



USAID
FROM THE AMERICAN PEOPLE

CONSTRUCTION PLAN

UKRAINE HEALTH REFORM SUPPORT (HRS)
GENERATOR INSTALLATION

May 2024

This publication was produced for review by the United States Agency for International Development. It was prepared by Deloitte Consulting LLP

CONSTRUCTION PLAN

UKRAINE HRS GENERATOR INSTALLATION

Dates: December 7, 2023 to January 31, 2025

Contract: 72012118C00001

Contracting Officer: Jessica Faber

Contracting Officer Representative: Paola Pavlenko

Submitted to:

USAID/Ukraine Regional Contract Office

Prepared by:

Deloitte Consulting LLP

Version	Date Approved
1.0 USAID HRS Generators Initial Construction Plan dated 2-12-2024	Feb 12, 2024
2.0 USAID HRS Generators Initial Construction Plan dated 5-23-2024	Pending USAID Approval

DISCLAIMER:

The authors' views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Contents

ACRONYMS.....	3
TERMS.....	5
1. INTRODUCTION.....	8
1.1 UKRAINE HRS BACKGROUND	8
2. ROLES AND RESPONSIBILITIES	9
2.1 USAID RESPONSIBILITIES	9
2.2 IMPLEMENTING PARTNER RESPONSIBILITIES	10
2.3 ARCHITECT/ENGINEER RESPONSIBILITIES	10
2.4 CONSTRUCTION CONTRACTOR RESPONSIBILITIES	10
2.6 TECHNICAL SUPERVISOR RESPONSIBILITIES	11
3. PHASING OF CONSTRUCTION RELATED ACTIVITIES	12
3.1 PLANNING	12
3.2 DESIGN	14
3.3 PROCUREMENT.....	17
3.4 CONSTRUCTION.....	18
3.5 MONITORING	23
3.6 HANDOVER.....	26
4. COMMUNICATION PLAN	28
4.1 PROJECT MEETINGS.....	28
4.2 PRE-CONSTRUCTION MEETING / KICK-OFF MEETING	28
4.3 CONSTRUCTION PROGRESS / QC MEETINGS	29

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADS	Automated Directives System
AEC	Architecture, Engineering, and Construction
A&E	Architect/Engineer
AIDAR	Agency for International Development Acquisition Regulations
AISC	American Institute of Steel Construction
ASTM	American Society for Testing Materials
BEO	Bureau Environmental Officer
CC	Construction Contractor
CEQ	U.S. Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Contracting Officer
COR	Contracting Officer's Representative
CPM	Critical Path Method
DCN	Document Control Number / Design Change Notice
DFOW	Definable Feature of Work
ECD	Environmental Compliance Database
EMMP	Environmental Mitigation and Monitoring Plan
ERC	Environmental Review Checklist
FAR	Federal Acquisition Regulations
FCR	Field Change Request
HCF	Healthcare Facility
HRS	Health Reform Support
HSSP	Health, Safety and Security Plan
IBC	International Building Code
ICC	International Code Council
IEE	Initial Environmental Examination
IEEE	Institute of Electrical and Electronics Engineers
IFC	Issued for Construction
MEO	Mission Environmental Officer
NCR	Non-conformance Report
NEPA	National Environmental Policy Act
NHSU	National Health Service of Ukraine
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan
RFI	Requests for Information
ROC	Record of Compliance

SERF Simplified Environmental Review Form
SOW Scope of Work
USAID United States Agency for International Development

DRAFT

TERMS

A&E Reviewer – refers to the qualified architecture and engineering company, procured by USAID, that will review and approve designs and specifications on behalf of USAID.

Action Submittals – Written and graphic information and physical samples that require NHSU/HCFs or A&E's responsive action/approval.

Activity – A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

"Approved" – When used to convey COR and/or NHSU or A&E action on submittals, applications, and requests, "approved" is limited to Construction's duties and responsibilities.

As-built drawings – The final set of detailed drawings or designs with actual dimensions, geometry and location of all project components built by a CC, submitted by the contractor upon completion of a construction project.

Construction Contractor – refers to the qualified construction company that will be awarded a subcontract to carry out construction for a specific activity.

Construction Waste – Building and site improvement materials and other solid waste resulting from construction operations.

Critical Activity – An activity on the critical path that must start and finish on the planned early start and finish times.

Critical Path – the longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

Critical Path Method (CPM) – a method of planning and scheduling a construction project where activities are arranged based on activity relationships; network calculations determine when activities can be performed and the critical path of the project.

Date of Substantial Completion – The date determined by the COR as of when substantial completion of the work has been achieved.

Design-Bid-Build - The traditional delivery method where design and construction are sequential and contracted for separately with two contracts and two contractors.

"Directed" – A command or instruction by CO. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

Disposal – Removal off-site of construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

Environmental Review Checklist (ERC) / Environmental Mitigation and Monitoring Plan (EMMP) – Plan prepared in accordance with USAID environmental regulation 22 CFR 216 that specifies required mitigation measures and monitoring indicators to minimize potential negative environmental impacts.

Equipment - All the machinery, tools, and apparatus necessary for the proper construction and acceptable completion of a project.

Final Acceptance – The stage in the progress of the work as determined by the COR and confirmed in writing to the CO, on which all work required under the contract has been completed in a satisfactory manner, subject to the discovery of defects after Final Acceptance.

Initial Environmental Examination (IEE) - The first review of the reasonably foreseeable effects of a proposed action on the environment. Its function is to provide a brief statement of the factual basis for a Threshold Decision as to whether an Environmental Assessment or an Environmental Impact Statement will be required.

"Indicated" – Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

"Furnish" – Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

"Install" – Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

Labor - Effort expended by people for wages or salary. Generally classified as either direct or indirect. **direct labor** is applied to meeting project objectives and is a principal element used in costing, pricing, and profit determination; **indirect labor** is a component of indirect cost, such as overhead or general and administrative costs.

Material - Any product or substance specified for use in the construction of a project.

Non-Conformance Report (NCR) - a formal notification to the CC that work does not meet the plans or the specifications for the project.

Products – Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

Project Site – Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

"Provide" – Furnish and install, complete and ready for the intended use.

Quality Control Plan (QCP) – plan developed by the CC and approved by Deloitte that specifies measures to verify that construction activities are compliant with health and safety, environmental guidelines, and regulations; permit and licensing requirements; materials testing and quality; and building code and design standards. The QCP specifies monitoring, testing, follow-up, and reporting measures to meet compliance requirements.

Regulations – Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

Requests for Information (RFI) - Request from HCFs, Deloitte, or CCs seeking information required by or clarifications of the Contract Documents.

Substitutions – Changes in products, materials, equipment, and methods of construction from those required by the approved designs and specifications and proposed by the CC.

1. INTRODUCTION

This construction plan will serve as the primary reference point for the standard operating procedures and risk mitigation measures employed for construction related activities under Ukraine Health Reform Support (HRS). Directives provided in the construction plan are based on Deloitte's Contract Modification Number 72012118C00001 with United States Agency for International Development (USAID), as well as applicable regulations for acquisitions as found in the Automated Directives System (ADS) Series 300, including the USAID Acquisition and Assistance Regulations and Implementation of Construction Activities under ADS 302 and ADS 303, ADS 204 for environmental procedures, 22 Code of Federal Regulations (CFR) 216, and the Federal Acquisition Regulations (FAR) and USAID Acquisition Regulations (AIDAR). FAR, and ADS clauses are cited throughout the document. The construction plan will be updated to incorporate any changes to USAID policy or regulations as they occur. Once the construction plan is approved, all substantial changes in the construction plan will require prior written approval of the Contracting Officer's Representative (COR).

1.1 UKRAINE HRS BACKGROUND

Given the current circumstances in Ukraine as a result of the war, the National Health Service of Ukraine (NHSU) and the healthcare facilities (HCFs) have an urgent need for generators to be installed to support the continuation of services at these facilities. Under this contract, Deloitte and its subcontractors will conduct activities aimed at restoring capacity at select facilities to provide quality medical services through the procurement, delivery, engineering design, and the installation of generators, in oblasts that have been recently liberated (or de-occupied) and have damaged/disrupted local facilities and HCFs.

Deloitte will procure design and construction services at the selected facilities, as time permits. It is acknowledged that installation work may not be completed before January 31, 2025 for all facilities. The scope of services for up to six facilities includes the following:

- Gathering requirements and develop a scope for generator installation needs at five HCFs;
- Soliciting architecture/engineering, construction, and quality assurance (QA) services through a Design-Bid-Build (DBB) delivery method;
- Developing installation drawings that comply with applicable regulations;
- Procuring up to two (2) generators;
- Executing installation services at selected facilities.

2. ROLES AND RESPONSIBILITIES

USAID, Deloitte, and Subcontractors will function as an integrated team with a shared vision and commitment to the program's success. USAID and Deloitte will re-examine design, procurement, and construction related needs and activities as necessary.

2.1 USAID RESPONSIBILITIES

The USAID team is led by the COR, working in close collaboration with USAID and the Contracting Officer (CO). The CO holds a critical role in managing construction projects, providing expertise from the planning phase through to execution and evaluation. The CO is responsible for helping to shape project design and implementation. This includes coordinating the development of objectives, identifying potential implementing partners, and determining suitable contract or grant instruments. Throughout the project, the CO will monitor award performance, confirming compliance with performance standards and managing necessary changes or revisions to contracts. The CO will also take action in cases of non-compliance, issuing warnings or recommending contract terminations as needed. The CO also has responsibilities in resolving audit findings, supporting their recommendations with a detailed analysis, and preparing required documents to address all aspects of audits. Finally, as required, the CO serves an advisory role, providing information and advice on critical issues or new or revised requirements to technical offices and management. They may also represent the office in key meetings, reinforcing their integral role in the successful management of construction projects.

The COR will perform a variety of duties associated with contract administration and technical functions, including serving as the technical liaison between the Contracting Officer (CO) and the contractor. The COR is in a unique position to monitor the contractor's performance in achieving the contract's purpose, and is delegated certain contract/task order administration functions and authorities that are otherwise vested in the CO. In order to be authorized to perform these delegated contract or task order administration duties, the CO must delegate that authority.

USAID approval does not change the legal responsibilities of the implementing partner for the validity of the design. Table 1 provides specific responsibilities for the CO and COR.

Table 1: CO and COR Approval Responsibilities

Documents/Actions	CO	COR
Subcontracts	X	
Environmental Monitoring Documents (EMMPs)		X
Certification of Progress Payments (GSA 2419)	X	
Change Orders / Modifications	X	
Final Handover Documentation	X	

2.2 IMPLEMENTING PARTNER RESPONSIBILITIES

Deloitte is serving as the implementing partner and is responsible for conducting project planning activities, preparing statements of work, and procuring and managing subcontracts for design and construction activities. Deloitte will conduct project management oversight and track progress against the construction schedule throughout the project. Deloitte will procure a qualified construction contractor (CC) to execute construction activities in Ukraine. To conduct proper quality control (QC) activities, Deloitte will procure technical supervisors to visit the sites twice a week and perform inspections of materials and activities and document construction progress and major milestones with the Technical Supervisor Weekly Construction Report (Appendix E). Deloitte will work with USAID and will be involved in the outlined phases of design, procurement, and construction, providing advice to USAID regarding strategic programming decisions and implementing program activities based on USAID technical guidance and decision-making. In accordance with FAR 52.236-19, the HRS Generator Installation Project Organizational Chart (Appendix F) will be updated with applicable subcontractors and the Technical Supervisor to show administrative organization, the personnel to be employed in connection with the work, and respective duties.

2.3 ARCHITECT/ENGINEER RESPONSIBILITIES

The A&E firm will serve as the key QA partner, accountable for designing project drawings and preparing detailed specifications. USAID's existing A&E may be leveraged to support the scope of work, as available, or another A&E firm will be procured to complete the designs and QA services for the HCFs. There may be multiple A&E firms involved in the generator installation projects. Their responsibilities will include design development, supporting the design review process, supporting construction procurement package development, and providing QA throughout construction.

2.4 CONSTRUCTION CONTRACTOR RESPONSIBILITIES

A qualified construction company will be awarded a subcontract to carry out the construction activities for the Ukraine HRS Generator Installation project. The CC will procure materials and equipment, install equipment, and refurbish, rehabilitate, or

construct infrastructure as well as provide manuals and training on proper infrastructure operation and use. The CC will be local in accordance with 22 CFR 228 and will provide full access to the construction sites to conduct necessary monitoring of construction activities.

2.6 TECHNICAL SUPERVISOR RESPONSIBILITIES

Deloitte will procure a technical supervisor to assist with responding to requests for information (RFI) from the CC and aid in QA activities throughout construction. While the technical supervisor is required to be involved in the project by Ukrainian law, they will also serve as the on-site QA supervisors.

The technical supervisor will visit the site twice a week to confirm compliance of the completed construction, environmental, health, and safety requirements. They will assess the quality of assembly works, foundations, structures, products, materials and equipment in accordance with requirements of state standards, building norms and rules, and other normative documents.

The technical supervisor will monitor construction progress on site and conduct inspections in correspondence with FAR 52.246-12 to verify conformance with designs and specifications. The technical supervisor will set up video surveillance to aid in monitoring of construction progress. They will review the Construction Contractor Weekly Construction Report (Appendix D) provided by the CC during the two weekly site visits to confirm that the work reported was performed. They will provide weekly reports with photo and video documentation summarizing the week's activities and work progress. Reports will include information about accepted and paid construction and installation works, project details, work accomplished, manpower, work progress, site conditions, safety, QC, photos, and videos.

The technical supervisor will request stoppage of work in the case of the use of materials, parts, and products that do not meet the requirements of regulatory documents. If the technical supervisor detects deviations from designs during construction, they will notify the CC to address them. If they are not addressed, the technical supervisor will notify Deloitte and relevant Ukrainian inspection agencies.

The technical supervisor will verify that redline as-built drawings are being maintained and updated at each site. The technical supervisor will monitor the formal handover of the generator system to the facility owners. They will confirm that training for equipment operations and maintenance was provided to facility personnel during handover.

3. PHASING OF CONSTRUCTION RELATED ACTIVITIES

To implement design and construction related activities, Deloitte will execute the engineering and construction components of this project through a DBB delivery method.

With respect to the build and install of the generators at NHSU, Deloitte will conduct a full and open competitive procurement for “build” services according to the design already produced by Green Powered Technology (GP Tech), with installation completion targeted for January 31, 2025. GP Tech will provide QA support throughout the process.

For generator installation at the other select HCFs, for which design services have not yet been procured, Deloitte will initiate conversations with each HCF to discuss needs, scope the work, outline the current procurement approach, and communicate the estimated timeline for the remaining period of performance for the HRS contract.

Generator installation related activities will be implemented in the following six phases with procurement activities anticipated for both design and construction:

1. Planning
2. Design
3. Procurement
4. Construction
5. Monitoring
6. Handover

All activities will be managed in close collaboration with USAID at all phases of the construction lifecycle.

3.1 PLANNING

Planning is a critical phase in the design and construction process and helps to minimize potential risks and maximizes the likelihood of project success. During pre-construction planning, Deloitte will identify requirements for the project scope, budget, schedule, and environmental considerations. This phase also involves preparing design procurement packages, and risk assessments where potential obstacles are identified and mitigation strategies are developed. Risk identification will start during this phase and the risk evaluation will be continuously monitored through project handover and final acceptance.

The planning phases consists of the following activities:

- **Gather SOW requirements from each HCF;**
 - For the HCFs without existing generator installation drawings, Deloitte will initiate a discussion to review potential next steps and how much of the work can be completed until January 31, 2025.

- Deloitte will send each HCF a questionnaire that helps identify key information for developing unique SOWs for each site.
- Information requested will include, but is not limited to, the status, condition, and location of previously procured generators stored onsite, intended use, generator final location preference including any external fuel tanks and additional infrastructure, existing site infrastructure, etc.
- **Risk Mitigation;**
 - The construction plan will integrate ADS 201's, Management of Construction Risk, eleven (11) critical success factors USAID utilizes for managing construction risk throughout the life cycle of the project. These success factors are built into the construction plan in the relevant construction phases. The success factors include:
 1. Project Definition,
 2. Stakeholder Engagement,
 3. Procurement Procedures, Contract Types, and Approaches,
 4. Institutional Capabilities to Operate and Maintain Investments,
 5. Health, Safety, Environmental and Social Requirements,
 6. Quality of Cost-Estimating and Scheduling,
 7. Appropriate Levels of Contractors' Qualifications,
 8. Risk-Management Methodology,
 9. Construction Oversight and Quality Verification, and
 10. Monitoring and Evaluation.
 - Deloitte, in coordination with the CC, will complete risk screening for each major construction activity. This process will begin during the construction phase and continue through project handover.
 - Deloitte will incorporate a consistent and systematic approach within a risk register for the identification, assessment, and mitigation of risks.
 - Deloitte will maintain a safe and secure site for document depository.
- **Design Procurement;**
 - Deloitte will coordinate with USAID to determine if GP Tech is available to design the generator installation drawings for the remaining HCFs. If they are not available, the A&E services will be competitively procured for the remaining five HCFs.
 - The design procurement phase will commence with the creation and dissemination of the RFP, outlining design needs and requirements of the project. Upon receipt of proposals, a comprehensive evaluation on the bidders' design approach, timeline, technical solution, key personnel, and past experience will be conducted, leading to the awarding of contracts to the most suitable parties. Deloitte will document all procurement activities thoroughly and keep USAID updated during the entire procurement process.

- Develop design procurement packages
 - To execute the generator installations at the HCFs, Deloitte will procure qualified A&E firm that is familiar with executing similar SOWs in Ukraine to reduce the risk to project delivery.
 - The A&E firm's contract will be firm fixed price.
 - The SOW will summarize the HCF requirements, objectives, outcomes, scope for design development, period of performance, environmental compliance requirements, and special requirements for the design activities.
 - Appropriate environmental compliance language will be incorporated into solicitations and awards for the design activities.
- Solicitation of award for an A&E firm
 - The process that will be followed includes the following:
 - Per FAR 36.213-2, the pre-solicitation notice will be posted 15 days before the RFP is posted.
 - Per FAR 36.6.401, the RFP will be posted for competitive bidders to send in their responses.
 - Per FAR 14.207, a pre-bid conference will be held virtually 7 days after the RFP is posted.
 - Request for Information documentation will be submitted 7 days after the pre-bid conference.
 - Per FAR 36.213-3, the bids will be due 30 days after the RFP is posted.
 - Per FAR 15.305 and FAR 36.203, the bids will be evaluated using the same criteria that was included in the RFP and an independent design estimate will be utilized to evaluate the bids.
 - Prior to finalizing the A&E subcontract, Deloitte will submit a notification of intent to subcontract with the associated documents for review and approval from the CO.

3.2 DESIGN

The A&E firm will be responsible for developing plans and drawings that will be reviewed by a USAID prior to drawings being issued for construction. The following activities and processes will occur throughout this phase:

- **Site feasibility studies and technical investigation studies;**

- A pre-design/pre-construction analysis will be conducted during the planning stages of the construction project to inform the design development and decisions and actions during construction.
- Feasibility studies or other pre-design analysis will consider the following issues and relevant findings will be communicated to stakeholders and incorporated into design considerations:
 - Existing site conditions: Are there existing conditions at the target sites that would impact meeting the scope of work (i.e. space constraints, soil conditions, etc.)?
 - Land rights: Have all legitimate landholders been identified and consulted with? Are the legitimate landholders uncontested, or, if yes, have all disputes been resolved?
 - Local construction capacity: Is the planned construction within the capacity of local contractors?
 - Stakeholder analysis: Have stakeholders been identified and consulted with in a formal process? Is a system established to receive and address feedback and grievances from stakeholders through the construction process?
 - Building codes: Have the local building codes been reviewed to determine adequacy (factors of safety, seismic conditions, hydrology, geology, etc.) for use in design compared to International Building Code (IBC) developed by the International Code Council (ICC), or U.S. codes and best practices? How will the project address the Americans with Disabilities Act (ADA) in its design?
 - Environmental impact: Have the impacts of construction on cultural and natural resources been assessed, avoided, and mitigated according to the requirements of 22 CFR 216?
- The A&E firm will conduct initial site surveys, geotechnical testing, and pre-design investigations, surveys, and activities necessary or reasonably inferable to successfully complete the SOW at each site.
- **Incorporate required standards and codes in designs and specifications;**
 - The A&E firm is responsible for developing designs that are compliant with all local and national building codes and standards and will be licensed in Ukraine or the U.S.
 - The A&E firm will adhere to FAR 52.236-21, Specifications and Drawings for Construction.
 - All designs will comply with the ADA, 752.236-70 Standards for Accessibility for the Disabled in USAID Construction Contracts, and other relevant standards so that the generator installation site is accessible all individuals.

The design process will involve reviews from USAID and their third party A&E to validate these standards are being met.

- In the absence of other Ukrainian standards being required by the specifications and contract documents, an applicable list of codes and standards will be requested from USAID to incorporate in the designs.
- During construction, if the CC, at any time or for any specific reason, wishes to deviate from Ukrainian codes and standards, then they will state the exact nature of the change giving the reasons for making the change and will submit a consent request with the complete specifications of the materials and descriptions of the equipment with a detailed explanation regarding the reason for the proposed change to Deloitte. The A&E will review the change documents and prepare a response for Deloitte regarding the request, if it is considered valid. Deloitte will seek approval from USAID before any changes are approved.
- **Design and technical specification development;**
 - The construction drawings developed by the A&E firm will provide accurate, detailed specifications of the architectural and technical components, supplemented by graphical representations for enhanced clarity and precision in decision-making. The designs and specifications will outline the expected results of the final product and include dimensions, structural components, material/equipment schedules, and equipment performance.
 - In accordance with FAR 52.236-5, Material and Workmanship, the A&E firm will include relevant documentation for all equipment and machinery which will be approved by the CO or USAID's A&E. All equipment, material, and articles incorporated into the work will be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided.
 - Relevant environmental mitigation measures in the USAID Ukraine ERC (Appendix A), EMMP (Appendix A), USAID Ukraine IEE Amendment No. 5 (Appendix B), and USAID Ukraine IEE Amendment No. 6 (Appendix C) will be incorporated in the designs and specifications.
 - The construction drawings will include all information and details to provide design intent and applicable requirements to be used for submission to obtain permits.
- **Design Quality Control/Quality Assurance and Reviews;**
 - USAID's designated engineering reviewer will provide requirements for the approval process for designs and specifications.
 - Drawings and specifications will be submitted for review prior to construction. Reviewers and/or approvers include USAID, their A&E reviewer, and any local government reviewers as directed by A&E.
- **Design Defects and Corrective Measures**

- Any design defects must be the responsibility of A&E firm at no additional cost to Deloitte and are not an allowable cost under the contract. This will be included as a clause and point of agreement in the subcontract.
- **Develop a Simplified Environmental Review Form (SERF)**
 - In accordance with the Initial Environmental Examination (IEE), 2017-UKR-020-002, prior to initiating any construction activity, Deloitte and the A&E will prepare an environmental review document in the Environmental Mitigation and Monitoring Plan (EMMP) format provided by the Mission Environmental Officer (MEO), unless the activity only includes sub-activities that require a SERF, in which case, Deloitte and the A&E may prepare an environmental review document in the SERF format.
 - After discussing with the Bureau Environmental Officer (BEO) and with approval from the MEO, Deloitte may prepare a single environmental review document that covers multiple sub-activities that are similar in nature and potential impact on the environment. The COR and MEO will approve the environmental review document prior to implementation. The BEO reserves the right to rescind the approval of an environmental review document due to environmental risks. For each site-specific activity, the environmental review document will include a Certification of No Adverse Significant Effects on the Environment, assigned a Document Control Number (DCN), and posted to the Environmental Compliance Database (ECD).
- **Develop Environmental Mitigation and Monitoring Plan (EMMP);**
 - The A&E will develop the EMMP in accordance with the IEE and USAID environmental regulation 22 CFR 216 and will be completed and submitted to USAID prior to any construction starting at each site.
 - The EMMP will specify mitigation measures, indicators, and reporting requirements to minimize or eliminate environmental and social impacts of construction related activities.
 - The A&E will support the preparation of the EMMP which will be reviewed by Deloitte prior to submission.
 - The COR will approve the EMMP prior to construction.

3.3 PROCUREMENT

The construction procurement phase will commence with the creation and dissemination of Request for Proposals (RFPs), outlining the project's needs and requirements. Upon receipt of proposals, a thorough evaluation on the bidders' safety plan, work schedule, technical solution, key personnel, and past experience will be conducted, leading to the awarding of contracts to the most suitable parties. Deloitte will document all procurement activities thoroughly and keep USAID updated during the entire procurement process.

- **Develop construction procurement packages;**
 - To execute the generator installations at the HCFs, Deloitte will procure qualified subcontractors that are familiar with executing similar SOWs in Ukraine to reduce the risk to project delivery.
 - The design and construction subcontracts will be firm fixed price.
 - The SOW will summarize the HCF requirements, objectives, outcomes, scope for design development, construction tasks, period of performance, environmental compliance requirements, and special requirements for the design, construction, and handover activities.
 - Appropriate environmental compliance language, including limitations defined in the IEE, Section 6, will be incorporated into solicitations and awards for the construction activities.
- **Solicitation of award for CCs;**
 - Deloitte will procure CCs to execute the construction and technical supervisors to monitor construction progress on site and conduct inspections to verify conformance with designs and specifications.
 - The process that will be followed includes the following:
 - Per FAR 36.213-2, the pre-solicitation notice will be posted 15 days before the RFP is posted.
 - Per FAR 36.6.401, the RFP will be posted for competitive bidders to send in their responses.
 - Per FAR 14.207, a pre-bid conference will be held virtually 7 days after the RFP is posted.
 - Request for Information documentation will be submitted 7 days after the pre-bid conference.
 - Per FAR 36.213-3, the bids will be due 30 days after the RFP is posted.
 - Per FAR 15.305 and FAR 36.203, the bids will be evaluated using the same criteria that was included in the RFP and an independent construction estimate will be utilized to evaluate the bids.
 - Prior to finalizing the subcontracts, Deloitte will submit a notification of intent to subcontract with the associated documents for review and approval of the CO.

3.4 CONSTRUCTION

The construction phase will involve pre-construction activities in addition to the assembly of the necessary infrastructure and installation of the generators at the select HCFs by the CC. The CC will complete the SOW at each site while meeting the design requirements and implementing the proper safety regulations and building codes/standards. Throughout the construction phase, the technical supervisor will monitor the CC's construction progress. The construction phase includes the following activities:

- **Prepare Critical Path Method (CPM) construction schedule;**
 - Deloitte will develop a high-level construction schedule including activities within each phase of the project.
 - Following the procurement of the CC, a detailed construction schedule for each generator installation will be prepared using the CPM. The construction critical path will identify the most important activities that have a direct impact on the project timeline. The level of detail and number of activities incorporated in the construction schedule will be sufficient to identify constraints, delays and effects by dependent activities and resources. All activities will be organized in a logical work breakdown structure, indicating work stages and phases. The schedule will be expressed in calendar days. At a minimum, the schedule will include:
 - Mobilization and demobilization,
 - All site investigation activities, including data on existing utilities,
 - All surveying and layout activities,
 - Major construction activities and milestones,
 - QC inspection and testing,
 - Material and equipment procurement submittals, taking into account the assessment of the quality and cost of materials,
 - Shop drawing preparation and submittals,
 - Activities associated with the procurement, purchase, fabrication and shipment of materials and equipment,
 - Activities associated with the procurement and shipment of all CC's Equipment, necessary for the performance of the contract,
 - Anticipated weather delays using historical data published monthly averages,
 - Stakeholder review and approval timeframes, and
 - Activities that may require monitoring,
 - Deloitte will remain in close coordination with the CC to verify construction progress is adhering to the baseline schedule.
 - If exigent circumstances are delaying the CC in meeting the schedule, the CC will provide written communication to Deloitte of the delay and surrounding circumstances. Deloitte will communicate these delays to USAID and the applicable HCF.
- **Permits**
 - The CC will help prepare necessary licenses and permits specific to the site, planning, and construction operations in accordance with Ukrainian government laws, codes, and regulations and FAR 52.236-7 as applicable to the performance of the work prior to any construction. The CC may request

in writing if any reasonable assistance is needed in the permit clearance process.

- If applicable, facility owners will assist in the permit request process.
- Personnel employed by and representing the respective facility will be responsible for submitting and securing necessary permits and licenses.
- Deloitte will verify that all relevant permits and licenses are obtained and assist the CC if the need arises. However, a request for assistance will not relieve the CC of any responsibility or obligation for these tasks.
- **Construction Quality Control Plan (QCP);**
 - The CC will develop a QCP that will be utilized to monitor construction activities throughout the project.
 - The purpose of this QCP is to provide the standards, guidelines, processes, and procedures required to manage QC during construction. This includes testing the integrity of materials, following applicable standards and guidelines, and validating construction quality.
 - Relevant environmental mitigation and monitoring requirements will be included in the QCP.
- **Health and safety at site plan with risk assessments;**
 - As a part of the request for proposal for construction services, the bidders will be required to submit a Health, Safety, and Security Plan (HSSP) as a part of their proposal. The plan will be evaluated for completeness and thoroughness and will be used in scoring the bidders.
 - The CC will be responsible for meeting environmental compliance, health and safety, and security requirements as a part of the plan.
 - Deloitte will procure a technical supervisor to conduct additional oversight of on-site construction health and safety. The technical supervisor will inspect and monitor construction in that it meets environmental, health, safety and security requirements. Reports will be provided to Deloitte to enforce any discrepancies.
 - The health and safety requirements to be addressed by the HSSP are included as a mitigation measure in the EMMP.
 - Evacuation plan in case of air attacks shall be developed by CC.
 - Shelter facility location for personnel during construction to be taken into account.
 - Measures to protect equipment against air threats.
- **Construction management training for site supervisors;**
 - The CC will provide training for all site supervisors and host training for new employees, as needed.
 - Deloitte will verify the technical supervisor qualifications prior to issuing a CC for construction oversight and QC monitoring.

- **Custody of materials;**
 - A material management plan will be implemented by the CC to verify that all materials are properly accounted for and protected. This will include proper storage and handling procedures, inventory tracking, and security measures.
 - Multiple generators have previously been purchased and staged at each construction site. The CC is responsible for conducting an inventory and condition assessment of the generators and associated equipment and providing a written overview of the conditions. If the generators are in poor condition and are not able to be installed, the CC will provide an estimate for a new procurement which will be submitted to USAID for approval.
- **Quality Assurance**
 - Inspections and Audits: Conducting regular on-site inspections and audits to verify that construction activities comply with the project specifications, codes, and standards.
 - QCPs: Developing and implementing QCPs that outline procedures for monitoring, testing, and documenting the quality of materials and workmanship throughout the construction process.
 - Submittal Reviews: Reviewing and approving material submittals from contractors to ensure they meet the project requirements before installation.
 - Testing and Verification: Performing testing and verification of critical components, such as structural elements, mechanical systems, and finishes, to confirm they meet performance criteria and regulatory requirements.
 - Documentation Management: Maintaining accurate documentation of inspections, test results, non-conformance reports, and corrective actions to track the project's quality performance and compliance status.
 - Non-Conformance Management: Identifying and addressing non-conformance issues promptly, including documenting deficiencies, determining root causes, and implementing corrective and preventive actions to mitigate risks and improve quality.
 - Coordination with Stakeholders: Collaborating with contractors, CCs, suppliers, and other project stakeholders to communicate quality expectations, resolve issues, and ensure alignment with project goals. By implementing these QA measures, an A&E firm helps to minimize construction defects, enhance project quality, and ensure the successful delivery of the built environment.
- **As-Built drawings development and review;**
 - During construction, the CC will be responsible for developing as-built drawings which include installed structures, equipment, utilities, as well as any utilities or structures encountered that were not previously identified in the drawings.

- Throughout the construction phase, the technical supervisor will verify redline as-built drawings are being maintained and updated at each site. Prior to their submittal to the A&E, the technical supervisor will be responsible to check and approve all as-built drawings to validate they depict the generator and associated features as constructed and incorporate all revisions.
- Upon final review of the as-built drawings by the A&E, they will be provided to USAID for record keeping.
- **Constructions changes and claims;**
 - Any changes to the construction plans will go through a formal change order process, which includes documentation, review, and approval.
 - Deloitte will issue direction to CCs as needed to complete the SOW. If an HCF requests a change that is considered to be outside of the SOW of Deloitte's contract, Deloitte will notify USAID of the change, request direction, and receive approval prior to proceeding with any work.
 - The CC must engage Deloitte and receive approval prior to negotiating and settling any claims. Requests for changes or substitutions will be submitted immediately upon direction received or discovery of need for change, but not later than fourteen (14) days prior to time required for preparation and review of related submittals. Changes to materials or approved designs will be submitted to the A&E for review and their recommended decision.
 - For design and material changes to approved designs, the A&E will consider the CC's request for substitution when the following conditions are satisfied, prior to submission to the CO. If the following conditions are not satisfied, A&E will return requests without action, except to record noncompliance with these requirements:
 - Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - Substitution request is fully documented and properly submitted.
 - Requested substitution will not adversely affect the construction schedule.
 - Requested substitution has received necessary approvals of authorities having jurisdiction.
 - Requested substitution is compatible with other portions of the Work.
 - Requested substitution has been coordinated with other portions of the Work.
 - Requested substitution provides specified warranty.
 - If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of

the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

- If any claim represents a substantive change to scope, period of performance, or budget – Deloitte must submit the claim to the CO for approval prior to negotiation and settlement.

3.5 MONITORING

In the construction monitoring phase, progress is measured against the baseline schedule and construction quality is monitored to be consistent with approved plans and specifications, concurrent with the construction phase. Construction monitoring is done in conjunction with the pay application request, prior to any disbursement to verify completion and the quality of the work. Construction progress reports will be provided and documented. The following activities will be conducted throughout this phase:

- **Establish Authorities and suspension of work;**
 - Clear lines of authority will be established, and protocols will be in place for the suspension of work in the event of safety concerns or other significant issues. The COR retains the right to halt construction activity at any time. The suspension order will remain in place until Deloitte is notified in writing via letter or email to resume works. From the date of the suspension order and until the resumption of works, Deloitte will not accept or process any payments from the CC, except for works completed prior to the suspension. Deloitte will only issue payment for work completed and verified by the technical supervisor.
- **Adequate site supervision;**
 - A qualified site supervisor will be appointed by the CC to oversee the daily operations at the construction site. They will validate that all work is being carried out according to the QCP, project plans, and specifications.
 - Deloitte will procure a technical supervisor, as noted in the Roles and Responsibilities section of the Construction Plan, to conduct additional oversight of on-site construction activities in addition to reviewing RFIs, construction reports, and completion of inspections. The technical supervisor will monitor construction quality and confirm required environmental mitigation and safety procedures are being implemented.
 - The A&E firm will also support QA activities to verify compliance with contract documents.
- **Design defects, poor workmanship and corrective measures;**
 - The technical supervisor will notify the CC of any detected noncompliance with the designs and specifications. The CC will be expected to take

immediate corrective action after receipt of such notice. Such notice, when delivered to the CC at the work site, will be deemed sufficient notification.

- Identified non-conformance and observations will be marked by paint, tape, tag, or other easily observable signal to prevent inadvertent cover-up. Noncompliance notification or stop work orders will be documented and maintained in the project records.
- Completion of corrective action will be noted on the inspection report.
- Verification of the corrective action and its results will be performed by the technical supervisor.
- Per FAR 52.236-5, Material and Workmanship, all equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended.
- Per FAR 52.236-5, Material and Workmanship, all work under this contract shall be performed in a skillful and workmanlike manner. If identified that any employee(s) are incompetent, careless, or otherwise objectionable, the employee will be removed from the work and/or project.
- **Progress reporting and site supervision;**
 - The CC will submit weekly reports that will include a summary of daily:
 - Conditions – weather, moisture, soil conditions, etc. (Note when and how adverse condition hampered or shut down construction operations)
 - Activities – work status, including locations (include description of each activity and the inspection phase, and photographs of key work features).
 - Controversial matters – disputes, questionable items, (noting if they were settled and, if so, how they were settled).
 - Deficiencies and violations – description, location, photographs, and corrective action.
 - Instructions given and received – identify recipient and source.
 - Progress information – report all delays, action taken or action contemplated.
 - Equipment – report arrival and departure of each major item of equipment by manufacturer, model, serial number, and capacity: report equipment in use and idle equipment.
 - Environmental monitoring – review mitigation and monitoring activities as identified in the EMMP.
 - Other reports – document that environmental and QC reports are identified, dated, and signed.
 - A technical supervisor will conduct on-site QA inspections and review weekly construction reports. Construction QA observation and reporting must

include progress of work, adequacy and compliance of construction, identification of deficiencies or non-complying work, status and corrective action taken on identified deficiencies, and photographs of key features of work and deficiencies noted.

- **Environmental monitoring and reporting:**

- Deloitte as the HRS Contractor will report to COR on Environmental monitoring and compliance on a regular, quarterly, basis, and, if needed – on ad hoc basis as well.
- Day to day monitoring of environmental compliance and protection measures will be carried out by the CC in accordance with the IEE, EMMP, ADS 204, 22 CFR 216 and Ukrainian environmental requirements. Any infractions or discrepancies will be noted in the construction reports and documented in environmental compliance reports.
- The technical supervisor will review the construction reports submitted and utilize the IEE and EMMP to track the implementation of mitigation measures at the site and measure any changes in environmental quality during project execution.
- If there are any deficiencies, the technical supervisor will provide notice of non-conformance to the CC to address immediately. Discrepancies will be monitored until further corrective actions have been carried out and completed.
- If an individual activity is found to pose significant adverse environmental effects that have not been identified and addressed in the approved environmental review documents, new environmental review documents will be developed to include environmental safeguards for such effects.

- **Pay application reviews:**

- This project is not considered a major acquisition and payment will be based upon a percentage (%) complete basis against a pre agreed upon schedule of values. The schedule of values will be developed as a deliverable in the subcontract which will be reviewed and approved by Deloitte.
- A physical site observation will be conducted by the technical supervisor on no less than a monthly basis in order to independently verify the line-item percentage (%) completion of the construction performed during the request period.
- Site photos will be required to be submitted validating the services rendered. This documentation is crucial for assessing project progress, compliance, and overall performance.

- **Liabilities:**

- The CC is responsible for completing the works within the time for completion specified in the subcontract. Due to the unique and exigent circumstances in Ukraine, liquidated damages (LD) will not be utilized.

3.6 HANDOVER

The handover phase involves a series of activities including the completion of all construction work, final inspections, obtaining applicable certifications and commissioning reports, resolving any remaining issues, finalizing payments, and transferring all relevant documentation. Proper handover is conducted to verify that the final construction aligns with all approved designs, specifications, and standards and all necessary information is obtained to handover to the owner so they can effectively operate and maintain the generators. Activities within the handover phase include the following:

- **Inspection and acceptance of key construction phases, including final walk through, punch lists and final acceptance:**
 - Regular inspections will be conducted at key construction phases and a punch list of deficiencies will be maintained by the CC to address prior to final handover.
 - Test and inspection documentation for critical systems will be submitted prior to handover and construction completion acceptance.
 - Final acceptance will only be given after a thorough final walkthrough, completion of punch lists, and resolution of any outstanding issues.
 - Final acceptance will be given by USAID and/or the applicable facility, as directed by the CO.
- **Warranties of work and retentions:**
 - In accordance with FAR 52.246-21, Warranty of Construction, the CC will guarantee all the work to be performed and all the materials to be furnished under this contract against defects in materials and workmanship for a period of one (1) year from the date of the construction completion acceptance.
 - The CC, must, within a reasonable time but in no case longer than thirty (30) days after receipt of a written notice, repair or replace any defects in materials or workmanship which may develop during the one (1) year period and any damages resulting from repairing or replacing of such defects at its own expense and without cost.
 - In the event the CC fails to remedy any such defect within a reasonable time, which in no case must be longer than thirty (30) days after receipt of such written notice, Deloitte may proceed with having such defects remedied at CC's expense, and the CC must pay the costs and charges accruing from such work and other damages.

- If exigent circumstances are delaying the CC in fulfilling warranty requirements in the prescribed timeline, the CC will provide written communication to Deloitte of the delay and circumstances. Deloitte will communicate these delays to USAID and the applicable HCF.
- If Deloitte considers that satisfactory progress has not been made in construction, Deloitte may retain a maximum of twenty (20) percent (%) of the amount of the payment until the construction project is substantially completed and final acceptance has been received.
- **Operation and maintenance documentation:**
 - The CC will provide operation and maintenance manuals provided by the vendors and manufacturers of the equipment that is installed at each site.
 - Following handover activities to NHSU/HCFs, Deloitte and its CCs will not be responsible for operating and maintaining the equipment.
- **Submit Record of Environmental Compliance**
 - Following the completion of construction activities at a specific HCF site, Deloitte and the CC will sign a Record of Compliance (ROC) certifying that the organization met all applicable conditions and submit it to the COR.
 - The COR will keep the original for the project files and provide a copy to the MEO and BEO. The ROC shall be assigned a DCN and posted to the ECD.

4. COMMUNICATION PLAN

Accurate, timely communications are required to avoid construction-related conflicts, errors, omissions, and delays. The project organization, stakeholders, and CCs must have an established communication network. Establishing open lines of communication is essential to maintaining strong working relationships and producing quality work.

Prior to initiation procurement activities for each HCF, the DBB approach will be discussed with each HCF. During these conversations, HCFs will have the opportunity to express their needs regarding the current timeline and review available options within the remaining period of performance for the HRS contract.

4.1 PROJECT MEETINGS

Project meetings will be scheduled to define and maintain responsibility and authority by promoting communication among personnel responsible for designing, constructing, and observing the construction. Meeting minutes containing significant discussions and agreements achieved will be distributed to the COR, A&E, and relevant participants for a five working day comment and approval period within three working days of the held meeting. A final approved version of the meeting minutes will be distributed no later than ten days after the meeting occurrence. The following subsections describe the project meetings anticipated during the work.

4.2 PRE-CONSTRUCTION MEETING / KICK-OFF MEETING

Upon receipt of approval from the COR to begin construction activities, a pre-construction meeting will be held to communicate to all project team members and stakeholders the project goals, expectations, critical success factors, SOW, definable features of work (DFOW), schedule, submittal requirements, documentation requirements, change management processes and procedures, construction means and methods, reporting and communication requirements, environmental issues, QC requirements, health and safety requirements, protocols, and any other necessary information.

The agenda will include, but not necessarily be limited to, the following:

- Review of Project SOW
- Construction Schedule and Current Progress
- Review of the QCP
- Determination of the lines of authority and communication
- Review of the HSSP
- Review of the EMMP, related environmental mitigation plans, and monitoring requirements
- Waste disposal and hazardous materials

- Procedures for processing field decisions, RFIs, submittals, substitutions, applications for payments, proposal requests, field orders, work change directives, and closeout procedures
- Security considerations and use of the premises for each HCF site including work restrictions, working hours, owner's occupancy requirements, responsibility for temporary facilities and controls

4.3 CONSTRUCTION PROGRESS / QC MEETINGS

Once construction begins, Deloitte, the CC, and the technical supervisor will meet on a weekly basis to review construction progress, quality, and any other relevant issues. For these meetings, the agenda will include, but not necessarily be limited to, the following:

- Construction progress and schedule updates
- Identification of problems that impede planned progress
- Review of health and safety concerns or issues
- Review of the QCP
- RFI, Design Change Notice (DCN), and Field Change Request (FCR) review/approval status
- Effect of proposed changes on progress schedule and coordination
- Submittals status
- Change orders status
- Project risks
- Review the near future work to be accomplished for coordination and documentation required (i.e., CC prepared Look Ahead Schedule)
- Inspection schedule and documentation
- Nonconformance items and corrective actions
- Invoicing and status of payments

5. APPENDIX

The following appendices have been included in the Construction Plan.

- A. USAID Ukraine Environmental Review Checklist (ERC) and EMMP for National Health Service of Ukraine
- B. USAID Ukraine IEE Amendment No. 5
- C. USAID Ukraine Simplified IEE Amendment No. 6
- D. Construction Contractor Weekly Construction Report Template
- E. Technical Supervisor Weekly Construction Report Template
- F. HRS Generator Installation Project Organizational Chart

DRAFT