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ENGINEERING SERVICES FOR RURAL ROADS  
REHABILITATION (ES3R)  
CONTRACT NO: EDH-I-00-08-00023  
YEAR 2, QUARTER 1  
PROGRESS REPORT (TO DECEMBER 2014)

20 January 2015

# ENGINEERING SERVICES FOR RURAL ROAD REHABILITATION (ES3R) CONTRACT NO. EDH-I-00-08-00023

## YEAR 2, QUARTER 1

## PROGRESS REPORT (TO December 2014)

**Prepared for: USAID/Liberia**

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20 January 2015

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government. This report was prepared for the U.S. Agency for International Development. It was prepared by CDM International, Engineering Services Rural Roads Rehabilitation (ES3R)

## Acronyms

A & E	Architect and Engineer
BoQ	Bills of Quantity
COP	Chief of Party
COR	Contracting Officer Representative
ES3R	Engineering Services for Rural Roads Rehabilitation
ETL	Engineering Team Leader
EVD	Ebola Virus Disease
FED	Food and Enterprise Development
FTF	Feed the Future
FTL	Field Team Leader
F2M	Farm to Market
F2MRR	Farm to Market Road Rehabilitation
GIS	Geographic Information System
GOL	Government of Liberia
IWP	Interim Work Plan
LESSP	Liberia Energy Sector Support Project
LMWP	Liberia Municipal Water Project
LOE	Level of Effort
MCA	Multiple Criteria Analysis
MOF	Ministry of Finance
MPEA	Ministry of Planning and Economic Affairs
MPW	Ministry of Public Works
OCA	Organizational Capacity Assessment
PIRS	Performance Indicator Results Sheet
RE	Resident Engineer
SI	Site Inspector
USAID	United States Agency for International Development

# **ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

**YEAR 2, QUARTER 1, OCTOBER TO DECEMBER 2014**

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# 1. SUMMARY PROJECT DESCRIPTION

## 1.1 Introduction

The U. S. Agency for International Development's (USAID) 'Engineering Services for Rural Roads Rehabilitation (ES3R)' was awarded to Camp Dresser McKee International (CDM) under the following USAID contract number: EDH-I-00-08-00023 and task order AID-669-TO-13-00002 which records the period of performance as 8 October 2013 to 20 October 2015.

Liberia's Farm to Market Rural Roads (F2MRR) activity is allied to the objectives of the Feed the Future (FTF) initiative, which is a U.S. government initiative, aiming to address the root causes of global hunger by sustainably increasing agricultural productivity. F2MRR will provide infrastructure investment in the rehabilitation of rural farm-to-market roads to support the following:

- USAID /Liberia FTF program Food and Enterprise Development (FED),
- Capacity development for routine maintenance systems within the Government of Liberia (GOL),
- Capacity development of Ministry of Public Works (MPW) rural roads engineers and local A & E firms,
- Development of alternative low volume road pavement pilot projects, standards and design specifications.

## **1.2 Objectives**

Within F2MRR, ES3R will be an implementing mechanism which will undertake the following objectives:

### **Objective 1:**

Provide construction oversight for three (3) local contracts for the rehabilitation of a total of 83.5 kilometers farm-to-market roads in Bong, Lofa, and Nimba counties from 2013 to 2015.

### **Objective 2:**

Produce engineering designs and construction documents for the 450 kilometers farm-to-market roads in Bong, Lofa, Nimba, and Grand Bassa counties to be rehabilitated in 2015 to 2018.

### **Objective 3:**

Training and pre-qualification of five (5) local architect-engineer firms capable of providing oversight for road rehabilitation activities by 2015.

## 2. QUARTERLY OVERVIEW

This is the first quarterly progress report to be presented in respect of Year 2 of the project. The report addresses completion of the first design package of 75km of roadway, as well as the EVD crisis and the onset of conditions which gave rise to the temporary withdrawal of field teams from field survey, to Monrovia office based, detailed road design works. In addition, the report details the status and approach to challenges on the project and presents the proposed Work Schedule for the next quarter with a guide to resumption of full project remobilization. A financial report is also included.

### 2.1 Quarter 4 Highlights Summary

The table below summarizes key events undertaken (by month) in the operations for the project. Items of importance will be detailed following the table.

	<b>OCTOBER 2014</b>	
<b>Date</b>	<b>Description</b>	<b>Comment</b>
1 Oct	CDM letter reply to USAID of 26 September	CDM letter
3 Oct	USAID CO letter reply to CDM of 1 October	USAID CO letter
6 Oct	USAID COR in design meeting with ES3R	ES3R design
6 Oct	CDM Letter to USAID – reply to USAID 3 October	CDM letter
14 Oct	USAID CO letter; issuance of Notice	USAID issue Notice
w/e 24 Oct	Numerous office visits by COR	COR to ES3R office
24 Oct	Meeting of CDM, USAID CO and senior staff	Washington D.C.
24 Oct	USAID CO letter, Notice of 14 Oct rescinded	USAID CO letter
24 Oct	USAID COR to Monrovia office to peruse designs	COR to Office
25 Oct	ETL proceeds on medical leave to Europe	ETL- J Clarke
27 Oct	CDM letter to USAID – will provide new proposal	Proposal by 7 Nov.
27 Oct	ES3R deliver design package to USAID/Liberia	Design delivery
29 Oct	COR/ES3R meet 21 <sup>st</sup> Century re: bridge design	Review design
29 Oct	Meeting with COR – advice of field visits	COR meeting

<b>NOVEMBER 2014</b>		
<b>Date</b>	<b>Description</b>	<b>Comment</b>
7 Nov	CDM submits letter with Revised Work Plan	To USAID/Liberia
8 Nov	SSF Suspension of Works lifted	By USAID/Liberia
10 Nov	Monthly Progress Report submitted	To USAID/Liberia
14 Nov	Letter received from USAID/Liberia MD	To all IP's
14 Nov	Letter received from USAID /Liberia CO	To all IP's
17 Nov	ES3R ETL, Jim Clarke, returns to Monrovia	Medical leave
19 Nov	Meeting with USAID	ETL at ES3R office
20 Nov	ES3R Annual Report 2014 submitted to USAID	Acknowledged
25 Nov	Invitation to IP's meeting received from USAID	Meet on 5 Dec.
27 Nov	FTL, G Kibisi, proceeds on annual leave	Leave period

<b>December 2014</b>		
<b>Date</b>	<b>Description</b>	<b>Comment</b>
2 Dec	Conf. Call with USAID (Macy, Smith, Wounuah.)	Telephonic
5 Dec	J. Clarke attends Implementing Partners Meeting	USAID
7 Dec	Jackson Kirungi departs Liberia	
9 Dec	Conf. Call with USAID (Macy, Smith, Wounuah.)	
10 Dec	Monthly Progress Report (Nov) submitted	To USAID/Liberia
11 Dec	CDM Smith letter USAID telephonic phone conferences (Revised Work Plan)	To USAID/Liberia
11 Dec	Letter request for transfer of COP duties	Shel. to Dotson
12 Dec	Last day Howard Shelmerdine as COP	
12 Dec	MPW Meeting to discuss standard documents	
13 Dec	Shannon Dotson assumes acting COP	
12-22 Dec	James Clarke conducts Health Assessment 1 in Lofa, Bong, and Nimba County	
16 Dec	Path forward meeting held with project staff	Update Staff.
19 Dec	Office Closes for the festive season	
22 Dec	Approval for travel and onboarding of new COP- Francisco Perez	
22 Dec	James Clarke departs Liberia for festive season	

## **2.2 Quarter 1 Details of Highlights**

### **2.2.1 EVD Crisis in Liberia**

Early in the reporting quarter the EVD crisis continued to worsen throughout the entire country. As described in in Q4, 2014 report, all teams had withdrawn to home station Monrovia to prevent exposure to uncontrolled elements of the population during the crisis. During this isolation period, all staff members avoided utilizing public transportation and were confined to office operations. This was in addition to more restrictive health and safety measures that were implemented to include hand washing stations, entry foot washing basins, and temperature checks by compound guards. During this isolation period, all forces continued to work and complete the first 75Km of roadway design package from which survey had been acquired before the onslaught of the crisis.

Thankfully, and with much relief, the surge of healthcare workers and donor country involvement appeared to have made significant impact towards controlling the crisis towards the middle of the quarter. Reviewing all available data sources indicated that the peak of infections was reached and health officials were beginning to regain control of the pandemic. As such, and with frequent communication with USAID, it was determined that a return to field operations may be possible. However, pursuant to remobilization of teams to the field, two health assessments would be required to ensure that adequate duty of care was being provided to working staff. Of primary and utmost concern to the health and safety of project staff was the access and availability of standard medical care not related to the EVD crisis. In order to determine that a sufficient level of care existed, Health Assessment 1 was initiated in late December to determine if health care facilities had reverted back to

sustainable and non-Ebola related care levels. A favorable report was found which indicated the facilities were resuming to levels of care consist with those pre-EVD crisis. The result of this report was the approval for remobilization to the county capitals and is scheduled for the early part of Q2, Y2 (January 2015). Upon successful integration to the county capitals, a second assessment (HA2) will be conducted. Project staff are in direct contact with local casual laborers from previously affected communities and a review of the current ground situation and other safety measures is required prior to the resumption of field activities.

### **2.2.2 Progress Meetings with USAID**

Progress/Update meetings occurred throughout the reporting period. A majority of these meetings were utilized to coordinate and develop methods to continue the project during the EVD crisis to the extent possible considering the withdrawal of forces to Monrovia. Project specific progress meetings were held with COR during regular visits to the project office during the reporting period. Two formal meetings were held on 29 October 2014, the first with 21<sup>st</sup> Century Engineering, the Nimba Contractor. The second meeting occurred between ES3R team and the COR. A third meeting was held 19 November 2014, when the COR visited the ES3R project office with the incoming CO Mr. Gerald T. Smith, for the purpose of introduction and familiarization with ES3R senior staff and office. As the festive season approached in mid-December, progress meetings were curtailed to accommodate office closure and leave time.

### **2.2.3 Project Deliverables and Documentation**

## Table of ES3R Communication Documents and Letters

ES3R COMMUNICATION DOCUMENTS AND LETTERS			
Communication		Date	Detail
From	To		
CDM	USAID CO	27-Oct-14	Updated Proposed Project Action Plan
USAID	Implementing Part.	14 Nov-14	EVD related information to partners
CDM	USAID CO	11 Dec-14	Revised Work Plan submitted to USAID
CDM	USAID CO	11 Dec-14	Request to transfer COP duties
USAID	CDM	22 Dec-14	Travel Approval and COP designation for Perez

The above 'Table of Communication Documents and Letters' includes in chronological order those communications of particular relevance to the progression of Works on the ES3R project during the reporting quarter.

The ES3R team maintained close liaison with USAID CO and COR, regarding changes in planning and project implementation warranted as a consequence of the health risks of the EVD. The primary emphasis of the coordination centered on the path forward to resumption of full project activities and return of Chief of Party in country.

### 2.2.4 Field Visits to Counties Sites

Due to the isolation of field teams in Monrovia, travel to outside counties was not permitted within the imposed health and safety guidelines due to the EVD crisis. A singular outside trip was allowed in late December to conduct the investigation and interviews of health care facilities (Health Assessment 1) by Jim Clarke in Lofa, Nimba, and Bong Counties.

### **2.2.5 Design of Bridgeworks**

It remains from completion of 75km of design work, as well as prior existing data, that numerous waterways on future road links will require bridge structures in excess of 10 meters span. The bridgework required is outside the ES3R scope of work. Following discussion with USAID, ES3R will quantify the LOE required for the design of the bridges between 10m and 16m, the development of standard bridge superstructure designs, as well as a design guide checklist for substructure elements of bridgeworks for feeder roads in Liberia.

The amendment to perform this work was placed on hold while a successful conclusion was reached with USAID regarding the path forward for the project (from impact of the EVD crisis). As a result of successful conclusion with a concentrated focus on remobilizing the team, a new amendment utilizing best available data is under preparation and will be submitted in Q2, Y2.

### **2.2.6 Revised Work Plan**

A revised work plan was re-submitted as requested by USAID on December 11. The document is attached as Annex A. The program outlines how the project objectives will be met and the execution of health assessment activities. A revised extended work plan/amendment (described above) is under preparation to take into account the impact of the EVD crisis.

## 3. PROJECT OBJECTIVES PROGRESS

### 3.1 Objective 1 – Construction Oversight

Consistent with previous CDM correspondence with the CO, the ES3R health and safety protocols enacted as a result of the EVD crisis prevented ES3R staff to be present and observe construction works. Nonetheless, the general progress of each of the contracts, with ‘time elapsed’ expressed as a percentage of total contract periods, as of the end of December 2014, is as follows:

#### **Bong:**

The construction contractor performance during October 2014 was low and characterized by minimal site activity. Clearing on the Tolomai - Lele road was the only work done during this period. According to the Contractor’s Work plan, full work was to commence during early November 2014.

Towards the end of October, the USAID/Liberia COR advised of his forthcoming scheduled visits to the construction site (12 – 15 November 2014). Regrettably, CDM Smith’s corporate policy did not permit field work for the ES3R team at that time.

The construction contractors indicated that their resources were being supplemented in order to achieve increased productivity during the reporting month with anticipated full production soon thereafter.

Limited events took place in the reporting period for December as no direct observation was possible due to the health and safety protocols enacted.

**Nimba:**

A meeting was held with 21<sup>st</sup> Century at the ES3R office on 29 October 2014, primarily to review the contractor's bridge design.

Output from the meeting, chaired by USAID COR, was as follows:

- The Contractor was advised to make a resubmission of his bridge design to include a structural design report that includes design calculations, foundation design assumptions, steel bending schedule and more clear drawings (showing bridge deck steel reinforcement, retaining wall steel & concrete).
- The Contractor was also advised to follow up the approval process in the Ministry of Public Works, but the COR offered to assist on the follow up provided the contractor's design report and designs were found acceptable (dependent on the design report requested).
- The Contractor advised that it planned to resume reshaping and embankment filling works on the remaining road section starting 3 November 2014.

Towards the end of October, the USAID/Liberia COR advised of his forthcoming scheduled visits to the construction site of Nimba (9 – 11 November). CDM Smith's corporate policy did not permit field work for the ES3R team at that time.

The construction contractor indicated that their resources were being supplemented in order to achieve increased productivity during the reporting month with anticipated full production soon thereafter.

**Lofa:**

The SSF request for suspension of work due to the outbreak of Ebola was granted by USAID/Liberia in letter dated 5 August 2014, which incorporated Modification No. 1; ‘to suspend all works being completed in Lofa County from 8 August 2014 to 7 September 2014, which was subsequently extended to 7 October 2014 by the issuance of Modification No. 2. Limited activity took place for Lofa County.

Towards the end of October, the USAID/Liberia COR advised of his forthcoming scheduled visits to the construction sites of Lofa (5 – 8 November. CDM Smith’s corporate policy did not permit field work for the ES3R team at that time.

Work in November in Lofa County recommenced following the lifting of the (total) three-month suspension of works - as of 8 November 2014.

Due to the limited progress meetings and scaled back operations from the rainy season and the EVD crisis, the following table describes activities through end of November.

<b>ES3R Status of Works Contracts</b>			
<b>Description</b>	<b>Bong</b>	<b>Lofa</b>	<b>Nimba</b>
Contract Award	22 Jan 2014	27 Jan 2014	22 Jan 2014
Contract Period, days	730	730+90	730
Time Elapsed (to end November), %	46	41	46
Overall Assessed Completion, % (approx.)(Nov)	35	34.4	39
Total Contract Value, USD	1,895,141.86	592,384.35	843,228.25
Payments to end October 2014, USD	508,376.56	202,957.65	280,847.97

### 3.2 Objective 2 – Design and Contract Documents

As a consequence of the EVD crisis, the three field teams were moved to the Monrovia office to carry out design work as of early August 2014. Since that time, the teams have continued with design work from the office, which resulted in the completion of design work for the following road links.

County	Road Link	Length km	Total km
Lofa	John's Town - Bulor	15.4	15.4
Nimba	Dounpa – Zuaplay – Gogein - Nimba	22.2	28.2
	Gaopah – Garwonpa - Fleedin	6.0	
Bong	Gbondi - Gbarnia	17.5	31.6
	Yaindewoun – Nyan – Molo ta Junction	14.1	
		<b>Total</b>	<b>75.2</b>

For each road link, conversion of survey data into tender documentation including:

- Strip mapping,
- Improvement plans,
- Bills of quantities (BoQ) according to specification,
- Technical drawings illustrating BoQ items,
- Digital drawings for pipe culverts,
- Digital drawings for revised inlet / outlet structures,
- Technical drawings for single and double cell box culverts,

- Review and revision of MPW Bills of Quantities (5 sections),
- Review and revision of MPW Specifications (5 sections),
- Preparation of standard contractor reporting templates.

The Preliminary Draft Design Package was completed on 24 October 2014. The same day, USAID COR visited the ES3R office in order to review the documentation contained in the package. As the COR expressed appreciation for the product, it was subsequently delivered to USAID/Liberia for formal review from stakeholders on 27 October 2014 per COR request. The completion of this first design package was sub sequentially dependent on the return of comments and redlines from key stakeholders (primarily MoPW).

Due to the EVD crisis, the available stakeholders to conduct review (MoPW) was severely impacted due to government scale back of non-essential services.

As an interim measure while the team awaited comments/redlines, design teams began efforts on preparing and prepping 30% preliminary design work for the remaining roadway works. The intent was to prepare limited templates that would expedite final design upon completion of survey data as well as establish common standards across all teams and counties. Additional work in November and December also included:

- Market research for the collection of costs for plant, equipment and materials,
- Unit rate analysis for estimate of costs,
- Plotting of cross sections and contours for waterway crossings; and
- Design details for five box culverts.

### 3.3 Objective 3 – Training and Capacity Building

The mentoring of contractors was not permissible during the reporting period due to the EVD crisis and enacted health and safety protocols for project team members. The training of A&E firms was also impacted in part due to travel advisories issued since the beginning of the EVD as well. However, continued mentoring of project staff per approaches described in the project inception report continued.

ES3R training and mentoring during the reporting period included:

#### Resident Engineers:

- Road geometric design calculations,
- Analysis of details from existing road conditions for design purposes,
- Preliminary design for box culverts,
- Calculations in design of structures,
- Preparation of road works bill of quantities,
- Interpretation and use of standard contract documentation
- Compile designs for submission to USAID/Liberia.
- Collection of market costs for plant, equipment and materials,
- Generation of rates for bill of quantities items,
- Culvert hydraulics and discharge,
- Analysis of field survey data
- Enhancement of Autocad Skills
- Conversion of topographical data in Autocad plan/profile

#### Site Inspectors:

- Collection and analysis of field data,

- Preparation of site layouts,
- Earthworks design and appraisal methods,
- Plotting of road reduced levels into AutoCAD,
- Erosion protection interventions and design process,
- Checking of strip maps and bill of quantities.
- Plotting of levels for cross sections
- Design of interventions for water crossings
- Developing strip maps

### **3.4 Performance Management Plan - PIRS**

The Performance Indicator Reference Sheets (PIRS) related to the progress of the ES3R project are included in Annex B of this document.

## 4. PROJECT CHALLENGES

The following items have been encountered during the course of the project and pose challenges to the ES3R team and project:

Challenge / Issue	Mitigation / Resolution
All contractors are struggling with the design / build contract model, thus require much support in preparation of submittals.	QAC has to offer inordinate amount of support to contractors in order that compliance be achieved and progress achieved.
The lack of capability of local contractors required that excessive time spent by FTL's in guidance and mentoring process.	ES3R must strike a balance between formal mentoring of contractors and progression of survey and design works required.
The lack of availability of diesel fuel in both Lofa and Nimba has had a negative impact on logistics and travel plans.	Despite contingency measures being in place, specific journeys out of county have been required to secure fuel, thus loss of productive vehicle time.
The suitability of dates for the presentation of the MCA tool and for county based presentations and workshops led to unavoidable rescheduling of dates.	Significantly extended time periods in the preparation and presentation of the prioritization workshops has incurred unexpected delays resulting in further time requirement for Y1 documentation deliverables.
Detailed design field survey commenced on 1 July. Available time for design documentation by deliverable date is 3.5 months.	On the basis of time available, completion of target design of 150km is a significant challenge as previously indicated. 75 km was agreed as appropriate within time available.
The Ebola crisis continues to intensify at the end of July requiring evacuation of Peace Corps personnel and issuance of	Intensification of project safety protocol. All teams are withdrawn from field work where interaction with

CDC travel advisory against non-essential travel.	local community is causing concern among team members.
In the interests of health and safety, the field teams were moved to the project office in Monrovia to commence design duties.	The staff of the three field teams will be fully engaged in the design of 75 km of roads for which survey data is now available.
MPW Technical Specifications, Method of Measurement and Detail Drawings which are required to be used in the contract documentation are neither finalized nor yet field tested.	ES3R have identified that from initial assessment, the existing MPW documents will require significant refinement for inclusion in the contract documents. Further work to be undertaken by ES3R.
Bridge engineer requirement.	Proposal for structural engineering support is required. A realistic estimate of waterways which require bridge structures is required.
MPW Specification is inconsistent with USAID/Liberia conditions of contract.	A Specification should be totally consistent with conditions of contract, a matter which should be resolved prior to any solicitation.

## 5. WORK PLAN FOR NEXT QUARTER

Given the successful conclusion of Health Assessment 1, teams will remobilize to county capitals to conduct Health Assessment 2. Upon the conclusion of the report and in depth analysis by Health and Safety, a full remobilization is likely to occur in the second quarter of year 2.

### **Objective 1: Construction Oversight**

Pending a successful conclusion of Health assessment 2, field teams are likely to resume construction oversight of the pre-engaged sites. During remobilization teams will review likely roadway segments for immediate resumption of field operations (assuming completion and approval of HA2) and data will be provided when available in the next monthly or quarterly report.

### **Objective 2: Design and Contract Documents**

Pending a successful conclusion of Health assessment 2, field teams will resume all field survey based activities. Upon obtaining additional meaningful data supply, teams can utilize existing 30% standard designs and templates to begin final plans.

### **Objective 3: Training and Capacity Building**

The formal program which was in place for the training of A & E firms has been postponed as addressed in section 3.3 of this report. Potentially, field mentoring of AE mentors can commence assuming a successful conclusion to HA2. However, due to the CDC travel advisory, expert visits from the United States will continue to on hold until a lifting of the warning.

## 6. FINANCIAL REPORT

ENGINEERING SERVICES FOR RURAL ROAD REHABILITATION			
FINANCIAL REPORT TO END DECEMBER 2014			
Row Labels	Sum of RAW COST	Indirect Cost	TOTAL Cost
01-Auto - A/P	21834		21,834.00
01-Mileage - expense	16.81		16.81
03-Room - A/P	74,865.49		74,865.49
03-Room - expense	6,795.90		6,795.90
04-Park, Toll, Taxi - A/P	17,788.99		17,788.99
04-Park, Toll, Taxi - expense	136.36		136.36
05-Prints - A/P	195.84		195.84
05-Prints - expense	87.00		87.00
06-Supplies - A/P	181,667.50		181,667.50
06-Supplies - expense	110.00		110.00
07-Miscellaneous - A/P	59,468.72		59,468.72
07-Miscellaneous - expense	541.50		541.50
08-Telephone - A/P	4,442.00		4,442.00
08-Telephone - expense	58.00		58.00
09-Car Rental - A/P	1,875.00		1,875.00
09-Car Rental - expense	350.00		350.00
10-Air Fare - A/P	4,808.40		4,808.40
10-Air Fare - expense	11,989.79		11,989.79
11-Outside Professionals	1,213,605.27		1,213,605.27
12-Computer - A/P	20,643.20		20,643.20
19-Shipping, Postage - A/P	982.00		982.00
24-Field Equipment - A/P	50,750.70		50,750.70
26-Auto - expense	170.00		170.00
28-Overnight Delivery - A/P	29.45		29.45
30-Meals - A/P	12,003.62		12,003.62
30-Meals - expense	4,109.83		4,109.83
Labor	69,265.76	127,449.00	196,714.76
Labor Local	225,107.42	414,197.65	639,305.07
Overseas Differential - ODC	30,550.40		30,550.40
Overtime	60.92		60.92
<b>Grand Total</b>	<b>2,014,309.87</b>		<b>2,555,956.52</b>
		Fee @ 7.5%	191,696.74
		<b>Inception To Date Total</b>	<b>2,747,653.26</b>

**ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

**ANNEX A**

**ES3R NARRATIVE  
and  
INTERIM WORK PLAN**

## **Proposed Revised Work Plan**

AID-EDH-I-00-08-00023-00/ AID-669-TO-13-00002  
Engineering Services for Rural Roads Rehabilitation (ES3R)  
November 7, 2014

### **1.0 INTRODUCTION**

CDM Smith hereby submits this Revised Work Plan, as requested by USAID's letter dated 24 October 2014, setting forth how it will fulfill the terms of the ES3R contract.

Due to the Force Majeure event of the Ebola epidemic, it has been impossible for CDM Smith staff to perform the services under its contract, as planned. Most importantly, CDM Smith is unable to comply with USAID regulation 728.307-70 that mandates the inclusion of AIDAR Clause 752.228-70 into USAID contracts and thereby requires contractors performing overseas work for USAID to provide MEDEVAC service coverage for its employees.

Consistent with the USAID regulation and its duty of care to its employees, CDM Smith has a contract with International SOS ("ISOS") to medevac personnel. Unfortunately, ISOS has advised us that it will not medevac anyone from Liberia that becomes infected with Ebola, and that (at the current time) only limited services can be offered to personnel that may incur injuries or sickness even if not related to Ebola. Further, providing safe and reliable medical care in-country is also proving to be impossible. CDM Smith is in discussions with Aspen Medical Liberia to contract to provide in-country transport and medical clinic services for non-Ebola related issues that are currently unavailable from ISOS or other medical service providers otherwise available to CDM Smith. However, Aspen reports that their services are also limited, and hence do not meet our complete needs.

CDM Smith remains committed to completing this project, provided that it can meet its duty of care to its staff to manage and mitigate the risk resulting from the Ebola pandemic. We believe that this revised work plan provides a reasonable path forward.

### **1.1 HEALTH AND SAFETY ASSESSMENTS**

Currently, all in-country contractor staff are supporting design work from the team office in Monrovia. Resuming work in the field will require a close working interface with the local communities including working relationships, transport, equipment handling, and (in some cases) living within the community. It is for these reasons that two health and safety assessments are necessary in order to determine when CDM Smith can move employees out of Monrovia to



the counties and resume field work (survey and construction oversight), while also meeting its duty of care to its employees.

- **Health & Safety Assessment #1 - Determine Ability to Move to County Capitals**

In order to determine the suitability of performing office work in the county capitals, a basic assessment will be carried out of the facilities and conditions in the main centers of Bong, Nimba and Grand Bassa counties, as well as ascertain the availability of medevac and health care services, transportation, accommodations, food, and other services. We expect to complete this assessment by early December 2014. Favorable results will allow for remobilization in early January 2015. Until this activity is completed, all project staff will continue working in the Monrovia office on the 30% design of the remaining 375km.

- **Health & Safety Assessment #2 – Determine Ability to Conduct Field Survey/Construction Oversight Work**

This second assessment will be directed towards existing health and safety conditions within the district areas in which field work is proposed to be commenced. The results will identify if/where safe working conditions allow resumption of field surveys (as well as construction oversight). Until this activity is completed, all Project staff will remain in the offices in the county capitals to continue work on the 30% design of the remaining 375km. Should the assessment determine that conditions are not yet suitable for resumption of field-based activities within that particular location, it is hoped that the team could remobilize to another county (assuming successful completion of health assessment #2).

## **1.2 PROJECT STAFFING/CONDITIONAL MOBILIZATION**

- **Chief of Party (CDM Smith)**

Due to the determination by CDM Smith's health and safety specialist and ISOS, as well as others, that current levels of healthcare within Liberia do not offer what is normally provided/expected by expatriate staff (e.g., emergency trauma treatment and air MEDEVAC to suitable medical facilities), we are unable at present to return our Chief of Party in country. However, we continue to monitor the situation, with ISOS, to determine when a return might be possible. Our Chief of Party will continue managing and directing the Project and team from a remote location until the conditions improve (e.g., when the CDC travel advisory against non-essential personnel warning is lifted - allowing resumption of normal air & MEDEVAC activities and access to air ambulance service). Our current understanding of the situation is the advisory is likely to be revised towards the tail end of Q1 2015.

- **Engineering Team Leader (CARDNO)**

The engineering team leader will continue to manage field operations during the time that the COP is working remotely. This position is staffed by our Teaming Partner, Cardno. Cardno has assured CDM Smith that their corporate duty of care standards can be met under the current Ebola Epidemic conditions. As a result, Cardno is able to continue staffing this position in Liberia. CDM Smith will continue monitoring and engaging in effective communication with Cardno during this time.



## 2.0 REVISED WORK PLAN

Detailed below is a description of each of the three project objectives, including a statement of the work completed to date, and a proposed approach for completing the remaining work.

### Objective 1: Rehabilitation of 83.5 Kilometers of Roads

The contract calls for construction oversight for three local construction contracts for the rehabilitation of a total of 83.5 kilometers farm-to-market, gravel-surfaced roads by local firms in Bong, Lofa, and Nimba counties from 2013 to 2015.

#### A. Work Completed to Date<sup>1</sup>

In January 2014 USAID awarded contracts to three local contractors to begin rehabilitation of the aforementioned roads. Details regarding those contracts and percent complete are provided in the table below.

County	Local Contractor	Start Work Date	Contract Period	Actual Percent Work Complete (end Oct 2014)
Bong	Westwood	22 January 2014	730 days	35%
Lofa	SSF Entrepreneur	27 January 2014	730 days	34.4%
Nimba	21 <sup>st</sup> Century	22 January 2014	730 days	39%

The ES3R team performed construction oversight of each of these contractors from 18 February 2014 to 26 June 2014 in Lofa County, and 18 February 2014 to 31 July 2014 in Bong in Nimba Counties. All construction oversight work was stopped on 31 July 2014 and the field teams were relocated to Monrovia.

Construction activities continued with scaled-down resources throughout the rainy season. The contractors have advised our team that full resources are being mobilized as of early November 2014, gearing up to full operations later in the month, while the ES3R oversight teams remain in Monrovia.

#### B. Proposed Approach for Completing Remaining Work

Upon a successful conclusion to the previously mentioned medical/health assessments for each county, site inspectors will resume oversight duties for remaining construction activities. Such oversight will be carried out by site inspectors who should be joined by A & E firm trainees from the AE Capacity Building Objective as appropriate, all with the mentoring of visiting resident

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<sup>1</sup> Note that details of work completed to date (for all 3 Objectives) have been provide in ES3R regular monthly reports, and what is contained in this document is only a summary

engineers from time to time. Monthly items such as site progress meetings and confirmation of measurement of works will be overseen by the relevant Field Team Leader.

Upon the successful conclusion of the health assessments for each county, Construction Oversight teams will be able to resume work.

## **Objective 2: Design and Documentation for 450 Km Roads**

The contract requires that we produce engineering designs and construction documents for the 450 kilometers (km) farm-to-market roads in Bong, Lofa, Nimba, and Grand Bassa counties to be rehabilitated from 2015 to 2018.

Per the contract, the results of the design and documentation were originally to be as follows:

- Selection and design of 225 km of farm to market roads by the end of year one; and
- Selection and design of 225 km of farm to market roads by the end of year two.

These original requirements were revised on the acceptance of the Inception Report as follows:

- Selection and design of 150 km of farm to market roads by the end of year one; and
- Selection and design of 300 km of farm to market roads by the end of year two.

### **A. Work Completed to Date on Objective 2**

The first step in completing Objective #2 was to carry out a rapid field assessment of the ‘universe of roads’ as recommended by key stakeholders. This step, which involved the preliminary survey of approximately 1,000 km of roads, was completed in April 2014.

The next step in the process of Objective #2 was to gain acceptance of the Multiple Criteria Analysis (MCA) tool which was proposed for use in the road prioritization selection process. This was achieved on 27 May 2014.

This was closely followed by county-based prioritization workshops, during June 2014, at which time the selection of the priority roads was completed by the participation of key stakeholders. The selection of 450 km of roads was thus completed on 26 June 2014.

In the Final Inception Report (17 January 2014), a revised schedule for the survey, design, and packaging of designs for tender was developed. That schedule was as follows:

#### Year 1

Survey/Design: Complete 150 km (25 km/month from April to September 2014, 6 months)

Packaging: Complete 150 km packaged into 4 contracts by 20 October 2014

#### Year 2

Survey/Design: Complete 300 km (25 km/month from October 2014 to September 2015, 12 months)

Packaging: Complete 300 km packaged into 4 contracts by end of October 2015

Following the selection of prioritized roads, which was completed towards the end of June 2014, the detailed field survey work commenced. Survey work was stopped on 31 July 2014.

At the time of withdrawal from field surveys, the following detailed field survey work had been completed:

County	Road Link	Length km	Total km
Lofa	John's Town - Bulor	15.4	15.4
Nimba	Dounpa – Zuaplay – Gogoin - Nimba	22.2	28.2
	Gaopah – Garwonpa - Fleedin	6.0	
Bong	Gbondi - Gbarnia	17.5	31.6
	Yaindewoun – Nyan – Molo ta Junction	14.1	
		Total	75.2

The field survey data collected up through 31 July 2014 was sufficient to complete the design package for those roads from the project office in Monrovia.

CDM Smith submitted an interim work plan to USAID on 9 August 2014 that outlined the revised plan and provided an updated schedule, showing a completion date of 26 September 2014. The detailed design was not completed until 24 October 2014 due to the addition of five large structures added to the Nimba cluster at the request of USAID, as well as the unavailability of Ministry of Public Work Staff for review and comment (among other factors).

The Preliminary Draft Design Package was delivered to USAID/Liberia on 27 October 2014.

## **B. Proposed Approach for Completing Remaining Work for Objective 2**

Additional work to complete Objective #2 includes: finalizing the preliminary design package for the 75.2 km of roads described above, collecting detailed field survey data for the remaining 375 km, completing designs for the remaining 375 km, and packaging remaining designs for tender.

The Preliminary Draft Design Package (75km) was completed on 24 October 2014, which was reviewed by USAID's Contracting Officer's Representative (COR) and subsequently delivered to USAID/Liberia on 27 October 2014 as per the COR request.

The approach for completing these tasks is described below.

## 1. Finalize Preliminary Design Package

Additional work remaining to finalize this design package includes:

- Review and comment from key stakeholders;
- ES3R meeting with key stakeholders (USAID & MPW) to discuss the preliminary draft designs;
- ES3R incorporation of comments;
- Internal ES3R QA/QC of draft designs,
- Formal submission of Draft Designs to USAID/Liberia;
- ES3R receipt of final comments on design package; and
- ES3R submission of final design package following incorporation of final comments.

Designs carried out to date on the 75km package include additions and amendments to MPW documentation (e.g. Specifications, Drawings, etc.), which will be utilized in future designs and facilitates higher productivity levels.

## 2. Obtaining Additional Survey Data and Completing Remaining Designs

All survey field teams have been in Monrovia since the beginning of August 2014. As a result, no additional field survey data has been collected for the remaining 75 km scheduled in Year 1 or the 300 km scheduled for Year 2. Without this data, no additional designs can be completed. Upon a successful conclusion of the health and safety assessments for each county, field survey teams will be able to resume work, to include:

- Establish field camp in consultation with local community;
- Hire and train two local “flying gang” (3 - 4 people each);
- Conduct discussions with community;
- Peg out road and paint chainages;
- Identify culvert locations and arrange clearing of bush (additional survey);
- Hire local labor for survey/sampling assistance;
- Conduct topographic survey w/levels at 25m intervals on centerline– offsets as necessary (additional survey);
- Establish benchmarks along route;
- Take levels along watercourse inverts (additional survey); and
- Identify, clear and sample gravel/fill source (additional survey).

Field survey data will be converted into tender documents, which will allow design teams to complete design drawings and documentation for each link of road.

The activities to complete these designs include:

- Strip mapping;
- Confirmation of basic engineering interventions;

- Finalization of improvement plans;
- Developing of bills of quantities (BoQ) according to specification;
- Developing technical drawings illustrating BoQ items,
- Developing digital drawings for pipe culverts;
- Developing digital drawings for revised inlet / outlet structures;
- Developing technical drawings for single and double cell box culverts;
- Reviewing and revising MPW Bills of Quantities (5 sections);
- Reviewing and revising MPW Specifications (5 sections); and
- Preparing standard contractor reporting templates.

As described previously, design teams have been confined to the Monrovia office completing the 75Km design package while preparing the basic template design for BoQ's and standards/specifications for all roadway sections, which may be utilized for the remaining 375Km of roadway.

This approach has the benefit of completing the 30% template designs (late January 2015) and thus allowing for an expedited integration of detailed field survey data to complete the BoQ/Final plan sets.

Standard templates will have been completed, as well as modifications to the MPW standard specification set.

### 3. Submission and Packaging of Contract Documentation

Packaging will take place after completion of each detailed design "group." This will be guided by the needs of USAID/Liberia. Efforts will be made to strike a balance of an equal length of roads surveyed and designed within each of the four counties. Subsequently, design packages will take into account: client guidance, county needs, location within the county, contractor performance and availability of funding.

Depending upon the outcome of the health and safety assessments, it is likely that survey teams would not resume work before the beginning of 2015. The Force Majeure event that is impacting the work may result in a delay of several months in completing surveys, and subsequently the designs and design packages for tender.

Due to the schedule impacts caused by the pandemic, we propose to maintain the three Field Team Leaders in-country throughout the remainder of the Project to assist in Objectives 1, 2, and 3, instead of having their term end in March 2015, as is currently scheduled.

#### **Objective 3: Training Local A/Es**

The Contract calls for training and pre-qualification of five (5) local architect-engineering firms capable of providing oversight for road rehabilitation activities by 2015.



The training component will, by the end of year two, result in trained A & E firms that will have the capability to design, prepare contract documentation, manage procurements, supervise and manage feeder road and basic building construction projects based on best practices.

#### **A. Work Completed to Date**

The work completed to date is as follows:

- EOI for interested firms in e-mansion;
- EOI for interested firms in Liberia press;
- Specialist trainer field visit – January 2014;
- Interview of firms expressing interest;
- Draft Pre-qualification report prepared and issued;
- Revised Pre-qualification report issued 31 March 2014; and
- Associated financial narrative to report issued 16 April 2014.

In addition, the first stage of classroom training for A & E selected firms, and trainees, was scheduled to be carried out during a two week period in mid-September 2014, which was postponed due to the prevailing Ebola (EVD) crisis in the country.

#### **B. Proposed Approach for Completing Remaining Work**

Initial classroom training sessions will be reconvened as soon as is safely practicable, in order that both the A/E firm trainees and the field teams have the benefit of the training component. Monrovia based classroom training of senior A/E firm personnel would be initiated following the lifting of CDC travel advisory and resumption of normally scheduled flights.

It may be feasible to initiate a limited classroom environment via remote teleconference, but challenges remain with dependable and consistent internet connectivity. Field training of A/E staff engineers' will resume upon successful completion of health assessments 1 and 2. This would then facilitate the commencement of field training on or around the resumption of field oversight and survey duties in the field.

The ES3R team believes that assessments #1 and #2 will not be completed until January 2015, at the earliest. As a result, at present, we believe the earliest any A/E team could oversee work in the field would be February 2015.

Classroom training cannot be completed until CDC lifts the travel advisory, which is unknown at this time. As funds for this activity have been on hold, no expenditures have been incurred. Once the training component resumes, it will be completed along with the remainder of the Project (approximate 6 month delay anticipated).

### **3.0 IMPACT TO COSTS AND SCHEDULE**

- **Costs Impact**



The current conditions impacting the Project will naturally add cost to the Contract performance. At this time, CDM Smith is unable to develop estimates for the changed work. However, once the assessments are complete, a revised estimated cost baseline will be provided.

- **Schedule Milestones**

As of this date, the original schedule baseline is impacted by approximately a six month slippage. Forecasting revised schedule milestones remains uncertain due to the ongoing impact of the epidemic. CDM Smith hopes, however, that a clearer definition of performance risks and Project impacts will be known by the end of 2014 and that we will be able to resume in-country field work early in 2015. Once that occurs, we will prepare a revised schedule baseline and estimated cost baseline for submission to USAID.

#### **4.0 CONCLUSION**

Due to the Ebola pandemic, and the impact on CDM Smith's inability to perform the work under this contract in the manner anticipated at contract inception, as well as our inability to currently meet the duty of care owed to its employees to provide a safe work place and medevac and basic medical services, CDM Smith proposes the reasonable plan set forth herein as an appropriate way to manage the Project under these extraordinary circumstances.

We recognize that one of the primary concerns raised by USAID is that the Chief of Party is not in-country. As explained above, we are unable at present to return our Chief of Party in country. However, we continue to monitor the situation, with ISOS, to determine when a return might be possible. Our Chief of Party will continue managing and directing the Project and team from a remote location until the conditions improve (e.g., when the CDC travel advisory against non-essential personnel warning is lifted - allowing resumption of normal air & MEDEVAC activities and access to air ambulance service). In conjunction with the in-country oversight services being provided in the field by our subcontractor, Cardno, we believe that the Project can be properly managed and maintained in this manner until we are able to once again place the Chief of Party back in to Liberia--which we are committed to doing as soon as we have determined that is appropriate to do so in a manner which is consistent with our duty of care to employees. In the event that USAID concludes that this work plan is unacceptable because of CDM Smith's current inability to place the Chief of Party in Liberia, we propose as an alternative solution that the CDM Smith Project work order be assigned, or novated, to Cardno, who has indicated to us a willingness to discuss with USAID the process, terms and conditions, for taking over the task order under the contract.

**ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION (ES3R)**

**ANNEX B**

**PERFORMANCE INDICATOR**

**REFERENCE SHEETS**

**September 2014**

PERFORMANCE INDICATOR REFERENCE SHEET

ENGINEERING SERVICES FOR RURAL ROADS REHABILITATION									
PERFORMANCE INDICATOR REFERENCE SHEET									
PERFORMANCE INDICATOR VALUES									
Year	TARGETS for ROAD SURVEY								Notes
	PROVISIONAL				ACTUAL				
	Bong	Lofa	Nimba	Grand Bassa	Bong	Lofa	Nimba	Grand Bassa	
2013	0	0	0	0	0	0	0	0	Base Year
2014	150				31.6	15.4	28.2	0	Sub total 75.2
2015	300								Total for four counties in 2015

<b>Performance Indicator Reference Sheet</b>			
<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Construction oversight provided for Local Contracts</b>			
<b>Name of Indicator: Length of road that has construction contract for rehabilitation awarded and in place</b>			
<b>Geographic Focus: Bong, Lofa and Nimba</b>			
<b>Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___</b>			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Kilometer</b>			
<b>Method of Calculation: Measure of length of roads</b>			
<b>Disaggregated by: None</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Driving along the roads</b>			
<b>Data Source: Project sites</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: Regular Check</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	<b>Notes</b>
2013	0	0	
2014	83.5	83.5	Contracts awarded January 2014
2015	150		
<b>THIS SHEET LAST UPDATED ON: DEC 14</b>			

<b>Performance Indicator Reference Sheet</b>			
<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Survey for design completed</b>			
<b>Name of Indicator: Length of survey (windshield and instrument) conducted</b>			
<b>Geographic Focus: Bong, Lofa ,Nimba and Grand Bassa</b>			
<b>Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___</b>			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Kilometer</b>			
<b>Method of Calculation: Measure of length of roads</b>			
<b>Disaggregated by: None</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Driving along the roads</b>			
<b>Data Source: Project sites</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: Regular Check</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	<b>Notes</b>
2013	0	0	
2014	150	75.2	Detailed design survey completed – preliminary survey for balance to 450km
2015	300		
<b>THIS SHEET LAST UPDATED ON: DEC 14</b>			

<b>Performance Indicator Reference Sheet</b>			
<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Target roads determined</b>			
<b>Name of Indicator: Prioritized target roads for further design development based upon stakeholders needs and requirements</b>			
<b>Geographic Focus: Bong, Lofa ,Nimba and Grand Bassa</b>			
<b>Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___</b>			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Kilometer</b>			
<b>Method of Calculation: Measure of length of roads</b>			
<b>Disaggregated by: None</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Driving along the roads</b>			
<b>Data Source: Project sites</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: Regular Check</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	
2013	0		
2014	150	450	Prioritized roads selected for total project in Y1
2015	300		Prioritized roads selected for total project in Y1
<b>THIS SHEET LAST UPDATED ON: DEC 14</b>			

<b>Performance Indicator Reference Sheet</b>			
<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Prequalification document submitted</b>			
<b>Name of Indicator: Develop evaluation criteria and conduct full assessment of available engineering sources.</b>			
<b>Geographic Focus: Bong, Lofa, Nimba, Grand Bassa and Monrovia</b>			
<b>Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___</b>			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Number</b>			
<b>Method of Calculation: Training logs/Attendance registers</b>			
<b>Disaggregated by: Sex</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Assessment</b>			
<b>Data Source: Project trainer</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: End of training period</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	<b>Notes</b>
2013	0	0	
2014	5	5	Five A & E firms selected for participation in ES3R project
2015			
<b>THIS SHEET LAST UPDATED ON: DEC 14</b>			

<b>Performance Indicator Reference Sheet</b>			
<b>Name of Development Objective: Ease of Access to Markets Facilitated</b>			
<b>Name of Intermediate Result: Local A&amp;E firms identified</b>			
<b>Name of Indicator: Expression of interest evaluation completed for number of A&amp;E firms</b>			
<b>Geographic Focus: Bong, Lofa, Nimba, Grand Bassa and Monrovia</b>			
<b>Is this an Annual Report indicator? No ___ Yes _Yes___, for Reporting Year(s) ___2013/2015___</b>			
<b>DESCRIPTION</b>			
<b>Precise Definition(s):</b>			
<b>Unit of Measure: Number</b>			
<b>Method of Calculation: Training logs/Attendance registers</b>			
<b>Disaggregated by: Sex</b>			
<b>Justification &amp; Management Utility: Usefulness of Indicators</b>			
<b>PLAN FOR DATA ACQUISITION BY USAID</b>			
<b>Data collection method: Evaluation</b>			
<b>Data Source: Project trainer</b>			
<b>Method of data acquisition by USAID: Reporting</b>			
<b>Frequency and timing of data acquisition by USAID: Annual</b>			
<b>Estimated cost of data acquisition: Included in project cost</b>			
<b>Individual responsible at USAID: David Wounuah</b>			
<b>Individual responsible for providing data to USAID: Howard Shelmerdine</b>			
<b>Location of Data Storage: PIDS</b>			
<b>DATA QUALITY ISSUES</b>			
<b>Date of Initial Data Quality Assessment: N/A</b>			
<b>Known Data Limitations and Significance (if any): N/A</b>			
<b>Actions Taken or Planned to Address Data Limitations: N/A</b>			
<b>Date of Future Data Quality Assessments: N/A</b>			
<b>Procedures for Future Data Quality Assessments: N/A</b>			
<b>PLAN FOR DATA ANALYSIS, REVIEW, &amp; REPORTING</b>			
<b>Data Analysis: Manual</b>			
<b>Presentation of Data: Tabulated</b>			
<b>Review of Data: End of training period</b>			
<b>Reporting of Data: Quarterly and Annual Report</b>			
<b>OTHER NOTES</b>			
<b>Notes on Baselines/Targets: Stipulated</b>			
<b>Other Notes: None</b>			
<b>PERFORMANCE INDICATOR VALUES</b>			
<b>Year</b>	<b>Target</b>	<b>Actual</b>	<b>Notes</b>
2013	0	0	
2014	8	8	Number of firms interviewed and assessed
2015			
<b>THIS SHEET LAST UPDATED ON: DEC 14</b>			