

## **Construction Sector Transparency Initiative - Ethiopia**

### **Pilot Study by the Assurance Team**

**Report on Information provided  
by  
Ethiopian Road Authority  
on  
Tongo-Begi - Mugi Road Project  
Contract2: Gidami – Mugi Project**

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## ACRONYMS

AASHTO	American Association of State Highway Transportation officials
AT	Assurance Team
CoST	Construction Sector Transparency
BOQ	Bill of Quantities
EIA	Environmental Impact Assessment
ERA	Ethiopian Roads Authority
ETB	Ethiopian Birr
FDRE	Federal Democratic Republic of Ethiopia
GC	General Contractor
HEC	Highway Engineering Consultants
LCB	Local Competitive Bidding
MPI	Material Project Information
NMSG	National Multi-Stakeholders Group
NMSGEC	National Multi-Stakeholder Group Executive Committee
PANAF	Pan-African Consultants
PEs	Procuring Entities
PPA	Public Procurement Agency
RE	Resident Engineer
RSDP	Road Sector Development Program
SPN	Specific Procurement Notice

## **ACKNOWLEDGEMENT**

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Last, but not least, we would like to thank the Director General of ERA, Ato Zaid W. Gebriel, and the Deputy Director General, Ato Abdu Mohammed, and the staff of the Ethiopian Roads Authority for their cooperation in availing the required documents without which this document could not have been materialized.

## 1. Summary

- 1.1 The Gidami - Mugi Road Project is a section of the Tongo – Begi – Mugi road. The proposed project is the construction of a new gravel road of DS5 standard. The road will have a two-lane gravel carriageway of 7 meter width in rural section and 12 meter in towns. The road project is an interregional road link between Oromiya and Benshangul Gumz Regional States and traverses *weredas* (districts) of Tongo, Begi, Gidami and Mugi. One of the most important development objectives of the road is to utilize agricultural potential in the Oromiya and Benshangul Gumuz regions and to provide interregional links between the important market places in the two Regions for it passes through potentially rich agricultural areas. It is part of the “Local Network West” which connects the Regions of Benshangul Gumz, Gambella and Oromiya to Addis Ababa and the central regions of Ethiopia
- 1.2 The Government of the Federal Democratic Republic of Ethiopia (FDRE) intends to upgrade Tongo – Begi – Mugi road as part of the Road Sector Development Program (RSDP). The engineering service of this project deals with detail engineering design and construction supervision for the Tongo– Begi – Mugi road project. The construction of the road is arranged in two contract lots: Contract 1, Begi – Gidami, and Contract 2, Gidami – Mugi. This pilot study focuses on the procurement process of contract 2.
- 1.3 The project has already been under construction since June 2008. The progress in major work item i.e. earthwork (53% of the total contract) is only 11.53% with a total physical progress of 20.9%. With similar period however, the planned construction progress was 67.75% and the corresponding elapsed time is 69.13% of the total contract time. The project is planned to be completed by end of June 2011 and no time extension has been granted so far.
- 1.4 It was noted that ERA was under going re-organizing its structure at the time of this study, subdividing the contract implementation department into five regions: central, eastern, western, northern and southern regional offices. This specific project falls on the western regional office. For this reason, some of the documents required for the assurance process were collected from this regional office.
- 1.5 The focus of this study is on the over all process of procurement from feasibility stage going through design and then to construction stage. Since the project is currently under construction, all matters concerning the completion stage are not applicable to this study.
- 1.6 A feasibility study was conducted on the proposed route corridor. The main objective of the feasibility study was to evaluate socio-economic and environmental impacts of the road and to identify the most economical and technically viable route among alternative alignments studied by the consultant.

- 1.7** The procurement of services for design and supervision was conducted as one package for Gidami – Mugi Road Project. The procurement of works was conducted as two separate lots: Contract 1 and Contract 2. The technical and financial evaluations for both services were done separately. Technical evaluations were made first and after identifying the technically responsive bidders, the financial proposals of those bidders were opened and evaluated.
- 1.8** Post qualification procurement process was followed for the procurement of works.
- 1.9** Both service and works procurements were of national competitive bidding.
- 1.10** The contractor's selection procedure was observed as inconsistent to the selection criteria set in the RFP. Experiences in rock excavation and crushed stone base were set as major selection criteria. But these criteria were cancelled after bids were opened. Bids that failed at preliminary examination were excused. Failures in major items of the selection criteria were also excused. The firm which emerged winner failed most in comparison to others. The AT believes, therefore, that the works tender lacked transparency and was full of inconsistency against the criteria set for selection.

## 2. Introduction

### 2.1 Background

- 1.1.1 The Construction Sector Transparency Initiative (CoST) is an international multi-stakeholder program designed to increase transparency and accountability of Procuring Entities (PEs) in public sector construction projects. It will do this by disclosing information at all stages of the construction project cycle, from the initial identification of the project to the final completion.
- 1.1.2 To ensure that the information that is released is available, complete and accurate in a form that can easily be understood by stakeholders it is necessary to verify, analyse and interpret by experts appointed for this purpose -- the assurance team.
- 1.1.3 The Gidami – Mugi Road Project is one of the 25 projects selected for the pilot study by the national Multi-Stakeholder Group Executive Committee. The selection comprises road, building and water works projects.
- 1.1.4 An assurance team appointed by the NMSGEC for this pilot study comprises two professionals of construction industry, working together to obtain and assess information and provide reports. Each team member on the road sector was assigned for assurance process of two roads.
- 1.1.5 A glossary of terms used in the report where they have a particular technical meaning in relation to construction is included at Appendix 1.

### 2.2 Objectives of the pilot study

- 1.1.6 The National Multi-Stakeholder Group has identified four objectives for the pilot:
- To learn lessons to inform the design of CoST internationally.
  - To learn lessons that improves transparency internationally through the disclosure of project information.
  - An enhanced understanding of construction project costs amongst public sector clients, industry and wider society.
  - To learn and share lessons on publicly-funded construction project governance.
- 1.1.7 On each of the projects in the pilot study, the assurance team has been appointed to carry out the following tasks:
- To collect the information from the Procuring Entities (PEs) of CoST projects to ensure the publication of the relevant Material Project Information (MPI).
  - To verify the accuracy and completeness of MPI disclosures on CoST Projects.
  - To produce reports that are clearly intelligible to the non-specialist, outlining the extent and accuracy of information release for the selected CoST projects.

- To analyse disclosed and verified data in order to make informed judgements about the cost and quality of the built infrastructure on CoST Projects.
- To produce reports that are clearly intelligible to the non-specialist, outlining the findings regarding the cost and quality of the infrastructure and highlighting any cause for concern that analysed information reveals on CoST Project.

## 2.3 Study Approach

- 1.1.8 The sphere of activity given to the assurance team was to study projects from feasibility stage up to completion of the work. In phase 1 of the report, the assurance team is expected to verify the completeness and accuracy of the material project information (MPI). In phase 2, detail analysis of same shall be conducted.
- 1.1.9 Memorandum of understanding was signed between ERA and FEACC on behalf of CoST Ethiopia to disclose project information. Accordingly, ERA instructed its concerned bodies in house and made official communication with consultants and contractors in charge of a specific project to cooperate with the assurance team.
- 1.1.10 Immediately after the appointment of the assurance team, an induction workshop prepared by NMSG was arranged on July 29, 2010 to all assurance team members and stakeholders of the construction industry to explain the objectives and procedures for this pilot study. Subsequently, a discussion on transparency initiative for all team members was arranged by the coordinator of CoST-Ethiopia; an expatriate was invited to highlight issues of transparency.
- 1.1.11 The national Multi-Stakeholder Group Executive Committee had supplied us with a standard list of material project information to be used on all pilot projects, and we could adapt to this into a set of schedules to suit the individual pilot projects. The completed schedule for Gidami – Mugi Road Project is set out in Appendix 2.
- 1.1.12 Documents availed by ERA were verified by checking the documents available with the supervision consultant, UNICONE. Correspondence letters among the parties, work programs, progress reports and contract documents were availed by the consultant. Sufficient related information was made available to make this report complete.
- 1.1.13 The information disclosed is listed in Appendix 3.

## 2.4 Gidami - Mugi Road Project

- 1.1.14 Gidami - Mugi Road is part of the Tongo – Begi - Mugi road project aimed to provide interregional links between the important market places in the adjacent Regions, in compliance with the government's road sector development program (RSDP). The feasibility study conducted on the route confirmed the economic and social feasibility of the selected road and environmental friendliness of the project. The principal objective of the Gidami - Mugi Road is provision of adequate transport infrastructure to contribute to economic and social developments of the two regions, in particular, and the country, in general.



- 1.1.15 The government of the Federal Democratic Republic of Ethiopia represented by Ethiopian Roads Authority has allocated sufficient budget towards the cost of appointing consultants and contractors to design, supervise and carry out the construction work.
- 1.1.16 The feasibility study, detail engineering design and tender document preparation had been carried out by UNICONE in association with HEC and HAMDA Engineering in 2006. The purpose of this feasibility study was to determine which of the identified alternative routes would be the most economically, socially and technically viable.
- 1.1.17 The supervision work during construction is also undertaken by the same consultant, UNICONE. Only one tender was made for the procurement of a consultant for feasibility study, design and supervision.
- 1.1.18 Construction work of the project is undertaken by Berhe Hagos General Contractor, a local construction company.

### 3. Verification of documents

#### 3.1 Ethiopian Roads Authority procedures

- 1.1.19 It is necessary to set out the ERA procedures for awarding and managing contracts in order to understand the status of documents disclosed by them.
- 1.1.20 All the work on the design and construction of the Gidami - Mugi Road contract -- is awarded to consultants and contractors according to procurement directives set by the Public Procurement Authority (PPA). The invitation to tender was on LCB basis. The tender was publicised in accordance to the directives set by the PPA. Standard instruction to bidders was also set to the bidding upon which every bidder may submit its offer in a transparent way.
- 1.1.21 The basis for the inception of this specific project is the Ethiopian Government's commitment on the policy of long term Road Sector Development Program (RSDP). The aim of RSDP is to contribute to economic and social development endeavours by improving the quality and quantity of the road infrastructure, thereby meeting poverty reduction objectives.
- 1.1.22 The feasibility and design stage works of this specific project lie in the second phase of the RSDP that is in the period from 2002 to 2007, while the construction stage lies from 2007 to 2010, SARDP III.
- 1.1.23 Three short-listed consulting firms have been invited to submit their technical and financial proposals for the feasibility study, detail engineering design, preparation of tender document and construction supervision works. For the construction works contract, ERA selected on the basis of LCB and going through tender evaluation process.
- 1.1.24 Awarding of the contract to the successful winner is done through standard letter of acceptance by letting know all bidders through a copy of the same letter.
- 1.1.25 Following the award, a consultant or contractor is invited to sign a contract agreement. The contract document is usually standard except for specific items related to a specific contract. Performance guarantee is submitted immediately after contract signing and before commencement of works.
- 1.1.26 Site hand over to the contractor and instruction to commence the construction work is done by standard letter.
- 1.1.27 At commencement of construction, the contractor is instructed by the supervision consultant to prepare and submit detailed work program in compliance with the terms and condition on the contract agreement for approval. The approved work program will also be sent to the client. The approved work program is used by the supervision consultant as one of the fundamental inputs to supervise the project.

#### 3.2 Project identification and budget

- 1.1.28 Appraisal of this project was based on the Government's policy of expanding Ethiopia's road network. The project is part of the 153 km road from Tongo to Gidami, located in the far west of Ethiopia in which about 98% of the project lies within Western Wellega Zone, Oromia National Regional State, and the remaining 2% in Benishangul Gumuz National Regional State. The proposed project is construction of 90 km new gravel road of design class DS5 and upgrading of the

Begi - Gidami existing road, 56 Km, from design class of DS6 to DS5. The road when constructed will stimulate the development of new areas which are endowed with cash crops and livestock.

- 1.1.29 An Engineer's Cost Estimate was prepared by UNICONE-HEC-HAMDA in December, 2007, for the construction of the project for an amount of ETB 336,250,476.45. The TAC made a correction on arithmetic errors and the corrected Estimate was found to be ETB 335,735,213.47. The Estimate was kept confidential until the opening of the financial offers submitted by bidders.
- 1.1.30 The Government of the FDRE, duly represented by ERA, has allocated sufficient budget from local treasury to finance payments for the construction works of Tongo – Begi – Mugi Road Project, Contract 2: Gidami – Mugi as part of the Road Sector Development Program II (RSDP II).
- 1.1.31 The schedule of material project information which was expected to be disclosed under the pilot study is set out in Appendix 2. The schedule was completed by cross checking the information provided by ERA against those availed by UNICONE, the consultant for supervision work.
- 1.1.32 A detailed schedule of the documents disclosed, with a description of their purpose, is included in Appendix 3.

### **3.3 Appointment of UNICONE**

- 1.1.33 The following documents have been provided in relation to the appointment of UNICONE-HEC-HAMDA for Feasibility Study, Detailed Engineering Design, Preparation of Tender Documents and Construction Supervision works.
  1. Tender Evaluation Report-Financial proposal. The financial proposals of those firms, which were found responsive in technical proposals, were opened on September 22, 2005 in the presence of ERA'S Contract Award Committee Members and representatives of the technically responsive firms. After making corrections on arithmetic errors of the financial proposals, the TAC determined combined technical and financial scores of these firms. Accordingly, the top ranking firm is CWCE-PANAF but due to the overlapping of proposed personnel assignment in similar other projects plus in accordance to the requirements set in RFP, TAC recommended awarding the contract to the second highest scoring firm. The CAC in its meeting held on October 4, 2005 endorsed the recommendation made by TAC and then the ERA Director General approved the recommendation on the 26<sup>th</sup> of October 2005.
  2. According to the details in the tender evaluation report, ERA awarded the contract to UNICONE in JV with HEC and HAMDA.
  3. Contract Agreement between ERA and UNICONE-HEC-HAMDA was signed on January 2, 2006, on the basis of standard contract data for such services including all relevant provisions deemed necessary for the service.
  4. Technical Evaluation Reports and all other related documents could not be availed from ERA. However, from references of the other documents specified above it could be understood that there were such reports but missing at the period of our request. This makes the information incomplete.

- 1.1.34 The Employer (ERA) commented on the draft review of feasibility study and detail engineering design report prepared by the consultant on June, 2006.
- 1.1.35 The Consultant took action on the commented issues and incorporated the same in its final report.
- 1.1.36 Majority of the documents that describe the appointment of UNICONE-HEC-HAMDA to perform feasibility study, detailed engineering design, preparation of tender documents and construction supervision works were accurate but the tender evaluation report for technical proposal of tenderers could not be found; that makes the disclosure of information incomplete.

### **3.4 Appointment of Berhe Hagos GC**

- 1.1.37 The following documents have been provided in relation to the appointment of Berhe Hagos General Contractor.
  - 5. The Letter of Tender submitted by Berhe Hagos GC to ERA as Bid Submission Sheet attachment dated January 8, 2009.
  - 6. Letter of acceptance dated April 10, 2008 informing the contractor that its bid has been accepted by ERA subject to the condition of contract for an amount of ETB 372,420,036.56
  - 7. Contract agreement made between ERA and Berhe Hagos GC signed on April 17, 2008.
  - 8. Appendix to Bid signed by the contractor
  - 9. General Conditions of Contract
  - 10. The Particular Conditions of Contract
  - 11. ERA Standard Technical Specifications 2002
  - 12. Special Provisions of Technical Specifications
  - 13. The Priced Bill of Quantities
  - 14. The Drawings
  - 15. Various forms: Anti Bribery pledge, Advance Payment Guarantee, Advance Payment Disbursement Schedule, Performance Security
  - 16. Dispute Resolution Procedure
- 1.1.38 Specific Procurement Notice (SPN) for Invitation to Bids for the subject Project was published on the Ethiopian Herald for two consecutive days. The SPN called for any interested bidder to collect the bidding document from ERA.
- 1.1.39 Pursuant to the notice of invitation nine bidders collected the tender documents.
- 1.1.40 Pre-bid meeting was held on December 8, 2007, as scheduled in the Bidding Document; nevertheless only one prospective bidder attended the meeting.
- 1.1.41 The minutes of meeting with addendum No. 1 dated December 10, 2007, and Addendum No. 2 dated January 9, 2008, were issued to all prospective bidders who purchased the bid document.

