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Pre-Qualification Document

Capacity Development for ES3R

Engineering Services for Rural Roads Rehabilitation
(ES3R) in Liberia

March 31, 2014

Pre-Qualification Document

Capacity Development for ES3R

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EXECUTIVE SUMMARY

The intent of the Objective 3 of the ES3R program and the purpose of this pre-qualification exercise are to pre-qualify and subsequently train five (5) local A&E firms capable of providing oversight for the road rehabilitation activities by 2015. The original Pre-Qualification Document was submitted prior to the required delivery date in February. Based upon the initial findings and discussions and input between CDM Smith and the USAID mission, the project team was requested to develop and provide a revised Pre-Qualification Document that would present a more robust capacity development program that would minimize risk to sustainable operations of A&E firms after project completion. The strengthened program will increased resource allocation as detailed in this report and implement the project reorganization proposed in the exception report in which continuous training will take place using three field based implementation teams. This report has been expanded to include those considerations and a more robust strengthening of the management and institutional capacity of A&E firms.

This pre-qualification process and documentation has been undertaken for four purposes:

1. To systematically evaluate candidate A&E firms and identify the areas of strengths and weaknesses of organizational capacity in order to guide capacity building activities under ES3R.
2. To establish the baseline value for the capacity indicator for five pre-selected firms.
3. To select the five most promising firms based upon the evaluation criteria used in the assessment tool.
4. To define potential capacity and training interventions to address identified capacity gaps in the identified and selected A&E firms (to be subsequently detailed based upon a training needs assessment).

The TRG Capacity Development Specialist arrived in Liberia on January 4, 2014. The purpose of this initial visit was to produce the short-list and review five local firms. That task included on-site interviews and assessments of each firm using an Organizational Capacity Assessment (OCA) tool that provided an overall baseline condition for each firm and later could be used after a year to document progress. The tool was developed by TRG staff in conjunction with the Capacity Development Consultant and has been provided to USAID.

The report data are derived from interviews of executive and key staff stakeholders in each firm.

The average capacity score across all dimensions for all firms is 2.2.

Table ES-1

Firm	Total Score
Longman Engineering*	2.1
Karnley Architects, Planners and Engineers	2.0
Gbesohn* Associates	2.6
Prime Consortium*	1.3
TSC Engineering and Construction*	3.2
Walker-Robinson International*	2.8
Jada, Inc.	2.3
Clinton and Partners	1.84

** Firms proposed to be part of the ES3R Program*

A score beginning with a 1.0 suggests that the firm is in a pre-start mode with few if any resources; scores beginning with a 2.0 suggest that the firm is beginning to evolve as an entity; scores beginning with a 3.0 suggest that the firm is developing nicely, knows what it needs to do to move forward and is on the right track; scores beginning with a 4.0 suggest that the firm is actually expanding and has most of the elements in place for future expansion, and scores beginning with a 5.0 suggest that the firm is currently technically, financially and managerially viable and has sufficient experience and staying power to operate successfully in the future.

All firms reviewed have been established in the post-conflict time with most lead by foreign-educated (mostly US) Liberian diaspora that have returned home. The selected firms have been judged to have the potential to be part of a core group of firms to lead Liberia into the future within their disciplines. Apart from the numerical scores, important cross-cutting attitudinal qualities for those selected included a stated awareness and willingness to evolve and the potential to develop into a core of industry leadership.

This report proposes a number of mechanisms through which the necessary strengthening can be realized, both technical and institutional. It proposes to make that portion of the capacity and institutional development objective related to business development of the A&E firms more robust to minimize risk of losing technical capacity investment once the project is concluded. In addition, enhancements to the technical and mentoring program includes support in the form of training modules covering essential topics, training equipment and travel for participants.

1. INTRODUCTION

1.1 Background

The USAID Engineering Services for Rural Roads Rehabilitation (ES3R) task order is a mechanism within the Farm to Market Road Rehabilitation (F2MRR) activity, which is allied with the objectives of the Feed the Future (FTF) initiative. FTF is a U.S. Government initiative which aims to address the root causes of global hunger by sustainably increasing agricultural productivity to meet the demand for food, facilitating access to strong markets, increasing incomes for the poor so they can meet their food and other needs, and reducing under-nutrition. F2MRR includes 6 task areas in total, not all of which are assigned to the ES3R Task Order, listed below in 1.2. The larger program will provide infrastructure investment in rehabilitation of rural farm-to-market roads to support the 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 Architectural and Engineering (A&E) firms in the design, procurement, and supervision of rural road construction and maintenance contracts; and development of alternative low volume road pavement pilot projects, standards, and design specifications.

1.2 Capacity Development Objectives and Purpose

CDM International's scope of services under the Task Order for USAID/Liberia Engineering Services for Rural Roads Rehabilitation (ES3R) Project consists of three major overarching objectives that support capacity development as outlined in the task requirements of the RFTOP:

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.

Objective 2: Produce engineering designs and construction documents for 450 kilometers of 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 A&E firms capable of providing oversight for the road rehabilitation activities by 2015.

Objective 3 is the subject of this Pre-Qualification report. Key sub-objectives related to this report include:

- Conduct a skills assessment and pre-qualification process of five (5) local A&E firms
- Based on the results of the skills assessment surveys, develop and execute a training program for local A&E firms aimed at enhancing the technical and managerial skills of employees of these firms so they can better perform road engineering work in the future. Training manuals will be developed and published.
- Develop a mentorship program in which all trained local A&E firms will be strengthened through periodic office visits, training in project management and organizational strengthening of the firms.

It is important to note that in order to meet Objective 3; Objectives 1 and 2 provide an important vehicle for conducting on-going and continuous training and mentoring with on-site supervision and field-team implementation. This is a major approach in the capacity-development design that CDM International has proposed. Once A&E firms are identified and pre-qualified, the task is to provide design, procurement support and construction supervision services to the road rehabilitation program while at the same time building the management capacity of local A&E firms.

The TRG Capacity Development Specialist is supporting the work of the CDM International team with a focus on management capacity building and building skills of CDM International in mentoring. The intent of the ES3R program and the purpose of this pre-qualification exercise under Objective 3 are to pre-qualify and subsequently train five (5) local A&E firms capable of providing oversight for the road rehabilitation activities by 2015. The firms are to be identified by the ES3R on-site project team. Ultimately, by the end of the project the capacity development specialist and the team will have achieved the following:

- Assessed each of the firm's capacity;
- Defined capacity gaps;
- Developed training programs;
- Provided and/or identified suitable training providers,
- Developed mentoring and skill transfer processes and abilities of project staff.

It is therefore, a staged plan that seeks to be relevant to what is going on at that time within the ES3R project itself.

1.3 Sustainability and Long-Term Outcomes

The sustainability of the A&E firms depends on their success as businesses within the market place in Liberia. It is also recognized that the success of the capacity development program depends in part on the ability of the A&E firms and Liberian national engineers to develop technical knowledge and skills as outlined in objectives 1 and 2. However, the investment in skills transfer and development will be sustained only if the A&E firms continue as successful businesses after the project is over.

In essence, the risk to the A&E firms' survival will be minimized if the business and institutional development side of the project can be made more robust than currently funded. As well, the risk that technical training and mentoring may not be applied if the A&E firms do not prosper will be lessened and the skills transferred to the firms will have a greater chance of being used long after project completion if the A&E firms continue to get contracts and the businesses prosper.

As a result of this analysis, ES3R proposes to provide project enhancements in capacity development to make Objective 3 more robust by providing additional training and mentoring to the business development side of the project in balanced proportions to the technical program. In addition, enhancements in the technical mentoring program are also proposed. These items will be discussed in detail in Section 5 of this report in order to meet the additional objectives listed below.

1.3.1 Proposed Additional Objectives

Capacity development seen in this context is not only to improve the skills of engineers and their counterparts in field teams but is also an important vehicle through which the project can transform the institutional capacity of the private firms—their business acumen and market knowledge, their attitudes, their commitment and the manner in which they help to build a sustainable professional A&E industry in Liberia through effective human resources development.

In addition to the project capacity development objectives identified above, enhanced indicators for Objective 3 should include these long-term success measures:

- Increased Capacity for Business Planning and Management: A&E firms will have a growing confidence in their own capacity to plan and manage the business, to

pursue and enter into contracts, implement and manage road construction and maintenance projects beyond the ES3R project.

- Improved Leadership and Management: Firms will be properly led and managed and understand the difference between management and leadership. Strong candidates as potential leaders including women in the A&E sphere will be supported and developed and identified and supported in this process through a variety of training and mentoring interventions.
- Strengthened Human Resources Development: Firms will have the knowledge, skills and experiences needed to manage a professional services firm.
- Improved Marketing: As resources become available and deployed by development financing, the trainee firms will be able to adequately propose and meet the job requirements that future road projects demand.

Within these key objectives, the following are considered important tasks of human resources management:

- Identify and recruit competent staff from the A&E firms for the roads rehabilitation projects
- Attract, retain, and rotate the right people to the right locations
- Ensure that learning and development supports operational priorities
- Develop leaders and managers including women for the future
- Ensure equality of access to appropriate learning and development opportunities for all trainees

2. PRELIMINARY ACTIVITIES

2.1 Initial Identification of Candidates

An Expression of Interest (EOI) was published on line as well as in the national press in November, 2013 describing the project and requesting a response from any local firms that showed possible interest in being considered for participation in the project. Nine (9) separate responses were received from local Liberian firms, from which five (5) were to be selected. The quality of the responses varied widely from a simple written acknowledgement that the firm was interested in being considered for the project and willing to participate in the training to firms submitting more elaborate qualifications and experience statements sharing multiple projects they had worked on as well as key staff CVs that they believe would be of value for this particular road rehabilitation project. The firms also varied in the scope of services they provided ranging from general consulting firms to engineering design and construction, architectural, planning and environmental services firms.

3. METHODOLOGY FOR PREQUALIFICATION ASSESSMENT

3.1 Introduction

The Capacity Development Specialist arrived in Liberia on January 4, 2014. The purpose of this initial visit was to produce the short-list and review of five local firms. That task included on-site interviews and assessments of each firm using an Organizational Capacity Assessment (OCA) tool that provided an overall baseline condition for each firm and later could be used after a year to document progress. The OCA tool was included as an attachment to the Inception Report submitted to USAID in December 2013 and will not be resubmitting here in the interest of brevity and duplication. The leadership of each firm was interviewed in a group or individual format and all interviewed firms were asked the same questions that followed the format of the assessment instrument.

3.2 The Organizational Capacity Assessment Tool

The tool was developed by TRG staff in conjunction with the Capacity Development Consultant [Note: The interview questions and answers and detailed scoring for each firm is retained by the Capacity Advisor in hand-written notes and archived for future reference in the next step. This will serve to maintain client confidentiality promised in the interviews]. The OCA was pre-tested

with a Liberian engineering company, slightly adjusted to local conditions and then administered face to face with each of the firms that ultimately showed interest in the project. The OCA tool is broken down into six distinct components and each component lists a series of indicators provided in a question and answer format:

- Background, History, Strategic Planning and Vision;
- Coordination and Communication with Stakeholders;
- Organizational Structure, Staffing and Skills;
- Organizational Leadership and Management;
- Technical and Project Performance;
- Financial Management.

Each component is scored on a sliding scale from 1 to 5; one (1) suggesting that the firm is in a predevelopment or nascent stage of development; two (2) suggesting that the firm is relatively new and just beginning to develop; three (3) suggesting that the firm is developing a track record and building a long term staff; four (4) suggests that the firm is expanding both by projects and by staff, while five (5) suggesting that the firm is fully functioning and is technically, managerially and financially viable and has the potential to prosper. Each category or assessment dimension is scored separately following the indicators in the one to five scoring scale. A final average provides a composite score.

3.3 Interviews

Face to face interviews were conducted, using the OCA tool, with the principals of seven local Liberian firms in Monrovia. Initially, respondents were told exactly what the purpose of the interview was to be and why it was being conducted. Interviews took on average about one and a half hours to conduct. The principals of one of the remaining eight firms were visiting the United States and were subsequently interviewed by the Consultant by telephone on his return to the U.S. The remaining ninth firm of the original nine submittals, chose not to participate in the program. Thus, eight total interviews were conducted by the capacity development advisor.

Within each interview, immediately following completion of the formal questionnaires, respondents were invited to explore issues, which had arisen during the course of the interviews in an informal setting and to provide a more personalized insight into the topics covered. These conversations provided important data about attitudes and motivation to participate and improve. Thus the interview had both quantitative and qualitative components. A list of firms

interviewed together with contact names and addresses, and key personnel are included in Annex A of this document.

4. RESULTS

4.1 Scores

Based on the face to face interviews and ongoing discussions with each firm the following scores (on the sliding scale from 1 to 5) were applied to each of the 6 categories for each firm. A score beginning with a 1.0 suggests that the firm is in a pre-start mode with few if any resources; scores beginning with a 2.0 suggest that the firm is beginning to evolve as an entity; scores beginning with a 3.0 suggest that the firm is developing nicely, knows what it needs to do to move forward and is on the right track; scores beginning with a 4.0 suggest that the firm is actually expanding and has most of the elements in place for future expansion, and scores beginning with a 5.0 suggest that the firm is currently technically, financially and managerially viable and has sufficient experience and staying power to operate successfully in the future.

The following scores were recorded. Total scores are shown to the right of the table.

Table 4.1 Score by Category of Firms

Firm	Background	Coordination	Organization	Leadership	Technical	Finance	Total Score
Longman Engineering	3.2	2.5	2.5	2.25	2.0	1.75	2.1
Karnley Architects, Planners and Engineers	1.7	2.0	1.75	2.0	2.75	1.75	2.0
Gbesohn Associates	2.0	2.5	3.2	2.5	3.0	2.5	2.6
Prime Consortium	1.5	1.0	1.0	1.5	1.5	1.25	1.3
TSC Engineering and Construction	2.4	3.2	3.6	3.2	3.5	3.2	3.2
Walker-Robinson International	2.8	3.2	3.5	3.2	2.5	1.75	2.8
Jada, Inc.	2.25	1.75	2.5	2.5	2.75	2.0	2.3
Clinton and Partners	1.5	2.0	1.75	1.87	2.0	1.87	1.84

Each of the firms interviewed was a registered A&E/Construction firm incorporated under the Business Law of the Republic of Liberia. These were Liberian-run companies with established offices in Liberia. Virtually all suggested that they were capable of providing engineering services in civil/structural engineering, highway engineering and construction oversight and supervision. Several firms also indicated they had strong credentials in architecture and urban planning and design.

Results of the analysis show while these eight firms all suggest that they have the capability, based on education and years of experience of senior managers, of providing professional service to clients in several disciplines within the broad range of A&E services, there are large skill gaps in most areas of professional development, including technical, managerial and financial services. Most of the firms interviewed ended up scoring somewhere in the pre-start-up or beginning stages of development, stages 1.0 and/or 2.0. Only one firm recorded a total score greater than 3.0. For the most part, these firms do not have the capability at this time to efficiently and effectively bid on, manage and complete single or multiple road infrastructure projects without significant difficulty. These are not firms that have matured to the point that they are capable of managing projects from start to finish and have not yet put in place the systems, policies and procedures to effectively “get the job done.” There is a shortage of necessary and specific skills within virtually all of the firms from a technical, managerial and financial standpoint to adequately meet the job requirements that existing and future road projects demand.

The eight firms tend to be small with roughly 4-6 full-time staff, on average. For the most part they are led by one person guiding and managing the business. Several of the firm’s leaders were educated elsewhere (most frequently in the U.S.) and are part of the diaspora that have returned to Liberia to help build a professional class of engineers. Those firms reviewed, led by representatives from the diaspora, exhibited greater leadership and management capacity, have been trained to think strategically, are beginning to provide a vision for their firm’s future and are more likely to delegate and provide internal team leadership. Most of the firms are recent start-ups; virtually all leaders having started their businesses in the post-civil war timeframe, sometime in the 2005 to 2011 period.

Most leaders complained of the severe lack of well-trained young, talented engineers in the country and the ability to find and retain key staff to work on projects. Entry level engineers coming out of the local universities are not well trained and are clearly not well prepared to plan, design or manage complex engineering projects. A the director of one of the firms suggested: “Most of these young engineers coming out of the local universities can spout all the right technical jargon, but have no idea what it means in the real world to put into practice anything that they may have learned in a textbook. They have no idea whatsoever how to lay out a design or take any sort of soil or geotechnical samples.” In addition, many mid-level or senior level

engineers who used to do the lion's share of much of the A&E work have either retired or have left the country as part of the country's brain drain following the civil war. There is a major shortage of A&E talent at all levels in Liberia.

The analysis suggests that a huge gap also exists in the ability of younger engineers to effectively communicate- either in report writing or public speaking. This came up time and time again in the interview process. Most leaders spoke of trying to do some internal coaching and mentoring to their teams on how to put a written report together or how to give oral presentations to potential clients. Leaders were equally frustrated with trying to provide staff with the most basic skills of being a "professional engineer". The main barriers to providing the right kind of training to make these young engineers capable of going into the field and managing a rural road job were cost and access to decent trainers. Firms did not have the resources to do much in the way of any internal training.

Additionally, while a key focus of these firms is client service delivery, most of the firm's leaders conclude that the skills to deliver client needs – to pursue, identify and close a contract, manage a proposal, plan the overall engagement prior to commencing the work, delivering and managing the project to meet the client's needs and expectations and delivering and following-up after completion of the project are sorely missing – essentially all of the ingredients necessary for effective engineering project management

In addition to the above, the most consistent complaint or frustration for the leaders of these firms was the "almost complete lack of capital and resources" (i.e., mostly equipment) to expand their businesses, create new sources of economic growth and generate additional employment. They do not have access to capital to take their businesses to a new level to expand and to provide their teams with the necessary equipment to work in the field. In addition, internal management and financial controls in the budgeting and accounting function need to be vastly improved with practical training in small business-related financial instruments.

4.2 Selected Firms

Based on the above findings the following five firms have been selected as potential candidates for participation in the ES3R project by the capacity development advisor:

- Longman Engineering Services;
- Gbesohn Associates;
- Prime Consortium;
- TSC Engineers;
- Walker Robinson Engineering Services.

While each of the firms selected varied somewhat in their technical skills, each of the firms that was selected distinguished themselves from the others - they all exhibited the beginning development of a group of core competencies – a grouping of skills that encompass the knowledge, abilities, attitudes, motives and temperament that distinguish future strong performers in the engineering field. Each exhibited a willingness and potential to move forward and to be fully engaged and excited about the future of the engineering opportunities in Liberia.

They understand both the need to provide practical technical/engineering skills outside the classroom and in the field to young motivated talent, but also see the need to build a professional class of engineering firms that are sustainable over time. Essentially, while they may not have all the requisite skills sets at the moment, they demonstrate understanding of the following key attitudes and requirements that will allow them to learn and grow. They understand the need for:

- Business and financial processes
- Knowledge of operations, systems, policies and procedures
- Clear articulation of thoughts and ideas
- Sense of urgency around meeting their client needs
- Establishing and communicating job requirements, performance goals and expectations to staff.
- Mentoring of younger staff and "modeling the way" for them.

In summary, the selected firms have the potential to be the leaders of a core group of firms to lead Liberia into the future in the judgment of the reviewer.

5. TRAINING REQUIRED BASED UPON THE PRE-QUALIFICATION INVESTIGATION: TECHNICAL MENTORING AND INSTITUTIONAL CAPACITY DEVELOPMENT

5.1 Overview: Capacity Development Program

While the diaspora may have a short term role in bridging the gap in technical and managerial skills within the A&E world, companies in the long term are rightly focusing on the development of local talent. A shortage of this local talent in Liberia is putting a strain on investment in the country as educational institutions fail to produce the quantity of high level engineering skills needed to meet the Liberia's growing business needs.

The data suggest that today, virtually none of the private firms interviewed could effectively and efficiently design, procure, or supervise rural road projects' construction and maintenance contracts effectively due to this shortage of necessary and specific skills. Therefore, ES3R can support these five firms and begin to fulfill the necessary skill gaps in two ways:

1. By providing practical real-world, onsite field training, mentoring and coaching of selected staff from each firm by the dedicated CDM Smith Resident Engineers (Field Team Leaders) and other professionals working on the job sites (see mentoring program description below) and,
2. By conducting training and executive coaching in business development for the leadership of the A&E firms as broader capacity development in Monrovia.

A variety of tailored tools and training programs can help meet the needs of these private sector firms, (as well as staff from the Ministry of Public Works to the extent that they use this opportunity to join training programs). As a result of this capacity building program, local Liberian A&E firms will have the capability in the future to bid on, manage, and complete complex road projects. The capacity of government officials to budget, plan, and oversee infrastructure projects will be also be enhanced.

The capacity development program therefore has two major pillars: The development of firm-level institutional capacity to manage the business and the technical training and field-based mentoring program.

5.2 The Institutional Development and Management Program for A&E Firms

The project's long-term impact for Liberia depends upon the sustainability and survival of the A&E firms as businesses within the market place in Liberia. The investment in skill development will be protected and supported if the A&E firms continue as businesses after the project is over. The institutional development and management program is designed to provide the leadership and top management of the A&E firms with a series of skills and concepts to help them survive and improve as business entities and to apply effective leadership and management as they grow and prosper.

Overall objectives for institutional development and management include:

- Improved Leadership and Management: Firms will be properly led and managed and understand the difference between management and leadership and how to apply the corresponding skills. In addition internal management and financial controls in the budgeting and accounting function need to be vastly improved with practical training in small business-related financial instruments.
- Improved capacity to plan and manage the business and develop strategic plans for business development.
- Management of human resources and staff development including staff motivation, recruiting and attracting talented staff and developing processes for employee ownership.
- Marketing of Architect and Engineering Services within the local and international markets.
- Provide continuous mentoring of A&E firm leadership in the integrated application of the skills and knowledge transferred in workshops through virtual executive coaching processes.

5.2.1 Leadership and Management Training and Communication Skills Training

This four-day workshop will be provided early in the first year of the project in order to set up a process and expectation of continuous learning about management for the leadership of the program. Follow-up to this course and subsequent training will be conducted by the TRG Capacity advisor using a virtual, Skype communication coaching process. The workshop will be titled: Achieving Results in Business Using Effective Management and Supervisory Skills. The objectives and content in summary form are as follows:

1. Communicate collaboratively and effectively with staff to ensure understanding and commitment to work. Initiate and conduct effective two-way communication with staff.
2. Clearly describe the difference between leadership and management and its application to business results.
3. Describe the most effective way to delegate duties and responsibilities to others using a framework that considers the ability and willingness of subordinates to achieve a specific task result.
4. Demonstrate skills to effectively describe and assign tasks to staff in a way that invites participation, understanding and commitment.
5. Demonstrate skills in providing effective performance feedback that is corrective and positive, as appropriate.
6. Describe different scenarios for taking decisions in the workplace that involve different degrees of staff input and consultation.
7. Facilitate productive staff meetings
8. Describe four options for dealing with conflict in the workplace.

5.2.2 Strategic Planning as a Means to Business Development for Owners and Managers of A&E Firms

This is essentially learning the skills and concepts of strategic planning while developing a strategic plan. This will include conducting an environmental scan of potential stakeholders and possible work and marketing opportunities prior to a workshop event of four days. Timing of this event will be in September of 2014 after the firms have established the work plan within the project and are able to look forward to the second year of the project and beyond when the project support has ended.

Objectives:

1. Identify the steps of the Strategic Planning Process.
2. Use methods associated with various steps (vision, developing objectives, sequencing a plan, developing and resourcing plan) to develop a strategic plan.
3. Prepare a draft of a strategic plan for each Firm.
4. Define a process for disseminating, discussing and adopting the strategic plan for each firm

5.2.3 Management of Human Resources and Staff Development

As indicated by the organization capacity assessment, the firms reviewed tend to be small with roughly 4-6 full-time staff, on average. For the most part they are led by one person guiding and managing the business. Most leaders complained of the severe lack of well-trained young, talented engineers in the country and the ability to find and retain key staff to work on projects.

The need is threefold: one area is to develop strategies to recruit and hire promising staff; the second need is to develop incentive structures to retain staff thorough employee benefits, opportunities for ownership through structuring shareholding partnership arrangements and succession and advancement opportunities; the third is to develop a program for skill and business development improvement for all staff.

This is a four-day workshop to be provided in the October-November time period 2014.

Objectives for this workshop include:

1. Develop strategies to recruit and hire promising staff including developing linkages to local training institutions.
2. Develop incentive structures to retain staff thorough employee benefits, opportunities for ownership through structuring shareholding partnership arrangements and succession and advancement opportunities.
3. Develop a structure for individual work objectives, performance review, and performance improvement plans for all staff.

5.2.4 Marketing of Architect and Engineering Services within the Local and International Markets

Expanding marketing efforts of A&E services to domestic and regional audiences will be a great opportunity to grow each company and reach potential clients that may not otherwise discover their services. Reaching a regional audience, though, entails understanding regional cultures, laws and online behaviors of each separate country. This workshop will begin to help each firm design and develop a domestic and regional marketing plan to optimize their talent and resources.

This is a four-day workshop to be provided in the second year of the program. This workshop will be linked directly to and act as a follow-on to the previous workshop on strategic planning.

Objectives for this workshop include:

1. Identify and determine potential market(s) within which each firm intends to effectively operate.
1. Begin to focus on knowledge of local culture and business customs in the markets where the firms want to operate.
2. Craft a market entry strategy that is mindful of the target market, resources and services they wish to offer.

5.2.5 Mentoring and Executive Coaching of Owners/Managers of Five Private Sector A&E Firms

This activity is designed to provide virtual and on-site executive coaching and consulting for the leaders and managers of the selected A&E firms. It will be provided by the TRG Capacity Development Advisor throughout the life of the project on each visit, and remotely using telephone (Skype), and will be supported and enhanced by regular, individual on-site contact with the CDM Smith Chief of Party and the Cardno Technical Lead. Each of the four workshop activities will require application planning and a follow-up work plan to apply skills and knowledge (Management and Leadership, Strategic Planning, Human Resource Management, and Marketing). The objectives of this activity are as follows:

1. Provide executive coaching on management issues as they arise.
2. Conduct follow-up consultation in each of the four major skill areas to ensure that the application plan developed in the workshop is applied and the challenges encountered are supported by coaching support.

Table 5.2 Institutional and Management Capacity Building Components

[Refer to Annex Attached Spreadsheet for Summary of any additional costs to TRG Contract]

Training and Mentoring	Attendees	Training Providers
1. Leadership and Management Training and Communication Skills Training	Selected leaders of each of the 5 firms	TRG
2. Strategic Planning as a Means to Business Development for Owners and Managers of A&E Firms	Selected leaders of each of the 5 firms	TRG
3. Management of human resources and staff development including staff motivation	Selected leaders of each of the 5 firms	TRG

4. Marketing of Architect and Engineering Services	Selected leaders of each of the 5 firms	TRG
5. Mentoring and executive Coaching of Owners of A&E Firms	Selected leaders of each of the 5 firms	
6. [Referred to in in section 5.3 as] Skill transfer and Consulting and Mentoring Skills	Field Team Leaders and counterparts	TRG Bruce Purdy

5.3 The Technical Training and Mentoring Program

The technical training will take the form of a combination of applied on-the-job mentoring and periodic classroom events. The mentoring program (continuous on-the job coaching) will be organized based upon the applied work program of three field-based teams (one in each project county area).

Each team will be managed by an ES3R project Field Team Leader (FTL) who will oversee all field based activities, managing a resident engineer and indirectly managing a site Inspector and vehicle driver/mechanic. In addition, the selected A & E firms will provide a trainee engineer to be seconded to teams for field mentorship and training purposes. FTLs have overall authority and responsibility for all field based activities and outputs.

5.3.1 Setting up the Detailed Diagnosis of Training Needs and the Mentoring Program

In order to craft a well-designed mentoring and training program, a process must be developed to assess current skill levels of the engineers assigned to the teams. As indicated in the Organizational Capacity Assessment process recently conducted, graduate engineers may have little real-world experience but may have a good theoretical understanding of civil engineering processes.

Once the entry capacity of field project staff (resident engineers and site Inspectors) are determined, the task will be to enter into a mentoring/coaching and training program so that trainees graduate from Year 1 to Year 2. Those staff provided by A&E firms as trainees will also require the same assessment process.

The task then will be to conduct team leadership and ongoing training on the job by FTLs. The model is a skill transfer process that can be termed coaching and mentoring. In order to assist ES3R staff become skilled coaches, an introductory process in how to train will be required. Training and coaching skills must be more than “telling”; it requires a process of gradual assumption of responsibility and application under the guidance of a more experienced person.

Training Resources Group will provide an introductory workshop for ES3R field staff and their technical supervisors in the process of skill transfer and needs assessment.

The methodology for skill transfer and consulting and mentoring skills for project field team leaders with counterparts will consist of the following objectives:

- Develop a skill profile and competency model for assessing capacity and needs for trainees/engineers and conduct interviews to determine skill levels.
- Enter into agreements with those who received the skill transfer (clients in a consulting relationship).
- Increase knowledge about the roles and characteristics of effective consultants/coaches;
- Effectively work with clients through the phases of the consulting process.
- Develop skills to use appropriate interpersonal skills to analyze a situation and support a client.
- Apply various approaches to consulting (expert/directive, collaborative and consultative) and understand the potential opportunities and problems associated with each;
- Select appropriate consultant roles for different situations encountered in work with clients
- Set goals and plan for the desired outcome of consultation/coaching.
- Establish a working relationship with clients including clear roles and responsibilities.

5.3.2 Technical Training Strategy

The training methodology proposed uses a process orientated approach, integrating field based mentoring in preparation for formal class room based training which ‘followed up’ and ‘back stopped’ by further field based support.

The capacity development sequence takes place in three Stages.

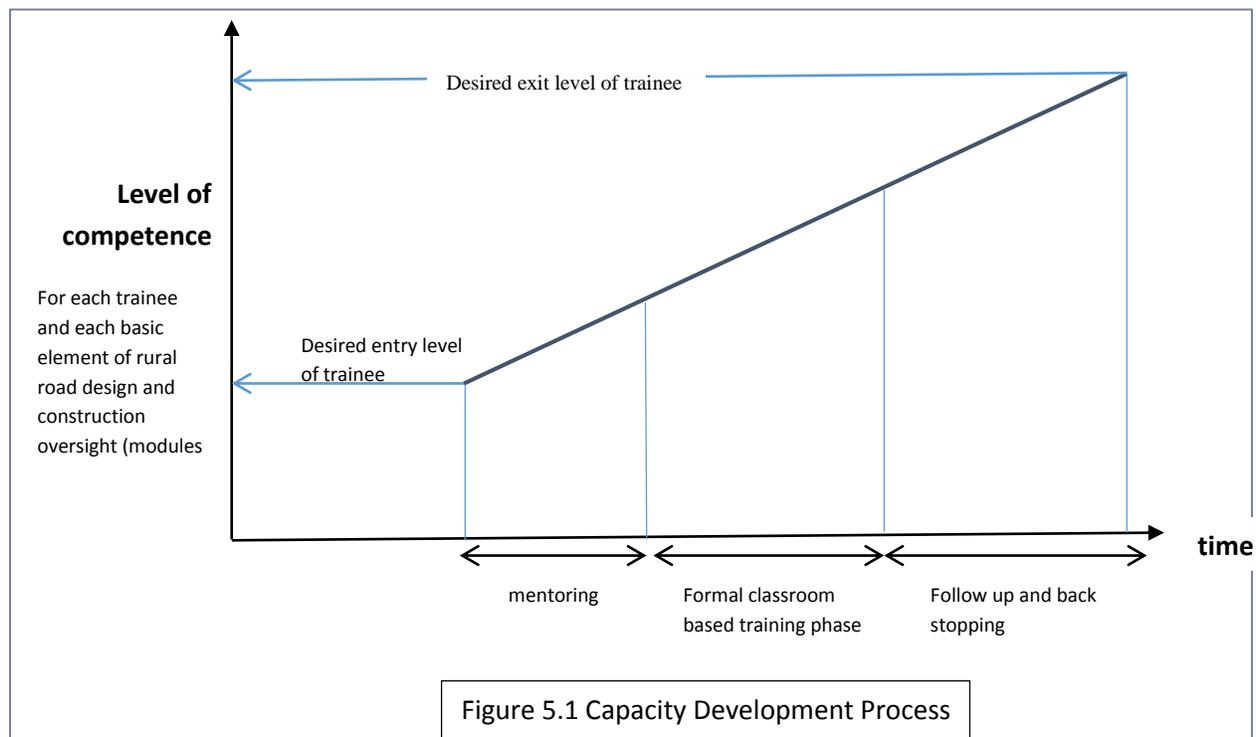
1. Field exposure to Construction oversight and detailed design.
2. Formal classroom training – modules 1-9,
3. Field based follow up and back stopping in construction oversight and detailed design.

The training program follows the sequence of a conventional rural road project cycle: planning, designing, implementing. Mentoring takes place on ‘in flight road contracts’ and ‘the project related detailed design activities’.

Classroom based training is timed at strategic points in the ES3R project cycle. Follow up (deepening level of understanding) and backstopping (deepen level of competence) follows classroom training. The process maximises ‘comprehension, retention and application’ of new skills. The process is based on the ‘Kolb cycle of Adult Learning’¹

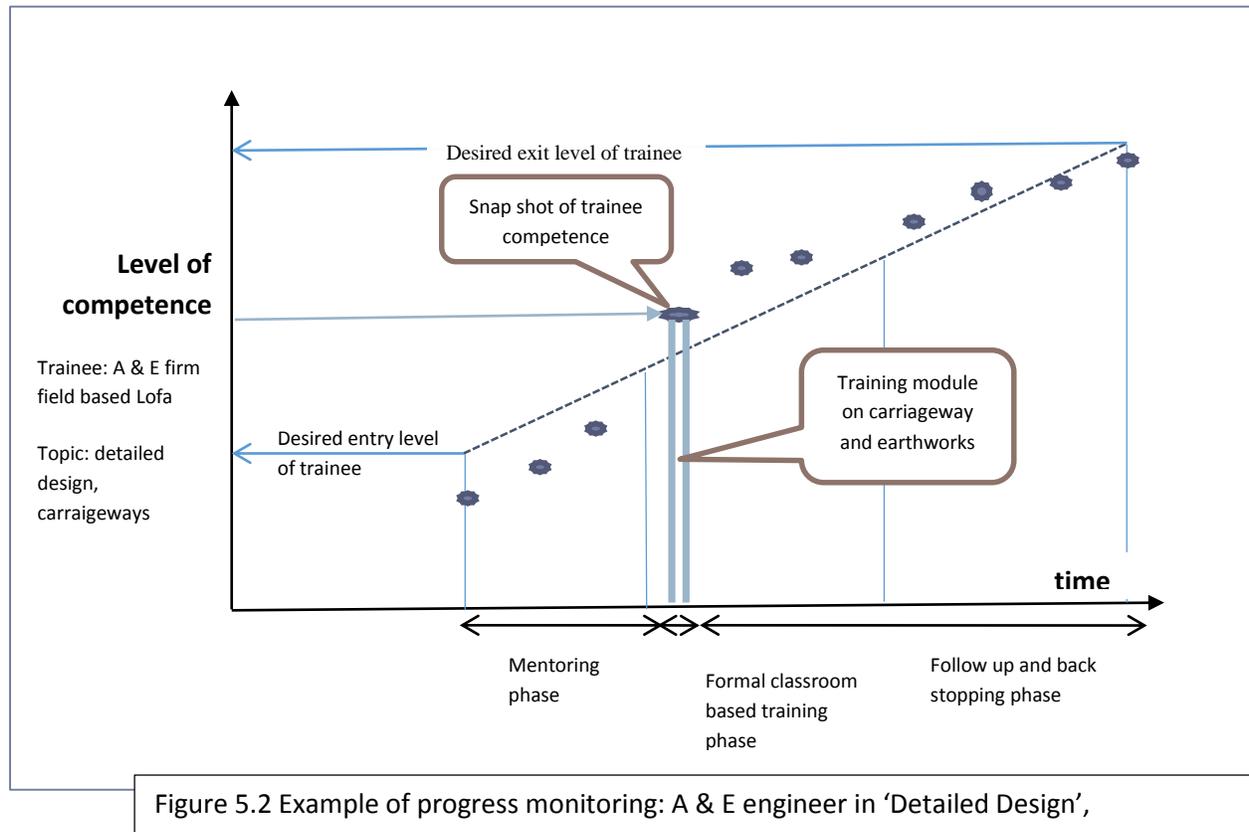
Each training participant is individually assessed and monitored through a continuous assessment process. The assessment is underpinned by a Training Agreement between the project and the individual. The training program for construction oversight concludes with an 8 month ‘trial contract’ for construction oversight for each of the A & E firms. This option is only available for A & E firms who have demonstrated through continuous assessment that they have reached the ‘exit level’. The size of the Trial Contract for Oversight is tuned to the measured capacity of the A & E firm using the continuous assessment tool.

A graphical illustration of capacity development is presented in Figure 5.1 hereafter:



¹ Kolb D. A. Experimental Learning (1984)

A graphical illustration of individual progress is presented in the following Figure 5.2:



5.3.3 Description of Training Modules (Oct. 2014 – May 2015)

Module 1: Introduction to Farm to Market Roads

This module provides the framework of the training program and a broad overview of the rural transportation network in Liberia. It introduces MPW policy, and the current status of the ministry’s standard documents related to roads that USAID has targeted for F2MRR.

The module targets A & E firm trainees from the field and from Head Office. It also reaches out to MPW technical officers both at the central and county level. Linking public and private sectors is judged to be a major key contribution to capacity development of the rural transport institution.

By the end of the module the participants should comprehend the relevance and importance of farm to market roads, their function and relevance in the transport network and role responsibilities of all road network stakeholders including the emergent role of the private sector.

Module 2: Rural Road Inventories, Project Prioritization and role of GIS in Rural Road Management

The module provides the relevance and basic procedure for road inventories, condition surveys and leads on to a multi criteria based project prioritization process, a model which is particularly suited to projects where conventional economic based investment decision tools are inappropriate. It also includes a session on the role of GIS in rural infrastructure project assessment and management.

The module targets MPW officers engaged in Feeder Roads planning and A & E firms who may be engaged by MPW for such works.

By the end of the module participants will have an understanding of each tool and its role in rural road management.

Module 3: Carriageway Pavements and Earthworks for Rural Roads

The module aims to provide a working knowledge of the most common defects in road carriageway surfaces, an understanding of the mechanisms causing deformation and degradation and cost effective remedies. It builds upon elementary comprehension of soil mechanics gained during participants academic courses.

The module targets A & E firm field based technicians, Project Resident Engineers and reaches out to MPW RE's.

At the end of the module participants should be able to identify carriageway defects and prescribe and cost appropriate remedies.

Module 4: Introduction to Laboratory Based Materials Testing

This module aims to provide a working knowledge of all key tests associated with both performance and method based specifications including all tests required by the MPW Feeder Road specifications.

While all degree qualified engineers have an elementary understanding of the various tests associated with engineering materials used for rural road construction very few have had the opportunity to witness and participate in the testing process. This module aims to correct this short fall and provide participants with an elementary understanding of the relationship between careful selection of suitable materials and durable carriageway pavement structures.

The module targets all field based national engineers and intends to use the MPW soils laboratory, Monrovia. Engineers will be stationed at the laboratory for 5 working days under the supervision of a practicing materials technician & the Laboratory Manager. They will be introduced to the procedures for various and typical tests such as MDD, OMC, CBR, Compaction and PI.

Module 5: Field Based Materials Testing and Materials Selection

In the current situation neither contractors nor construction overseers have access to materials testing equipment. In the interest of improved rural road management this shortfall must be rectified.

All field based project participants will be introduced to simple site based tests that enable identification of critical engineering performance characteristics of soils both in situ at borrow pits and as constructed.

It is proposed to engage a practicing materials technician to visit each of the Project counties to explain how and why these simple field tests are used. An elementary Gravel Road testing set² is included in the budget of this module. The test kit will be donated to all participating A & E firms.

Module 6: Storm Drainage for Rural Roads

This module builds on academic knowledge of participants in hydraulics. It focuses this knowledge toward the selection and design of lateral and longitudinal road drainage structures. As with soil mechanics and highway engineering most Liberian graduates lack the practical application of basic hydraulics to the design of engineered hydraulic structures. This module aims to correct this.

The module targets all field based project participants and reaches out to MPW county technical staff.

At the end of the module participants should be able to identify critical characteristics of storm events and select appropriate remedial interventions.

² www.CSIR.co.za

Module 7: Road Construction Contract Management

This module provides a broad overview of construction oversight, the roles and responsibilities of primary stakeholders; Oversight Contractor, Road Contractor, Client and MPW. It focuses on key contract documents, their purpose and their interpretation. It further develops critical tools used for compliance and measurement.

It targets all senior Project staff, A & E firm trainees, both field and Head office based as well as MPW RE's. The module intends to reinforce experiences of trainees gained through the pre formal training mentoring stage.

At the end of the module participants should have a broadened understanding of the contractual arrangements pertaining to Construction Oversight and the tools used to ensure compliance and reporting.

Module 8: Environmental and Stakeholder Management

This module introduces Environmental Impact Assessment, mitigation and impact management. It explains the principles and purpose of stakeholder involvement both during assessment and management of impact and mitigation.

The module targets A & E firm trainees, senior project staff and MPW RE's. The module is integrated with visits from the EIA project specialist and EMMP experiences during ongoing road improvement contracts.

At the end of the module participants should have a broad understanding of the basic principles of 'green roads'.

Module 9: Responding to an Expression of Interest for Construction Oversight

This module is a prelude to an A & E firm trial contract. It attempts to mimic a response to a 'Call for Expression of Interest' and subsequent 'Call for Proposals' from Clients for Road Construction oversight be it from USAID or similar donors/institutions. It focuses on presentation of A & E firm profile, assessment of costs related to A & E activities in Construction Oversight such as transport, salaries, accommodation, head offices overheads etc.

The module targets specifically the A & E firm employees both field and head office. The inputs of the module draw heavily on both field training and mentoring and A & E company management training and brings together both technical and administrative training components.

It is expected that the outputs of the module in terms of filed and HO budgets will be used as the basis for the Trial Contract

Module 10: Trial Contract for Construction Oversight

It is strongly recommended that A & E firms undertake a Trial Road Oversight Contract. This trial will consolidate all aspects of road oversight experiences gained through mentoring and classroom based training.

Trial contracts shall be given to A & E firms only once trainees have reached a prescribed level of aptitude and competence. Figure 5.2 which is included earlier within this section, illustrates the principle used to assess competence. The trial contract can be tailored to suit the assessed capacity of the A & E firm.

The FTLs will continue to provide support to A & E firm trainees during their remaining tenure with the project. There after the project Resident Engineers in their new role as FTL will take over.

5.3.4 Timing of Training Program

To facilitate and reinforce the capacity development process the Project Structure transitions through four phases. These transitions permits upward progress of trainees as trainee competence improves.

Phase 1: April – October 2014. Figure 5.3

Structure is as indicated in Inception Report, January 2014.

Key features:

- FTLs are TCNs and responsible for:
 - Components 1 (Construction Oversight 84km),
 - Component 2 (Detailed Design)
 - Component 3 (Mentoring)
- REs for:
 - Construction Oversight
 - Design Support
- SI for:
 - Site supervision
- SI A & E
 - Exposed to site supervision

Phase 2: October – December 2014. Figure 5.3

- FTLs are TCNs responsible for:
 - Component 1
 - Component 2
 - Designing and delivering Field Based Training Modules
- REs for:
 - Construction Oversight
 - Design support
- A & E trainees:
 - Site supervision
 - Exposed to design support
- SIs for:
 - Site supervision

Phase 3: January – April 2015. Figure 5.4

- FTLs are TCNs responsible for:
 - Component 1
 - Component 2
 - Delivering Field Based Training and back stop to A & E firm trial contract
- REs for:
 - Construction Oversight (84km), design and support A & E firm trial contract (contract Management)
- SIs for site supervision (84km) and support to A & E firm trial contract (construction Supervision)

Phase 4: May – October 2015. Figure 5.5

- REs take on role as FTL on;
 - Detailed design support to A & E firm REs
 - Support for A & E firm trial contract
- SIs take on role as REs for:
 - construction oversight (84km)
 - support to A & E firm Site Supervision on trial contracts
- A & E RE for:
 - Construction contract management for trial contract
 - Detailed Design
- A & E SI for
 - Site Supervision of Trial contract

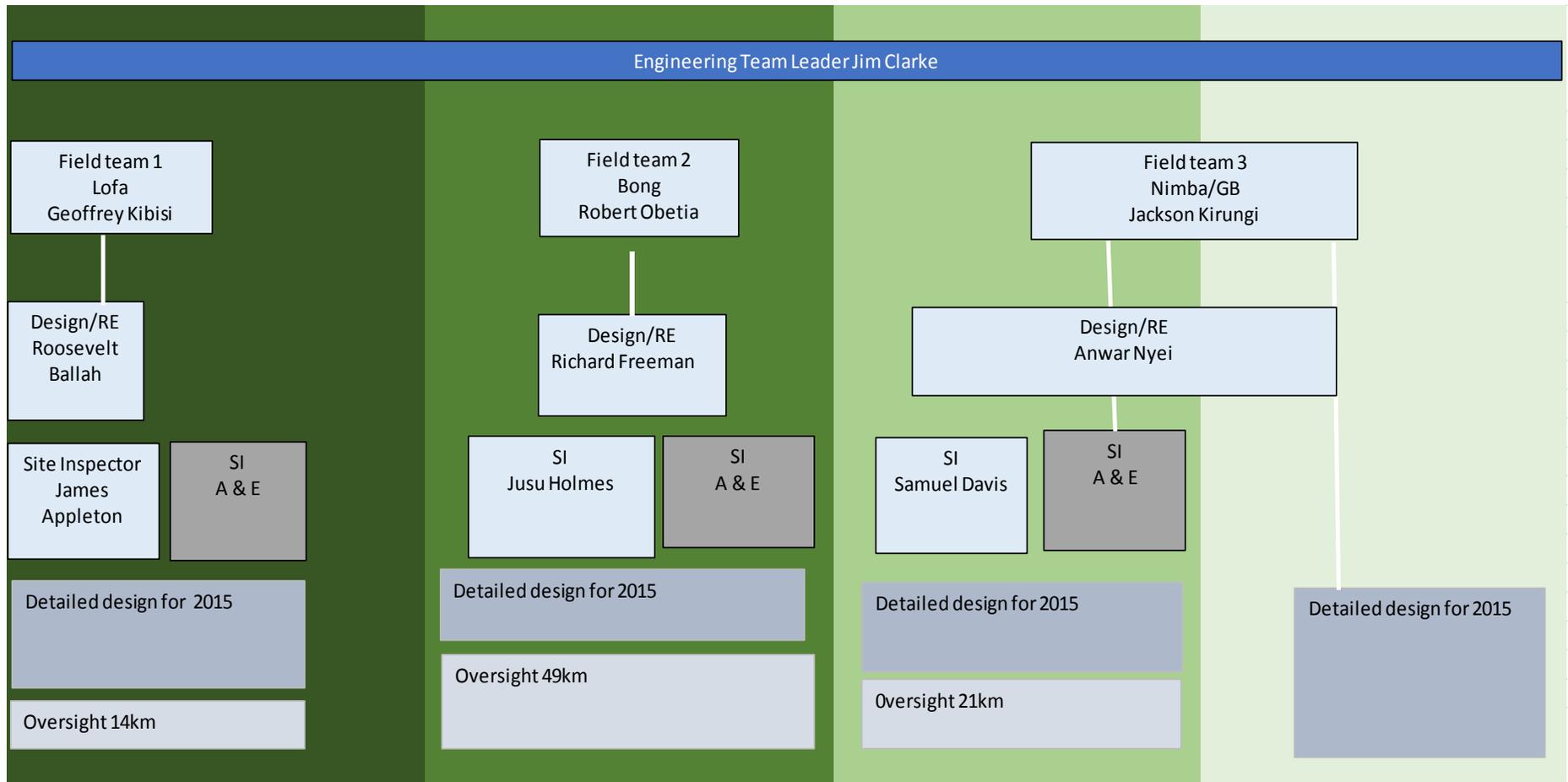


Figure 5.3: Phases 1 & 2 – April to December 2014

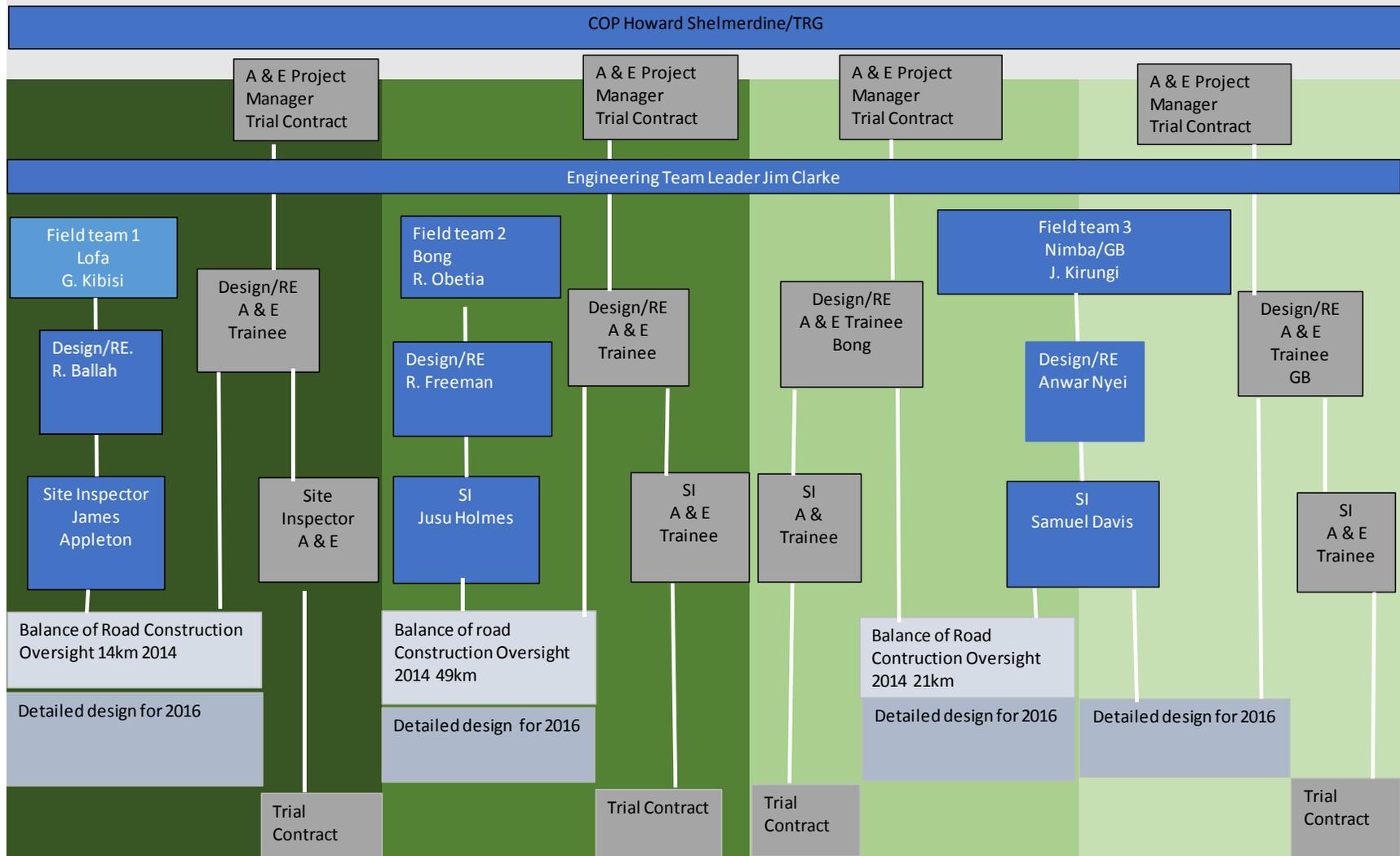


Figure 5.4: Phase 3 – January to April 2015

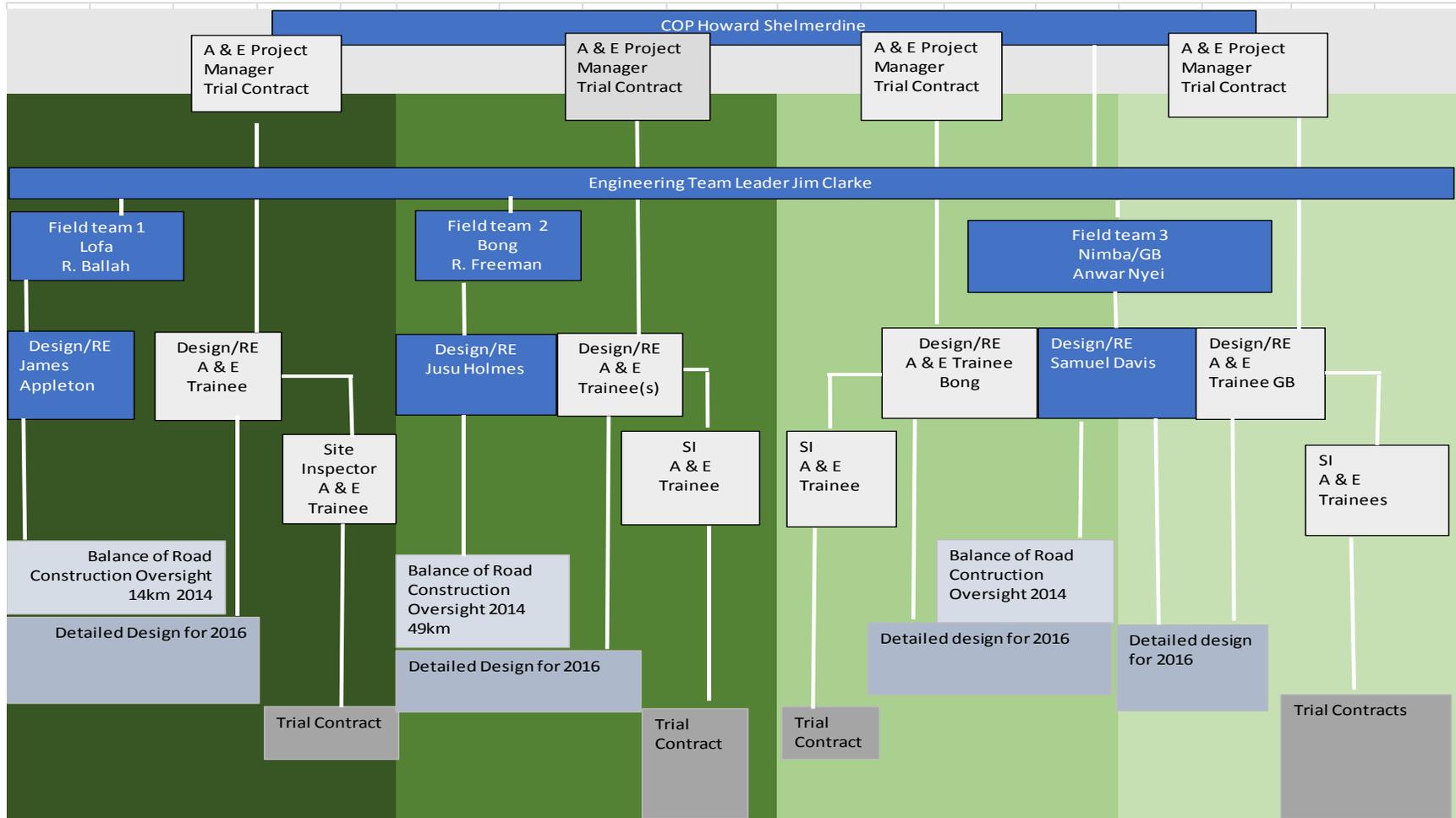


Figure 5.5: Phase 4 – May to October 2015

5.3.5 Inputs for Training Program

- 30 Trainees
- 900+ days of mentoring
- 45 days of formal training
- 785 formal Trainee days

5.3.6 Outputs from Training Program

- 5 A & E firms with:
 - Project Manager who can procure and manage contracts for construction oversight and rural roads design
 - Senior Engineer with detailed design and construction oversight capabilities
 - Site Inspector with site supervision skills
- 4 MPW RE's with:
 - Enhanced understanding of rural road management
 - Enhanced experience in planning and construction contract management
 - Exposure to Project selection tools
- MPW HQ with:
 - Enhanced understanding of rural road management
 - Enhanced understanding in the use and management of private sector A & E firms
 - Exposure to project selection tools
 - Expanded Feeder Roads Design Manual
- 3 Contractors with:
 - Enhanced understanding of Construction Contract Management
 - Improved understanding of intervention and material selection
 - Exposure to environmental assessment and mitigation tools
- 3 Liberian Field Team Leaders with;
 - Comprehensive exposure rural road design
 - Project management capacity
 - Project selection capacity
 - Rural road network planning
- 3 Senior Design Engineers with:
 - Working knowledge of detailed road design
 - Construction contract management capacity
- Manual for Design and Construction Oversight manual for Farm to Markets Roads based on the principles of Basic Access

5.3.7 Technical Training Program - Details

Module ³	Designed by	Delivered by	Sessions (indicative only – details to finalized following capacity assessment)	Attendees
<p>1. Introduction to Farm to Market Roads*. 5 days Classroom based at CARI, Bong County.</p>	R.Obetia	R. Obetia J. Clarke	<ul style="list-style-type: none"> • Network Characteristics • Functional classification • Connectivity • Stakeholder roles <p>MPW Central, County, District, user groups, road side residents and beneficiaries, private sector.</p> <ul style="list-style-type: none"> • Project Cycle Planning, prioritizing, detailed design, implementation and maintenance • Feeder Roads Design Manual 	<ul style="list-style-type: none"> • Field based A & E trainees (5) • Head Office based Trainees (5) • Senior Project Engineers (3) • MPW County Resident Engineers (4) • MPW HQ Feeder Roads Department Engineers (3) • Contractor senior staff (3) <p>Total = 23</p>
<p>2. Rural Road Inventories, Project Prioritization, and role of GIS in Rural Road Management</p> <p>5 days,</p> <p>Classroom and field work</p> <p>Location: CARI, Bong County</p>	J Kirungi	J. Kirungi J. Clarke	<ul style="list-style-type: none"> • Role of GIS in Rural Road Management • Road Inventories • Condition Surveys • Selection of criteria • Prioritization process 	<ul style="list-style-type: none"> • Field Based Trainees (5) • Senior Project Engineers (3) • MPW County Engineer(4) • MPW central Engineers and planners (5) • Total = 17

³ Session Briefs and Handouts to form Farm to Market Road Handbook

*Essential modules

²Optional modules

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<p>3. Carriageway Pavements and Earthworks for Rural Roads* 5 days Combination of classroom and field trips. Location: ES3R Head Office & MPW laboratory</p>	R. Obetia	R. Obetia J. Clarke	<ul style="list-style-type: none"> Deterioration of soils under traffic loading and climatic influences Defect assessment Remedy selection FRDM Concept of Basic Access Specifications and BoQ Unit Rate Analysis 	<ul style="list-style-type: none"> Field Based A & E Trainees (5), Senior Project Engineers (3), MPW HQ Feeder Road Engineers (4) Contractor Senior Staff (3) <p>Total = 15</p>
<p>4. Introduction to Laboratory Based Materials Testing² 5 days MPW soils testing Laboratory² (subject to agreement with MPW Minister)</p>	Local Material technician TBD	MPW materials technicians	<p>Working alongside MPW laboratory technicians undertaking following tests</p> <ul style="list-style-type: none"> MDD OMC CBR PI <p>Each trainee group (4/5 per group) attend 1 week to MPW's Soils Testing laboratory, at convenient times</p>	<ul style="list-style-type: none"> A & E field based trainees (5), Senior project Staff (3), Project SI (3) MPW HQ Feeder road engineers (3) <p>Total = 14</p>
<p>5. Field Based Materials Testing and Materials Selection² 5 days at each in each county by visiting materials Technician</p>	Local materials technician TBD	Local materials technician TBD	<ul style="list-style-type: none"> Various compliance tests using appropriate technologies Identification of Borrow quarries 	<p>Total for 3 counties</p> <ul style="list-style-type: none"> A & E field based trainees (5) Senior Project Engineers (3) SIs (3) MPW REs (3) Contractors (3) <p>Total = 17</p>
<p>6. Elementary Hydraulics for Rural Roads* 5 days Combination of classroom and field trip Location: CARI, Bong County</p>	J. Clarke/G. Kibisi	J. Clarke/G. Kibisi	<ul style="list-style-type: none"> Hydrology of water courses Catchment characteristics Hydraulic design of water course crossings Geometric design of water course crossings FRDM, specifications and BOQ Unit Rate analysis 	<ul style="list-style-type: none"> Field based trainees (5) Senior Project Engineers (3) MPW RE (4) Contractors (3) <p>Total = 15</p>
<p>7. Contract Management* 5 days Classroom based</p>	J. Clarke/J Kirungi	J. Clarke/J. Kirungi	<ul style="list-style-type: none"> Law of Contract Conditions of Contract 	<ul style="list-style-type: none"> Field Based Trainees (5), Senior Engineers (3),

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<p>Location: CARI. Bong County</p>			<ul style="list-style-type: none"> • Roles of Responsibilities of Client, QAC, Contractor and MPW • Compliance • Measurement • Preparation of Contractor certificates • Site progress Meetings • Progress reporting 	<ul style="list-style-type: none"> • A & E Managers (5) • MPW County Resident Engineers (4) • Contractor Project Engineers (6) <p>Total = 23</p>
<p>8. Environmental and Stakeholder Management* 5 days Combination of Classroom and field visits Location; CARI Bong County</p>	<p>G. Kibisi</p>	<p>G. kibisi</p>	<ul style="list-style-type: none"> • Introduction to environmental Impact Assessment • Law Policy and Institutional arrangements for EIA systems • Stakeholder involvement and engagement • Screening, Scoping and Impact Analysis • Mitigation and Impact Management • Reporting 	<ul style="list-style-type: none"> • Field Based Trainees (5), • Senior Engineers (3), • MPW County Resident Engineers (4) • Contractor Environmental engrs (3) • A & E Managers (5) <p>Total = 20</p>
<p>9. Responding to an Expression of Interest for construction oversight* 5 days Classroom Location; CARI Bong County</p>	<p>Obetia Kirungi Kibisi</p>	<p>Obetia Kirungi Kibisi</p>	<ul style="list-style-type: none"> • Preparation of Company profile • Assessing costs of Contract HR, housing, operations, HO overhead, risk and profit etc 	<ul style="list-style-type: none"> • A & E project managers (5) • A & E field technicians (5) • Project REs (3) <p>TOTAL = 13</p>

6. CONCLUSIONS AND NEXT STEPS

The pre-qualification and selection process provides a promising beginning with the identification of five potential local A&E firms that have the potential to work with the ES3R project and eventually meet the goals of a sustainable core group of capable development partners for Liberia.

The first step is to set clear expectations with these firms and initiate preparation of the capacity development program. The project design requires a mentoring partnership with the project so that identified firms are “working along-side” as the technical program for rural roads moves forward. Prior to departure, the TRG Capacity Advisor discussed next steps with the CDM International Chief of Party and agreed to return as soon as possible to meet with the candidate firms and the ES3R resident staff and design the capacity development program. This will involve a combination of structured learning using local resources and coaching and mentoring program.

During the next visit (to be arranged) visit, the Capacity Advisor intends to conduct a Leadership and Management training course that will be designed based upon available data from interviews.

The Technical Training and Mentoring program which has been detailed in section 5 of this document integrates field based mentoring with classroom based training which is considered will have lasting benefit for ES3R staff, A & E project managers and trainees, MPW head office and county based staff and contractors’ engineers. Nine modules involve formal classroom training, together with field visits as appropriate, all of which are recommended, although options may be exercised as desired by USAID/Liberia. The formal program will be followed by a Trial Contract for Construction Oversight for A & E firms which have demonstrated capability during the former training and mentoring schedule.

The training programs thus recommended herein are considered well worthy of the formation of a sustainable base for the future design and construction oversight in the rural roads sector. We look forward to our future participation in this program which we trust will be favoured by USAID/Liberia. The financial costs related to the program will be included as a separate document.

ANNEX A

A & E FIRMS INTERVIEWED

ANNEX A: FIRMS INTERVIEWED

Name, Address, Telephone Number and Email of Firm	Key Personnel	Interview Date and Time
LONGMAN ENGINEERING SERVICES INC. S.K.D. Blvd., Opposite Don Kan Filling Station; Congo Town, Monrovia Tel: (+231) 6908738; 776814553	Thomas W. Johnson and Moses Abu	WEDNESDAY 8 TH JANUARY 2014 - 2:00 – 3:30PM
AMALB SYSTEMS, INC. AND, KARNLEY ARCHITECTS, PLANNERS AND ENGINEERS 8 TH STREET, SINKOR, Monrovia (231) 886921068 ekarnely@yahoo.com	Elijah Karnley	WEDNESDAY 8 TH JANUARY 2014 - 4:00 PM
GBESOHN ASSOCIATES LIMITED Warren Street, off Camp Johnson road Gooding Building, Central Monrovia. Office Tel:+231-202-123819; Cell:+231-886- 123819 Email: isaac@gbesohnassociates.com	Engr. Isaac K. Krah- Gbesohn Managing Principal Partner	THURSDAY- 9 TH JANUARY 2014 - 10:00 – 11:30AM
PRIME CONSORTIUM INC. Red-light, Benson Hospital, Paynesville Freeman.richardk@gmail.com jkpajibo@hotmail.com Tel: +2316-520101 / +231-770328214 (Mr. Pajibo's telephone)	Jlatah K. Pajibo Richard K. Freeman Farfini Kamara Suleiman Ken	THURSDAY- 9 TH JANUARY 2014 - 1:00 -3:00PM

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<p>TSC ENGINEERING AND CONSTRUCTION CONSULTANTS INC. ACICO Building, 2nd Floor Carey Street, Monrovia asackor@tristarliberia.com Monr ovia: +231 880657966</p>	<p>Amara Sackor</p>	<p>THURSDAY- 9TH JANUARY 2014 - 4:00PM</p>
<p>WALKER-ROBINSON INTERNATIONAL Center and Carey Streets, Monrovia Tel: +231 8866547652 Narsamstmt1@yahoo.com</p>	<p>Norman Robinson</p>	<p>FRIDAY- 10TH JANUARY 2014 - 10:00AM – 12:00PM</p>
<p>JADA, Inc. Dual a rod island, Monrovia arunadorley@gmail.com</p>	<p>Aruna Dorley</p>	<p>MONDAY, 13 January 2014, 9:00Am - -11:00AM</p>
<p>Clinton and Partners, Inc. 20th Street, Sinkor, Tubman, Blvd. Monrovia, Liberia Tel: 888. 947. 911 Jclin912@hotmail.com</p>	<p>Joyce Clinton</p>	<p>Friday, 24 January, 2014 (interviewed via telephone in the United States)</p>

ANNEX B ESTIMATES AND ANTICIPATED BUDGETARY ITEMS FOR CDM-SMITH (Refer to Attached Spread Sheet for Additional Total Costs)

- 1. Training venues.** Field training can take place both at field sites, and in county offices. It is assumed that the MPW will provide conference space for training in county offices. CDM-Smith will be required to provide equipment and meals and coffee breaks (see below).

In Monrovia, there is a very large conference room at the Ministry of Health that they rent out for \$100 a day. The project would need to provide its own projector and screen, and flip charts and meals and coffee breaks, and travel and per diem for staff coming to Monrovia for training. It would be much less expensive than renting hotel-based space at \$200 per day.

2.2 Cost Estimate for Training Equipment

- a. LCD projector \$2,000
- b. Four flip charts, \$800
- c. Rental Conference Room Space \$100/day for 20 days, \$2,000
- d. Lap Top Computer with hand-held Power Point Remote: \$1,600

2.3 Local Trainers and Potential Structured Technical Training Required

a. Pending data development, CDM/Smith will need to estimate specialized training and use of local trainers using a plug figure: x days local consultant/trainers, plus travel and per diem of x days. [standard local consultant rate to be determined]. Provision of specialized technical training or enrollment in x number of training courses provided at local universities and institutes [TBD]

The specific requirements for local trainers and locally available courses at the university or other resources will be determined based on the Training Needs Assessment.