

# Republic of Malawi



*Accelerating Malawi's Economic Growth*

## Roads Authority

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### ROAD AND BRIDGE MAINTENANCE PROGRAMME FOR THE 2022-23 and 2023 –2024 FINACIAL YEARS

### Prequalification Document for Procurement of Urgent and Emergency Works

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<b>Subject of Procurement</b>	<b>Urgent and Emergency Works</b>
<b>Procurement Reference Number</b>	<b>RATUDE/2022/23</b>
<b>Procurement Method</b>	<b>National Competitive Bidding</b>
<b>Date of Issue of Bidding Document</b>	<b>5<sup>th</sup> October 2022</b>

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**October 2022**

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## PREFACE

Procurement under projects financed by Road Fund Administration is carried out in accordance with the procedures contained in the Public Procurement Law and Regulations of the Republic of Malawi.

The Roads Authority Pre-qualification Document has been prepared for use by the Roads Authority in the procurement process of urgent and emergency works through national competitive bidding (NCB). The procedures presented are based on good procurement practice, and are in compliance with the *Public Procurement Law*.

The Roads Authority intends to prequalify contractors for the Urgent and Emergency Works, for the 2022/23 and 2023/24 financial years. It is expected that Invitations to Bid will be made within one month after submission of pre-qualification applications and will continue for a period ending 30<sup>th</sup> March, 2024.

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## **Section 1: Instructions to Applicants**

## Section 1: Instructions to Applicants

### 1. Scope of Application

- 1.1 The Procuring Entity indicated in the Application Data Sheet (ADS), invites Applications for Prequalification, as described in the Invitation for Prequalification. The subject and procurement reference numbers are provided in the Application Data Sheet.

### 2. Eligible Applicants

- 2.1 An Applicants must:

- (a) have the legal capacity to enter into a contract;
- (b) not be insolvent, in receivership, bankrupt or being wound up, not have had their business activities suspended and not be the subject of legal proceedings for any of the foregoing; and
- (c) have fulfilled all obligations to pay taxes according to the tax laws of Malawi.

- 2.2 To demonstrate compliance with the criteria an Applicant shall submit with its Application copies of :

- (a) its certificate of Contractor Registration from the National Construction Industry Council;
- (b) tax clearance certificates or equivalent for the last financial year; and
- (c) other appropriate documentary evidence demonstrating its compliance.

- 2.3 An Applicant that has been debarred from participating in public procurement in accordance with ITA Sub-Clause 10.3, at the date of the deadline for Application submission or thereafter, shall be disqualified.

- 2.4 To qualify for prequalification, Applicants shall meet the minimum qualifying criteria specified in Section 3, Evaluation and Qualification Criteria.

### 3. Documents Comprising the Application

- 3.1 The Application submitted by the Applicant shall comprise information, in the format indicated in Section 2, Application Data Sheet, (ADS), where appropriate:

- 3.2 For clarification purposes, the Employer's address is Application Data Sheet, (ADS)

### 4. Deadline for Submission of Applications

- 4.1 Applications shall be delivered to the Procuring Entity at the address specified in the ADS no later than the time and date specified in the ADS.

- 4.2 The Procuring Entity may extend the deadline for submission of Applications by issuing an amendment, in which case all rights and obligations of the Procuring Entity and the Applicants previously subject to the original deadline will then be subject to the new deadline.

### 5. Late Applications

- 5.1 Any Application received by the Procuring Entity after the deadline prescribed in the ADS will be rejected and returned unopened to the Applicant.

### 6. Applications Opening

- 6.1 The Procuring Entity will open the Applications, in the presence of the Applicants' representatives who choose to attend at the time and in the place specified in the ADS.
- 6.2 The Procuring Entity will prepare minutes of the Application Opening, including the information disclosed to those present. Copies of the minutes will be made available to any Applicants that request for them.
- 6.3 No Application will be rejected at opening except for those that will be returned unopened to the Applicants.

## **7. Prequalification Criteria**

- 7.1 The Procuring Entity will prequalify Applicants whose Applications have been determined to be substantially responsive to the prequalification documents.

## **8. Procuring Entity's Right to Prequalify and to Reject any or all Applicants**

- 8.1 The Procuring Entity reserves the right to accept or reject any Application, and to cancel the whole prequalification process and reject all Applications, at any time prior to the prequalification of contractors, without thereby incurring any liability to the affected Applicants or any obligation to inform the affected Applicants of the grounds for the Procuring Entity's action.

## **9. Notification of Prequalification**

- 9.1 The notification of Prequalification by the Procuring Entity to the Applicants will not constitute the formation of the Contract. The Procuring Entity shall publish in the Malawi Local Press the results of the Prequalification Results as required by the Public Procurement Act 2003.

## **10. Corrupt or Fraudulent Practices**

- 10.1 The Government of the Republic of Malawi (hereinafter called "the Government") requires that Procuring Entities, as well as Applicants and Contractors under public-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Government: defines, for the purposes of this provision, the terms set forth below as follows:
  - (i) "corrupt practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
  - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
  - (iii) "collusive practices" means a scheme or arrangement between two or more Applicants, with or without the knowledge of the Procuring Entity, designed to establish prices at artificial, noncompetitive levels; and
  - (iv) "coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.
- 10.2 The procuring entity will reject a recommendation for prequalification if it determines that the Applicant recommended for prequalification has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the prequalification in question;
- 10.3 The procuring entity will debar an Applicant from participation in public procurement for a specified period of time if it at any time determines that the firm has engaged in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a contract.

## **Section 2. Application Data Sheet**





## **Section 3 – Evaluation and Qualification Criteria**

## Section 3 – Evaluation and Qualification Criteria

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Eligibility and Qualification Criteria				Compliance Requirements			Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
<b>1. Eligibility</b>							
1.1	<b>Conflict of Interest</b>	No conflicts of interest	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
1.2	<b>Eligibility</b>	Not having been declared ineligible by the Government of Malawi in accordance with ITA 2.3.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
<b>2. Historical Contract Non-Performance</b>							
2.1	<b>History of Non-Performing Contracts</b>	Non-performance of a contract <sup>1</sup> did not occur as a result of contractor's default since 1 <sup>st</sup> January 2017.	Must meet requirement <sup>2</sup>	Must meet requirements	Must meet requirement <sup>2</sup>	N/A	Form CON-2
2.2	<b>Suspension Based on Execution of Bid Securing Declaration by the Employer</b>	Not under suspension based on execution of a Bid Securing Declaration.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
2.3	<b>Pending Litigation</b>	Applicant's financial position and prospective long term profitability still sound according	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

<sup>1</sup> Non performance, as decided by the Employer, shall include all contracts where (a) nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the applicant have been exhausted.

<sup>2</sup> This requirement also applies to contracts executed by the Applicant as JV member.

		to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the Applicant					
2.4	<b>Litigation History</b>	No consistent history of court/arbitral award decisions against the Applicant <sup>3</sup> since 1 <sup>st</sup> January 2017	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2
<b>3. Financial Situation and Performance</b>							
3.1	<b>Financial Capabilities</b>	<p>(i) The Applicant shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as:</p> <p><b>MK20,000,000.00-Lot 1</b>  <b>MK50,000,000.00-Lot 2</b>  <b>MK75,000,000.00-Lot 3</b></p> <p>for the subject contract(s) net of the Applicants other commitments.</p> <p>(ii) The Applicant shall undertake to urgently mobilize and carry out emergency works up to completion as described</p>	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN – 3.1, with attachments
			Must meet	Must meet	N/A	N/A	

<sup>3</sup>The Applicant shall provide accurate information on the related Application Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Applicant or any member of a joint venture may result in failure of the application.

		<p>in section 6(A) without any advance or progress payment.</p> <p>(iii) The Applicant shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.</p> <p>(iv) The audited balance sheets or, other financial statements acceptable to the Employer, for the last <b>Three (3)</b> years shall be submitted and must demonstrate the current soundness of the Applicant's financial position and indicate its prospective long-term profitability.</p>	<p>requirement</p> <p>Must meet requirement</p>	<p>requirement</p> <p>N/A</p>	<p>Must meet requirement</p>	<p>N/A</p>	
3.2	<b>Average Annual Construction Turnover</b>	<p>Minimum average annual construction turnover of:</p> <p><b>MK80Million-Lot 1</b> <b>MK125Million-Lot 2</b> <b>MK800Million-Lot 2</b></p> <p>calculated as total certified payments received for contracts in progress and/or completed within the last <b>three (3)</b> years.</p>	<p>Must meet requirement</p>	<p>Must meet requirement</p>	<p>Must meet <b>40 %</b>, (<b>forty percent</b>) of the requirement</p>	<p>Must meet <b>40 %</b>, (<b>forty percent</b>) of the requirement</p>	Form FIN – 3.2
<b>4. Experience</b>							
4.1 (a)	<b>General Construction Experience</b>	<p>Experience under construction contracts in the role of prime</p>	<p>Must meet requirement</p>	<p>N/A</p>	<p>Must meet requirement</p>	<p>N/A</p>	Form EXP – 4.1

		contractor, JV member, sub-contractor, or management contractor for at least the last <b>five</b> years, starting <b>1<sup>st</sup> January, 2017</b>					
4.2 (a)	<b>Specific Construction &amp; Contract Management Experience</b>	(i) A minimum number of similar <sup>4</sup> contracts specified below that have been satisfactorily and substantially <sup>5</sup> completed as a prime contractor, joint venture member <sup>6</sup> , management contractor or sub-contractor <sup>6</sup> between <b>1<sup>st</sup> January 2015</b> and application submission deadline: (i) <b>2</b> contracts, each of minimum value of  <b>MK40 Million-Lot 1</b> <b>MK125Million-Lot 2</b> <b>MK600Million-Lot 3</b>	Must meet requirement	Must meet requirement <sup>7</sup>	N/A	N/A	Form EXP 4.2(a)
4.2 (b)		For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management	Must meet requirements	Must meet requirements	N/A	N/A	Form EXP-4.2 (b)

<sup>4</sup>The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VI, Scope of Works. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

<sup>5</sup> Substantial completion shall be based on 80% or more works completed under the contract.

<sup>6</sup> For contracts under which the Applicant participated as a joint venture member or sub-contractor, only the Applicant's share, by value, shall be considered to meet this requirement.

<sup>7</sup>In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

		contractor or sub-contractor <sup>6</sup> between <b>1<sup>st</sup> January 2017</b> and application submission deadline, a minimum construction experience in the following key activities successfully completed: <b><i>Double Chip Seal or Cape Seal or Asphalt of 50,000m<sup>2</sup> per year and concrete works of 300m<sup>3</sup> per year</i></b>					
<b>5. Essential Equipment</b>							
5.1	<b>Proposals for the timely acquisition (own, lease, hire, etc.) of the following essential equipment</b>	Dozer, Excavator, Front End Loader, Water Pump, Grader, Roller, Water Bowser, Tipper, Flat lorry, Concrete Mixer, Concrete Vibrator	Must meet requirement	Must meet requirement	N/A	N/A	Form EQP - 5.1

*Note to Applicants: This Application Submission Form should be on the letterhead of the Applicant and should be signed by a person with the proper authority to sign documents that are binding on the Applicant.*

### Application Submission Form

Date: *[insert day, month, and year]*  
Procurement Reference No:

To: *[insert full name of Employer]*

We, the undersigned, apply to be prequalified for the referenced NCB and declare that:

- (a) We have examined and have no reservations to the Prequalification Document, including Addendum(s) No(s)., issued in accordance with Instructions to Applicants *[insert the number and issuing date of each addendum]*.
- (b) We have no conflict of interest in accordance with the Public Procurement Regulations of the Government of Malawi;
- (c) We meet the eligibility requirements as stated ITA 2, we have not been suspended by the Employer based on execution of a Bid Securing Declaration in accordance with ITA 2.3;
- (d) We declare that the following commissions, gratuities, or fees have been paid or are to be paid with respect to the prequalification process, the corresponding bidding process or execution of the Contract:

<u>Name of Recipient</u>	<u>Address</u>	<u>Reason</u>	<u>Amount</u>
<i>[insert full name for each occurrence]</i>	<i>[insert street/number/city/country]</i>	<i>[indicate reason]</i>	<i>[specify amount, currency, value, exchange rate and MK equivalent]</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

*[If no payments are made or promised, add the following statement: "No commissions or gratuities have been or are to be paid by us to agents or any third party relating to this Application"]*

- (f) We understand that you may cancel the prequalification process at any time and that you are neither bound to accept any Application that you may receive nor to invite the prequalified Applicants to bid for the contract subject of this prequalification process, without incurring any liability to the Applicants.



- (g) All information, statements and description contained in the Application are in all respect true, correct and complete to the best of our knowledge and belief.

Signed *[insert signature(s) of an authorized representative(s) of the Applicant]*

Name *[insert full name of person signing the Application]*

In the capacity of *[insert capacity of person signing the Application]*

Duly authorized to sign the Application for and on behalf of:

Applicant's Name *[insert full name of Applicant or the name of the JV]*

Address *[insert street number/town or city/country address]*

Dated on *[insert day number]* day of *[insert month]*, *[insert year]*

[For an a joint venture, either all members shall sign or only the authorized representative, in which case the power of attorney to sign on behalf of all members shall be attached]

*Note to Applicants: The information to be filled in by Applicants in the following pages will only be used for purposes of prequalification or for verification of pre-qualification. Attach additional pages as necessary. Applicant should fill in updated information only.*

## Form ELI -1.1

# Applicant Information Form

Date: *[insert day, month, year]*  
 Prequalification For Urgent And Emergency Works 2022-2023  
 Page *[insert page number]* of *[insert total number]* pages

Applicant's name <i>[insert full name]</i>
In case of Joint Venture (JV), name of each member: <i>[insert full name of each member in JV]</i>
Applicant's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Applicant's actual or intended year of incorporation: <i>[indicate year of Constitution]</i>
Applicant's legal address [in country of registration]: <i>[insert street/ number/ town or city/ country]</i>
Applicant's authorized representative information Name: <i>[insert full name]</i> Address: <i>[insert street/ number/ town or city/ country]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers, including country and city codes]</i> E-mail address: <i>[indicate e-mail address]</i>
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above. <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement. <input type="checkbox"/> In case of Government-owned enterprise or institution, documents establishing: <ul style="list-style-type: none"> <li>• Legal and financial autonomy</li> <li>• Operation under commercial law</li> <li>• Establishing that the Applicant is not dependent agency of the Employer</li> </ul>
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

## Form ELI -1.2

### Applicant's JV Information Form

*[The following form is additional to Form ELI – 1.1., and shall be completed to provide information relating to each JV member (in case the Applicant is a JV) as well as any Specialized Sub-contractor proposed to be used by the Applicant for any part of the Contract resulting from this prequalification]*

Date: *[insert day, month, year]*  
 Prequalification For Urgent And Emergency Works 2022-2023  
 Page *[insert page number]* of *[insert total number]* pages

Applicant name: <i>[insert full name]</i>
Applicant's JV Member's name: <i>[insert full name of Applicant's JV Member]</i>
Applicant's JV Member's country of registration: <i>[indicate country of registration]</i>
Applicant JV Member's year of constitution: <i>[indicate year of constitution]</i>
Applicant JV Member's legal address in country of constitution: <i>[insert street/ number/ town or city/ country]</i>
Applicant JV Member's authorized representative information Name: <i>[insert full name]</i> Address: <i>[insert street/ number/ town or city/ country]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers, including country and city codes]</i> E-mail address: <i>[indicate e-mail address]</i>
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. <input type="checkbox"/> In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

## Form CON – 2

### Historical Contract Non-Performance, Pending Litigation and Litigation History

*[The following table shall be filled in for the Applicant and for each member of a Joint Venture]*

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

Date: *[insert day, month, year]*

Prequalification For Urgent And Emergency Works 2022-2023

Page *[insert page number]* of *[insert total number]* pages

Non-Performed Contracts in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> Contract non-performance did not occur since 1 <sup>st</sup> January 2015 specified in Section III, Qualification Criteria.			
<input type="checkbox"/> Contract(s) not performed since 1 <sup>st</sup> January 2015 specified in Section III, Qualification Criteria and Requirements.			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount MK
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for non performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Qualification Criteria and Requirements as indicated below.			

<b>Year of dispute</b>	<b>Amount in dispute (currency)</b>	<b>Contract Identification</b>	<b>Total Contract Amount MK</b>
<i>[insert year]</i>	<i>[insert amount]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i>  Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>
<input type="checkbox"/> No pending litigation in accordance with Section III, Qualification Criteria and Requirements. <input type="checkbox"/> Pending litigation in accordance with Section III, Qualification Criteria and Requirements as indicated below.			
<b>Year of award</b>	<b>Outcome as percentage of Net Worth</b>	<b>Contract Identification</b>	<b>Total Contract Amount MK</b>
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i>  Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i>	<i>[insert amount]</i>

## Form FIN – 3.1

### Financial Situation and Performance

*[The following table shall be filled in for the Applicant and for each member of a Joint Venture]*

Applicant's Name: *[insert full name]*  
 Date: *[insert day, month, year]*  
 Joint Venture Member Name: *[insert full name]*  
 Prequalification For Urgent And Emergency Works 2022-2023  
 Page *[insert page number]* of *[insert total number]* pages

#### 1. Financial data

Type of Financial information in MK	Historic information for previous three years, (amount in MK)		
	Year 1	Year 2	Year 3
Statement of Financial Position (Information from Balance Sheet)			
Total Assets (TA)			
Total Liabilities (TL)			
Total Equity/Net Worth (NW)			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital (WC)			
Information from Income Statement			
Total Revenue (TR)			
Profits Before Taxes (PBT)			
Cash Flow Information			
Cash Flow from Operating Activities			

#### 2. Sources of Finance

*[The following table shall be filled in for the Applicant and all parties combined in case of a Joint Venture]*

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount MK
1		
2		
3		

#### 3. Financial documents

The Applicant and its parties shall provide copies of financial statements for *three* years pursuant Section III, Qualifications Criteria and Requirements. The financial statements shall:

- (a) reflect the financial situation of the Applicant or in case of JV member, and not an affiliated entity (such as parent company or group member).
  - (b) be independently audited or certified in accordance with local legislation.
  - (c) be complete, including all notes to the financial statements.
  - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements<sup>8</sup> for the *three* years required above; and complying with the requirements

#### **4. Undertaking by Applicant to work without advance or progress payment**

The Applicant shall undertake to urgently mobilize and carry out emergency works up to completion as described in section 6(A) without any advance or progress payment.

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<sup>8</sup> If the most recent set of financial statements is for a period earlier than 12 months from the date of application, the reason for this should be justified.



**Form FIN - 3.2****Average Annual Construction Turnover**

*[The following table shall be filled in for the Applicant and for each member of a Joint Venture]*

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

Prequalification For Urgent And Emergency Works 2022-2023

Page *[insert page number]* of *[insert total number]* pages

<b>Annual turnover data (construction only)</b>		
<b>Year</b>	<b>Amount Currency</b>	<b>MK</b>
<i>[indicate calendar year]</i>	<i>[insert amount and indicate currency]</i>	
Average Annual Construction Turnover *		

\* Total amount for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements.

## Form EXP - 4.1

### General Construction Experience

*[The following table shall be filled in for the Applicant and in the case of a JV Applicant, each Member]*

Applicant's Name: *[insert full name]*  
 Date: *[insert day, month, year]*  
 Joint Venture Member Name: *[insert full name]*  
 Prequalification For Urgent And Emergency Works 2022-2022  
 Page *[insert page number]* of *[insert total number]* pages

*[Identify contracts that demonstrate continuous construction work over the past five years pursuant to Section III, Qualification Criteria and Requirements. List contracts chronologically, according to their commencement (starting) dates.]*

Starting Year	Ending Year	Contract Identification	Role of Applicant
<i>[indicate year]</i>	<i>[indicate year]</i>	Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and MK equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and MK equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in currency, mention currency used, exchange rate and MK equivalent*]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Prime Contractor" or "JV Member" or "Sub-contractor" or "Management Contractor"]</i>

## Form EQP – 5.1

### Timely Acquisition of Essential Equipment

Applicant's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member Name: *[insert full name]*

Prequalification For Urgent And Emergency Works 2022-2023

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Propose timely acquisition of essential equipment in accordance with Section III, Qualification Criteria and Requirements.

No.	Equipment	Make/Model	Condition	Source
1				
2				
3				

## Section 5. Eligible Countries

All countries are eligible except countries subject to the following provisions.

A country shall not be eligible if:

- (a) as a matter of law or official regulation, the Government of the Republic of Malawi prohibits commercial relations with that country, provided that the Government is satisfied that such exclusion does not preclude effective competition for the provision of the works required; or
- (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Government of the Republic of Malawi prohibits any procurement of works from that country or any payments to persons or entities in that country.

# Section 6: Work Requirements

# **Section 6: Work Requirements**

## **Contents**

- 6 (A) Scope of Works
- 6 (B) Drawings (To be provided as and when required)
- 6 (C) Technical Specifications
- 6 (D) Supplementary Information

## **SECTION 6A: Scope of Works**

The scope of works under this contract covers all types emergency road and bridge construction works across Malawi which include but not limited to:

- i. Re-instatement of washed away bridges of all types
- ii. Launching of bailey bridges
- iii. Backfilling and reinstatement of cut sections of the road of all types

## **SECTION 6B: Drawings**

(To be provided as and when required)



**SECTION 6C: TECHNICAL SPECIFICATIONS**

## **6 C. TECHNICAL SPECIFICATIONS**

The Technical Specifications to be used for this Contract contain two Parts as follows:

### **PART A: STANDARD SPECIFICATIONS**

The Standard Specifications for this contract shall be the Southern African Transport Co-ordination Committee (SATCC) Draft Standard Specifications for Road and Bridge Works, September 1998, reprinted July 2001.

This Document, which forms Part of the Tender and Contract documentation, is printed by the SATCC in Maputo in Mozambique and all Tenderers should acquire their own copy of this standard document at their own cost. Tenderers should note that whilst this document is similar to the "Standard Specifications for Road and Bridge Works for State Road Authorities", (otherwise known as the COLTO specification, prepared by the South African Committee of Land Transport Officials), there are significant differences in some items.

### **PART B: PARTICULAR SPECIFICATIONS**

THE PARTICULAR SPECIFICATIONS FORM AN INTEGRAL PART OF THE TENDER AND CONTRACT DOCUMENTATION AND SUPPLEMENT THE STANDARD SPECIFICATIONS.

In the event of any discrepancy with a part or parts of the Standard Specifications, the Bill of Quantities or the Drawings, the Particular Specifications shall take precedence..

The Particular Specifications are contained in the pages that follow.

All references to Project Specifications in the Standard Specifications, shall mean Particular Specifications for this contract.

The terms "Project Specifications" and "Particular Specifications" shall be interpreted to have the exact same meaning. All works shall be measured as described in the Bill of Quantities.

The Particular Specifications, shall supplement and modify, delete and/or add to the Standard Specifications, as stated. Where any Clause, paragraph or sub-paragraph in the Standard Specifications is supplemented by one of the following paragraphs from the Particular Specifications, the provisions of such Clause, paragraph or sub-paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto, deleted, or superseded by any of the following paragraphs in the Particular Specification, the provisions of such Clause, paragraph, or sub-paragraph in the Standard Specification, not so amended, deleted or superseded shall remain in effect.

**Clauses and pay items modified by the Particular Specifications are numbered "PS" followed by a number corresponding to the number of the relevant clause or pay item in the Standard Specifications. New clauses and pay items not covered in the Standard Specifications are also designated "PS" followed by a number. These numbers follow on from the last clause or payment item number used in the relevant section of the Standard Specifications.**

## PART B: PARTICULAR SPECIFICATIONS

### SERIES 1000:GENERAL

#### Section 1100:Definitions and Terms

✓ **Change Clause 1126 as follows:**

#### PS 1126 Road Prism

The areas indicated in Figures 1 and 2 in the SATCC Draft Standard Specifications for Road and Bridge Works issued by the SATCC in September 1998 (reprinted July 2001).

✓ **Add the following definitions:**

#### PS 1142 Routine Term Maintenance Contract

This is a contract that operates on the basis of a Contractor being appointed for a fixed period of time (typically 1 year with possible extension) to undertake a variety of maintenance tasks, as-and-when the need arises and the requirement to do any work is instructed by means of a Works Order issued by the Procuring Entity.

#### PS 1143 – Additional Routine Term Maintenance (RTM) Definitions)

The following table provides additional definitions for the routine term maintenance works.

Term	Meaning
AASHTO	American Association of State Highway and Transportation Officials.
ASTM	American Society for Testing Materials.
Binder	Viscous adhesive (normally bitumen based) used to bind aggregates together and provide waterproofing.
Bitumen	Petroleum based binder formed as residue following the distillation of crude oil. Comes in various grades depending on viscosity and volatility.
Blading	The activity of cutting the road surface using a motor grader.
Bleeding	Excess free binder on the surface of the pavement.
Block Cracking	Interconnected cracks in a bituminous road surface forming a series of large polygons usually with sharp corners or angles.
BS	British Standard.
California Bearing Ratio (CBR)	A standard test (ASTM D1883) which assigns a relative support / strength value based on resistance force to a penetrating plunger. Percentages quoted are relative to a standard compacted crushed stone. Samples are pre-soaked for at least 4 days, unless otherwise stated.
Camber	The uniformly shaped slope of a road lane necessary to shed water off the road.
Camber board	'Homemade' apparatus for checking cross-fall of road or shoulder camber. Has a level upper surface used with a spirit level.
Cold-mix	A bitumen / aggregate asphalt, made with cutback bitumen to allow workability at ambient ('cold') temperatures. Used mainly for patch / pothole repair.
Compaction Fraction	A standard test for pipe bedding which compares un-compacted and compacted volumes of material using a specified procedure.

Term	Meaning
Cross-Fall	The gradient of pavement camber measured transversely across the road. Usually falls to either side of the centre line but may slope continuously across the road on bends ('super-elevation').
Crown	The highest point of the cross-section of the road, usually the centre line.
Cure	A term applied to the hardening of a bitumen cutback or emulsion resulting from the evaporation of volatile 'cutter' or water.
Cut-back (bitumen)	A blend of bitumen and volatile 'cutter' (normally a mixture of kerosene & diesel). Material is graded in terms of viscosity and curing rate (SC, MC & RC: 'slow', 'medium' and 'rapid' curing). Viscosity increases with size of number (e.g. MC 3000).
Emulsion (bitumen)	A mixture of water and bitumen (held in fine suspension). Used mainly for surface dressing (treatment), patching material and as a tack coat. Can be used cold.
Kettle	Small mobile heater unit for raising the temperature of bitumen binders. Often fitted with hand lance and discharge pump / hose.
Length - Person	A person assigned to perform a prioritised list of labour based routine maintenance operations to defined sections of a road.
Nominal aggregate size	Normally the 2 <sup>nd</sup> largest sieve size in a quoted grading. Usually 100% must pass the largest, with a retained percentage required on the 2 <sup>nd</sup> largest.
Overlay	A uniform thickness layer of asphalt applied over an existing road, largely for strengthening the pavement.
Patching	The localised application of bituminous surfacing to an existing bituminous surface, to fill depressions or seal a defect.
Periodic Maintenance	Maintenance works that are occasionally required at intervals of several years. Normally relatively costly, large scale works requiring specialist equipment and skilled resources.
Plasticity Index	Abbreviated 'PI'. The difference between Liquid and Plastic Limits of the 'fines' content of an aggregate material – serves as an indicator of the 'clay' content of the fines.
Prime coat	A penetrating, liquid application of heated bitumen (often a cutback) applied to an unbound aggregate pavement layer (usually base course) to provide a bond between unbound aggregate and bituminous seal.
Rehabilitation	A major intervention to an existing road aimed at significantly extending its design life.
SABS	South African Bureau of Standards.
SATCC	Southern African Transport and Communications Commission.
Spoil	Material originating from the maintenance / construction operations which is not re-utilised ('waste').
Weep hole	A hole in a wall / structure which allows the passage of water for the purpose of preventing the build-up of water pressure.
Windrow	A long, narrow mound or bund of material formed by a motor-grader.
Works Order	An instruction issued by the Employer or his Representative which directs the Contractor to carry out Works or perform some function or obligation under the Contract.

**SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS**

✓ ***Add to following to Clause 1201:***

**PS 1201 SCOPE**

The Section also covers matters which in particular relate to the Routine Term Maintenance (RTM) contract (**From PS 1230 to PS 1239**). The RTM contract operates on the basis of a Contractor being appointed for a fixed period of time (typically 1 year with possible extension) to undertake a variety of maintenance tasks, as-and-when the need arises and the requirement to do any work is instructed by means of a Works Order issued by the Procuring Entity.

The types of work covered through this Routine Term Maintenance (RTM) approach are limited to activities that are required regularly to keep the Malawian road network in good and fair conditions and for which the scope of the work is reasonably predictable. Contractor's prices are required to be applicable regardless of where, when and in what quantity the work arises on the road network. This makes the approach quite different from a 'works style' contract where the rates take careful account of site-specific information and considerations. For these reasons RTM is particularly suitable for routine road maintenance works. Conversely, most 'periodic maintenance' activities (e.g. regravelling or resealing) are planned in advance. Here, the presentation to bidders of detailed site information ensures that competitive bids are encouraged. Making this distinction also avoids situations where relatively short sections of periodic maintenance can rapidly exhaust funds set aside for continuous routine tasks. For this reason separate budget heads for routine term maintenance (RTM) and periodic activity contracts are normal.

Dayworks are included in RTM contracts to facilitate 'emergency' works and also those of unusual requirements. Finally, an item for 'Length-persons' has been incorporated and will be particularly useful for instances where a road section already brought to a good standard requires preserving as such by continuous, minor attention.

**PS1204: PROGRAMME OF WORK**

✓ ***Replace the first paragraph with the following:***

**(a) APPROVED PROGRAMME**

The contractor shall submit his programme of work, within the time stated in the Particular Conditions of Contract, to the Engineer for approval. The Contractor shall ensure that he has at his disposal adequate staff with the necessary expertise to develop and maintain the network programme for the duration of the contract and to provide the information required by the Engineer as specified hereafter.

The programme shall be in a bar chart (Gantt chart) or any other time-activity format acceptable to the Engineer and shall clearly show:

- (1) The proposed rate of progress in order to complete the works within the required period as tendered, showing the various activities, their duration and proposed resources (major plant and labour) for each element of the works. Sufficient details shall be provided to enable the Engineer to be able to assess construction progress. All activities, including establishment on site, trimming and finishing and the completion of all minor ancillary works are to be included in the programme.
- (2) The sequence of activities and any dependencies (time or resource related) between them; the critical path activities; the amount of slack time for non-critical activities;
- (3) Key dates in respect of work to be carried out, or information, etc., to be provided, by others.
- (4) The anticipated value of work to be done during each month and any
- (5) Other information specifically required by the Engineer.

When drawing up his programme, the Contractor shall, take into consideration:

- (1) Testing and approval process of materials and works
- (2) Expected weather conditions and their effects.
- (3) Known physical conditions or artificial obstructions.
- (4) The accommodation and safeguarding of public traffic.
- (5) Dealing with, altering and installing services.
- (6) Expropriation and all other actions required in terms of this contract.

The following details shall be submitted together with the programme.

- (1) the number of working hours per day, working days per week, assumed holiday or shut-down periods on which the programme is based.
- (2) The overall labour and major plant resources on which the programme is based.
- (3) The detailed traffic accommodation proposals on which the programme is based (road or lane closures, lengths of sections to be worked, timing etc).
- (4) The rate of production for major works components such as layer works, subbase, base, surfacing, etc (units per day / hour) on which the programmed time for carrying out the work is based.

The Contractor shall base his initial programme of work on the scope of the work as described in the Particular Specifications. This programme shall be reviewed on a regular basis by the Contractor in accordance with changing circumstances, delays and amendments to the work ordered by the Engineer as a result of further examinations made by him.

Minor revisions to the approved programme may be introduced from time to time by mutual agreement between the Contractor and the Engineer. Should the Engineer believe that a major revision of the programme is required, the Contractor will be notified in writing and a revised programme shall be submitted within two weeks of receipt of such notification.

It should be noted that it is in the Contractor's interest to provide a comprehensive programme giving as much information as possible about the times allowed for the various activities as well as resource or other limitations affecting the programme, since the approved programme may be used to evaluate any claims in terms of the General Conditions of Contract for extensions of time.

## **(b) REPORTING**

The Contractor shall submit to the Engineer, at least three working days before each monthly site meeting copies of the following:

- (i) The construction programme with progress charts and programme graphs updated to reflect the actual progress to date.
  - (ii) A summary of progress on site over the month preceding the site meeting. The report shall be in the form of a detailed narrative to the construction programme.
  - (iii) Details of activities running late, indicating what steps have been or will be taken to ensure that the work is completed within the specified time.
  - (iv) A report on all labour, plant and materials on site, according to sub-clauses PCC 4.21 and PCC 6.10 of the Particular Conditions.

## **PS1206 THE SETTING-OUT OF WORK AND PROTECTION OF BEACONS**

***Add the following at the beginning of this clause:***

"Upon issuance of the order to commence, the Engineer shall issue to the Contractor a set of setting out co-ordinates and the Contractor shall set out the works accurately and shall be responsible for any error(s) which may occur in such setting out and shall amend and rectify such error(s) at his own expense.

In addition to setting out data, the Engineer shall issue to the Contractor co-ordinates of Benchmarks and control points for survey control. The Contractor shall, prior to using the benchmarks and control points, check their accuracy and confirm in writing to the Engineer that the information is sufficient for setting out the works accurately. Should discrepancies be found in the information issued by the Engineer, the Contractor shall afford the Engineer the opportunity to investigate the discrepancies and correct them within a period of seven calendar days. The Contractor shall programme his work in such a way that this requirement will not impact negatively on the rate of progress of the works, and no claim for extension of time will be entered pursuant to this requirement.

The Contractor may if he deems it necessary, establish additional control points. Any additional control points shall consist of steel pegs set in concrete at positions not likely to be affected by

the works. The coordinates of the established points shall be issued to the Engineer in the form 'Name,Y,X,Z'"

***Replace the second sentence in the second paragraph with:***

"In case that the reference beacons along the contract sections have been either destroyed, displaced or damaged before the handing over of the site to the contractor, then the Engineer will arrange to have new reference benchmarks reinstated by the Contractor at 500 m intervals and the cost of the re establishment work will be paid under Section 1800 (Day Works) of the Particular Specifications".

**PS1207: NOTICES, SIGNS AND ADVERTISEMENTS**

✓ ***Add the following to the second paragraph:***

"See Section 6B in Volume I of this document for details of the Notice Boards. These boards shall remain in position until the end of the maintenance period, and shall then be removed without delay.

**PS 1208: MEASUREMENTS**

***Add the following clause to 1208 ( c ):***

"Cross-sectional levels shall be taken at not greater than 20-metre intervals jointly from the Surveyor of the Engineer and of the Contractor and agreed between the Contractor and the Engineer before any clearing, grubbing, stripping of topsoil or earthworks are undertaken and at any stage thereafter that the Engineer may require.

Cross sections shall be taken at the same interval as the setting out. The cross sections shall cover the entire road reserve and shall contain a minimum of seven points consisting of centre point and three equally spaced points on either side of the centre point. The points shall be in line and perpendicular to the centre line. The results of the survey shall be certified by the Engineer as soon as possible"

**PS1209 PAYMENT**

**(b) Rates to be inclusive**

✓ ***Replace "period of maintenance" in the last line of the first paragraph with "Defects Liability Period"***

**(c) The meanings of certain phrases in payment clauses**

**(i) Procuring and furnishing (materials)**

✓ ***Insert "duties" in the sixth line of sub-clause after "all tax"***



**PS 1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS**

- ✓ **Add the following to this clause:**

“Opening of a section of road to public traffic **before** the requirements of Clause 1210 have been met, if such opening should be allowed by the Engineer, shall not entitle the Contractor to the issue of a Practical Completion Certificate for the road section in question.”

**PS 1214: Contractor’s Activities in Respect of Property Outside the Road Reserve and of Services Moved, Damaged or Altered**

- ✓ **Add the following clause 1214 (f):**

“Any of the Contractor’s activities outside the Site or outside the road reserve on property not belonging to the Employer shall be exclusively at the Contractor’s own risk, cost and responsibility.”

**PS1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL**

- ✓ Method (ii) (Critical – path method) will be used for determining the extension of time due to inclement weather.
- ✓ Add the following table B1215/1 at the end of section on Method (ii) (Critical Path)
- ✓ Abnormal rain as shown in table B1215/1 shall be proven by rainfall records for previous five years (prior to contract start date) from Metrological Department. For the purposes of calculating an extension of time due to climatic conditions the number of days in excess of the number of working days anticipated to be lost due to climatic conditions as shown in Table B1215/1 shall be taken into account:

B 1215/1: Anticipation days (“n” working days) lost due to climatic conditions:

Month	Rain Days		
	Northern Region	Central Region	Southern Region
January	6	6	6
February	6	6	6
March	4	4	4
April	2	2	2
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	2	2	2
<b>Total</b>	<b>22</b>	<b>22</b>	<b>22</b>

The Engineer will certify a day lost due to climatic conditions only if:

- (a) no work on the critical path according to the latest approved programme for completion of the works could be carried out during that specific working day or if
- (b) only 30% or less of the work force and plant planned for that specific day, could work.

The extension of time as a result of climatic conditions will be calculated monthly as being equal to the number of days certified by the Engineer as lost due to climatic conditions, less the number of days in Table B1215/1. The total extension of time for the contract will be the sum of the monthly extensions. If the total extension of time for the Contract is negative it will be disregarded when determining the completion date(s)."

**Add the following new clauses:**

**PS 1230: Road Network Inspections**

Inspections are required to constantly watch and monitor the condition of the road network so that necessary maintenance works can be identified in a timely manner. The Contractor is required to inspect all road asset features on the Network and to report the occurrence of problems and other areas of deterioration to the Employer’s Representative in an agreed format, at monthly intervals on an agreed monthly date. The Employer’s Representative will also be monitoring the Network, but he may also utilise reports from the Contractor as one key trigger for detailed inspections.

Emergencies shall be reported immediately they become known. Inspection requirements are detailed in the table below:

**All costs incurred by the Contractor in performing these obligations should be covered by a particular pay item in the bills of quantities.**

**Table 1: Inspection Requirements**

Road Class	Asset Item	Frequency of Inspection	Defects (Including location details)
Paved ‘M’ Roads	Pavement	Weekly	Occurrence and size of any pothole. Extent (length and width) of any edge breaks. Extent of any surface cracking.
	Drainage Ditches	Weekly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All Other Paved Roads	Pavement	Fortnightly	Occurrence and size of any pothole. Extent (length and width) of any edge breaks. Extent of any surface cracking.

Road Class	Asset Item	Frequency of Inspection	Defects (Including location details)
	Drainage Ditches	Fortnightly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All Unpaved 'M', 'S', 'T' Roads	Pavement	Fortnightly	Corrugations or ruts in the surface. Soft or eroded sections. Inadequate thickness of gravel. Loss of road camber.
	Drainage Ditches	Fortnightly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Monthly and Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.
All District Roads	Pavement	Monthly	Any road blockage or physical feature causing obstruction. Soft or eroded sections.
	Drainage Ditches	Monthly	Height and extent of vegetation growth. Other blockages.
	Culverts / Structure	Start and Finish of wet season	Nature and extent of any siltation (% of bore obstructed) Description of any structural defect.

### PS 1231 - Emergency Works

In the case of emergency situations; the contractor who is present on a particular part of the road network on the basis of the routine term maintenance contract will be instructed to carry out the necessary emergency works. The speed and efficiency with which problems can be dealt with is an important feature of Routine Term Maintenance (RTM) contracts. Because of the unpredictable and urgent nature of some emergency works they are normally carried out on the basis of 'Dayworks'.

### PS 1232 - Traffic Control

In the case of RTM contracts; traffic control shall be carried out in line with Section 1500 of these technical specifications .

### PS 1233 Safety

The Contractor shall pay due regard to the safety of his workers and the travelling public. Any obstructions unavoidably left within the highway shall be clearly marked and have advance warning markers and signs in accordance with the specification.

All equipment and vehicles shall be in a good, safe condition. All intended guards and safety features originally provided by the manufacturer shall be in place and operational. Vehicles operating in the highway shall be roadworthy with working lights and braking system.

The Contractor shall pay particular attention to the safety of operators and all persons in the vicinity of heated bitumen works, and fuel transfer / storage operations. Fire extinguishers must be available and a prohibition of smoking must be actively enforced. The temperature of heated materials shall be measured and controlled to prevent overheating.

The Contractor shall have first aid facilities in place to attend to personal injuries that may result from accidents occurring within the work Site.

### **PS 1234 - Protection of the Environment**

The Contractor shall take all reasonable precautions to avoid or limit environmental impact. In addition to normal good construction and maintenance practice; it is expected from the Contractor to strictly follow the requirements of the Environmental Guidelines and/or project specific Environmental Management Plans produced by the Roads Authority. Any non-compliance with these requirements which could have been avoided in the opinion of the Engineer may be considered sufficient grounds for withholding payment of part or all of the amounts to be paid for the pay item PS13.05

### **PS 1235 - Length-Person Activities**

The activities comprise providing, supervising and managing teams of 'length-persons' to perform a prioritised list of labour-based routine maintenance operations to sections of road, its shoulders, verges and drainage features. The Contractor is responsible for keeping the length-persons correctly equipped at all times. The activity assigns a defined road length to each length-person who conducts a number of routine maintenance activities on that section.

Some contracts require that a high level of precedence be attached to the performance of routine maintenance tasks by Length-persons managed by the main Contractor. In this regard it should be anticipated that the assignment of Length-persons will be required wherever practicable.

In all cases where length-persons have been assigned pursuant to a Works Order; the performance of associated routine maintenance activities shall always be measured as included under pay item

Length-persons will normally be assigned on the basis of one individual worker per 2 kilometre of road. This spacing may be adjusted and fixed by the Employer, following discussions with the Contractor, where either party considers the workload to be inappropriate based on field observations.

The use of length-persons will yield best results when applied to roads that are already in a good condition and / or have recently received a programme of periodic or routine maintenance to bring them into a maintainable condition.

The primary objective of the length-person is to carry out operations to preserve a road in a good condition. Generally the daily time inputs of length-persons will be as necessary to achieve the specified maintenance outputs ('performance standards') and will be adjusted accordingly by the Contractor.

However, where the road is initially in a poor condition, the Employer shall agree with the Contractor in advance of works starting, a period for enhancing the condition of the road when the activities and assigned work length intervals may be temporarily adjusted. In these cases performance targets will be set on the basis that each length person will provide work equivalent to an average of 40 hours effective labour per week.

Performance is controlled through the application of liquidated damages as specified in the Contract. This is on the basis of fixed deductions per kilometre for cases where in the opinion of the Employer's Representative the works are not adequately performed, and / or the length-person is not properly equipped.

Length-persons are categorised separately depending on whether they are assigned to rural or designated urban areas.

**PS 1236 Quarries, Borrow Areas and Dumps**

**The Contractor is responsible for identifying all quarry and borrow areas that will yield materials** in sufficient quantity and quality to meet all the requirements of the Specification. The Employer may provide reasonable assistance in securing consents and licenses, however the Contractor shall be responsible for any compensation, royalty and any other costs associated with acquiring rights and operating the site.

The Contractor is similarly responsible for identifying and acquiring rights to use all dump sites and for their subsequent restoration.

The exploitation of all the identified borrow areas, quarries, and dumps (tips) must be approved by the Employer. Section 3100 provides general requirements on the operation and restoration of such areas.

**PS 1237 Distinction of Earth and Gravel Roads**

The relevant maintenance works for earth and gravel roads are described in different sections of the Technical Specifications. Section 3300 is applicable for maintenance works on earth roads which consist of unimproved earth soil. Section 3400 is applicable for maintenance works on gravel roads which have defined engineering properties and require more effort to cut, trim and compact as well as in sourcing, selecting, excavating and transporting the gravel.

**PS 1238 - Target Serviceability Standards**

The following schedule of intervention levels should be referred to by the Contractor when predicting the likely frequency, pattern and distribution of required maintenance works over the assigned Network. It is not applicable for works undertaken by Length-Person. It is for guidance purposes only. The Employer intends to use a similar schedule to guide the generation of Works Orders. The actual coverage of work will however be based on allocated project funds following the system of prioritisation described in PS 1239.

As an example, in the case of a single pothole appearing on a rural stretch of Main paved road, the Contractor can expect to be instructed to carry out a repair as soon as it reaches 250mm diameter in size. Upon receiving the instruction through a Works Order he would have to complete the repair within the time specified. Late completion would require the application of liquidated damages to the extent stated in the Contract.

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
<b>BITUMEN PAVED ROADS</b>				
PAVEMENT	Potholes	'M' (Rural)	No single pothole >250mm dia.	Initiate repair
		'M' (Urban)	Three (3) potholes >250mm dia. per any 250m section	Initiate repair
			No single pothole >400mm dia.	Initiate repair
		All other (Rural)	No single pothole >400mm dia.	Initiate repair
		All other (Urban)	Five (5) potholes >250mm dia. per any 250m section	Initiate repair. Defer severe cases to 'Periodic Programme'.
No single pothole >750mm dia.	Initiate repair			

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
	Edge Breaks	'M' Roads	Loss of >200mm width over a length >10m.	Initiate repair. Investigate cause – also reinstate shoulder if necessary.
		All Others	Loss of >300mm width over a length >25m.	- ditto -
PAVEMENT	Cracks >3mm width	'M' Roads	Any	Seal cracks
		All Others	Areas where >5% is affected.	Seal cracks
	Cracks <3mm width	'M' Roads	Areas where 10-20% is affected.	Apply slurry seal patch
		All Others	Areas where >20% is affected	Apply slurry seal patch
BRIDGES	Superficial deterioration	All	Based on visual assessment	Paint / repair
	Silted / blocked	All	Any significant build up	Clear
	Structural damage	All	Minor	Repair
		All	Major	Defer to Periodic Programme
PIPE CULVERTS	Silted	All	>25% of bore capacity lost	Clear following inspection before and after wet season
	Erosion	All	Affects stability of the structure / road	Repair following inspection following wet season
DRAINS	Silted / overtopping	All	Any observed overtopping during rains, or >25% loss of depth.	Repair following inspection before and after wet season
	Erosion	All	Any rapid worsening of condition.	Repair following inspection before and after wet season
SHOULDERS	Edge Step	All 'M' roads	>50mm step on a section >10m	Reconstruct shoulder
		All Others	>75mm step on a section >25m	Reconstruct shoulder
	Erosion	All	Any deteriorating condition threatening stability	Repair
SHOULDERS	High Vegetation	All	Interferes with sight lines or pedestrian access	Cut and clear
ROAD FURNITURE	Damaged signs	All	Function impaired	Replace
	Omitted signs	All	Urgent potential danger	Install new sign
	Faded road markings	All	>25% of length ceases to be distinguishable	Repaint
SAFETY	Obstructions	All	Any avoidable temporary danger	Urgent attention (usually 'dayworks')

ELEMENT	DEFECT	ROAD GROUP	EXTENT (MAX)	INTERVENTION
	Slips and other hazards	All	Any assessed potential to restrict access	Clear and / or carry out stabilisation works
<b>UNPAVED ROADS</b>				
Note: Due to the wide range of road conditions and traffic demand on the unpaved network, the majority of intervention levels should be determined on a case-by-case basis with the objective of maintaining reliable, year-round access.				
GRAVEL SURFACE	Corrugations and / or eroded surface	All (>250 vpd)	Traffic speed significantly impaired	Grade typically 4-5 times per year
		All (50 - 250 vpd)	Uncomfortable to travel	Grade typically 2-4 times per year
		All (<50 vpd)	Ensure safe reliable access	Grade typically 1-2 times per year
	Inadequate gravel thickness	All	<50mm thick on sections <250m long	Spot repair or localised re-gravelling
			<50mm thick on sections >250m long	Defer to 'Period Programme' (Re-gravelling)
EARTH	Shape	All	Ensure year round reliable access	Carry out 'spot improvements'
DRAINAGE FEATURES	Standing Water	All	Standing water on road surface	Spot improvement to improve profile / camber
DRAINAGE FEATURES	Standing Water	All	Any blockage to drains / culverts	Rectify



## Part 2: Section 6: Work Requirements

### PS 1239 - System of Works Prioritisation

The following system for prioritising maintenance works has been developed in recognition that the available funding is often insufficient to perform all desired work.

The method does not apply to the assignment of Length-Persons, where the decision to put road sections under this form of maintenance is likely to be based on considerations that include the existing condition of the road and other social factors. An amount for Length-Person expenditure will normally be fixed for the Network, with the remaining budget apportioned using the prioritisation procedure.

The method relates the importance of the maintenance activity to the importance of the road. Roads are ranked according to whether they are bitumen paved and by classification category. This places strategic paved roads within urban centres at the top in order of importance with unclassified roads at the opposite extreme.

Maintenance work activities have been ranked in the following order of importance:

- ❑ **Emergency:** Urgent repairs to blocked or impassable roads including bridge redecking etc. Removal of debris and stabilisation of side slopes that threaten to close the road or endanger life etc.
- ❑ **Road Surface Repair (Bitumen):** Pothole repair, edge break repair, crack sealing etc.
- ❑ **Drainage (Routine):** Ditch and culvert clearing, shoulder trimming, repairs to erosion damage, etc.
- ❑ **Drainage (Recurrent):** Structural work (concrete, masonry, gabions etc.), new pipe culverts, subsoil drains etc.
- ❑ **Road Surface Repair (Unpaved):** Spot repairs, grading, reshaping, rehabilitating etc.
- ❑ **Other Routine Work:** Grass cutting, road signs and markings, etc.

The matrix overleaf indicates how the classification of maintenance activities is related to the classification of roads. Maintenance activities are numbered from 1 (highest priority) to 42 (lowest priority). The matrix is applied to the list of roads within the allocated Network to produce a ranked list of works. Whilst this will produce a rational and consistent order of priority it should not be considered inflexible and it is recognised that there may be special and localised reasons for making adjustments.

Proceeding down the list of prioritised works, the amount, extent and necessity for each category will be determined with the aid of Target Serviceability Standards set out in PS 1238. Works in the order of the prioritised list are then performed each month to the limit of the monthly budget allocation.

CATEGORY OF TERM MAINTENANCE ACTIVITY	PRIORITY							
	ROAD GROUP							
	Urban Paved 'M'	Rural Paved 'M'	Other Rural Paved	Other Urban Paved	Other Secondary	Other Tertiary	District	Unclassified
Emergency	1	2	3	4	5	6	10	11
Road Surface Repair (Bitumen)	7	8	9	12	13	14		
Drainage (Routine)	15	18	21	22	23	24	25	39



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Drainage (Recurrent)	16	19	26	27	28	29	30	40
Road Surface Repair (Unpaved)					31	32	33	41
Other Routine Work	17	20	34	35	36	37	38	42

Adapted from Overseas Road Note 1 and 20

Figure PS 1239 - Matrix of Maintenance Priorities

### PS 1240: LAND AVAILABLE

The land available to the Contractor free of charge shall be as follows:

- (i) The land occupied by the Permanent Works
- (ii) The land occupied by approved (usually existing and public) temporary diversion routes
- (iii) The land indicated on the Drawings or subsequently approved (usually public) by the Engineer as borrow areas for materials for pavement construction or as quarries for stone.
- (iv) The land occupied by approved (usually existing and public) access roads to (iii) above.
- (v) The land required for housing, plant-yards, workshops and offices after approval has been given for the locations and layouts of such installations.
- (vi) Subject to the approval of the Engineer, any land lying within the boundaries of the road reserve (generally 60 m in rural areas and 24 m in urban areas, total width, centred on the road centreline) may also be made available to the Contractor as working space or borrow areas for fill material. In forest plantations the width available to the Contractor will be 17.5 m on either side of the centreline.

The Contractor shall make all negotiations and pay all necessary compensation fees for any additional land he may require, including borrow areas for fill material outside the road reserve (if approved by the Engineer).

The land available to the Contractor is not necessarily the land to be cleared, which shall be indicated by the Engineer. The costs of clearing for the purpose of borrowing material, opening access roads, working space, or any other purpose or work not forming part of the Permanent Works shall be borne by the Contractor.

### PS 1241: COMPENSATION

The costs of agreed compensation for disturbance of buildings, crops, trees and relocation of fences and services within the land available free of charge shall be paid by the Contractor through the Contract and he shall be reimbursed net under the relevant items in the Bill of Quantities.

## **Part 2: Section 6: Work Requirements**

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The cost of all other compensation shall be borne by the Contractor.

The Contractor shall cooperate with the appropriate authorities and shall make all necessary arrangements to agree compensation. Construction of the Works shall not commence until compensation has been agreed.

### **PS 1242: GRAVES AND TOMBS**

Areas which contain graves and/or tombs within the Site shall be cleared by the Contractor, who shall seek assistance from the District Commissioner to obtain the consent of the Village Authorities to enter into each of such areas for the removal and reburial of corpses and remains. Compensation to the Village Authorities, if any, shall be reimbursed to the Contractor through the Contract under the relevant item in the Bill of Quantities.

### **PS 1243: COPIES OF SUPPLY ORDERS**

The Contractor shall provide the Engineer with copies of all orders for the supply of materials and goods required in connection with the Works.

### **PS 1244: DRAWINGS**

The Contractor shall be issued with two copies of each of the Drawings forming part of the Contract documents, as well as with two copies of any further drawings which may be issued by the Engineer from time to time. Any additional copies of drawings required by the Contractor may be purchased from the Engineer.”

### **PS 1245: AMENITY AND ACCESS**

The Contractor shall ensure that, in carrying out the Works, he causes no damage by plant, workmen, flooding, dust, subsidence or otherwise to property. He shall take all precautions to the satisfaction of the Engineer to ensure that such hazards are avoided and public amenity maintained. The Contractor shall make good, forthwith and at his own cost, any damages and inconveniences caused by him; failing to do which the matter shall be treated under Sub-Clause 72.1 of the General Conditions of Contract, as amended, and the Employer shall be entitled to employ and pay other persons to carry out the same, and all costs shall be recoverable from the Contractor by the Employer in accordance with such sub-clause.

### **PS 1246: DUST CONTROL**

The Contractor shall take appropriate measures to protect the Works and adjacent private and public property from dust contamination and nuisance.”

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### **PS1247 REPORTING OF ACCIDENTS**

“The Contractor shall report every accident which occurs on the road, within the extent of the Works, to the Engineer within twenty-four (24) hours of such accident, irrespective of whether such accident has a bearing on the damage to the works or to persons, property or things. The report must be in writing and must contain full particulars of the accident. Photographs of each accident shall also be included in the report. The Engineer has the right to conduct any or all enquiries, on either the Site or elsewhere, as to the causes and consequences of any such accident. The Contractor shall also keep a comprehensive record of all accidents which occur on the road and shall make such records available to the Engineer on demand.”

### **PS 1248 MAXIMISING THE USE OF LABOUR**

This Contract has been established and shall be priced as equipment based type of road works project. However, the Roads Authority is desirous of making a contribution towards reducing the level of unemployment in the project area. To this end, the following items of work have been identified as suitable for maximising the use of manual labour.

- (a) Bush clearing and the removal of roots from the surface after grubbing has been done by machine, and loading of such roots for transport to disposal areas.
- (b) Excavation and backfilling for culverts, kerbs and channels, including for removal of existing units, all to a maximum depth of 1,5m.
- (c) Excavations for guardrail posts, road sign footings, guide blocks and erosion protection works, all to a maximum depth of 1,5m.
- (d) Constructing gabion baskets and stone pitching.
- (e) Placing of kerbs and concrete edging.
- (f) Erection of road signs.
- (g) Base correction.
- (h) Back chipping during surfacing operations.
- (i) Trimming of cut slopes, and final trimming of shoulder breakpoints and fill slopes.
- (j) Trimming of open drains, side drains, inlet and outlet channels of culverts.
- (k) Trimming of catch - water drains, mitre banks and mitre drains.
- (l) Finishing off the road, road reserve and borrow pits.

Tenderers are required to submit a tender for the Works under the condition that at least the items listed above must be done using manual labour. Additional information and suggestions which will further the use of labour will be viewed in a positive light.

The Employer is also desirous of making a contribution towards equal opportunities for women, not only in respect of labour, but also throughout the human resource base of the Contract. No gender restrictions shall apply throughout the workforce. In respect of the latter and as far as is practicable, the Contractor is required to employ at least 15% of his unskilled labour force from the feminine gender. In addition, only Malawian citizens shall be employed in the Contractor's unskilled labour force.

**PS 1249 HIV/ AIDS PREVENTION PROGRAMME**

The contractor shall from the commencement of the contract through his SHE-Officer implement a generic HIV/AIDS awareness training programme for all permanent and temporary workers of the main contractor and all subcontractors. The type of training; the number of trainees and the cost of all training shall be as agreed by the Employer and the Engineer.

The training material for the structured training programme shall, as far as possible, be accredited by the Ministry of Health and Education and be delivered by suitably qualified and accredited trainers. The training programme shall be subject to the approval of the Employer and the Engineer, and the Contractor shall if so instructed by the Engineer, alter or amend the programme and course content.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the training programme, including the following:

- Transport of the selected workers( as necessary)
- Stationery and all other necessary materials.

No separate payment will be made for the training venue and everything necessary for the delivery of the training.

All Training shall take place during normal working hours and the Contractor shall make adequate allowance in his programme of work to accommodate the training to be provided. All selected workers shall be remunerated in respect of all time spent undergoing skills training. The SHE-Officer must make sure that the specified workers attend the HIV/AIDS Prevention training courses.

The Contractor shall keep comprehensive records of the training given to each worker and whenever required shall provide copies of such records to the Engineer. At the successful completion of a course, each candidate shall be issued at the Contractor's own cost with a certificate.

The Contractor shall ensure that all attendees sign an attendance register, and shall provide the Engineer with a copy of the attendance register the day after each course. The SHE-Officer shall prepare a quarterly report on the programme.

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**SECTION 1300 CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS**

**PS 1303: Payment**

**PS 13.01: The Contractor's General Obligations**

Add the following paragraph after the fourth paragraph (numbered as (iii)):

(iv) The combined total amount of pay item 13.01(a), 13.01(b) and 13.01(c) shall not exceed 20% of the tender sum

**Add the following new pay items:**

**PS 13.02: Authorised Compensation Unit**

- (a) Provisional Sum for Authorised Compensation.....Provisional Sum
- (b) Handling Cost and profit in respect of item PS 13.02(a).....%

The contractor has to enter the percentage in the rate column and then calculate the amount for pay item PS13.02 (b)

**PS13.03: Relocation of Services:**

- (a) Provisional sum allowed for the protection and relocation of services ..... Provisional sum
- (b) Handling Cost and profit in respect of item PS13.03(a).....%

The contractor has to enter the percentage in the rate column and then calculate the amount for pay item PS13.03 (b)

The provisional sum allowed under sub item (a) shall be expended to cover the actual costs for the protection and moving of services by the Contractor and others.

The provisional sums shall be expended only with the approval of the Engineer.

**PS 13.04: Construction of Sign Boards.....No.**

The unit of measurement shall be number of construction sign boards supplied.

The tendered rate shall include full compensation for procurement, erection and removal of construction sign boards after completion of the project.

The sign board has to comply with the particular drawing.

**PS 13.05: Contractor's Environmental Obligations**

- (a) Fixed obligations ..... lump sum
- (b) Time-related obligations..... month

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The lump sum tendered under Item PS13.05 (a) shall represent full compensation for the fixed part of the Contractor’s obligations in respect of environmental matters for the Contract, i.e. that part which is substantially fixed and not a function of the time required for the completion of the contract or of the value of the work.

Payment of the lump sum tendered under Item PS13.05(a) shall be effected in the same manner as that described in Clause 1303 of the Specifications for Item 13.01(a).

The monthly rate under item PS13.05 (b) shall represent full compensation for the time-related part of the Contractor’s Environmental obligations as specified in the Environmental Regulations in Clause PS 1239 of the Project Specifications and elsewhere in the contract documents, for which payment is not included under other Pay Items.

Payment of the tendered rate per month for Item PS13.05 (b) will be subject to the same terms and conditions as are described in Clause 1303 of the Specifications for Item 13.01(c).

Payment will be made monthly over the full Time for Completion, as defined in the General Conditions of Contract.

Where the Contractor does not comply fully with his environmental obligations, and where he has been notified to that effect in writing at least three times since the Commencement Date, he may forfeit payment in terms of Clause PS 1239 of the Project Specifications.

**PS 13.06: Contractor’s Health Obligations**

- (a) Fixed obligations.....lump sum
- (b) Time-related obligations.....month

The lump sum tendered under Item PS13.06 (a) shall represent full compensation for the fixed part of the Contractor’s obligations in respect of health matters including HIV and AIDS awareness for the Contract, i.e. that part which is substantially fixed and not a function of the time required for the completion of the contract or of the value of the work.

Payment of the lump sum tendered under Item PS13.06(a) shall be effected in the same manner as that described in Clause 1303 of the Specifications for Item 13.01(a).

The monthly rate under item PS13.06 (b) shall represent full compensation for the time-related part of the Contractor’s Health obligations as specified in the Special Conditions of Contract Clause 64.

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Payment of the tendered rate per month for Item PS13.06 (b) will be subject to the same terms and conditions as are described in Clause 1303 of the Specifications for Item 13.01(c).

Payment will be made monthly over the full Time for Completion, as defined in the General Conditions of Contract.

Where the Contractor does not comply fully with his health obligations, and where he has been notified to that effect in writing at least three times since the Commencement Date, he may forfeit payment.

**PS 13.07 Contractor's mobilisation per emergency or urgent call out.....No.**

The unit of measurement shall be the number of call outs by the Employer or his representative in cases of emergency or other urgent reasons.

The tendered rate shall include full compensation for transport of the required equipment, staff and construction materials to the relevant site. The payment of the rate implies immediate response to the call out.

**SECTION 1400 HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S  
SITE PERSONNEL**

**PS1407 MEASUREMENT AND PAYMENT**

*Create the following pay items*

**PS14.15 Survey equipment for use by the Engineer.....month**

- ✓ The unit of measurement for the supply and maintenance of the survey equipment as described in detail in the Particular Specifications including software programme shall be the month.

The tendered rate shall include full compensation for the supply and maintenance of the equipment. The tendered sum per month will be payable for as long as the equipment is required, but not after the official completion date of the contract.

**PS14.20 Provision of semi-skilled labour for use by the Engineer**

- (a) Provision of Labourers.....provisional sum(P/sum)
- (b)Charges and profit in respect of PS14.20 (a)
- (State % and extend as an amount)..... percentage (%)

Payment under Item PS14.20 (a) shall be made monthly and the amount due to the Contractor will be equal to the total of the actual amount paid to the Engineer's semi-skilled labourers plus the direct cost of medical and pension benefits, Workmen's Compensation, sick leave and holiday pay, incurred by the Contractor in respect of the Engineer's semi-skilled labourers. The Contractor shall advise the Engineer of the full monthly cost for each semi-skilled labourer engaged. No payment other than that provided above will be made in respect of the employment of semi-skilled labourers for the Engineer. Contract price adjustment will not apply to this item.

**PS14.21 Provision of Length – Person**

- (a) For roads in rural areas.....man-month
- (b) For roads in urban areas.....man-month

The unit of measurement shall be person-months based on a calendar month, assuming continuous assignment and full-time availability, and that the prioritised list of tasks is attended to in a diligent manner. Payment shall include for all training and supervision, direct and indirect costs of providing the length-person, the provision, maintenance and replacement as required, of the basic tools stipulated above, protective clothing, wages, allowances, transport (where



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required), attending for inspections, providing freely available materials such as suitable fill, and all incidentals necessary to complete the work as specified.

There shall be two subcategories of this Item for payment purposes:

### **801a Provide Length-Person (Rural Areas)**

### **801b Provide Length-Person (Urban Areas)**

## **SECTION 1500 ACCOMMODATION OF TRAFFIC**

### **PS1502 GENERAL REQUIREMENTS**

✓ ***Add the following new sub – clauses:***

#### **(i) Moving and display of signs**

The Contractor shall adhere strictly on the sign layout and spacing shown on the drawings or directed by the Engineer. Any sign not required for or which is in contradiction with the prevailing situation, shall be removed or covered with non-transparent material without delay. Where permanent signs are to be covered it shall be done with non-plastic material.

#### **(j) Failure to comply with provisions for the accommodation of traffic**

The failure of or refusal by the Contractor to construct and / or maintain diversions, barricades, traffic signs or road markings at the proper time, or to take the necessary precautions for safety and convenience of public traffic as specified or instructed by the Engineer, shall be sufficient cause to suspend payment on this contract until the required construction or maintenance has been completed to the satisfaction of the Engineer considering that there is a risk to the public. Such stoppage of the payment will not be acceptable as a reason for extension of time or additional compensation.

### **PS1503 TEMPORARY TRAFFIC-CONTROL FACILITIES**

✓ ***Add the following after the second paragraph:***

No work may proceed in any section where accommodation of traffic is required until such time as the relevant requirements with regard to sign posting are met. The Contractor shall keep sufficient surplus signs, delineators and barricades on the site to allow for the replacement of damaged or missing items within a period of three hours of instructions having been given by the Engineer.

#### **(a) Traffic-control devices**

✓ ***Add the following:***

Sufficient flagmen suitably trained and equipped as detailed in sub-clause (g) below, shall be provided at all designated access points on public road to and from the working areas to the

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satisfaction of the Engineer. The flags shall be at least 750 mm x 500 mm on a stick of adequate length.

When movable temporary signs are used, provision shall be made for sandbags on the sign bases to prevent the signs from being overturned by wind or eddies behind moving traffic, as detailed in sub-clause (h) below.

### (b) Road signs and barricades

✓ **Add the following:**

Retro-reflective material for temporary road signs shall comply with the requirements of SABS 1519.

The retro-reflective coefficients determined according to the methods of SABS 1519, shall be at least 60% of the values given in Table 1 of SABS 1519.

The classes shall be as specified in Sub-clause 5402 (g) of the Standard Specifications.

Road signs that do not comply with these standards shall be cleaned and re-tested or removed from the site and replaced with approved road signs.

### (c) Channelization devices and barricades

✓ **Add the following:**

Delineators shall comply with the following requirements:

- (i) A minimum contrast ratio of 4 shall exist between the yellow call 1 retro-reflective material and the black non-reflective material.
- (ii) Delineators shall be affixed in a flexible manner to the base units and shall be able to withstand wind speeds of at least 60 km/h without overturning. The bases shall be stabilised by placing of sandbags.
- (iii) The bottom edge of the delineator shall not be more than 200 mm above the road surface.

Cones (red-orange, fluorescent) with minimum height of 750 mm may be used as supplementary traffic-control facilities to delineators, but only for short-term lane deviations during daylight. Lane closures or deviations continuing into night time shall be demarcated by delineators. The maximum spacing between delineators or cones is 30 m.

✓ **Add the following sub-clauses:**

### (g) Worker clothing and safety jackets

All construction workers shall wear high visibility clothing when on the construction site. Any worker working on or adjacent to a trafficked road shall wear a safety jacket (reflective vests). Overalls shall be either orange or red-orange or yellow in colour with retro-reflective strips. Raincoats shall be bright orange or red-orange.

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In addition all flagmen are to be distinctly dressed in high visibility orange overalls, a safety jacket similar to those worn by traffic officers as supplied by Sparks and Ellis or similar approved. Safety jackets shall also be made available to the Engineer and all his staff free of charge.

**1517 : Measurement and Payment**

*Add the following new pay item:*

**PS 15.13 Provision of temporary structures for river crossings during bridge repair or construction.....No**

Payment shall be made as a lump sum. This sum shall be full compensation of the costs incurred for material, equipment and labour for the temporary crossing.

**SECTION 1600 OVERHAUL**

**PS1601 Scope**

- ✓ ***Free-haul distance for this contract will be unlimited. Subsequently no separate payment will be made for overhaul irrespective of the material or the distance hauled.***

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**SECTION 1700 CLEARING AND GRUBBING**

**PS1701 Scope**

**Add the following to this Clause:**

This section also includes the cutting of grass and bushes along the road to improve visibility. The grass, shrubs and bush shall be cut 50 mm to 100 mm above the ground. The width of cutting shall be 3m to 10m from the edge of the road where grass starts to grow or as directed. This scope shall also include the cutting of tree branches leaning onto the road wherever applicable.

The scope of works shall also include excavation and disposal of any debris in the road reserve

The scope of works shall also includes the treatment of anthills, .

**PS1703 EXECUTION OF THE WORK**

**(a) Areas to Be Cleared, Grubbed and Stripped**

At the end of this sub-clause add the following:

Removing topsoil too far in advance of excavation or filling operations may also cause reclearing and regrubbing. Payment for clearing and grubbing shall be made only once. Reclearing and regrubbing shall be at the Contractor's own cost.

**(b) Cutting of Trees**

At the end of this sub-clause add the following:

Individual trees designated in writing by the Engineer shall be left standing and uninjured. A penalty between MK5,000.00 and MK 10,000.00, depending on its size and age, shall be imposed for every tree which is unnecessarily removed or damaged. The branches of trees to be left standing shall be trimmed so as to leave a 7 m clearance above the carriageway.

**PS 1704: Measurement and Payment**

*Add the following new pay items:*

**PS 17.04: Cutting and removal of tree branches.....No.**

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If necessary and as instructed by the Engineer, tree branches shall be cut in sections from the top downwards. The branches to be left standing shall be trimmed so as to have a 6m clearance above carriageway. Necessary precaution shall be taken to prevent damage to structures and other private and public property. Individual trees designated in writing by the Engineer shall be left standing and uninjured.

The unit of measurement shall be number of tree branches exceeding 300mm girth cut. The girth shall be measured at the narrowest point of the tree or branch. The tendered rate shall include full compensation for all work necessary for the cutting, removal and disposal of all material.

### PS 17.05: Clearing and grubbing, demolition of existing structures

Item	Unit
PS 17.05(a): Masonry structures.....	m <sup>3</sup>
PS 17.05(b): Concrete structures .....	m <sup>3</sup>
PS 17.05(c): Brickwork .....	m <sup>3</sup>
PS 17.05(d): Gabions .....	m <sup>3</sup>

The tendered rate shall include full compensation for demolition of the existing structures and disposal of the waste material from site including unlimited haulage costs.

### PS 17.06: Debris Excavation and Disposal.....Cubic Metre

In areas designated by the Engineer the Contractor shall remove and spoil outside the road reserve area, soil which is deemed unsuitable. The limits to the areas considered to contain unsuitable materials shall be measured and ground elevations taken by the Engineer before and after excavation. The contractor shall dispose the unsuitable material in a location acceptable to the Engineer.

The volume of excavation shall be calculated in cubic metres using the Average End Area method and the result of these calculations shall form the basis for payment for this item. The unit price paid per cubic metre shall be full compensation for all costs related to excavation, loading, hauling and disposing of the unsuitable material including levelling as directed by the Engineer. No overhaul will be paid for this material.

### PS 17.07: Shrubs and Grass Cutting.....Square Metre

Measurement shall be in square metres. Length shall be measured along the centre line of the road. The width shall generally be measured from the shoulder break point into the road verge as instructed by the Engineer. Excessive shrubs shall be determined case by case by the Engineer

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whether to include in the shrubs and grass cutting rate or to pay as a unit item under bush clearing (PS 17.08)

### **PS 17.08: Bush Clearing.....Square Metre**

Measurement shall be in square metres. The quantity shall be taken as the area in square metres within the road reserve as designated by the Engineer and cleared by manual labour in accordance with these specifications. The tendered rate shall include full compensation for all work necessary for the clearing, removal and disposal of all cleared material.

### **PS 17.09 Treatment of Anthills.....Number**

Where anthill material is encountered within the road prism, the contractor shall excavate to a depth of 0.6m below existing ground level over an area as directed by the Engineer. The excavated area shall be treated with an approved pesticide and backfilled with suitable material compacted to specifications.

The rate of payment shall be the number of anthills treated. This rate shall cover the provision of labour, tools, approved pesticides, road signs and safety devices. Excavation and backfilling shall be paid for under their appropriate pay items

✓ **Create the following new section:**

### **SECTION PS 1800: DAY WORKS**

#### **PS1801 SCOPE**

This section covers the listing of day work items in accordance with the General and/or Special Conditions of Contract determining payment for work which cannot be quantified in specific units in the Schedule of Quantities, or for work ordered by the Engineer during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Schedule of Quantities.

#### **PS1802 ORDERING OF DAYWORK**

No day work shall be undertaken unless written authorisation has been obtained from the Engineer.

#### **PS1803 MEASUREMENT AND PAYMENT**

**Item**

**Unit**

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### PS18.01 Personnel during normal working hours

(a)	Unskilled labour . . . . .	hour (h)
(b)	Semi-skilled labour . . . . .	hour (h)
(c)	Skilled labour . . . . .	hour(h)
(d)	Ganger . . . . .	hour (h)
(e)	Flagmen. . . . .	hour (h)
(f)	Operators. . . . .	hour (h)
(g)	Foremen . . . . .	hour(h)
(h)	Surveyor . . . . .	hour(h)
(i)	Lab technician . . . . .	hour(h)

**Item**

**Unit**

### PS18.02 Personnel outside normal working hours

Outside normal working hours .

(a)	Unskilled labour . . . . .	hour (h)
(b)	Semi-skilled labour. . . . .	hour (h)
(c)	Skilled labour. . . . .	hour (h)
(d)	Ganger.. . . .	hour (h)
(e)	Flagmen.. . . .	hour (h)
(f)	Operators. . . . .	hour (h)
(g)	Foremen . . . . .	hour (h)
(h)	Surveyor . . . . .	hour (h)
(i)	Lab. Technician . . . . .	hour (h)

**Item**

**Unit**

### PS18.03

#### Plant

(a)	Tip Truck 6m <sup>3</sup> . . . . .	hour (h)
(b)	Tip truck 10m <sup>3</sup> . . . . .	hour (h)
(c)	Motor grader (type specified) . . . . .	hour (h)
(d)	Wheeled loader (type specified) ...	hour
(e)	Lowbed(type specified) . . . . .	hour (h)
(f)	Water bowser – self propelled (capacity specified)..	hour (h)
(g)	Vibratory roller . . . . .	hour (h)
(h)	Pneumatic roller . . . . .	hour (h)
(i)	Grid roller with tractor (type specified)	hour (h)
(j)	Tractor (type specified) . . . . .	hour (h)
(k)	Tracked excavator (type specified) . . . . .	hour (h)
(l)	Bulldozer (type specified) . . . . .	hour (h)
(m)	Excavator . . . . .	hour (h)
(n)	Concrete Mixer . . . . .	hour (h)
(o)	Water Pump. . . . .	hour (h)

The unit of measurement for items PS18.01 to PS18.03 shall be the hour for the item of plant or personnel. Non- working hours for the plant breakdown, lack of operator or any other reason shall not be measured. The item shall be taken from the time that the personnel and /or plant depart until return.

Measurement shall only be for work instructed and directed by the Engineer where the Engineer consider no other appropriate rates is available in the schedule of quantities. Prior

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to the commencement of any work by the labourers described under items PS18.01 and PS18.02, the Contractor must obtain written consent from the Engineer regarding the classification of all labourers in terms of “unskilled”, “semi skilled”, and “skilled labourers”

The tendered rates for labour for the items PS18.01 and PS18.02 shall include full compensation to cover overhead charges and profit, leave pay, bonuses, subsistence allowances, Employer’s contributions, additional payment for over overtime where applicable, insurances, housing, site supervision, use of small hand tools and appliances, non-mechanical plant, operative and contingent costs relating to the supply of personnel.

The tendered rates for Plant for item PS18.03 shall be all-inclusive hire charge for the use of trucks or plant/equipment including driver or operator and shall apply only to vehicles, plant and equipment nominated in writing by the Engineer. The tendered rate for item PS18.04 shall include full compensation for the operating costs including fuel, maintenance, depreciation, administrative and contingent costs as well as profit

<b>Item</b>	<b>Unit</b>
<b>PS18.04      Materials</b>	
(a) Procurement of materials.....	Provisional Sum (P/Sum)
(b) Contractor’s handling costs, profit and all other charges in respect of sub item PS18.04(a). .....	Percentage (%)

The Unit of measurement for sub-item PS18.04(a) shall be the amount actually paid for the procurement of materials to be purchased and shall be made in accordance with the provision of the General Condition of Contract. Only the actual quantities of materials used, as verified by the Engineer, shall be paid for.

The percentage tendered for sub-item PS18.04(b) shall be the percentage of the amounts actually paid for the procurement of the materials as ordered under the sub-item PS18.04(a) and shall be in full and final compensation in respect of the Contractor’s handling costs, profit, and all other charges in connection with the procurement and supply of the materials to the point of usage.

<b>Item</b>	<b>Unit</b>
<b>PS18.05      Transport</b>	
(a) LDV. . . . .	kilometre (km)
(b) Flatbed truck . . . . .	kilometre (km)

The unit of measurement for item PS18.05 shall be the kilometre distance that the vehicle travelled for transporting personnel and/or Plant. All travelling shall be approved by the Engineer.

The tendered rate for item PS18.05 shall include full compensation for the cost of the vehicle including fuel, maintenance, depreciation and running costs.

The above-mentioned tendered rates shall be in full compensation for the various items, as specified and not additional compensation shall be considered.



**SECTION 2100      DRAINS**

**PS2103 BANKS AND DYKES**

*Add the following after the last paragraph*

“Mitre banks, catch water banks and dykes shall be constructed using manual labour with the exception of hauling operations when haul distance in the opinion of the Engineer preclude the use of wheel barrows.

The Contractor may, however, construct certain banks and dykes using conventional plant based methods where manual methods are not feasible provided that his reasons for using these conventional methods are adequately motivated in writing and approved by the Engineer.

Work executed using manual labour will be measured and paid for separately from work carried out using conventional methods.”

**PS2107      MEASUREMENT AND PAYMENT**

*Add the following items:*

“Item	Unit
<b>PS21.20      Excavation for open drains using manual labour:</b>	
(a) Hand excavation soft material situated within the following depth ranges below the surface level:	
(i) 0m up to 1.5m.....	cubic metre (m <sup>3</sup> )
(b) Extra over sub-item PS21.20 (a) for excavation in the following classes of material, irrespective of depth:	
(i) Hand excavation of intermediate material.....	cubic metre (m <sup>3</sup> )

The unit of measurement shall be the cubic shall be the cubic metre of material excavated using manual labour in accordance with the authorised dimensions, measured in place before excavation. Excavation for open drains only as defined in Sub-clause PS2102 shall be measured.

Irrespective of the total depth of the excavation, the quantity of material in each depth range shall be measured and paid for separately.

The tendered rates shall include full compensation for using manual labour for excavation of the material to the required lines, levels and grades, trimming and the disposal of the material as directed.

For payment purposes a distinction shall be made between the various classes of material.

Item	Unit
<b>PS21.21      Banks and Dykes using manual labour.....</b>	<b>...cubic metre (m<sup>3</sup>)</b>

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The unit of measurement shall be the cubic metre of material placed by manual labour, measured in place in the banks or dykes, and calculated in accordance with the authorised dimensions.

The tendered rate shall include full compensation for using manual labour for procuring, furnishing, placing, watering, compacting, shaping and trimming the material in the banks and dykes.

### PS 21.22 Drain Clearing:

- (a) Line Drains
  - (i) < 500 mm bottom width.....metre
  - (ii) > 500 mm bottom width.....metre
  
- (b) Unlined Drains
  - (i) < 1000 mm .....metre
  - (ii) > 1000 mm .....metre

This item shall include the removal of debris, sediment and other obstructions from the side drains using hand tools and labour. It shall also include the restoration of geometry and hydraulics of the side drains to ease the flow of water. Soil excavated from the drain shall be taken to spoil beyond the side drain where it shall not wash back to the side drain.

### PS 21.23 Drain Blading:

- (a) < 1000 mm .....metre
- (b) > 1000 mm .....metre

The task comprises the mechanical cleaning and reshaping of unlined (earth) roadside and mitre drains by motor grader. The technique is suited to V-shaped and relatively wide flat-bottomed ditches. Trimmed material is moved well clear of the highway to the rear side of the drain where it cannot wash back into the drain.

The works shall be measured in metres (m) of drain run, existing and new turnouts, measured individually on each side of the road. This shall include all necessary handwork in the vicinity of obstructions and where access is constrained, and for the complete removal and disposal of trimmed materials including haulage off-site where necessary. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

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**SECTION 2200: PREFABRICATED CULVERTS**

**PS2203 MATERIALS**

✓ ***Add the following sub-clause:***

**(j) Steel reinforcement**

Steel reinforcement for inlet and outlet structures, manholes and other appurtenant structures shall comply with the requirements of section 6300 of the standard specifications.

**PS2204 CONSTRUCTION METHODS**

✓ ***Add the following to this sub-clause:***

✓ ***Culverts shall be constructed using the trench method as described in paragraph (a)***

**PS2211 BACKFILLING OF PREFABRICATED CULVERTS**

✓ ***Amend the first paragraph of sub-clause (a) to read as follows:***

"The material used for the back-filling alongside the culvert shall be selected material of at least G7 quality. Where the excavated material is not of adequate quality selected material shall be imported for this purpose. The material placed over the top of the culvert shall be of the same quality as that of the road pavement at a similar depth but in any event of at least G7 quality."

**PS2218 MEASUREMENT AND PAYMENT**

***Add the following new pay items***

**Item Unit**

**PS22.29 Excavation for culvert using manual labour**

(a) Hand excavation, soft material situated 0m up to 1.5m

below the surface level.....cubic metre (m<sup>3</sup>)

(b) Extra over sub-item PS22.29(a) for excavation in intermediate material irrespective of depth.....cubic metre (m<sup>3</sup>)

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### PS22.30 Backfilling using manual labour

- (a) Using the excavated material.....cubic metre (m<sup>3</sup>)
- (b) Using imported selected material.....cubic metre (m<sup>3</sup>)
- (c) Extra over sub-item PS22.30 (a) and (b) for soil cement  
backfilling (5% cement).....cubic metre(m<sup>3</sup>)
- (d) Concrete backfill (Class 15/19).....cubic metre(m<sup>3</sup>)

### PS 22.31 Culvert Cleaning:

- (a) Pipe Culverts
  - (i) < 600 mm diameter.....metre
  - (ii) > 600 mm diameter.....metre
- (b) Box Culverts
  - (i) < 900 x 600 mm .....metre
  - (ii) > 900 x 600 mm .....metre

The unit of measurement shall be the running metre of culvert cleaned. The tendered rate per metre shall include the cutting of vegetation at least 3m distance in both the down stream and up stream channels of the culvert. It also includes the removal of debris, sediment and other obstructions from the culvert barrel, inlet and outlet structures. If in the course of cleaning the culvert any damages to the culvert, such as broken or dislocated pipes, eroded aprons, undermining, etc., are noticed, these will be dealt with under relevant pay items and shall be treated as additional works. The rate shall also include full compensation for all the costs associated with the disposal of the excavated debris, sediments and obstructions off site.

### PS 22.32 Removal of graffiti from structures.....square metre

The unit of measurement shall be the area of the restored surface cleaned on instruction from the Engineer.

The tendered rate shall include full compensation for all labour, cleaning materials, patent products (e.g. Synchronkleen or similar), equipment, transport and overheads necessary for restoration of the surfaces.

**SECTION 2300 CONCRETE KERBING, CONCRETE CHANNELLING,  
OPEN CONCRETE CHUTES AND CONCRETE LININGS FOR OPEN DRAINS**

**PS2302 MATERIALS**

**(d) Bedding material**

✓ **Add the following:**

"A class 15/13 semi-dry concrete mix shall be used unless otherwise directed by the Engineer"

**PS 2307 MEASUREMENT AND PAYMENT**

✓ **Add the following to pay item 23.07**

**PS23.07** The trimming of excavation for concrete lines or for cement mortared stone masonry open drains should be done by using manual labour.

✓ **Add the following to pay item 23.08**

**PS23.08** The tendered rate for surface finish shall also include full compensation for the required formwork as described in pay item 23.09.

✓ **Add the following new pay item :**

**PS 23.09 Lining of drains**

(a) Lining for open channel horizontal or inclined with stone masonry to a thickness between 250 and 350 mm including pointing.....square metre

(b) Lining for open channel horizontal or inclined with stone brickwork 115mm thick.....square metre

(c) Lining for open channel horizontal or inclined with stone brickwork 230mm thick.....square metre

The unit of measurement shall be the square metre of masonry or brickwork built. The tendered rate per square metre shall include full compensation for the construction material including transport to site, the masonry or brickwork work completed as specified.

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**SECTION 2500**  
**EROSION**

**PITCHING, STONEMWORK AND PROTECTION AGAINST**

✓ **Add the following to Clause 2501 – Scope:**

This section covers also the hand repair of erosion gullies and minor slips occurring in road shoulders, verges or drain sides. The work involves the trimming and preparing of the cuts and reinstating with compacted selected fill in order to achieve the original feature shape. The repair of the cut should be made after investigation and corrective works to prevent further concentration of water flows at the location (performed as a separate Item).

The construction of check dams in the road side ditches will be required on steep grades where the in-situ material is very erodible. Therefore at locations designated by the Engineer, the Contractor will build masonry check dams in the road side ditches as instructed by the Engineer.

**PS 2508 MEASUREMENT AND PAYMENT**

✓ **Add the following new pay item to 25.01 Stone Pitching:**

**PS 25.01(e) Mortar Stone Pitching:.....m<sup>2</sup>**

The unit of measurement shall be the square metre of mortar stone pitching. The tendered rate per square metre shall include full compensation for the construction material including transport to site, the pitching work completed as specified to a thickness between 250 and 350 mm including pointing.

✓ **Add the following new pay items**

**PS 25.08 Erosion Damage Repair:.....m<sup>3</sup>**

The works shall be measured in cubic metres (m<sup>3</sup>) of compacted backfill material including that used to reinstate benches, accepted in place after compaction. Physical measurements of length, breadth and thickness of the hole shall be recorded and comprise a pre-estimate of the necessary work including the backfilling of all cut benches. Sufficient sections shall be measured to give an accurate representation of the actual work performed. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 25.09 Check Dams:.....Cubic Metre**

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The unit of measurement shall be the cubic metre of masonry built. The tendered rate per cubic metre shall include full compensation for the construction material including transport to site, the masonry work completed as specified to a thickness between 250 and 350 mm including pointing. Backfilling in between successive check dams if required shall be paid for under the appropriate pay items.

### **SECTION 3100      BORROW MATERIAL**

#### **PS 3101:      SCOPE**

✓ ***Add the following to the end of this clause:***

The possible locations of sites for proposed quarries and borrow pits for construction materials are indicated in the materials survey report. The Contractor shall satisfy himself as to the suitability of such sources by trial pits dug on a 25 m grid through the full depth of the material being investigated and testing samples from each pit for classification, CBR and compaction. It shall be, in any case the responsibility of the Contractor to provide sufficient material of approved quality to complete the Works.

The Contractor may, with the approval of the Engineer, locate and open up quarries and borrow pits in addition to those indicated in the materials survey, in which case he shall investigate these additional sources as specified above for borrow areas designated in the materials survey.

The Contractor must obtain a permit from the Chief Mining Engineer before opening up stone quarries.

The Contractor shall remove all ant-hills, ants' nests, vegetation, topsoil, overburden, boulders, rock, unsuitable and oversize material, and shall provide, erect, operate and maintain all plant necessary for the operation of quarries and borrow pits, together with all access roads, bridges and the like, all at his own expense unless otherwise provided as a pay item..

#### **PS 3102:      Negotiations with Owners and Authorities**

✓ ***Replace clause 3102 with the following:***

The Contractor shall satisfy himself that all necessary negotiations have been made with the owner (if any) of the land on which any borrow pit is situated, prior to the opening of such borrow area. The attention of the Contractor is drawn to the provisions of Clause 1214.

#### **PS 3108:      Classification of Borrow Pits for Gravel Materials for Pavement Layers**

Delete this clause in its entirety.

✓ *Add the following clause to Section 3100:*

**PS 3110: Explosives and Blasting**

Blasting shall be carried out in strict accordance with the latest Government regulations, and at all times shall be carried out and supervised by fully qualified persons in terms of these Regulations. If in any situation blasting is considered dangerous, the Engineer's decision in this respect shall be final. Should any damage of any kind occur, the Contractor shall be solely responsible for such damage or any claims that may arise therefrom, and shall, at his own expense, carry out repairs or restoration as the Engineer may direct.

Care shall be taken that no undischarged cartridges are allowed to remain in the excavation. Careless or indiscriminate use of explosives will result in the Engineer withdrawing permission for their use and under such circumstances the Contractor shall resort to other methods of excavation.

The Contractor shall obtain the written permission of the Engineer for each location where the Contractor requires using explosives.



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### **SECTION 3200 SELECTION, STOCKPILING AND BREAKING-DOWN THE MATERIAL FROM BORROW PITS AND CUTTINGS, AND PLACING AND COMPACTING THE GRAVEL LAYERS**

#### **PS3202 SELECTING THE MATERIALS**

***Add the following:***

“ The quality of the materials in the borrow pit is inconsistent. Good quality material is often limited to small pockets. It may therefore be necessary to stockpile and mix materials to ensure that the quality of the material will comply with the specified requirements for a particular layer for which it will be used. The cost for these processes shall be deemed to be covered by the rates for the various items of work for which these materials are used.”

#### **PS 3206 CONTROLLING THE MOISTURE CONTENT OF MATERIALS**

✓ ***Add the following to the third paragraph:***

The time required for doing work to accelerate the drying out of wet material or for dealing with wet material as described above, shall not be regarded as part of a delay caused by inclement weather in terms of clause PS 1215.

### **SECTION 3300 MASS EARTHWORKS**

#### **PS3301 SCOPE**

✓ ***Add the following to Clause 3301:***

This section also covers the excavation of material in the river channel near drainage structures, so that easy flow of water is maintained so that drainage structures and embankments are protected from erosion and/or undermining. It also includes the removal of flood deposited material at crossings to restore openings of bridges and culverts so that overflowing is controlled.

The scope shall also include maintenance activities of earth roads.

#### **PS3305 TREATING THE ROADBED**

**(a) Removing unsuitable material**

✓ ***Add the following to the first paragraph of this sub-clause:***

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"Roadbed material within 1.0 m of the finished road level shall have a minimum CBR of 3 at 90% of modified AASHTO density, after compaction. Any material which does not meet this requirement shall be treated as unsuitable and removed."

**PS 3312 MEASUREMENT AND PAYMENT**

Delete in pay – items 33.01, 33.02, 33.04 and 33.07 the wording “including free – haul up to 0.5 km” and replace with: “including unlimited free – haul distance”.

✓ **Replace pay Item 33.01, Cut and borrow to fill (a) and (b) with the following:**

<b>Item</b>	<b>Unit</b>
PS 33.01	Cut and borrow to fill including unlimited freehaul distance
	(a) Gravel or soft material in compacted layer thicknesses of 300 mm and less
	(j) compacted to 90% modified AASHTO density .....cubic metre
	(ii) compacted to 93% modified AASHTO density .....cubic metre

✓ **Replace pay Item 33.07, Removal of unsuitable material (a) and (b) with the following:**

**PS 33.07 Removal of unsuitable material :.....m<sup>3</sup>**

The unit of measurement shall be the cubic metre of unsuitable material removed by the contractor in accordance with the Engineer’s instructions irrespectively of layer thicknesses and stability of the material. The tendered rate shall include unlimited free haul distances.

✓ **Add the following new pay items**

**PS 33.14 River Training:.....m<sup>3</sup>**

River training shall be paid per cubic metre of material removed. The rate shall include the operation of excavation plant, removal and transportation to spoil of excavated material. The repair and maintenance of the drainage structures shall be covered elsewhere in appropriate items

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### **PS 33.15 Spot Repair of Earth Roads:.....m<sup>3</sup>**

The works comprise repairing scattered or isolated potholes, depressions, eroded areas or corrugations in an earth carriageway by placing, levelling and compacting local borrow material using hand labour and tools. The objective is to restore a smooth, stable riding surface, proper crown and to prevent water from ponding.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected material, accepted in place after compaction. Physical measurements of length, breadth and average thickness of the trimmed, excavated, hole shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 33.16 Grading Earth Roads (Equipment Based:.....Km**

The works comprise grading earth roadway surfaces and side drains using a motor grader, without adding material from borrow areas or widening, to restore proper crown, cross fall, drainage and an even riding surface.

The works shall be measured in kilometres (Km) of full width of road graded (side drains inclusive). Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 33.17 Reshaping Earth Roads (Labour Based:.....Km**

The works comprise initial filling of potholes and erosion gullies with fill from road reserved or side drains followed by continuous reshaping (drain to drain) and cambering of the carriageway using hand tools and labour thereby restoring proper crown, crossfall, drainage and an even riding surface of the road.

The works shall be measured in kilometres (km) of full width of road reshaped (side drains inclusive). Payment shall include all described reshaping works within the carriageway boundaries. Mitre drains shall be paid separately under their appropriate item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, hand tools, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 33.18 Rehabilitating Earth Roads:.....Km**

The works comprise scarifying, grading, reshaping, watering, mixing and compacting of the existing road formation of earth roads, including reshaping the side ditches to the cross-section as determined by supervising engineer or as shown in the drawings where available. All soils used in reshaping the road section shall be free of organic or other unsuitable matter.

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As there might be no designed profile grade for roadbeds in question, the elevation of the reshaped road surface will be determined by the Supervising according to the amount of material brought in from the adjoining side drains or road reserve and incorporated into the existing surface.

The works shall be measured in kilometres (km) of full width of road (side drains inclusive). Payment shall include all described works to the roadway inclusive of scarifying, watering and compaction. Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 33.19 Localised Gravelling of Earth Roads:.....Cubic Metre**

The task comprises the supply and laying of specified selected road wearing course gravel to achieve a uniform layer thickness together with shaping, watering and compaction within localised areas on earth roads.

The works are normally performed when the existing earth road has been eroded or otherwise damaged in a localised section. Mechanical compaction and material watering for moisture control are mandatory. Any necessary improvements / repairs to the road drainage system should be carried out as a separate activity in advance of these regravelling operations.

The works shall be measured in cubic metres of selected road gravel measured in its finally compacted condition. Normal measurements shall be based on specified thickness, instructed width and measured length. Alternatively, if agreed with the Employer's Representative the quantity shall be taken as being 70% of the loose volume of delivered gravel surfacing material measured in the trucks. Full-load measurements must be agreed for each truck in advance of deliveries commencing and will normally be based on number of volumetrically checked shovel buckets. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials, compaction works and all incidentals necessary to complete the work as specified.

## **SECTION 3400 PAVEMENT LAYERS OF GRAVEL MATERIAL**

### **PS3401 SCOPE**

#### **✓ Add the following to Clause 3401**

This section also includes shoulders reconstruction, trimming and repair using plant, labour and gravel material when long sections have been damaged. This item covers all the shoulder preparatory and cleaning works, grading, scarifying and filling with gravel or crusher run that qualifies as base material and compacting of shoulders to restore shape and slope for easy flow of water and also for use by vehicles wishing to park off the carriageway.

### PS3402 MATERIALS

✓ **Add the following to (a) General**

The material test results for the available gravel material on the various borrow pits in general showed a high plasticity index (PI). The quantity of gravel material complying to the requirements of the standard specifications is limited.

✓ **Change Clause 3402 (b) as follows:**

The maximum plasticity index of the natural material for selected layer shall be 25%

✓ **Change Clause 3402 (c)(ii) as follows:**

The maximum plasticity index of the natural material for sub - base shall be 20%

✓ **Change Clause 3402 (d)(ii) as follows:**

The maximum plasticity index of the natural material for base shall be 12%

### PS3403 CONSTRUCTION

#### (b) Placing and compaction

Shoulders

✓ **Add the following:**

Shoulders shall be constructed from the same material as the base

✓ **Add the following sub-clause PS 3403 (g)**

#### Shoulder Reconstruction

The activity consists of reshaping, scarifying, patching and generally building up the level and shape of deformed or eroded shoulders (normally to bitumen surfaced roads) to regain originally designed profiles. The fill material shall be obtained from areas of cut (where suitable) or other approved borrow pits. Deep or localised erosion cuts should be repaired as a separate operation using Item 305 or 306. The aim is to provide continuous support to the pavement edge and to allow rainwater falling on the road to uniformly run off the road shoulders without concentrating in channels.

**Add the following sub-clause PS 3403 (h)**

✓

#### Shoulder Trimming

The activity comprises the manual trimming down of high or inadequately sloped shoulders adjacent to roads and the removal of that material to approved dump sites. The operation is intended to remove material that builds up gradually in shoulders and prevents the uniform discharge of water from the road surface into the drainage ditches.

**Add the following sub-clause PS 3403 (i)**

✓

**Shoulder Repair**

Where the shoulders to a paved road have been damaged such that potholes, gullies, vehicle ruts, excessive drop, corrugations have formed, they shall be repaired using hand labour, tools and local borrow. The repair shall be such that the shoulder is well trimmed, filled and sloped to approximately 4% ~ 6% so that there shall be no ponding of water and drivers do not hesitate to pack on it.

**PS3407 MEASUREMENT AND PAYMENT**

✓ **Change pay item 34.01 as follows:**

Delete the wording “including free – haul up to 1.0 km” and replace with “including unlimited free – haul distance”.

**Delete the second paragraph (payment paragraph) of item 34.01 and substitute with the following:**

The tendered rates shall include full compensation for mixing, watering, placing and compacting the material supplied under item PS34.01, and the protection and maintenance of the layer and the conducting of control tests, all as specified.

✓ **Add the following new pay items**

**PS 34.05 Shoulder Reconstruction:.....m<sup>3</sup>**

Gravel shoulder compacted to 98% of modified AASHTO density with minimum thickness of 150mm

The works shall be measured in cubic metres of selected material accepted in the road shoulder measured after compaction. Physical measurements of length, width and average thickness shall be recorded. Where agreed in advance with the Employer’s Representative, equivalent compacted volume may be estimated by the application of a compaction factor (typically 70%) applied to the loose delivered volume of material. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

**PS 34.06 (i) Shoulder Trimming (Manual):.....km**

**PS 34.06 (ii) Shoulder Trimming (Mechanical):.....km**

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The works shall be measured in metres (m) of road shoulder measured separately on each side of the road. This shall include the complete removal and disposal of trimmed materials including haulage off-site. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 34.07      Shoulder Spot Repairs:.....m<sup>3</sup>**

The rate of payment shall be per cubic metre of material placed from borrow. This rate shall cover the preparation of the shoulder surface for patching, the excavation and transport of local borrow, placing, levelling, and compacting. It shall also cover for the provision of labour, tools, road signs and safety devices.

### **PS 34.08      Access Ramp to Adjoining Property:.....m<sup>3</sup>**

The unit of measure shall be cubic metre. The unit price paid per ramp shall be full compensation for all work required in connection with constructing the ramp, including the furnishing of all necessary labour, materials and incidentals.

### **PS 34.09      Spot Repair of Gravel Roads:.....m<sup>3</sup>**

The task involves the hand repair of potholes, ruts, soft-spots and erosion gullies in gravel roads using selected material. It is intended for isolated repairs required between scheduled maintenance and localised repairs to very lightly trafficked road segments. The task is not suitable for the repair of corrugations or where the frequency of pot-holes is high.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected material, accepted in place after compaction. Physical measurements of length, breadth and average thickness of the trimmed, excavated, hole shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 34.10      Grading Gravel Roads:.....Km**

The task comprises the mechanical grading of gravel roads and their shoulders to restore a smooth riding surface. It is trimming aimed at controlling surface roughness by removal of loose material and corrugations. The operation will not remove severe irregularities nor will it significantly restore camber. It does not involve mechanical compaction. Loose material is removed from the road surface and windrowed along the edge of the carriageway (in the dry season) or recovered across the road (in the wet season).

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The works shall be measured in kilometres (km) of full width road graded. This shall include shoulders and side drains. Mitre drains shall be paid separately under their applicable Item 21.01. Physical measurements of length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 34.11      Rehabilitating Gravel Roads:.....Km**

The works comprise ripping, scarifying, grading, reshaping, watering, mixing and compacting of the existing road formation of gravel roads, including reshaping the side ditches to the cross-section as determined by supervising engineer or as shown in the drawings where available. All soils used in reshaping the road section shall be free of organic or other unsuitable matter.

As there might be no designed profile grade for roadbeds in question, the elevation of the reshaped road surface will be determined by the Supervising according to the amount of material brought in from the adjoining side drains or road reserve and incorporated into the existing surface.

The works shall be measured in kilometres (km) of full width of road (side drains inclusive). Payment shall include all described works to the roadway inclusive of scarifying, watering and compaction. Mitre drains shall be paid separately under their applicable item 21.01. Physical measurements of road length shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, equipment, handling, labour, materials and all incidentals necessary to complete the work as specified.

### **PS 34.12      Localised Gravelling of Gravel Roads:.....Cubic Metre**

The task comprises the supply and laying of specified selected road wearing course gravel to achieve a uniform layer thickness together with shaping, watering and compaction within localised areas on gravel roads.

The works are normally performed when the existing road pavement has developed insufficient thickness following several years of trafficking or has been eroded or otherwise damaged in a localised section.

Mechanical compaction and material watering for moisture control are mandatory. Any necessary improvements / repairs to the road drainage system should be carried out as a separate activity in advance of these regravelling operations.

The works shall be measured in cubic metres of selected road gravel measured in its finally compacted condition. Normal measurements shall be based on specified thickness, instructed width and measured length. Alternatively, if agreed with the Employer's Representative the quantity shall be taken as being 70% of the loose volume of delivered gravel surfacing material measured in the trucks. Full-load measurements must be agreed for each truck in advance of deliveries commencing and will normally be based on number of volumetrically checked shovel buckets. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials, compaction works and all incidentals necessary to complete the work as specified.



**SECTION 4100 PRIME COAT**

**PS 4102 MATERIALS**

**(a) Priming material**

✓ ***Add the following:***

The prime coat shall either be MC 30 or MC 70 cut-back bitumen. The nominal rate of application for tender purposes shall be 0.7 litre/m<sup>2</sup>.

**PS 4303: Plant and Equipment**

**(a) General**

Add the following:

The Contractor shall ensure that he has a very good competent surfacing team, which is capable of delivering a high quality standard of workmanship; i.e. Competent and experienced Asphalt Foreman, operators and attendants, who have abilities of carrying out binder distribution and seal work operations within specified tolerance of applications and according to final product requirements.

The Engineer will instruct the removal of incompetent staff from site and a replacement thereof with a competent staff if satisfactory performance is not achieved and maintained.

**(b) Binder distributor**

Add the following:

"The binder distributor shall be capable of spraying the binder to the specified application rates and to the satisfaction of the Engineer. It is important that the pump of the distributor shall be capable of delivering the binder at the spray bar nozzles at the correct pressure to obtain the specified application rates, irrespective of the viscosity properties of the proposed binder. The spray bar of the distributor shall be fitted with fishplates at the outside edge of the bar to prevent over spraying onto shoulders or staining of concrete elements on the edge of the surfacing of the road. If instructed by the Engineer, the outside nozzles of the spray bar shall be turned to a 45° angle to achieve a thickened edge of binder along the outside limits of the seal area.

The variation in the rate of application between two adjoining 100 mm strips shall not exceed 5%, excluding the outside 300 mm on either side of the spray bar. The coefficient of the variation shall not exceed 10%. The test procedure shall be as prescribed in the Modified Tray-test contained in TRH 3 and shall be carried out each time the distributor is established on site or at least once per week. The binder distributor shall thus carry a set of troughs at all times in order to allow the execution of this test. A calibration certificate, not older than 3 months, for the binder distributor shall be presented to the Engineer in order to ensure accurate application rates.

The binder distributor shall be fitted with a suitable valve or other access gate for taking of samples of the binder for testing purposes."

**(c) Chip spreaders**

Add the following at the end of the first paragraph:

"The chip spreader shall be capable of delivering a proper and uniform transverse distribution of chips across the width of the hopper. The chip distribution shall be tested

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by means of canvas patches each 1.0 by 1.0m and placed side by side. The mass of chips spread into each individual canvas patch shall not deviate by more than 10% from the calculated average spread per canvas patch "

Add the following to the last paragraph:

"A non-self propelled chip spreader may only be used in the event of a breakdown of the self-propelled chip spreader and shall be limited to the completion a distributor load. No further application of binder shall be permitted until such time as the self-propelled chip spreader is repaired or replaced."

At the end of the clause add the following paragraphs:

"It is the Contractor's responsibility to incorporate, service and maintain all the necessary, adequate and sufficient equipment to carry out all his sealing operations. The Contractor may use the same bitumen distributor and heater described in Sub-Clauses 4103(a) and (d).

"The Engineer shall be entitled to instruct the removal, substitution or addition of equipment should there be any doubt as to the efficiency or capability of the equipment provided. No sealing work shall commence or continue if, in the opinion of the Engineer, all the required equipment is not on the site or in good operational condition."

### PS 4304: GENERAL LIMITATION AND REQUIREMENTS

#### (a) Weather limitations

##### (i) Non-homogeneous Modified Binders (summer grade)

The minimum road surface temperature for applying bitumen-rubber binder shall be 25°C, and if below 25°C, the air temperature shall be at least 20°C and rising. As soon as the minimum air temperature at night is recorded to fall below 10°C, sealwork shall cease until warmer weather conditions are experienced.

Application of binders shall not be allowed if the existing cracks in the road contain moisture after rain.

#### (d) Preparation of areas to be sealed

##### (ii) Newly constructed seals

For the repair and filling of uneven spots in the completed base shallower than 12mm, a slurry complying with the requirements of clause 4604 (c) shall be used, based on one of the gradings of a Fine slurry.

60% stable mix-grade emulsion prepared from 80/100 penetration grade bitumen shall be used as binder.

The mix of fine aggregate, which shall be used for repairs shall comply with the following requirements by volume in the case of the irregularities exceeding 12mm in depth:

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9.5mm nominal sized aggregate	1 part
6.7mm nominal sized aggregate	1 part
Fine –graded crusher sand	1 part

Each patch shall be compacted by means of two passes of the a steel-wheeled roller of minimum mass of one comma five (1.5) tons, which compaction must be applied within four (4) hours after the emulsion has broken.

### (iii) Existing Surfaces to be resealed

If so instructed the Contactor shall seal wide cracks by hand-application of Petrol seal. Payment will be made at daywork rates. Localised undulations shall be repaired as for base corrections, where and if so instructed, also on Dayworks rates.

Except at the intersections, the existing surfacing shall be cut back to a width of 7.4m with a roller cutting blade attached to a heavy self-propelled roller. The redundant surfacing strips shall be removed and edge break repairs shall be carried out before completion of the reconstruction of the shoulders, where such reconstruction is instructed.

Three (3) weeks prior to commencements of resealing operations an MSP 3 inverted emulsion rejuvenator shall be applied over the full width of the narrowed existing road seal, plus 100mm to 300mm wider along each side. The MSP 3 rejuvenator spray, shall be applied in half widths at an application rate of 0.5 l/m<sup>2</sup> during the summer months, before the start of the rains and the sprayed section kept closed to traffic for at least five (5) hours before re-opening.

### **PS 4305: HEATING AND STORAGE OF BITUMINOUS BINDERS**

#### (b) Non- homogenous (heterogeneous) modified binders (summer grade)

Bitumen rubber binder shall not be stored at all. Once the rubber is added to the base bitumen, the product shall be applied to the road as soon as it is adequately digested and at spraying temperature. Any binder left in the distributor at the end of the allowable spraying period, or not applied due to an unforeseen stoppage lasting till beyond the spraying period, shall be removed from site. Even a forced stoppage in the blending period between addition of the rubber and heating to spraying temperature shall not be considered as a reason for the approval of storing the binder for later use. Reference shall be made to the specified limitations regarding the programme of work and lengths of construction areas described in section 1200 and 1500 of these specifications.

The Engineer's supervisory staff shall, through timeous notification by the Contractor, be afforded the opportunity to attend to all bitumen rubber blending operations in order to exercise control sampling and testing on the binder from the stage just prior to the addition of the rubber to the base bitumen up to the end of the allowable spraying period. Failure to conform to the requirements will be considered reason enough by the Engineer to reject the batch of binder.

### **PS 4310: Dust Control**

Delete paragraph two.

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**SECTION 4900 TREATMENT OF SURFACE DEFECTS, PATCHING, REPAIRING EDGE BREAKS, CRACK SEALING**

**PS4911 MEASUREMENT AND PAYMENT**

✓ **Change pay items 49.09 (a) and (b) as follows:**

The tendered rate for backfilling of excavations for patching shall be applicable to any damaged area irrespective of the size.

✓ **Add the following additional pay items:**

**PS 49.09 Backfilling of excavations for patching with:**

(c) Gravel material.....Cubic Metre

This task is normally performed in conjunction with bitumen surfacing repairs where the depth of potholes or other failure areas, extend significantly within lower unbound pavement layers. It is also used where the cause of surfacing failure is the deformation of the unbound layers or road foundation. Reconstruction of the unbound layers under this item is made using natural gravel base material compacted mechanically.

The works shall be measured in cubic metres (m<sup>3</sup>) of selected natural gravel base material after compaction. Physical measurements of length, width and average thickness shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above irrespective of the size of the damaged areas including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

(d) Crushed Stone Aggregate.....Cubic Metre

This task is normally performed in conjunction with bitumen surfacing repairs where the depth of potholes or other failure areas, extend significantly within lower unbound pavement layers. It is also used where the cause of surfacing failure is the deformation of the unbound layers or road foundation. Reconstruction of the unbound layers under this item is made using crushed stone aggregate compacted mechanically.

The works shall be measured in cubic metres (m<sup>3</sup>) of crushed stone aggregate after compaction. Physical measurements of length, width and average thickness shall be recorded. Unit rates shall include full compensation for all steps necessary to comply with the above irrespective of the size of the damaged areas including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified

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**PS 49.16 Rip, scarify, water, mix and re-compact existing base.....Square Metre**

(a) 95% of modified AASHTO density (specify compaction thickness layer)...

(b) 98% of modified AASHTO density (specify compaction thickness layer)

Work under this item involves ripping of existing surfacing that is heavily potholed. The old surfacing material shall be disposed of away from the site. The remaining surface shall be scarified, watered, mixed and compacted to the specified density.

Payment shall be made per square metre of surface compacted, and shall be compensation for cost of using grader, water bowser, and roller. Where top up gravel is required, this shall be paid under item PS 49.09(c).

**PS 49.17 Milling, water, mix and re-compact existing road pavement layers.....Square Metre**

(a) 95% of modified AASHTO density (specify compaction thickness layer)

(b) 98% of modified AASHTO density (specify compaction thickness layer)

Work under this item involves milling of the existing road pavement layers to a depth of up to 200mm, watering, mixing, shaping to levels and compaction to the specified density. All the necessary preparations prior to the milling exercise such as cleaning and removal of debris, loose soil and deleterious material shall also form part of this work item.

Payment shall be made per square metre of surface milled, and shall be compensation for providing milling equipment, grader, water bowser and roller. Where top up gravel is required, this shall be paid under item PS 49.09(c).

**PS 49.18 Pothole Repair:**

(a) With stabilised base material:

(i) Base material stabilised with cement .....square metre

(ii) Base material stabilised with bituminous emulsion .....square metre

**Part 2: Section 6: Work Requirements**

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The works comprise the permanent repair of existing potholes in paved roads, using stabilised aggregate base materials. The works shall include cutting of the edges, excavation of loose material, priming of edges, placement and compaction of stabilised base materials up to a depth of 200mm in terms of base preparation where necessary.

The material shall comply with the following requirements specified for the various types of materials in the appropriate sections of the specifications.

The works shall be measured in square metres of completed repair of any thickness up to a depth of 200mm. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals necessary to complete the work as specified.

Where the repair shall be covered with a slurry seal, this shall be carried out and measured as a separate pay item.

- (b) With cold mix asphalt material:
  - (i) 25 mm thickness.....square metre
  - (ii) 40 mm thickness.....square metre

The works comprise the repair of existing potholes in paved roads using cold mix asphalt material. The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary. Surfacing is made using cold premix asphalt manufactured to recipe using a pug-mill or concrete mixer and mechanically compacted to achieve a smooth, even road surface.

The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth, handling, labour, materials and all incidentals necessary to complete the work as specified.

- (c) With plant mix hot asphalt:
  - (i) 25 mm thickness.....square metre
  - (ii) 40 mm thickness.....square metre

The work comprises the permanent repair of isolated potholes (up to 200mm in depth in terms of base preparation) that have formed in the surface of an asphalt or surface dressed pavement.

The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary. Surfacing is made using hot-mix asphalt produced at a central batching plant to an approved recipe.

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Hot-mix Asphalt shall be a Continuously Graded (Medium) asphalt surfacing using 80/100 (or 60/70 where specified) penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (2001) Clauses 4202 and 4203.

Prime coat to unbound bases shall be 60% stable grade anionic bitumen emulsion (diluted with up to 3 parts of water to 1 part emulsion, depending on the porosity of the base material).

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion or heated penetration grade bitumen. Cut-back bitumen may be used with the prior consent of the Employer.

The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth, handling, labour, materials and all incidentals necessary to complete the work as specified.

- (d) With site mix asphalt:
  - (i) 25 mm thickness.....square metre
  - (ii) 40 mm thickness.....square metre

The work comprises the permanent repair of existing potholes in paved roads using site prepared hot mix asphalt produced to an approved recipe. The repair involves the proper cutting of the pothole edges, removal of failed material, preparation of the hole, application of tack / prime coat and cut back bitumen to the cut faces, placement and compaction of top-up base materials of existing pavement up to a depth of 200mm where necessary. This repair option should only be used where small work quantities are required or where central batching plants are not available. To ensure the proper performance of the completed repair, the asphalt is required to be placed and compacted in accordance with the Specifications in Section 4200.

Site mixed Asphalt shall be a Continuously Graded (Medium) asphalt surfacing made using 80/100 (or 60/70 where specified) penetration grade bitumen and designed in accordance with the requirements of SATCC (Draft) Standard Specifications for Road and Bridge Works (1998) Clauses 4202 and 4203. In certain situations the Employer may permit the use of standard recipe mix designs or alternative approved specifications, but only where sufficient test data and records of field performance confirm suitability.

Prime coat to unbound layers shall be 60% stable grade anionic bitumen emulsion (diluted with up to 3 parts of water to 1 part emulsion depending on the porosity of the base material).

Tack coat for joints shall be undiluted 60% stable grade anionic bitumen emulsion, or heated penetration grade bitumen. Where required to the floor of potholes that do not extend below the existing asphalt, tack coat shall be diluted 2 parts of water to 1 part emulsion. Cut-back bitumen may be used with the prior consent of the Employer in which case small quantities may be prepared by blending kerosene and bitumen using strict fire precautions on site.



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The work for payment shall be measured in square metres. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, preparation of the patching area inclusive of top-up base materials up to 200mm depth, handling, labour, materials and all incidentals necessary to complete the work as specified.

**5000 ANCILLARY ROAD WORKS**

*Add the following new section:*

**SECTION PS5050: BUS BAYS**

**PS 5051 Scope**

Bus Bays will be located on site as instructed by the Engineer. Where Bus Bays are situated on opposite side of the road they shall be located such that the entry tapers follow each other and not the exit tapers that shall be remote from each other.

The Bus Bay shall be constructed as detailed in the drawings. The construction works shall include the following items:

- Gravel base on top of separately prepared sub base and earthworks
- Kerb stone type S1 including backing with concrete
- Concrete for bus bay 200 mm Class 20/19 with shrinkage joints and brushed surface finish
- Steel fabric reinforcement – size A252 in concrete
- Joints and sealant
- Finishes
- Drainage outlets through kerbs and verge
- Fill for side walk behind kerb stones

**PS 5052 MEASUREMENT AND PAYMENT**

Payment for Bus Bays item shall be made as comprising of all the activities mentioned under PS 5051 above, for the number of Bus Bays as instructed by the Engineer.

Excavation and fill below the sub base will be measured and paid under separate measured items.

The following pay items are applicable:

**PS 50.01: Bus Bays: Construct Bus Bays as per typical bus bay drawing**

- (a) Subbase 95% modified AASHTO in layers of 200mm.....m<sup>3</sup>
- (b) Base to 98% modified AASHTO in layers of 200mm.....m<sup>3</sup>
- (c) 20/19 concrete pavement 200mm thick.....m<sup>3</sup>
- (d) Steel fabric reinforcement – type A252.....kg
- (e) Kerb stone Type S1 including backing with concrete.....m
- (f) Drainage outlet.....No.

**SECTION 5100      MARKER AND KILOMETRE POSTS**

**PS 5101 SCOPE**

***Add the following to this Clause:***

Road reserve demarcation beacons shall be constructed according to details on the drawings at an interval of 200m on either side of the road.

**PS 5106      MEASUREMENT AND PAYMENT**

✓ ***Add the following pay item:***

<b>Item</b>	<b>Unit</b>
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<b>PS 51.03 Road reserve demarcation beacons .....</b>	<b>No.</b>
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The unit of measurement shall be the number of beacons installed to the satisfaction of the Engineer

The tendered rate shall include full compensation for excavation, materials, masonry construction, backfilling and plastering of the beacon.

**SECTION 5200: GUARDRAILS**

**PS 5203      CONSTRUCTION (a) Erection**

✓ ***Add the following to the 3<sup>rd</sup> paragraph:***

The bolts shall be tack welded to the nuts in order to reduce the risk of vandalism.

**SECTION 5400 ROAD SIGNS**

**PS 5401 SCOPE**

***Add the following to this Clause:***

This section also covers the repair of permanent road traffic signs. It includes the repair and replacement of faded, damaged or not clearly visible existing signboards and reference marker boards.

This section also covers the cleaning of existing permanent road signs which faces appear dirty, faded or non-reflective as well as the removal of illegal signs.

**5406 ERECTING ROAD SIGNS**

***Change the heading of this Clause as follows:***

**PS 5406 ERECTING ROAD SIGNS, REPARING OF ROAD SIGNS AND CLEANING OF ROAD SIGNS**

***Add the following Sub-Clauses:***

**PS 5406 (h) – Repair Work**

The Engineer may require that certain existing signs be dismantled for repair work or storage and later re-erected. The signs shall be repainted or repaired, by replacing the 200mm profiles or straightening the sheet metal, in accordance with the methods and requirements specified during the manufacturing process. New materials shall be used for part or all of the supporting structure. This work shall be done with as little damage as possible to the signs.

**PS 5406 (i) – Cleaning of Road Signs**

(i) Cleaning

The Engineer shall indicate which signs are to be cleaned when cleaning is to be carried out.

Sign faces shall be cleaned using a non-abrasive cleaner with a pH of 6 to 8. Approved sign cleaning equipment such as the “Highway Handyman” cleaner shall be used.

All loose dirt and cleaners shall be washed from the sign. High pressure spray on the signs shall be avoided.

To reach the large overhead signs for cleaning, the Contractor shall use a truck with a hydraulic lift and shall take all necessary precautions not to damage the road surface when positioning the truck.

On instruction from the Engineer the Contractor shall remove dirt and graffiti from road sign faces.

(ii) Painting of metal road sign elements

Metal road sign supports and frames of sign faces which are showing a degree of corrosion, shall be repainted with the same type of paint used during the initial manufacturing of the sign elements. All corroded parts to be repainted shall first be properly cleaned using wire brushes, sanding

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paper, or other effective cleaning apparatus, to such an extent that no trace of rust can be observed all to the satisfaction of the Engineer.

Illegal signs: removal

Only on the instruction of the Engineer shall illegal signs be removed and disposed of or stored if required. Any inquiries from outside parties regarding the removal of illegal road signs shall be directed to the Engineer.

### PS 5409 MEASUREMENT AND PAYMENT

**Create the following new Pay Item:**

#### PS 54.10 Road Signs (Complete).....No.

Measurement items 54.01, 54.02 and 54.03 are combined into one item PS54.10 and measurement shall be in terms of number of road signs installed and approved. A schedule of road signs to be installed will be provided on drawings detailing type, location for installation, dimensions, fixing and installation details, etc.

The road signs shall be of Class 1 – Engineering grade and lettering, symbols and border of retro-reflective material of High-intensity grade.

Under Item 54.10 the tendered rate shall also include the full compensation for provision and installation of the road signs (including excavation in soft material or rock, concrete backfill, road sign steel tubing supports, bolts and other accessories, welding, lettering etc.) according to drawings and specifications.

#### PS 54.11 Repair of Road Traffic Signs.....No.

The unit of measurement shall be the number of repaired road traffic signs.

The tendered rates shall include full compensation for dismantling of the damaged traffic sign and its support, repairing the road signboard and re-fixing it to the road sign support structure. The tendered rate shall also include the cost for all equipment, labour, supervision, nuts, bolts, transport, handling, *inter alia* necessary for the installation of the road signboard.

#### PS 54.12 Repair of Road Sign Supports.....No.

The unit of measurement for erecting supporting structures manufactured from steel tubing shall be the number of repaired steel tubing used. Bolts and other accessories shall not be measured separately.

The tendered rates shall include full compensation for erecting the road sign supports, including all bolts, screws, rivets, welding and accessories, together with the painting and galvanising required and the provision and treatment of breakaway holes in timber supports.

The tendered rate shall include full compensation for all the labour, excavation, backfilling with soil or concrete, *inter alia*, as may be necessary for completing the work in accordance with the details shown on the drawings.

#### PS 54.13 Road Sign Cleaning:

- (a) Cleaning of guard-rail reflectors (all types).....No.
- (b) Cleaning of road signs boards from any dirt as well as from graffiti.....No.

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The unit of measurement shall be the number of guard-rail reflectors and road signs cleaned.

The tendered rates shall include full compensation for all labour, material and equipment necessary for cleaning the road signs from any dirt as well as from graffiti. It shall include for the provision and application of the specified cleaning detergent.

### **PS 54.14 Painting of metal road sign elements:**

- (a) Road sign supports or frames ..... litre (l)
- (b) Road sign boards .....litre (l)

The unit of measurement shall be the litre of road sign paint as per manufacturer's specifications.

The tendered rate shall include full compensation for the supply and application of one coat of the specified paint to sign supports and frames. The tendered rate shall also include for the cleaning and preparation of the elements, as specified, before the application of the paint.

### **PS 54.15 Removal of Illegal signs.....No.**

The unit of measurement shall be the number of illegal road signs of any size removed on instruction of the Engineer.

The tendered rate shall include full compensation for all labour, equipment, transport and overheads necessary for removal of the illegal signs.

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**SECTION 5500 ROAD MARKINGS****PS5502 MATERIALS**

(ii) ***Add the following to (a) Paint (ii)Retro-reflective road marking paint:***

- ✓ Road marking paint shall comply with the requirements of SABS 731-1 for type 1 paint

During actual painting the Contractor must supply sealed samples of the paint to be used to the Engineer together with details of the paint batch numbers and testing carried out on these particular batches by the paint manufacturer to prove compliance with this specification. These samples shall be kept until the end of the period of maintenance.

**PS 5507 APPLYING THE PAINT**

✓ ***Add the following to the last paragraph:***

After completion of a section of asphalt surfacing and before opening the section to traffic, the pre-marking of the centre and edge lines shall be done. At least two weeks shall elapse after completion of the surfacing before the permanent road markings shall be applied, unless otherwise directed by the Engineer.

**SECTION 5700 LANDSCAPING, TOPSOILING AND GRASSING**

**PS 5702: Materials**

Add the following to the relevant sub-clauses:

**(a) Fertiliser/Soil-Improvement Material**

Fertilisers shall not be used in this Contract.

**(b) Grass Cuttings**

Grass cuttings shall be fresh cuttings of the species as specified by the Engineer

**(c) Grass Seeds**

The Contractor may use grass seeding in lieu of planting, but no additional payment shall be made for hand seeding or hydroseeding.

**(d) Trees, Shrubs and Hedge Plants**

This sub-clause is deleted.

**(e) Grass Sods**

Delete this sub-clause and replace it with the following:

“Veld sods may be obtained from approved areas where a suitable type and density of grass are found. No additional payment shall be made for sods.”

**(f) Anti-Erosion Compounds**

This sub-clause is deleted.

**(g) Topsoil**

Delete paragraphs two, three and four, and replace them with the following:

“Topsoil shall be obtained from stripping operations under embankments and in cuttings in accordance with Sub-Clauses 1702(c) and 1703(a). Topsoil stripped from borrow areas shall not be used for topsoiling elsewhere but must be used to rehabilitate the borrow areas themselves. If the Contractor fails to conserve the topsoil as prescribed in Sub-Clause 1702(c) he shall obtain suitable topsoil from other sources at his own cost.

“Care shall be taken to prevent the compaction of the topsoil in stockpiles or in the Works in any way, particularly by trucks driven over such material.”



**PS 5704: Preparing Areas for Grassing**

**(a) Soil Ripping**

This sub-clause is deleted.

**(b) Areas Which Do Not Require Topsoil**

This sub-clause is deleted.

**(c) Areas Which Require Topsoil**

Add the following to this sub-clause:

All surfaces to be grassed shall immediately before grassing be roughened to ensure a proper bond with the topsoil. Topsoil free from stones shall be placed on the prepared surface and trimmed to a thickness slightly higher than the final thickness.

Where shown on the Drawings or directed by the Engineer the verges and the slopes of cuttings and embankments shall be covered with topsoil and lightly rolled to the required final thickness.

**(d) Fertilising**

This sub-clause is deleted.

**PS 5705 Grassing**

The Contractor shall choose the method of establishing grass. No additional payment shall be made regardless of the method of grassing employed by the Contractor.

Add the following to this sub-clause:

**(a) Planting Grass Cuttings**

Fresh grass cuttings of the “Kapinga” species or other approved species shall be planted by the Contractor at 250 mm centres and watered at frequent intervals to ensure the grass takes root and spreads out quickly. Grass cuttings that have been allowed to dry out shall not be planted.

Add the following to this sub-clause:

**(c) Hydroseeding**

The Engineer shall approve the types and mixtures of seeds to be used before the Contractor orders any seed. Hydroseeding shall be carried out with an approved hydroseeding machine at a rate of application of not less than 38 kg of seed mixture per hectare. A mulch shall be added to the hydroseeding mix at an approved rate.

**(d) Topsoiling Only**

This sub-clause is deleted.

Add the following to this sub-clause:

**(e) Grassing With an Approved Grass Planter**

Grassing shall be done with an approved grass planter which plants the seeds in rows spaced not more than 250 mm apart. The planter shall plant the seeds approximately 6 mm deep and shall lightly compact the topsoil.

**(g) Other Methods**

This sub-clause is deleted.

**(h) The Grassing of Borrow Pits, Temporary Bypasses, Camp Sites, Access Roads and Stockpile Sites**

This sub-clause is deleted.

**PS 5706: Maintaining the Grass**

**(a) Watering, Weeding, Mowing and Replanting**

On line one of paragraph two delete “mow” and replace with “cut”.

**(b) Acceptable Cover**

At the beginning of this sub-clause add the following as first paragraph:

“The Contractor shall be solely responsible for establishing an acceptable grass cover and for the cost of re-establishing grass by any method where no acceptable cover has been established.”

**(c) Maintenance Period**

The maintenance period in respect of grass shall commence when an acceptable grass cover as defined in (b) above has been established and shall last one year or to the end of the period of the Contract, whichever expires later.

The Contractor shall be responsible for watering, cutting and maintenance of all grassed areas during the period of maintenance.

**Part 2: Section 6: Work Requirements**

---

**(d) Proprietary Brand Materials Used for Erosion Prevention**

This sub-clause is deleted.

**(e) Responsibility for Establishing an Acceptable Cover**

This sub-clause is deleted. Sub-Clause 5706(b) applies.

**(f) Re-Fertilising**

This sub-clause is deleted.

**PS 5709: Measurement and Payment**

Add the following new pay items:

**PS 57.03 (c ) (i):** Preparing the area for grassing, topsoil obtained from within the road reserve or borrow areas (unlimited free haul), layer thickness 75mm.....m<sup>2</sup>

## Part 2: Section 6: Work Requirements

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**SERIES 6000:           STRUCTURES**

**Section 6100:           Foundations for Structures**

**6115 Measurement and Payment**

✓ *Change pay items 61.02 and 61.04 as follows:*

<b>Item</b>		<b>Unit</b>
<b>PS 61.02</b>	<b>Excavation:</b>	
(a)	Excavation in any material other than rock at any depth .....	m <sup>3</sup>
(b)	Excavation in rock at any depth .....	m <sup>3</sup>
<b>PS 61.04</b>	<b>Backfill to Excavations:</b>	
(a)	utilizing imported material or material from excavation.....	m <sup>3</sup>
(b)	Soil cement at the Engineer's instruction .....	m <sup>3</sup>

## Part 2: Section 6: Work Requirements

---

### **Section 6200: Falsework, Formwork and Concrete Finish**

#### **6210 Measurement and Payment**

***Change Pay Item 62.01 to read as follows:***

**PS 62.01 Formwork** .....square metre

Formwork to all members, any face (horizontal, vertical or inclined) and for all classes of finish.

***Amend the first paragraph after the first four Pay Items to read as follows:***

“The unit of measurement shall be the square metre and only the actual area of formwork in contact with the finished face shall be measured. No separate payment will be made for vertical, horizontal or inclined formwork. The rate for formwork shall be for all classes of finish and to any direction.”

***Add the following new section:***

### **SECTION PS 6900: REPAIR AND MAINTENANCE OF BRIDGES**

#### **PS 6900 Scope**

The works comprise the inspection, removal of deteriorated wooden bridge deck members (beams, chasses and running boards), cleaning of the receiving structure and replacing with new members as required and fixing securely in place. In terms of payment, a differentiation is made between timber superstructure bridges, and Bailey Bridges due to the difference in fixings.

The works shall also cover the repair and maintenance of concrete decks parapets, deck slabs and beams.

#### **PS 6901 Materials**

##### **(a) Wooden bridge decks**

Timber chassis (cross-member) and running boards - (225 - 250 x 75mm) pine/equivalent soft wood or (225 - 250 x 50mm) hardwood,

Bulk-stripped Blue Gum or any other approved hardwood timber bearers (beams) - (300 – 450 mm dia. to match existing) or

Approved bulk-stripped softwood beams in special cases - (300 – 450 mm dia. to match existing),

Timber packing pieces (preferably hardwood),  
150mm galvanised coach screws,

Preservative treatment chemicals.

##### **(b) Concrete bridge decks**

Concrete

Epoxy

Penetration grade bitumen

**PS 6903 Execution of Works**

**(a) Wooden bridge decks**

1. The bridge shall be stripped of rotten or otherwise faulty timbers as directed by the Employer's Representative. The exact extent of the work will be confirmed on site depending on the agreed condition of the exposed timber.
2. Faulty timbers shall be replaced with new timbers that generally have the same dimensions as the original, except as otherwise directed by the Employer.
3. Discarded timbers shall be disposed of by the Contractor in dumps approved by the Employer's Representative. On no account shall these be burned other than indirectly by logging and donation to local dwellers for cooking fuel, etc.
4. All deck timbers shall be square sawn, well seasoned, without warps or twists and free of jagged edges.
5. Main bearer beams shall be straight and without splits or cracks and be of uniform size.
6. All softwood shall first be given two coats of proprietary preservative paint applied strictly in accordance with the manufacturer's instructions. Any cuts that are subsequently made to the timber shall be similarly treated.
7. Chassis timbers (cross-members) shall be fitted with an air gap of not more than 50mm between adjacent planks to allow drainage and prevent dirt from becoming trapped. Where for reason of uneven beams the planks do not sit uniformly, they shall be packed using hardwood packing pieces cut to size. Packing pieces shall be a minimum of 300mm in length. High points on bearers may be locally removed by trimming.
8. All timbers shall be fixed using 150mm galvanised coach screws or nuts and bolts. Nails shall not be used unless otherwise approved due to their tendency to work loose. The screws shall be driven in a skewed and staggered manner.
9. In the case of Bailey Bridge redecking only proprietary galvanised steel fixings shall be permitted.
10. After renewing the deck chassis timbers, new running boards shall be fitted. These shall form a bridge valley (space between the two sets of running boards) of not more than 500mm or shall match the previous configuration. Each set of running surface shall have five planks or 1.1metres width, whichever is greater). All running boards shall be longer than 1.5m in length. Joints between parallel boards shall be staggered.
11. On completion of the works, the site shall be cleaned of all surplus materials and waste, and left in a clean, tidy condition.

**(b) Concrete bridge decks**

Concrete shall be transported and placed in a manner that will prevent segregation or loss of constituent materials or the contamination of the concrete.

Concrete shall not be placed in any part of the works until the Engineer's approval has been given. Placing and compacting the concrete shall at times be under the direct supervision of an experienced concrete supervisor. Concrete shall be fully compacted by vibrators or other approved means during and immediately after placing.

**PS 6904 Measurement and Payment**

**PS 69.01 Removal of existing timber bridge decks.....metre**

The unit of measurement shall be the metre of measured timber bridge deck length.

## Part 2: Section 6: Work Requirements

---

The tendered rate shall include the removal of timber running boards, chassis and beams of an existing timber deck bridge. The tendered rate shall also include the disposal of removed items away from site.

### **PS 69.02 Bailey bridge works (Specify Type of Bailey Bridge and Configuration) eg Standard, Mabey or Extra wide and Single Single, Tripple Single, Double Double etc**

#### **(a) De-launching .....metre**

The unit of measurement shall be the metre of measured bailey bridge length.

The tendered rate shall include the de-launching of entire bridge including preparatory work, required de-launching gear, equipment and labourers.

#### **(b) Re-launching.....metre**

The unit of measurement shall be the metre of measured bailey bridge length.

The tendered rate shall include the re-launching of entire bridge including preparatory work, required launching gear, equipment and labourers.

#### **(c) Transportation of bailey parts.....tonne-km**

The unit of measurement shall be the tonne of bailey parts to be transported multiplied by the transport distance.

The tendered rate shall include the loading, transport and unloading of bailey parts as instructed by the Project Manager.

### **PS 69.03 Renew Bridge Timbers – Standard Chassis**

**(a) (225–250) mm x 75 mm Softwood .....metre**

**(b) (225–250) mm x 50 mm Hardwood .....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.04 Renew Bridge Timbers – Running Boards**

**(a) (225–250) mm x 75 mm Softwood .....metre**

**(b) (225–250) mm x 50 mm Hardwood .....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.05 Renew Bridge Timbers – Bailey Bridge Chassis**

**(a) (225–250) mm x 75 mm Softwood .....metre**

**(b) (225–250) mm x 50 mm Hardwood .....metre**

## Part 2: Section 6: Work Requirements

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The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.06 Renew Bridge Timbers – Bailey Bridge Running Boards**

- (a) (225–250) mm x 75 mm Softwood .....metre**  
**(b) (225–250) mm x 50 mm Hardwood .....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.07 Renew Bridge Timbers – Bailey Bridge Kerbs/Ribbands/Edge beams.....metre**

- (a) (225–250) mm x 75 mm Softwood .....metre**  
**(b) (225–250) mm x 50 mm Hardwood .....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.08 Renew Bridge Timbers – Bailey Bridge Ribband bolts (specify minimum size)-No**

The unit of measurement shall be the number of bailey bridge ribband bolts.  
The tendered rate shall include the supply of bolts to site and instalment of bolts to bailey bridge elements.

### **PS 69.09 Renew Bridge Timbers Beams/Bearers (300 – 450mm diameter).....metre**

The works shall be measured in linear metres of each timber size installed and accepted on the bridge structure excluding all off-cuts and wasted pieces which shall not be measured. Payment shall include for the provision and application of the preservative and all metal fixings etc. Unit rates shall include full compensation for all steps necessary to comply with the above including all transport, handling, labour, materials and all incidentals inclusive of backfilling and compaction of approaches to running boards surface level necessary to complete the work as specified.

### **PS 69.10 Repair of deck parapets).....metre**



**Part 2: Section 6: Work Requirements**

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This item includes the repair of damaged steel deck parapets on the sides of the bridge deck.

Work under this item shall be measured and paid for per linear metre repaired. The rate per metre shall be full compensation for the cost of materials, labour, transport and welding.

**PS 69.11 Repairing reinforced concrete deck slabs and beams.....square metre**

This item includes the repair of damaged deck slabs and beams of the bridge deck.

Work under this item shall be measured and paid for per square metre repaired. The rate per square metre shall be full compensation for the cost of materials, labour and transport.

**PS 69.12 Sealing cracks on concrete decks.....metres**

This item includes the sealing of cracked slabs and beams of the bridge deck.

Work under this item shall be measured and paid for per linear metre sealed. The rate per linear metre shall be full compensation for the cost of materials, labour and transport.

**SECTION PS 7100: TESTING OF MATERIALS AND WORKMANSHIP**

**PS 7101      Scope**

✓ **Add the following to Clause 7101:**

- 1.
2. The Contractor shall be responsible for conducting such testing as may be required in order to indicate that proposed materials and mix designs comply fully with the requirements of the Specification. These tests shall be performed and submitted for checking, in advance of carrying out Works. The Contractor shall also carry out such further monitoring tests as may be required by the Specification during the performance of the Works.
3. Except where otherwise provided for in the Contract, the cost of testing shall be borne by the Contractor and shall be deemed to be included in his tendered rates for the work item.

**7115    Measurement and Payment**

✓ **Add the following new pay item:**

PS            71.04                                    Testing                    and                    Quality                    Control  
Obligations.....months

The tendered rate shall include full compensation for providing the apparatus on the site and making it available and for using it for as long as may be necessary. The tendered rate shall also include full compensation for having the required tests conducted by experienced laboratory staff.

Alternatively, the tendered rate shall include full compensation for having the required tests conducted by an approved laboratory.

## **Section 6D**

# **Supplementary Information**

## **Section 6D – Supplementary Information**

- (i) Standard Works Order Format
- (ii) Wages Record Form
- (iii) Dayworks Approval Form
- (iv) Project Sign Board
- (v) Site Diary Form
- (vi) Sub-contract Agreement Form
- (vii) Labour Return Form

**ROADS AUTHORITY  
ROUTINE TERM MAINTENANCE PROGRAMME  
WORKS ORDER**

Works Order No	<input type="text"/>	Issued By	<input type="text"/>	<input type="text"/>	(For Employer)
Contract No.	<input type="text"/>	Date Received	<input type="text"/>	<input type="text"/>	
Date W.O. Prepared	<input type="text"/>	Accepted By	<input type="text"/>	<input type="text"/>	(For Contractor)

The Following Works are instructed pursuant to the Conditions of Contract and Specifications

(Description of Work)
-----------------------

Location of Works	Region <input type="text"/>	Road No. <input type="text"/>
	District <input type="text"/>	Start (km) <input type="text"/>
		Finish (km) <input type="text"/>

Commencement Date of Works	<input type="text"/>	(if required to be stated)
Period of Completion	<input type="text"/>	(days following receipt of W.O.)
<b>Date Due for Completion</b>	<input type="text"/>	Extension if Granted <input type="text"/> Days
Extended Date for Completion	<input type="text"/>	(where applicable)

Programme Required	<input type="text"/>	Yes or No	Method Statement	<input type="text"/>	Yes or NO
Method of Valuation	<input type="text"/>		BOQ or Dayworks		
Monthly Payments Permitted	<input type="text"/>	Yes or No	(where specifically provided for)		
Provision for Liquidated Damages	<input type="text"/>		MK per day		

Notified Date of Completion	<input type="text"/>	Received on	<input type="text"/>
Take Over by Employer	<input type="text"/>	Days Late	<input type="text"/>

Description of any Defects in Work

(Description of any Defects in Work)
--------------------------------------

Employer's estimate of defect rectification costs (withheld from payments)	<input type="text"/>
Final date set for rectification (pending permanent deduction of cost)	<input type="text"/>

Bill Item	Description	Unit	Estimated Quantity	Rate (MK)	Estimated Value (MK)	Actual Quantity	Actual Value (MK)
<b>Total Measured Works</b>							
Add 16.% of Measured Works as value Added Tax							
<b>Total Works Order Value</b>							
Liquidated Damages Deducted							
Defect Rectification Cost Deducted							
<b>Settled Final Account Amount</b>							

<b>VALUATION CERTIFIED</b>	For Contractor	_____	Date	_____
	For Supervisor	_____	Date	_____
	For Employer	_____	Date	_____

**Part 2: Section 6: Work Requirements**



<b>WAGES RECORD</b>					
<b>Contract Name:</b>					
<b>Contract No:</b>			<b>Contract Sum: MK</b>		
<b>Start Date:</b>		<b>Contract Period:</b>		<b>Extention of Time:</b>	
<b>Revised Completion date:</b>					
<b>Contractors Name:</b>					
Item	Labour Type			Duration Worked	Total Wages Paid (Mk)
	Class	Number Male	Number Femall		
1	Management				
2	Head Office staff				
3	Site Agent				
4	Foreman				
5	Casual Labourers*				
6	Other Staff				
	<b>Total</b>				
<b>Any Other Information on Labour issues on the Contract:</b>					

\* Please Attach list of casual labourers

Submitted By:.....Signed & Stamped.....



## DAYWORKS APPROVAL FORM - URGENT AND EMERGENCY WORKS

Date of Preparation:

Scope of Works:

Locality of the works:

Function:

Series 900 - Dayworks						
Id	Plant	Unit	Quantities			Reason/Motivation for the variation
			Estimated	Executed	Variation	
901	D6 Dozer	Hour				
902	D4 Dozer	Hour				
903	Motor grader 125 – 150 HP	Hour				
904	Motor grader 160 – 200 HP	Hour				
905	Excavator 0.5 – 1.0 cum	Hour				
906	Front-end loader 1.5 – 2 cum	Hour				
907	Vibrating roller (self propelled) 8 – 12 tonnes	Hour				
908	Smooth wheeled roller 10 – 12 tonnes	Hour				
909	Pneumatic tired roller 25 – 30 tonnes	Hour				
910	Pedestrian vibrating roller (0.75 – 2 tonnes)	Hour				
911	Plate compactor (vibratory)	Hour				
912	Water bowser with spray bar (truck mounted)	Hour				
913	Truck – flatbed lorry 5-10 tonne capacity	Hour				
914	Truck – tipper 8-12 tonne capacity	Hour				
915	Truck – tipper 15 tonne capacity	Hour				
916	Pick-up 4WD	Hour				
917	Water pump 75mm with hose	Hour				
918	Concrete Mixer 0.5 cum	Hour				
	<b>Labour</b>					
919	Unskilled	Hour				
920	Ganger	Hour				
921	Tradesman	Hour				
	<b>Materials</b>					
922a	Provisional Sum for Purchase of Materials - 7 Tonne Trips					
a1	Quarry Dust	Trips				
a2	Crusher run	Trips				
a3	Fine aggregate - Sand	Trips				
a4	Other (please specify)	Trips				
922b	Percentage addition to 922a a to cover profit, handling and all other costs	%				

Consultant

Prepared By

Signature

Date

Contractor

Accepted By

Signature

Date

Roads Authority

Approved By

Signature

Date

NB:

1. This form shall be filled in and approved before the contractor starts the works
2. The quantities herein are estimates (but should be strictly adhered to). The contractor should seek verbal approval before exceeding the quantities
3. Blank copies of this forms should be filled in on site during handovers of the sites

## Standard Sign Board

The Contractor shall provide, erect and maintain, Project Sign Boards at all the principle boundaries to road Network. The normal number of signs shall be two (2). The cost of providing and maintaining the sign boards should be included in the rates tendered for other work items and will not be separately reimbursed.

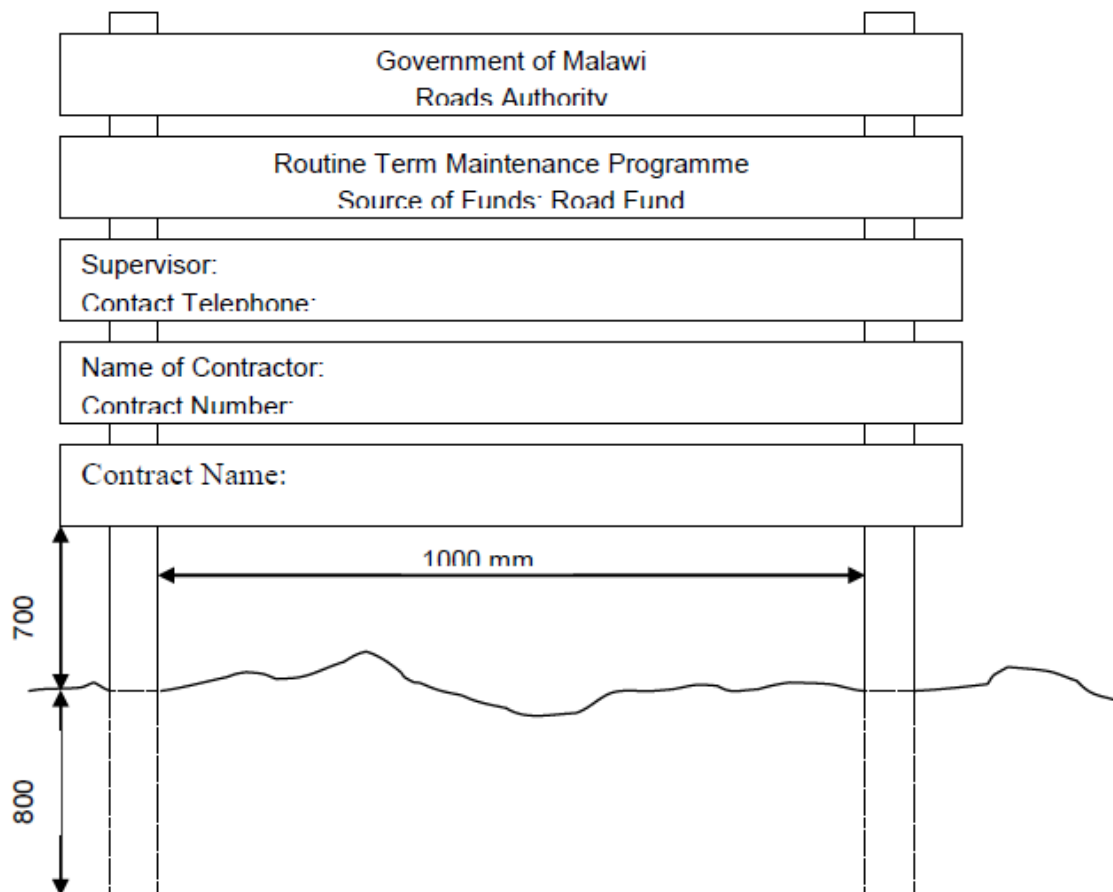
The dimensions of each sign shall be:

Stands – 100mm x 50mm x 3250mm (timber); boards – 300mm x 25mm x 1200mm (timber); gaps between boards – 50mm

Materials:

All timber must be treated wood, sign boards shall be painted blue with white lettering.

The sign board text shall be as indicated below, or as otherwise notified by the Employer:



## Part 2: Section 6: Work Requirements

<b>ROADS AUTHORITY MAINTENANCE</b>										Date:	
<b>DEPARTMENT CONTRACT SITE DIARY</b>										Sheet No.	
<b>FORM</b>											
SITE DATA											
RA DIVISION				REGION				DISTRICT			
CONTRACT No.				CONTRACT TITLE:							
CONTRACTOR NAME:						CONSULTANT NAME:					
ROAD No.		SECTION No.				FROM:				TO:	
DAILY FORMATION											
Date			Day			Working Time		From:		To:	
WEATHER CONDITION			Rain	Yes	No	Working Condition		Poor	Fair	Good	
MAINTENANCE ACTIVITIES											
	BOQ Item			Description				Location			
1											
2											
3											
RESOURCES ON SITE											
1	PERSONNEL			Site Ag	Site Eng	Foreman	Driver	Operator	Craftman	Unskilled	Total
	Number										
2	PLANT AND VEHICLE			Plant	Plant	Hvy Veh.	Veh.	Motorbike	Bicycle	Others	Total
	Number										
3	MATERIALS			Gravel		Crushed Stone		Aggregate		Cement	
	Quantity				cu.m		cu.m		cu.m		kg
	MATERIALS			Premix		Timber		Diesel		Petrol	
	Quantity				kg		cu.m		litre		litre
OTHER ACTIVITIES											
	Type			Location				Purposes			
1	Survey										
2	Setting - Out										
3	Sampling										
4	Testing										
5	Measurement										
6	Review Program										
7	review Cost										
8	Inspection										
9	Meeting										
10	Visitors										
11	Others										
REMARKS											
INSTRUCTIONS FOR FILLING IN THE FORM											
DAILY FILLING IN: Filled in by Contractor's Site Agent (In Triplicate Copies)											
WEEKLY DISTRIBUTION: Contractor Office - 1 copy, Consultant office - 1 copy and RA Regional Office - 1 copy											



## **Section 7**

# **General Conditions of Contract**

## Section 7: General Conditions of Contract

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## Section 7. General Conditions of Contract

### A. General

#### 1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

- a) An “Admeasurement Contract” means a contract based on a priced Bill of Materials and Quantities or schedule of unit price rates in which payment to the Contractor is made subject to measurement of physical quantities of items by the Employer.
- b) The “Activity Schedule” means the priced Activity Schedule forming part of the Bid for Lump Sum Contract.
- c) The “Adjudicator” is the person appointed jointly by the Employer and the Contractor to

- resolve disputes in the first instance, as provided for in Clauses 24 and 25 hereunder.
- d) “Bill of Quantities” means the priced and completed Bill of Quantities forming part of the Bid for an Admeasurement contract.
  - e) “Compensation Events” are those defined in Clause 44 hereunder.
  - f) The “Completion Date” is the date of completion of the Works as certified by the Project Manager, in accordance with Sub-Clause 55.1.
  - g) The “Contract” is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in Clause 2. below.
  - h) The “Contract Price” is the price stated in the Notice of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
  - i) “Contractor” means the Supplier appointed under the Contract for the performance of the Works.
  - j) “Days” are calendar days; “months” are calendar months.
  - k) “Dayworks” are varied work inputs subject to payment on a time basis for the Contractor’s employees and Equipment, in addition to payments for associated Materials and Plant.
  - l) A “Defect” is any part of the Works not completed in accordance with the Contract.
  - m) The “Defects Liability Certificate” is the certificate issued by Project Manager upon correction of defects by the Contractor.
  - n) The “Defects Liability Period” is the period named in the Special Conditions of Contract and calculated from the Completion Date.
  - o) “Drawings” include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
  - p) “Employer” means the Procuring Entity who employs the Contractor to carry out the Works.
  - q) “Equipment” is the Contractor’s machinery and vehicles brought temporarily to the Site to construct the Works.
  - r) The “Initial Contract Price” is the Contract Price listed in the Procuring Entity’s Notice of Acceptance.
  - s) The “Intended Completion Date” is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Special Conditions of Contract. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
  - t) “Materials” are all supplies, including consumables, used by the Contractor for incorporation in the Works.
  - u) “Plant” is any integral part of the Works that shall have a mechanical, electrical

chemical, or biological function.

- v) The “Procuring Entity” is the party who employs the Supplier to carry out the Works.
- w) The “Project Manager” is the person named in the Special Conditions of Contract (or any other competent person appointed by the Employer and notified to the Contractor to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- x) A “Security” is any monetary surety required by the Employer to guarantee performance by the Contractor under the Contract.
- y) The “Site” is the area defined as such in the Special Conditions of Contract.
- z) “Site Investigation Reports” are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- aa) “Specification” means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- bb) The “Start Date” is given in the Special Conditions of Contract. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- cc) A “Subcontractor” is a person or corporate body who has a Contract with the Supplier to carry out a part of the work in the Contract, which includes work on the Site.
- dd) The “Supplier” is a person or corporate body whose Bid to carry out the Works has been accepted by the Procuring Entity.
- ee) The “Contractor’s Bid” is the completed bidding document submitted by the Contractor to the Procuring Entity.
- ff) “Temporary Works” are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- gg) A “Variation” is an instruction given by the Project Manager which varies the Works.
- hh) The “Works” are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Special Conditions of Contract.

## 1 Interpretation

- 1.1. In interpreting these General Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager will provide instructions clarifying queries about these General Conditions of Contract.
- 1.2. If sectional completion is specified in the Special Conditions of Contract, references in the General Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

- 1.3. The documents forming the Contract shall be interpreted in the following order of priority:
    - (a) Agreement,
    - (b) Notice of Acceptance,
    - (c) Contractor's Bid,
    - (d) Special Conditions of Contract,
    - (e) General Conditions of Contract,
    - (f) Specifications,
    - (g) Drawings,
    - (h) Bill of Quantities or Activity Schedule, and
    - (i) any other document listed in the Special Conditions of Contract as forming part of the Contract.
  
  2. Language and Law
    - 2.1. The language of the Contract is English and the law governing the Contract is that of Republic of Malawi, unless otherwise specified in the Special Conditions of Contract.
  
  3. Project Manager's Decisions
    - 3.1. Except where otherwise specifically stated and subject to any restrictions in the Special Conditions of Contract, the Project Manager will decide contractual matters between the Employer and the Contractor in the role representing the Employer.
  
  4. Delegation
    - 4.1. The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.
  
  5. Communications
    - 5.1. Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
  
  6. Subcontracting
    - 6.1. The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.
  
  7. Other Suppliers
    - 7.1. The Contractor shall cooperate and share the Site with other suppliers, contractors, public authorities, utilities, and the Employer between the dates
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given in the Schedule of Other Suppliers, as referred to in the Special Conditions of Contract. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Suppliers, and shall notify the Contractor of any such modification.

8. Personnel

8.1. The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the Special Conditions of Contract, to carry out the functions stated in the Schedule or other personnel approved by the Project Manager. The Project Manager will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Schedule.

8.2. If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the work in the Contract.

9. Employer's and Contractor's Risks

9.1. The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

10. Employer's Risks

10.1. From the Start Date until the Defects Correction Certificate has been issued, the following are Employer's risks:

**10.1.1.** The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to:

10.1.1.1. use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or

10.1.1.2. negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.

**10.1.2.** The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

10.2. From the Completion Date until the Defects Correction Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

**10.2.1.** a Defect which existed on the Completion Date,

**10.2.2.** an event occurring before the Completion Date, which was not itself an Employer's risk, or

**10.2.3.** the activities of the Contractor on the Site after the Completion Date.

11. Contractor's Risks

11.1. From the Starting Date until the Defects Correction Certificate has been issued,



the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

12. Insurance

12.1. The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Special Conditions of Contract for the following events which are due to the Contractor's risks:

**12.1.1.** loss of or damage to the Works, Plant, and Materials;

**12.1.2.** loss of or damage to Equipment;

**12.1.3.** loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and

**12.1.4.** personal injury or death.

12.2. Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

12.3. If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

12.4. Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

12.5. Both parties shall comply with any conditions of the insurance policies.

13. Site Investigation Reports

13.1. The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the Special Conditions of Contract, supplemented by any information available to the Bidder.

14. Queries about the Special Conditions of Contract

14.1. The Project Manager will clarify queries on the Special Conditions of Contract.

15. Contractor to Construct the Works

15.1. The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16. The Works to Be Completed by the Intended Completion Date

16.1. The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Programme submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

17. Approval by the Project Manager

17.1. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings.

17.2. The Contractor shall be responsible for design of Temporary Works.

17.3. The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

17.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

17.5. All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.

18. Safety

18.1. The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries

19.1. Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

20. Possession of the Site

20.1. The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Special Conditions of Contract, the Employer will be deemed to have delayed the start of the relevant activities, and this will be a Compensation Event.

21. Access to the Site

21.1. The Contractor shall allow the Project Manager and any person authorised by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

22. Instructions

22.1. The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.

23. Disputes

23.1. If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within fourteen (14) days of the notification of the Project Manager's decision.

24. Procedure for Disputes

- 24.1. The Adjudicator shall give a decision in writing within twenty-eight (28) days of receipt of a notification of a dispute.
- 24.2. The Adjudicator shall be paid by the hour at the rate specified in the Bid Data Sheet and Special Conditions of Contract, together with reimbursable expenses of the types specified in the Special Conditions of Contract, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within twenty-eight (28) days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above twenty-eight (28) days, the Adjudicator's decision will be final and binding.
- 24.3. The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place shown in the Special Conditions of Contract.

25. Replacement of Adjudicator

- 25.1. Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within thirty (30) days, the Adjudicator shall be designated by the Appointing Authority designated in the Special Conditions of Contract at the request of either party, within fourteen (14) days of receipt of such request.

**B. Time Control**

26. Programme

- 26.1. Within the time stated in the Special Conditions of Contract, the Contractor shall submit to the Project Manager for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 26.2. An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 26.3. The Contractor shall submit to the Project Manager for approval an updated Programme at intervals no longer than the period stated in the Special Conditions of Contract. If the Contractor does not submit an updated Programme within this period, the Project Manager may withhold the amount stated in the Special Conditions of Contract from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- 26.4. The Project Manager's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Project Manager again at any time. A revised Programme shall show

the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1. The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

27.2. The Project Manager shall decide whether and by how much to extend the Intended Completion Date within twenty-one (21) days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

28.1. When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Employer and the Contractor.

28.2. If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

29. Delays Ordered by the Project Manager

29.1. The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

30. Management Meetings

30.1. Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

30.2. The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

31.1. The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon

as reasonably possible.

- 31.2. The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

### **C. Quality Control**

#### 32. Identifying Defects

- 32.1. The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

#### 33. Tests

- 33.1. If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

#### 34. Correction of Defects

- 34.1. The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the Special Conditions of Contract. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 34.2. Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

#### 35. Uncorrected Defects

- 35.1. If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager will assess the cost of having the Defect corrected, and the Contractor will be liable for this amount. The amount will be deducted from current and future payment certificates, or paid by the Contractor if insufficient funds are due under the contract.

### **D. Cost Control**

#### 36. Bill of Quantities or Activity Schedule

- 36.1. This Contract is:
  - 36.1.1. An Admeasurement Contract with a Bill of Quantities, subject to Option 1; or
  - 36.1.2. A Lump Sum Contract with an Activity Schedule, subject to Option 2, as indicated in the Special Conditions of Contract.

#### Option 1: Bill of Quantities for Admeasurement Contract

- 36.2. The Bill of Quantities shall contain items for the construction, installation,
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testing, and commissioning work to be done by the Contractor.

- 36.3. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

Option 2: Activity Schedule for Lump Sum Contract

- 36.4. The Contractor shall provide updated Activity Schedules within fourteen (14) days of being instructed to by the Project Manager. The activities on the Activity Schedule shall be co-ordinated with the activities on the Programme.
- 36.5. The Contractor shall show delivery of Materials to the Site separately on the Activity Schedule if payment for Materials on Site shall be made separately.

37. Change in the Bill of Quantities or Activity Schedule

Option 1: Changes in the Bill of Quantities for Admeasurement Contracts

- 37.1. If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than twenty-five (25) percent, provided the change exceeds one (1) percent of the Initial Contract Price, the Project Manager shall adjust the rate or price to allow for the change.
- 37.2. The Project Manager shall not adjust rates or prices from changes in quantities if thereby the Initial Contract Price is exceeded by more than five (5) percent, except with the prior approval of the Employer.
- 37.3. If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

Option 2: Changes in the Activity Schedule for Lump Sum Contracts

- 37.4. The Activity Schedule shall be amended by the Contractor to accommodate changes of Programme or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

38. Variations

- 38.1. All Variations shall be included in updated Programmes (or in the case of Lump Sum Contracts in updated Programmes and Activity Schedules) produced by the Contractor.

39. Payment for Variations

- 39.1. The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 39.2. For Admeasurement Contracts only, if the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in Sub-Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in

the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates, which shall be lower, for the relevant items of work.

- 39.3. If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.
- 39.4. If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 39.5. The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

#### 40. Cash Flow Forecasts

- 40.1. When the Programme (or in the case of Lump Sum Contracts the Programme or Activity Schedule) is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

#### 41. Payment Certificates

- 41.1. The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed and materials on site less the cumulative amount certified previously.
- 41.2. The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 41.3. The value of work executed and materials on site shall be determined by the Project Manager.
- 41.4. The value of work executed and materials on site shall comprise the value of:
  - 41.4.1. the quantities of the items in the Bill of Quantities completed in the case of Admeasurement Contracts; or
  - 41.4.2. completed activities in the Activity Schedule in the case of Lump Sum Contracts.
- 41.5. The value of work executed shall include the valuation of Variations and Compensation Events.
- 41.6. The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

#### 42. Payments



- 42.1. Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within forty-five (45) days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 42.2. If an amount certified is increased in a later certificate as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 42.3. Unless otherwise stated, all payments and deductions will be paid or charged in the proportions of currencies comprising the Contract Price.
- 42.4. Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
43. Compensation Events
- 44.1 The following shall be Compensation Events:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Special Conditions of Contract.
  - (b) The Employer modifies the Schedule of Other Suppliers in a way that affects the work of the Contractor under the Contract.
  - (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
  - (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
  - (e) The Project Manager unreasonably does not approve a subcontract to be let.
  - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Notice of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
  - (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
  - (h) Other Suppliers, contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
  - (i) The advance payment is delayed.
  - (j) The adverse effects on the Contractor of any of the Employer's Risks.
  - (k) The Project Manager unreasonably delays issuing a Certificate of Completion beyond a period of thirty (30) days.



- (l) Other Compensation Events described in the Special Conditions of Contract or determined by the Project Manager shall apply.

44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager will assume that the Contractor will react competently and promptly to the event.

44.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

#### 45 Tax

45.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date twenty-eight (28) days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of Clause 47.

#### 46 Currencies

46.1 Where payments are made in currencies other than Malawi Kwacha, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

#### 47 Price Adjustment

47.1 a specific currency "c". Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the Special Conditions of Contract. If so provided, the amounts certified in each payment certificate, after deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$$P_c = A_c + B_c I_{mc}/I_{oc}$$

where:

$P_c$  is the adjustment factor for the portion of the Contract Price payable in

$A_c$  and  $B_c$  are coefficients specified in the Special Conditions of Contract, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency "c"; and

Imc is the index prevailing at the end of the month being invoiced and loc is the index prevailing twenty-eight (28) days before Bid opening for inputs payable; both in the specific currency "c".

- 47.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

#### 48 Retention

- 48.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the Special Conditions of Contract until Completion of the whole of the Works.
- 48.2 On completion of the whole of the Works, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected.
- 48.3 On completion of the whole Works, the Contractor may substitute retention money with an "on demand" Bank guarantee.

#### 49 Liquidated Damages

- 49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Special Conditions of Contract for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the Special Conditions of Contract. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.
- 49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in Sub-Clause 43.1.

#### 50 Bonus

- 50.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the Special Conditions of Contract for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

#### 51 Advance Payment

- 51.1 The Employer shall make advance payment to the Contractor of the amounts stated in the Special Conditions of Contract by the date stated in the Special Conditions of Contract, against provision by the Contractor of an Unconditional

Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.

51.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilisation expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

51.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

## 52 Securities

52.1 The Performance Security shall be provided to the Employer no later than twenty-one (21) days after receipt of the Notice of Acceptance and shall be issued in the form of a Bank Guarantee in the format specified in the contract and in an amount specified in the Special Conditions of Contract and by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security (Bank Guarantee) shall be valid until a date twenty-eight (28) days from the date of issue of the Certificate of Completion.

## 53 Dayworks

53.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

53.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two (2) days of the work being done.

53.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

## 54 Cost of Repairs

54.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

# **E. Completion of the Contract**

## 55 Completion

55.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager will do so upon deciding that

the work is completed.

56 Taking Over

56.1 The Employer shall take over the Site and the Works within seven (7) days of the Project Manager's issuing a Certificate of Completion.

57 Final Account

57.1 The Contractor shall supply the Project Manager 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 Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within sixty (60) days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within sixty (60) 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.

58 Operating and Maintenance Manuals

58.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Special Conditions of Contract.

58.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Special Conditions of Contract, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the Special Conditions of Contract from payments due to the Contractor.

59 Termination

59.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

59.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- (a) the Contractor stops work for twenty-eight (28) days when no stoppage of work is shown on the current Programme and the stoppage has not been authorised by the Project Manager;
- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty-eight (28) days;
- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within ninety (90) days of the date of the Project Manager's certificate;
- (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (f) the Contractor does not maintain a Security, which is required;

- (g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the Special Conditions of Contract; and
- (h) if the Contractor, in the judgment of the Employer has engaged in corrupt, fraudulent, collusive or coercive practices in competing for or in executing the Contract.

For the purpose of this paragraph:

"corrupt practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution.

"fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract;

"collusive practices" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Employer, designed to establish prices at artificial, noncompetitive levels; and

"coercive practices" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract.

- 59.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under Sub-Clause 59.2 above, the Project Manager shall decide whether the breach is fundamental or not.
- 59.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 59.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

## 60 Payment upon Termination

- 60.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Special Conditions of Contract. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 60.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

## 61 Property

- 61.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

62 Force Majeure

- 62.1 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Contractor that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Contractor. Such events may include, but not be limited to, acts of the Employer in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 62.2 If a Force Majeure situation arises, the Contractor shall promptly notify the Employer in writing of such condition and the cause thereof. Unless otherwise directed by the Employer in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 62.3 The Contractor shall not be liable for forfeiture of its performance security or retention monies held, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

63 Release from Performance

- 63.1 If the Contract is frustrated by an event of Force Majeure or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

## **Section 8**

# **Special Conditions of Contract**

## Section 8 - Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Clause Reference	SCC Clause No.	Special Conditions
GCC 1.1	SCC 1.1	<p>The Procurement Entity is : <u>Roads Authority of Malawi</u>                      The Project Manager is: <u>To be advised (TBA)</u>                      The name and procurement reference number of the Contract is: <u>[To be Inserted]</u>                      The Works consist of: <u>[To be Inserted]</u>                      The site is located : <u>[To be Inserted]</u>                      and is defined in Drawings Nos.: <u>[To be Inserted]</u>                      The Start Date shall be: <u>[To be Inserted]</u>                      The intended Completion Date for the whole of the works shall be: <u>Urgent after the Start Date</u>                      The word "Bill of Quantities" is synonymous with 'Priced Schedules'.</p>
GCC 2.3	SCC 2.3	<p>Delete Clause 2.3 in its entirety and replace with the following:</p> <p>For the purpose of representation the priority of documents shall be in accordance with the following sequence:</p> <ul style="list-style-type: none"> <li>(a) The Contract Agreement ( if completed)</li> <li>(b) Minutes of Contract Negotiations (if any)</li> <li>(c) the Notice of Acceptance</li> <li>(d) the Letter of Bid</li> <li>(e) the Special Conditions of Contract</li> <li>(f) the General Conditions of Contract</li> <li>(g) the Particular Specifications</li> <li>(h) the Standard Specifications for Routine Term Maintenance Works</li> <li>(i) the Drawings and</li> <li>(j) the priced Bill of Quantities</li> <li>(k) the completed Qualification Information Forms and any other documents forming part of the Contract.</li> </ul> <p>All information supplied by the Contractor on the Qualification Information Forms (Section 4) will be contractually binding. The Contractor shall be in breach of contract, in case when the information offered in these forms is not implemented by the Contractor during maintenance works.</p>
GCC4.1	SCC4.1	<p>The Project Manager shall obtain the specific approval of the Employer before taking action under the following clauses                      (viii) Clause 7: Subcontracting</p>



Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>(ix) Clauses 28: Extension of the intended Completion Date</p> <p>(x) Clause 56: Taking Over</p> <p>(xi) Clauses 39 and 40: Variations</p> <p>(xii) Clause 44 Compensation Events (Contractors Claim)</p> <p>Notwithstanding the obligation as set out above to obtain approval, if in the opinion of the Project Manager, an emergency occurs affecting the safety of life, or of the works or of adjoining property, the Project Manager may without relieving the Contractor of any of his duties and responsibilities under the Contract instruct the Contractor to execute all work or to do all things as may, in the opinion of the Project Manager be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of the approval of the Employer, with any such instruction of the Project Manager. The Project Manager shall determine an addition to the contract price in respect of such instruction if and as may be relevant and shall notify the Contractor accordingly, with a copy to the Employer.</p>
<b>GCC 7.1</b>	<b>SCC 7.1</b>	<p><b>Subcontracting</b></p> <p>In the event of non performance the Project Manager shall instruct the contractor to subcontract the works within 14 days and failure to do that the Project Manager shall nominate a sub contractor prior to termination. as listed in Schedule 1.6 under Section 4.5 (Qualification Information Forms)</p>
<b>GCC 8.1</b>	<b>SCC 8.1</b>	<p>The Schedule of Other Suppliers <b>is not</b> part of the Contract</p>
<b>GCC 13.1</b>	<b>SCC 13.1</b>	<p>The minimum insurance cover and deductibles shall be:</p> <p>(a) The minimum cover for insurance of the works, plant and materials is :</p> <p>(b) <b>MWK 0.5 Million (≤15 million contract amount); MWK 1.0 million( ≥ 15 million contract amount); MWK 2.0 million (≥ 50 million contract amount); MWK 3.0 million (≥ 200 million contract amount); MWK 5.0 million (≥ 500 million contract amount);</b>per occurrence with the number of occurrences unlimited.</p> <p>(c) The maximum deductible for insurance of the Works, Plant and Materials is : N/A</p> <p>(d) The minimum cover for insurance of equipment is <b>MWK1.0 Million (≤15 million contract amount); MWK 2.0 million( ≥ 15 million contract amount); MWK 4.0 million (≥ 50 million contract amount); MWK 5.0 million (≥ 200 million contract amount); MWK 10.0 million (≥ 500 million contract amount);</b> per occurrence with the number of occurrences unlimited.</p> <p>(e) The maximum deductible for insurance of equipment is : N/A</p> <p>(f) The minimum cover for insurance of property is <b>MWK 0.5 Million (≤15 million contract amount);</b></p>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p><b>MWK 1.0 million (≥ 15 million contract amount);</b>  <b>MWK 2.0 million (≥ 50 million contract amount);</b>  <b>MWK 3.0 million (≥ 200 million contract amount);</b>  <b>MWK 5.0 million (≥ 500 million contract amount);</b></p> <p>(g) The maximum deductible for insurance of property is : N/A  The minimum cover for personal injury or death insurance is <b><u>MWK3 million</u></b> with no deductible.</p>
<b>GCC 14.1</b>	<b>SCC 14.1</b>	Site Investigation Report(s) <b>are not</b> part of the contract
<b>GCC 16.1</b>	<b>SCC 16.1</b>	In the case of outstanding pothole patching works; if the contractor has not patched these potholes within 48 hours after receiving the instruction of the Project Manager then penalties shall apply. The applicable financial penalty would be equal to the cost of the outstanding pothole patching works. Additionally, after failing to repair the potholes within the 48 hours; the Project Manager may also consider removal of the Contractor's key staff.
<b>GCC 19</b>	<b>SCC 19</b>	<p>Change the clause name to “ <b>Safety and Health</b>”</p> <p>Delete the text of Clause 19 in its entirety and replace with the following:</p> <p>Except otherwise stated in the Technical Specifications, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulances service are available at all times at the Site at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all the necessary welfare and hygiene requirements and for the prevention of epidemics.</p> <p>The Contractor shall appoint a Safety Officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Work, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.</p> <p>HIV-AIDS Prevention</p> <p>The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's</p>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>Personnel and the local community, to promote early diagnosis and to assist affected individuals.</p> <p>The Contractor:</p> <ul style="list-style-type: none"> <li>(a) Is responsible for implementing an HIV prevention program among the Contractor's employees (and the local community) for the duration of the Contractor's contract and commencing as soon as practicable after the Contractor's employees arrives at the site/s in conjunction with occupational health staff of the contractor and the local health authorities involved in HIV/AIDS prevention;</li> <li>(b) Can sub-contract with a Service Provider in the case of that he will not be able to implement the Program; when sub-contracting with the Service Provider, the Contractor gives any representative of the service provider and the Employer all reasonable access to the site in connection with HIV Prevention Program;</li> <li>(c) Instructs his employees to participate in the HIV prevention in the course of their employment and during the working hours or any period of overtime provided for the relevant employment contracts;</li> <li>(d) Does nothing to dissuade the Contractor's employees from participating in the HIV Prevention Program.</li> </ul> <p>The Contractor shall be entitled to be reimbursed by the Employer for any eligible payments. These payments include ones, which are made under a sub-contract made for the purpose of clause 19 in accordance with relevant provisions in the Contract.</p> <p>Where the Contract sub-contracts any of its obligations under the contract, it shall require any sub-contractor to comply with this sub-clauses (b) through (d) of the Contract as if it were the contractor</p> <p>The Contractor shall install and maintain adequate personnel and measures to ensure the safety of road users during construction of works, in particular, the site must be left in a safe, trafficable condition outside normal working hours. The minimum expected traffic control measures are included in the Particular Specifications and Drawings. Nevertheless, the Contractor remains responsible for traffic control</p> <p><b>The "Occupational Safety, Health and Welfare Act (Malawi) No</b></p>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<b>21 of 1977” is applicable for this contract</b>
GCC 21.1	SCC 21.1	The Site Possession Date shall be <b><u>within 14 days after</u></b> Signing of Contract.
GCC 25.2	SCC 25.2	Fees and Types of reimbursable expenses to be paid to the Adjudicator are: <b><u>To be agreed at time of appointment</u></b>
GCC 25.3	SCC 25.3	The institution whose arbitration procedures shall be used is <b><u>the National Construction Industry Council of Malawi (NCIC)</u></b> and Arbitration shall take place <b><u>in Lilongwe – Malawi</u></b>
GCC 26.1	SCC 26.1	The Appointing Authority for the Adjudicator is : <b>NCIC</b>
GCC 27.1	SCC 27.1	The Contractor shall submit a revised Programme for the Works within <b>14 days</b> of Signing of Contract.
GCC 27.3	SCC 27.3	The Period between Programme Updates is <b>14</b> days. The amount to be withheld for late submission of an updated Programme is: <b>5%</b> of Current Interim Payment Certificate amount.
GCC 28	SCC 28	Replace the wording “Project Manager” with “Employer” in Clauses 28.1 and 28.2. Add the following to Clause 28.1 : “Extension of the Intended Completion Date will also be granted for abnormal rainfall as defined in the Particular Specifications”
GCC 32	SCC 32	<b>Early Warning</b>
	SCC 32.1	<p><b>Add the following to Clause 32.1</b></p> <p>If the Contractor considers himself to be entitled to any Extension of Time for Completion and/or any additional payment (Compensation Event) under any clause of these General Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Project Manager, describing the event or circumstance giving the rise to the claim. The notice shall be given as soon as practicable, and no later than <b>28 days</b> after the Contractor becomes aware, or should have become aware, of the event or circumstance.</p> <p>If the Contractor fails to give an early warning within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment because of a Compensation Event and the Employer shall be discharged from all liability in connection with claims for Extension of the Intended Completion Date or for a Compensation Event.</p>
	SCC 33.2	<p><b>Add the following Sub-clause:</b></p> <p>The Project Manager shall also check and confirm quality, quantity and cost of delivery of Special Materials as included in the List of Basic Material Prices ( see Section 4). No Special Material will be removed from site and/or camp without authorization of the Project Manager</p>
GCC 35.1	SCC 35.1	The Defects Liability Period is: <b><u>2 months for works, except for reinforced concrete structures and bitumen works in which case the Liability Period will be 1</u></b>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<b>year.</b>
GCC 37.1	SCC 37.1	This contract is an <b>Ad-measurement</b> Contract
GCC 42	SCC 42	Payments Certificates
GCC 42.1	SCC 42.1	<p>Delete: Sub-clause GCC 42.1 and replace with the following:</p> <p>The contractor shall give reasonable notice to the Project Manager of any completed and accepted work in terms of quality which may be required to be measured separately for payment purposes. The Project Manager shall then arrange joint measurements to be carried out by representatives of Contractor, Project Manager and Employer.</p> <p>When so requested by the Project Manager the Contractor shall measure and determine quantities of work completed and accepted in terms of quality during each month, as well as materials produced or applied at the Works, or supplied to the Site, as appropriate on his own and as may be required in respect of the pay items included in the Schedule of Quantities.</p>
GCC42.2	SCC42.2	<p>Add the following to Clause GCC 42.2:</p> <p>The contractor shall provide to the Project Manager proof of payments of wages to the workforce working for the contractor. Failure to provide such records or proof of payment of wages any equal amount of money will be withheld from the certificate until such a time the proof is received failing which the Employer shall reserve the right to proceed to pay the wages directly to the work force through their respective local authorities and labour offices.</p>
GCC43	SCC43	Payments
GCC 43.1	SCC 43.1	<p>Replace forty-five (45) days with sixty (<b>60</b>) days in clause 43.1</p> <p>Add the following to Clause GCC 43.1:</p> <p>The rate of interest shall be <b>2.0 percent</b> above the prevailing commercial borrowing rates</p>
	SCC 43.5	<p><b>Add the following Sub-Clause</b></p> <p>The Employer is not liable for compensation in regards to any construction equipment or material brought on the site which was not fully used during the construction and maintenance of the works, and the Employer cannot be held liable for loss or damage of any of the said equipment or material brought on the site by the Contractor or which was used during the execution of this Contract.</p>
GCC 44.1 (1)	SCC 44.1 (1)	<p>The following events shall also be Compensation Events: <b>None</b></p> <p><b>Abnormal Rainfall is not a Compensation Event</b>, but will provide for Extension of the Intended Completion Date with time related cost.</p>
GCC 44.2	SCC 44.2	<p>Replace the wording "Project Manager" in this Paragraph with "Employer".</p>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions								
		<p>Add the following: The Project Manager has to assess the compensation event and submit the recommendations in that regard to the Employer for decision finding.</p>								
GCC 44.3	SCC 44.3	<p><b>Replace Clause GCC 44.3 with the following:</b></p> <p>Within <b>60 days</b> after the contractor became aware (or should have become aware) of the events or circumstance giving rise to a claim for a compensation event or for the extension of time or within such other periods as may be proposed by the Contractor and approved by the Project Manager, the Contractor shall send to the Project Manager a fully detailed claim which includes full supporting particulars of the basis of the claim for a Compensation Event and/or for the extension of time and the amount of additional payment claimed.</p> <p>Add the following at the end of this Clause: Within <b>60 days</b> after receiving a Claim, or within such other period as may be proposed by the Project Manager and approved by the Contractor, the Employer shall respond with approval or with disapproval and detailed comments. If the Employer fails to give his decision within the period of <b>60 days</b> he shall be deemed to have made a decision dismissing the claim.</p>								
GCC 47	SCC 47	<p>The Contract <b>is not</b> subject to price adjustment in accordance with Clause 47 of the Conditions of Contract and the Supplementary Bid Information in Section 4 – Qualification Forms</p>								
GCC 48.1	SCC 48.1	<p>The proportion of payment retained is <b>5%</b> from each Interim Payment Certificate and the maximum amount retained shall be <b>2.5%</b> of the Total Contract price.</p>								
GCC 49.1	SCC 49.1	<p>The rate per day for liquidated damages is <b>0.5%</b> of the <b>Works Order Value</b> per day. The maximum amount of liquidated damages for the whole of the Works is <b>5 %</b> of the final contract price.</p>								
GCC 50	SCC 50	<p>Clause GCC 50 is <b>not</b> applicable</p>								
GCC51.1	SCC 51.1	<p>The Advance Payment will be equivalent to <b>20%</b> of the Contract Price less contingency and VAT . It will be paid to the Contractor no later than <b>28 days</b> after receiving the advance payment certificate submitted together with an acceptable Advance Payment Security.</p>								
GCC 51.3	SCC 51.3	<p>The Advance Payment will be repaid by deducting as below:</p> <table border="1" data-bbox="548 1625 1430 1766"> <thead> <tr> <th data-bbox="548 1625 1073 1661">Percentage Completed</th> <th data-bbox="1073 1625 1430 1661">Payment</th> </tr> </thead> <tbody> <tr> <td data-bbox="548 1661 1073 1696">20%</td> <td data-bbox="1073 1661 1430 1696">10%</td> </tr> <tr> <td data-bbox="548 1696 1073 1732">50%</td> <td data-bbox="1073 1696 1430 1732">50%</td> </tr> <tr> <td data-bbox="548 1732 1073 1766">80%</td> <td data-bbox="1073 1732 1430 1766">100%</td> </tr> </tbody> </table>	Percentage Completed	Payment	20%	10%	50%	50%	80%	100%
Percentage Completed	Payment									
20%	10%									
50%	50%									
80%	100%									
GCC 52	SCC 52	<p><b>Securities</b></p>								
GCC52.1	SCC52.1	<p>In the first sentence in this clause change the number of days from twenty one days (21) to fourteen days (14) .</p>								

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>Add the following to this Clause                      The Performance Security shall be <b>10 percent</b> of the accepted Contract Price: This is applicable only for contracts whose values exceed <b>MWK 15 million</b></p> <p><i>Performance Securities for contract values between MWK 15 million and MWK 50 million only may alternatively be obtained from insurance companies.</i></p> <p><i>Performance Securities for contract values above MWK 50 million shall be obtained from banks only .</i></p> <p>The Performance Security shall be presented in accordance with the Form of Performance Guarantee included in Section 9.</p> <p>Where the Performance Security is in form of a Bank Guarantee, it shall be issued by:</p> <ul style="list-style-type: none"> <li>(a) a bank located in Malawi or</li> <li>(b) a foreign bank through a correspondent bank located in Malawi</li> </ul>
GCC58.1	SCC58.1	The date by which operating and maintenance manuals are required is : <b>N/A</b>
GCC58.2	SCC58.2	<b>“As built” drawings are required at the end of the defects liability period, to be provided by the site supervising Consultant (Project Manager)</b>
GCC 58.2	SCC 58.2	The amount to be withheld for failing to produce “as built” drawings and/ or operating and maintenance manuals by the date required <b>Not applicable</b>
GCC 60.1	SCC 60.1	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is <b>25%</b>
GCC 62	SCC 62	<p><b>Force Majeure</b></p> <p>Delete the text of Clause GCC 62 in its entirety and replace with the following:</p>
	SCC 62.1	<p><b>Definition of Force Majeure</b></p> <p>In this GCC Clause, “Force Majeure” means an exceptional event or circumstance:</p> <ul style="list-style-type: none"> <li>(a) which is beyond a Party’s control,</li> <li>(b) which such Party could not reasonably have provided against before entering into the Contract,</li> <li>(c) which, having arisen, such Party could not reasonably have avoided or overcome, and</li> <li>(d) which is not substantially attributable to the other Party.</li> </ul>
		Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a)



Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>to (d) above are satisfied:</p> <p>(i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,</p> <p>(ii) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,</p> <p>(iii) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,</p> <p>(iv) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and</p> <p>(v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.</p> <p>(vi) shortage of diesel and/or bitumen and/or cement in Malawi and any other similar unforeseeable events not within the control of either party and which by the exercise of due diligence neither party is able to overcome.</p>
	<b>SCC 62.2</b>	<b>Notice of Force Majeure</b>
	<b>SCC 62.2.1</b>	<p>If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure</p>
	<b>SCC 62.2.2</b>	<p>The Party shall, having given notice, be excused from performance of its obligations for so long as such Force Majeure prevents it from performing them</p>
	<b>SCC 62.2.3</b>	<p>Notwithstanding any other provision of this SCC Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract</p>
	<b>SCC 62.3</b>	<b>Duty to Minimise Delay</b>
	<b>SCC 62.3.1</b>	<p>Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.</p>
	<b>SCC 62.3.2</b>	<p>A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure</p>
	<b>SCC 62.4</b>	<b>Consequences of Force Majeure</b>
	<b>SCC 62.4.1</b>	<p>If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under SCC Clause 62.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to SCC Clause 44 [Compensation Events] to:</p> <p>(a) an extension of time for any such delay, if completion is or will be</p>



Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
		<p>delayed</p> <p>(b) if the event or circumstance is of the kind described in SCC Clause 62.1.2(i) to (iv) [Definition of Force Majeure] and, in the case of SCC Clause 62.1.2(ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in SCC Clause 13 [Insurance]</p> <p>The Contractor shall not be liable to forfeiture of his performance guarantee, liquidated damages or termination of default if, and to the extent that, his delay in performance or other failure to perform his obligations under the contract is the result of an event of <b>Force Majeure</b>. The Contracting Authority shall similarly not be liable to payment of interest on delayed payments, for non-performance, idle equipment cost and labour costs in the case of shortages of diesel and or bitumen and/ or cement or for termination by the Contractor for default, if, and to the extent that, the Contracting Authority's delay or other failure to perform its obligations is the result of Force Majeure.</p>
	<b>SCC 62.5</b>	<b>Optional Termination, Payment and Release</b>
	<b>SCC 62.5.1</b>	<p>If the execution of substantially all the Works in progress is prevented for a continuous period of 30 days by reason of Force Majeure of which notice has been given under <b>SCC</b> Clause 62.2, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with <b>SCC</b> Clause 63.</p>
	<b>SCC 62.5.2</b>	<p>Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:</p> <ul style="list-style-type: none"> <li>(b) the amounts payable for any work carried out for which a price is stated in the Contract;</li> <li>(c) the Cost of Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: these Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;</li> <li>(d) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;</li> <li>(e) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and</li> <li>(f) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.</li> </ul>

Part 3: Section 8 - Special Conditions of Contract

GCC Clause Reference	SCC Clause No.	Special Conditions
<b>GCC 63</b>	<b>SCC 63</b>	<p><b>Release from Performance</b></p> <p>Delete the text of Clause GCC 63 in its entirety and replace with the following:</p>
		<p>Notwithstanding any other provision of this SCC Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:</p> <p>the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and</p> <p>the sum payable by the Employer to the Contractor shall be the same as would have been payable under SCC Clause 62.5 [Optional Termination, Payment and Release] if the Contract had been terminated under SCC Clause 62.5</p>
	<b>SCC 64</b>	<p><b><u>Add the following new Clause:</u></b></p> <p><b>Protection of the Environment</b></p> <p>The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.</p> <p>The Contractor shall adhere at all times to the Environmental Management Plan contained in the Supplementary Information under Section 6 D. The Contractor will be held accountable for any costs arising from his negligence with regard to the environment. The Employer reserves the right to recover any such costs by deduction of the relevant amount from interim payment certificates.</p>

# **Section 9**

## **Contract Forms**

Agreement

**Procurement Reference No: [To be Inserted]**

**THIS AGREEMENT** made the \_\_\_\_\_ day of \_\_\_\_\_ 2022, between  
**The Roads Authority of Functional Building, Paul Kagame Road, Private Bag B346,**  
**Lilongwe 3** (hereinafter called “the Employer”), of the one part, and

\_\_\_\_\_

\_\_\_\_\_

(hereinafter called “the Contractor”), of the other part:

WHEREAS the Employer is desirous that the Contractor execute

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein for the sum \_\_\_\_\_ of

\_\_\_\_\_ **(MK \_\_\_\_\_)** (hereinafter called the Contract Price).

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NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
  - (a) The Contract Agreement ( if completed)
  - (b) Minutes of Contract Negotiations (if any)
  - (c) the Notice of Acceptance
  - (d) the Letter of Bid
  - (e) the Special Conditions of Contract
  - (f) the General Conditions of Contract
  - (g) the Particular Specifications
  - (h) the Standard Specifications for Routine Term Maintenance Works
  - (i) the Drawings and

- (j) the priced Bill of Quantities
  - (k) the completed Qualification Information Forms and any other documents forming part of the Contract.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
5. The Contract Price or such other sum as may be payable shall be paid in Malawi Kwacha.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed in accordance with the law specified in the Special Conditions of Contract on the day, month and year indicated above.

Signed by: \_\_\_\_\_

(for the Employer)

Name: **Eng. Francis Dimu**

Position: **Acting Chief Executive Officer**

Witnessed by:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Signed by: \_\_\_\_\_ (for the Contractor)

Name: \_\_\_\_\_ Position: \_\_\_\_\_

Witnessed by:

Name: \_\_\_\_\_ Address: \_\_\_\_\_

*Note for Bidders: The Performance Security should be on the letterhead of the issuing Financial Institution and should be signed by a person with the proper authority to sign documents that are binding on the Financial Institution.*

# Performance Security

## Performance Bank Guarantee (Unconditional)

Date: **[insert date]**

Procurement Reference No.: **[insert procurement reference number]**

To: **[name and address of Employer]**

WHEREAS **[name and address of Contractor]** (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. **[number]** dated **[date]** to execute **[name of Contract and brief description of Works]** (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognised bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE WE hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of **[amount of Guarantee] [amount in words]**, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of **[amount of Guarantee]** as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.

This Guarantee shall be valid until a date twenty-eight (28) days from the date of issue of the Certificate of Completion.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

Signature and seal of the Guarantor:

Name of Financial Institution:

Address:

Date: