate for the type of works and accurately covering all the project activities in the contract, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If there are technical specifications appropriate for the type of works but not covering all the project activities in the contract some coverage is inaccurate and / or incomplete, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If there are no technical specifications in the contract, or technical specifications are appropriate for the type of works or is largely inaccurate or largely incomplete, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

2.6 Parameter A4 of VfM Instrument: Overall appropriateness of the design in terms of economy and function (fitness for purpose)

(Parameter A4 of the VfM Instrument)

Assessment of Parameter A4 is done as follows:

- a) If designs considered different designs or intervention options, a realistic comparison made and justifications on the selected option or intervention given the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3. It is important to note here that if there is evidence that appropriate road maintenance software such as HDM4, DROMAS, or RMMS were used it is considered that optimal interventions were selected;
- b) If designs did not consider different designs or intervention options but realistic costs estimates were prepared the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If neither road maintenance software were applied nor detailed designs prepared the score is “POOR” The Auditor should enter a ‘1’ under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

2.7 Accuracy and Completeness of BOQs for the works and their consistency with the drawings and technical specifications

(Parameter A5 of the VfM Instrument)

Assessment of Parameter A5 is done as follows:

- a) If BOQs are accurate and complete i.e. they include all works items and are correctly named and linked to specifications by specification reference numbers, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If BOQs are slightly inaccurate and or a few items are missing, or a few items are not correctly named or just a few reference numbers are incorrect or missing, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If there are no BOQs, or the BOQ is not referenced to specifications, or the BOQ is highly incorrect, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1. The Auditor should enter a ‘1’ under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

2.8 Accuracy of Engineer’s Estimates

(Parameter A6 of the VfM Instrument)

Assessment of Parameter A6 is done as follows:

- a) If Engineer’s estimates are reasonably accurate and complete, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If Engineer’s estimates are accurate but incomplete or complete but inaccurate, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;

- c) If Engineer's estimates are inaccurate, incomplete or missing, the score is "POOR". The Auditor should enter a '1' under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

2.9 Tender Documentation

It is brought to the attention of the Auditor that the IAs must prepare accurate and complete tender documents in order to receive competitive tenders. The IAs are also required to use the appropriate and accepted standard tender documents issued by PPRA. In addition, the documents must be worded so as to permit and encourage competition and such documents shall set forth clearly and precisely all the information necessary for a prospective tenderer to prepare responsive and competitive tenders. Furthermore, tender evaluation and selection of the lowest evaluated bidder should solely be based strictly on the criteria specified in the tender dossier. Tender documents must not include requirements and terminologies which discriminate unfairly against participation by contractors.

2.10 Accuracy and completeness of tender documents

(Parameter A7 of the VfM Instrument)

Assessment of Parameter A7 is done as follows:

- a) If the tender documents are complete, accurate with all relevant information provided in the Tender Data Sheet and Special Conditions of Contract and correctly arranged (Specifications, Drawings, & Bill of Qualities, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If the tender documents are complete and properly arranged but inaccurate or some relevant information is missing, the score is "FAIR". The Auditor should enter a '1' under column label 2;
- c) If the tender documents are incomplete, inaccurate and incorrectly arranged, the score is "POOR" the Auditor should enter a '1' under column label 1; and
- d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

2.11 Computation of Score under Planning, Design and Tender Documentation

The score under Planning, Design and Tender Documentation stage is computed as follows:

$$S_{pdt} = \sum \frac{G}{T} * 3 + \frac{F}{T} * 2.5 + \frac{P}{T} * 0 + \frac{INA}{T} * 0$$

Where

S_{pdt} = Performance Score under Planning, Design and Tender Documentation Indicator;

G = Total count under "Good" column;

T = Total count

F = Total count under "Fair" column;

P = Total count under "Poor" column; and

INA = Total count under "INA" column.

NOTE:

Parameters and sub parameters which are not applicable will not contribute to the aggregation of the final score. It is also important to the Auditor to bear in mind that maintenance works and minor structures repairs entail neither feasibility analyses nor design calculations. The Auditor should therefore not assign any score for indicators, parameters or sub-parameters which are not applicable to specific projects or situations. You only need to write “Not applicable” in the comments column.

2.12 Conclusion and Auditor’s Opinion on Planning, Design and Tender Documentation

The VfMI requires the Auditor to give an opinion not only on the overall project performance, but also under each audit indicator. The VfMI automatically displays one of the three possible conclusions as elaborated below.

- If the score is greater than 2.5 (score >2.5 but ≤ 3.0), the VfMI automatically displays a phrase “**GOOD**”. It means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor’s opinion will be: “*Planning, Design and Tender Documentation was done in a cost-effective manner and therefore VFM was realized under this stage*”;
- If the score is between 1.7 and 2.5 inclusive ($1.7 \leq \text{score} \leq 2.5$), the VfMI automatically displays a phrase “**ADEQUATE**”. It means that Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. The Auditor’s opinion will be: “*Planning, Design and Tender Documentation was done in a cost-effective manner but major improvements could be made to realize VFM under this stage*”;
- If the score is below 1.7 (score <1.7), the VfMI under “Comments” column automatically reads “**INADEQUATE**”. It means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor’s opinion will be: “*Planning, Design and Tender Documentation was not done in a cost-effective manner and therefore VFM was not realized under this stage*”.

The VfMI automatically formats the phrase “**INADEQUATE**” in ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain black. The red colour alerts the reader that performance for the particular indicator leaves a lot to be desired and needs particular attention.

NOTE:

While “**GOOD**”, “**FAIR**” and “**POOR**” are used in assigning scores in the VfMI, Auditor’s opinion should be expressed as “**GOOD**”, “**ADEQUATE**”, or “**INADEQUATE**” performance

CHAPTER 3**INDICATOR 'B': PROCUREMENT STAGE**

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CHAPTER 3

PROCUREMENT STAGE

1. What does this VfM indicator aim to examine and establish?
2. Which documents must be requested from the Implementing Agency / Roads Fund Board and reviewed by the Auditor under this indicator in order to fill in the VfM Instrument under planning stage?
3. How does the Auditor arrive at conclusion and opinion?

3.1 Relevant Documents

The list of documents to be reviewed includes, but not limited to, the following:

- a) Public Procurement Act No. 7 of 2011, its Regulations and Standard Tender Documents
- b) The Contractors Registration Act No. 17 of 1997, and The Contractors Registration (Amendment) Act No.15 of 2008
- c) Minutes of IA Tender Board
- d) Approved Annual Procurement Plan
- e) Tender Adverts
- f) Tender and Quotation Documents
- g) Records / minutes of Tender opening
- h) Tender Evaluation Reports
- i) Contract Documents [Form of Agreement, Letter of Acceptance, Contractor's Tender, SCC, GCC, Standard Specifications, Special Specifications, Drawings, Bills of Quantities, and (if applicable) Minutes of Pre-contract negotiations]
- j) Advance Payment Guarantees
- k) Performance Guarantees

3.2 Appropriateness of Procurement Method

(Parameter B1 of the VfM Instrument)

Regulation 149(1) of GN. No. 446 stipulates that procurement through international and national competitive tendering shall be considered before other methods of tendering are used. Regulation 149(2) requires a written prior approval of the tender board before other methods of procurement can be used where it is established that such methods may have due regard for transparency, economy and efficiency in the implementation of the project. The seventh schedule of GN. No. 446 also specifies methods of selection and limit of application per contract for goods, works and non-consultancy services.

In order to establish appropriateness of procurement method used, the Auditor should review the APP, TB minutes, approved budget to determine budgeted amount (Engineer's estimates) and tender notice.

Assessment of Parameter B1 is done as follows:

- a) If the procurement method used is in line with the seventh schedule of GN. No. 446 and is consistently reflected so in the approved APP, TB approved procurement method and tender documents (including tender notice), the score is "GOOD". The Auditor should enter a '1' under column label 3;

- b) If the procurement method used is in line with the seventh schedule of GN. No. 446 and was approved by TB but there are slight inconsistencies in how this is reflected in tender documents or tender notice, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the procurement method used is not in line with the seventh schedule of GN. No. 446 or was not approved by TB or the method approved by TB and used is not the one stated in the issued tender documents (including tender notice), the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.3 Compliance with PPA, its Regulations and Standard Documents

(Parameter B2 of the VfM Instrument)

3.3.1 Use of standard tender and contract documents

(Sub-parameter B2 (1) of the of the VfM Instrument)

Section 70 (1) of PPA2011 and Regulations 184 (3) and 287(4) of GN No.446 state, in part, that the PE shall use the appropriate standard tender documents issued by the PPRA to address specific issues of a project in accordance with guidelines issued by the PPRA. Regulation 184 (4) stipulates further that any changes to the standard tender documents shall be introduced only through tender data sheets, or through special conditions of contract. Regulation 184 (5) further states that where the relevant standard tender documents are not issued, the procuring entity shall use standard tender documents acceptable to the PPRA.

NOTE:

Section 33(c) of PPA 2011 stipulates that approving of tendering and contract documents is one of Tender Board’s functions.

Assessment of sub-parameter B2 (1) is done as follows:

- (a) If appropriate standard tender documents issued by the PPRA were used and approved by TB and changes (if any) were introduced only through tender data sheets, or through special conditions of contract, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If appropriate standard tender documents issued by the PPRA were used but changes introduced through tender data sheets, or through special conditions of contract have resulted into minor inconsistencies with some parts of the same documents, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If tender documents used are neither the ones issued by PPRA nor standard tender documents acceptable to the PPRA, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.3.2 Tender Notice

Sub-parameter B2 (2) of the of the VfM Instrument

Having established the applicable procurement method, the Auditor should then examine whether its application complied with the requirements of the PPA and its Regulations. For International Competitive Tendering (ICT), the requirement stated under section 68(2) of PPA 2011 and Regulation 181(5) of GN. No. 446 should be fully complied with. Regulation 181(5) of GN. No. 446 states, in part, that in the case of an international tendering, a similar notice shall be published once in the appropriate foreign or international publication or, professional or trade journal. For National Competitive Tendering (NCT), the requirement is that the tender notice should be advertised in the PPRA Journal and Tender Portal, Procuring entity website and /or Notice Board and one local newspaper.

Other procurement methods which could be used by IAs are: restricted tendering, competitive quotations (shopping), single source procurement, minor value procurement, and micro value procurement. Provisions in the PPA and its regulations regarding these methods should be strictly complied with.

The Auditor should take note of the following facts:

- i) Publication in the PPRA Journal and tender portal, local newspaper and IA's own website (if any) are mandatory. IAs having no own website may use own and nearby offices notice boards in lieu of own websites.
- ii) A newspaper with regional circulation (beyond national borders) is construed to fulfil the requirement for foreign or international publication.
- iii) International companies are allowed to tender for works under NCT unless national exclusive preference is stated in the tender notice and tender documents; the difference between ICT and NCT lies only in the way the tender notice is advertised.
- iv) Placing tender notices only on own and nearby offices notice boards shall not be considered to satisfy the requirement of the Act.

Assessment of sub-parameter B2 (2) is done as follows:

- (a) If the tender notice was properly advertised as per requirements of Section 68(2) of PPA 2011 and Regulation 181(5) of GN. No. 446, and contents of the tender notice were complete and consistent, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- (b) If the tender notice was properly advertised as per requirements of Section 68(2) of PPA 2011 and Regulation 181(5) of GN. No. 446, but contents of the tender notice contained some insignificant errors which cannot mislead prospective tenderers; the score is "FAIR". The Auditor should enter a '1' under column label 2;
- (c) If any one of the modes of advertising stated in the first schedule of GN. No. 446 of 2013 was not used for tender notice advertisement (i.e. the notice was advertised in only some of the mandatory modes of advertising), or the tender notice missed out some important contents, or its contents were inconsistent, the score is "POOR". The Auditor should enter a '1' under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

3.3.3 Selection Method

(Sub-parameter B2 (3) of the of the VfM Instrument)

The Seventh Schedule of the GN. No. 446 of 2013 specifies limits of application of procurement methods. The Auditor should under this sub parameter establish whether limits of application were adhered to. While ICT, RT and SS have no applicable limits of application, it should be noted that the limits for applying NCT, CQ and MVP for works are TShs. 5 billion, TShs. 200million and TShs. 20 million respectively.

Although RT and SS have no applicable limits, justification for their application must be clearly recorded. MicroVP is only applicable for goods not for works.

It is brought to the attention of the Auditor that in compliance with Regulation 149(2) a procurement method must have a written approval of the tender board.

Assessment of sub-parameter B2 (3) is done as follows:

- (a) If the procurement method is fully consistent with PPA requirements and approved by TB in writing, or in case of RT and SS methods, justification for their application is clearly recorded, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If in case of RT and SS methods, records of justification for their application have some insignificant errors, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If the procurement method is not consistent with limits of application or if there is no written TB approval of the method or in case of RT and SS methods justification for their use is missing, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.3.4 Prequalification and shortlisting

(Sub-parameter B2 (4) of the of the VfM Instrument)

Section 52 of PPA 2011 stipulates that a procuring entity may engage in prequalification proceedings with a view to identifying tenderers prior to inviting tenders for the procurement of goods, works or services.

It is brought to the attention of the Auditor that Section 53 of PPA 2011 makes it mandatory to conduct Post-qualification where tenderers have not been pre-qualified. Section 53(1) states, in part, that *the PE shall, where tenderers have not been pre-qualified, determine whether the tenderer whose tender or proposal has been determined to offer the lowest evaluated tender, in the case of procurement or the highest evaluated tender in the case of disposal of public assets by tender, has the legal capacity, capability and resources to carry out effectively the contract as offered in the tender before communicating the award decision.*

Assessment of sub-parameter B2 (4) is done as follows:

- (a) If prequalification or post-qualification was properly conducted, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If post-qualification was conducted but there were some insignificant shortcomings in the post-qualification process, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;

- (c) If post-qualification was not done where tenderers had not been pre-qualified, or there were major and serious shortcomings post-qualification was not properly conducted, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.3.5 Time for submitting tenders

(Sub-parameter B2 (5) of the of the VfM Instrument)

The Eighth Schedule of GN. No. 446 of 2013 specifies time to be given to tenderers to prepare and submit their tenders. The schedule states the minimum periods under prequalification stage for ICT and NCT as 30 and 21 calendar days respectively. For tendering stage periods for ICT, NCT, and Restricted NCT are 30, 21, and 21 respectively. National Shopping (NS) and International Shopping (IS) are given 4 and 8 calendar days respectively. Where large works are involved 90 calendar days have been allowed.

Assessment of sub-parameter B2 (5) is done as follows:

- (a) If time given to tenderers to prepare and submit their tenders was consistent with the Eighth Schedule of GN. No. 446 of 2013, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If time given to tenderers to prepare and submit their tenders was shorter than the specified time in the Eighth Schedule of GN. No. 446 of 2013 but was later corrected and duly extended during the tender period, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If time given to tenderers to prepare and submit their tenders was shorter than the specified time in the Eighth Schedule of GN. No. 446 of 2013, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.3.6 Communication of Clarification to Tenderers

(Sub-parameter B2 (6) of the of the VfM Instrument)

Regulation 122 of GN. No. 446 states, in part, that at least fourteen days prior to the deadline for the submission of applications to pre-qualify, a PE shall respond to any request by a tenderer for clarification of the pre-qualification documents that is received by the procuring entity within three working days. Without identifying the source of the request, the PE’s response shall be communicated to all tenderers to whom the PE has provided the prequalification documents.

The attention of the Auditor is further drawn to Regulation 13 of GN. No. 446 that a tenderer may request a clarification of the solicitation documents from a PE. Regulation 13(2) then stipulates that the PE shall, within three working days after receiving the request for clarification, communicate in writing to all tenderers to which the procuring entity has provided the solicitation documents without identifying the source of the request so as to enable the tenderers to take into account the clarification received in the preparation of their tenders provided that such request is submitted to the PE at least fourteen days prior to the deadline for the submission of the tenders in the case of competitive tendering, and three days in the case of non-competitive tendering.

Assessment of sub-parameter B2 (6) is done as follows:

- (a) If the PE promptly responded in writing to all timely requests by tenderers for clarification of the solicitation documents within the prescribed times, and responses were sent to all tenderers, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If the PE, inadvertently or otherwise, revealed the identity of the source of a request for clarification, or responded to a time barred request for clarification, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If the PE responded not to all timely requests by tenderers for clarification of the solicitation documents, or a response was not within the prescribed time, or the response was sent not to all tenderers, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

Overall Assessment of Parameter B2

Assessment of Parameter B2 is automatically generated by the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not attempt to manually enter the assessment in the locked yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under B2 are in full compliance, the score is “GOOD”. The VfMI displays a ‘1’ under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is “FAIR”. The VfMI displays a ‘1’ under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is “POOR”. The VfMI displays a ‘1’ under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a ‘1’ under column label 0.

NOTE:

Sub-parameters which are not applicable will not contribute to the aggregation of the final score. The Auditor should write “Not Applicable” under comment column of the respective indicator or sub parameter.

3.4 Evaluation Process and Award of Contract

(Parameter B3 of the VfM Instrument)

3.4.1 Composition of tender evaluation committee (Reg. 202(1) and 297(1) of GN. No. 446)

(Sub-parameter B3 (1) of the of the VfM Instrument)

The composition of tender evaluation committees (ECs) is specified under Section 40 of PPA 2011 and Regulation 202(1) and 202(2) of GN. No. 446. These cited parts of the Act and its Regulations demand that the membership of the EC shall be recommended by the PMU and approved by the AO or Chief Executive, and that an evaluation committee shall comprise of not less than three and not more than five members. In exceptional circumstances, however, the AO

may increase the number depending on the value and complexity of the procurement if there are justifiable reasons.

Assessment of parameter B3 (1) is done as follows:

- (a) If the composition of EC is as per Section 37 of PPA 2011 and its Regulations and membership was recommended by the PMU and approved by the AO and numbers are right, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If expertise and experience of members of EC is slightly lacking with respect to the value and complexity of the procurement requirement, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If the composition of EC is not consistent with Section 40 of PPA 2011 and its Regulations, or membership was not recommended by PMU or members were not approved in writing by the AO or numbers are not right or expertise and experience of members of EC is by and large lacking with respect to the value and complexity of the procurement requirement, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.2 Members of evaluation team signing code of ethics [Section 40(6) of PPA 2011]

(Sub-parameter B3 (2) of the of the VfM Instrument)

This sub-parameter requires verifying whether members of evaluation committee signed the code of ethics in compliance with section 40(6) of PPA 2011.

Assessment of parameter B3 (2) is done as follows:

- (a) If all members of EC properly signed the code of ethics form, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) This is a mutually exclusive event with either Yes or No, so there is no likelihood of a “FAIR”. Score. The Auditor may not enter anything under column label 2;
- (c) If at least one member of EC did not sign the code of ethics form, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.3 Evaluation done as per the evaluation criteria contained in the tender dossier or Request for Proposal

(Sub-parameter B3 (3) of the VfM Instrument)

It is important that evaluation is done strictly based on the criteria contained in the tender documents. The Auditor should however be conversant with evaluation criteria which constitute minor and major deviations which warrant disqualification of a bidder or not disqualifying a bidder with minor deviation. Material deviations issues which justify rejection of a tender are listed in Regulation 204(2) and 205 of GN. No. 446. Rejection of a tender based on minor deviations is not allowed as stated in Regulation 207(2) (b) that *a procuring entity may regard a tender as responsive even if it contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirements set forth in the solicitation documents or it contains errors or oversights that are capable of being corrected without touching on the substance of the tender.*

It is also important to note that tenderers should not be evaluated outside criteria contained in the tender documents [Regulation 203(1)] and it is unlawful to change evaluation criteria after tender submission or during evaluation process. Furthermore, post qualification is mandatory if prequalification was not done, [(section 53(1)] and should be done only to the lowest evaluated bidder using qualification criteria stipulated in the tender documents.

Assessment of parameter B3 (3) is done as follows:

- (a) If evaluation was done as per the evaluation criteria contained in the tender dossier, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If, minor errors are found in the evaluation done as per the evaluation criteria contained in the tender dossier, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If evaluation was did not fully abide by the evaluation criteria contained in the tender dossier or was changed after tender submission or a minor deviation was used to reject a tender, or post-qualification was not done where it was required, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.4 Minutes of tender board meeting specifying reasons for rejecting a lower tender [Reg. 237(3) of GN. No. 446]

(Sub-parameter B3 (4) of the VfM Instrument)

Regulation 237(1) of GN. No. 446 states that where the lowest tender is not accepted, reasons may be given orally, on request, to any tenderer who submitted a lower tender than that accepted. Regulation 237(3) demands that minutes of TB meeting shall specify reasons for rejecting or accepting a lower tender and such information shall be confidential.

Assessment of parameter B3 (4) is done as follows:

- (a) In the event the lowest tender was not accepted, if records of minutes of TB meeting clearly specify reasons for rejecting a lower tender, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If, records of minutes of TB meeting specify reasons for rejecting a lower tender but some of the cited reasons have-not been fully substantiated, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If the lowest tender was not accepted, but there are no records of minutes of TB meeting specifying reasons for doing so, or if the specified reasons are not valid, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.5 Notification of intention to award the contract [Regulation 231(2) and 231 (3) of GN. No. 446]

(Sub-parameter B3 (5) of the VfM Instrument)

In compliance with Regulation 231(2) of GN. No. 446, the AO shall within three days of receiving the tender board’s notification of award decision, issue to all tenderers who participated in the tender in question a notice of intention to award the contract giving tenderers fourteen days within which to submit a complaint, if any. Regulation 231(3) however restricts

the AO of a Local Government Authority not to issue such a notice until conditions of section 60(4) of the Act have been fulfilled.

Assessment of parameter B3 (5) is done as follows:

- (a) If a notice of intention to award the contract was properly issued as per regulation 231(2) and regulation 231(3), the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If there were minor errors and / or contradictions in issuing a notice of intention to award the contract (e.g. genuine typographical errors, etc.), the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If no notice of intention to award the contract was issued, or the issued notice did not fully comply with any part of regulation 231, or a lodged complaint was not properly determined as per section 96(6) of the Act, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.6 Publication of awards [Regulations 20 and 234 of GN. No. 446]

(Sub-parameter B3 (6) of the VfM Instrument)

A Procuring Entity should submit to the PPRA for publication in the Journal and Tenders Portal contract award information in respect of any procurement made within fourteen days from the date of award. Further, Regulation 20(3) requires that after completion of contract, the AO of the PE shall, within twenty one days from the date of completion of the contract, provide the PPRA with complete information on contract implementation. Regulation 235(2) of GN. 446 in addition states that PEs shall ensure that copies of acceptance notices, are submitted to the PPRA within fourteen days of sending an acceptance notice to the tenderer.

Assessment of sub-parameter under B3 (6) is done as follows:

- (a) If contract award information and contract completion information (if project is completed), were timely provided to PPRA, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If contract award information or contract completion information (if project is completed), were timely provided to PPRA, but the information so provided contains errors and / or contradictions, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If contract award information or contract completion information (if project is completed), were not timely provided to PPRA, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

3.4.7 Quality and comprehensiveness of the tender evaluation report

(Sub-parameter B3 (7) of the VfM Instrument)

This sub parameter aims at establishing whether tender evaluation report was of good quality and whether they contained relevant and necessary attachments such as copy of tender advert, minutes of tender opening and signed code of ethics. Evaluation report should comply with the

Evaluation Guidelines issued by PPRA. Good quality reports should include, but not limited to the following section:

1. Introduction

- 1.1 Tendering Process
- 1.2 Site Visit and Pre Tender Meeting (where applicable)
- 1.3 Tenders Submission and Opening

2. Preliminary Examination of Tenders

- 2.1 Commercial Responsiveness
- 2.2 Technical Responsiveness
- 2.3 Substantial Responsiveness

3. Detailed Tender Evaluation

- 3.1 Correction of Errors
- 3.2 Evaluated Tender Price for Each Tender
- 3.3 Breakdown of Tender Prices
- 3.4 Assessment of Rates of Major Work Items

4. Post-Qualification (only to the lowest evaluated bidder)

5. Annexes:

[Copy of Tender Adverts; Minutes / Records of Tender Opening; Signed Copies of Covenants of the Evaluation Committee Members; Tender Evaluation Tables (Tables 1 to 12) : Table 1: Identification Form; Table 2: Tendering Process; Table 3: Tender Submission and Opening; Table 4: Tender Prices (as Read Out); Table 5A: Preliminary Examination (Commercial Responsiveness); Table 5B: Preliminary Examination (Technical Responsiveness); Table 6: Corrections and Unconditional Discounts; Table 7: Exchange Rates (where applicable); Table 8: Currency Conversion (Multiple Currencies); Table 9: Currency Conversion (Single Currency); Table 10: Additions, Adjustment and Priced Deviations; Table 11: Domestic/ Preference for Works (where applicable); and Table 13: Proposed Contract Award

It is however brought to the attention of the Auditor that some of the tables may not be applicable. In such a case, it is good practice to include in the evaluation report blank templates of the inapplicable tables with an inscription: “*Table is Not Applicable*”.

Assessment of sub-parameter under B3 (7) is done as follows:

- a) If tender evaluation report contains all the sections and relevant annexes and is free from errors, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If tender evaluation report does not contain all the sections and relevant annexes and contains errors and / or contradictions, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If tender evaluation report is shallow and does not show important features as highlighted above, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

Overall Assessment of Parameter B3

Assessment of Parameter B3 is automatically generated in the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not manually enter the assessment in the locked

yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under B3 are in full compliance, the score is “GOOD”. The VfMI displays a ‘1’ under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is “FAIR”. The VfMI displays a ‘1’ under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is “POOR”. The VfMI displays a ‘1’ under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a ‘1’ under column label 0.

3.5 Competitiveness of rates quoted for major items of construction when compared with prevailing market prices

(Parameter B4 of the VfM Instrument)

This parameter possesses a serious challenge to fill in because the Auditor is expected to have or know the prevailing market rates within the region where the IA is located, which is not always the case. Further, assumption that the Auditor may use engineer’s estimates as basis for comparison is not strictly correct because IAs may not have the capacity to prepare realistic engineer’s estimates and sometimes the engineer’s estimates do not reflect market prices of the inputs.

In order to assist the Auditor, it is important to list here major items in road construction projects. These include Clearing, Grubbing and Removal of Topsoil (in Ha); heavy reshaping (in Km); light reshaping (in Km); grading (in Km); excavation of mitre drains (in m); excavation of catch water drains (in m); Common excavation to spoil (in m³); Rock excavation (in m³); Fill and improved subgrade layers (in m³); Pavement layers of natural Gravel and pavement layers (in m³); Crushed Aggregate Class CRR for base course (in m³); Asphalt concrete surfacing, AC 19 mm, using PEN 40/50 bitumen laid in 40 mm or 50mm compacted thickness (in m³); Double Surface Dressing Using 20/10mm aggregate, 0.015 and 0.009 m³ per m² and PEN 80/100 bitumen 1.9litre per m²(in m²); 600mm Diameter Reinforced concrete culverts (in m); 900mm Diameter Reinforced concrete culverts (in m); 1200mm Diameter Reinforced concrete culverts (in m); Concrete Class 15 (in m³); Concrete Class 25 (in m³); Concrete Class 30 (in m³);

As a general guidance, the Auditor should have an idea on prevailing market rates, and based on that information and interviews with selected contractors who have tendered within the region make a realistic comparison. The challenge posed above however still holds. Another challenge is that rates obtained through competitive tendering can hardly be contractually questioned.

It is therefore assumed the RFB will develop software which will enable consultants to apply in specific regions to establish competitiveness on major items.

Assessment of parameter B4 is done as follows:

- a) If tendered rates compares well with prevailing market rates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If tendered rates are either unrealistically low (more than 50% below the prevailing market rates) or unrealistically high (more than 50% above the prevailing market rates), the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 1.

3.6 Overall competitiveness of the most economic tender when compared with prevailing market prices in both private and public sectors

(Parameter B5 of the VfM Instrument)

This parameter assesses the overall competitiveness of the most economic tender when compared with prevailing market prices in both private and public sectors. It is understood that road construction in private sector are rare and obtaining their costs is difficult. Further, the most economic tender (lowest evaluated tender) is selected based on criteria contained in the tender dossier; hence questioning competitiveness may not be realistic. Defining prevailing market prices is also another challenge. It is however assumed the RFB will develop software which will enable consultants to apply in specific regions to establish competitiveness on major items.

However general cost indications such as cost per Km, or cost per m of structure, or total intervention cost may help him/her to fill in the Instrument. He/she must however be conversant with major contributing factors to overall costs. For example for a bridge, you need to know the main materials that drive the overall costs, taking into account the location, remoteness, complexity and project size.

Assessment of Parameter B5 is done as follows:

- a) If the overall cost compares well with prevailing market cost the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If the overall cost is either unrealistically low (more than 50% below the prevailing market cost) or unrealistically high (more than 50% above the prevailing market cost) the score is "POOR". The Auditor should enter a '1' under column label 1;
- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 1.

3.7 Capacity and competence of the selected contractor in relation to project size and complexity

(Parameter B6 of the VfM Instrument)

The Auditor should assess if the contractor still possess qualification criteria evaluated during evaluation tenders. Emphasis should be on the personnel, equipment and financial soundness (line of credit/credit facilities) as described in the contract.

Assessment of Parameter B6 is done as follows:

- a) If the capacity of the works contractor matches with class limits for the contract price, and the contractor has demonstrated in his tender submission that he has the competence to execute the contract, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If the capacity of the works contractor is lower than the class limit of the contract price, the score is "POOR". The Auditor should enter a '1' under column label 1;
- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 1.

3.8 Computation of Score under Procurement Indicator

The contribution to the overall score of Procurement Indicator is 10%. The maximum score assigned to “GOOD” performance is 3 points; 2.5 to “FAIR” performance; 0 to “POOR” Performance. In cases where Information is not available (INA), the score is also zero.

The score under Procurement stage is computed as follows:

$$S_p = \sum \frac{G}{T} * 3 + \frac{F}{T} * 2.5 + \frac{P}{T} * 0 + \frac{INA}{T} * 0$$

Where

S_p	=	Performance Score under Procurement Indicator;
G	=	Total count under “Good” column;
F	=	Total count under “Fair” column;
P	=	Total count under “Poor” column; and
INA	=	Total count under “INA” column.

NOTE:

Parameters and sub parameters which are not applicable will not contribute to the aggregation of the final score

3.9 Conclusion and Auditor’s Opinion on Procurement Indicator

The VFMI requires the Auditor to give an opinion not only on the overall project performance, but also under each audit indicator. The VFMI automatically displays one of the three possible conclusions as elaborated below.

- If the score is greater than 2.5 (score >2.5 but ≤ 3.0), the VfMI automatically displays a phrase “**GOOD**”. It means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor’s opinion will be “*Procurement Stage was done in a cost-effective manner and therefore VFM was realized under this stage*”;
- If the score is between 1.7 and 2.5 inclusive (1.7 ≤ score ≤ 2.5), the VfMI automatically displays a phrase “**ADEQUATE**”. It means that Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. The Auditor’s opinion will be “*Procurement Stage was done in a cost-effective manner but major improvements could be made to realize VFM under this stage*”;
- If the score is below 1.7 (score <1.7), the VFMI under “Comments” column automatically reads “**INADEQUATE**”. It means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor’s opinion will be: “*Procurement Stage was not done in a cost-effective manner and therefore VFM was not realized under this stage*”.

The VfMI automatically formats the phrase “**INADEQUATE**” in ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain black. The red colour alerts the reader that performance for the particular indicator leaves a lot to be desired and needs particular attention.

NOTE:

While “**GOOD**”, “**FAIR**” and “**POOR**” are used in assigning scores in the VfMI, Auditor’s opinion should be expressed as “**GOOD**”, “**ADEQUATE**”, or “**INADEQUATE**” performance

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CHAPTER 4

CONSTRUCTION STAGE

1. What does this VfM indicator aim to examine and establish?
2. Which documents must be requested from the Implementing Agency / Roads Fund Board and reviewed by the Auditor under this indicator in order to fill in the VfM Instrument under planning stage?
3. How does the Auditor arrive at conclusion and opinion?

4.1 Relevant Documents

It is brought to the attention of the Auditor that most of the documents overlap but under this VfM indicator, the Auditor must review the following documents:

- Contract Documents (Form of Agreement, Letter of Acceptance, Contractor's Tender, SCC, GCC, General Specifications, Special Specifications, Drawings, BOQ, pre-contract negotiations)
- Power of Attorney
- Advance Payment Guarantees (where applicable)
- Performance Guarantees (where applicable)
- Insurance Covers (where applicable)
- Contract and Updated / Revised Programmes of Work
- Progress Reports
- Payment Records / Certificates
- Site instructions
- Variation Orders (VO's)
- Approval of variation orders
- Quality Control Regime (Test results and checking their consistencies)
- Minutes of Site and management Meetings
- Project (Correspondence) Files
- List of Claims
- Determination of claims
- Approval of claims
- Certificates (interim payment certificate, take-over certificate (substantial completion certificate and final completion certificate)
- Final account (contract closure, return of securities, return of retention monies)
- Previous Audit Reports

4.2 Timeliness of Site Possession

(Parameter C1 of the VfM Instrument)

In order to assign a score under this parameter, the Auditor should establish from the contract documents and project file when was site possession contractually due, whether was the contractor given access to site as per the contract and whether there were no obstructions within construction corridor. The Auditor should physically verify this during site inspection.

Assessment of Parameter C1 is done as follows:

- a) If the contractor was given full access to site as per the provisions in the contract documents and relevant correspondence, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the contractor was given access to only part of the site while he was supposed to be given full access, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the contractor was not given full access to site until the IA becomes liable (time extension with or without cost) as per the provisions of the contract, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.3 Quality of Project Programme (Schedule of Work)

(Parameter C2 of the VfM Instrument)

This parameter assesses whether the Programme of Work included in the contract as the time of signing, referred hereto, as “Contract Programme” and Updated Programme(s) of Work to be submitted in the course of execution of the contract were, or are of satisfactory quality. A good quality programme should be complete showing all activities; detailed enough to show breakdown of sub activities under each major activities; and achievable i.e. it must be realistic using the available resources contained in the contractor’s tender and updated from time to time in accordance with the provisions of the contract.

Assessment of Parameter C2 is done as follows:

- a) If the Programme of Work (Schedule of Work) is detailed, complete and achievable and submitted in accordance with the terms and conditions governing the contract, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the Programme of Work (Schedule of Work) does not show all sub activities or incomplete and not achievable, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the Programme of Work (Schedule of Work) is not realistic or is missing, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1. The score is also poor if the schedule of work is not feasible i.e. it does not include details of activities and milestones;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.4 Adherence to Project Programme

(Parameter C3 of the VfM Instrument)

The Auditor should answer, under this parameter, whether the “Approved” Programme of Work is, or was adhered to. The “Approved” is introduced here to include also contractually justified and substantiated extension of time.

Assessment of Parameter C3 is done as follows:

- a) If the approved Programme of Work/Updated Programme (Schedule of Work) was, or is being adhered to, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the Programme of Work/Updated Programme (Schedule of Work) was, or is, not adhered to for activities which are not in the critical path, i.e. their delays do not affect the completion date, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the Programme of Work/Updated Programme (Schedule of Work) was or is not adhered to on critical activities (massive slipped of work schedule), the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.5 Quality of Contractor's Site Organization and Staff

(Parameter C4 of the VfM Instrument)

The Auditor should assess this parameter basing on contractor’s submission as per requirements of the bidding documents. Of the contractor’s submission which made the contractor to be awarded the contract include site organisation (organisation chart) and key staff. The contractor’s tender includes also names, qualifications and experience of key staff; hence the Auditor should examine whether the staff of the contractor were those contained in his tender, or if replacement had been made, the replacement should have similar or superior qualifications and experience. It is also a requirement that the replacement should obtain employer’s written approval.

Assessment of Parameter C4 is done as follows:

- a) If the contractor’s site organisation and staff comply fully with contractor’s submission or replacement complied with the requirements of the contract including approval by the Employer, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the contractor’s site organisation and staff comply partially with contractor’s submission or replacement complied partially with the requirements of the contract including approval by the Employer, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the contractor’s site organisation and staff do not comply fully with contractor’s submission or replacement did not comply with the requirements of the contract including approval by the Employer, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.6 Quality of Supervising Engineer's Site Staff

(Parameter C5 of the VfM Instrument)

In order to fill in this parameter, the Auditor should answer whether the Supervising Engineer or Technician from the Employer have the adequate academic qualifications and experience to supervise the project of the size, complexity and magnitude. It is also important to establish whether he/she was or is full time on the project, and at site.

Assessment of Parameter C5 is done as follows:

- a) If the supervising site staff is led by a registered as a professional engineer the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the supervising site staff is led by a graduate engineer (not registered as a professional engineer), the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the supervising site staff is led by neither a graduate engineer nor a Technician with at least years’ experience, the score is “POOR”. The Auditor should enter a ‘1’ under column label 0;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.7 Quality of Quality Assurance Programme

(Parameter C6 of the Vfm Instrument)

In order to ensure compliance on quality of work done and materials used, contracts specify, under General and Special specifications, requirements to be met. The specifications will specify the type of tests to be performed to ascertain the works done have attained the required quality. The Auditor should therefore assess whether specifications were adequate i.e. whether they are detailed enough to measure and ensure quality compliance in terms of checks and balances, instruments and laboratory have been established to ensure compliance as per provision of the contract. There should be a clear approving mechanism of inspecting, rejecting and accepting the works done. It is worth to note that contractor has primary responsibility of ensuring the works complied with specifications and standards specified in the contract. The Auditor is expected to be conversant with the Standard Specification for Road Works – 2000 issued with the Ministry of Works.

Assessment of Parameter C6 is done as follows:

- a) If the specifications clearly and adequately spell out requirements to be met on quality aspects, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the specifications are not detailed and ambiguous, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the specifications are irrelevant or missing, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.8 Adherence to Quality Assurance Programme

(Parameter C7 of the VfM Instrument)

This assesses whether the quality assurance programme stipulated under section 4.7 above is/was adhered to.

Assessment of Parameter C7 is done as follows:

- a) If all tests on work done and materials were carried out and the results are realistic (the test results reflect actual site conditions) and the number and types of tests complied with the provisions in the contract, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If tests on work done and materials were carried out but the test results not realistic (the test results do not reflect actual site conditions) and the number and types of tests do not, or did not comply with the provisions in the contract, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If no tests are or were or irrelevant tests, carried out the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.9 Quality of Environmental Management Plan (EMP)

(Parameter C8 of the VfM Instrument)

The attention of the Auditor is drawn to the fact that interventions of maintenance nature do not warrant for a rigorous EMP. However, some or all of the following short term impacts need to be examined: destruction of vegetation; water pollution; reduced air quality due to dust emission; vibrations due to compactions; noise (from construction vehicles and plants); disturbance on the cultural heritage; waste generation; accidental spills/contamination; poor sanitation; occupational hazards/ accidents; and loss of land.

In addition, the following direct impacts and long-term negative impacts need to be audited where applicable: landscape deterioration; littering of wastes; soil erosion and sediment transport; noise; vibration and deterioration of air quality due to increased traffic volume; accidents due to traffic volume and speed increase; and induced development of business activities along the improved road or bridge.

This parameter tries to establish whether adequate plan was spelled out in the contract documents to mitigate both short-term and long-term negative impacts.

Assessment of Parameter C8 is done as follows:

- a) If the contract documents spelled out correct and complete EMP, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the contract documents spelled out the EMP but minor details are missing, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the contract documents do not, or did not contain the EMP, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

- d) If the information is not available the Auditor should enter a '1' under column label 0.

4.10 Management of Contractual Documents

(Parameter C9 of the VfM Instrument)

The Auditor should identify types of contractual documents stipulated in the contract document. These may include advance payment guarantee, insurance cover, and performance security. The Auditor should examine whether these contractual documents were correctly worded, provided by the contractor in compliance with the terms and conditions of contract (timely submission & correct amount), and whether their validity periods is in compliance with the contract or updated as appropriate. In addition, the Auditor should assess whether securities were returned once contract was completed.

Assessment of Parameter C9 is done as follows:

- a) If the contractual documents were provided in full compliance with the terms and conditions of contract, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If the contractual documents were provided but were not in full compliance with the terms and conditions of contract, the score is "FAIR". The Auditor should enter a '1' under column label 2;
- c) If the contractual documents were not provided, the score is "POOR". The Auditor should enter a '1' under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.11 Quality and Management of Project Documentation

(Parameter C10 of the VfM Instrument)

This parameter examines whether the correspondences in the project file are complete and sequentially filed from planning, design through tendering and contract implementation to project completion and closure.

4.11.1 General Correspondence

(Sub-parameter C10 (1) of the VfM Instrument)

Assessment of sub-parameter C10 (1) is done as follows:

- (a) If correspondences in the project file are complete and sequentially filed for all project stages, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- (b) If, correspondences in the project file are not complete or are sequentially disorganised, the score is "POOR". The Auditor should enter a '1' under column label 1;
- (c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.11.2 Site Instructions

(Sub-parameter C10 (2) of the VfM Instrument)

All forms of contracts require the Contractor to carry out all instructions issued by the Project Manager (PM) which comply with the applicable laws where the site is located. Instructions should, as a rule, be given in writing. If given orally, it should be confirmed in writing as soonest as possible. An instruction should include site instruction number, subject of instruction, its implications on time and cost, date and signature of the PM. Furthermore, it should clearly indicate that is an instruction and not a variation order.

Assessment of sub-parameter C10 (2) is done as follows:

- (a) If all Instructions were properly issued and contained the necessary attributes, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If all Instructions were properly issued but a few contain minor errors, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If, an instruction was not properly issued, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.3 Minutes of Site Meetings

(Sub-parameter C10 (3) of the VfM Instrument)

Most forms of contracts stipulate that site meetings should be held at a regular interval. The Auditor should take note and cite a clause of contract which specifies site meetings and at what interval. Having established that he/she should then request for all minutes of site meetings held. Minutes of site meetings must be dated, properly recorded showing persons who attended the meeting, agenda, issues discussed and agreed. Minutes should always be properly signed by the parties.

Assessment of sub-parameter C10 (3) is done as follows:

- (a) If site meetings were held at a regular interval and minutes properly taken and signed by parties, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If a few site meetings were skipped for no proper reason, or some few minutes have errors or a few are not signed by parties, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If site meetings were rarely held or minutes were generally not properly taken or minutes were not signed by parties, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.4 Progress Reports

(Sub-parameter C10 (4) of the VfM Instrument)

Progress reports should normally be prepared monthly depending on the size, complexity and contract period of the project. In addition, RFB Annual Performance Agreements (PAs) specify that Implementing Agencies (IAs) must submit consolidated quarterly and annual performance

reports. The Auditor should therefore assess whether contractual requirements and the requirements of the PAs were complied with in terms of completeness and adequacy of the reports, timely submission of the same and whether the reports reflect actual site situations.

Assessment of sub-parameter C10 (4) is done as follows:

- (a) If monthly/ quarterly progress reports contain the necessary information and are being submitted in time, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If progress reports are submitted in time but contain errors, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If progress reports are incomplete or are not submitted in time, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.5 Works Measurement and Inspection Records

(Sub-parameter C10 (5) of the VfM Instrument)

It is important here to note that prior to effecting payments the Project Manager (PM) together with the contractor should jointly measure the works done and agree on the completed and works to be certified for payments. The measurement sheet and inspection records must be signed by the contractor and countersigned by the PM or his authorized representative. Measurement sheets should also show BOQ item and output of the measured items.

Assessment of sub-parameter C10 (5) is done as follows:

- (a) If measurement sheets are properly prepared and signed, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If measurement sheets have minor errors the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If measurement sheets are not properly prepared and signed, or have serious mistakes, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.6 Material Testing Records

(Sub-parameter C10 (6) of the VfM Instrument)

This sub parameter assesses adequacy and correctness of test records carried out by the IA on materials incorporated in the works i.e. subgrade, fill materials, gravel, aggregates, re-bars, and they should not be confused with parameters E4 and E5 of the VfMI, which deal with tests results obtained by the Auditor. The Auditor should assess correctness, completeness and consistency of material testing records both at documentation and actual site conditions levels. The materials test results should be kept in the respective project files.

Assessment of sub-parameter C10 (6) is done as follows:

- (a) If materials test records carried out by IA are correct and adequate, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;

- (b) If materials test records are fewer than required or have some minor errors, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If there are no materials test records contrary to contract specifications, or such records are largely inadequate or incorrect, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.7 Interim and Final Payment Certificates

(Sub-parameter C10 (7) of the VfM Instrument)

This sub parameter examines whether Interim and Final payment Certificates (where applicable) are paid as per the terms and conditions. In addition, the Auditor should establish compliance with the provisions in the contract. These may include requirement to submit advance payment guarantees, recovery of advance payment, minimum amount for each IPC (if specified in the SCC), proper retention amount, release of 50% of retention upon substantial completion, relevant attachments such as measurement sheets and test results (where relevant), etc.

Assessment of sub-parameter C10 (7) is done as follows:

- (a) If Interim and Final payment Certificates are paid as per the terms and conditions of contract, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If all terms and conditions of contract were observed in effecting Interim and Final payment Certificates but a few measurement sheets were not attached, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If any terms and conditions of contract was overlooked in effecting Interim and Final payment Certificates or measurement sheets were largely not attached, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- (d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

4.11.8 Variation Orders (VOs)

(Sub-parameter C10 (8) of the VfM Instrument)

As a rule variation orders should be evaluated based strictly on the provisions of contract. All VOs must be numbered, dated, show background of the VO, its time and cost implications and should be signed by all parties. All variation orders must get approval of the Tender Board prior to issuing to the contractor.

Assessment of sub-parameter C10 (8) is done as follows:

- (a) If variation orders were properly prepared and observed all the required provisions of contract and approvals, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If variation orders observed all the required provisions of contract and approvals but contained errors and/ or contradictions, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If a variation order did not observe any of the required provisions of contract or was issued without approval of TB, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

- (d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.11.9 Management of Claims

(Sub-parameter C10 (9) of the VfM Instrument)

It is brought to the attention of the Auditor that a claim is a request from the contractor to the Project Manager for extra payment or for extension of time or both for events, which the contractor thinks he is entitled either compensation events or variations. PM has the responsibility of assessing merits of claims and make determination in accordance with the terms and conditions of the contract. A variation is an instruction given by the PM, which changes the works from that envisaged in the drawings, specification, Bill of Quantities and other contract documents.

Claims generally fall into two categories namely, cost and delay (time) claims. The majority of cost claims fall into the following three broad groups: (i) the Contractor has encountered conditions or obstructions that could not have reasonably been foreseen at the time of tender; (ii) extra or changed works have been paid by too low unit rates fixed by the Project Manager (PM); and (iii) there have been delays and disruptions to work operations for reasons beyond the control of the Contractor.

On the other hand, time claims and disruptions to the contractor's operations are in principle admissible if the site has not been made available on time; drawings have been issued too late; the progress of the works has been formally suspended by the PM; there have been errors and discrepancies in the contract documents; the survey points handed over to the contractor have been in error; and the Contractor has been ordered to make excavations to uncover and test work which subsequently proved to be in order. To qualify for payments however the contractor has to prove that it was not possible for him to utilize idle equipment and labourers by moving the team in question to alternative work site. This is important, as it is the obligation of the Contractor to make all possible efforts to minimize the effects of any obstruction to his work. In addition, it is the contractor's duty to document and substantiate all his claimed expenses.

As a rule, claims are dealt with in accordance with provisions in the contract and it is important that procedures are adhered to and deadlines complied with. Claims must be settled as soon as possible after receipt of substantiated and fully documented submission from the Contractor.

In evaluating a claim, the contractor's submission is subjected to the following procedure; establishing the basis of the Contractor's claim [The Contractor is required to state the Clause on which he has based his claim. The Claim is rejected outright if it is not supported by a contract clause]; Adherence to procedure stipulated in the Contract [The Contractor must have given a notice of intention to claim within the time limit stipulated in the contract. If notice has not been given and evidence shows that the Employer would have avoided the cause of the claim, the claim should be rejected]; Verification of costs claimed [As far as possible, the costs claimed should be on the basis of data contained in the contract].

A valid claim is rejected if timely notice was not given; the claim is contractually late; contract procedures were not followed; proper records were not kept; the claim does not establish any valid entitlement under the contract; and inadequate information is available or provided to verify the claim or support its quantification.

For a contractually acceptable claim, the PM prepares his/her recommendations for settling the claim. The recommendations generally include brief description of the event; Dates for the event; references to correspondences from the Contractor and the PM; Reference to relevant

contractual clauses; the PM's assessment; the cost and time consequences; and PM's recommendations.

Assessment of sub-parameter C10 (9) is done as follows:

- (a) If claims were properly dealt with in accordance with provisions of the contract, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- (b) If any provision of the contract was not observed in dealing with a claim, the score is "POOR". The Auditor should enter a '1' under column label 1;
- (c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

Overall Assessment of Parameter C10

Assessment of Parameter C10 is automatically generated in the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not manually enter the assessment in the locked yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under C10 are in full compliance, the score is "GOOD". The VfMI displays a '1' under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is "FAIR". The VfMI displays a '1' under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is "POOR". The VfMI displays a '1' under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a '1' under column label 0.

4.12 Assessment of Variations

(Parameter C11 of the VfM Instrument)

Assessment of Parameter C11 is done as follows:

- a) If variations were managed in full in compliance with the terms and conditions of contract the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If variations were not managed in compliance with the terms and conditions of contract the score is "POOR". The Auditor should enter a '1' under column label 1;
- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.13 Assessment (including validity) of claims and related cost overruns

(Parameter C12 of the VfM Instrument)

Assessment of Parameter C12 is done as follows:

- a) If cost claims were managed in full in compliance with the terms and conditions of contract and obtained all mandatory approvals the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If cost claims were not managed in compliance with the terms and conditions of contract the score is "POOR". The Auditor should enter a '1' under column label 1;

- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.14 Assessment (including validity) of project delays and extensions of time

(Parameter C13 of the VfM Instrument)

Assessment of Parameter C13 is done as follows:

- a) If extensions of time granted were contractually justified and procedures stipulated in the contract fully followed / adhered to the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If extensions of time granted were not contractually justified and procedures stipulated in the contract fully followed / adhered to not followed / adhered to the score is "POOR". The Auditor should enter a '1' under column label 1;
- c) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

4.15 Computation of Score under Construction Indicator

The score under Construction stage is computed as follows:

$$S_c = \sum \frac{G}{T} * 3 + \frac{F}{T} * 2.5 + \frac{P}{T} * 0 + \frac{INA}{T} * 0$$

Where:

S_c	=	Performance Score under Construction Indicator;
G	=	Total count under "Good" column;
T	=	Total count
F	=	Total count under "Fair" column;
P	=	Total count under "Poor" column; and
INA	=	Total count under "INA" column.

NOTE:

Parameters and sub parameters which are not applicable will not contribute to the aggregation of the final score

4.16 Conclusion and Auditor's Opinion on Construction Indicator

The VfMI requires the Auditor to give an opinion not only on the overall project performance, but also under each audit indicator. The VfMI automatically displays one of the three possible conclusions as elaborated below.

- If the score is greater than 2.5 (score >2.5 but ≤ 3.0), the VfMI automatically displays a phrase "GOOD". It means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor's opinion will be: "Construction stage was done in a cost-effective manner and therefore VFM was realized under this stage";

- If the score is between 1.7 and 2.5 inclusive ($1.7 \leq \text{score} \leq 2.5$), the VfMI automatically displays a phrase “**ADEQUATE**”. It means that Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. The Auditor’s opinion will be: “*Construction stage was done in a cost-effective manner but major improvements could be made to realize VFM under this stage*”;
- If the score is below 1.7 (score <1.7), the VfMI under “Comments” column automatically reads “**INADEQUATE**”. It means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor’s opinion will be: “*Construction stage was not done in a cost-effective manner and therefore VFM was not realized under this stage*”.

The VfMI automatically formats the phrase “**INADEQUATE**” in ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain black. The red colour alerts the reader that performance for the particular indicator leaves a lot to be desired and needs particular attention.

NOTE:

While “**GOOD**”, “**FAIR**” and “**POOR**” are used in assigning scores in the VfMI, Auditor’s opinion should be expressed as “**GOOD**”, “**ADEQUATE**”, or “**INADEQUATE**” performance

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CHAPTER 5

PROJECT COMPLETION AND CLOSURE STAGE

1. What does this VfM indicator aim to examine and establish?
2. Which documents must be requested from the Implementing Agency / Roads Fund Board and reviewed by the Auditor under this indicator in order to fill in the VfM Instrument under planning stage?
3. How does the Auditor arrive at conclusion and opinion?

It is brought to the attention of the Auditor that the is VfMI can only give aggregated project score to physically completed projects and administratively closed contracts. For ongoing projects, the Auditor cannot give any conclusion on the overall project. The auditor's opinion on this indicator should therefore be excluded for ongoing projects.

5.1 Relevant Documents

In order to assess this indicator, the Auditor should review, but not limited to, the following documents:

- Contract Documents
- Project File
- Original Contract Drawings
- All Interim Payment Certificates
- Substantial Completion Report
- Snag list
- Substantial Completion Certificate
- Final Account
- Defects Liability Management Reports or Inspection Records
- As-built Drawings
- Final Completion Report
- Final Payment Certificate

5.2 Quality and Completeness of As-built-drawings

(Parameter D1 of the VfM Instrument)

Contracts for major interventions such as PM, major bridges construction and rehabilitation require the contractor to prepare and submit As-built drawings. The Auditor should therefore establish whether preparation of the As-built drawings was a requirement in the contract, when were they to be submitted and if there was any penalty for delayed submission or non-submission of the same. The Auditor should also establish whether the As-built drawings submitted are complete, correct and of good quality. For projects where As-built was not (or is not) a requirement, the Auditor should not assign any score under but write on the "Comments" column "N/A" to mean that this requirement is not applicable.

Assessment of Parameter D1 is done as follows:

- a) If As-built drawings are complete, correct and of good quality and were prepared as per the terms and conditions of contract the score is "GOOD". The Auditor should enter a '1' under column label 3;

- b) If As-built drawings prepared as per the terms and conditions of contract but are incomplete, incorrect and their quality unsatisfactory the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If As-built drawings were prepared the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

5.3 Compilation and Management of Snag List

(Parameter D2 of the VFM Instrument)

Most forms of contracts describe how project completion from when substantial completion is declared to when the defects liability period expires and final (or practical) certificate of completion is issued. Upon declaring a project substantially completed, a substantial completion certificate is issued and snag list attached to it. It is important to pose here and define substantial completion, snag list and defects liability period.

Substantial Completion or Practical Completion is when the Employer takes possession of a part of the substantial completed works before final completion of the whole of the works. Normally, at this stage jointly inspection done between the Employer and Contractor whereby Snag List of uncompleted minor works or defects is prepared which are to be completed during Defects Liability Period (Defects Notification Period). As a matter of principle, 50% of the retention money is released and the remaining balance released when issuing Final Completion Certificate. This act as a safeguard to the Employer that the Contractor will correct the defects otherwise the retained money is used.

Snag List is a list of minor uncompleted works or defects which is prepared following jointly inspection done between the Employer and Contractor which are to be completed or corrected during Defects Liability Period.

Defects Liability Period is the period indicated in the Special Condition of Contract and is calculated from the Practical (Substantial) Completion Certificate (taking-over certificate) to Final Completion Certificate (Performance Certificate). During this period the Contractor has an obligation to make good any inadequacies and shortcomings in the materials and workmanship covered by the contract. All activities listed in the Snag List are corrected during this period.

It is brought to the attention of the Auditor that the above definitions and their applicability depend on the Forms of Contract governing the contract under audit. Therefore, the Auditor is advised to read and be conversant with terms and conditions governing the contract.

Assessment of Parameter D2 is done as follows:

- a) If substantial completion certificate was issued as per the As-built drawings are complete, correct and of good quality and were prepared as per the terms and conditions of contract the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If As-built drawings prepared as per the terms and conditions of contract but are incomplete, incorrect and their quality unsatisfactory the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If As-built drawings were prepared the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

- d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

As a rule therefore, the Auditor should establish whether procedures and timing stated in the contracts were followed.

5.4 Substantial Completion Certificate, Final Certificate and Settlement of Final Account

(Parameter D3 of the VfM Instrument)

These three aspects normally follow a sequential order. Firstly, a Substantial Completion Certificate is issued when works are substantially completed save for the minor outstanding works and defects which will not substantially affect the use of the works for the intended purpose. The Auditor should be aware of the provisions of contract in relation to this i.e. Contractors should submit request for inspection and application that the works are substantially completed and ready for acceptance which should be followed by jointly inspection and then issuance of certificate if work is accepted. At this stage, 50% of retention money is released. The date of declaration substantial completion is the start of defects liability period.

Secondly, the Final Certificate is issued after the Defects Liability Period and final inspection has been conducted and ascertain that all defects and outstanding works have been completed as per contract and parties to the contract discharged from the contractual obligation without violating accrued rights and obligations in the contract. 50% of the remaining retained money is then released. Lastly, the Contractor should submit the final account represents full and final settlement of all monies due to the contractor under or in connection with the contract. The PM/Engineer has the responsibility under the contract to review and certify amount which fully due to the contractor and balance due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

It is brought in the attention of the Auditor, the assessment and interpretation should be done within the framework of existing contract and what has been provided here is general framework.

Best practice is that if the Employer delays to convene final inspection meeting, and when it is finally done, the works are found to be complete (in other words, works are declared substantial completed), substantial completion date is pegged on the date when the contractor submitted his request. If the works are found incomplete, i.e. they are not accepted as substantially complete, the substantial completion will not be declared until another inspection is done. The forms of contracts issued by PPRA, which are relevant here, state as follows:

“The Contractor shall request the Project Manager (PM) to issue a Certificate of Completion of the Works, and the PM shall do so upon deciding that the whole of the Works is completed.”

The Employer shall take over the Site and the Works within seven days of the PM's issuing a certificate of Completion.”

Furthermore, the Standard form of contract issued by PPRA stipulate that the Contractor shall supply the PM with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The PM shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the PM shall issue within 56 days a schedule that states the scope of the corrections or additions that are

necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate

Assessment of Parameter D3 is done as follows:

- a) If substantial completion & Final certificates and settlement of final account were managed in full compliance with the terms and conditions of contract the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If substantial completion & Final certificates were issued but not as per the terms and conditions of contract, and settlement of final account was not in full compliance with the same the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If substantial completion & Final certificates and settlement of final account had not been prepared or issued the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

5.5 Management of Defects Liability Period

(Parameter D4 of the VFM Instrument)

As explained in Sections 5.3 and 5.4 above, during this period contractor has contractual responsibility to rectify defects and complete minor outstanding works listed in the Snag list. If the contractor does not rectify the defects, the Employer has the contractual right to utilize 50% of retained monies to correct the defects or to complete minor outstanding works. The Auditor should (i) check whether the inspection was conducted and Snag list was prepared prior to issuing the Substantial Completion Certificate; (ii) check whether the contractor complied with contractual obligation defects in the Snag List prior to issuing the Final Completion Certificate; (iii) check if the contractor fulfilled his contractual obligation or not, in case not, what remedy measures were taken by the Employer as per provision of the contract; and (iv) check and be certain that the 50% of remaining retained monies was released after final inspection and acceptance of all corrected defects and pending minor works.

The Auditor should also note that Defects Liability Periods will only arise if they are included in the contract. In this case Contractors do not have the automatic obligation to return to the site to fix any defects. Employers should give careful consideration to the wording and requirements of defects rectification provisions where they are considering hiring another contractor to fix the original contractor's mistakes. In assessing this, the bottom line is the Form of Contract used in the contract under audit. It is expected that Special Conditions of Contract must have specified the defects liability period. The Auditor should therefore establish whether this period was adhered to before Employer' taking over the site and the works. It is also brought to the attention of the Auditor that the Contractor must be instructed to correct defects in the snag list and defects or failure which have developed during defects period which are due to poor workmanship caused by the Contractor.

Assessment of Parameter D4 is done as follows:

- a) If all defects in the snag list and defects or failure developed during defects period which are due to poor workmanship caused by the Contractor were adequately attended to before expiry of the defects liability period the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;

- b) If defects in the snag list and defects or failure developed during defects period which are due to poor workmanship caused by the Contractor were partially attended to the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If defects in the snag list and defects or failure developed during defects period which are due to poor workmanship caused by the Contractor were not attended to the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

NOTE:

Management of defects liability period may not be applicable for maintenance works. However, as a matter of principle, the Auditor should be guided by the provisions of the respective contracts.

5.6 Quality and Adequacy of Final Project Report

(Parameter D5 of the VfM Instrument)

It is brought to attention of the Auditor that, the Final Project Report is not a contractual issue but rather this report is required to be prepared by the PM (in-house or consultant engaged by IA) stipulate how the project was managed. For this report to be adequate and of acceptance quality should contain at minimum; summary of difficulties/problems encountered and how they were overcome/solved; changes and modifications to the original design, specifications and conditions of contract (with reasons); all Variation Orders; all submitted claims and their assessment; site meetings, uses of provisional and contingency sums; details of all payments to the contractor and consultant, all tests performed; site instructions issued and as built drawings.

The Auditor should assess whether this was prepared or not irrespective who was the PM (in-house or consultant) and it contain relevant information. IA has the responsibility of ensuring that these reports are prepared in timely manner.

Assessment of Parameter D5 is done as follows:

- a) If adequate (complete and of good quality) Final Project Report was prepared the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the Final Project Report was prepared but does not contain important and relevant information the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the Final Project Report was not prepared the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

5.7 Final Quantities Versus As-built-drawings

(Parameter D6 of the VfM Instrument)

In assessing this sub-indicator, the Auditor should compare the final quantities on major items Vs as built drawings on major items only. Where it is impractical to compare the two or as built drawings are missing, the Auditor should compare final quantities in the Final Completion Certificates and jointly measurement taken at site (sign-off by the Auditor and Employer’s

representative). The Auditor should use other available information such as variation orders and site instructions to check compliance of final quantities paid for with those reflected in actual investment (jointly measurement). The physical measurement at site should be jointly between the Auditor and IA's representative. In order to avoid cumbersome quantities take-off, it is advisable that the Auditor should select only major items and on a random basis because the intention is to establish whether what is shown on the As-built drawings reflect relatively accurate quantities contained in the final accounts.

Assessment of Parameter D6 is done as follows:

- a) If quantities from As-built drawings prepared are relatively accurate in comparison with final quantities contained in the final account (or final payment certificate) the score is "GOOD". The Auditor should enter a '1' under column label 3;
- b) If quantities from As-built drawings prepared have minor discrepancies when compared to final quantities contained in the final account (or final payment certificate) the score is "FAIR". The Auditor should enter a '1' under column label 2;
- c) If quantities from As-built drawings prepared are inconsistent with final quantities contained in the final account (or final payment certificate) the score is "POOR". The Auditor should enter a '1' under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a '1' under column label 0.

NOTE:

As-built drawings are normally not relevant for maintenance works; hence the Auditor should write "Not Applicable". However, as a matter of principle, the Auditor should be guided by the provisions in the respective contracts.

5.8 Final Project Cost Versus Accepted Tender Price

(Parameter D7 of the VFM Instrument)

In this sub-indicator, the Auditor must assess, first, if there is any difference between the final project cost and original contract price; second, what were the causes and technical justification of the difference and finally, whether proper channels of approvals were followed during contract management. The Auditor should be aware that phrase tender price refers to the original contract price. The causes of difference could be variation orders issued (negative or positive) during execution of the contract, increase or decrease of quantities and price adjustment made in the contract. All these three aspects have provision in the contract of how they should be dealt with.

It is brought to the attention of the Auditor that for the case of variation orders, besides complying with provisions of the contract, the Project Manager is also required to abide with the PPA and its Regulations in terms of approval. The Auditor should go as far as analysing whether variation orders were justifiable or not. The increase or decrease of quantities, these two aspects have provisions in the contract on how they should be handled. As for price adjustment, the Auditor should be aware that it is applicable only to fluctuating type of contracts. Fixed price type of contracts are not subject to any price adjustments. Fluctuating contracts on the other hand allow for price adjustments based on increases or decreases in the prices of project inputs such as labour, materials and equipment. The bottom line, in assessing this sub-indicator, the Auditor must be conversant with the Form of Contract governed the contract.

Assessment of Parameter D7 is done as follows:

- a) If substantial completion certificate was issued as per the As-built drawings are complete, correct and of good quality and were prepared as per the terms and conditions of contract the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If As-built drawings prepared as per the terms and conditions of contract but are incomplete, incorrect and their quality unsatisfactory the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If As-built drawings were prepared the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

5.9 Actual Project Completion Time Versus Original Contract Period

(Parameter D8 of the VFM Instrument)

In assessing this indicator, the Auditor need first to understand the project completion time or duration of contract as stipulated in the contract in relation to the contract commencement date. The difference between actual project completion time and original contract period is major factor while assessing compliance. If the difference is positive and there was no extension granted, then, this would imply project was completed in time or before time. In case there were delays in the execution of project it would imply that extension of time was granted as a result of excusable compensatory delays or liquidated damages were deducted as a result of non-excusable delays. If the delays were non-excusable and no action was taken by IA, it would imply that there was no sound contract management and the Auditor should investigate non-enforcement by IA. The reason for non-compliance with actual project completion should be documented.

Assessment of Parameter D8 is done as follows:

- a) If the project was completed with the original period or within the contractually revised contract period the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If the project was completed within the revised contract period but the extension of time was not contractually justifiable the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If the project was not completed within the original contract period or contractually revised contract period the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available the score is “POOR”. The Auditor should enter a ‘1’ under column label 0.

5.10 Computation of Score under Project Completion and Closure Indicator

The contribution to the overall score of Project Completion and Closure Indicator is **10%**. The maximum score assigned to “GOOD” performance is 3 points; 2.5 to “FAIR” performance; 0 to “POOR” Performance. In case where the Information is not available (INA), the score is also zero.

The score under Project Completion and Closure stage is computed as follows:

$$S_{pcc} = \sum \frac{G}{T} * 3 + \frac{F}{T} * 2.5 + \frac{P}{T} * 0 + \frac{INA}{T} * 0$$

Where:

S_{pcc}	=	Performance Score under Project Completion and Closure Indicator;
G	=	Total count under “Good” column;
T	=	Total count
F	=	Total count under “Fair” column;
P	=	Total count under “Poor” column; and
INA	=	Total count under “INA” column.

NOTE:

Parameters which are not applicable will not contribute to the aggregation of the final score

5.11 Conclusion and Auditor’s Opinion on Project Completion and Closure Indicator

The VfMI requires the Auditor to give an opinion not only on the overall project performance, but also under each audit indicator. The VfMI automatically displays one of the three possible conclusions as elaborated below.

- If the score is greater than 2.5 (score >2.5 but ≤ 3.0), the VfMI automatically displays a phrase “**GOOD**”. It means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor’s opinion will be: “*Project Completion and Closure was done in a cost-effective manner and therefore VFM was realized under this stage*”;
- If the score is between 1.7 and 2.5 inclusive ($1.7 \leq \text{score} \leq 2.5$), the VfMI automatically displays a phrase “**ADEQUATE**”. It means that Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. *The Auditor’s opinion will be: “Project Completion and Closure was done in a cost-effective manner but major improvements could be made to realize VFM under this stage”*;
- If the score is below 1.7 (score <1.7), the VfMI under “Comments” column automatically reads “**INADEQUATE**”. It means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor’s opinion will be: “*Project Completion and Closure was not done in a cost-effective manner and therefore VFM was not realized under this stage*”.

The VfMI automatically formats the phrase “**INADEQUATE**” in ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain black. The red colour alerts the reader that performance for the particular indicator leaves a lot to be desired and needs particular attention.

NOTE:

While “**GOOD**”, “**FAIR**” and “**POOR**” are used in assigning scores in the VfMI, Auditor’s opinion should be expressed as “**GOOD**”, “**ADEQUATE**”, or “**INADEQUATE**” performance

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CHAPTER 6

EXECUTED WORKS

1. What does this VfM indicator aim to examine and establish?
2. Which documents must be requested from the Implementing Agency / Roads Fund Board and reviewed by the Auditor under this indicator in order to fill in the VfM Instrument under planning stage?
3. How does the Auditor arrive at conclusion and opinion?

6.1 Relevant Documents

In order to assess this indicator, the Auditor should review, but not limited to, following documents:

- Project File
- Specifications
- Strip maps
- Original Contract Drawings
- All Interim Payment Certificates
- Snag list
- Terms of Reference (issued by RFB to Auditors)
- Test results
- Environmental and Social Impact Management Plan(ESIMP);

6.2 Visual Assessment of overall Quality of Workmanship

(Parameter E1 of the Value for Money Instrument)

Contract document especially specification is the main reference document for the Auditor in order to be able him/her to assessing the quality of the completed works. Specifications are to be read in conjunction with the General Conditions of Contract to which the Contractor is being referred to. Basically, specifications for each item in the road works have three main parts; description of works, measurement and payment. Furthermore, specifications explain the materials to be incorporated and desired quality. In this sub-indicator, the Auditor should visually assess the quality of workmanship, quality of the materials incorporated, quality of riding surface, absence of defects in the road surfaces and in the structures, drainage (mitre drains, catch-water drains, camber and/or super elevation) have completed in accordance with terms and conditions of contract. Since this is visual assessment, the the Professional judgment of the Auditor is called upon to determine to what extent the completed works are in compliance with the specifications.

It is brought to the attention of the Auditor that visual assessment should be done at site after reviewing contract documents and contract file and understanding the scope of works and desired quality. Documents such as drawings, site instructions, variation orders should be assessed in order make informed assessment/judgment.

6.2.1 Overall quality of workmanship

(Sub-parameter E1 (1) of the VfM Instrument)

Assessment of sub-parameter E1 (1) is done as follows:

- (a) If visual assessment establishes that the overall quality of workmanship is of high standard, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in quality of workmanship, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in quality of workmanship, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.2 Overall quality of materials used

(Sub-parameter E1 (2) of the VfM Instrument)

Assessment of sub-parameter E1 (2) is done as follows:

- (a) If visual assessment establishes that overall quality of materials used are highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in quality of materials used, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in quality of materials used, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.3 Overall quality of riding surface

(Sub-parameter E1 (3) of the VfM Instrument)

Assessment of sub-parameter E1 (3) is done as follows:

- (a) If visual assessment establishes that overall quality of riding surface is highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in quality of riding surface, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in quality of riding surface, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.4 Absence of defects, such as cracks, ruts and localized potholes

(Sub-parameter E1 (4) of the VfM Instrument)

Assessment of sub-parameter E1 (4) is done as follows:

- (a) If visual assessment establishes that overall there are no defects, such as cracks, ruts and localized potholes, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;

- (b) If visual assessment establishes that overall there are only minor shortfalls in defects such as cracks, ruts and localized potholes, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in defects such as cracks, ruts and localized potholes, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.5 Camber and/or super-elevation

(Sub-parameter E1 (5) of the VfM Instrument)

Assessment of sub-parameter E1 (5) is done as follows:

- (a) If visual assessment establishes that overall camber and/or super-elevation are highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in camber and/or super-elevation, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in camber and/or super-elevation, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.6 Routine maintenance: Grass kept at minimum height: Height less than 50 cm at all the time

(Sub-parameter E1 (6) of the VfM Instrument)

Annual performance agreements for maintenance works between RFB and TANROADS as well as PMORALG, contain Performance Indicators and Targets (Schedule II of PAs) which define service delivery performance requirements. Among these performance indicators falling under routine maintenance are:

- | | | |
|--|---|--|
| 1. Grass kept at minimum height | : | Height less than 50 cm at all time |
| 2. Presence of potholes on paved network | : | Potholes patched within 48 hours |
| 3. Drainage | : | Culverts and ditches clear and open |
| 4. Cleaning of roads and drainage system | : | No debris and solid waste dumped on road shoulder and drainage system. |

In order to conform to these performance agreements and therefore get good value for money, IAs need to plan, procure and execute the required works in such a way that the above mentioned performance indicators and targets are attained.

Assessment of sub-parameter E1 (6) is done as follows:

- (a) If visual assessment establishes that overall grass is kept at minimum height of less than 50 cm at all the time, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in keeping grass at minimum height of less than 50 cm at all the time, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;

- (c) If visual assessment establishes that overall there are major and serious shortfalls in keeping grass at minimum height of less than 50 cm at all the time, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.7 Routine maintenance: Presence of potholes on paved network: Potholes patched within 48 hours

(Sub-parameter E1 (7) of the VfM Instrument)

Assessment of sub-parameter E1 (7) is done as follows:

- (a) If visual assessment establishes that overall potholes on the paved network are patched within 48 hours, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in patching potholes on the paved network within 48 hours, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in patching potholes on the paved network within 48 hours, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.8 Routine maintenance: Drainage: Culverts and ditches clear and open

(Sub-parameter E1 (8) of the VfM Instrument)

Assessment of sub-parameter E1 (8) is done as follows:

- (a) If visual assessment establishes that overall drainage culverts and ditches are clear and open, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in drainage culverts and ditches to be clear and open, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in drainage culverts and ditches to be clear and open, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.9 Routine maintenance: No debris and solid waste dumped on road shoulder and drainage system

(Sub-parameter E1 (9) of the VfM Instrument)

Assessment of sub-parameter E1 (9) is done as follows:

- (a) If visual assessment establishes that overall there is no debris and solid waste dumped on road shoulders and drainage system, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in having no debris and solid waste dumped on road shoulders and drainage system, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in having no debris and solid waste dumped on road shoulders and drainage system, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.10 Routine maintenance: Quality of graded / reshaped unpaved road

(Sub-parameter E1 (10) of the VfM Instrument)

Assessment of sub-parameter E1 (10) is done as follows:

- (a) If visual assessment establishes that overall the quality of graded/ reshaped road is highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in the quality of graded/ reshaped road, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in the quality of graded/ reshaped road, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.11 Routine maintenance: Quality of pothole patching/ pothole filling for paved/ unpaved road

(Sub-parameter E1 (11) of the VfM Instrument)

Assessment of sub-parameter E1 (11) is done as follows:

- (a) If visual assessment establishes that overall the quality of pothole patching/ pothole filling is highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in the quality of pothole patching/ pothole filling, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in the quality of pothole patching/ pothole filling, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.12 Routine maintenance: Quality of crack sealing for paved road

(Sub-parameter E1 (12) of the VfM Instrument)

Assessment of sub-parameter E1 (12) is done as follows:

- (a) If visual assessment establishes that overall the quality of crack sealing is highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in the quality of crack sealing, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in the quality of crack sealing, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.2.13 Bridges Maintenance/ Repairs: Quality of Bridge Maintenance Works / Major repairs

(Sub-parameter E1 (13) of the VfM Instrument)

Assessment of sub-parameter E1 (13) is done as follows:

- (a) If visual assessment establishes that overall the quality of bridge maintenance works/ major repairs is highly satisfactory, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If visual assessment establishes that overall there are only minor shortfalls in the quality of bridge maintenance works/ major repairs, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If visual assessment establishes that overall there are major and serious shortfalls in the quality of bridge maintenance works/ major repairs, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

Overall Assessment of Parameter E1

Assessment of Parameter E1 is automatically generated in the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not manually enter the assessment in the locked yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under E1 are in full compliance, the score is “GOOD”. The VfMI displays a ‘1’ under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is “FAIR”. The VfMI displays a ‘1’ under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is “POOR”. The VfMI displays a ‘1’ under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a ‘1’ under column label 0.

6.3 Physical Site Measurements on Road Works

(Parameter E2 of the VfM Instrument)

This parameter assesses physical site measurements in order to determine compliance with drawings and Technical Specifications. The section of works or part works to be measured should be done by the Auditor having reviewed contract documents and contract file, including payment records. In specific occasions, the Terms of Reference may specify works or part of works in to particular project, physical measurements to be done otherwise in all cases the Auditor has the responsibility of sampling depending on what he/she has observed. The physical site measurements of works performed should be done jointly with IA’s representative(s) and results countersigned. The physical measurements should be compared with drawing and technical specifications or site instructions issued in the course of contract execution.

It is expected that the Auditor will analyse any difference noted and make recommendation as appropriate. The sub-parameters itemized under parameter E2 are for orthodox road related works. For other types of works, e.g. bridge major repairs, the Auditor may substitute some or all these sub-parameters with relevant ones like: foundations, abutments/ piers, spans, bridge deck, etc., but in order to keep internal logical functions intact, the total number of sub-

parameters should remain to be a maximum of six. Assessment of the substitutesub-parameters should follow a similar logic to E2 (1) - E2 (6) below.

The Auditor should note that the measurements taken at site are part and parcel of the evidence to accompany the report. Furthermore, the Auditor is expected to have carefully studied the specifications to understand the allowable tolerances in case of minor differences which are within tolerance limits. As a general rule, tolerances are specified in the contract documents but where such tolerances are not specified, the Auditor may use what is the best practice or common judgment.

6.3.1 Pavement structure

(Sub-parameter E2 (1) of the VfM Instrument)

Assessment of sub-parameter E2 (1) is done as follows:

- (a) If actual dimensions of pavement structure measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of pavement structure measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If actual dimensions of pavement structure measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.3.2 Road carriageway

(Sub-parameter E2 (2) of the VfM Instrument)

Assessment of sub-parameter E2 (2) is done as follows:

- (a) If actual dimensions of road carriageway (and shoulders) measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, and the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of road carriageway (and shoulders) measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If actual dimensions of road carriageway (and shoulders) measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.3.3 Foot paths

(Sub-parameter E2 (3) of the VfM Instrument)

Assessment of sub-parameter E2 (3) is done as follows:

- (a) If actual dimensions of foot paths measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of foot paths measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If actual dimensions of foot paths measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.3.4 Road side drains

(Sub-parameter E2 (4) of the VfM Instrument)

Assessment of sub-parameter E2 (4) is done as follows:

- (a) If actual dimensions of road side drains measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of road side drains measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If actual dimensions of road side drains measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.3.5 Mitre drains

(Sub-parameter E2 (5) of the VfM Instrument)

Assessment of sub-parameter E2 (5) is done as follows:

- (a) If actual dimensions of mitre drains measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of mitre drains measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;

- (c) If actual dimensions of mitre drains measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

6.3.6 Road signs

(Sub-parameter E2 (6) of the VfM Instrument)

Assessment of sub-parameter E2 (6) is done as follows:

- (a) If actual dimensions of road signs measured at site establishes that overall they agree with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- (b) If actual dimensions of road signs measured at site establishes that overall there are only minor shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- (c) If actual dimensions of road signs measured at site establishes that overall there are major and serious shortfalls in agreeing with dimensions shown in contract drawings, record of measurement sheets and relevant payment certificates, the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;

Overall Assessment of Parameter E2

Assessment of Parameter E2 is automatically generated in the VfM Instrument by aggregation of sub-parameter assessments. The Auditor should not manually enter the assessment in the locked yellow coloured cell of the VfMI. The aggregation is internally generated by excel logical functions based on the following rules:

- a) If all the assessed sub-parameters under E2 are in full compliance, the score is “GOOD”. The VfMI displays a ‘1’ under column label 3;
- b) If less than 50% of the assessed sub-parameters are poor and the remaining are fair or good, the score is “FAIR”. The VfMI displays a ‘1’ under column label 2;
- c) If at least 50% of the assessed sub-parameters are poor, the score is “POOR”. The VfMI displays a ‘1’ under column label 1;
- d) If information is not available for any of the assessed sub-parameters, the VfMI displays a ‘1’ under column label 0.

6.4 Physical Site Measurements of Drainage Structures

(Parameter E3 of the VfM Instrument)

This parameter covers Physical Site Measurements of Culverts and Bridges Determine with Drawings and Technical Specifications. Similar approach should be followed as per item 6.3 above.

Assessment of Parameter E3 is done as follows:

- a) If measuring of actual dimensions at site establishes that dimensions were in line with dimensions shown in the drawings and contained in the payment certificates and the

accompanying measurement sheet (i.e. no overpayment is detected) the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;

- b) If measuring of actual dimensions at site establishes that dimensions were not in line with dimensions shown in the drawings but the difference were within tolerance limits the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If physical measurement establishes significant difference, i.e. difference outside tolerance limits, but payments did not consider the actual work done (that is an overpayment was detected) the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

6.5 Field Tests on Pavement Structures

(Parameter E4 of the VfM Instrument)

This indicator examines quality compliance. To that end, field tests to determine the quality of the materials used and completed pavement structure are specified in the TOR for the Auditor in order to establish compliance with the Technical Specifications.

In addition to visual assessment and physical measurements, the Field Tests will be done by the Auditor to confirm whether the materials used and completed works comply with technical specifications as well as whether the quality of works reflect the investment. The Terms of Reference given to the Auditor will specify the estimated number of tests to be performed each type of works i.e. paved roads, unpaved roads and bridges.

Paved road: the following tests will be conducted;

Surface dressing: Field density and thickness (Base –CRS/CRR), TFV (dry & wet) – surface dressing wearing course;

Asphalt concrete: Coring of Asphalt (Bulk density & thickness) and Binder content & aggregate grading

Unpaved roads: Field density (sand replacement method) and gravel thickness.

All samples for testing should be taken in a random pattern. Sampling should also cover sections or materials where there are major deviations from tests results taken by the IAs and actual site conditions. Where specified or required by the Terms of Reference, stratified random sampling methods should be followed. All tests shall be conducted in accordance with the standard methods specified in the Specifications. All these tests should be carried out according to the Laboratory Testing User Guide of the Central Materials Laboratory (CML) of the Ministry of Works unless the test in question is not covered by this standard. The Auditor should compare these results with those conducted during construction and certification of payments to ensure conformance with the applicable specifications.

Assessment of Parameter E4 is done as follows:

- a) If tests results on materials used on road pavement and completed works show compliance with the technical specifications (both General and Special) the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;

- b) If tests results on materials used on road pavement and completed works show minor deviations from the technical specifications (both General and Special) the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If tests results on materials used on road pavement and completed works show non-compliance with the technical specifications (outside tolerance limits) the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

6.6 Field Tests on Drainage Structures

(Parameter E5 of the VfM Instrument)

This covers field tests in order to determine the quality of the materials used and drainage Structure to establish compliance with the Technical Specifications. The structures may include bridges, culverts (box, pipe, vented), drifts, access slabs, or lined drains.

The purpose of the proposed test is to test concrete structures after the concrete has hardened to determine whether the structure is suitable for its designed use and assess the structural integrity or adequacy. Ideally such testing should be done without damaging the concrete and that's why non-destructive test has been adopted. The test specified to be performed by the Auditor in the structures is a Rebound Hammer. The test should be carried out according to the Laboratory Testing User Guide of the Central Materials Laboratory (CML) of the Ministry of Works. The Auditor should compare the results with those conducted during construction.

Assessment of Parameter E5 is done as follows:

- a) If tests results on materials used on drainage structures and concrete works show compliance with the technical specifications (both General and Special) the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If tests results on materials used on drainage structures and concrete works show minor deviations from the technical specifications (both General and Special) the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If tests results on materials used on drainage structures and concrete works shown non-compliance with the technical specifications (outside tolerance limits) the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

6.7 Assessment of Compliance with Environment Management

(Parameter E6 of the VfM Instrument)

In principle the contract will spell out the responsibility of the contractor regarding the protection of the environment. If it is provided in the contract, the contractor will take all reasonable steps to protect the environment and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations on site. Furthermore, the contractor should comply with the Statutory Regulations in force in Tanzania regarding environmental protection and waste disposal and should liaise with the responsible authorities to

understand rules and procedures. For contracts which Environmental and Social Impact Assessment [ESIA] was conducted, the safeguards outlined in such assessment should be the basis of the assessing compliance.

The Auditor should assess this sub-indicator on the basis of the environmental management provisions provided in the contract. For the contractor to fulfil his contractual obligation there must an Environment Management Plan prepared and followed. The Auditor should assess to what extent issues such as reinstatement of borrow pits, excavations, water pollutions, nuisance and etc. have addressed and implemented.

Assessment of Parameter E6 is done as follows:

- a) If Environmental and Social Impact Plans stipulated in the contracts were fully implemented the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If Environmental and Social Impact Plans stipulated in the contracts were partially implemented the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If Environmental and Social Impact Plans stipulated in the contracts were not implemented the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

6.8 Safety and Environment Management for Ongoing Projects

(Parameter E7 of the VfM Instrument)

This parameter assesses uncompleted project on compliance with Safety and Environment Management Plans stipulated in the contract documents. The premise will be as described in item 6.7 above. For the ongoing contract, the Auditor should assess whether the plans in place are followed and will yield required results in terms of compliance with safety and environment management.

On the safety issues, the Auditor should assess physically whether the contractor is taking all reasonable precautions to maintain the health and safety of his personnel at site.

Assessment of Parameter E7 is done as follows:

- a) If safety and environmental issues stipulated in the contracts are being implemented strictly as the provisions in the contract documents the score is “GOOD”. The Auditor should enter a ‘1’ under column label 3;
- b) If safety and environmental issues stipulated in the contracts are being implemented but shortfalls or discrepancies are observed the score is “FAIR”. The Auditor should enter a ‘1’ under column label 2;
- c) If safety and environmental issues stipulated in the contracts are not being implemented as the provisions in the contract documents the score is “POOR”. The Auditor should enter a ‘1’ under column label 1;
- d) If the information is not available or inadequate, the Auditor should enter a ‘1’ under column label 0.

6.9 Performance based Contracts (PBC): Compliance of Maintenance Services with the required Service Level as per PBC Specifications

(Parameter E8 of the VfM Instrument)

Performance-Based Contracts (PBC)² differ significantly from method-based contracts that have been traditionally used to maintain roads. PBC is a type of contract in which payments for the management and maintenance of road assets are explicitly linked to the contractor successfully meeting or exceeding certain clearly defined minimum performance indicators. In performance-based contracting the Client does not specify any method or material requirements. Instead he specifies performance indicators³ that the contractor is required to meet when delivering maintenance services. According to the World Bank Procurement Guidelines (2004), performance-based procurement, also called output-based procurement, refers to competitive procurement processes resulting in a contractual relationship where payments are made for measured outputs instead of the traditional way where the measurement and payment reflects the quantity of input.

Performance or Service Levels define the minimum conditions of road, bridge and traffic assets as well as the management and operation of the assets during the entire contract period, leaving it to the contractor as to how to achieve them. The contractor is free to decide: *What to do; When to do it, How to do it, Where to do it, To do the physical works himself or subcontract*; as long as he meets the performance or service levels during the contract period. Lump sum payments are made periodically and might be adjusted in accordance with the change of certain factors, like inflation or traffic volume. Major emergency, rehabilitation and improvement works might be paid based on unit prices for works agreed case by case. Deductions or penalties are applied for non-compliance with terms and conditions of contract, especially with respect to the service level criteria. Duration of contracts would at least include one periodic maintenance cycle (4-5 years for gravel roads and 8-10 years for bituminous roads). Pure routine maintenance contracts can be 1-2 years.

Assessment of Parameter E8 is done as follows:

- (a) If the required Service Level as per PBC Specifications has been achieved, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- (b) If the required Service Level as per PBC Specifications has not been achieved, the score is "POOR". The Auditor should enter a '1' under column label 1;

6.10 Performance based Contracts: Compliance with other Service Quality Levels as per PBC Specifications

(Parameter E9 of the VfM Instrument)

Service Quality Levels (SQLs) are defined from a road user's perspective and are grouped into 4 categories: (1) Accessibility; (2) Average Travel Speed in km/h; (3) Ride Quality; and (4) Road Durability. The required standards of each SQL are found in the PBC Specifications. The Auditor needs to have good understanding of PBC type of contract and PBC specifications to be able to fairly assess this SQL parameter.

Parameter E9 is would normally be assessed during detailed investigative audits and would be skipped during ordinary VfM audits. This is because assessment of Parameter E9 is

² Also popularly known as Performance-based Management and Maintenance of Roads (PMMR)

³ Performance specifications are often called "levels of service" in some countries.

quite involving and takes a long time to complete the necessary measurements (especially the 'Road Durability' part), while Parameter E8 is sufficient to give an overall assessment of a PBC project.

Assessment of Parameter E9 is done as follows:

- (a) If the required Service Quality Levels (SQLs) for 'Accessibility', 'Average travel speed' 'Ride quality' and 'Road Durability' as per PBC Specifications have been achieved, the score is "GOOD". The Auditor should enter a '1' under column label 3;
- (b) If the required SQL for 'Accessibility' has been achieved but there are only minor shortfalls on one of the required SQLs, the score is "FAIR". The Auditor should enter a '1' under column label 2;
- (c) If the required SQL for 'Accessibility' has serious shortfalls or the same is true for more than one other SQLs, the score is "POOR". The Auditor should enter a '1' under column label 1;

6.11 Computation of Score under Executed Works Indicator

The contribution to the overall score of Executed Works Indicator is **40%**. The maximum score assigned to "GOOD" performance is 3 points; 2.5 to "FAIR" performance; 0 to "POOR" Performance. In case where the Information is not available (INA), the score is also zero.

The score under Executed Works is computed as follows:

$$S_{ew} = \sum \frac{G}{T} * 3 + \frac{F}{T} * 2.5 + \frac{P}{T} * 0 + \frac{INA}{T} * 0$$

Where

S_{ew}	=	Performance Score under Executed Works Indicator;
G	=	Total count under "Good" column;
T	=	Total count
F	=	Total count under "Fair" column;
P	=	Total count under "Poor" column; and
INA	=	Total count under "INA" column.

NOTE:

Sub indicators which are not applicable will not contribute to the aggregation of the final score

6.12 Conclusion and Auditor's Opinion on Executed Works Indicator

The VfMI requires the Auditor to give an opinion not only on the overall project performance, but also under each audit indicator. The VfMI automatically displays one of the three possible conclusions as elaborated below.

- i) If the score is greater than 2.5 (score >2.5 but ≤ 3.0), the VfMI automatically displays a phrase "GOOD" under the Comments column. It means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor's opinion will be: "Executed Works were cost-effective and therefore VfM was realized under this indicator";
- ii) If the score is between 1.7 and 2.5 inclusive ($1.7 \leq \text{score} \leq 2.5$), the VfMI automatically displays a phrase "ADEQUATE" under the 'Comments' column. It means that

Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. The Auditor's opinion will be: *"Executed Works were cost-effective but major improvements could be made to realize VfM under this indicator"*;

- iii) If the score is below 1.7 (score <1.7), the VfMI automatically displays a phrase **"INADEQUATE"** under the 'Comments' column. It means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor's opinion will be: *"Executed Works were not cost-effective and therefore VfM was not realized under this indicator"*.

The VfMI automatically formats the phrase **"INADEQUATE"** in 'red' colour while **"GOOD"** and **"ADEQUATE"** phrases remain black. The red colour alerts the reader that performance for the particular indicator leaves a lot to be desired and needs particular attention.

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CHAPTER 7

OVERALL PERFORMANCE AND INTEGRITY IN PROJECT IMPLEMENTATION

7.1 Overall Project Performance

Chapters 2 to 6 of this guide lead us through the process of assessing the five VFM indicators for a project. In order to make an opinion of the overall project performance we need to aggregate the scores obtained from the five indicators into an overall score for the project. The Vfm instrument can be applied up to whatever stage the project has reached and a project Vfm score can only be determined upon completion of all the 5 stages of the Vfm instrument. For ongoing projects therefore, the VfmI will give aggregate performance score for each of the stages covered, but will display an error message (#DIV/0) for the aggregated score for the whole project. The VfmI ensures the aggregated score for a project can only be determined upon completion of all the 5 indicators of the Vfm instrument.

7.1.1 Aggregation of scores for a complete project

In aggregation of scores for the five performance indicators, the Planning, Design and Tender Documentation Indicator contributes **20%** to the overall score; Procurement Indicator contributes **10%**, Construction Indicator **20%**, Project Completion and Closure Indicator **10%**, while Executed Works Indicator contributes **40%**. The VfmI internally computes the aggregated score for the five performance indicators and displays the project overall score in the bottom row of the VfmI worksheet under column label (iii).

- i) **“GOOD”** opinion means that management organization and operations are conducive to achieving Value for Money and only minor improvements are needed. The Auditor’s opinion will be: *“Overall the project was performed in a cost-effective manner and therefore Vfm was realized for this project”*;
- ii) **“ADEQUATE”** opinion means that Management organization and operations are generally conducive to achieving Value for Money, but major improvements could be made. The Auditor’s opinion will be: *“Overall the project performance was cost-effective but major improvements could be made to realize Vfm for this project”*;
- iii) **“INADEQUATE”** opinion means that management organization and operations are not considered to be conducive to achieving Value for Money. The Auditor’s opinion will be *“Overall the project performance was not cost-effective and therefore Vfm was not realized for this project”*.

7.2 Integrity in Project Implementation (Part Z of the VfmI)

(Part Z of the Vfm Instrument)

The Vfm audit requires the Auditor to give an opinion not only on each performance indicator but also on the overall project implementation. The conclusion and Auditor’s opinion on the overall implementation of the project should be based on two major aspects:

- (i) The aggregated score on performance indicators A to E of the VfmI, and
- (ii) Assessment on integrity of project implementation (Part Z of the VfmI).

Part Z of the VfMI strives to assess integrity of project implementation. A few items addressing integrity have to be assessed by the Auditor. These are in form of short questions whose answers are either 'Yes' or 'No'. If an answer to any of the questions is 'Yes', the Auditor has to estimate the extent or quantum of the problem (usually as a percentage of the contract sum) and document essential supporting evidence. If the quantum of the problem on any item exceeds a given threshold then the project becomes 'Not Value for Money' as its integrity of implementation is ethically unsound.

7.2.1 Inflated quantities in the Bills of Quantities

Part Z1 of the VfM Instrument

The question to be addressed by the Auditor is: *Is there any evidence of inflated quantities in the Bills of Quantities?* If the answer is yes, then the Auditor has to collect evidence supporting this and evaluate the extent of the problem by estimating the percentage value of inflated quantities relative to the contract sum.

Assessment of Part Z1 is done as follows:

If the answer to the question is 'No', nothing should be filled in column (a). If the answer to the question is 'Yes', then the estimated percent value should be filled in column (a).

7.2.2 Unjustified over design

Part Z2 of the VfM Instrument

The question to be addressed by the Auditor is: *Is there any evidence of unjustified over design?* If the answer is yes, then the Auditor has to collect evidence supporting this and evaluate the extent of the problem by estimating the percentage value of the over design relative to the contract sum.

Assessment of Part Z2 is done as follows:

If the answer to the question is 'No', nothing should be filled in column (a). If the answer to the question is 'Yes', then the estimated percent value should be filled in column (a).

7.2.3 Overpriced Bid

Part Z3 of the VfM Instrument

The question to be addressed by the Auditor is: *Is there any evidence of overpriced bid?* If the answer is yes, then the Auditor has to collect evidence supporting this and evaluate the extent of the problem by estimating the percentage value of the overpriced amount relative to the perceived market project value.

Assessment of Part Z3 is done as follows:

If the answer to the question is 'No', nothing should be filled in column (a). If the answer to the question is 'Yes', then the estimated percent value should be filled in column (a).

7.2.4 Unjustified Variations

Part Z4 of the VfM Instrument

The question to be addressed by the Auditor is: *Are there any variations with no justification?* If the answer is yes, then the Auditor has to collect evidence supporting this and evaluate the extent of the problem by estimating the percentage value of the variations relative to the original contract sum.

Assessment of Part Z4 is done as follows:

If the answer to the question is ‘No’, nothing should be filled in column (a). If the answer to the question is ‘Yes’, then the estimated percent value should be filled in column (a).

7.2.5 Unjustified Time overrun

Part Z5 of the VfM Instrument

The question to be addressed by the Auditor is: *Is there substantial unjustified time overrun?* If the answer is yes, then the Auditor has to collect evidence supporting this and evaluate the extent of the problem by estimating the percentage time overrun relative to the original contract period.

Assessment of Part Z5 is done as follows:

If the answer to the question is ‘No’, nothing should be filled in column (a). If the answer to the question is ‘Yes’, then the estimated percent value should be filled in column (a).

7.3 Overall Project VFM Assessment

As pointed out in Section 7.2 above, the conclusion and Auditor’s opinion on the overall VFM assessment of the project is based on two major aspects: (i) The aggregated score on performance indicators A to E and (ii) Assessment on integrity of project implementation (Part Z of the VfMI).

7.3.1 Case 1: Projects having No Integrity Issue

If the Integrity of Project Implementation (part Z of the VfMI) has no issue, then the VfMI automatically displays (in the bottom rightmost cell of the VfMI) one of the three possible conclusions listed in Table 2 of Chapter 1 of this guide. The possible conclusions are:

<u>Project Aggregate Score</u>	<u>Value for Money Opinion</u>
Between 2.5 up to 3.0	GOOD
From 1.7 to 2.5 (inclusive)	ADEQUATE
Below 1.7	INADEQUATE

The VfMI automatically formats the phrase “**INADEQUATE**” in ‘red’ colour while “**GOOD**” and “**ADEQUATE**” phrases remain black. The red colour alerts the reader that implementation for the particular project leaves a lot to be desired and needs particular attention.

7.3.2 Case 2: Projects having Integrity Issue(s)

If in any of the questions under part Z of the VfMI (integrity section) is answered ‘Yes’ and the quantum of the problem exceeds a threshold value set in column (c) of the item, then the project is ‘*Not Value for Money*’. The VfMI automatically overrides the aggregate score assessment for Sections A to E with an assessment for part Z and yields a ‘*Not Value for Money*’ for that project regardless of the aggregate score on performance indicators and spontaneously displays the “**INADEQUATE**” opinion. The opinion is displayed in the bottom right cell of the VfMI. The idea is: however well the project performance was, the project cannot be good value for money if there was any dubious or seriously improper action or corruption-like move in connection with implementation of the project.

7.4 Overall Agency Performance

The performance of an Implementing Agency based on audited projects is assessed by aggregation of scores on individual projects weighted by project sizes of individual projects. A

good proxy for project size is contract price. The overall Agency performance score resulting from weighted aggregate scores of audited projects is computed as follows:

$$S_{av} = \frac{1}{p_t} \sum_1^n p_i s_i$$

Where:

S_{av} = VfM score of the Implementing Agency

p_t = Total contract price of audited projects

n = Number of projects audited in the respective Implementing Agency

p_i = Accepted contract price of individual project

s_i = VfM score of individual project

Applicable VfM opinions based on aggregated score weighted contract prices are shown in Table 3 of Chapter 1 above.

The Auditor should manually calculate the S_{av} (Overall Agency Performance) based on the number of projects audited in the AI.

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CHAPTER 8

REPORTING

8.1 Introduction

The VfM audit report is arguably the most important component of the entire audit process. It has several purposes:

- Measuring the performance of each IA in line with Performance Agreement;
- identifying areas which IAs are complying or not complying with the Performance Agreement as well as bringing them to the attention of RFB so it can take correction measures;
- presenting the findings of the VfM audit as well as Auditor's conclusions and recommendations;
- reporting on those activities and procedures that represent good practice which may be usefully adopted by other IAs;
- providing a basis for follow-up audit either by the Auditor or by RFB to review the implementation of recommendations, or alternative action taken by IAs; and
- providing VfM audit evidence collected by the Auditor.

The main steps in the reporting stage are:

- Preparation of Inception Report (at the beginning of the audit)
- the preparation of issues for exiting meeting and IA management to verbally respond;
- the conduct of an exit meeting with the IA in order to authenticate audit findings and obtain preliminary management responses and / or explanations;
- the preparation and presentation of the Draft and final reports; and

8.2 Reporting Standards

INTOSAI Reporting Standards 400 provide some guidance applicable to the drafting of VfM audit reports. One of the guidance states; *'The audit report should be reliable. The report should be informative and, if provided, have logical and clear recommendations that are linked to the audit objectives and the findings. The auditors should report the audit objectives, scope, methodology and sources used, as well as audit findings, conclusions, and recommendations. It should be easy to understand the purposes of the audit and interpret the results. The report should be complete, accurate, objective, convincing and as clear and concise as possible.'*

The standards further note that the form and content of all audit reports are founded on the following general principles:

Title: *'The opinion or report should be preceded by a suitable title or heading, helping the reader to distinguish it from statements and information issued by others.'*

Signature and date: *'The opinion or report should be properly signed. The inclusion of a date informs the reader that consideration has been given to the effect of events or transactions about which the auditor became aware up to that date.'*

Objectives and scope: *‘The opinion or report should include reference to the objectives and scope of the audit. This information establishes the purpose and boundaries of the audit.’*

Completeness: *‘Opinions should be appended to and published with the evidence to which they relate, but VfM reports may be free standing. The auditor’s opinions and reports should be presented as prepared by the auditor. In exercising its independence the auditor should be able to include whatever it sees fit, but it may acquire information from time to time which in the national interest cannot be freely disclosed. This can affect the completeness of the audit report. In this situation the auditor retains a responsibility for considering the need to make a report, possibly including confidential or sensitive material in a separate, unpublished report.’*

Addressee: *‘The opinion or report should identify those to whom it is addressed, as required by the circumstances of the audit engagement and local regulations or practice. This may be unnecessary where formal procedures exist for its delivery.’*

Identification of subject matter: *‘The opinion or report should identify the area VfM audit to which it relates. This includes information such as the name of the audited agency, the date and period covered by the VfM audit and the subject matter that has been audited.’*

Legal basis: *‘Audit opinions and reports should identify the legislation or other authority providing for the audit.’*

Compliance with the standards: *‘Audit opinions and reports should indicate the auditing standards or practices followed in conducting the audit, thus providing the reader with an assurance that the audit has been carried out in accordance with generally accepted procedures.’*

Timeliness: *‘The audit opinion or report should be available promptly to be of greatest use to readers and users, particularly those who have to take necessary action.’*

8.3 Attributes of a VfM Report

If it is to achieve its objectives a VfM report must be objective, concise, timely and persuasive. Because its aim is to bring about improved procedures and structures, it must establish its credibility by accurately reflecting the audit findings, presenting logical conclusions and making meaningful, practical and relevant recommendations.

The presentation and structure of the report should make the target audience motivated to read it promptly, understand it easily, and accept what it has to say and support or implement the recommendations.

8.3.1 Objective

In order to be seen to be objective, when drafting a VfM audit report, the Auditor needs to present any relevant evidence that is opposed to his or her opinion, not just the evidence in favour of it. There is a temptation to only present the evidence which supports the Auditor’s opinion and let the IA management come up with evidence to refute it. This is not objective and when such countering evidence is produced, the Auditor and the VfM report lose credibility because it appears as if the Auditor has not done sufficient work to gather and analyse all evidence on which to base audit conclusions.

8.3.2 Concise

A VfM audit is often the result of many hundreds of hours work and involves perhaps thousands of pages of working papers and audit evidence. The role of the author of the report is to distil this material into as concise a report as possible. To this end the VfM auditor must develop his or her writing skills. The Auditor need to be able to review their words and find a

way to express their ideas in the shortest possible way, replacing long words with shorter ones, and reducing the number of sentences in an argument without detracting from that argument.

The Auditor should also go through the report carefully and test every point to see if they are all necessary. This test is simple; if this point was left out would the report be less effective at meeting its objectives.

8.3.3 Timely

A VfM audit report should be drafted as quickly as possible after the completion of the audit field work. The process should commence during the fieldwork and finishing it should be a matter of urgency once the auditor has gathered all the required information. There are two reasons for this.

Firstly; presumes that the VfM audit report is going to result in improvement in processes and structures and those improvements are going to enable the IA to achieve its objectives more efficiently or effectively, or manage the funds received from RFB more securely or even ensure its compliance with legislation. The sooner those changes are brought into being, the better. Secondly; a delay in producing the audit report makes the Auditor appear to be inefficient. In case delays occur, the Auditor need to communicate the reasons to RFB. As part of maintaining relationships with the IA, it is important that they are fully acquainted with the audit process including the time needed to analyse audit evidence and consider what it means.

A VMF audit report should be drafted when findings are identified. Then refined throughout the audit process as further information becomes available and should be completed as soon as possible after the end of audit fieldwork.

8.3.4 Persuasive

Basically a VfM audit report is making a case for change and improvement. No matter how compelling the findings of the audit, it is best to assume that decision-makers will start from a position of being opposed to change. The Auditor who believes that having strong findings and drawing valid conclusions are all that is required to have the IA accept and implement the recommendations may be surprised when the IA chooses to attack the credibility of the findings and reject the recommendations. Even if the Auditor puts forward a persuasive and convincing report, there is no guarantee that the recommendations will be accepted by the IA, although it greatly reduces the chances of rejection.

In order for a report to be persuasive the Auditor of the report must consider the point of view of the audience for the report and what will persuade them to take appropriate action to address the findings. To be persuasive there must be clearly defined and logical links from the audit evidence to the findings, the conclusions and recommendations. If this chain of links is broken at any point, then the reader can dismiss the argument from that point on. If, for example, the findings do not necessarily lead to the conclusions drawn by the Auditor, then the reader may reject the conclusions and the recommendations, even if the recommendations actually solve the problems highlighted by the findings.

8.3.5 Balanced Reporting

It should be taken into consideration, IA appreciates it when the Auditor makes positive statements in the audit report about those things that the IA appears to have done well. Many Auditors believe this is worthwhile as well. The problem with this is that audits are expected to add value, and when the Auditor comes across something that seems to be working well, there is very little value to add to the IA but it can serve as a demonstration of good practice to other IAs.

The Auditor should not be influenced by the desire of the IA for positive comments to make statements which he has not gathered sufficient evidence to support. And where an auditor feels it is possible to make a positive comment about some aspect of the IA, this statement should be supported by evidence. Equally it is rare to find that all aspects need to be improved. Where Auditor find areas of good practice he should acknowledge this positively while focusing attention on developing recommendations to strengthen areas requiring improvement.

8.4 Structure of VfM Report

In most cases an Auditor will determine a report structure which will be used for all its VfM audit reports. If no such structure exists then the auditor will have to decide how the report is to be structured. All reports of more than a few pages should be layered so that readers can find out what they want to know by choosing as much of the report as they need to. The sections which should be in every report are an executive summary, key findings and recommendations. Detailed findings and appendices with relevant source documents should be added.

8.4.1 The Executive Summary

The importance of an efficient and effective executive summary cannot be over-estimated. If the report is to make an impact with stakeholders who can direct that action be taken, then the executive summary must grab their attention and tell them everything they need to know to make a decision to involve themselves in the resolution of the audit findings. These high-level decision-makers do not have time to read information that they do not need to know. If they start to read an executive summary that does not quickly get to the point, then they may not develop an interest in the findings and recommendations at all and will leave its resolution to people at a lower level.

8.4.2 The Body of the Report

The body of the report should itself be structured so that it provides the reader with a full understanding of the audit and its results. It should include:

- **Introduction** - a brief description of the project being audited and the main details of the audit. This should also give the reader a description of the report, providing a map of the rest of the body of the report;
- **About the audit** - a full description of the audit, its scope, objectives, findings and recommendations. This places the findings and conclusions of the audit into context for the reader. Any limitations on the scope of the Auditor's work and the reasons for this should be described here. A scope limitation occurs, for example, when the Auditor is unable to audit key areas of the project due to factors beyond the Auditor's control. The auditor would consider whether it is appropriate to comment in the report on the implications of the lack of suitable criteria for the activity being audited;
- **Overall conclusion** - is the project performing well and what evidence caused the Auditor to draw this conclusion? This is drafted with the audit objective in mind;
- **Chapters/sections outlining the detailed findings of the audit** - each chapter/section should provide details of what would constitute realize VfM, what the audit found in sufficient detail to establish the credibility of the findings and the conclusions drawn by the auditor. Positive aspects of performance should also be reported. In the conclusion to each section or chapter of the report, any recommendations relating to the findings discussed should also be provided.

8.4.3 The Use of Visual Aids

Thoughtful use of visual aids such as graphs, charts, and maps as well as relevant and informative photographs make the report much easier to understand for people who respond better to a visual presentation. With visual aids it is important to ensure that they are unambiguous and immediately draw attention to the point the Auditor is trying to make. The Auditor should note that what is true for sentences is true for visual aids, there should only be one idea represented.

8.4.4 Using Graphs

Tables include the raw data gathered during the audit. Some Auditors are not interested in a graphical presentation of data and may be inclined to place any graphs in appendices. However, Auditors do not write the reports for themselves, and there will be readers for whom the graphs provide a better understanding of the audit. Place any graphs in the body of the report, because putting them in an appendix requires the reader to go searching for them and this may mean they won't be read at all. However, the raw data should be included in tables included in appendices. The Auditor should consider how the graph will look in the final document.

8.4.5 Special Charts

Sometimes special charts can help clarify or even reduce the amount of text needed to explain something. Likewise, readers can visualize very quickly when the report includes charts such as histograms, pie charts or graphs.

8.4.6 Photographs

Photographs are very good for ensuring that all readers get a clear understanding of a particular situation when explaining it in sufficient detail to provide this understanding would take hundreds of words. Photographs are also good for 'before and after' scenarios. An Auditor should take care to ensure that the picture really shows what they want it to show.

8.5 Recommended VFM Report Outline

The report format recommended by RFB is structured as follows:

1. Cover page
2. Glossary of abbreviations
3. Table of contents
4. Executive summary (summary of main findings)
5. Introduction
 - Background
 - Audit Objective
 - Scope of the Work
 - Audit Sample
 - Audit Limitations
6. Detailed findings
7. Summary and Recommendations (based on results of the VFM Instrument)
8. Annexes:
 - Summary of key Findings
 - Minutes of Entry and Exit Meetings
 - Records of site visit forms
 - Printouts of filled VFM instrument forms
 - Selected Site Photographs

- Matrices summarizing performance of all audited Implementing Agencies. This should cover VfM scores for each audited road project showing scores for Indicators A to E.
- List of main issues noted for each Indicator (A - E) for each audited Implementing agency.

NOTE:

The Auditor needs to confirm with the RFB on the format of the report when preparing the audit report

ANNEXES

Chapters in the User Guide	Table of Contents for this Chapter
Chapter 1 - Introduction to Value for Money Audit	Proposed Measurement Sheet Terms of Reference for Technical Audits
Chapter 2 - Planning, Design and Tender Documentation	
Chapter 3 - Procurement Process	
Chapter 4 - Construction Stage	
Chapter 5 - Project Completion and Closure Stage	
Chapter 6 - Executed Works	
Chapter 7 - Overall Performance and Integrity in Project Implementation	
Chapter 8 – Reporting	

PROPOSED MEASUREMENT SHEET

Contract Number: _____

Contract / Project Name: _____

BoQ Item No.	Measurements and Calculations	Output

Signed by For IA

Name: _____

Designation: _____

Signature: _____

Date: _____

Signed by For the Auditor

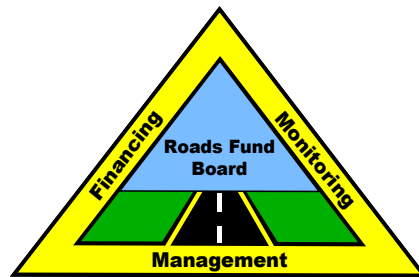
Name: _____

Designation: _____

Signature: _____

Date: _____

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