- 1.1.42 Among the nine prospective bidders, who have collected the tender document, only four of them have submitted their qualification documents and financial offer before the deadline for submission of bids, January 15, 2008.
- 1.1.43 Only qualification documents of each bidder were opened on January 15, 2008, in the presence of ERA's Contract Award Committee and representatives of bidders who choose to attend the opening ceremony.
- 1.1.44 Following the recommendation of TAC and endorsement of same by the Director General of ERA, the financial proposals of bidders which post-qualification documents were responsive were opened on February 26, 2008, in the presence of CAC members and representatives of the post-qualified firms.
- 1.1.45 Preliminary examination of bids was conducted: Completeness of bids and responsiveness to the Instruction to Bidders were scrutinized. Accordingly, all the bidders were found to have complied with these requirements.
- 1.1.46 The TAC made a comparison of bid price with the Engineer's Estimate. Engineer's estimate was prepared by UNICONE in JV with HEC and HAMDA in December, 2007, for an amount of ETB 335,735,213.47.
- 1.1.47 Berhe Hagos GC was found with the least financial offer among the four bidders, with a deviation of +10.92% from the Engineer's Estimate, ETB 372,420,036.56. The TAC accepted the deviation and recommended for pre-contract discussion.
- 1.1.48 The Contract Award Committee (CAC) in its meeting held on March 14, 2008, reviewed the TAC report and endorsed the recommendation of TAC to award the contract to Berhe Hagos GC with the amount ETB 372,420,036.56. Finally, the recommendation was approved by the Director General of ERA.
- 1.1.49 The documents disclosed describe the appointment of Berhe Hagos GC for construction work fully and accurately.

## 4. Data Analysis

### 4.1 Approach to Awarding Contracts

- 1.1.50 With regard to this project, ERA followed the procedures of PPA's Standard Bidding Document. The approach is transparent and cost effective and ultimately enables the public to get what it pays for. The AT has observed that ERA was consistent with this procurement approach through out the process of awarding contracts for this project.
- 1.1.51 Both open tendering and selection from short listed firms have been applied in this specific project at different stages of the procurements.
- 1.1.52 Engineer's Estimate was prepared for the construction of the road. Preparation of Engineer's Estimate helps to judge the price offered by bidders although it has become unreliable on Ethiopian construction market these days. Nowadays, It is more important to study the market development within the period between the preparation of Engineer's Estimate and contracting the construction work.

### 4.2 Tender Process for Consultancy Service

- 1.1.53 This contract consists of two distinct phases: phase I focus on feasibility study, detail engineering design, and preparation of tender document for construction, and phase II was for construction supervision work. On the agreement signed in phase I, it was noted that continuation of phase II shall depend on consultant's performance in the 1<sup>st</sup> phase and provision of budget for the 2<sup>nd</sup> phase with a maximum duration of two years between the two phases.
- 1.1.54 The technical evaluation in selecting the consultant was as outlined in item 3.3.1. Following the endorsement of the technical evaluation report by the CAC and approval by ERA's Director General, the financial proposal of those that secured the minimum qualifying mark was opened. The marks were: UNICONE-HEC-HAMDA -89%, National Engineers-93% and CWCE- 93.3%.
- 1.1.55 After correction of arithmetic errors financial scores of the three firms were determined as 100, 83 and 95.4 for UNICONE-HEC-HAMDA, National Engineers and CWCE, respectively.

The total combined score was determined by giving a weight of 80% to the technical score and 20% for financial score. Accordingly, the total mark attained was: UNICONE-HEC-HAMDA -91.2%, National Engineers-91% and CWCE-93.7%. Although CWCE scored the highest, due to overlap of key personnel assigned on a concurrently tendered consultancy service and on an on-going consultancy service TAC recommended the second highest scoring firm, UNICONE-HEC-HAMDA.

### 4.3 Feasibility Study by UNICONE-HEC-HAMDA

- 1.1.56 The feasibility study considered alternative routes to select the best one with maximum socio-economic benefit and minimum environmental damage. The first section of the road, Ashi – Mugi (14km), is an already existing one on the Dembidolo – Mugi road. The alternative routes were:

- Rout Alternative 1; Gidami – Gey (Gergeda) – Haro Kola – Ashi
- Rout Alternative 2; Gidami – Gey (Gergeda) – Sasina – Sidi – Ashi
- Rout Alternative 3; Gidami – Tibe – Sasina – Sidi – Ashi

- 1.1.57 The main objective of the Environmental Impact Assessment (EIA) is to identify and evaluate the environmental impacts of the three alternative routes identified by the consultant for the Gidame-Mugi stretch (i.e. Gidami-Gei-Haro Kola-Ashi, Gidami-Gey-Sasina-Sidi-Ashi and Gidami-Tibe-Sasina-Sidi-Ashi with total length of 77.36 km, 90.38 km and 95.872 km, respectively) for the purpose of selecting the one which will have the least environmental damage as well as the most beneficial for socio-economic development.
- 1.1.58 According to the segregated negative biophysical impacts, the socio-economic benefits, and the parameters used to rank the three comparable route alternatives, route alternative 2 (i.e. Gidami-Gey-Sasina-Sidi-Ashi) was found to be the best alignment with least environmental negative impact in the project area. Moreover, this route was found to serve a wider population.
- 1.1.59 According to the study, the estimated traffic of the project road for the planned period is 63 at the opening of the road for traffic in 2009 and 187 in 2023, at the end of planned period. Using ERA's Geometric Design Manual, 2002, the consultant recommended a road of design class DS5 section: 7m wide unpaved carriageway (without shoulders).
- 1.1.60 The service rendered by the consultant and the information provided concerning the feasibility of the project is detail. Detail works have been done from the point of view of economic, social development and engineering aspects.

#### **4.4 Project Implementation-Construction Supervision Service**

- 1.1.61 The consultant's employment for supervision work is needed to look after the construction work on behalf of the Employer-ERA throughout the entire construction period, including the defects liability (maintenance) period. The supervision consultant has to ensure that the road is constructed in accordance to the General and Particular Conditions of Contract, Technical Specifications and Engineering Drawings or any amendments thereto. It has also to optimize use of available resources, minimize costs incurred to the Employer and maximize quality of the works. Moreover, it has to ensure that the road is constructed within the Contract Price and Time for Completion allowed under the contract or any agreed amendments thereto.

The appointment of consultant for design and supervision work was made following a series of lengthy but important tender processes. The contract between ERA and UNICONE-HEC-HAMDA was made on a lump-sum basis.

- 1.1.62 The main objective of the feasibility study was to identify the most economical and technically viable alternative of the proposed road to carry out the Detailed Engineering Design. The consultant made comparison of three alternative routes from various aspects and finally proposed the best route based on its viability.

The consultant recommended the best viable route based on detailed studies, according to reports. However, the same consultant made a design review on a stretch of 12 km from the start of the project, a stretch that required the introduction of retaining wall and rock excavation which ultimately costs the Employer an additional amount of 14,850,359.56. This could only mean that the study was not sound or detail and that the professional competence of the consultant is questionable. The Employer approved the variation with disaffection, in order not to halt the progress of the works. No further action was taken.

- 1.1.63 The consultant again proposed a design review that introduced similar variation works as above on the horizontal and vertical alignment of the road section that could cost the Employer an amount of 21,795,557.86. The occurrence of rock along the preferred route must have been identified at design stage if adequate investigation had been conducted. It is to be noted that the bill of quantities did not include rock excavation items; however, the existence of rock excavation was evident immediately after start of construction.
- 1.1.64 ERA took no action except expression of dissatisfaction with the professional competence of the firm that made a design change costing it an additional amount of ETB 36,645,947.42.
- 1.1.65 The design consultant had not performed the design task with good practice. The availability of rocks in the roadway of the selected route was not detected during field investigation. During construction, the rock sites were easily identified.
- 1.1.66 The supervision consultant was not time conscious when notifying the client of incoming variation works due to design changes. ERA in its later dated June 1, 2009, had criticized the supervision consultant for its delay in the review of design. The delay contributed to additional costs and time overrun.
- 1.1.67 The variations due to design changes that incur additional costs to the Employer above the planned budget could affect the provision of value for money. Therefore, the consultant needs to take time to thoroughly study the physical conditions of the roadway and come up with least cost solutions.

#### **4.5 Tendering Process for Works Contract**

- 1.1.68 The appointment of Berhe Hagos GC was made following the evaluation of post-qualification and financial evaluation of four tenderers who submitted their qualification document and financial offers before the deadline for submission of bids, January 15, 2008 namely: AKIR Construction PLC, Berhe Hagos GC, SATCON Construction PLC and Yencomad Inc PLC. The post-qualification method examined initially whether the documents comply with the criteria set out in the qualification document: financial situation, general and specific construction experience, major construction equipment, work schedule, construction methodology, key personnel and their performance on the ongoing projects.
- 1.1.69 During detail examination of bids regarding the financial situation i.e. proposed source of financing, only two out four bidders submitted proper document in accordance to the requirements in the bidding document while the other two submitted conditional credit guarantee.



Not all bidders' who were post qualified did fulfil the other selection requirements set in the bidding document. The following observation on the bid proposal of the successful bidder highlights how the selection criteria were relaxed during evaluation.

- 1.1.70 Execution of 130,000 m<sup>3</sup>/year of earth work, 22,000 m<sup>3</sup>/year of gravel wearing course/subbase, 22,000 m<sup>3</sup>/year of crushed stone base and 13,000 m<sup>3</sup>/year of rock excavation were set as main criteria for evaluation of experience in key construction activities.

According to the Evaluation Report, TAC observed that no rock excavation and crushed stone base was included in the Bill of Quantities. Therefore, it excluded these major items from the evaluation process. Earthwork and subbase were taken as the only key activities to evaluate the performance of each bidder.

The evaluation report states that the Tender Analysis Committee (TAC) first conducted evaluation of qualification documents and recommended all four firms to be post-qualified.

It is to be noted that rock excavation and crushed stone base were set as criteria for qualification although the BOQ did not show any. It is also to be noted that above 50% of the bidders who purchased the bidding document refrained from participating in the bid. This may have been due to frustrations of the experiences requested in those key activities. However, after bid opening the TAC omitted these criteria. ERA approved TAC's omission of these criteria. This makes the bid non-transparent and non-competitive. Bidders should be evaluated only against the stated requirements in the bidding document prepared by the client. Therefore, the AT believes that the post qualification process of this bid was unfair.

- 1.1.71 The TAC in its preliminary examination of bids noted that the bidder, Berhe Hagos GC fails to submit Form QUA-1.1(b) (power of attorney), Form QUA-1.5(b) (methodology) and Form EXP-4.2(b) (key activities). The TAC proceeded with the evaluation process by accepting those items as they were with condition that the bidder should submit if found successful.

If failure to meet such qualification information cannot be criteria for disqualification, why does the PE set these in the bidding document? Moreover, the TAC set the condition "should provide" not stating what if the bidder cannot provide these documents.

- 1.1.72 In the qualification criteria regarding major construction equipment Berhe Hagos GC did not include tandem roller and sheep foot roller. However the TAC accepted these items conditionally to be fulfilled if the firm becomes successful. If these items are set as qualification criteria, the possibility of acceptance without fulfilling them is not justifiable. The bidder's proposal was not supposed to be responsive to the bidding requirement

- 1.1.73 Berhe Hagos GC's work schedule lacked the following items.

- Resource requirement/deployment under the major work items
- Histogram of the requirements for all major equipments
- Requirement for possession of site

- Arrangement for the provision of the temporary facilities for the engineer

Observing the above shortfalls, TAC suggested that the bidder should revise the schedule before contract signing. However, the submission of proper schedule would have been the minimum requirement for comparison of bids. The relevance of the inclusion of submission of schedule in the RFP looks vague if the bidder is exempted to define the resource requirement for major items at competition stage.

Berhe Hagos GC also failed to submit work methodology though it was a requirement in the RFP. However, the TAC overlooked this criterion and admitted the bidder to be post qualified.

The AT believes Berhe Hagos GC's proposal to be non-responsive to the tender requirements. If the set criteria were to be relaxed, they were to be communicated to all potential contenders in due time.

The financial proposals of those firms found responsive in post-qualification examination were opened. Evaluation of the financial proposal included correction of arithmetic errors, correction of provisional sums and discounts.

- 1.1.74 Comparison of bids with the Engineer's Estimate was made and the least bidder, Berhe Hagos GC was found to be above the engineering estimate by 10.93% while the highest bidder, SATCON Construction PLC was found 22.4% above the estimate. The deviation from the estimate of the least bidder was accepted by the client. The reasons set to justify the acceptance of such deviation were the sufficiency of the competition to judge the price of construction and the significant rise in the cost of construction materials all over the world. The duration between completion of design and date of agreement for construction work was one and a half year.
- 1.1.75 Nine bidders collected the RFP but only four submitted their bidding documents. When more than 50% of prospective bidders did not submit their bids, ERA must have been concerned and tried to know the reasons behind. There were no documents showing such efforts; the participation of more bidders is believed to come up with lowered construction costs and better quality assurance.
- 1.1.76 All the aforementioned suggestions of the TAC were endorsed by CAC and approved by the General Manager of ERA.
- 1.1.77 The appointment of the contractor contradicted the evaluation criteria set for evaluation by the client.

#### **4.6 Project Implementation-Works Contract**

- 1.1.78 The first variation was issued to the contractor on September 24, 2008, for the replacement of consultant's facility from higher standard, type A house and Vehicle, to medium standard. Therefore, not far from the date of commencement of the construction work a variation amount of ETB 4, 546,663.00 was reduced from the contract price.
- 1.1.79 The Contractor had given notice on October 23, 2008, for its intention to submit the claim for the omission of Type A house and vehicle. However, the consultant

rejected the claim for not submitting within the stipulated time in the conditions of contract.

- 1.1.80 The design of the road was reviewed to suit the site condition and, accordingly, an additional cost of ETB 14,850,359.56 was incurred due to the introduction of rock excavation and retaining wall. As the estimated amount of this variation was considerable and above the power of the Engineer, the proposal was submitted to the Employer for approval. The Employer approved the variation on June 10, 2009, with dissatisfaction on the performance of the design consultant, which was but the supervision consultant itself.

Similarly, the consultant made another design review which cost the Employer an additional amount ETB 21,795,557.86 and the Employer's feeling was the same as in the previous design revision. Up to the day this report was prepared, the consultant didn't issue variation order to the contractor in association with the second design revision.

- 1.1.81 The Contractor claimed for handling cost and profit of provisional sum specified for foundation investigation of bridges on June 2, 2010. The consultant has not yet approved it, taking time to review it in line with the provision of the contract.
- 1.1.82 Additional cost was incurred due to Governmental Legislation for Excise Tax on imported goods. In relation to this, the contractor claimed on April 11, 2008 the extra cost incurred for the purchase of Engineer's vehicles and the consultant recommended that the contractor is entitled for additional cost of ETB 624,860.88 and requested the Employer on September 3, 2009. The Employer accepted the consultant's proposal on June 29, 2009 after scrutinizing it with the submitted supporting documents.
- 1.1.83 The contractor submitted and got approval of the various interim payment certificates. The processing of interim payment has been in accordance with the contract agreement.
- 1.1.84 The contractor prepared and submitted a work schedule which was approved by the consultant. However, a considerable draw-back is already reflected in the construction progress: only 20.9% of the contract amount is accomplished while the time elapsed is 69.13% of the total contract time. It is very difficult to compensate such slippage, 48%, and the consultant and the client need to take serious action. If such considerable slippage is kept unresolved, the contractor might enter into damages and the Employer may not benefit according to its expectation.

The major shortcomings that contributed to delay in construction progress according to the consultant's report are: lack of skilled and unskilled labour, late mobilization of contractor's plant and equipment, late deployment of competent staff, shortage of construction material and effect of excessive moisture under dense forest. The introduction of rock excavation and retaining walls, due to design change, also demanded additional time.

- 1.1.85 The documents provided demonstrate that the quality of construction works was carried out in accordance with good practice except the contractor's delay in work progress.

## Appendix 1: Glossary

**Accountability:** CoST's aim is to enhance the accountability of procuring bodies and construction companies for the cost and quality of public-sector construction projects. The core accountability concept is to 'get what you pay for'. The 'you' in this context applies equally to national governments, affected stakeholders and to the wider public.

**Budget:** an amount of money allocated to a project or scheme

**Competitive Tendering:** Awarding contracts by the process of seeking competing bids from more than one contractor.

**Construction Sector Transparency (CoST) Initiative:** An international multi-stakeholder initiative designed to increase transparency and accountability in the construction sector.

**Consultant:** An organisation or individual who has made a contract to provide services.

**Contract:** A binding agreement made between two or more parties, which is intended to be legally enforceable.

**Contract Documents:** Documents incorporated in the enforceable agreement between the Procuring Entity and the contractor, including contract conditions, specification, pricing document, form of tender and the successful tenderers' responses (including method statements), and other relevant documents expressed to be contract documents (such as correspondence, etc.)

**Contractor:** An organisation or individual who has made a contract to undertake works, supply goods or provide services.

**Contract period:** An arrangement for the supply of works, goods or services established for a fixed period of time.

**Cost estimate:** A cost estimate prepared by the buyer of works, goods or services which provides a benchmark or a basis for evaluation and/or negotiation when tenders/offers are received from tenderers. It also serves as an instrument of project planning and budgeting.

**Employer:** In the context of the CoST initiative, the Procuring Entity awarding construction and consultancy contracts for the project.

**Feasibility study:** An evaluation of a proposed project to determine the difficulty and likely success and benefits of implementing the project.

**Material Project Information (MPI):** MPI in this context is intended to indicate that information disclosed on a project is sufficient to enable stakeholders to make informed judgements about the cost and quality of the infrastructure concerned.

**Procurement:** The process of acquiring goods, works and services, covering acquisition from third parties and from in-house providers. The process spans the whole life cycle from identification of needs, through to the end of a services contract or the end of the useful life of an asset.

**Procuring Entities (PEs – also referred as clients and contracting authorities):** The State, regional or local authorities, bodies governed by public law or associations formed by one or several of such authorities that procure works, goods and services with full or part public funding.

**Program:** The projected timing of activities required under the contract.

**Supervision contract:** A contract with a consultant to oversee the performance of the contractor on the construction work, to give a level of reassurance to the Employer about the quality of the work.

**Stake holder:** is an organization or group involved in business and therefore has responsibilities towards it and an interest in its success.

**Tender:** An official written offer to an invitation that contains a cost proposal to perform the works, services or supplies required, and is provided in response to a tendering exercise. This normally involves the submission of the offer in a sealed envelope to a specified address by a specified time and date

**Tender Documents:** Documents provided to prospective tenderers when they are invited to tender and that form the basis on which tenders are submitted, including instructions to tenderers, contract conditions, specification, pricing document, form of tender and tenderers responses

**Tender Evaluation:** Detailed assessment and comparison of contractor, supplier or service provider offers, against lowest cost or most economically advantageous (cost and quality based) criteria.

**Transparency:** In the context of the CoST initiative transparency relates to the disclosure of material project information on construction projects.

## **Annex 1: Material Project Information**

Stage of project cycle	List of MPI to be disclosed	List of Disclosure
<i>Project identification</i>	Project name	Tongo-Begi-Mugi Road, contract 2, Gidami-Mugi
	Procuring Entity	Ethiopian Roads Authority
	Project specification	Construction of new gravel to DS5 standard
	Purpose	To improve and expand the basic transport infrastructure
	Location	Western Ethiopia in Oromia National Regional State, Mirab Wolega Zone
	Intended Beneficiaries	The local community.
	Feasibility study	Carried out in 2006, The project was found feasible with construction cost of ETB 335,735,213.47
<i>Project funding</i>	Financing agreement	Not applicable
	Budget	Amount not disclosed by PE
	Engineer's estimate	ETB 335,735,213.47
<i>Tender process (project design and supervision)</i>	Tender procedure	Quality and Cost based selection
	Number expressing interest	Not disclosed by PE
	Number shortlisted	Not availed
	Number submitting tender	Not availed
	List of tenderers	Not availed
	Tender evaluation report	Yes partially, the technical evaluation cannot be availed
<i>Tender process (main contract for works)</i>	Tender procedure	Quality and Cost based selection
	Number expressing interest	9
<i>Tender process (main contract for works)</i>	Number shortlisted	Not applicable
	Number submitting tender	4
	List of tenderers	4
	Tender evaluation report	Yes
<i>Contract award (project design &amp; supervision)</i>	Name of main consultant	UNICONE-HEC-HAMDA
	Contract price	ETB 5,942,290.98 (for the whole route)
	Contract scope of work	consultancy services for the Detailed Engineering Design and construction supervision
	Contract program	October 2005 – September 2006
<i>Contract award (project supervision)</i>	Name of main consultant	Same as above
	Contract price	As stated above the amount specified is both for contract-1 and contract-2
	Contract scope of work	Construction supervision of the specified project as set out in Contract Data
	Contract programme	June 2008 – June 2012

Stage of project cycle	List of MPI to be disclosed	List of Disclosure
<i>Contract award (main contract for works)</i>	Name of main contractor	Berhe Hagos GC
	Original Contract price	ETB 372,420,036.56
	Revised Contract price	ETB 404,519,290.98
	Contract scope of work	Construction works of the specified road
	Contract programme	June 2008 – June 2011

<i>Contract Execution (contract for Project Supervision)</i>	Changes to contract price	Nil
	Changes to programme,	Nil
	Changes to scope of work,	Nil
<i>Contract Execution (Main Contract for Works)</i>	Individual changes to the contract which affect the contract price, with reasons	1 <sup>st</sup> change – ETB 367,873,373.56 Due to omission and/or replacement of vehicle and accommodation type to the consulting staff
		2 <sup>nd</sup> change – ETB 382,723,733.12 Due to design change that led introduction of rock excavation and retaining wall
		3 <sup>rd</sup> change – ETB 404,519,290.98 Due to design change that led introduction of rock excavation and retaining wall
	Individual changes to the contract which affect the programme, with reasons	There is a design revision that may affect the programme, but not settled yet officially
	Details of any re-award of main contract	None

Documents to be disclosed	Disclosure status
Feasibility study	Yes
Financing agreement	Not applicable
Tender evaluation report	Yes
Project evaluation report	Not yet applicable
Audit report	Not yet applicable

Documents Required for Data Analysis	Disclosure status
Contract document	Yes
Approved extension of time	Not yet applicable
Rejected extension of time	Not yet applicable
Approved cost claims	Yes
Rejected cost claims	Yes
Variation orders	Yes
Payment Certificate	Yes

Latest Monthly Progress Report	Yes, June 2010



## Annex 2: Schedule of Documents Disclosed

Document title	Subject of document
<b>Contract for feasibility study detail engineering design (SABA Engineering PLC)</b>	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent plus cost benefit to the employer
Contract document	Comprises the Contract Agreement based on lump-sum remuneration, and defining the General and Special Conditions of Contract
Review of feasibility study	Feasibility report using various parameters to promote the client's decision on the intended project
Environmental Impact assessment	Review of the route assessment and its social impact on the surrounding society and all over the country
Preparation of Resettlement Action Plan	Resettlement of the society within the road prism due to widening of the road plus modification of the existing route and study of compensation cost related to it
Detail engineering design	Making a design review of this specific route basing on its practicability and economic and social impact
Preparation of Tender Document	Making ready before hand for the upcoming construction work for the easiness of selection the supervision service consultant
<b>Contract for construction supervision</b>	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent. Can help to make a value judgment on the evaluation process
Contract document	Comprises the Contract Agreement, General and Special Conditions of Contract
Progress report	Works accomplished in the reporting month and its presiding months. Problems encountered and remedial solutions
Correspondence letters	Important contractual matters disclosed by communicating using official letters concerning all stake-holders of the project.

<b>Document title</b>	<b>Subject of document</b>
Certificate of Payment	Interim Certificate showing that the payment is processed in accordance to contract & budget
<b>Contract for main works</b>	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent. Can help to make a value judgment on the evaluation process
Contract document	Comprises the Contract Agreement, General and Special Conditions of Contract, Completed Schedules, Technical Specification and Engineering Drawings
Progress report	Works accomplished in the reporting month and its presiding months. Problems encountered and remedial solutions
Contractor's work program	Detail work program prepared by the Contractor and approved by the Consultant important in managing the time, resources and cash flow.
Certificate of Payment	Interim Certificate showing that the payment is processed in accordance to contract & budget

### **Annex 3: Table of project changes (variation orders and claims)**

	<b>Date of issue of variation order</b>	<b>Reason for variation</b>	<b>Work required to implement the variation</b>	<b>Effect on cost</b>	<b>Effect on programme / time</b>	<b>Effect on quality</b>
1.	24 Sep. 2008	Omission and/or replacement of vehicle and house type	Not applicable	-4,546,663.00	No	No
2.	16 Oct. 2009	Change in design	Rock excavation and construction of retaining wall	+14,850,359.56	Will have, but not fixed yet	Not observed yet
3.	Not issued yet	Change in design	Rock excavation and construction of retaining wall	+21,795,557.86	Will have, but not fixed yet	Not observed yet
4.						
5.						
	<b>Date of claim</b>	<b>Reasons for claim</b>		<b>Amount claimed</b>	<b>Sum agreed by client</b>	<b>Date of agreement</b>
6.	11 Apr. 2008	Additional cost due to Government's Legislation for Excise Tax		624,860.88	624,860.88	29 June 2009
7.						
8.						
9.						
10.						
11.						

## **Summary and Findings of the Pilot Study on Gidami-Mugi Road Project**

### **Summary:**

The Gidami - Mugi Project is a section of the Tongo – Begi – Mugi Road Project. The proposed project is the construction of a new gravel road of DS5 standard. The road will have a two-lane gravel carriageway of 7 meter width in rural sections and 12 meter in towns. The road project is an interregional road link between Oromiya and Benshangul Gumz Regional States and traverses weredas (districts) of Tongo, Begi, Gidami and Mugi. One of the most important development objectives of the road is to utilize agricultural potential in the Oromiya and Benshangul Gumuz regions and to provide interregional links between the important market places in the two Regions for it passes through potentially rich agricultural areas. It is part of the “Local Network West” which connects the Regions of Benshangul Gumz, Gambella and Oromiya to Addis Ababa and the central regions of Ethiopia

The procurement of services for design and supervision was conducted as one package for Gidami – Mugi Road Project. The procurement of works was conducted as two separate lots: Contract 1 Begi – Gidami and Contract 2 Gidami – Mugi. This pilot study focuses on the procurement process of contract 2. Post qualification procurement process was followed for the procurement of works. Both service and works procurements were of national competitive bidding.

The project has already been under construction since June 2008. The progress in earthwork, a major work item which accounts for 53% of the total contract, is only 11.53%. The total physical progress is only 20.9% although the plan was to reach 67.75%. The corresponding time elapsed is 69.13% of the total contract time. The project is planned to be completed by end of June 2011 and no time extension has been granted so far.

It was noted that ERA was under going re-organizing its structure at the time of this study, subdividing the contract implementation department into five regions: central, eastern, western, northern and southern regional offices. This specific project falls on the western regional office. For this reason, some of the documents required for the assurance process were collected from this regional office.

A feasibility study was conducted on the proposed route corridor. The main objective of the feasibility study was to evaluate socio-economic and environmental impacts of the road and to identify the most economical and technically viable route among alternative alignments studied by the consultant.

## **Findings**

**Rock excavation and crushed stone base, the most important of the key activities set as criteria, were excluded from the criteria for selection list after bids were opened. Of the nine bidders which collected the RFP only four showed up. It is believed that the tightness of criteria in key construction activities might have frustrated the other five to compete. Such major changes must have been done in good time before the date of bid submission and must have been communicated to all the nine bidders in appropriate time. The AT couldn't find any legitimate ground or justification to exclude any selection criteria in whole or partly after bid opening.**

**Of the four bidders that competed, the proposal of the bidder which emerged winner did not include power of attorney, methodology, key activities and complete schedule. Missing these criteria was meant to be disqualified. The bidder was post-qualified against these selection criteria and, finally, emerged winner.**

**Therefore, it was evident that the contractor's selection procedure was not consistent with the selection criteria set in the RFP. Bids that failed at preliminary examination were excused. Failures in major items of the selection criteria were also excused. The firm which emerged winner failed most in comparison to others. The AT believes, therefore, that the works tender lacked transparency and was full of inconsistency against the criteria set for selection**

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