USAID EL SALVADOR
FROM THE AMERICAN PEOPLE

USAID/El Salvador Tropical Storm Ida Reconstruction Project

Work Plan

January 2012

This Publication was produced for review by the United States Agency for International Development/El Salvador. It was prepared by CDM Smith.

Contract No.: AID-EDH-I-00-08-00023
Order No.: AID-519-TO-12-00001

Acronyms

A&E	Architecture & Engineering
AASHTO	American Association of State Highways and Transportation Officials
ASTM	American Society for Testing and Materials
CAD	Computer Aided Design
COP	Chief of Party
COTR	Contracting Officer's Technical Representative
D/B	Design/Build
EA	Environmental Assessment
EMP	Environmental Mitigation Plan
GIS	Geographic Information Systems
GOES	Government of El Salvador
GRAM	GRAM Arquitectos S.A. de C.V.
IEA	Initial Environmental Assessment
LRFD	Load and Resistance Factor Design
MARN	Ministry of Environment and Natural Resources
MEO	Mission Environmental Officer
MINED	Ministry of Education
MOP	Ministry of Public Works
MINSAL	Ministry of Health
O&M	Operation and Maintenance
PMP	Performance Monitoring Plan
PQM	Project Quality Management
QA/QC	Quality Assurance/Quality Control
QMP	Quality Management Procedures
RD	R.D. Consultores S.A. de C.V.
SDB	Small Disadvantaged Business
STP	Technical Secretary of Presidency
USAID	United States Agency for International Development
VMVDU	Vice Ministerio de Vivienda y Desarrollo Urbano

Table of Contents

1 Background

In November 2009, persistent rain over several days associated with Tropical Strom Ida resulted in significant flooding, landslide and loss of lives and property in El Salvador. Heavy rainfall over a short period of time on the night of November 7-8, 2009, triggered flooding and landslides, causing the loss of 200 lives (plus 78 people unaccounted for), and the destruction of homes, roads and bridges, and other household and community infrastructure. There was severe Infrastructure damage and loss of live in the five departments of San Salvador, la Paz, Cuscatlán, San Vicente and La Libertad, also water and sanitation facilities destroyed.

On December 4th, the Economic Commission of Latin America and the Caribbean (ELAC), with the support of the Government of El Salvador (GOES), published a Damage Assessment Report that identified $240 million in damages and losses. ELAC estimated that 125,000 Salvadorans were directly or indirectly affected, and concluded that $343 million would be required for the rehabilitation and reconstruction of the affected areas.

Most GOES ministries also undertook sector specific assessments after the storm. The Ministries of Education and Health, and the Ministry of Public Work (through the Vice Minister of Housing) detailed damage to schools, clinics, and houses, classifying them into several categories such as partially damaged, completely damaged, and infrastructure in need of relocation due to ongoing high-risk factors.

People, communities, and government authorities at all levels are still grappling with the process of reconstruction and rehabilitation. While the GOES has dedicated several tranches of funding to address housing needs, environmental mitigation, and reconstruction, additional assistance is needed to stabilize and resume livelihoods, to restore basic infrastructure necessary to support economic recovery, and to address the apparent shortfalls in government, community, and institutional capacity to mitigate the likelihood of future occurrences of similar events.

Through the Tropical Storm IDA Reconstruction Project, the United States Agency for International Development (USAID) is supporting the reconstruction of bridges, schools and health clinics that have been identified and prioritized by the GOES through total program funding of $25 million for engineering/architectural services, construction, equipment and other related services and support (see Section 11.1 for breakdown on funding by component). United States Government funds will initially be used to design and fund the construction of up to six bridges, the associated road approaches, and other drainage structures in the affected areas, but other activities may be assigned as needed. The construction of these projects will also assist the affected region with a source of temporary employment, build confidence in local communities, and contribute to long term economic recovery by improving access to local farmers and residents. In addition, the reconstruction efforts will also initially include up to 14 healthcare facilities, and up to 32 schools

located in the Ida affected regions with damages classified under the categories of moderate to severe.

The list of facilities and maps indicating the locations of these facilities is included in Section 10.

2 Objectives, Goals and Expected Results

2.1 Main Objective

The main objective of the program is to repair, rehabilitate/reconstruct the priority facilities identified where damage is attributed to Tropical Storm Ida. This objective and scope of services has been captured within the task order (Task Order Contract No.: AID-519-TO-12-00001) that was awarded to CDM Smith to carry out A&E services for the design and rehabilitation/ reconstruction of the damaged facilities, employing quality criteria in standards and design practice for improvements to the existing facilities and reduce the susceptibility of the facilities to future damage from natural disasters..

CDM Smith will assess the facilities and propose interventions through general supervision and administration, A&E services (studies, assessments and preliminary designs), provide design-build procurement support to USAID, design-build construction oversight,, and training to local firms and increasing the empowerment of local communities for appropriate care and the facilities through community engagement and capacity building.

2.2 Project Goals, Objectives and Expected Results

CDM Smith will contribute to the improvement of damaged infrastructure in three sectors (i.e., bridges, health care facilities or clinics, and educational facilities) to benefit the affected populations, assisting communities with sustainable infrastructure, direct and indirect employment during reconstruction, and significant direct and indirect benefits attributable to the improved facilities and reductions in travel time and cost (from construction of new bridges and reconstruction of bridges damaged by Tropical Storm IDA). These improvements, undertaken in collaboration with local stakeholders, will build confidence, local capabilities and contribute to long term economic growth. CDM Smith's interventions will show results in all three sectors.

Schools and Health Care Facilities: According to the Ministry of Education, the rehabilitation of 32 priority schools will directly benefit 17,938 people among students and staff; and according to data provided by the Ministry of Health, the re-construction and rehabilitation of 14 healthcare facilities will directly benefit 230,700 people.

A total of 248,644 people will benefit from reconstruction and rehabilitation of schools and health care facilities in five departments (San Salvador, La Libertad, Cuscatlán, San Vicente and La Paz) where this program will be implemented. The final number of beneficiaries will depend upon the schools and health care facilities that are rehabilitated or reconstructed.

Other direct beneficiaries would include the families of the students, as well as the community members themselves through the provision of facilities that will educate their youth and provide adequate shelter when/if future disasters strike.

Bridges: The reconstruction of 3 existing bridges (temporary bridges in: Acahuapa, San Antonio and Titihuapa); and the construction of 3 new bridges in locations where bridges do not currently exist, but where the storm IDA increases the river channel cross-section (one in Apulo–Corinto, San Martin; and two in Asino-Joya Grande, Ilopango), will improve the transportation flow of goods and services, facilitate local and regional transportation, and provide access to local farmers and residents in the five departments affected by IDA Storm as identified by USAID and the GOES.

3 General Approach

3.1 Introduction

Based on discussions that occurred between CDM Smith during the cost negotiation phase, as well as subsequent early implementation meetings that have taken place post-Task Order award, the proposed CDM Smith general approach has been refined and enhanced from the original technical proposal through the following events:

a. The Post Award Conference (Jan 1st, 2012), led by USAID, which facilitated a common understanding of the scope, limitations, and identification of critical issues, and project framework. A communications protocol was defined for the implementation process.

b. Meetings which introduced CDM Smith to the Technical Secretary of Presidency (STP) (Jan 11th, 2012) and presented the results of an internal CDM Smith Project Quality Management (PQM) workshop (Jan 12th, 2012); this provided the opportunity for discussion/presentation of further details of the CDM Smith approach, including the rapid assessment phase – one result of which will lead to the identification of facilities for 'Fast Track' development to obtain quick results. During the meeting, STP set forth the proposed constructing completion date for all the facilities (schools, health care facilities and bridges) of no later than May of 2014.

c. Meetings with each Ministry--i.e., the Ministry of Public Works (Jan 17th, 2012), the Ministry of Health (Jan 18th, 2012), and the Ministry of Education (Jan 18th, 2012). These meetings provided the opportunity to clarify that the preliminary cost estimates prepared by each Ministry may be different to those preliminary cost estimates to be prepared by CDM Smith during a rapid assessment period, based, in part, upon the criteria utilized to determine rehabilitation/reconstruction needs at each project site. This discussion facilitated the definition of the criteria to be used by CDM Smith to develop a more accurate cost estimate in accordance with the philosophy to 'build back better' along with an integrated approach to the construction work.

d. Meetings with USAID (Jan 17th and 23rd, 2012) to discuss the prequalification process and how the project should be promoted to capture construction sector interest, and how to define requirements to encourage construction and A&E firms to form alliances to participate as a temporary partnership to mitigate the risk of a deficient coordination implicit in a "design and build" contract.

e. The training programmed by USAID and given by the Mission Environmental Officer of USAID (Paul Schmidtke, Jan 26th, 2012), which facilitated an understanding of the initial environment assessment scope and the knowledge of specialized guidelines to obtain the necessary information to define mitigation measures that must be incorporated in the final designs and budget for environmental management plans (EMPs). Further, information was provided to enable a responsible determination on the necessity of carrying out a full environment assessment (EA) for bridges, that will require a more detailed analysis and refined mitigation measures.

Finally, in order to develop more accurate cost estimates for actual work conditions, our general approach is based on in-depth discussions of the following two different risk factors: environmental country risk (natural disasters), and internal project risk. These risks must each be analyzed and mitigation measures identified and defined for incorporation into the design stage. Further, these defined needs will be incorporated into the cost estimates for the design/build contracts and included within the proposed scope of work.

3.2 Key Features of Our General Approach

In accordance with the necessity for the GOES for completion of the construction activities within the timeframe of the limited cooperative agreement, CDM Smith is orienting the planning, resources and implementation schedule in an effort to meet this challenge – this is based upon a general approach focusing on accelerated execution, which will require collaboration from USAID and the ministries to be successful. The plan includes the compression of project schedule for the first set of schools and health care facilities for expedited studies, assessment and preliminary design to enable the rapid completion of these facilities to quickly demonstrate the successful results of the program.

Other complementary point of view that reinforced CDM Smith general approach is based on the following additional key features:

a. Collaborative project startup and initial rapid appraisal;
b. An initial environmental assessment (IEA) for each site that to obtain authorization from USAID, to progress on facility-related activities;
c. A fast-track approach;
d. Stakeholder engagement;
e. Capacity building;
f. Proactive attention to community engagement and gender concerns;
g. Implementation coordination;
h. Schedule tracking and project controls;
i. Rigorous Quality Assurance/Quality Control (QA/QC) procedures; and
j. Interdependency and interaction between components and tasks.

Collaborative project startup and rapid appraisal: In compliance with CDM Smith's commitment for a rapid startup, facilitated by USAID (separating award date from effective date), CDM Smith has started up immediately the activities assigned under Task Order Contract No.: AID-519-TO-12-00001. Thus far, CDM Smith has established a fully equipped local office and an integrated local core team: the Chief of Party (COP), a Technical Team Leader and the Operation Manager, and has

signed notices to proceed to subcontractors. In the process of facilitating consensus on overall objectives, establishing a team mentality to jointly address problems as they are encountered, CDM Smith has participated in key meetings with USAID and local stakeholders to establish clear roles and responsibilities, as well as identified critical success factors and reach mutual agreement on a agreed-upon course of action. As part of our rapid appraisal approach, CDM Smith has met with MOP, MINED and MINSAL to review available information and to define the criteria to prioritize facilities based on basic necessities of each ministry plus requirements set forth by donor to comply with USA's federal and USAID's regulations. At this moment, CDM Smith has encouraged the preparation of field assessment guidelines to better ensure reporting consistency and has coordinated mobilization of multiple teams to the field, beginning on February 1st, 2012.

An Initial environmental assessment (IEA) for each site: CDM Smith has been trained by USAID's Mission Environmental Office to conduct an initial environmental assessment for each facility, as is required in Annex J.3 of the task order (in section B. "Timing of Reporting Requirements"); this includes an environmental guideline to be followed and a request for an environmental mitigation plan (EMP) that has to be approved by the USAID's Mission Environmental Office before commencing activities.

A Fast-Track approach: as a result of the rapid appraisal phase, CDM Smith will recommend to the ministries and USAID a re-prioritization of facilities oriented to achieve early 'concrete' results in Year 1 by contracting the designing-construction for the first group of less complex selected schools and health care facilities quickly in order to generate increased engagement of target communities and stakeholders by introducing the project to local stakeholders (communities, municipalities, ministerial offices in each affected department, and other donors); this will also enable early testing of processes and procedures from design through tendering to construction that can be used to adjust and improve the procurement and contracting processes in time for the more comprehensive infrastructure packages.

Stakeholder engagement: CDM Smith is supporting USAID's and the Government of El Salvador's (GOES) plans to benefit the IDA affected populations, by designing and implementing agreed-upon targeted interventions in collaboration and consultation with USAID, the Ministry of Health (MINSAL), the Ministry of Education (MINED), the Ministry of Public Works (MOP), the Ministry of Environment and Natural Resources (MARN) through the liaison designated by each ministry, and relevant municipalities and communities. This has been initiated in startup/stakeholder meetings, and will be maintained through monthly progress reporting and presentations. It is envisioned that these stakeholders will be part of the extended project team and CDM Smith knows their understanding of the project and engagement on the 'team' will facilitate overcoming of obstacles or potential schedule delays that are encountered during project execution. Nevertheless, larger issues will be resolved through collaborative discussions with USAID.

Capacity building: As an integral part of the Design-Build construction contracts, CDM Smith will require that contractors who furnish equipment provide appropriate education and training on operation and maintenance to organized O&M Committees in the field.

CDM Smith will also assist relevant ministries receiving the infrastructure in developing, disseminating, and establishing maintenance plans. In addition, through community outreach activities and training**,** CDM Smith will raise awareness and deliver know-how to sustain the investments across the spectrum of partnering stakeholders, but especially among communities so that they can proactively and effectively participate in operation and maintenance (O&M) of their own facilities. CDM Smith is sure that, with proper training and manuals, these committees will successfully perform O&M activities for: cisterns, elevated tanks and pumping equipment, septic tank maintenance, faucets and valves, roofs, drainage ditches and gutters, and solid wastes or hazardous disposal.

Proactive attention to community engagement for O&M and gender concerns: In order to foster community participation and a sense of ownership, CDM Smith's Community Outreach Team will organize O&M committees, so that the community will have a role in the project from the startup through ongoing maintenance of their facility after completion. CDM Smith has contracted a specialist, an independent consultant for managing/coordinating the community involvement and gender issue, and the first activity under the project has been to design the strategy to accompany the technical process during the execution, to ensure positive relationships with each community.

Implementation coordination: CDM Smith has initiated a process to encourage USAID and the ministries to have a fully coordinated extended team in order to reduce redundancies and achieve synergies, leverage complementary activities and streamline initiatives across our own subcontractors, design-build contractors, and other donors and stakeholders. CDM Smith will strength the coordination and synergies via the project control and the quality assurance systems.

Effective Operations Management for schedule tracking and project controls: CDM Smith will efficiently manage multiple projects, schedules and budgets, and track and report implementation progress on all projects which will be implemented in a carefully coordinated sequence for appropriate allocation of resources, per the Gantt chart and Critical Path Method in an annex to this report. Based on its experiences elsewhere, CDM Smith will implement effective and proven planning, quality controls, and program management tools and methods.

Rigorous Quality Assurance/Quality Control (QA/QC) procedures: CDM Smith will ensure consistency in data collection and reporting, review and validate design work, reduce risk and help ensure high-quality sustainable infrastructure by using CDM Smith's proprietary Quality Management Procedures Manual No. 2 (QMP-2) for Engineering Services during Construction, in addition to QMP-3 for Construction Project Operations. These manuals are the cornerstones of CDM Smith's quality management program and are mandatory for all CDM Smith's projects.

Strong interdependency and interaction between activities: The management system that will be utilized by CDM Smith will achieve synergies and deliver an integrated and consistent approach for schools and health care facilities.

It is worth noting, however, that bridges, because of their own unique risk factors, will require a different level of topographical, geotechnical, geophysical and hydrological studies, and closer and more frequent supervision during the construction of key elements. CDM Smith has identified for both components-- vertical structures and bridges--cross-cutting issues that tie together the different aspects of the work, such us: community and gender concerns, environmental protection, climate concerns, and capacity building and training of stakeholders (for operation and maintenance).

3.3 Country Environmental Risk

Seventy seven percent (77%) of El Salvador's population lives in areas at high risk from drought, hydro, and geophysical hazards (World Bank, 2005). Some estimates point out that between 1998 and 2005, El Salvador has suffered losses of almost US $907 million (dollars of 2008) due to climate related disasters (Mansilla et al., 2009).

El Salvador suffers greatly from disasters caused by seismic activity, for instance, the 2001 earthquakes caused losses and damages of US $1,200 million - equivalent to 12% of GDP (dollars of 2000) (CEPAL, 2001). However, the list of threats and disasters in El Salvador is quite extensive and is not limited to earthquakes.

The heavy rains of November 7 and 8 of 2009 (associated with Hurricane IDA), unleashed hundreds of disasters of varying degrees throughout the Salvadoran territory, among others: landslides in San Vicente Volcano that partially destroyed the towns of Guadalupe and Verapaz; landslides around Ilopango Lake affecting the municipalities of the greater San Salvador Metropolitan area, and floods in the La Paz, La Libertad and Cuscatlán.

According to the findings of the "Comisión Técnico Científica" coordinated by MARN to report on the impacts of IDA storm ("Síntesis de los informes de evaluación técnica de las lluvias del 7 y 8 de noviembre 2009 en El Salvador, Duran and Romano 2010"), IDA revealed new risk and disaster scenarios (not previously reported) in the Salvadoran territory.

There is evidence of changes in the intensity and duration of climatologically phenomena with increased impacts on the Salvadoran population, the environment and the economy.

With these known environmental risks, well-defined mitigation measures and other protective code considerations will provide a sound criteria for the decision making to more fully scope the rehabilitation/reconstruction needs and will guide the prioritization process - the incorporation of

climate change oriented design features will better enable the avoidance of recurring damages in public structures. This is the essence of the CDM Smith 'build back better' approach.

3.4 Project Risks

A number of project risks were identified in the CDM Smith proposal; these have been updated and are included within the table below – along with the risk mitigation measures that CDM Smith will employ, working with USAID and stakeholders as a larger project team.

PROJECT RISKS	RISK MITIGATION MEASURES
Multiple construction activities at numerous sites at one time.	CDM Smith has split the work between three highly experienced Salvadoran technical teams for the preliminary listing of facilities, each one by kind of facilities (two CDM Smith's subcontractors, one for bridges and the other for schools and health care facilities).
Capacity of Construction Contractors	CDM Smith is working together with USAID to promote and start up a prequalification process to define a short list of firms that have the technical expertise and financial structure to reduce the contracting risk. Furthermore, CDM Smith will support USAID to: Conduct Pre-bid meetings to clarify scope elements and expectations including community concerns. Evaluate/provide guidance to contractors on their construction schedules using Gantt chart - Critical Path Method. Establish the standards and clearly defined expectations associated with USAID, stakeholder and CDM Smith requirements. Establish the requirements under which supervision and reporting will occur within planned scope, schedule and budget. Make construction contractors aware of compliance with CDM's Code of Conduct in relations with the communities.
Mixed results of experience with Design-Build approach in El Salvador	CDM is supporting USAID to conduct a pre-qualification process for Design/Build (D-B) contractors. CDM Smith will develop qualifications requirements in consultation with USAID, based on the work anticipated and on the experience, capacity, and financial stability of potential contractors.
Quality of Supervision	CDM Smith will establish a Quality Control Plan, and will define clear roles and responsibilities for construction supervisors, reporting mechanisms/checklists and protocols, and verify progress and QA through site audits.

PROJECT RISKS	RISK MITIGATION MEASURES
Adherence to environmental guidelines, and potential delays caused by reviews and permits	CDM Smith is already working with USAID's environmental guidelines and its team has been trained for the Mission Environmental Officer to conduct the Initial Environmental Assessment (EIA) for each facility and for preparing the Environmental Mitigation Plan (EMP). CDM Smith has met MINED, MINSAL and MOP to understand the process set forth by MARN, in order to know what each ministry is doing to facilitate the projects approval in order to avoid delays.
The security situation related to "Maras"	CDM Smith is preparing a security plan to be delivered in mid-February 2012. CDM Smith has included, in its Community and Gender Issues Management Plan, a procedure to obtain support from communities in each site to address security concerns related to Maras. CDM Smith suggests USAID to require each D/B contractor (as part of their cost proposal) to include a provision for security as needed for their personnel as well as site security (a typical responsibility for a construction contractor). CDM Smith will engage security services when recommended for specific field activities.

Though the table included above defines the mitigation measures for project risks, there are some topics that have a further and important influence on project implementation, as follows:

a. **Capacity of construction contractors and multiple construction sites:** CDM Smith proposes a pre-qualification phase, and will facilitate the preparation and implementation of a contractor pre-qualification process, so that later D/B tenders go out only to pre-qualified firms. CDM Smith will prepare tender packages for construction of facilities in groups of (potentially 3 to 8 facilities each, for schools and health care facilities) depending on contractor capacity, location of facilities, degree of complexity (severe or moderate damage, new construction, reconstruction or rehabilitation), and other criteria to be determined at the end of the studies/assessment phase.

   The relationships between the communities and the contractors are also important. Communities need to be aware of what is expected in terms of the time line of activities within their communities. At times, the relationships between the communities and the contractors can become strained, local property is damaged, encroached upon or the community is simply inconvenienced by construction activities. Thus contractors need to be mindful of community concerns and respectful to gain the trust and support of the community. A Code of Conduct will be incorporated into the D/B Contracts - the Code of Conduct will also include expected responsibilities of the community (discussed prior to construction activities). During community outreach meetings, the issues and conflicts will

be discussed including the violations of community and contractors' code of conduct. Violations to the code of conduct will be highlighted and addressed along with other problems caused by contractors to communities, and vice versa, will be discussed and mediated via conflict resolution methods used by CDM Smith in other projects. Before the construction starts on each site, the construction contractor will be introduced to the communities.

b. **Mixed results of experience with Design-Build approach in El Salvador:** During our interviews with A&E firms in El Salvador, we learned that Design-Build Contracts (called "Llave en Mano"), have suffered from unforeseen costs that have penalized contractors and/or resulted in substandard quality of works. It is common to hear complaints from architecture and engineering firms about being squeezed to death by "Llave en Mano" type projects. Some Salvadoran professionals indicate that negative experiences with Design-Build have occurred due to poor preliminary design, unrealistic schedules, scopes and budgets; and contracts prepared by inexperienced Contracts/Procurement professionals. In some cases, and in order to comply with Design-Build requirements, Salvadoran construction firms have teamed-up with design firms under deficient contractual arrangements that compound the problems. On the other hand, some Salvadoran firms indicate that D/B in El Salvador has been more successful when scoping of services, timelines and requirements are clear in well drafted contracts, and a common understanding is confirmed through pre-bid/pre-construction meetings. In addition to these elements, the experience of CDM Smith in many projects shows that pre-qualification of construction contractors partially mitigates the risks by limiting the pool of potential contractors to those with the requisite qualifications for design-build approach.

   Knowing the market condition of construction sector and the firms' capabilities, the CDM Smith strong recommendation for USAID is to promote alliances between at least one construction firm and one A&E firm to form joint ventures to participate in the bidding process and sign contract as a one entity with previously defined task and responsibilities, as follows: the experienced construction firm to build as operation management responsible; and the A&E firm to prepare the final design, construction permits, and led and articulate the quality control system during construction stage. Furthermore, the D/B contractor 'team' would be the responsible party to develop detailed drawings and drawing adjustments or corrections through final design. This is the best way to assure that USAID will have the right skill associated with the right team or alliance.

c. **The security situation related to "Maras":** The main strategy to neutralize the gang's activities is to engage the community as a partner who will be gaining the benefit of an improved facility that will provide them with enhanced services. The more involvement/engagement of community we that the project is able to achieve, the more secure will be construction site will be as the members of the gang have family ties to the community itself, and are part of the same community. CDM Smith is acutely conscious of the many problems of youth-gangs, and shall work closely with the communities, with their leaders in order to avoid confrontation and to identify approaches targeted to avoidance and mitigation where potential conflict is considered a risk.

3.5 Key Challenges

CDM Smith has identified important key challenges and key success factors that are extremely important to define the roadmap for the implementation stage in order to develop a consensus on overarching objectives where the larger project team works together to anticipate issues before they affect that project as well as efficiently address issues that come up and need to be resolved before they impact project progress: –

a. The main key challenge is to ensure teamwork for the extended team that includes the CDM Smith's key personnel and its subcontractors' team, the designated COTR, and the liaisons with Salvadoran government representatives: Technical Secretary of Presidency (STP) and Ministries (MINED, MINSAL and MOP).

b. It is important to show early success and a bias for actions to be facilitated by the rapid appraisal to prioritize the facilities with the goal to implement a fast-track approach to repair or rehabilitate the infrastructure that is best suited for quick and trouble-free progress, i.e. limited complexity, short construction period, no known impediments to approval - limited environmental (per USAID and MARN) requirements, permitting requirements, etc. This grouping of facilities, to be developed under the fast track approach, will be included in the first group to deliver for the tendering and contracting process as soon as possible. Thus, it is important to achieve early consensus/approval on these facilities, while it is understood that facilities with 'lower' priority may merit additional discussion to reach consensus.

c. In order to avoid downtimes for processes, activities and tasks, CDM Smith will comply with the planned schedule and will prepare deliverables in a timely fashion.

3.6 Success Factors

The key success factors for the project were one of the subjects discussed in the project startup/PQM meeting. Success factors are meant to identify a limited number of factors, at a fairly high level – the appropriate management of which is critical to the overall success of the project. The success factors identified are:

a. Creating synergy in and out of the extended team, keeping always the overall objective in mind, working within previously approved scope of work and budget.

b. CDM Smith will attempt to quickly facilitate consensus on the intervention criteria with USAID and the Salvadoran Government at the beginning of each stage – to clarify expectations, expected results, and deliverables – thus mitigating potential delays to the extent possible.

c. There is an issue of service provision during construction that is pending a joint consensus resolution between USAID and the ministries. That is how and in what manner the

population depending on the services of the facilities will be served during periods where the facility may be partially or wholly inaccessible for an extended period of time during construction. In CDM Smith meetings with the Ministry of Health we understand that they have estimated a cost of $15,000 for each health care facility for alternative space rental/rehabilitation for this purpose. CDM Smith will work with USAID and the ministries to facilitate a resolution of this issue which must be resolved well before construction takes place.

d. Complying with the CDM Smith's QA/QC system, compliant with ISO 9001, assuring high quality standards.

e. There must be flexibility, within the larger project team to make the necessary adjustments during the course of implementation based upon actual working conditions and activities required for project progress.

f. At the beginning, it is important to define the communication protocol for the project participants, for the extended team, and respect the defined channels.

g. Incorporate as a cross cutting activity, the best practices in public administration techniques based on community involvement management and a gender policy to integrate women as decision makers in their communities.

3.7 Specific Criteria by Facility Type

As a result of early meetings with USAID and stakeholders: Ministry of Public Works (MOP, Jan 17th, 2012), Ministry of Health (MINSAL, Jan 18th, 2012), and Ministry of Education (MINED, Jan 18th, 2012); criteria agreements have been reached, which will be used by CDM Smith to get more accurate budgets in accordance with the philosophy to build back better and to look for integral construction works.

3.7.1 Criteria for Health Care Facilities

Criteria agreed by MINSAL, USAID and CDM Smith, and which will be used by CDM Smith for the rapid assessment stage:

a. In addition to the criteria used by MINSAL for cost estimates, CDM Smith will incorporate regulations and requirements of USAID and the Government of USA.

b. USAID requires a preliminary diagnosis for each work site environment, which must be approved by the Mission Office of Environment before starting any activity.

c. Works shall be executed under the form of Design-Build Contracts. CDM Smith will provide diagnoses, minimum essential technical studies, preliminary conceptual designs and supervision during the Design-Build period.

d. Medical centers will be built on existing land. There shall be no liability of any kind.

e. The formulation of the designs should consider the following:

i. Design life of 20 years to make possible future expansion plans.

ii. Build spaces under the current Agreement that will be defined based on current needs, projected 5-year term.

iii. Use of ramps or elevators to facilitate access for people with disabilities.

iv. Emergency Stairs in buildings over a plant.

v. Structure protection against the climate change.

vi. Promotion of energy efficiency and clean energy use.

vii. Waiting rooms should be adequate for the number of users that can be served for a period of 2 hours.

viii. An area for vector emergency response with independent access must be included.

ix. In the units where a clinical laboratory is necessary to include, the use of an air conditioning and air exchange system to prevent biological contamination must be guaranteed.

x. In the specialist level units, a data system to facilitate future electronic management of the consultation must be included.

xi. In the intermediate level units, it is necessary to provide the amenities to facilitate independent connection of computers in the following areas: laboratory, pharmacy, warehouse, statistics (file) and appointments.

xii. Intermediate units must provide a separate space for "Counseling for Women."

xiii. An automatic emergency electrical system must be included.

xiv. In order to minimize the cost of security, global access to the health center should be centralized.

xv. Must provide emergency exits with panic door hardware.

xvi. The ceilings should be light and fire retardant.

f. Transport costs and social issue management oversight during the construction phase are not included in the contract of CDM Smith, so it should be added to the cost of the work during the design and construction stage.

g. Structural design shall prevent the vulnerability of the whole and its parts against seismic action through continuity of elements or by anchorage usage.

h. The rehabilitation cost estimates will not include any taxes or fees under the responsibility of MINSAL.

It is agreed that the cost estimates and preliminary diagnosis resulting from the rapid assessment stage, will be the basis for prioritizing infrastructure to intervene and for decision makings by the Technical Secretariat of the Presidency (STP), the Ministry of Health and USAID.

3.7.2 Criteria for Schools

Criteria agreed by MINED, USAID and CDM Smith, which will be used by CDM Smith for the rapid assessment stage:

a. In addition to the criteria used by MINED for preliminary cost estimates, CDM will incorporate Smith regulations and requirements of USAID and the Government of USA.

b. USAID requires a preliminary diagnosis for each work environment site, which must be approved by the Mission Office of Environment before starting any activity.

c. Works shall be executed under the form of Design-Build Contracts. CDM Smith will provide diagnoses, minimum essential technical studies, preliminary conceptual designs and supervision during the Design-Build period.

d. The acquisition of land that may result from recommended purchases, is under the responsibility of MINED.

e. In the formulation of the designs should be considered the following:

   i. Design life of 20 years to make possible future expansion plans.

   ii. Build spaces under the current Agreement will be defined based on current needs, projected 5-year term.

   iii. Use of ramps or elevators to facilitate access for people with disabilities.

   iv. Emergency Stairs in buildings over a plant.

   v. Structure protection against the climate change. Promotion of energy efficiency and clean energy use.

   vi. All classrooms should have at least two doors to facilitate the rapid evacuation of students.

   vii. The principal and computer rooms should have elements that guarantee reasonable assurance of its contents.

   viii. The ceilings should be light and fire retardant.

   ix. Each school must have a unified power system.

f. Transport costs and social issue management oversight during the construction phase are not included in the contract of CDM Smith, so it should be added to the cost of the work during the design and construction stage.

g. Structural design shall prevent the vulnerability of the whole and its parts against seismic action through continuity of elements or by anchorage usage.

h. The cost estimates do not include any taxes or fees under the responsibility of the MINED.

It is agreed that the cost estimates and preliminary diagnosis resulting from the rapid assessment stage will be the basis for prioritizing infrastructure to intervene and decisions by the Technical Secretariat of the Presidency, the Ministry of Education and USAID.

3.7.3 Criteria for Bridges

Criteria agreed by MOP, USAID and CDM Smith, which will be used by CDM Smith for the rapid assessment stage:

a. USAID requires a preliminary diagnosis for each work site environment, which must be approved by the Mission Office of Environment before starting any activity.

b. In addition to the criteria used by the MOP for preliminary cost estimates, CDM Smith will incorporate regulations and requirements of USAID and the Government of USA for the donation.

c. Works shall be executed under the form of Design-Build Contracts. CDM Smith will provide diagnoses, minimum essential technical studies, preliminary conceptual designs and supervision during the Design-Build period.

d. Transport costs and social issue management oversight during the construction phase are not included in the CDM Smith contract, so it should be added to the cost of the work during the design and construction stage.

e. Removal and relocation of temporary bridges will be the responsibility of the MOP, which has a specialized team for this.

f. With the exception of San Antonio Bridge, new bridges can be relocated or realigned in order to comply with standards and minimize bridge spans.

g. The acquisitions of rights of way or properties that may result from recommended purchase shall be under the responsibility of MOP, which has a specialized management office.

h. Temporary routes or bypasses should be ensured during the construction phase. Bypass costs and temporary works shall be under the responsibility of the construction firm.

i. Temporary or permanent ramp approaches or access ramps shall be under the responsibility of the construction firm.

j. Deep foundations shall be used only when required by technical studies.

k. Structural design shall prevent vulnerability to seismic and hydrostatic action of the whole structure by continuity of elements or by anchorage usage.

l. The connectivity can be ensured with other type of overpass works, instead of bridges, as determined by technical studies.

m. The cost estimates shall not include any taxes or fees that shall be under the responsibility of the MOP.

It is agreed that the cost estimates and preliminary diagnosis resulting from the rapid assessment stage will be the basis for prioritizing infrastructure to intervene and decisions by the Technical Secretariat of the Presidency, the Ministry of Works public and USAID.

4 Methodology

4.1 Key Lines of Action

Based on the general approach explained above, it is important to define the methodology framework utilized for implementing the project.

There are general activities for which CDM Smith is compelled to comply as part of the task order. These groups of tasks will make possible to better document a proficient performance and/or improve the value of services provided. However, they do not ensure, in and of themselves, the achievement of the overall objective - as a whole are developmental activities to achieve goals, such us: General Supervision and Administration, Development of Documentation Clearinghouse, and coordination with other Donors.

While there are some common elements associated with the different facility types, they are different facilities with different requirements (and under the jurisdiction of different stakeholders), and thus, will follow different tracks at the detail level. CDM Smith has planned the implementation of the work by the following three activities: schools, health care facilities and bridges.

CDM Smith will develop the work by applying a proven and successful management system in accordance with the requirements included in the USAID's task order for this project.

The planning and schedule has been prepared dividing the technical work into the following tasks, which are common for the activities cited above:

a. Rapid appraisal: the objective is obtaining basic information and a quick appraisal to make preliminary budgets, initial environmental assessments and social climate for each site, in order to determine preliminary estimated cost (as compared to estimated cost prepared by ministries) and re-prioritize facilities. Following the Rapid Appraisal, facilities for which there is consensus between USAID and stakeholders can proceed to more detailed study and preliminary design phase.

   CDM Smith proposes that a subset of these facilities – those facilities with repair requirements that are less complex, requiring less significant duration, and have a negative environmental determination can be Fast Tracked.

b. Assessment and Preliminary Design: the objective is completing all the technical studies and assessments necessary to prepare a preliminary design (by groups of facilities, in order of priority), which is defined as 30% of final design and must include the technical

specifications along with other documentation for tender preparation.

This stage begins with a fast-track process that will include those schools and health facilities coming out sooner that are less complex, that require less work to repair or rehabilitate. CDM Smith plans to group these schools and health facilities by type.

c. Design-Build Contract Procurement: the main objective is supporting USAID during the bidding and contracting process to answer questions that potential bidders will have to minimize differences in interpretations.

   CDM Smith will also assist USAID in the following related tasks: Issue tenders for design-build; attend pre-proposal/pre-bid meetings and prepare minutes; assist USAID in drafting addenda & respond to questions; and, advise USAID with the review of bids and award recommendations.

d. Design-Build (D-B) Supervision Services: The objective is assuring the quality of construction work by implementing a proprietary quality management system (QMS) to better ensure the quality of the processes utilized and compliance with identified requirements for this project.

   Furthermore, CDM Smith will monitor the following tasks that the D/B contractor will undertake: mobilization / start-up; reviews of submittals; on site activities, monitoring and reporting; meetings with CDM Smith personnel and subcontracted supervisor firms; and records/control, maintenance and updates.

e. Contract Closeout: the activities are verifying the financial balance/value of works achieved with each contractor, verify if the first payment (in advance) has been paid off, review the warranties, bonds, and manuals, and confirm that the required trainings have been completed as specified.

   CDM Smith will assist USAID to issue Certificates of Completion for all works, and review and confirm the requisite drawings and documentation is submitted for the works.

Besides the technical tasks for each activity, as mentioned above, CDM Smith will undertake some administrative tasks common to all of them: General Supervision and Administration, Development of Documentation Clearinghouse, and Other Donors and Donor Coordination.

a. General Supervision and Administration: The General Supervision and Administration extends for the life of the contract, starting with the mobilization of personnel/startup meetings through regular meetings and consultations with USAID and stakeholders and the development of the required program deliverables.

   At the time of the presentation of this document, CDM has an equipped and operational office, with staffing needed for the initial activities identified and mobilized. The project controls system will be initiated in the first week of February 2012 and its functionality will be enhanced in line with project document control and data reporting needs.

b. Kickoff meetings with USAID and key stakeholders are a critical step in ensuring an oversight effort that meets the needs and expected results of USAID's and GOES' IDA Reconstruction Program. During initial kickoff meetings, USAID and CDM have initiated the establishment of clearer understandings of the quality assurance / quality control approach to be applied. While started, this process is still ongoing with some activities remaining, such as agreement on expectations for the documentation clearinghouse (formats, storage, security and retrieval protocols).

   CDM Smith knows the importance of having a strong and timely control to detect and focus in closing the gap between reality and programmed goal, and has determined that the control system, once initially developed, will be followed with internet access (web portal) tailored to fit with the information monitoring and reporting needs to effectively track performance during the implementation of the project.

c. Development of Documentation Clearinghouse: CDM Smith will develop a robust document control system to manage the significant amount of information produced during studies, design, tenders and construction supervision; and to ensure that all this information (in electronic and hardcopy formats) is readily available to USAID and all relevant parties upon request and for project reporting/adherence to contract requirements. CDM Smith will implement a web-based system to store all project documents and upload project information into a database capable of generating custom reporting.

d. In addition, CDM Smith has included a cross-cutting activity required by the modern public administration to invest in social infrastructure, the community and gender issue management to empower the community in order to better assure facility maintenance and sustainability and that women to be active part of making decision process.

e. Other Donors and Donor Coordination: CDM Smith will support USAID's efforts to avoid duplication and to enhance synergy and leveraging with other donor's initiatives related to the reconstruction of bridges, schools, and health care facilities and programmatic issues related to health and education sectors.

4.2 Social-Gender Issue Management

4.2.1 Conceptual Framework for Social Management Area

Social-Gender Issue management processes are a cutting-cross program component and will be utilized as a strategy that keeps the relationship of the beneficiary communities and other local

actors integrated in the requisite processes implemented for the execution of development works. The social management strategy is envisioned as an integrated community and gender approach.

The community approach is the medium that allows communities and social actors in the project know, understand, engage and integrate social subjects throughout the construction process. This approach involves the community from the beginning of the process through the completion of the works, when the rehabilitated/reconstructed infrastructure will be delivered to the community with confidence that the communities themselves will provide for their care and maintenance. The operational implementation of this approach rests on the existing community organization where works are executed as well as in providing opportunities and mechanisms for local participation.

Based on the importance and recognition of the contribution of women in developing societies, as well as the disadvantages of women compared with men in the country; the reconstruction process will make every effort to implement the 'gender' approach so that women participate and in an integrated manner to the benefit of the project sustainability.

The gender approach refers to a conceptual tool that aims to show that the differences between women and men are not limited to biological differences but cultural differences leading to behaviors and structures that establish distinct roles for female and male. The application of this perspective helps to initiate specific actions to ensure that women are social actors in their development.

The integration of community approach and the application of gender perspective in the construction projects will be under the following lines of action:

Community Focus	The Gender Perspective
Study of the social reality of communities to obtain knowledge of their particularities and generalities	Awareness, and promotion of gender equity perspective approach on the CDM Smith team, as well sub contractors, contractors and communities involved in the infrastructure project
Opening of training processes about community focused approach directed to contractors and sub contractors involved in the process of construction	Facilitate the integration of women in all phases of project - inside the companies performing the jobs, in the implementation process and also inside the target population.
Quality assurance, standardization methodologies and tools for Community action in the process of constructing the Infrastructure	Empower women for their insertion from a gender perspective throughout the process of reconstruction and identify their needs in different areas: social, organization, labor,

Community Focus	The Gender Perspective
	educational, and other.
Identifying social issues related to community integration that may affects the smooth implementation of the project.	Facilitation of Training Process on gender approach
Design plans for participation and integration of communities at the various stages of the project with an emphasis on maintenance of the delivered infrastructure	Promoting and helping ensure the implementation of affirmative action for women participating in the construction projects.
Field supervision in the communities	Monitoring and evaluation of executed gender mainstreaming by each of the social teams of each of the contractors of this projects
Implementation of monitoring and evaluation (M&E) systems of community-based approach developed by contractors who be responsible for design-build activities.	

4.2.2 General Objective

Integrating community-based approach and gender in the process of reconstruction of public infrastructure damaged by Tropical Storm IDA, meeting quality standards and compliance with the contractually established time frame.

4.2.3 Expected Results

a. A reconstruction process of damaged infrastructure that is in line with community and gender equality practices.
b. Timely social studies and pre-diagnoses of each of the communities where infrastructure construction will take place.
c. Design and apply instruments, guides, intervention methodologies that provide valuable information to any information system developed by contractors in the area of social work management.
d. Personnel from contractor's social team that are fully instructed coached and qualified on the models of social intervention.

e. That the communities, the contractors are qualified to apply the community and gender equality frameworks.

f. Establish a monitoring/supervision/evaluation system for the implemented actions for the social work units of contractors.

g. Communities that are knowledgeable and committed with the maintenance of the new/reconstructed infrastructures

COMMUNITY INVOLVEMENT/ENGAGEMENT

PHASES OF THE PROJECT, LINES OF ACTION, SIGNIFICANT ACTIVITIES AND METHODOLOGY

PROJECT PHASES	OBJECTIVES	LINE OF ACTION / COMMUNITY AREA	TASKS	METHODOLOGY
STUDY AND PRELIMINARY PLANNING PHASE RAPID APPRAISAL	Counting on the organized and necessary information about the community and the beneficiary population as decisive factors in the process of reconstruction of the works of public infrastructure	Quick diagnosis focused on a community level.	Research guide design Documentary research Field Research	The research methodology will be qualitative and include documentary research and field research. Some techniques of information collection apply such as: documentary review, municipality monographs studies, contact with primary sources, application of various tools, information organization.
PRELIMINARY DESIGS	Integrating the community and gender focus from the project design to the finalization of the works.	Preliminary diagnosis with a community level focused on the gender. Organized information on the communities of each work to be rebuilt.	Completion of the pre-diagnosis. Workshops on information and training focused on community and gender with the subcontractor companies of the CDM team. Application of field research tools. Interviews with community leaders Identification of social actors involved in the project at the social level Field research	Together with the communities, participation proposals will be created in any of the phases of the execution process of the works. Moreover, a coordination drain will be opened with the subcontractor companies for the relative assessments to the integration of the following components: community and gender.
CONTRACTING PLANNING CONSTRUCTIO N PHASE	Creating tools of planning, measuring, application and registration of the social area to enable standardize intervention models in the entire process of the project.	Conceptual framework of the community and gender focus to apply. Promotion plan design of the work construction. Evaluations of the technical specifications of the social management area (when solicited)	Identification and contact with the communal organizational structures. Train the offering companies for the building with focus on community and gender. Support evaluations of the social management component to choose subcontractor companies. Study profiles of social management staff of the contractors. Study of the work programs of the social management component. Preparation of tools of registration and	The specialist of the community area will plan in advance: plans, tools of registration, framework of reference, etc. that direct the subcontractor companies for the integration of the component in their proposals. In this phase, programs, profiles and resources appointed to the social component will also be evaluated

PROJECT PHASES	OBJECTIVES	LINE OF ACTION / COMMUNITY AREA	TASKS	METHODOLOGY
			measure to monitor.	
SUPERVISION PHASE	Through the monitoring, supervising and evaluating actions, guaranteeing the quality of social management and the application of actions that harmonize the construction and reconstruction of the works, in the whole process of execution of the projects.	Supervising the quality of the social management and gender component. Certify the integration of the communities in the reconstruction project Apply processes of training specialized in the community and gender area.	Field supervision Verification visits Consultancy Evaluation of the strategies and working goals of the contractors in the field of social management. Model proposals of maintenance and tracking plans from the communities. Training planning in specific areas focused on community and gender.	The contracting firms will have to integrate the communities in the process of construction and take actions that take into account the participation of the beneficiaries in the construction process. Through a system of monitoring and supervision tasks in the field they will help guarantee the application of the community focus.
CONSTRUCTION CONTRACTS FINALIZATION	Guaranteeing that the contracting companies apply the maintenance and care plans as a mean to strengthen the development of the communities.	Monitoring the application of the maintenance plans.	Together with the contractors opening processes of training to apply tracking and care plans Presenting the closing and social impact reports required. Presentation of evaluation reports.	The coordinator of the community and gender area of the CDM team, together with the contractors and their specialists in Social Management will work the maintenance and care plans of the works. In a second time, they will open training days by working sector (schools, units of health and bridges).
Training development	Raising awareness, promoting and training the integration of the gender perspective in the subcontracting companies of the CDM team, contractors and other parties involved in the whole process of execution of the project.	Training to apply the focus on the communities and the gender perspective Trainings on the use of tools and social intervention registry	Planning of trainings focusing on community and gender. Execution of training processes. Evaluation of training processes.	Training plans will be made for respective approval Necessary training days will be implemented for all the instances involved in the project. Moreover the contractors will be trained on the communities and genders theme.
Documentary and information development	Systematize the consecutive processes and the community and gender focus applied, with purpose of knowing the successful experiences and learnt lessons in the development of the reconstruction project.	Data and information on the community and gender process applied.	Presentation of monthly reports. Presentation of quarterly reports. Presentation of closing reports. Creation of tool documents for the works field.	

5 Tasks Implementation

For each set of health care facilities, schools, and bridges, as result of the selection process of the USAID, four common tasks shall be performed in accordance with the requirements included in the USAID's task order for this project and subject to the scope described in this section.

a. Rapid appraisal, which will provide the basic information and a quick appraisal for the decision-making process of prioritization and selection of facilities to be reconstructed under the project.

b. Assessment and Preliminary Design: Includes all the technical studies and assessments to complete preliminary designs documents, defined as 30% of final design (or 30% construction documents) necessary to implement the tendering process for procurement of D/B Contracts.

c. Tendering: Based on uniform final design documentation, the tendering process will lead to the selection of qualified D/B contractors for the execution of the rehabilitation/ construction of facilities (the quality of the bidding contractors is anticipated to be approved and facilitated by the prequalification process).

d. Supervision of D/B contracts: Comprises management and oversight to better ensure that every D/B Contract will be completed in compliance with final designs documents, drawings, specification, as well as within planned schedules and budgets. Through following the quality management system (QMS), the quality of each of D/B contract results is better ensured. Contracts closeouts at the end of Supervision of D/B contracts services will include, financial closeout, capacity building and reception of final deliverables as well as facility turnover.

5.1 Studies, Assessments and Preliminary Design

CDM Smith has divided the "Studies, Assessments and Preliminary Design" phase into two distinct sub-phases: Rapid Appraisal and Detailed Studies which includes Assessments and Preliminary Designs.

For both sub-phases, CDM Smith will develop and apply uniform guidelines for subcontractors to conduct the work according to the work plan. Initial discussions and training on these guidelines before deployment of staff to the field is a critical step to ensure a common understanding regarding methodology, process, expected outcomes and reporting. All subcontractors will share these common guidelines and methodology /templates for field assessments.

5.1.1 Rapid Appraisal

There will be a rapid appraisal (of roughly 4-6 weeks duration), scheduled to start in February 2012, following the verification of facilities and development of evaluation criteria (completed in mid March 2012 as mentioned above). The rapid appraisal will include a confirmation/verification of rehabilitation, reconstruction, or construction needs at all sites. Following the Rapid Appraisal, facilities/Bridges for which there is consensus between USAID and stakeholders can proceed to more detailed study and preliminary design phase. We propose that a subset of these facilities – those facilities with repair or construction requirements that are less complex, demanding less significant duration, and have a negative environmental determination can be Fast-Tracked.

Fast-track Facilities: In order to achieve early 'concrete' results, and early starting and testing of procedures from design through tendering that can be used to adjust and improve processes going forward, CDM Smith plans to complete work – from beginning to end – on selected facilities using a fast-track approach. The first step for this approach is consulting with, and concurrence from, USAID and the Ministries on the identification of these facilities resulting from the analysis of the findings/recommendations from the rapid appraisal. The preliminary criteria for the selection of these Fast-Track Facilities are:

a. Schools for which improvements are less extensive and less expensive than others;
b. Health care facilities that require rehabilitation, not new construction;
c. Facilities/Bridges that have a negative environmental determination; and
d. Facilities/Bridges for which streamlined design and tendering (with USAID assistance) can produce an improved set of facilities well in advance of others requiring more intensive study and design.

The proposed fast-track process will be carried out with due diligence and sensitivity to minimize misleading expectations. It will require collaboration from USAID and other stakeholders to facilitate selection of target sites and expedite procurement, approvals and review processes for schedule compliance.

The main objective of the rapid appraisal is the development of a list of re-prioritized facilities, resulting from an analysis of the data gathered during the rapid appraisal that includes a rationale for the re-prioritization and where the highest priority facilities will be selected for Fast Track development through a presentation with USAID/Stakeholders, followed by discussion and approval.

CDM Smith as USAID's A/E contractor is will accomplish the following activities:

a. Will be responsible for conducting a rapid appraisal, including consultations with the Ministries related to facilities, to review available information; preparation of field assessment guidelines/criteria to ensure reporting consistency.

b. The primary information to be collected during the rapid appraisal includes: site specific data on facilities themselves, the site (drainage, etc.), environmental features (for USAID EA requirements). This site specific data will enable the development of a scope of recommended improvements (rehabilitation needs as identified by the ministries, additional rehabilitation needs, and improvements needed to correct code violations), define a preliminary estimated cost of D/B construction and related services to be included within the D/B contractor scope for each facility, based on index numbers, experience and expertise, estimated final design and construction duration in order to provide preliminary information to share with USAID and Stakeholders along with recommendations for prioritization.

c. The listing of facilities as included in the SOW addendum is presented in order of priority by the ministries themselves. The recommended prioritization of facilities (by groups) will adhere to the priority listing as presented order of priority developed by the ministries (see Section 10 for facility lists) to the extent possible and practical. It is understood that there may be some reordering (of the ministry listings) based upon the findings of the rapid appraisal and the analysis of the data collected, e.g. location convenience of grouping some facilities within a package, etc. CDM Smith will present its recommended prioritization in a tabular format, comparing recommended prioritization with the Ministries recommended prioritization with a rationale for revisions, if any, between the two lists. Recommendations will include proposed sites for early/execution, with phased implementation of more detailed assessments, and preliminary design for facilities that will be included within the design/construction program. The recommendations will take into account the allocated funds under the Project. The first priority set of facilities, will be considered 'Fast Track' facilities.

Expected deliverables are:

a. Background description/rapid appraisal data associated with each facility

b. Prepare the Initial Environmental Evaluation Report for each site by filling out the following annexed IEE forms: III-A. Environmental Screening; III-B. Identification of Mitigation Plan; and, III-C. Environmental Monitoring and Evaluation Tracking Table; and,

c. Survey report of existing infrastructure and proposed scope to rehabilitate and to bring facility to code or recommendation for facility to be relocated for construction /rehabilitation purposes.

d. Define a preliminary estimated cost of construction for the rehabilitation scope for facilities and bridges, based on index numbers, experience and expertise, in order to give

USAID preliminary information to define the facilities/bridges that could be included within the design/construction program with the allocated funds for activity under the Project.

e. Basic inputs to plan social work management by answering the following questions: How is the community organized? Who are the community leaders and how to contact them?, and how the community defines the social environment?

f. Tabular summary listing of all facilities that are reprioritized along with the rationale for changes to the priority assigned by the Ministry.

5.1.2 Detailed Studies and Assessments

As groupings of facilities are approved by USAID/stakeholders, teams of specialists from our technical subcontractors will be mobilized to each facility and collect all the information needed for preparation of project profiles for the preliminary design stage.

Detailed studies data for schools and clinics will complement the information provided by Ministries and will include:

a. Site analysis, including GPS/GIS location, topographical survey, analysis of risks/hazards, type of soils, and overall functioning of the site. The analysis will include inspections for industrial-type health risks.

b. Determination of architectural and engineering requirements and initial feasibility;

c. Specialized studies including electrical systems, potable water supply, storm water drainage, sanitary facilities and sewerage disposal, solid waste disposal, hazardous and infectious wastes disposal in health care facilities, etc.;

d. Structural analysis, especially due to damage caused by water infiltration into the foundations; and

e. Measurements and drawings including floor plans, elevations, facades, sections, and structural details on walls, roofs and roof structures, and inventory of accessories such as windows, doors, electrical circuit boxes, lamps, gutters, valves, perimeter walls, gates, etc.

f. Identification of equipment needs. In the case of commodity procurements, CDM Smith will validate these needs in consultation with relevant ministries and USAID.

g. All facility assessments will include consideration of gender-sensitive factors for facility design (such as ensuring separate sanitary facilities for boys and girls in all schools). Architectural drawings of all the facilities will be accompanied by photographs and narratives of each location and condition of all architectural and engineering elements, especially those that reportedly are most in need of replacement and rehabilitation, such as: leaking roofs, clogged / inadequate drainage systems and un-sanitary facilities.

h. All drawings and topographical studies will be digitized, in AUTOCAD files.

i. Soils tests and hydro-geologic tests will be necessary for vertical structures in some cases. Lab tests will be conducted to draw a profile of each site where rehabilitation and new construction will be implemented. Perforations will be required in those sites where floors have deformed due to humidity/water infiltration.

The general assessment for bridges requires the following studies:

a. Topographical;
b. Geological;
c. Geotechnical and Geophysical;
d. Hydrological and Hydraulic; and
e. Traffic

Topography: Longitudinal topographic measurements of the river and the road will be performed (200 meters upstream and 200 meters downstream, and 200 meters before and after the bridge), with cross section measurements at 20 meters each in order to draw a topographic map with 1 meter curves/gradients of the river and the road. All existing infrastructure will also be included in this map (trees, fences, access to adjacent properties, and others. The topographical map will be geo-referenced to geodesic markers of the "Centro Nacional de Registros, (CNR)". Plans and maps will be presented in CAD.

Geology: Geological investigation will begin with site visits and research on the lithological, stratigraphy, tectonic characteristics, alignments and faults in each site. Other areas of study and activities include:

a. Determination of geological and seismic risk;
b. Location of borrow pits and location of access roads to borrow pits;
c. Preparation of geological map; and delivery of geological report for each bridge site.

Geotechnical and Geophysical Studies: Geotechnical studies will encompass the following:

a. Establishment of Geotechnical Program (field work and laboratory programs);
b. Field exploration, including drilled wells (at 1.5 and 3 meters depth at each bridge location);
c. Mechanical subsoil exploration with rotational equipment (2 boreholes at each bridge location at depths of approximately 15 to 30 meters;

d. Exploratory Standard Penetration studies (following requirements of Norm ASTM D-1586, at depths of approximately 5.00 meters (4 studies at each bridge);

e. Laboratory Tests, including among others: Atterberg tests, organic matter content, density, bearing ratios, grain size analysis, materials compression and gravity, mineral content and others as established by ASTM Norms.

Geophysical Studies: These will be conducted by seismic refraction in the area of location of each bridge. In the case of Titihuapa y Acahuapa bridges a minimum longitude of 100 meters will be used, in all others, 50 meters. Subsoil profiles will be drawn and soil materials identified, as well as all other components of the bridge substructure. Based on site visits and laboratory analysis, a geotechnical profile will be presented with conclusions and recommendations in a report with maps and tables.

Hydrological and Hydraulic Studies: The purpose of the studies is to determine in a section along the river the maximum discharge, maximum velocity, and maximum surface water level for the design of a bridge. Hydrological studies will include:

a. Determination of the watershed characteristics: area, length of the longest course, perimeter and slope;

b. Determination of the time of concentration;

c. Determination of the use of the land in the watershed;

d. Determination of the runoff coefficient;

e. Rainfall analysis - intensity, duration and return period of rainfall;

f. Application of the Unit Hydrograph method to determine maximum discharge in a select point of the river for the design of the bridge;

g. Determination of scour characteristics

h. Topographic studies at the site of the bridge and determination of cross sections of the river at a distance of around 500 meters each upstream and downstream;

i. Application of HEC-RAS method and the Manning formula to determine maximum water level, area of the section and maximum velocity at the site; and

j. Analysis of erosion problems and determination of scour in bridge piers and below hydraulic structures.

Traffic Studies: Traffic counts will be conducted for 7 days at the closest point of access to the bridge. This information will be used for the projection of Annual Daily Average Traffic. This

information is critical for the design of the bridge - paving surface treatments and structural elements specifications.

After field assessment task is completed and results compiled and analyzed, CDM Smith will again hold consultations with USAID, and MOP to ensure agreements with the design needs in each bridge. CDM Smith will also hold consultations with MARN to identify and discuss requirements and better ensure an adequate and timely environmental permitting process. After the Rapid Appraisal and the detailed studies phases are completed, CDM Smith will begin the process of preliminary design.

The main objective of this phase is the completion of more detailed studies and assessments required for the preliminary design for facilities/bridges (facilities/bridges grouping) to be approved by USAID.

CDM Smith as USAID's A/E contractor will accomplish schools and clinics the following activities:

a. Compile and review information:
    i. Collect/review/validate available information that Salvadoran Ministries (MINED and MINSAL) staff has compiled on the structures to be rehabilitated/reconstructed (in addition to that provided during the proposal phase).
    ii. Identify and review existing policies governing clinic design;
    iii. Conduct identification of property setbacks and alignments of site, including verification of tenure/title with proper authorities.
    iv. Collect and review the required regulatory information, as well as property ownership documents: property information, zoning ordinances, permitting requirements, and other baseline approvals.
    v. Determine availability and accessibility of utility services, such as electricity, tap water, sewage system, and telephone service.
b. Develop a program of requirements for clinics (ECO's, vaccinations, birth, etc.).
    i. The programs will be based on the policies and standards provided by the government, tailored to the particular site. The specific program of requirements will take into account planned activities at the projected/planned capacity or enrollment as appropriate.
    ii. For each facility, identify its pre-hurricane capacity.
    iii. For each facility, identify the actual usage prior to the hurricane.
    iv. Using the information above, define the trends, target market and stakeholder groups in consultation with ministry and/or related city hall, and principal for medical

administrator for health facilities, in order to define space needs projections for the next five years.

v. In the same way, an expansions master plan shall be established for the rational use of space, based on clinic design projections for 20 years ahead and construction usage for the next 5 years.

c. Complete a site analysis:

i. Complete all required feasibility studies, topographic mapping (with geo-referencing, including planimetry and altimetry of the site and close contour), and preliminary geotechnical investigations for each site, including at least 3 standard penetration tests (SPT) per site.

ii. Flood plain information.

iii. Assessment of site stability during storm events.

iv. Complete a technical description for each site, based on geodesic reference of National Center of Registers (CNR).

v. Document conditions at each site (including profiles and pictures), including the existing infrastructure, vegetation, existing facilities, such as electrical, plumbing, telephone, etc.

vi. Identification/description of environmental issues at each site that will be used as baseline data to be incorporated into USAID EAs, MARN EIAs and Environmental Mitigation Plans (EMPs).

vii. Inspection of the site, risk analysis and assessment of geographic, hydrographic, road connections, weather, winds, solar radiation, rainfall, temperature, and other factors. This will also include environmental data collection in accordance with requirements for EA/EIA.

d. Identify/recommend a subgroup of facilities that require less significant construction time and resources to rehabilitate – these facilities will be proposed for 'fast-track' design/build execution.

e. Develop preliminary maintenance plans for proper O&M of facilities.

CDM Smith as USAID's A/E contractor will accomplish for rehabilitation of bridges the following activities:

a. Collect/review available information that Salvadoran Ministry of Public Work (MOP) staff might have compiled on the structures to be rehabilitated/reconstructed (in addition to that provided during the proposal phase).

b. Conduct identification of property setbacks, including verification of tenure/title with proper authorities,

c. Collect the following data: alignment data, roadway width, intersection stations & angles, span lengths & numbers, angles between bents & centerline, existing structures, right-of-way lines, detours / traffic staging, demolitions, utilities, location map, live load loading (sketch and note), expansion and fixed joints, elevation datum, existing ground line, high water and ordinary high water elevation, proposed ground line, end slope and protection, hydraulic data, grade lines, typical bent section, roadway clearances, guardrail transitions, footing elevations and pile types, datum elevation.

d. Feasibility of facilities for construction stage, such as electricity, tap water, sewage system, and telephone service.

e. Existing policies or future expected traffic density for each bridge or its related highway.

f. Define the trends, target market and customer by consulting to Ministry of Public Work and/or related city hall, in order to define the type of bridge needed at least for the next 100 years.

g. Technical description for each site, based on geodesic reference of National Center of Registers (CNR).

h. Document conditions at each site (including profiles and pictures): geographic and geometrics properties of the watershed; land use. Natural storage, vegetative cover, and soil property information; description of the drainage features of the watershed; rainfall observations and statistics of the precipitation; and, stream flow observations and statistics of the stream flow.

i. Document the existing facilities supported by the bridge, if any, such as electrical, plumbing, telephone, etc.

j. Identification/description of environmental issues at each site that will be used as baseline data to be incorporated into USAID EAs, MARN EIAs and Environmental Mitigation Plans (EMPs).

k. Inspection of the site, risk analysis and assessment of geographic, hydrographic, road connections, weather, winds, solar radiation, rainfall, temperature, and other factors. This will also include environmental data collection in accordance with requirements for EA/EIA.

l. Complete all required feasibility studies, as follow:

    i. Topographic mapping (with geo-referencing, including planimetry and altimetry of the site and close contour), delivering cross-sections of the river every 20 meters, at least 400 meters upstream and 200 meters downstream.

    ii. Validate hydrology studies based on annual recurrence interval of 100 years for the superstructure and 500 years for the substructure, in order to minimize the climate

change risk, and to assure the resiliency and adequate robustness of infrastructure design.

iii. Determine stream flood profiles for existing and future conditions through hydraulic modeling;

iv. Preliminary geotechnical investigations for each site, including at least one rotational penetration test (RPT) per site for Acahuapa, San Antonio and Titihuapa, and only standard penetration test (SPT) for the others up to 10 meters.

v. Define the impact of potential bridge scour and stream degradation, especially if an encroachment on stream could be recommended.

vi. Define the better and cost-effective location if a new bridge is recommended.

m. Identify/recommend a bridge that requires less significant construction time and resources to rehabilitate – this infrastructure will be proposed for 'fast-track' design/build execution.

n. Develop preliminary maintenance plans for proper O&M of facilities/sites.

Expected deliverables are a report on each site (including but not limited to site plans, programs, and other information described above), which includes results of each study/assessment and recommendations for design improvements.

5.1.3 Preliminary Designs

Schools and clinics

The information provided by the GOES ministries and the findings, conclusions and recommendations of the assessments will be basis for preparing preliminary designs. These will take into consideration mitigation measures for natural hazards and the effects of climate change and/or environmental risks in each facility. In all cases, CDM Smith will incorporate requirements for energy efficient technologies (which may be limited to the building elements being rehabilitated), and will work in close collaboration with MSPAS to not only comply with their needs and local construction standards, but to update their requirements and specifications, based upon the judgment/recommendation of the designers.

Preliminary designs are defined as 30% complete for all health care facilities, except in those cases where more in-depth structural investigations would be needed due to infiltration of water into the building's foundations and depending on soil conditions.

In order to build back better, CDM Smith may well go beyond ministerial requirements, adding/prescribing and designing with consideration to, among others: earthquake-resistant standards and specifications, materials and labor quality, testing methods, norms and standards,

construction procedures, methods for handling maintenance and repairs in different elements (which will include user-friendly guidance to communities, parents and staff), additives and accessories, norms on measurements, and characteristics and capacities of equipment and special installations.

Specific recommendations for the Design-Build (D/B) approach will be an integral part of CDM Smith's contribution for vertical structures as well as for bridges.

USAID Approval of Preliminary Designs: As all preliminary design information, analysis and recommendations is completed for all facilities, CDM Smith will furnish preliminary design documentation for USAID for approval.

Main objective will be the completion of preliminary design (30%) for each USAID approved facility, in preparation for Design/Build procurement.

CDM Smith as A/E contractor will accomplish the following activities:

a. Final Architectural Program, taking into account: comments received from approving agencies, needs of the owner and user, and also the financial resources allocated.
b. Application of Design Criteria, including facilities accessible to persons with disabilities.
c. Provide input to a design criteria document, meant to establish a uniform approach to design of common elements and or materials to be used in construction.
d. Preliminary design drawings and calculations: will vary with scope, but will include a report consolidating preliminary research and proposed design, final space program, and preliminary estimate of construction cost. Other elements to be included, depending on scope, include:
    i. Site layouts, indicating facility placement, site work, utilities and facility designs needed for all facilities or aspects of facilities that are on –areas identified for rehabilitation/improvement works. The designs will include mitigation measures for effects due to climate change and/or environmental risks and incorporate requirements for energy efficiency.
    ii. Preliminary Architectural Design; proposed site design within its urban or rural context, proposed spatial relationships, complex layout and level definition, and building layout. Enlarged layouts of key spaces, showing furnishings and equipment.
    iii. Code study, showing occupancy loads, egress analysis and fire separation plan.
    iv. Following CDM Smith guidelines, and based upon available standards, develop appropriate specifications. Documented local standards are to be used for clinic construction. If local standards do not exist, then CDM Smith will identify appropriate

standards and codes for application to the project, such as IBC 2012. Further, when facility access is part of the approved rehabilitation/ reconstruction, US ADA accessibility standards will be utilized (www.access-board.gov/ada-aba/final.cfm).

e. Pre Design of Engineering: Identify technical problems, and give recommendations to solve them. Describe proposed structural system and general structural bay size.

f. Drawings by discipline, indicating damages to repair/rehabilitate (architecture, structures, plumbing, electrical, mechanical, equipment, furniture, etc.

g. Develop estimated bill of quantities (BOQ) for each site.

h. Based upon the specifications and BOQ, Subcontractor will develop a cost estimate for the improvements for each facility (Estimated budget for final design and construction stage of each facility).

i. Contractor will confirm that plans meet Ministry's needs and local construction standards.

j. Develop the Environmental Form (Formulario Ambiental) for each facility for submittal to MARN. An EIA is not included.

k. Develop a project schedule (in MS Project) in electronic format, updated with progress to be submitted biweekly and monthly.

Expected deliverables for each facility are:

a. Design documents and calculations

b. Design drawings

c. Detailed technical Specifications

d. Bill of Quantities (BOQ)

e. D/B Contractor Scope of Work, including requirements for final design

f. Other documents:

   i. Preliminary design report (digital and hard copy), summarizing the proposed design and scope, along with cost data.

   ii. Narrative describing recommended approach for architecture and engineering disciplines.

   iii. Basic site-specific data such as area of facility by floor, capacity of facility, etc. Include list of applicable codes.

   iv. Topographic drawings (digital and hard copy), including location of all existing services

   v. Plan, profile and section drawings of existing facilities(digital and hard copy)

   vi. Site plan identifying all risks/hazards and vulnerabilities, as well as pedestrian and car traffic around and on site, accessible routes around the site, etc. Show setbacks,

rights-of-way, and other constraining information. Show sun arc, prevailing winds, and other elements that may influence design.

vii. Plan to mitigate all identified risks/hazards and vulnerabilities

viii. Proposal for temporary relocations, demolition, rehabilitation, improvements for reparation of existing facilities.

ix. Plan and detail drawings (digital and hard copy) for proposed rehabilitation or new design/construction of facilities.

x. Site survey, including topographic profile drawings; these are to include adjacent properties and land uses (digital and hard copy).

xi. Elevation and section drawings of the design proposal of the new facilities and or facilities proposed for rehabilitation/reconstruction (digital and hard copy).

xii. Adjustment of MINSAL standards to site conditions and specific needs.

xiii. Preliminary drawings of proposed for plumbing, sanitary, fire, electrical and structural elements (digital and hard copy).

xiv. Suggested MS Project schedule, considering the impact of seasonal considerations during the design and construction stages.

xv. Detailed technical specifications.

xvi. Structural and soil considerations, to be required to the D/B contractor and specific protections to be designed for him.

xvii. Estimated budget, including detailed direct and indirect cost. It will be used to allocate funds for each facility and to compare the economic offers during the D/B bidding process.

Bridges

Based on the results of studies and assessments, and in consultations with MOP, the preliminary design for bridges and construction alternatives will be prepared. These alternatives will be evaluated based on technical feasibility parameters. The final preliminary design will be approved in consultation between USAID and MOP. Preliminary design for bridges will be prepared based on the requirements of “AASHTO LRFD Bridge Design Specifications, Fifth Edition, 2010.”

Likewise, seismic forces will be evaluated in accordance with the requirements of the "Regulation for the Security of Structural Constructions of the Republic of El Salvador", the "Standard Technique for Design of Foundations and Stability of Slopes" and other standards that are part of this regulation, as appropriate, which will be complemented by the above mentioned AASHTO LRFD specifications.

Preliminary design of bridge structures and paving design: The design of bridge structures will include addressing freeboard elevation, size of bridge opening, bridge type and location, scour preventive measures, foundation type, and seismic design requirements, among other aspects, design approach includes:

a. Geometric design of the roadway;
b. Preliminary design of bridge structures;
c. Preliminary design works for environmental protection and/or mitigation;
d. Design of pavement of approaches to the bridge;
e. Study of drainage works;
f. Development of drawings and technical documents;
g. Preparation of preliminary budget and bills of quantities, including environmental protection/mitigation works; and
h. Based on the geotechnical and traffic characteristics along the route, two alternatives for the road layers will be considered: an asphalt layer and a layer with hydraulic concrete slabs. AASHTO 93-based methodology and the corresponding software will be used for the evaluation and design of pavements for approaches to San Antonio, Titihuapa and Acahuapa bridges.

USAID Approval of Preliminary Designs: As all preliminary design information, analysis and recommendations is completed for all facilities, CDM Smith will furnish preliminary design documentation for USAID for approval.

Main objective of this phase is the accomplishment of preliminary (30%) designs suitable for design/build contracting, which includes but may not be limited to the following:

a. Design Drawings
b. Calculations
c. Specifications
d. Bill of Quantities (BOQs)

CDM Smith as A/E Contractor will perform and accomplish the following activities:

a. Final Geometric Design, taking into account: the technical studies and assessment, the needs of the owner, user and also the financial resources allocated.
b. Final Diagnosis and actual project
c. Design Criteria, including handicap facilities. This will be previously approved by COP, before design stage could be initiated.
d. Provide input to a design criteria document, meant to establish a uniform approach to design of common elements and or materials to be used in construction

e. Aesthetics analysis as part of preliminary structural studies to assure the best appearance for the bridge and to be a complement for his surroundings.

f. Preliminary design drawings and calculations – site layouts, indicating facility placement, site work, utilities and facility designs needed for all facilities or aspects of facilities that are on –site and identified for rehabilitation/improvement works. The designs will include mitigation measures for effects due to climate change and/or environmental risks and incorporate requirements for energy efficient technology. Preliminary design for bridges will be prepared based on the requirements of "AASHTO LRFD Bridge Design Specifications, Fifth Edition, 2010.

g. Preliminary Architectural Design; proposed relationships of urban spaces, proposed rooms relationship, complex layout and level definition, and building layout.

h. Architectural drawings

i. Based upon available standards, develop appropriate specifications. Documented local standards are to be used for bridges construction. In the case that no local standard exists for the task in question, then the US standard should be used. Further, when facility access is part of the approved rehabilitation/ reconstruction, US ADA accessibility standards will be utilized (www.access-board.gov/ada-aba/final.cfm)

j. Pre Design of Engineering: Identifying technical problems, and give recommendations to solve them. Pre-dimensioning is included

k. Drawings by subject, indicating damages to repair/rehabilitate (architecture, structures, plumbing, electrical, mechanical, etc.

l. Develop estimated bill of quantities (BOQ) for each site

m. Based upon the specifications and BOQ, A/E Contractor will develop a cost estimate for the improvements for each facility (Estimated budget for final design and construction stage of each facility).

n. As designs are developed, A/E Contractor will confirm that plans meet Ministry's needs and local construction standards.

o. Gather of required approval according to the local law

p. Develop "Formulario Ambiental" for each facility for submittal to MARN. An EIA is not included

q. Develop a project schedule (in MS Project) in electronic format, updated with progress to be submitted biweekly and monthly.

r. Define Scope of Work for D-B phase.

Expected deliverables are:

a. Digital and hard copy of a summary report, including site reconnaissance, project development and justification, right of way restrictions, permits and restrictions, and utility conflicts or restrictions. This report shall include enough color photographs to provide the look and feel of the bridge site and the real status of the bridges.

b. Topographic drawings (digital and hard copy), including location of all existing services and land uses.

c. Plan, profile and section drawings of existing facilities(digital and hard copy)

d. Site plan identifying all risks/hazards and vulnerabilities

e. Plan to mitigate all identified risks/hazards and vulnerabilities

f. Proposal for demolition, evict, rehabilitation, improvements for reparation of existing facilities

g. Preliminary design concepts for previous approval of COP, detailing decision or assumptions, including: the analysis to justify the bridge instead other type of structure (culvert, box, etc); foundation support assumptions (assumed pile or drilled shaft bearing capacity loads, assumed lateral soil pressure, and liquefaction potential); seismic load assumptions; structures features.

h. Technical report of aesthetical analysis and pre-structural design of bridges and proposed dimension for bridge's structural components, including a short description of the structure topology, software used, computer inputs and output, detailed notes and structural specification.

i. Plan and detail drawings (digital and hard copy) for proposed rehabilitation or new design/construction of facilities.

j. Suggested MS Project schedule, considering the impact of seasonal considerations during the design and construction stages.

k. Detailed technical specifications and structural and soil considerations, to be required to the D/B contractor and specific protections to be designed for him.

l. Estimated budget, including detailed direct and indirect cost. It will be used to allocate funds for each bridge and to compare the economic offers during the D/B bidding process.

5.2 Design-Build Contract Procurement

Through frequent meetings / discussions to be held during this period, CDM Smith will assist USAID in developing Statements of Work and Request for Proposal documents for Design-Build procurement by furnishing all preliminary designs, bills of quantities (or lump sum bid items), cost estimates/budgets, technical specifications, work programs, and any other technical documentation necessary for tenders preparation, including occupational health and safety plans.

This information should be complete and sufficient for Pre-qualified D-B Construction Contractors to prepare full designs and construction plans. As they submit their D-B bids, CDM Smith will assist USAID to review and award contacts.

Based on the early construction contractor pre-qualification process – which will accelerate this phase – the bidding process and contractor selection for D-B Awards includes several steps in the methodology:

a. Announcements;
b. Bidding conferences;
c. Managing the bidding process;
d. Evaluation of offers;
e. Ranking of offers;
f. Negotiations;
g. Facilitating approvals from MINED,MINSAL, MOP, and MARN;
h. Contract Awards.
i. Quality control standards must be considered during procurement.

Pre-bid meetings: During pre-bid conferences, construction contractors will also be made aware of FAR compliance and CDM Smith's Health and Safety requirements with which they must comply on site, including code of conduct in relations with the communities. The CDM Smith El Salvador-based team will periodically verify compliance with health and safety and code of conduct requirements on site from all contractors.

Main objective of this phase is the completion of documentation and provide guidance to USAID for the completion of D/B Contract Packages that provide sufficient detail and guidance to D/B Contractors that minimizes potential issues in awarding D/B Contracts and misinterpretations during D/B construction.

CDM Smith as A/E contractor will accomplish the following activities:

a. Reproduction, collation, and providing copies of material for bid packages, e.g. design drawings, specs and BOQs. These materials are to be provided in bilingual format as feasible as materials for bid package will be produced in both English and Spanish, where English is the governing language. To the extent possible/practical, the contractor will produce bid documents (design drawings, BOQs, Specifications) in bilingual format and/or uniform format that do not have to be translated to serve as both the Spanish and English version of the bid document.
b. Provide inputs/recommendation for scheduling of works.
c. Provide inputs/recommendations on QA/QC procedures to be followed by Design Build contractors.
d. Providing recommendations on contract packages (identify facilities for each bid package)
e. Responding to questions from bidders on designs produced.
f. Assist in review of tenders, including mathematical checking and input into selection reporting.
g. Follow up with MARN as necessary for approval of EIAs.

5.3 Design-Build (D-B) Supervision Services

5.3.1 Final Design

Main objective will be the completion of final designs for each USAID approved facility, if an environmental assessment is recommended, it will be performed by the responsible D/B contractor.

USAID Approval of Final Designs: As all final design information, analysis and recommendations is completed for all facilities, CDM Smith will review design documentation for USAID for approval.

CDM Smith will monitor, review and emit concurrence for the next deliverables produced by the D/B Contractors, and will be used as input and reference for the construction stage:

a. Design documents and calculations
b. Final Design drawings
c. Updated Detailed Technical Specifications
d. Updated Bill of Quantities (BOQ)
e. Construction and environmental permits, inclusive environmental mitigation plans (EMP's) and Environmental Assessments (EA's) if necessary.

f. Other documents:

   i. Final design report (digital and hard copy).

   ii. Site plan identifying all risks/hazards and vulnerabilities. Plan to mitigate all identified risks/hazards and vulnerabilities during construction process.

   iii. MS Project schedule, considering the impact of seasonal considerations during the design and construction stages.

   iv. QC Management and Safety Plan.

5.3.2 Construction Stage

CDM Smith's approach to construction management support and supervision services – to ensure Contractual Performance – is summarized below by making reference to our own Project Cycle Control Process that includes:

a. Review and approve payments/vouchers;
b. Resolve Contractual issues;
c. Provide Quality Assurance;
d. Monitor overall planning, scheduling, scope and cost controls;
e. Progress reporting and maintaining records; and
f. Close Contract at final completion of the works.

CDM Smith will provide assistance to USAID for the development of bidding requirements which would include mobilization plans and construction manuals from all contractors; and develop its own supervision plan with established benchmarks, performance metrics and identification of performance deviations, evaluations for corrective actions, and adjustments. Field supervisors will document performance and deviations daily in the field and convey to the main office to evaluate results and draw lessons learned for improvements on the ongoing projects.

A quality control plan will be an integral part of our supervision plan. This will be established for each project at start-up. It will enable field supervisors -- architects and engineers -- to measure work products, quality of workmanship, and conditions on site against set quality benchmarks. Where field architects and engineers notice performance deviations between plans and field implementation, they will either work with the contractor on site to make reparations or escalate a report to the COP who will resolve the matter with the contractor's management and advise USAID of possible problems and potential claims. All materials will be checked to ensure compliance with specifications in the contract documents.

In addition, CDM Smith will advise USAID on contractors work schedule; will attend pre-construction meetings and prepare minutes, and advise the COTR on quality control issues and progress in the regular reporting process.

Construction Contract Completions: In a timely manner, CDM Smith will conduct the necessary inspections and monitor Punch Lists to determine the remaining works to be completed. When remaining works are satisfactorily completed, CDM Smith will assist USAID in issuing Certificates of Substantial or Final Completion.

Upon completion of works, CDM Smith will review and certify all As-Builts, and help ensure that any other documentation required in the construction contracts are submitted properly.

CDM Smith will also review any required operation and maintenance (O&M) manuals before submission to USAID and before finalization for on-site use.

Training and Capacity Development: CDM Smith will ensure that D/B construction contracts require that vendors who furnish equipment with specialized installation, operation, and maintenance provide appropriate education and training to the recipients' personnel in the field. CDM Smith will also assist relevant ministries receiving the infrastructure provided in developing, disseminating, and establishing maintenance plans for such infrastructure and infrastructure components.

Main objective of D-B Supervision Services is the verification by regular monitoring and presence on site that the D/B Contractor complies with the approved design, specifications and other requirements in carrying out the rehabilitation/reconstruction activities, while maintaining proposed/approved schedule.

CDM Smith as A/E contractor will perform the following activities:

a. Mobilization/startup
    i. Verify contractor mobilization plans, including recommendations for approval of work schedule and issuance of notice to commence.
    ii. Participate in pre-construction meetings and prepare meeting minutes.
    iii. Review and advice on quality control issues and plans.
    iv. Approve design-build contractors' QA/QC plans. In a timely manner, notify of non-compliance with current US industry quality standards.
    v. Review construction (including health and safety) manuals or other materials provided by the construction firms for accuracy, operational usefulness, and consistency that are used to guide the construction contractors on construction procedures, forms

required for inspection, handover, testing, submittals, transmittals, and other topics as necessary.

b. Reviews of submittals

   i. Verify and validate all engineering and construction documents, assessments, and design / build proposals for the rehabilitation and reconstruction of schools, and health clinics for awards

   ii. Review records of the construction contractor's critical path method (CPM) construction schedules and ensure that they comply with construction contract documents. Submit these CPM schedules to the COTR and recommend acceptance or rejection.

c. On site activities, monitoring and reporting

   i. Monitor and report on construction activities, including review and approval recommendation of shop drawings and submittals provided by the construction contractor. Ensure that the design-build contractor(s) obtains all required permits and approvals and those construction activities comply with all applicable laws and standards.

   ii. Continuously monitor and advise on the progress of the work, by conducting site visits and providing weekly progress highlights and detailed monthly progress reports. Monthly progress reports should describe the value of works completed; problems that may require USAID/COTR attention, actions taken to date by the A/E firm, the likelihood that completion could be delayed or advanced, and whether circumstances reported could affect projects costs. Monthly progress reports shall include, but not be limited to, documentation of test results, mitigation of issues in environmental assessments, and project progress photographs.

   iii. Advise USAID of possible problem situations (technical, legal, political, or otherwise) and construction service contractors' actions, of which the CDM Smith technical subcontractor firm has become aware, that may adversely impact project implementation.

   iv. Monitor, report, and take necessary measures to ensure that the construction complies with the Environmental Assessment and, or Environmental Mitigation Plan and include this information in monthly progress reports as well as in final reports.

   v.

d. Records maintenance

   i. Maintain project construction records, in hardcopy and electronic format that include but are not limited to shop drawings, submittals for materials, warranties, product literature, and maintenance procedures. Prepare correspondence, certificates, notices, and instructions as required for the signature of the COTR.

e. Contractor Invoices

   i. Review construction service contractors' payment invoices and make appropriate recommendations for payment to USAID. Certify that completed works covered by invoices have been carried out in accordance with the requirements of the

construction contracts, or otherwise indicate any deficiencies in the completion of the works.

f. Claims

i. Promptly examine construction service contractor claims for extensions of time, payments of extra work, and other similar matters. Promptly submit appropriate recommendations to the COTR. Advice on claims and disputes as necessary. Include technical support services for participation in litigation or alternative dispute resolution of claims.

ii. Play a role in the review analysis and in making recommendations to USAID in the event of a possible claim or litigation between the United States Government and the construction contractors. In the event of litigation or any alternative process between the said parties for the resolution of claims undertaken or defended by USAID, provide expert opinion and recommendations to protect USAID interests such as preparing for and serving as a witness in any public or private hearing or other forum related to projects.

g. Meetings

i. Participate in periodic construction implementation meetings and such additional meetings as necessary, to resolve issues impacting project costs and schedules.

h. Contract Closeouts at Completion of works

i. In a timely manner, conduct the necessary inspections and determine the remaining works to be completed. When remaining works are satisfactorily completed, and in coordination with USAID, issue Certificates of Substantial or Final Completion to USAID.

ii. Maintain/track status of warranties/guarantees for all awarded construction contracts and, when appropriate, if requested, alert USAID in writing 30 days prior to the expiration of any warranty or insurance that may need an extension.

iii. During periods for the remedy of project defects, provide inspection services to verify completion of all work in accordance with construction contract specifications and monitor, report, and take the necessary measures to assure proper closeout of the construction contract for the project.

iv. Upon completion of works, review, certify, and insure that as-built drawings as well as any other documentation required in the construction contracts are submitted properly.

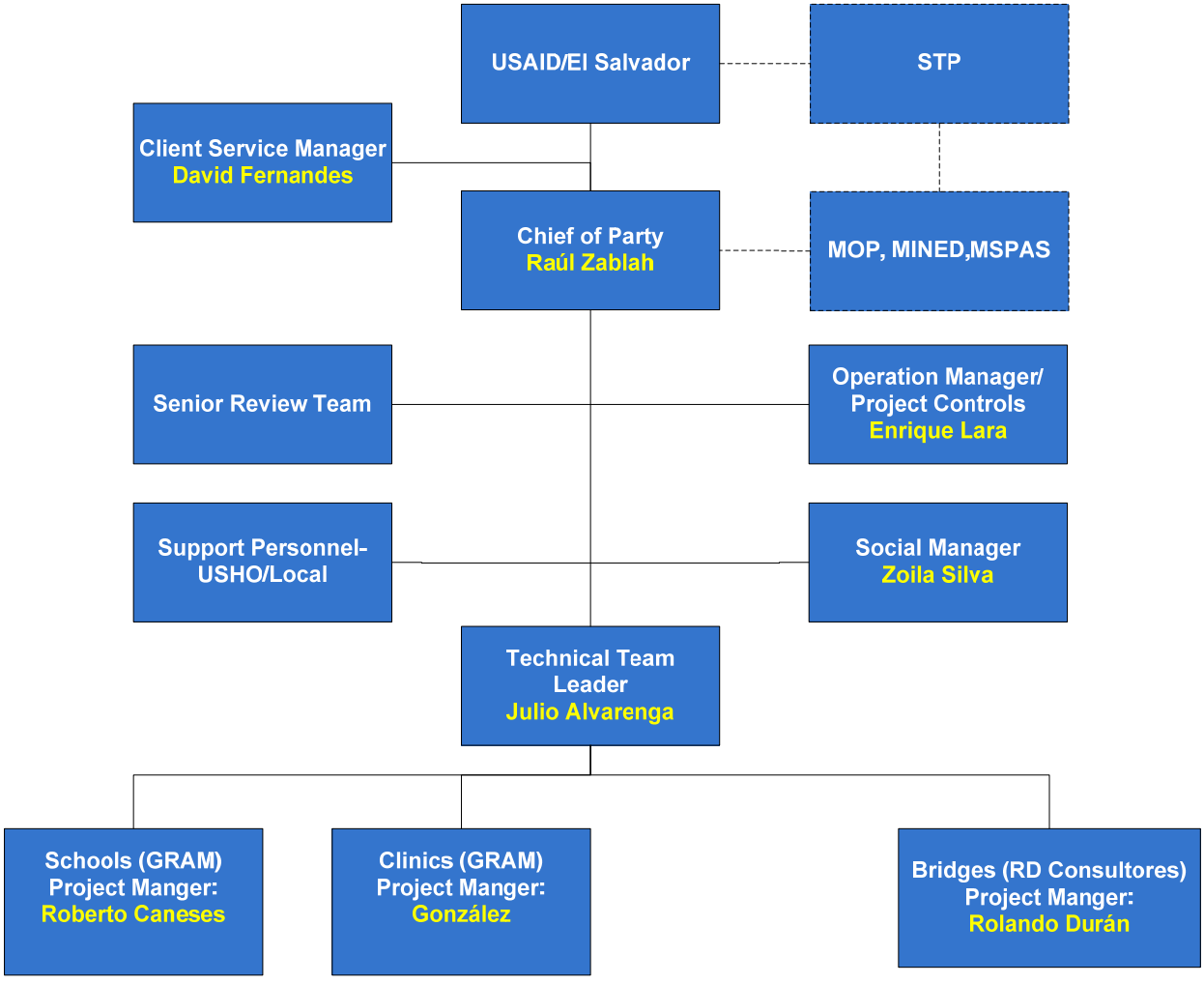
v. Review any required operation and maintenance (O&M) manuals before submission to USAID

vi. The A/E firm is responsible, when assigned by the COTR or CO, for the review of system manuals and other operating documents written in Spanish for renovated health clinics for completeness, and operational usefulness. The A/E firm may be required to review any activities by the construction contractor to incorporate manufacturer's standard manuals into the system manuals. The construction contractor's responsibility is limited to ensure that all manufacturer's standard manuals and cut sheets are complete before they are handed over to the A/E firm.

6 Project Team

6.1 Key Personnel

The key personnel are the Chief of Party, Raúl Zablah; the Technical Team Leader, Julio Alvarenga; and, the Operations Manager, Enrique Lara. The key personnel will supported by the Client Service Manager, Senior Review Team and Specialists from various CDM Smith USA-based offices, as well as supplementary locally-based as needed personnel.



6.2 Subcontractors

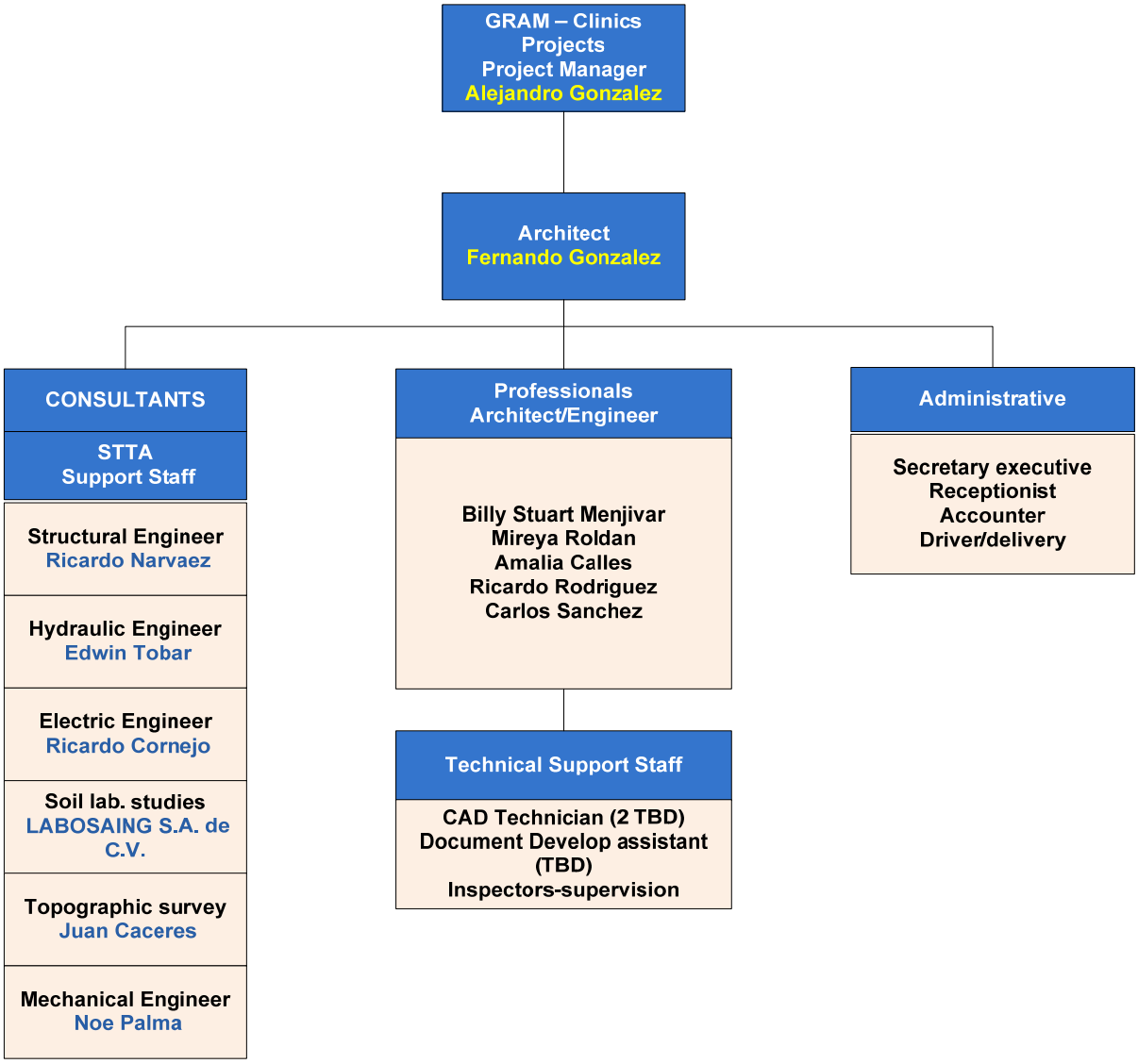
To develop all of the activities associated with Preliminary Design and Supervision of the Design and Build contracts, CDM Smith has joined forces with two well known local firms, who will serve subcontractors.

GRAM S.A. de C.V. is in charge of two components: schools and health care facilities. The School component is lead by Roberto Caneses and the health facilities are lead by Alejandro Gonzalez.

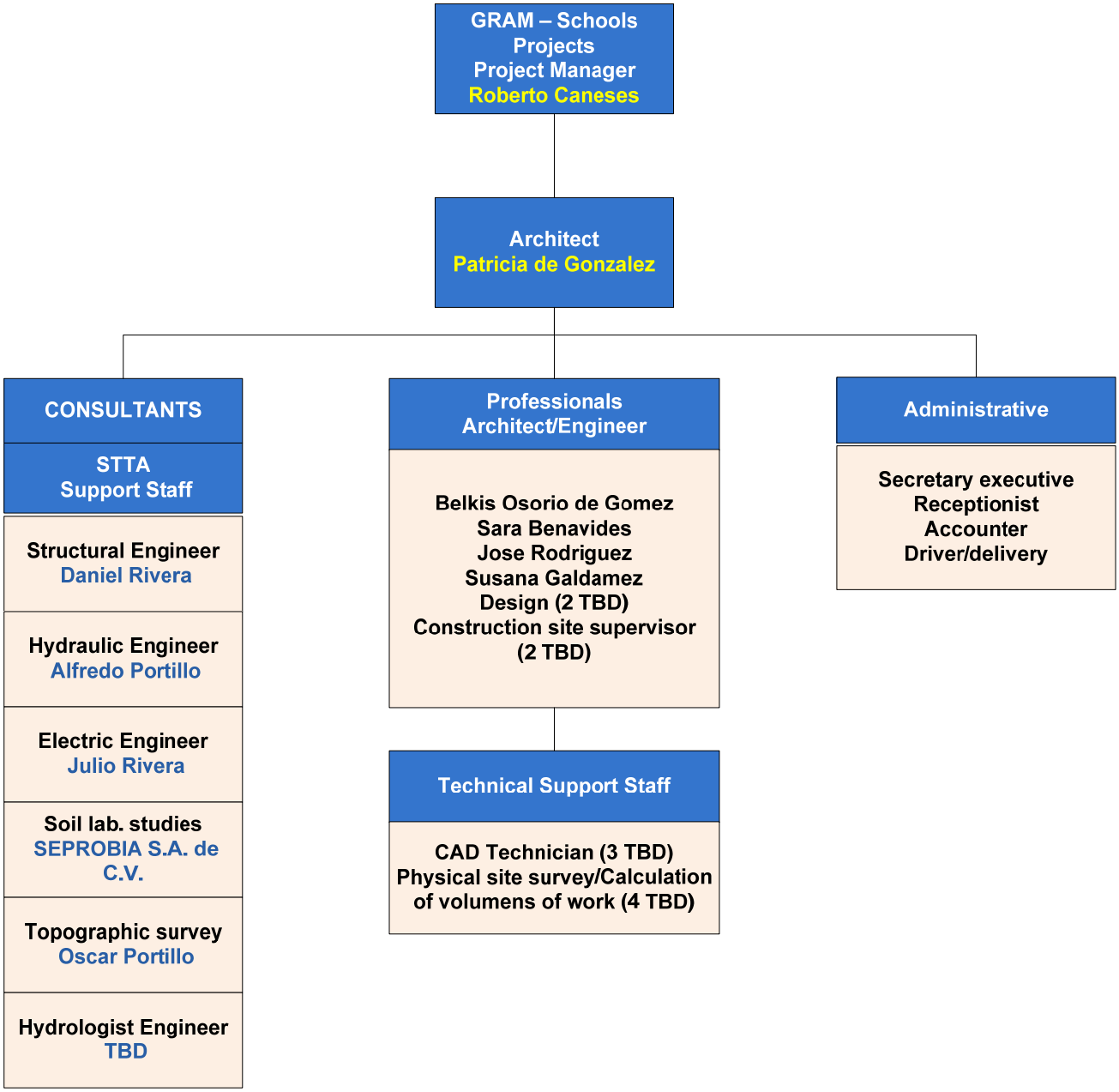
RD Consultores S.A. de C.V. is in charge of the bridges component, lead by Rolando Duran.

The organizational charts for each of the three components are presented in the following pages:

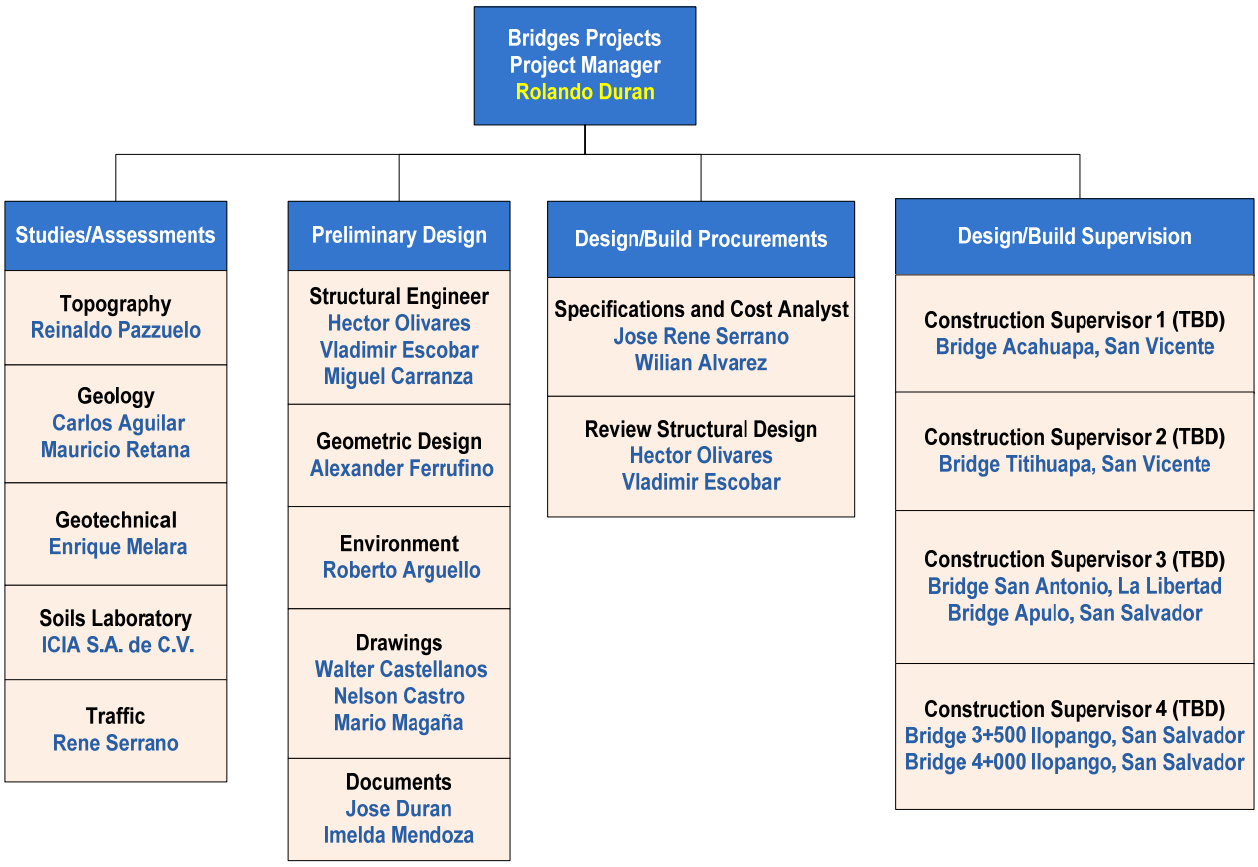
GRAM-Clinics



GRAM – Schools



R.D. Consultores, S.A. de C.V. - Bridges



6.3 Matrix of Responsibilities

Position	Firm	Expat/ Local	Gen Adm.	Pre-Designs	Tendering	Supervision	C. Closeouts	B. Capacity	Clearinghous	Position reports to:	Responsibility in brief	Name
Key Personnel												
Chief of Party*	CDM	Expat	X	X	X	X	X	X	X	USAID COTR and CDM Sr. Mgt	Responsible for project delivery across all tasks, project monitoring and submittals, and management of personnel. Liaises with USAID and CDM HQ, coordinates with other donors and host country stakeholders (MOP, MINED, MSPAS).	Raul Zablah
Operations Manager/ Project Controls*	CDM	Local	X	X		X	X		X	COP	Develops/maintains Program Controls System (PCS) to measure/track progress - schedule and budget, coordinating inputs from Technical Team - providing oversight/supervision to PCS developer. Tracks subcontractor - D/B Contractor costs vs progress. Develops linked GIS database. Develops electronic formats for field collection of data and reporting (linking with GIS database). Coordinates documentation database from studies through construction completion and turnover. Coordinates project deliverable submittals, ensuring that CDM QA/QC procedures have been followed. Assists with development of SOWs for contractors.	Enrique Lara
Technical Team Leader*			X	X	X	X	X	X	X		Provides hands-on, daily oversight and guidance to assessment/studies, preliminary design, tendering, and supervision functions. Manages and mobilizes technical resource staff in support of field activities and quality audits. Provides guidance to, and collaborates in preparation of all reporting to COP and USAID, including annual reports and annual work plans. Provides timely response to information requests for all operations and ensures timely preparation and submission of data to the COP and USAID. Works with local subcontractors in the development and implementation of plans, schedules and progress reports. Monitors and reports on assessment/studies, design and supervision progress to the COP in coordination with Operations Manager and other units as needed; Oversees and coordinates designs by lead designers for bridges, schools, clinics. Ensuring consistency between designers, QA/QC, and compiles preliminary design packages for procurement in collaboration with technical subcontractors.	Julio Alvarenga
Short Term Technical Resources/Field Support												
Engineering/Technical												
Structural Engineer	CDM	Expat		X		X				Technical Team Leader	Supports Technical Team Leader on guidance to bridge subcontractor and reviews of submittals - also anticipated for in-country meeting covering design stds/criteria development and CDM QA/QC requirements	Leonel Almanzar
Project Engineer (Jr)	CDM	Local Cons		X		X				Techncal Team Leader	Support the Technical Team Leader on assessment/studies, preliminary design, and supervision of works (during Y1 only) being implemented by subcontractors. Mobilize to the field according to schedule and upon request to conduct monitoring, control and reporting of all field activities, especially during assessment phase. Report and double-check reporting on progress from all field activities	TBD
Architect	CDM	Local Cons		X		X				Techncal Team Leader	Support the Technical Team Leader on reviews during preliminary design phase as needed - depending on review needs, may bring in alternative specialist on an as needed basis.	TBD
Hydrologist	CDM	Local Cons		X						Technical Team Leader	Provides support to TTL in reviews of hydrological submittals coming from technical subcontractors during study phase	Fernando Lemus
Geotechnical Specialist	CDM	Local Cons		X						Technical Team Leader	Provides support to TTL in reviews of geotechnical submittals coming from technical subcontractors during study phase	Luis Armando Pineda
Environmental												
Sr. Environmental Specialist	CDM Cons.	Expat		X		X				Technical Team Leader	Develops environmental guidance/templates in for Envir. Assessments (EAs) and Envir. Mitigation Plans (EMMP) in accordance with 22 CFR 216. Supervises the collection/consolidation of information in accordance with El Salvador EIA requirements (to extent possible for design scope limitations). Finalizes submittals to USAID based upon in-country team inputs. Reviews environmental reporting, ongoing compliance reported by field personnel/construction contractors.	Karen Menczer

Position	Firm	Expat/ Local	Gen Adm.	Pre-Designs	Tendering	Supervision	C. Closeouts	B. Capacity	Clearinghous	Position reports to:	Responsibility in brief	Name
Local Environmental Coordinator	CDM Cons.	Local		X		X				Sr. Env. Spec.	Works with Sr. Env Spec on development of EA based upon information from Subcontractors. Coordinates information developed by Subcontractors, provides guidance to subs on what data/reporting is needed for both the USAID EA and the GOES EIA. Participates in meetings with MARN - provide comments/corrections on environmental reporting. Reviews logs from field team and construction contractor on environmental compliance.	Ernesto Javier Figueroa
Community Outreach - subcontractor - SMP												
Community Involvement Coordinator	SMP	Local sub-cons ultant		X		X	X			COP/ Technical Team Leader	Develops Community Involvement Plan for community engagement and participation in maintenance of facilities. Guides community outreach team to introduce the projects to relevant stakeholders and promote participation, integration and ownership of rehabilitation/construction works in clinics, schools and bridges. Addresses gender concerns, ensures gender integration and response to gender needs (i.e., separate sanitary facilities for boys and girls in schools) Serves as conduit for two way information sharing between project and communities.	Zoila Silva
Comm. Involvement Promoter	SMP	Local Cons ultant		X		X	X			Community Coordinator	Conducts direct interactions with communities, provides information to communities on project and feedback to project from community inputs. Monitors/reports on adherence to infrastructure maintenance plans.	TBD
Senior Review Team												
Lead Practitioner		Expat		X		X	X			COP	Serves as senior technical reviewer, coordinating other QA/QC reviewers as needed and within TRC budget. Conducts routine and periodic performance checks as project progresses for resolution of issues as they arise.	Eduardo Galindo
Structural Engineer		Expat		X		X				LP, COP, TTL	Provides technical QA/QC oversight of submittals - checking on reviews of CDM local team, primarily, but not limited to the design phase	Leonel Almanzar
Electrical Engineer		Expat		X		X				LP, COP, TTL	Provides technical QA/QC oversight of submittals - checking on reviews of CDM local team, primarily, but not limited to the design phase	Raul Aviles
Mech (HVAC/Plumb)		Expat		X		X				LP, COP, TTL	Provides technical QA/QC oversight of submittals - checking on reviews of CDM local team, primarily, but not limited to the design phase	Leon Warriner
Geotechnical		Expat		X						LP, COP, TTL	Provides technical QA/QC oversight of submittals - checking on reviews of CDM local team, primarily, but not limited to the design phase	Michael Gilbert
Sr. Cost Estimator		Expat		X		X				COP, TTL	Develops costing guidance and templates, develops and/or reviews cost estimates prepared locally, bills of quantities and pre-bid and post bid documentation.	Alfred Vega
Technical Subcontractors												
Schools and Clinics	GRAM	Local		X	X	X	X	X	X	Technical Team Leader	GRAM will be responsible for schools and medical facilities through two teams, one for each facility type - provides a field team and resident technical services to carry out - or oversee - 1.) initial site investigations/assessments (topo studies, geotech, facility/site assessments); 2) preliminary design (drawings, specifications, BOQs, cost estimates); 3) D/B procurement (procurement packaging, responding to bidder questions, etc.); 4) D/B supervision (reviews/ recommendation on contractor submittals, site visits/audits, compliance monitoring, engineering review, change order review and comment); 5) contract completions (final facility inspections and recommendation, verification on completions, facilitate transition); 6) training/capacity buiding (vendor provided training, maintenance plans developed by contractors). Personnel identified for the work will cover, but may not be limited to, Topographic Surveyors, Geotechnical Specialists, Hydrologists, Structural/ Sanitary/ Site (Civil)/ Electrical Engineers, CADD technicians, Cost Estimators and Field Construction personnel. Subcontractor will design deliverables in addition to monthly (weekly during construction) reports in formats in accordance with CDM guidance.	Alejandro Gonzalez (as lead), along with Fernando Gonzales and various GRAM personnel for the Medical Facilities Team. Arq Roberto Caneses and team for the Schools
Bridges	RDC	Local		X	X	X	X	X	X	Technical Team Leader	R.D. Consultores, S.A. will provide a similar scope of services but with a focus on bridges. Personnel will include structural (bridge) as well as highway design/supervision specialists.	Rolando Duran (as lead) and various RDC personnel

Position	Firm	Expat/ Local	Gen Adm.	Pre-Designs	Tendering	Supervision	C. Closeouts	B. Capacity	Clearinghous	Position reports to:	Responsibility in brief	Name
Project Controls System Development	JPC	Local		X	X	X	X	X	X	Ops Manager	Juan Pablo Castillo will design/develop internet-based Project Controls system to be utilized by the project to capture site and facility data, progress on implemenation activities (design and contruction), reporting (suitable for submittal as annex to project periodic reporting - monthly, qtrly, annually), costs vs progress, etc. The development of the PC system will be under the guidance/direction of the CDM Ops Mgr with inputs from other CDM team members (COP, TTL) and subcontractors. Training/orientation on input/data needs is also part of the scope of services.	Juan Pablo Castillo
Local Administrative Personnel												
Office Manager/ Financial Manager	CDM	Local	X						X	COP	Manages local office and coordinates in-country operations. Manages local administrative personnel. Develops/overseas administrative office procedures and functions. Overseas CDM local finances/accounts. Negotiates with local vendors. Coordinates security services for project. Supports other project needs as necessary.	Leticia Bonilla
Administrative Assistant	CDM	Local	X						X	Office Mgr.	Provides general administrative/ secretarial support to the project	Yesenia Rosales
Accountant	CDM	Local	X							Office Mgr.	Oversees project bank account/reconciliation, maintains ledger, backup for invoicing according to CDM/USAID requirements, maintains office petty cash, maintains secure filing system and office safe, prepares CDM local period charges report (LCR) on monthly basis for submittal to CDM (within 1 week of month end), maintains vendor list/project inventory, prepares payroll, project cost projections/status and other financial reporting as requested by Office Mgr or CDM Home Office.	Elmer Argueta
Housekeeper	CDM	Local	X						X	Office Mgr	Provides general maintenance and upkeep of the office. Maintaining a clean and professional environment. Manage the kitchen/kitchen equipment and inventory. Coordinate with the office manager or her designee on supply needs.	Ana Maria Argueta-Recinos
Driver	CDM	Local	X							Office Mgr	Provides vehicle transport to project team, maintain project vehicles and trip logs.	Rafael Quijada
HO Support Personnel												
HO Project Manager (PM)	CDM	Expat	X	X	X	X	X	X	X	CSM	Provides support to COP throughout the life of the project as well as assist with mobilization, setting up project office, staffing, processes and procedures. Reviews periodic reports and key deliverables before submittal to client. Serves as liaison with other home office staff and coordinates project support from HO, as necessary, in all areas. Supports project mgt. team with contract modifications and negotation with subcontractors on an as needed basis.	John Gavin
Client Service Manager (CSM)	CDM	Expat	X							CDM Sr. VP	Overall responsible on behalf of CDM for delivery on contract, conducts client audits, confirming that project adheres to CDM commitments.	David Fernandes
Contract Administrator (CA)	CDM	Expat	X							COP,PM, Contract Manager	Responsible for overall project accounting, invoicing to client, developing ECAC/project projections, reviewing LCR, maintaining charge codes, resolving discrepancies, oversight/guidance to local accountant as needed.	Tone Limtrajiti
Contract Manager	CDM	Expat	X		X	X				COP, CSM & PM	Provides guidance during administrative, financial, contractual startup and training. Support to El Salvador-based team in DB procurement, bringing in USAID contracting experience. Provides overall F&A supervision, development of contracts/ subcontracts, QA/QC financial auditing, assistance for contractual modification development/reviews.	Carl Brown
Admin Support/Logistics	CDM	Expat	X							PM	Provides general administration and logistics support throughout project period including coordinating HO staff travel, accommodations and general communications with staff on administrative and logistics needs.	AnaMaria Dillon

7 Communications Protocols

For any project, efficient and effective communications protocols help ensure that the correct authorities are involved at the correct level for facilitating project progress and performance. The source of the protocols to be utilized under this project were discussed at, and agreed upon,at the Post Award Conference with USAID; they were further defined at the PQM meeting that involved both USAID and key project stakeholders, and included:

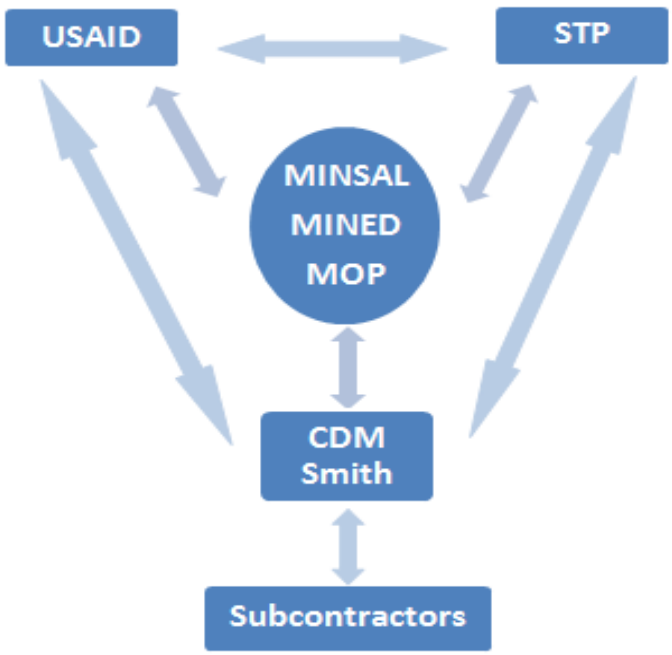
a. USAID has direct communication and relations with the CDM Smith Team and the STP.

b. GOES communication is housed in the STP, which deals directly with the USAID Office in El Salvador.

c. USAID will have direct communication with CDM Smith. CDM Smith can have contact with the STP and the ministries, but must keep USAID fully informed. Also, CDM Smith can contact the ministries directly, but must keep the STP and USAID fully informed.

d. Final decisions will be made jointly by USAID and the STP; USAID will convey these decisions to CDM Smith for any necessary adjustments the to the implementation process.

e. CDM Smith´s subcontractors will only have a direct relationship with CDM Smith; they will not have a direct relationship with the ministries or the STP.



Project Communication Protocol Chart

The CDM Smith points of contact were defined in the post-award conference, as follows:

For technical aspects:

Raúl Zablah,

Chief of Party,

Telephone number 2243-2036

Email: zablahr@cdmsmith.com

Address: Av. La Capilla #257, Col. San Benito, San Salvador, El Salvador.

For contractual aspects:

Carlton K. Brown,

Principal Contract Manager,

Telephone number (617) 452-6201

Email: brownck@cdmsmith.com

8 Schedule

The three year project duration plan (See Annex 1) has been scheduled from December 30th, 2011 to December 29th, 2014.

For monitoring purposes, common tasks have been included specifically for/under each type of facility. Milestones derived from this general schedule will be used to determine target results considered in the Performance Monitoring Plan (PMP).

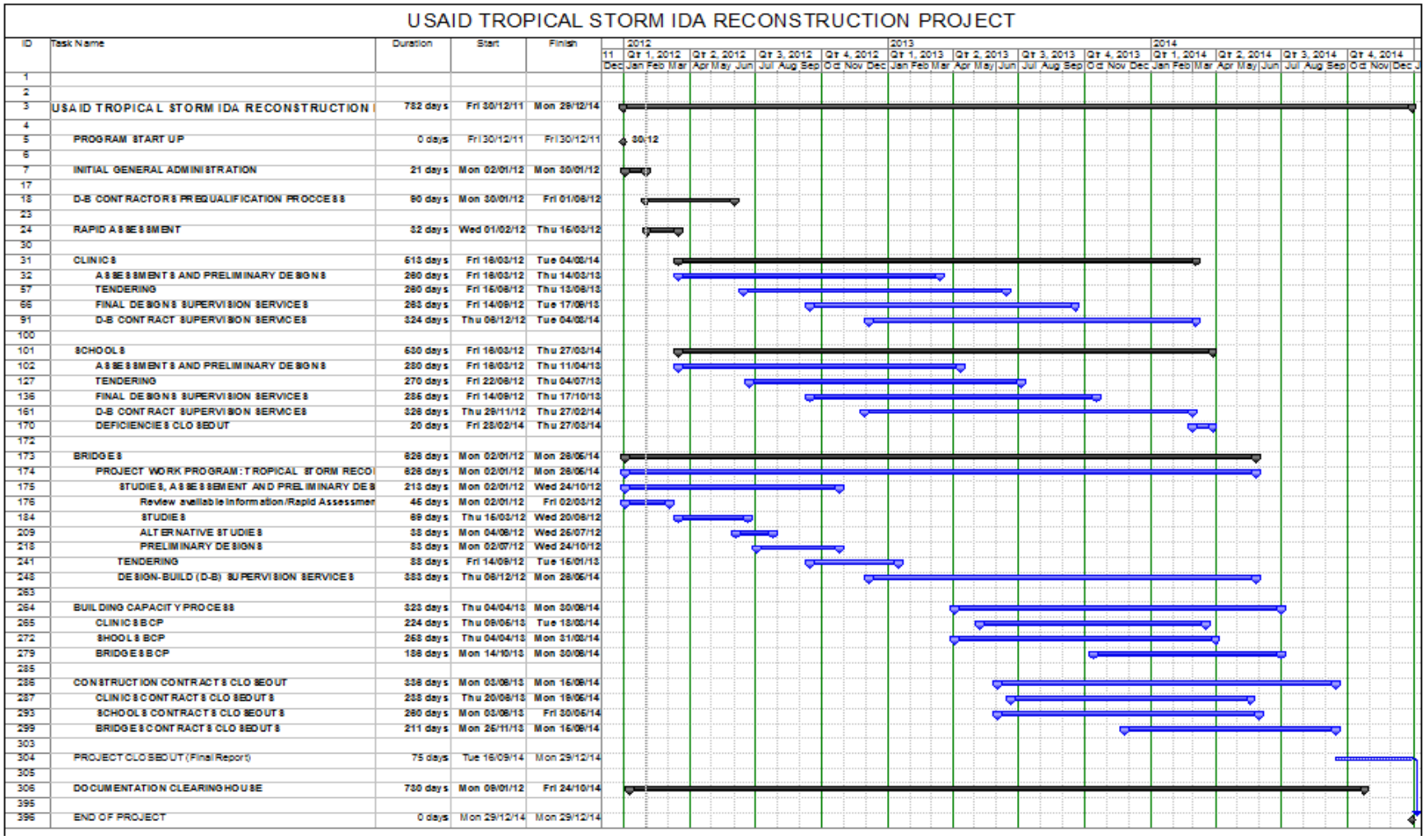
All Ministries' proposed health unit and school facilities, and bridges have been considered only for initial planning and scheduling purposes as well.

As an initial logistics/implementation approach, health unit facilities been grouped into four sets, schools have also been grouped in four sets, and for implementing bridge reconstruction two sets have been considered based upon the span and importance on the proposed structures. Two out of six bridges are separated from the others based upon their longer span and higher complexity which will demand more time for the implementation of common tasks.

With this in mind, it is understood that the initial project schedule is subject to reprogramming, and pre-established sets are subject to reorganization, depending upon the rapid appraisal results and decisions by USAID in concurrence with stakeholders. Despite the tentative character of the initial schedule, it has been established to provide sound general guidance for the decision making/ logistical planning to fully program the identified works.

The following sections include: A summarized Schedule with main project tasks, a tentative schedule for involvement of expatriate specialists, and milestones by facility type.

8.1 Summary Schedule



8.2 CDM Smith Expatriate Specialists Interventions

We have tentatively programmed the travel of three CDM Smith specialists from the US to El Salvador. The timing of their travel is intended to coincide with the optimum timing of their inputs for the efficient and effective use of their time, when their input can be of greatest value to the overall work program. The three specialists are listed below, along with tentative timing and purpose of their travel.

Expat Environmental Specialist (Karen Menczer) – the timing for the Environmental Specialist's trip is tentatively scheduled for the first week of March 2012. At this point, we anticipate having sufficiently completed a portion of the Rapid Appraisal along with collection of environmental data/anticipated impact to project sites. The purpose of this trip would be for a review of the collected/collated information, discussions with the project team on preparation of the next/subsequent environmental documentation required for development and guidance on proposed environmental categorization of facilities for review with USAID. It is envisioned that the Environmental Specialist will remain engaged, from the home office, to then provide support as needed as environmental documentation/recommendations is being developed and finalized.

CDM Smith Structural Engineer/Design QA/QC (Leonel Almanzar) – the timing for the structural engineer's visit is mid-March 2012, by which time the Rapid Appraisal will be largely completed but before more detailed assessment and preliminary design. The purpose of this visit is to review the information obtained, provide additional guidance to technical subcontractors on forms/formats for design and provide additional clarification on design/QA-QC requirements of CDM Smith to meet the expectations of USAID and Ministerial stakeholders. While the Structural Engineer has more of a technical focus on the bridge work, he is well versed in CDM Smith's QA/QC requirements which apply to all facilities.

CDM Smith Contract Specialist (Carl Brown) – the timing for the Contract specialist is near the end of the project, for a trip in month 34 or 35. This trip is scheduled in anticipation of project closeout, disposition of assets, contract finalization, administrative closeout etc.

At the moment, the three specialists shown above are the only ones we anticipate utilizing--basedon their respective scopes of works described above, as well as the realities of a tight budget. However, this doesn't mean that they will be the only travelers, based on evolving project needs. IFor example, it may be beneficial/cost effective for the CDM Smith Client Service Manager, David Fernandes, the Home Office Manager, John Gavin, or other technical personnel to also travel to El Salvador during the three year program; their travel will be based upon project needs and budget flexibility.

8.3 Health Unit Facilities Milestones

As for the general scheduling of the project, all MINSAL's proposed Health Unit Facilities have been considered grouped in four sets for initial planning and scheduling purposes and for establishing tentative milestones for mains tasks to be executed for the completion of the health unit facilities.

With this in mind, it is understood that milestones dates are subject to rescheduling, and health unit sets subject to reorganization, depending on the rapid appraisal results and decisions to be issue by USAID in concurrence with stakeholders.

These milestones or the rescheduled ones after the rapid appraisal stage will be used for the determination of target results considered in the Performance Monitoring Plan (PMP).

Milestone Table for Health Unit Facilities
(Tentative task finish dates)

Task	First Group	Second Group	Third Group	Fourth Group	Total Clinics
Initial Appraisal					Mar 2012
Studies and Assessments					May 2012
Preliminary Designs	Jun 2012	Sep 2012	Dec 2012	Mar 2013	Mar 2013
Design-Build Contract Procurement	Sep 2012	Dec 2012	Mar 2013	Jun 2013	Jun 2013
Design-Build Supervision Services					
Final Designs	Dec 2012	Mar 2013	Jun 2013	Sep 2013	Sep 2013
Construction Phase	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Mar 2014

8.4 School Facilities Milestones

As for the general scheduling of the project, all MINED's proposed School Facilities have been considered grouped in four sets only for initial planning and scheduling purposes and for establishing tentative milestones for mains tasks to be executed for the completion of the School facilities.

With this in mind, it is understood that milestones dates are subject to rescheduling, and School sets subject to reorganization, depending on the rapid appraisal results and decisions to be issue by USAID in concurrence with stakeholders. These milestones or the rescheduled ones after the rapid appraisal stage will be used for the determination of target results considered in the Project Monitoring Plan (PMP).

Milestone Table for School Facilities (Tentative task finish dates)					
Task	First Group	Second Group	Third Group	Fourth Group	Total Schools
Initial Appraisal					Mar 2012
Studies and Assessments					May 2012
Preliminary Designs	Jun 2012	Sep 2012	Dec 2012	Apr 2013	Apr 2013
Design-Build Contract Procurement	Sep 2012	Dec 2012	Mar 2013	Jul 2013	Jul 2013
Design-Build Supervision Services					
Final Designs	Dec 2012	Apr 2013	Jul 2013	Oct 2013	Oct 2013
Construction Phase	May 2013	Aug 2013	Nov 2013	Feb 2014	Feb 2014

8.5 Bridges Milestones

As for the general scheduling of the project, all MOP's proposed bridges have been considered grouped in two sets only for initial planning and scheduling purposes and for the establishing of tentative milestones for mains tasks to be executed for the completion of the rehabilitation of bridges.

With this in mind, it is understood that milestones dates are subject to rescheduling, and Bridge sets subject to reorganization, depending on the rapid appraisal results and decisions to be issue by USAID in concurrence with stakeholders. These milestones or the rescheduled ones after the rapid appraisal stage will be used for the determination of target results considered in the Performance Monitoring Plan (PMP).

Milestone Table for Bridges (Tentative task finish dates)					
Task	First Group	Second Group	Third Group	Fourth Group D	Total Bridges
Initial Appraisal					Mar 2012
Studies and Assessments					Jun 2013
Preliminary Designs	Sep 2012	Oct 2012	x	x	Oct 2012
Design-Build Contract Procurement	Dec 2012	Jan 2013	x	x	Jan 2013
Design-Build Supervision Services					
Final Designs	Mar 2013	May 2013	x	x	May 2013
Construction Phase	Nov 2013	May 2014	x	x	May 2014

9 Performance Monitoring Plan (PMP)

The PMP includes indicators of performance, guided by the overall project objectives, and broken down into measurable / quantifiable results that can be used to track both progress on the individual tasks by facility type as well as overall performance of the project.

The data driven elements of routine performance reporting will be supported by our proposed Project Controls System. The PMP will also be used as a tool for risk management and for tracking effectiveness of mitigation measures.

Two levels of performance indicator will be used: one level will include CDM Smith performance indicators for managing, tracking and reporting monthly to USAID and stakeholders. These indicators are organized by main tasks and facility type for corresponding fiscal years (2012, 2013 and 2014) according to USAID requirements. The other level of performance indicators, essentially four indicators, has been established by in accordance with USAID's reporting requirements to the US Congress.

It is anticipated that number of facilities will be revised following the rapid assessment, re-prioritization of facilities and preliminary cost estimate for number of facilities that can be rehabilitated/reconstructed with the available funding.

9.1 FY 2012 Monitoring Indicators (CDM Smith)

ID	INDICATOR		FY 2012												Total
			QRT 2				QRT 3				QRT 4				
			Jan	Feb	Mar	Total	Apr	May	Jun	Total	Jul	Aug	Sep	Total	
	Rapid Assessment														
1	Number of Rapid Assessments for Health Clinics Completed	Target			14	14									14
		Actual													
2	Number of Rapid Assessments for Schools Facilities Completed	Target			32	32									32
		Actual													
3	Number of Rapid Assessments for Bridges Completed	Target			6	6									6
		Actual													
	Preliminary Design														
4	Number of Preliminary Designs for Health Clinics Completed	Target							3	3			4	4	7
		Actual													
5	Number of Preliminary Designs for Schools Facilities Completed	Target							8	8			8	8	16
		Actual													
6	Number of Preliminary Designs for Bridges Completed	Target											4	4	4
		Actual													
	Tendering														
7	Number of D-B Contract Procurement for Health Clinics Completed	Target											3	3	3
		Actual													
8	Number of D-B Contract Procurement for Schools Facilities Completed	Target											8	8	8
		Actual													
9	Number of D-B Contract Procurement for Bridges Completed	Target													
		Actual													
	Final Design														
10	Number of Final Designs for Health Clinics Completed	Target													
		Actual													
11	Number of Final Designs for Schools Facilities Completed	Target													
		Actual													
12	Number of Final Designs for Bridges Completed	Target													
		Actual													
	Construction of Facilities														
13	Number of Health Clinics Rebuilt/Rehabilitated	Target													
		Actual													
14	Number of School Facilities Rebuilt/Rehabilitated	Target													
		Actual													
15	Number of Bridges Rebuilt/Rehabilitated	Target													
		Actual													
	Training and Capacity Development														
16	Number of Health Clinics Trainings and Capacity Developments Completed	Target													
		Actual													
17	Number of School Facilities Trainings and Capacity Developments Completed	Target													
		Actual													
18	Number of Bridges Trainings and Capacity Developments Completed	Target													
		Actual													

9.2 FY 2013 Monitoring Indicators (CDM Smith)

ID	INDICATOR		FY 2013																
			QRT 1				QRT 2				QRT 3				QRT 4				Total
			Oct	Nov	Dec	Total	Jan	Feb	Mar	Total	Apr	May	Jun	Total	Jul	Aug	Sep	Total	
	Rapid Assessment																		
1	Number of Rapid Assessments for Health Clinics Completed	Target																	
		Actual																	
2	Number of Rapid Assessments for Schools Facilities Completed	Target																	
		Actual																	
3	Number of Rapid Assessments for Bridges Completed	Target																	
		Actual																	
	Preliminary Design																		
4	Number of Preliminary Designs for Health Clinics Completed	Target			3	3			4	4									7
		Actual																	
5	Number of Preliminary Designs for Schools Facilities Completed	Target			8	8					8			8					16
		Actual																	
6	Number of Preliminary Designs for Bridges Completed	Target	2			2													2
		Actual																	
	Tendering																		
7	Number of D-B Contract Procurement for Health Clinics Completed	Target			4	4			3	3			4	4					11
		Actual																	
8	Number of D-B Contract Procurement for Schools Facilities Completed	Target			8	8			8	8					8			8	24
		Actual																	
9	Number of D-B Contract Procurement for Bridges Completed	Target			4	4	2			2									6
		Actual																	
	Final Design																		
10	Number of Final Designs for Health Clinics Completed	Target			3	3			4	4			3	3			4	4	14
		Actual																	
11	Number of Final Designs for Schools Facilities Completed	Target			8	8					8			8	8			8	24
		Actual																	
12	Number of Final Designs for Bridges Completed	Target							4	4		2		2					6
		Actual																	
	Construction of Facilities																		
13	Number of Health Clinics Rebuilt/Rehabilitated	Target											3	3			4	4	7
		Actual																	
14	Number of School Facilities Rebuilt/Rehabilitated	Target										8		8		8		8	16
		Actual																	
15	Number of Bridges Rebuilt/Rehabilitated	Target																	
		Actual																	
	Training and Capacity Development																		
16	Number of Health Clinics Trainings and Capacity Developments Completed	Target											3	3			4	4	7
		Actual																	
17	Number of School Facilities Trainings and Capacity Developments Completed	Target										8		8		8		8	16
		Actual																	
18	Number of Bridges Trainings and Capacity Developments Completed	Target																	
		Actual																	

9.3 FY 2014 Monitoring Indicators (CDM Smith)

ID	INDICATOR		FY 2014																
			QRT 1				QRT 2				QRT 3				QRT 4				Total
			Oct	Nov	Dec	Total	Jan	Feb	Mar	Total	Apr	May	Jun	Total	Jul	Aug	Sep	Total	
	Rapid Assessment																		
1	Number of Rapid Assessments for Health Clinics Completed	Target																	
		Actual																	
2	Number of Rapid Assessments for Schools Facilities Completed	Target																	
		Actual																	
3	Number of Rapid Assessments for Bridges Completed	Target																	
		Actual																	
	Preliminary Design																		
4	Number of Preliminary Designs for Health Clinics Completed	Target																	
		Actual																	
5	Number of Preliminary Designs for Schools Facilities Completed	Target																	
		Actual																	
6	Number of Preliminary Designs for Bridges Completed	Target																	
		Actual																	
	Tendering																		
7	Number of D-B Contract Procurement for Health Clinics Completed	Target																	
		Actual																	
8	Number of D-B Contract Procurement for Schools Facilities Completed	Target																	
		Actual																	
9	Number of D-B Contract Procurement for Bridges Completed	Target																	
		Actual																	
	Final Design																		
10	Number of Final Designs for Health Clinics Completed	Target																	
		Actual																	
11	Number of Final Designs for Schools Facilities Completed	Target	8			8													8
		Actual																	
12	Number of Final Designs for Bridges Completed	Target																	
		Actual																	
	Construction of Facilities																		
13	Number of Health Clinics Rebuilt/Rehabilitated	Target			3	3			4	4									7
		Actual																	
14	Number of School Facilities Rebuilt/Rehabilitated	Target		8		8		8		8									16
		Actual																	
15	Number of Bridges Rebuilt/Rehabilitated	Target		4		4						2		2					6
		Actual																	
	Training and Capacity Development																		
16	Number of Health Clinics Trainings and Capacity Developments Completed	Target			3	3			4	4									7
		Actual																	
17	Number of School Facilities Trainings and Capacity Developments Completed	Target			8	8			8	8									16
		Actual																	
18	Number of Bridges Trainings and Capacity Developments Completed	Target		4		4							2	2					6
		Actual																	

9.4 FY 2012, 2013 and 2014 Monitoring Indicators (USAID)

USAID - EL SALVADOR TROPICAL STORM IDA RECONSTRUCTION PROJECT
Contract No. AID-EDH-I-00-08-00023 / Order No. AID-519-TO-12-00001

STRATEGIC OBJECTIVE 519-022 "HUMANITARIAN ASSISTANCE AND CRISIS RESPONSE"

SUMMARY PERFORMANCE INDICATORS OPERATIONAL PLAN DATA TABLE AS OF DECEMBER 30, 2011 - HUMANITARIAN ASSISTANCE ACTIVITY

	Indicator	Selected for OP reporting	Progress direction + or -	Baseline data	Baseline year	Target/ Actual	FY11	FY12	FY13	FY14	Date Last Data Quality Assessment	Data source
	OBJECTIVE: TIMELY HUMANITARIAN ASSISTANCE AND CRISIS RESPONSE											
	IR 2: HUMANITARIAN RELIEF AND RECONSTRUCTION											
1	Number of designs for damaged structures completed.	YES	+	0	2011	Target	0	27	25	0	TBD	Contractor
						Actual	0					
2	Number of health facilities rebuilt/rehabilitated.	YES	+	0	2011	Target	0	0	7	7	TBD	Contractor
						Actual	0					
3	Number of schools rebuilt/rehabilitated.	YES	+	0	2011	Target	0	0	16	16	TBD	Contractor
						Actual	0					
4	Number of bridges rebuilt.	YES	+	0	2011	Target	0	0	0	6	TBD	Contractor
						Actual	0					

Humanitarian Assistance:

Timely humanitarian assistance and crisis response

Intermediate Result 2: Humanitarian Relief and Reconstruction

<table>
<tr><td colspan="4">INDICATOR: Number of designs for damaged structures completed</td></tr>
<tr><td rowspan="8">UNIT OF MEASURE: Number of designs

SOURCE: CDM Smith

INDICATOR DESCRIPTION: This indicator measures the number of preliminary designs of health facilities, schools, and bridges that are completed by the Architecture and Engineering (A&E) contractor as a direct result of the funding provided by USAID.

OPERATIONAL PLAN STANDARD INDICATOR:

YES _X__ NO___

PROGRAM AREA: Protection, Assistance and Solutions

PROGRAM ELEMENT: Assistance and Recovery

METHOD OF DATA COLLECTION: Directly from the contractor’s design files.

FREQUENCY/SCHEDULE OF DATA COLLECTION: Monthly

RESPONSIBLE FOR DATA COLLECTION:

COMMENTS:</td><td>FISCAL YEAR</td><td>PLANNED TARGET</td><td>ACTUAL RESULT</td></tr>
<tr><td>2012</td><td>27</td><td></td></tr>
<tr><td>2013</td><td>25</td><td></td></tr>
<tr><td>2014</td><td>N/A</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

Performance Indicator Reference Sheet

Strategic Objective: Timely Humanitarian Assistance and Crisis Response

Intermediate Result: Humanitarian Relief and Reconstruction

Indicator: Number of designs for damaged structures completed

Link to Other Reporting Indicators/Name: N/A

Is this an OP Standard Indicator?: Y **In Reporting Year:** 2012

DESCRIPTION

Precise Definition(s): This indicator measures the number of preliminary designs of health facilities, schools, and bridges that are completed by the Architecture and Engineering (A&E) contractor as a direct result of the funding provided by USAID.

Unit of Measure: Number of designs

Disaggregated by: N/A

Justification/Management Utility: This indicator will help measure the progress of the Tropical Storm Ida Reconstruction Project.

PLAN FOR DATA ACQUISITION BY USAID

Data Collection Method: Records on designs completed by the contractor

Method of Acquisition by USAID: Data will be provided in monthly reports

Data Source(s): Contractor

Frequency/Timing of Data Acquisition: Monthly

Estimated Cost of Data Acquisition: Approximately $200 per quarter

Responsible Individual(s) at USAID: Sophie Taintor, COTR

DATA QUALITY ISSUES

Date of Initial Data Quality Assessment: TBD

Known Data Limitations and Significance (if any): N/A

Actions Taken or Planned to Address Data Limitations: COTR will monitor project progress

Date of Future Data Quality Assessments: TBD

Procedures for Future Data Quality Assessments: Spot checks of data, site visits

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis: Information will be analyzed by the COTR in conjunction with the contractor monthly.

Presentation of Data: Data will be presented in written reports and illustrative tables.

Review of Data: Data will be reviewed monthly with the contractor.

Reporting of Data: Data from this indicator will be reported in monthly reports.

OTHER NOTES

Notes on Baselines/Targets: Targets are not cumulative

Location of Data Storage: In files of USAID and the contractor

Other Notes: N/A

THIS SHEET LAST UPDATED ON: 30Jan2012

Humanitarian Assistance:

Timely humanitarian assistance and crisis response

Intermediate Result 2: Humanitarian Relief and Reconstruction

INDICATOR: Number of health facilities rebuilt/rehabilitated.			
UNIT OF MEASURE: Number of facilities **SOURCE:** Contractor **INDICATOR DESCRIPTION:** This indicator measures the number of health facilities that are rebuilt or rehabilitated as a direct result of the funding provided by USAID. **OPERATIONAL PLAN STANDARD INDICATOR:** **YES _X__ NO___** **PROGRAM AREA:** Protection, Assistance and Solutions **PROGRAM ELEMENT:** Assistance and Recovery **METHOD OF DATA COLLECTION:** Directly from the contractor's design files. **FREQUENCY/SCHEDULE OF DATA COLLECTION**: Monthly **RESPONSIBLE FOR DATA COLLECTION:** **COMMENTS:**	**FISCAL YEAR**	**PLANNED TARGET**	**ACTUAL RESULT**
	2012	0	
	2013	7	
	2014	7	

Performance Indicator Reference Sheet

Strategic Objective: Timely Humanitarian Assistance and Crisis Response
Intermediate Result: Humanitarian Relief and Reconstruction
Indicator: Number of health facilities rebuilt/rehabilitated.
Link to Other Reporting Indicators/Name: N/A
Is this an OP Standard Indicator?: Y **In Reporting Year:** 2012

DESCRIPTION

Precise Definition(s): This indicator measures the number of health facilities that are rebuilt or rehabilitated as a direct result of the funding provided by USAID.

Unit of Measure: Number of facilities
Disaggregated by: N/A
Justification/Management Utility: This indicator will help measure the progress of the Tropical Storm Ida Reconstruction Project.

PLAN FOR DATA ACQUISITION BY USAID

Data Collection Method: Completion records from the contractor
Method of Acquisition by USAID: Data will be provided in monthly reports
Data Source(s): Contractor
Frequency/Timing of Data Acquisition: Monthly
Estimated Cost of Data Acquisition: Approximately $200 per quarter
Responsible Individual(s) at USAID: Sophie Taintor, COTR

DATA QUALITY ISSUES

Date of Initial Data Quality Assessment: TBD
Known Data Limitations and Significance (if any): N/A
Actions Taken or Planned to Address Data Limitations: COTR will monitor project progress
Date of Future Data Quality Assessments: TBD
Procedures for Future Data Quality Assessments: Spot checks of data, site visits

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis: Information will be analyzed by the COTR in conjunction with the contractor monthly.
Presentation of Data: Data will be presented in written reports and illustrative tables.
Review of Data: Data will be reviewed monthly with the contractor.
Reporting of Data: Data from this indicator will be reported in monthly reports.

OTHER NOTES

Notes on Baselines/Targets: Targets are not cumulative
Location of Data Storage: In files of USAID and the contractor
Other Notes: N/A

THIS SHEET LAST UPDATED ON: 30Jan2012

Humanitarian Assistance:

Timely humanitarian assistance and crisis response

Intermediate Result 2: Humanitarian Relief and Reconstruction

INDICATOR: Number of schools rebuilt/rehabilitated.			
UNIT OF MEASURE: Number of facilities **SOURCE:** Contractor **INDICATOR DESCRIPTION:** This indicator measures the number of schools that are rebuilt or rehabilitated as a direct result of the funding provided by USAID. **OPERATIONAL PLAN STANDARD INDICATOR:** **YES _X__ NO___** **PROGRAM AREA:** Protection, Assistance and Solutions **PROGRAM ELEMENT:** Assistance and Recovery **METHOD OF DATA COLLECTION:** Directly from the contractor's design files. **FREQUENCY/SCHEDULE OF DATA COLLECTION**: Monthly **RESPONSIBLE FOR DATA COLLECTION:** **COMMENTS:**	**FISCAL YEAR**	**PLANNED TARGET**	**ACTUAL RESULT**
	2012	0	
	2013	16	
	2014	16	

Performance Indicator Reference Sheet

Strategic Objective: Timely Humanitarian Assistance and Crisis Response
Intermediate Result: Humanitarian Relief and Reconstruction
Indicator: Number of schools rebuilt/rehabilitated.
Link to Other Reporting Indicators/Name: N/A
Is this an OP Standard Indicator?: Y **In Reporting Year:** 2012

DESCRIPTION

Precise Definition(s): This indicator measures the number of schools that are rebuilt or rehabilitated as a direct result of the funding provided by USAID.

Unit of Measure: Number of facilities
Disaggregated by: N/A
Justification/Management Utility: This indicator will help measure the progress of the Tropical Storm Ida Reconstruction Project.

PLAN FOR DATA ACQUISITION BY USAID

Data Collection Method: Completion records from the contractor
Method of Acquisition by USAID: Data will be provided in monthly reports
Data Source(s): Contractor
Frequency/Timing of Data Acquisition: Monthly
Estimated Cost of Data Acquisition: Approximately $200 per quarter
Responsible Individual(s) at USAID: Sophie Taintor, COTR

DATA QUALITY ISSUES

Date of Initial Data Quality Assessment: TBD
Known Data Limitations and Significance (if any): N/A
Actions Taken or Planned to Address Data Limitations: COTR will monitor project progress
Date of Future Data Quality Assessments: TBD
Procedures for Future Data Quality Assessments: Spot checks of data, site visits

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis: Information will be analyzed by the COTR in conjunction with the contractor monthly.
Presentation of Data: Data will be presented in written reports and illustrative tables.
Review of Data: Data will be reviewed monthly with the contractor.
Reporting of Data: Data from this indicator will be reported in monthly reports.

OTHER NOTES

Notes on Baselines/Targets: Targets are not cumulative
Location of Data Storage: In files of USAID and the contractor
Other Notes: N/A

THIS SHEET LAST UPDATED ON: 30Jan2012

Humanitarian Assistance:

Timely humanitarian assistance and crisis response

Intermediate Result 2: Humanitarian Relief and Reconstruction

INDICATOR: Number of bridges rebuilt.			
UNIT OF MEASURE: Number of structures **SOURCE:** Contractor **INDICATOR DESCRIPTION:** This indicator measures the number of bridges that are rebuilt as a direct result of the funding provided by USAID. **OPERATIONAL PLAN STANDARD INDICATOR:** **YES _X__ NO___** **PROGRAM AREA:** Protection, Assistance and Solutions **PROGRAM ELEMENT:** Assistance and Recovery **METHOD OF DATA COLLECTION:** Directly from the contractor's design files. **FREQUENCY/SCHEDULE OF DATA COLLECTION**: Monthly **RESPONSIBLE FOR DATA COLLECTION:** **COMMENTS:**	**FISCAL YEAR**	**PLANNED TARGET**	**ACTUAL RESULT**
	2012	0	
	2013	0	
	2014	6	

Performance Indicator Reference Sheet

Strategic Objective: Timely Humanitarian Assistance and Crisis Response
Intermediate Result: Humanitarian Relief and Reconstruction
Indicator: Number of bridges rebuilt.
Link to Other Reporting Indicators/Name: N/A
Is this an OP Standard Indicator?: Y **In Reporting Year:** 2012

DESCRIPTION

Precise Definition(s): This indicator measures the number of bridges that are rebuilt as a direct result of the funding provided by USAID.

Unit of Measure: Number of structures
Disaggregated by: N/A
Justification/Management Utility: This indicator will help measure the progress of the Tropical Storm Ida Reconstruction Project.

PLAN FOR DATA ACQUISITION BY USAID

Data Collection Method: Completion records from the contractor
Method of Acquisition by USAID: Data will be provided in monthly reports
Data Source(s): Contractor
Frequency/Timing of Data Acquisition: Monthly
Estimated Cost of Data Acquisition: Approximately $200 per quarter
Responsible Individual(s) at USAID: Sophie Taintor, COTR

DATA QUALITY ISSUES

Date of Initial Data Quality Assessment: TBD
Known Data Limitations and Significance (if any): N/A
Actions Taken or Planned to Address Data Limitations: COTR will monitor project progress
Date of Future Data Quality Assessments: TBD
Procedures for Future Data Quality Assessments: Spot checks of data, site visits

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis: Information will be analyzed by the COTR in conjunction with the contractor monthly.
Presentation of Data: Data will be presented in written reports and illustrative tables.
Review of Data: Data will be reviewed monthly with the contractor.
Reporting of Data: Data from this indicator will be reported in monthly reports.

OTHER NOTES

Notes on Baselines/Targets: Targets are not cumulative
Location of Data Storage: In files of USAID and the contractor
Other Notes: N/A

THIS SHEET LAST UPDATED ON: 30Jan2012

10 Project Lists by Facility Type

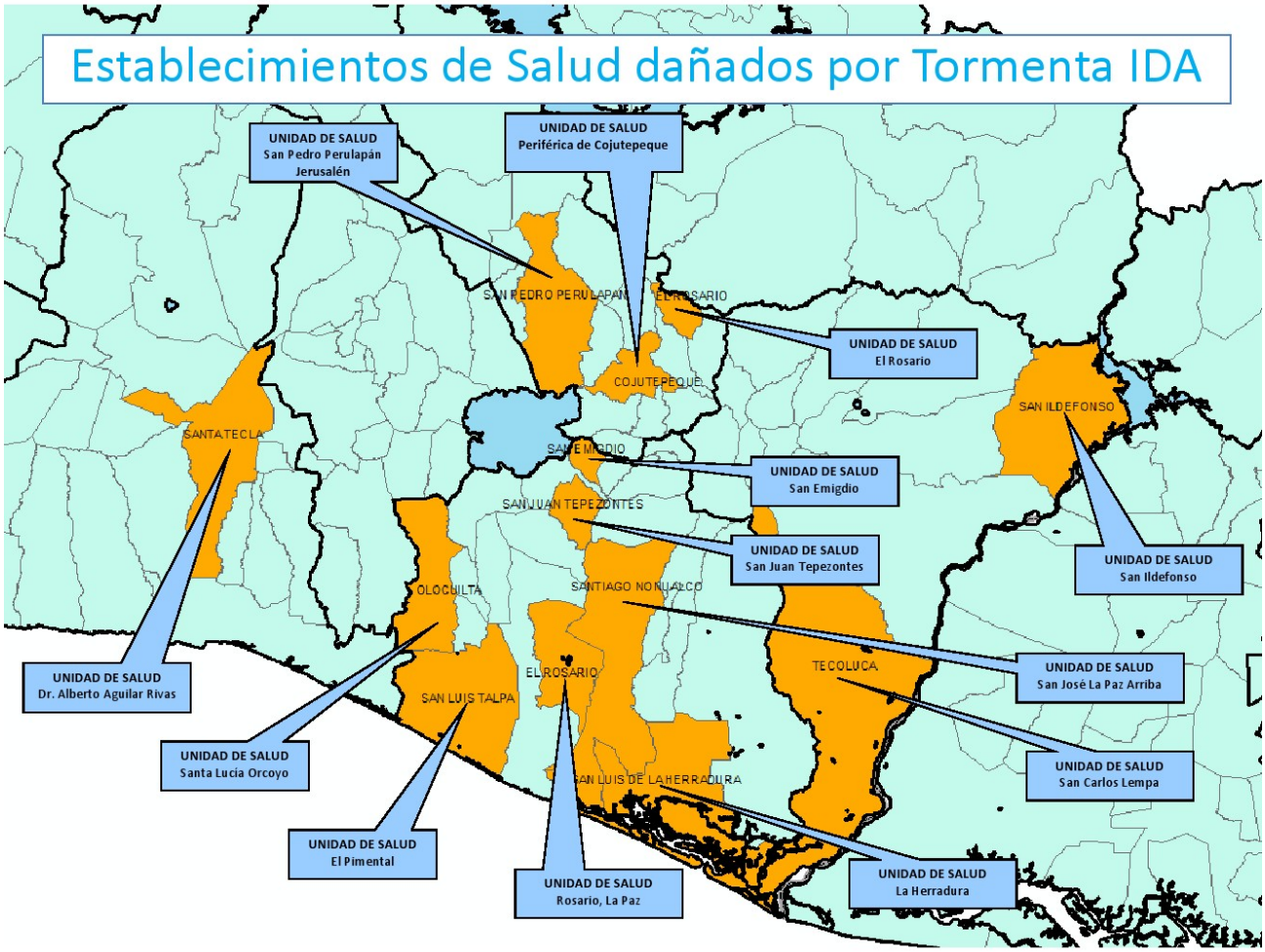
The USAID El Salvador Tropical Storm Ida Reconstruction Project has three main groups of facilities: Clinics, Schools and Bridges.

The proposed sites, selected by the ministries and their respective location in maps are presented below.

10.1 Clinics

A total of 14 health facilities were selected by the MINSAL and are presented in the table below, in their order priority as determined by MINSAL.

No.	Departamento	Municipio	Nombre
1	La Paz	Olocuilta	Unidad de Salud Santa Lucía Orcoyo
2	La Paz	San Luis Talpa	Unidad de Salud El Pimental
3	Cuscatlan	San Pedro Perulapan	Unidad de Salud San Pedro Perulapán
4	Cuscatlan	San Pedro Perulapan	Unidad de Salud Jerusalén
5	Cuscatlan	Cojutepeque	Unidad de Salud Periférica de Cojutepeque
6	La Paz	San Juan Tepezontes	Unidad de Salud de San Juan Tepezontes
7	La Paz	Santiago Nonualco	Unidad de Salud Sant José La Paz Arriba
8	La Paz	San Emigdio	Unidad de Salud San Emigdio
9	Cuscatlan	El Rosario	Unidad de Salud El Rosario, Cuscatlán
10	San Vicente	Tecoluca	Unidad de Salud San Carlos Lempa
11	San Vicente	San Idelfonso	Unidad de Salud San Idelfonso
12	La Paz	La Herradura	Unidad de Salud La Herradura
13	La Paz	El Rosario	Unidad de Salud El Rosario, La Paz
14	La Libertad	Santa Tecla	Unidad de Salud Dr. Alberto Aguilar Rivas

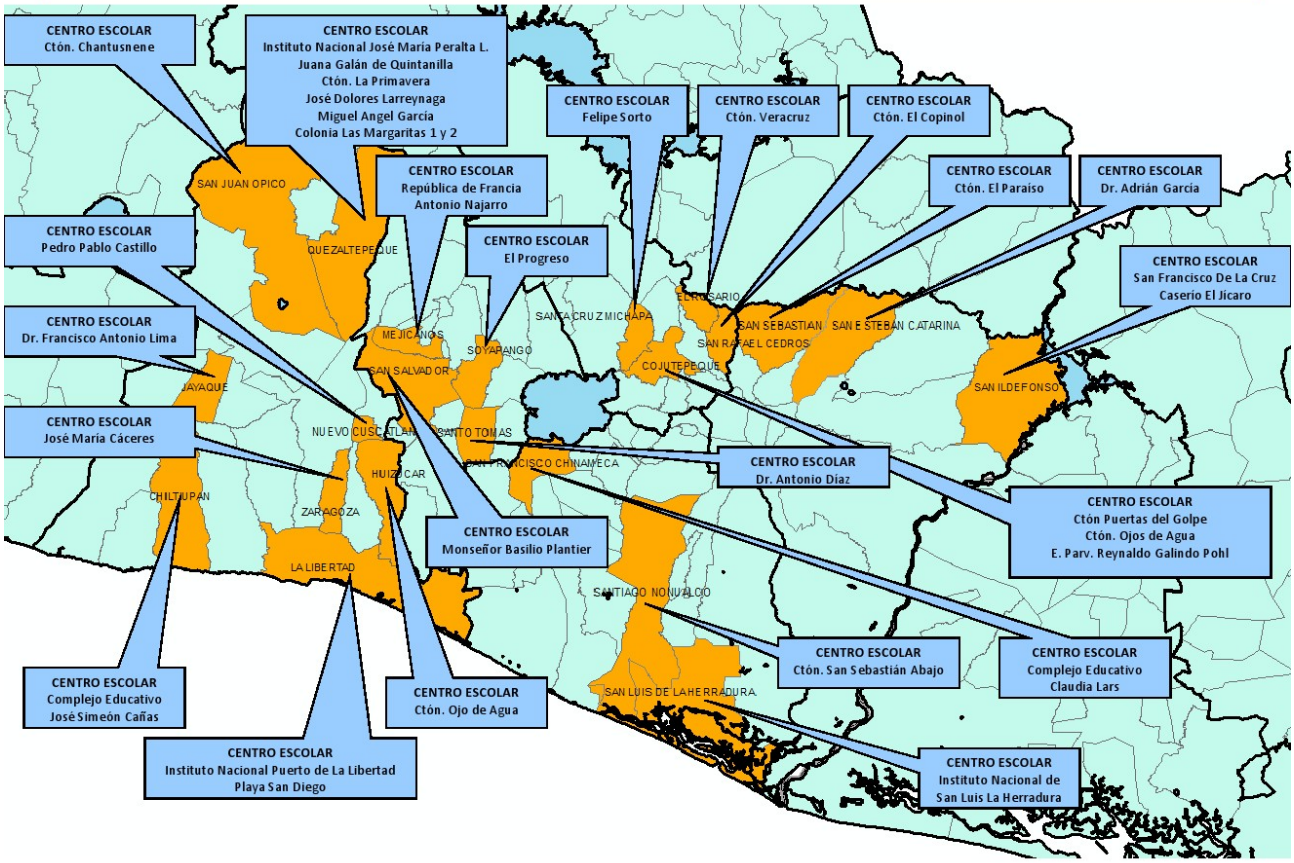

Establecimientos de Salud dañados por Tormenta IDA
UNIDAD DE SALUD
San Pedro Perulapán
Jerusalén
UNIDAD DE SALUD
Periférica de Cojutepeque
UNIDAD DE SALUD
El Rosario
UNIDAD DE SALUD
San Emigdio
UNIDAD DE SALUD
San Juan Tepezontes
UNIDAD DE SALUD
San Ildefonso
UNIDAD DE SALUD
San José La Paz Arriba
UNIDAD DE SALUD
San Carlos Lempa
UNIDAD DE SALUD
La Herradura
UNIDAD DE SALUD
Rosario, La Paz
UNIDAD DE SALUD
El Pimental
UNIDAD DE SALUD
Santa Lucia Orcoyo
UNIDAD DE SALUD
Dr. Alberto Aguilar Rivas
SAN PEDRO PERULAPAN
EL ROSARIO
COJUTEPEQUE
SAN EMIGDIO
SAN JUAN TEPEZONTES
SAN ILDEFONSO
SANTA TECLA
OLOCUILTA
SANTIAGO NONUALCO
TECOLUCA
SAN LUIS TALPA
EL ROSARIO
SAN LUIS DE LA HERRADURA

10.2 Schools

A total of 32 schools were selected by the MINED and are presented in the table below, in their order priority as determined by MINED.

No.	Departamento	Municipio	Nombre
1	Cuscatlan	Cojutepeque	CE Canton Puertas del golpe
2	Cuscatlan	Cojutepeque	CE Canton Ojos de agua
3	Cuscatlan	Cojutepeque	E. Parv. Reynaldo Galindo Pohl
4	Cuscatlan	El Rosario	CE Canton Veracruz
5	Cuscatlan	Santa Cruz Michapa	CE Felipe Sorto
6	Cuscatlan	San Rafael Cedros	CE Canton El Copinol
7	La Libertad	Chiltiupan	Complejo educativo José Simeon Cañas
8	La Libertad	Huizucar	CE Canton Ojo de agua
9	La Libertad	Jayaque	CE Dr. Francisco Antonio Lima
10	La Libertad	La Libertad	Instituto Nacional Puero de La Libertad
11	La Libertad	La Libertad	CE Playa San Diego
12	La Libertad	Nuevo Cusctlan	CE Pablo Castillo
13	La Libertad	Quezaltepeque	Instituto Nacional José María Peralta Lagos
14	La Libertad	Quezaltepeque	CE Juana Galan de Quintanilla
15	La Libertad	Quezaltepeque	CE Canton La Primavera
16	La Libertad	Quezaltepeque	CE José Dolores Larreynaga
17	La Libertad	Quezaltepeque	CE Miguel Angel Garcia
18	La Libertad	Quezaltepeque	CE Colonia Las Margaritas 1 y 2
19	La Libertad	San Juan Opico	CE Canton Chantusnene
20	La Libertad	Zaragoza	CE José María Caceres
21	La Paz	San Francisco Chinameca	Complejo educativo Claudia Lars
22	La Paz	San Luis La Herradura	Instituto Nacional San Luis La Herradura
23	La Paz	Santiago Nonualco	CE Canton San Sebastian Abajo
24	San Salvador	Santo Tomas	CE Dr. Antonio Diaz
25	San Salvador	Mejicanos	CE República de Francia
26	San Salvador	Mejicanos	CE Antonio Najarro
27	San Salvador	San Salvador	CE Monseñor Basilio Plantier
28	Soyapango	San Salvador	CE El Progreso
29	San Vicente	San Sebastian	CE Canton El Paraiso
30	San Vicente	San Esteban Catarina	CE Dr. Adrian García
31	San Vicente	San Ildefonso	CE San Francisco de la Cruz
32	San Vicente	San Ildefonso	CE Caserío El Jicaro

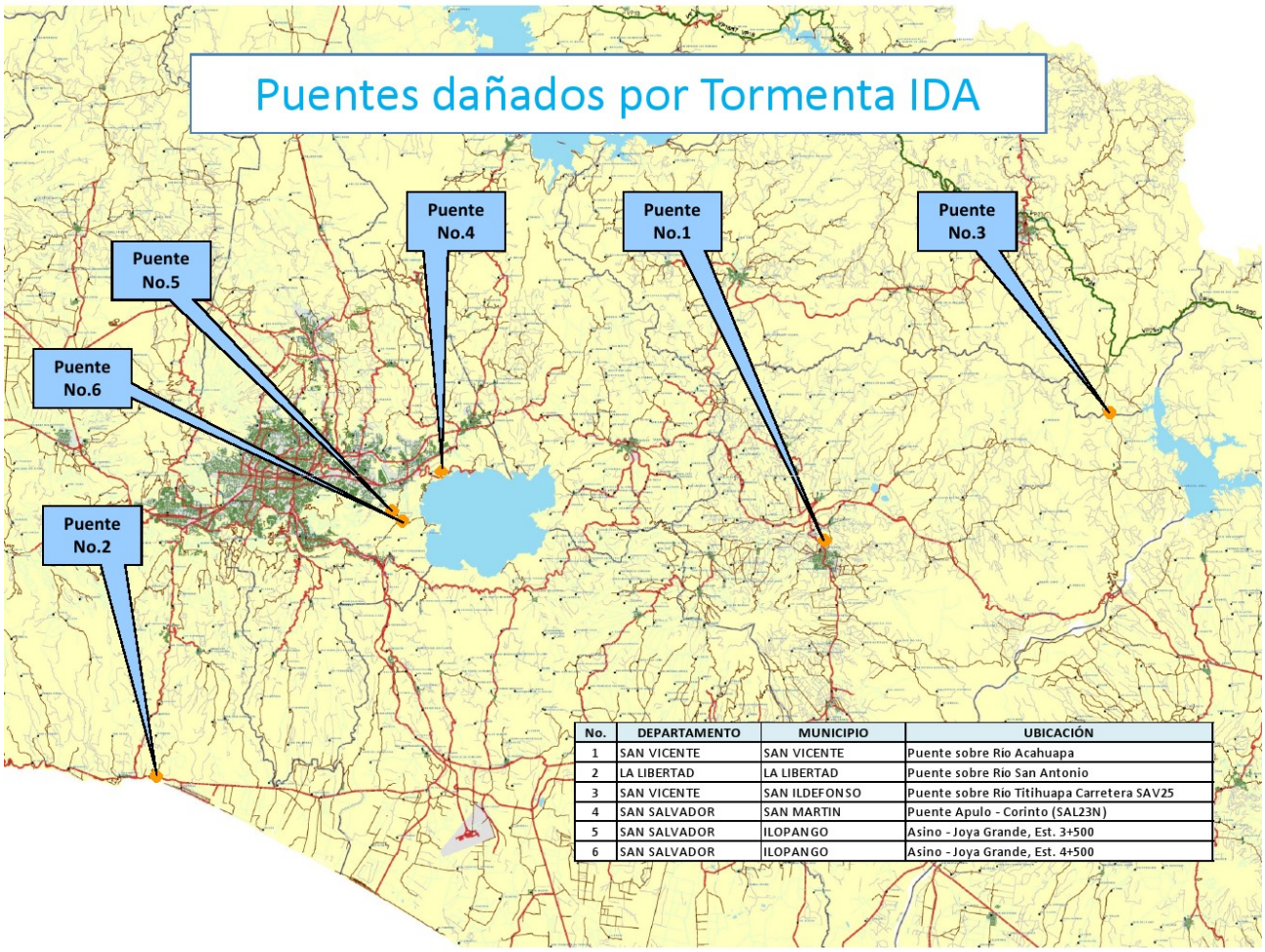
Centros Educativos dañados por Tormenta IDA



10.3 Bridges

A total of 6 bridges were selected by the MOP and are presented in the table below, in their order priority as determined by MOP.

No.	Departamento	Municipio	Nombre
1	San Vicente	San Vicente	Puente sobre Rio Acahuapa
2	La Libertad	La Libertad	Puente San Antonio
3	San Vicente	San Idelfonso	Puente Titihuapa
4	San Salvador	San Martin	Puente Apulo - Corinto
5	San Salvador	Ilopango	Puente Asino - Joya Grande 3+500
6	San Salvador	Ilopango	Puente Asino - Joya Grande 4+000

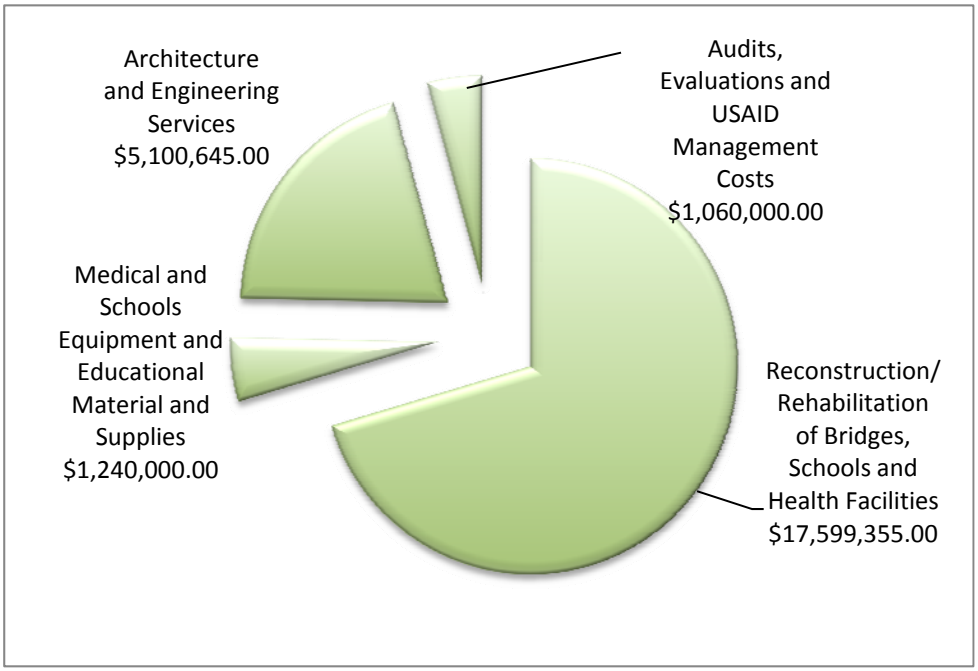


11 Budget

11.1 Illustrative Budget by program area/Components (U.S.$)

USAID has allocated total funding of $25 million for the program that has been divided into the program areas/components as listed below:

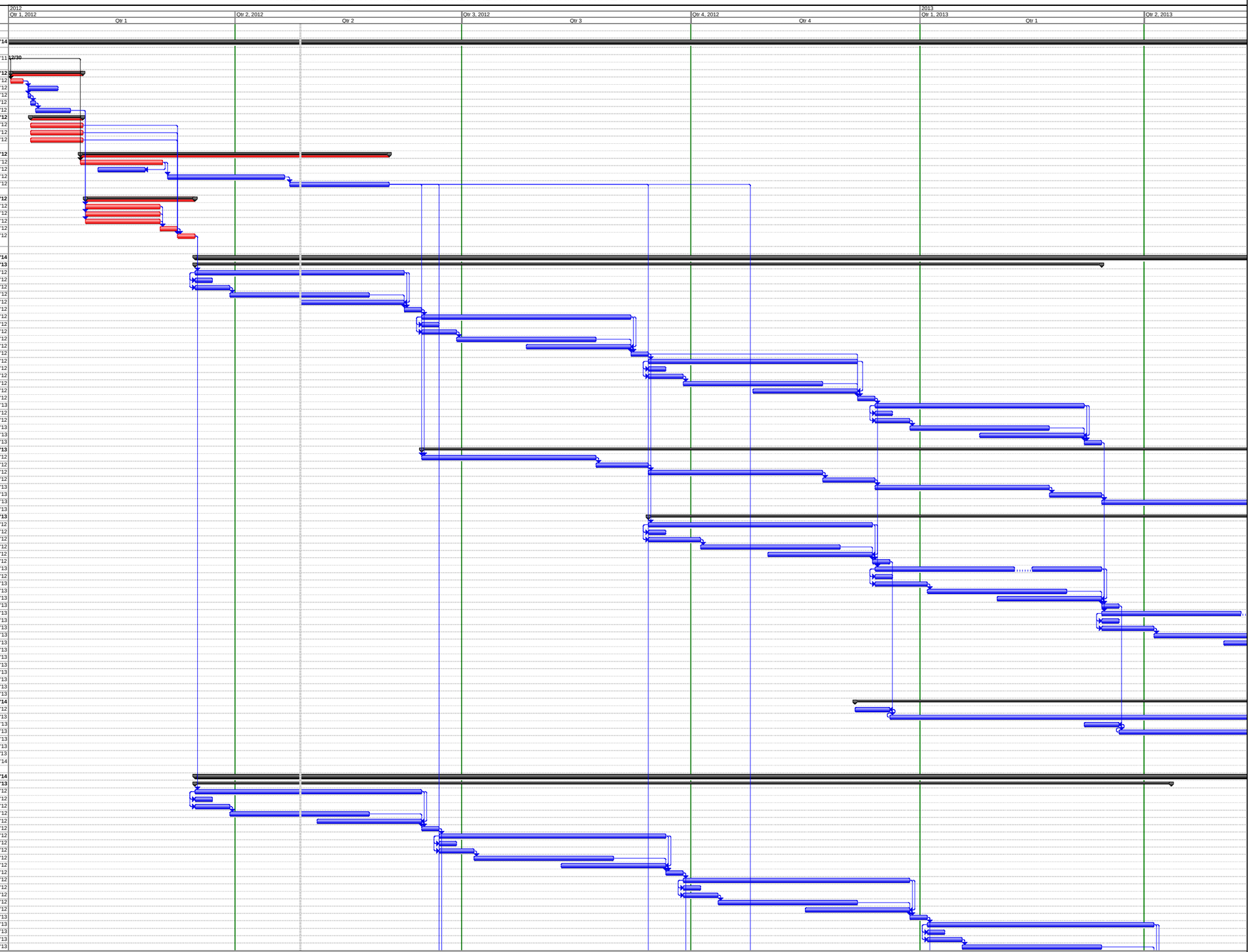
ID	COMPONENT	ALLOCATED FUNDS
1	Reconstruction / Rehabilitations of Bridges, Schools and Health Facilities	US$17,599,355.00
2	Medical and Schools Equipment and Educational Materials and Supplies	US$1,240,000.00
3	Architecture and Engineering Services	US$ 5,100,645.00
4	Audits, Evaluation and USAID Managements Costs	US$ 1,060,000.00
	TOTAL	**US$ 25,060,000.00**



Annex 1: Detailed Project Schedule

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT

ID	Task Name	Duration	Start	Finish
1				
2				
3	**USAID TROPICAL STORM IDA RECONSTRUCTION PROGRAM**	**782 days**	**Fri Dec 30, '11**	**Mon Dec 29, '14**
4				
5	**PROGRAM START UP**	0 days	Fri Dec 30, '11	Fri Dec 30, '11
6				
7	**INITIAL GENERAL ADMINISTRATION**	**21 days**	**Mon Jan 2, '12**	**Mon Jan 30, '12**
8	Initial Mobilization	5 days	Mon Jan 2, '12	Fri Jan 6, '12
9	Establishment of Project Office	10 days	Mon Jan 9, '12	Fri Jan 20, '12
10	Post Award Conference USAID-CDM Smith	1 day	Mon Jan 9, '12	Mon Jan 9, '12
11	USAID-Stakeholders Meetings	2 days	Tue Jan 10, '12	Wed Jan 11, '12
12	Development of General Criteria	10 days	Thu Jan 12, '12	Wed Jan 25, '12
13	**Initial Planning**	**15 days**	**Tue Jan 10, '12**	**Mon Jan 30, '12**
14	Work Plan, WP	15 days	Tue Jan 10, '12	Mon Jan 30, '12
15	Security Plan, SP	15 days	Tue Jan 10, '12	Mon Jan 30, '12
16	Performance Monitoring Plan, PMP	15 days	Tue Jan 10, '12	Mon Jan 30, '12
17				
18	**D-B CONTRACTORS PREQUALIFICATION PROCCESS**	**90 days**	**Mon Jan 30, '12**	**Fri Jun 1, '12**
19	Expresion of Interest Announcement-EI Receiving	25 days	Mon Jan 30, '12	Fri Mar 2, '12
20	Project Information Process (CASALCO, ASIA, etc.)	15 days	Mon Feb 6, '12	Fri Feb 24, '12
21	Prequalification Process Announcement-PP Documentation Receiving	35 days	Mon Mar 5, '12	Fri Apr 20, '12
22	Evaluation - Notification of Prequalification	30 days	Mon Apr 23, '12	Fri Jun 1, '12
23				
24	**RAPID APPRAISAL**	**32 days**	**Wed Feb 1, '12**	**Thu Mar 15, '12**
25	Collection and processing of information for clinics	22 days	Wed Feb 1, '12	Thu Mar 1, '12
26	Collection and processing of information for schools	22 days	Wed Feb 1, '12	Thu Mar 1, '12
27	Collection and processing of information for bridges	22 days	Wed Feb 1, '12	Thu Mar 1, '12
28	Preparing of rapid appraisal report	5 days	Fri Mar 2, '12	Thu Mar 8, '12
29	General Evaluation and Notification of the results of Rapid Appraisal process (USAID, GOES)	5 days	Fri Mar 9, '12	Thu Mar 15, '12
30				
31	**CLINICS**	**513 days**	**Fri Mar 16, '12**	**Tue Mar 4, '14**
32	**ASSESSMENTS AND PRELIMINARY DESIGNS**	**260 days**	**Fri Mar 16, '12**	**Thu Mar 14, '13**
33	**Preliminary design, Group 1**	60 days	Fri Mar 16, '12	Thu Jun 7, '12
34	Criteria Development, Group 1	5 days	Fri Mar 16, '12	Thu Mar 22, '12
35	Preliminary Environmental Documentation, Group 1	10 days	Fri Mar 16, '12	Thu Mar 29, '12
36	Preliminary Environmental Resolution, Group 1	40 days	Fri Mar 30, '12	Thu May 24, '12
37	Preliminary Building Permits, Group 1	30 days	Fri Apr 27, '12	Thu Jun 7, '12
38	Approvals (USAID, MINSAL), Group 1	5 days	Fri Jun 8, '12	Thu Jun 14, '12
39	**Preliminary design, Group 2**	60 days	Fri Jun 15, '12	Thu Sep 6, '12
40	Criteria Development, Group 2	5 days	Fri Jun 15, '12	Thu Jun 21, '12
41	Preliminary Environmental Documentation, Group 2	10 days	Fri Jun 15, '12	Thu Jun 28, '12
42	Preliminary Environmental Resolution, Group 2	40 days	Fri Jun 29, '12	Thu Aug 23, '12
43	Preliminary Building Permits, Group 2	30 days	Fri Jul 27, '12	Thu Sep 6, '12
44	Approvals (USAID, MINSAL), Group 2	5 days	Fri Sep 7, '12	Thu Sep 13, '12
45	**Preliminary design, Group 3**	60 days	Fri Sep 14, '12	Thu Dec 6, '12
46	Criteria Development, Grupo 3	5 days	Fri Sep 14, '12	Thu Sep 20, '12
47	Preliminary Environmental Documentation, Group 3	10 days	Fri Sep 14, '12	Thu Sep 27, '12
48	Preliminary Environmental Resolution, Group 3	40 days	Fri Sep 28, '12	Thu Nov 22, '12
49	Preliminary Building Permits, Group 3	30 days	Fri Oct 26, '12	Thu Dec 6, '12
50	Approvals (USAID, MINSAL), Group 3	5 days	Fri Dec 7, '12	Thu Dec 13, '12
51	**Preliminary design, Group 4**	60 days	Fri Dec 14, '12	Thu Mar 7, '13
52	Criteria Development, Group 4	5 days	Fri Dec 14, '12	Thu Dec 20, '12
53	Preliminary Environmental Documentation, Group 4	10 days	Fri Dec 14, '12	Thu Dec 27, '12
54	Preliminary Environmental Resolution, Group 4	40 days	Fri Dec 28, '12	Thu Feb 21, '13
55	Preliminary Building Permits, Group 4	30 days	Fri Jan 25, '13	Thu Mar 7, '13
56	Approvals (USAID, MINSAL), Group 4	5 days	Fri Mar 8, '13	Thu Mar 14, '13
57	**TENDERING**	**260 days**	**Fri Jun 15, '12**	**Thu Jun 13, '13**
58	**Design-Build tender, Group 1**	50 days	Fri Jun 15, '12	Thu Aug 23, '12
59	Approvals / Contractual documents (USAID), Group 1	15 days	Fri Aug 24, '12	Thu Sep 13, '12
60	**Design-Build tender, Group 2**	50 days	Fri Sep 14, '12	Thu Nov 22, '12
61	Approvals / Contractual documents (USAID), Group 2	15 days	Fri Nov 23, '12	Thu Dec 13, '12
62	**Design-Build tender, Group 3**	50 days	Fri Dec 14, '12	Thu Feb 21, '13
63	Approvals / Contractual documents (USAID), Group 3	15 days	Fri Feb 22, '13	Thu Mar 14, '13
64	**Design-Build tender, Group 4**	50 days	Fri Mar 15, '13	Thu May 23, '13
65	Approvals / Contractual documents (USAID), Group 4	15 days	Fri May 24, '13	Thu Jun 13, '13
66	**FINAL DESIGNS SUPERVISION SERVICES**	**263 days**	**Fri Sep 14, '12**	**Tue Sep 17, '13**
67	**Final design, Group 1**	60 days	Fri Sep 14, '12	Wed Dec 12, '12
68	Criteria Developmet, Group 1	5 days	Fri Sep 14, '12	Thu Sep 20, '12
69	Environmental Documentation, Group 1	15 days	Fri Sep 14, '12	Thu Oct 4, '12
70	Environmental Resolution, Group 1	40 days	Fri Oct 5, '12	Thu Nov 29, '12
71	Building Permits, Group 1	30 days	Thu Nov 1, '12	Wed Dec 12, '12
72	Approvals (USAID, MINSAL), Group 1	5 days	Thu Dec 13, '12	Wed Dec 19, '12
73	**Final design, Group 2**	60 days	Fri Dec 14, '12	Thu Mar 14, '13
74	Criteria Developmet, Group 2	5 days	Fri Dec 14, '12	Thu Dec 20, '12
75	Environmental Documentation, Group 2	15 days	Fri Dec 14, '12	Thu Jan 3, '13
76	Environmental Resolution, Group 2	40 days	Fri Jan 4, '13	Thu Feb 28, '13
77	Building Permits, Group 2	30 days	Fri Feb 1, '13	Thu Mar 14, '13
78	Approvals (USAID, MINSAL), Group 2	5 days	Fri Mar 15, '13	Thu Mar 21, '13
79	**Final design, Group 3**	60 days	Fri Mar 15, '13	Thu Jun 13, '13
80	Criteria Developmet, Grupo 3	5 days	Fri Mar 15, '13	Thu Mar 21, '13
81	Environmental Documentation, Group 3	15 days	Fri Mar 15, '13	Thu Apr 4, '13
82	Environmental Resolution, Group 3	40 days	Fri Apr 5, '13	Thu May 30, '13
83	Building Permits, Group 3	30 days	Fri May 3, '13	Thu Jun 13, '13
84	Approvals (USAID, MINSAL), Group 3	5 days	Fri Jun 14, '13	Thu Jun 20, '13
85	**Final design, Group 4**	60 days	Fri Jun 14, '13	Tue Sep 10, '13
86	Criteria Developmet, Grupo 4	5 days	Fri Jun 14, '13	Thu Jun 20, '13
87	Environmental Documentation, Group 4	15 days	Fri Jun 14, '13	Thu Jul 4, '13
88	Environmental Resolution, Group 4	40 days	Fri Jul 5, '13	Thu Aug 29, '13
89	Building Permits, Group 4	30 days	Wed Jul 31, '13	Tue Sep 10, '13
90	Approvals (USAID, MINSAL), Group 4	5 days	Wed Sep 11, '13	Tue Sep 17, '13
91	**D-B CONTRACT SUPERVISION SERVICES**	**324 days**	**Thu Dec 6, '12**	**Tue Mar 4, '14**
92	**Pre-Construction Meetings, Group 1**	10 days	Thu Dec 6, '12	Thu Dec 20, '12
93	Construction's supervision, Group 1	120 days	Thu Dec 20, '12	Wed Jun 5, '13
94	**Pre-Construction Meetings, Group 2**	10 days	Fri Mar 8, '13	Fri Mar 22, '13
95	Construction's supervision, Group 2	120 days	Fri Mar 22, '13	Thu Sep 5, '13
96	**Pre-Construction Meetings, Group 3**	10 days	Fri Jun 7, '13	Fri Jun 21, '13
97	Construction's supervision, Group 3	120 days	Fri Jun 21, '13	Thu Dec 5, '13
98	**Pre-Construction Meetings, Group 4**	10 days	Wed Sep 4, '13	Wed Sep 18, '13
99	Construction's supervision, Group 4	120 days	Wed Sep 18, '13	Tue Mar 4, '14
100				
101	**SCHOOLS**	**530 days**	**Fri Mar 16, '12**	**Thu Mar 27, '14**
102	**ASSESSMENTS AND PRELIMINARY DESIGNS**	**280 days**	**Fri Mar 16, '12**	**Thu Apr 11, '13**
103	**Preliminary design, Group 1**	65 days	Fri Mar 16, '12	Thu Jun 14, '12
104	Criteria Development, Group 1	5 days	Fri Mar 16, '12	Thu Mar 22, '12
105	Preliminary Environmental Documentation, Group 1	10 days	Fri Mar 16, '12	Thu Mar 29, '12
106	Preliminary Environmental Resolution, Group 1	40 days	Fri Mar 30, '12	Thu May 24, '12
107	Preliminary Building Permits, Group 1	30 days	Fri May 4, '12	Thu Jun 14, '12
108	Approvals (USAID, MINED), Group 1	5 days	Fri Jun 15, '12	Thu Jun 21, '12
109	**Preliminary design, Group 2**	65 days	Fri Jun 22, '12	Thu Sep 20, '12
110	Criteria Development, Group 2	5 days	Fri Jun 22, '12	Thu Jun 28, '12
111	Preliminary Environmental Documentation, Group 2	10 days	Fri Jun 22, '12	Thu Jul 5, '12
112	Preliminary Environmental Resolution, Group2	40 days	Fri Jul 6, '12	Thu Aug 30, '12
113	Preliminary Building Permits, Group 2	30 days	Fri Aug 10, '12	Thu Sep 20, '12
114	Approvals (USAID, MINED), Group 2	5 days	Fri Sep 21, '12	Thu Sep 27, '12
115	**Preliminary design, Group 3**	65 days	Fri Sep 28, '12	Thu Dec 27, '12
116	Criteria Development, Group 3	5 days	Fri Sep 28, '12	Thu Oct 4, '12
117	Preliminary Environmental Documentation, Group 3	10 days	Fri Sep 28, '12	Thu Oct 11, '12
118	Preliminary Environmental Resolution, Group3	40 days	Fri Oct 12, '12	Thu Dec 6, '12
119	Preliminary Building Permits, Group 3	30 days	Fri Nov 16, '12	Thu Dec 27, '12
120	Approvals (USAID, MINED), Group 3	5 days	Fri Dec 28, '12	Thu Jan 3, '13
121	**Preliminary design, Group 4**	65 days	Fri Jan 4, '13	Thu Apr 4, '13
122	Criteria Development, Group 4	5 days	Fri Jan 4, '13	Thu Jan 10, '13
123	Preliminary Environmental Documentation, Group 4	10 days	Fri Jan 4, '13	Thu Jan 17, '13
124	Preliminary Environmental Resolution, Group 4	40 days	Fri Jan 18, '13	Thu Mar 14, '13

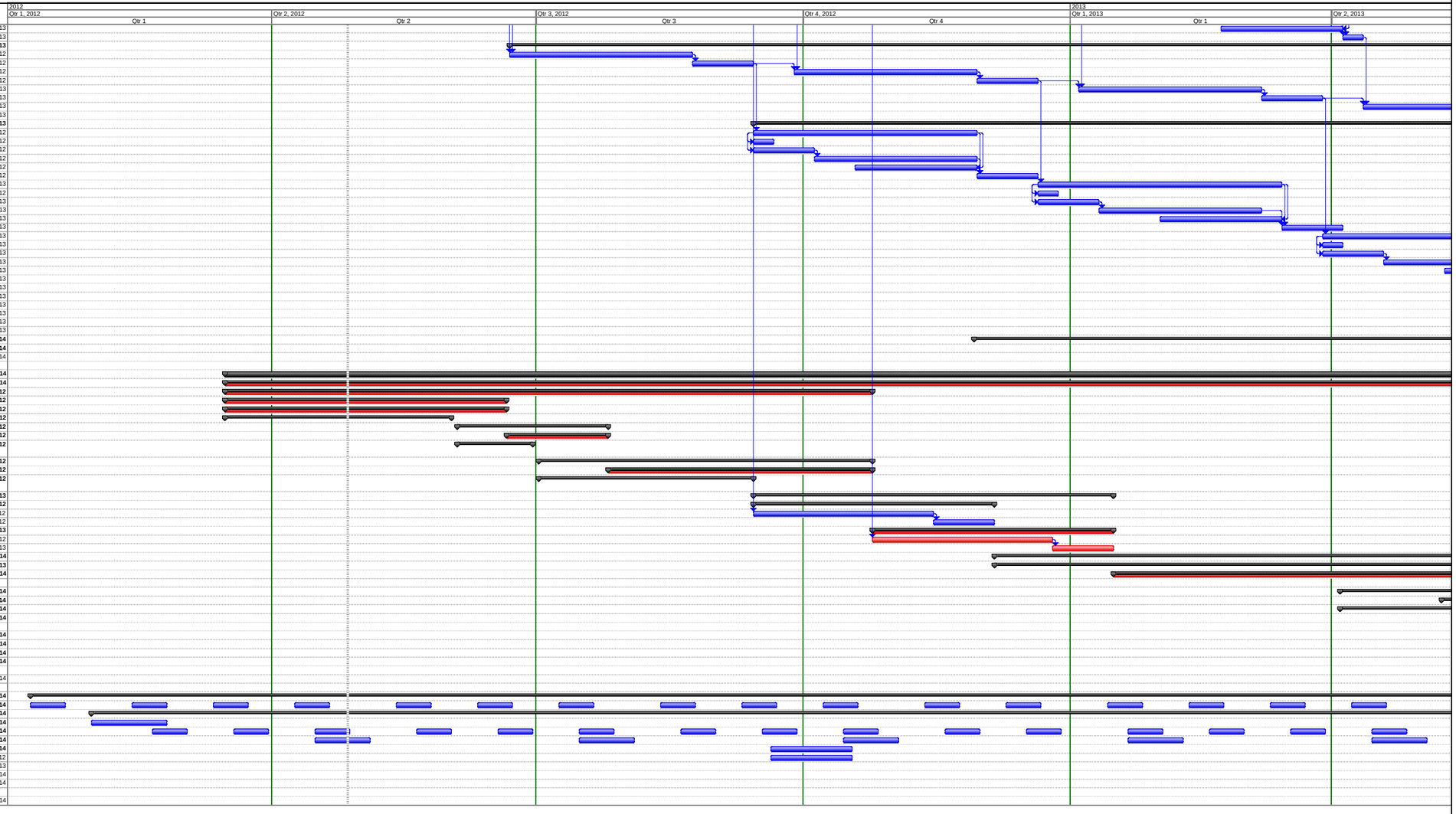


Project: GENERAL SCHEDULE (vdl)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT

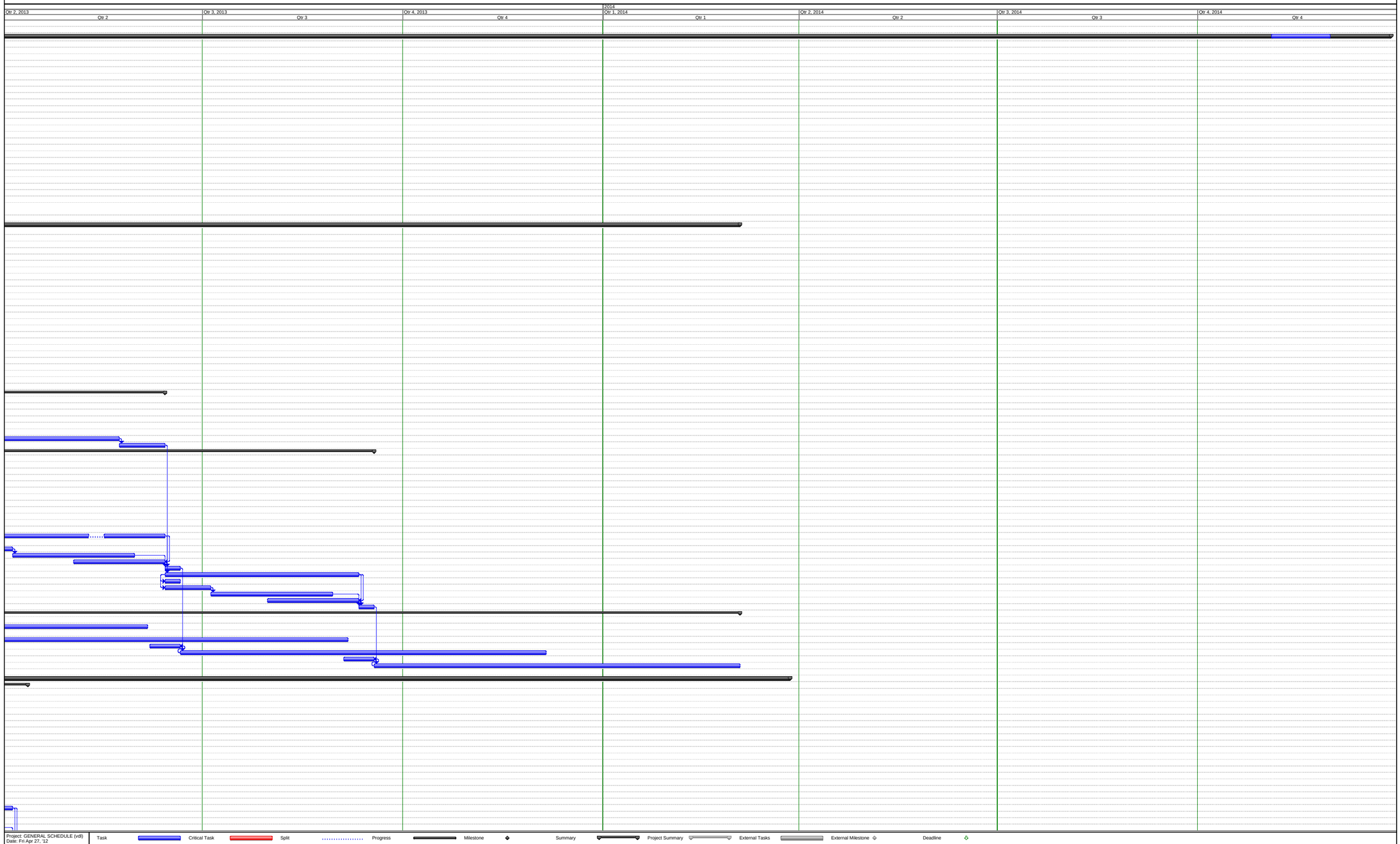
ID	Task Name	Duration	Start	Finish
125	Preliminary Building Permits, Group 4	30 days	Fri Feb 22, '13	Thu Apr 4, '13
126	Approvals (USAID, MINED), Group 4	5 days	Fri Apr 5, '13	Thu Apr 11, '13
127	**TENDERING**	**270 days**	**Fri Jun 22, '12**	**Thu Jul 4, '13**
128	**Design-Build tender, Group 1**	45 days	Fri Jun 22, '12	Thu Aug 23, '12
129	Approvals / Contractual documents (USAID), Group 1	15 days	Fri Aug 24, '12	Thu Sep 13, '12
130	**Design-Build tender, Group 2**	45 days	Fri Sep 28, '12	Thu Nov 29, '12
131	Approvals / Contractual documents (USAID), Group 2	15 days	Fri Nov 30, '12	Thu Dec 20, '12
132	**Design-Build tender, Group 3**	45 days	Fri Jan 4, '13	Thu Mar 7, '13
133	Approvals / Contractual documents (USAID), Group 3	15 days	Fri Mar 8, '13	Thu Mar 28, '13
134	**Design-Build tender, Group 4**	45 days	Fri Apr 12, '13	Thu Jun 13, '13
135	Approvals / Contractual documents (USAID), Group 4	15 days	Fri Jun 14, '13	Thu Jul 4, '13
136	**FINAL DESIGNS SUPERVISION SERVICES**	**285 days**	**Fri Sep 14, '12**	**Thu Oct 17, '13**
137	**Final design, Group 1**	55 days	Fri Sep 14, '12	Thu Nov 29, '12
138	Criteria Developmet, Group 1	5 days	Fri Sep 14, '12	Thu Sep 20, '12
139	Environmental Documentation, Group 1	15 days	Fri Sep 14, '12	Thu Oct 4, '12
140	Environmental Resolution, Group 1	40 days	Fri Oct 5, '12	Thu Nov 29, '12
141	Building Permits, Group 1	30 days	Fri Oct 19, '12	Thu Nov 29, '12
142	Approvals (USAID, MINED), Group 1	15 days	Fri Nov 30, '12	Thu Dec 20, '12
143	**Final design, Group 2**	60 days	Fri Dec 21, '12	Thu Mar 14, '13
144	Criteria Developmet, Group 2	5 days	Fri Dec 21, '12	Thu Dec 27, '12
145	Environmental Documentation, Group 2	15 days	Fri Dec 21, '12	Thu Jan 10, '13
146	Environmental Resolution, Group 2	40 days	Fri Jan 11, '13	Thu Mar 7, '13
147	Building Permits, Group 2	30 days	Fri Feb 1, '13	Thu Mar 14, '13
148	Approvals (USAID, MINED), Group 2	15 days	Fri Mar 15, '13	Thu Apr 4, '13
149	**Final design, Group 3**	60 days	Fri Mar 29, '13	Thu Jun 20, '13
150	Criteria Developmet, Group 3	5 days	Fri Mar 29, '13	Thu Apr 4, '13
151	Environmental Documentation, Group 3	15 days	Fri Mar 29, '13	Thu Apr 18, '13
152	Environmental Resolution, Group 3	40 days	Fri Apr 19, '13	Thu Jun 13, '13
153	Building Permits, Group 3	30 days	Fri May 10, '13	Thu Jun 20, '13
154	Approvals (USAID, MINED), Group 3	15 days	Fri Jun 21, '13	Thu Jul 11, '13
155	**Final design, Group 4**	60 days	Fri Jul 5, '13	Thu Sep 26, '13
156	Criteria Developmet, Group 4	5 days	Fri Jul 5, '13	Thu Jul 11, '13
157	Environmental Documentation, Group 4	15 days	Fri Jul 5, '13	Thu Jul 25, '13
158	Environmental Resolution, Group 4	40 days	Fri Jul 26, '13	Thu Sep 19, '13
159	Building Permits, Group 4	30 days	Fri Aug 16, '13	Thu Sep 26, '13
160	Approvals (USAID, MINED), Group 4	15 days	Fri Sep 27, '13	Thu Oct 17, '13
161	**D-B CONTRACT SUPERVISION SERVICES**	**326 days**	**Thu Nov 29, '12**	**Thu Feb 27, '14**
170	**DEFICIENCIES CLOSEOUT**	**20 days**	**Fri Feb 28, '14**	**Thu Mar 27, '14**
171	Field visits and justifications	20 days	Fri Feb 28, '14	Thu Mar 27, '14
172				
173	**BRIDGES**	**572 days**	**Thu Mar 15, '12**	**Mon May 26, '14**
174	**PROJECT WORK PROGRAM: TROPICAL STORM RECONSTRUCTION IDA**	**572 days**	**Thu Mar 15, '12**	**Mon May 26, '14**
175	**STUDIES, ASSESSEMENT AND PRELIMINARY DESIGN**	**159 days**	**Thu Mar 15, '12**	**Wed Oct 24, '12**
176	**STUDIES**	**69 days**	**Thu Mar 15, '12**	**Wed Jun 20, '12**
177	**GROUP A (Acahuapa and Titihuapa)**	**69 days**	**Thu Mar 15, '12**	**Wed Jun 20, '12**
189	**GROUP B (San Antonio, Apulo Corinto, Asino 3+500 and 4+**	**56 days**	**Thu Mar 15, '12**	**Fri Jun 1, '12**
201	**ALTERNATIVE STUDIES**	**38 days**	**Mon Jun 4, '12**	**Wed Jul 25, '12**
202	**GROUP A (Acahuapa and Titihuapa)**	**25 days**	**Thu Jun 21, '12**	**Wed Jul 25, '12**
206	**GROUP B (San Antonio, Apulo Corinto, Asino 3+500 and 4+00)**	**20 days**	**Mon Jun 4, '12**	**Fri Jun 29, '12**
210	**PRELIMINARY DESIGNS**	**83 days**	**Mon Jul 2, '12**	**Wed Oct 24, '12**
211	**GROUP A (Acahuapa and Titihuapa)**	**65 days**	**Thu Jul 26, '12**	**Wed Oct 24, '12**
222	**GROUP B (San Antonio, Apulo Corinto, Asino 3+500 and 4+00)**	**54 days**	**Mon Jul 2, '12**	**Thu Sep 13, '12**
233	**TENDERING**	**88 days**	**Fri Sep 14, '12**	**Tue Jan 15, '13**
234	**GROUP B (San Antonio, Apulo Corinto, Asino 3+500 and 4+00)**	**59 days**	**Fri Sep 14, '12**	**Wed Dec 5, '12**
235	Tendering (tender, questions and answers, evaluation of tenders	44 days	Fri Sep 14, '12	Wed Nov 14, '12
236	Contractual documentation	15 days	Thu Nov 15, '12	Wed Dec 5, '12
237	**GROUP A (Acahuapa and Titihuapa)**	**59 days**	**Thu Oct 25, '12**	**Tue Jan 15, '13**
238	Tendering (tender, questions and answers, evaluation of tenders	44 days	Thu Oct 25, '12	Tue Dec 25, '12
239	Contractual documentation	15 days	Wed Dec 26, '12	Tue Jan 15, '13
240	**DESIGN-BUILD (D-B) SUPERVISION SERVICES**	**383 days**	**Thu Dec 6, '12**	**Mon May 26, '14**
241	**GROUP B (San Antonio, Apulo Corinto, Asino 3+500 and 4+00)**	**242 days**	**Thu Dec 6, '12**	**Fri Nov 8, '13**
248	**GROUP A (Acahuapa and Titihuapa)**	**354 days**	**Wed Jan 16, '13**	**Mon May 26, '14**
255				
256	**BUILDING TRAINING PROCESS**	**323 days**	**Thu Apr 4, '13**	**Mon Jun 30, '14**
257	**CLINICS BCP**	**224 days**	**Thu May 9, '13**	**Tue Mar 18, '14**
264	**SHOOLS BCP**	**258 days**	**Thu Apr 4, '13**	**Mon Mar 31, '14**
271	**BRIDGES BCP**	**186 days**	**Mon Oct 14, '13**	**Mon Jun 30, '14**
277				
278	**CONSTRUCTION CONTRACTS CLOSEOUT**	**336 days**	**Mon Jun 3, '13**	**Mon Sep 15, '14**
279	**CLINICS CONTRACTS CLOSEOUTS**	**238 days**	**Thu Jun 20, '13**	**Mon May 19, '14**
285	**SCHOOLS CONTRACTS CLOSEOUTS**	**260 days**	**Mon Jun 3, '13**	**Fri May 30, '14**
291	**BRIDGES CONTRACTS CLOSEOUTS**	**211 days**	**Mon Nov 25, '13**	**Mon Sep 15, '14**
295				
296	PROJECT CLOSEOUT (Final Report)	75 days	Tue Sep 16, '14	Fri Dec 26, '14
297				
298	**DOCUMENTATION CLEARINGHOUSE**	**756 days**	**Mon Jan 9, '12**	**Sun Nov 30, '14**
299	**COLLECTING**	**730 days**	**Mon Jan 9, '12**	**Fri Oct 24, '14**
334	**DELIVERABLES**	**741 days**	**Mon Jan 30, '12**	**Sun Nov 30, '14**
335	**Workplan**	**655 days**	**Mon Jan 30, '12**	**Fri Aug 1, '14**
340	**Monthly Progress Reports, MPRs**	**660 days**	**Mon Feb 20, '12**	**Fri Aug 29, '14**
372	**Quaterly Progress Reports, QPRs**	**605 days**	**Mon Apr 16, '12**	**Fri Aug 8, '14**
383	**Annual Reports, Ars**	**542 days**	**Thu Sep 20, '12**	**Fri Oct 17, '14**
384	Annual Reports Ars 1	20 days	Thu Sep 20, '12	Wed Oct 17, '12
385	Annual Reports Ars 2	20 days	Fri Sep 20, '13	Thu Oct 17, '13
386	Annual Reports Ars 3	20 days	Mon Sep 22, '14	Fri Oct 17, '14
387	**Final Report**	20 days	Tue Nov 4, '14	Sun Nov 30, '14
388				
389	END OF PROJECT	0 days	Mon Dec 29, '14	Mon Dec 29, '14



Project: GENERAL SCHEDULE (vdl)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT



Project: GENERAL SCHEDULE (vdl)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT

Project: GENERAL SCHEDULE (vdl)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT

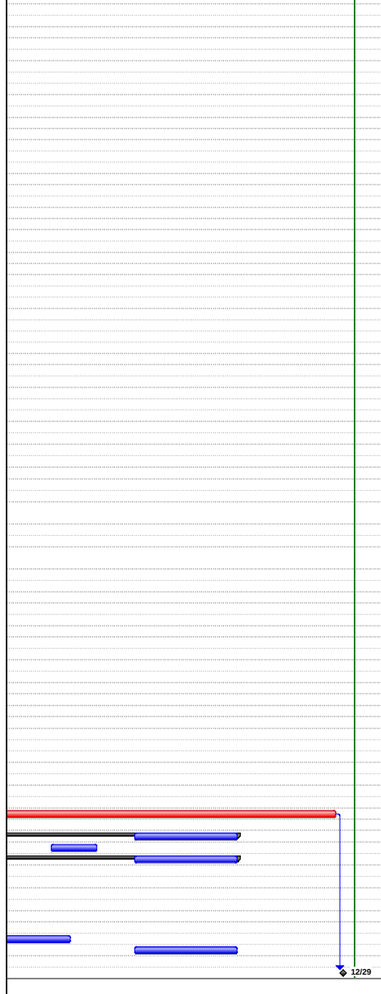
2014	2015					2016	
Qtr 4, 2014	Qtr 1, 2015	Qtr 2, 2015	Qtr 3, 2015	Qtr 4, 2015		Qtr 1, 2016	Qtr 2, 2016
Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2

Project: GENERAL SCHEDULE (vdt)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

ANNEX 1. USAID TROPICAL STORM IDA RECONSTRUCTION PROJECT

2014	2015					2016	
Qtr 4, 2014	Qtr 1, 2015	Qtr 2, 2015	Qtr 3, 2015	Qtr 4, 2015		Qtr 1, 2016	Qtr 2, 2016
Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2



Project: GENERAL SCHEDULE (vdl)
Date: Fri Apr 27, '12

Task | Critical Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline