



HAITI INFRASTRUCTURE PROGRAM FINAL REPORT OCTOBER 2022

CONTRACT NUMBER: AID-OAA-I-15-000045

ORDER NO: 72052118F00004

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FINAL REPORT

OCTOBER 2022

Contract: AID-OAA-I-15-000045

Order No: 72052118F00004

Submitted to:

USAID Haiti

Prepared by:

AECOM USA, Inc.

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ACRONYMS AND ABBREVIATIONS

ACOR	Administrative Contracting Officer's Representative	MEP	Mechanical, Electrical, and Plumbing
AFD	Agence Française de Développement	MTPTC	Ministère des Travaux Publics, Transports et Communications
AVANSE	Appui à la Valorisation du Potentiel Agricole du Nord, Pour la Sécurité Économique et Environnementale (Support for the Promotion of the Agricultural Potential of the North, for Economic and Environmental Security)	NCHS	National Campus for Health Sciences (Le Campus des Sciences de la Santé)
BOQ	Bill of Quantities	NGO	Non-Governmental Organization
CAEPA	Comité d'Approvisionnement en Eau Potable et Assainissement	NTP	Notice to Proceed
CM	Construction Manager	OAA	Office of Acquisition and Assistance
CMC	Construction Management Consultant	OIEE	Office of Infrastructure, Engineering, and Energy
COP	Chief of Party	PPE	Personal Protection Equipment
COR	Contracting Officer's Representative	QA	Quality Assurance
CPARS	Contractor Performance Assessment Reporting System	QOR	Quality Observation Report
CTE	Centre Techniques d'Exploitation	RFTOP	Request for Task Order Proposal
CUCD	Canaan Upgrading Program and Community Development	SOW	Scope of Work
DINEPA	Direction Nationale de l'Eau Potable et de l'Assainissement	STTA	Short-Term Technical Assistance
GOH	Government of Haiti	TCG	Tseng Consulting Group, Inc.
HIP	Haiti Infrastructure Program	TEC	Total Estimated Cost
HHIP	Haiti Health Infrastructure Program	UCLBP	L'Unité de Construction de Logements et de Bâtiments Publics
HO	Home Office	USAID	United States Agency for International Development
HSBR	Haiti Staffing & Business Resources	USG	United States Government
HUEH	Hôpital de l'Université d'Etat d'Haiti	UTE	Unité Technique d'Exécution
IP	Implementing Partner	WAF	Work Approval Form
JUH	Justinien University Hospital (L'Hôpital Universitaire Justinien)	WASH	Water, Sanitation and Hygiene
LTTA	Long-Term Technical Assistance	WATSAN	Water and Sanitation Project
MDR-TB	Multi-Drug-Resistant Tuberculosis		

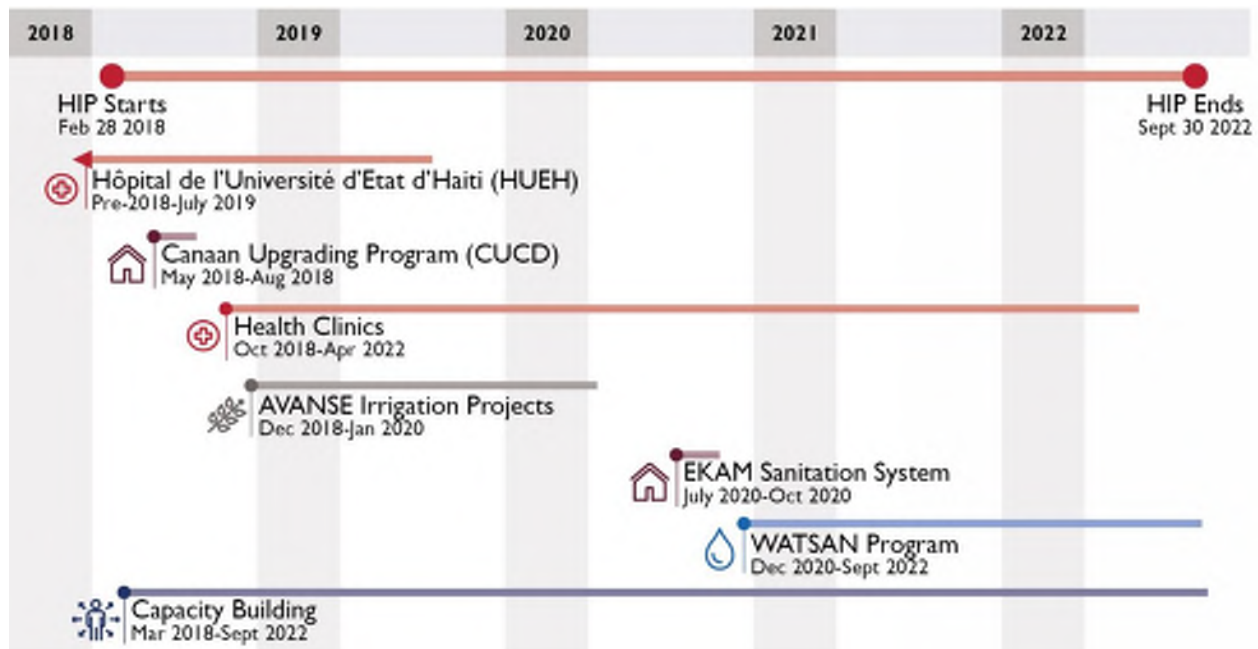
EXECUTIVE SUMMARY

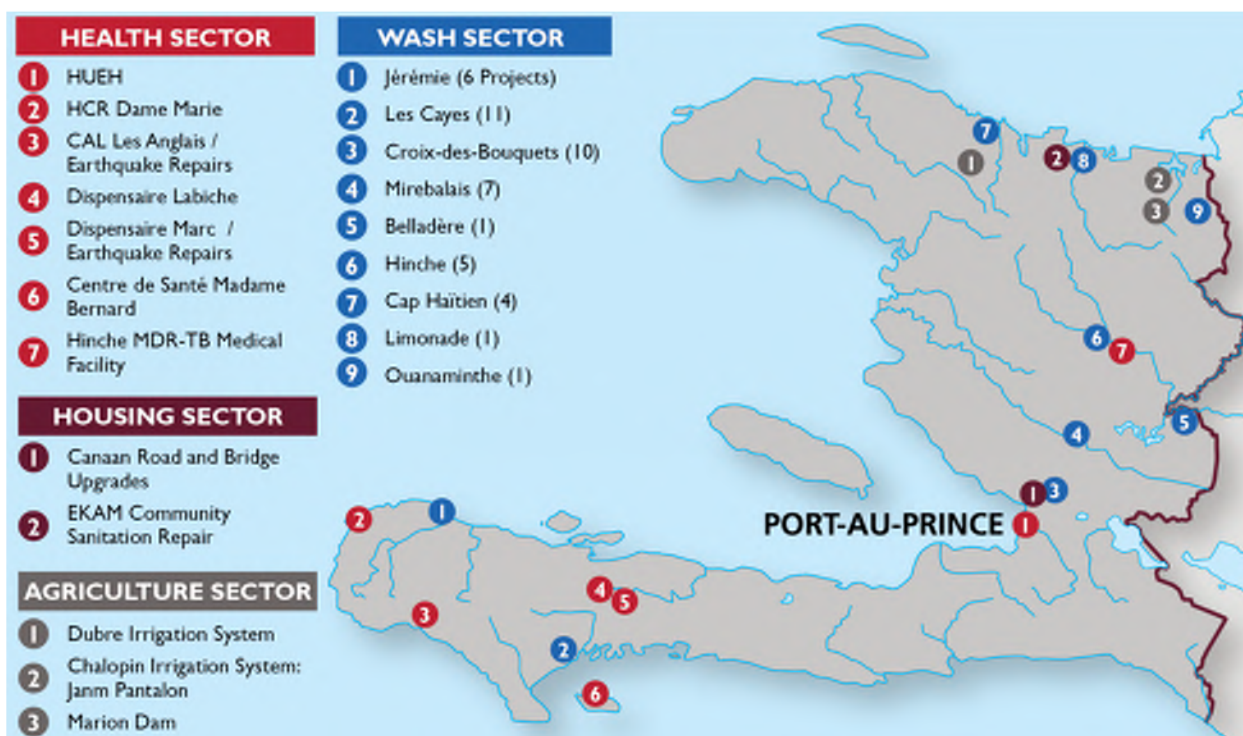
FROM MARCH 2018 TO SEPTEMBER 2022 AECOM PROVIDED PROGRAM MANAGEMENT, ARCHITECTURAL, ENGINEERING, SPECIALIST TECHNICAL SUPPORT, AND QUALITY MANAGEMENT SERVICES TO USAID FOR THE CONSTRUCTION OF STRUCTURALLY SAFE AND RESILIENT INFRASTRUCTURE ACROSS MULTIPLE SECTORS IN HAITI.



THE HAITI INFRASTRUCTURE PROGRAM TEAM FOCUSED ON MAXIMIZING LOCAL, IN COUNTRY DELIVERY, SUPPLEMENTING WITH SPECIALIST STTA RESOURCES, AT USAID'S REQUEST TO RESPOND TO CHANGING NEEDS

AECOM brought infrastructure expertise to help USAID build various medical facilities, sanitary water systems, roads, and agriculture projects. AECOM's maintained continuity of on-the-ground support to USAID throughout multiple periods of civil unrest and natural disasters, always retaining the ability to increase scale and provide USAID with flexibility to address a wide variety of infrastructure initiatives.





COST CONTROL AND PERFORMANCE

AECOM maintained a cost-efficient, scalable approach to delivery which enabled USAID access to draw on many of AECOM's global resources and specialized skillsets, as unexpected needs emerged. AECOM executed the scope of work and additional projects assigned by USAID under work approval forms, while keeping cost well under the contract ceiling.

ACCOMPLISHMENTS AND IMPACT

58

projects across five sectors

80%



program labor hours performed by more than 19 locally hired staff (over 90K hours)



Health:
Healthcare services restored to 90,000 residents



Housing:
Improved roadway access for 200,000 citizens



Agriculture:
Increased yields for 500 farmers through rehabilitation and expansion of irrigation systems



WASH: Delivery of basic or improved water access for ~300,000 people and basic access or improved sanitation for ~75,000 people.

SUCCESS STORIES



2018: SEAMLESS TRANSITION FROM HHIP TO HIP

Following AECOM's execution of the Haiti Health Infrastructure Program (HHIP) from 2012-2018, USAID issued a five-year task order contract to AECOM for Architectural and Engineering services to design and manage multisectoral infrastructure portfolio projects (Haiti Infrastructure Program) in February 2018. This contract represented not only a continuation of the work begun under the HHIP, but also a broadening of scope to include additional infrastructure sectors and additional services.

Over the course of the year, AECOM implemented a workplan that smoothed the transition from HHIP to HIP, providing benefits of continuity of service on ongoing contracts while also reflecting the expanded portfolio of multisectoral infrastructure. This was achieved by maintaining the existing team from HHIP who provided a wealth of prior experience on previous and ongoing projects, then supplementing those staff with specialized technical experts from the U.S when needed.

For ongoing projects in the health sector, designs executed by AECOM under HHIP moved into construction without encountering a learning curve for a new consultant. Maintaining the team members from HHIP provided key stakeholders with access to the same architects and engineers who produced the original designs. This access not only resulted in faster responses to contractor RFIs, but also historical context for design decisions. Field staff who maintained a presence on project sites across both programs were familiar with many of the construction contractors and projects and were already prepared to recognize quality or safety issues, and to work with USAID and the contractor to implement pro-active solutions.

In standing up new projects, AECOM's 'field first' model retained the same in-country team, carrying over their existing knowledge of working in Haiti, while taking advantage of reach back to a wide range of technical specialists available within AECOM to assist on across multiple sectors.

During this transitional year, there were multiple periods of political unrest. AECOM's team remained flexible and responsive to USAID's needs throughout, incorporating security plans to consistently provide site visits and inspections to support USAID at times when U.S. Embassy personnel were restricted from travel.

Ultimately, through continuity of staffing and knowledge retention, AECOM maintained momentum on existing projects, streamlined many processes, and expanded support to USAID in new infrastructure sectors.

THE MAJORITY OF STAFF REMAINED ON THE TEAM OVER THE TRANSITION BETWEEN HHIP AND HIP. THROUGH THIS CONTINUITY OF STAFFING AND RETENTION OF INSTITUTIONAL KNOWLEDGE, AECOM WAS ABLE TO REDUCE SUBMITTAL REVIEW TIMEFRAMES FROM USAID'S REQUIRED 14-DAY RESPONSE TIME TO AN AVERAGE OF FOUR DAYS.

FROM THE CPARS: *The Contractor was able to achieve a rather seamless transition between the prior A&E services program and its current contract without a loss of service or extended delays in responsiveness. (Interim: 02/2018-02/20)*



PROGRAM MANAGER BOB MERRILL AND COP NEIL KANESHIRO ENGAGED WITH STAKEHOLDERS AT CANAAN IN APRIL 2018, EXPANDING AECOM'S PARTICIPATION INTO NEW INFRASTRUCTURE SECTORS



2019: A MILESTONE IN THE RECONSTRUCTION OF THE HÔPITAL DE L'UNIVERSITÉ D'ETAT D'HAÏTI (HUEH)

The largest tertiary general university hospital in the country, HUEH, had suffered from severe maintenance problems prior to the January 2010 earthquake. The earthquake exacerbated these problems and caused the collapse of multiple buildings. In response, the “Reconstruction and equipment of the hospital of the State University of Haiti (HUEH)” project was established and co-funded by USAID and Agence Française de Développement (AFD), and the Haitian State Treasury.

Beginning under the previous HHIP contract, AECOM provided construction quality assurance reviews and oversight of the construction contractor and construction management firm on behalf of USAID. AECOM conducted frequent walkthrough observations of the buildings and documented findings. These construction quality assurance reviews benefited USAID and other implementing partners by identifying deficiencies with architectural and structural elements as well as mechanical/electrical/plumbing systems and assemblies.

In mid-2019, a dispute resulted in stalled negotiations between the contractor and GOH, ultimately causing work to stop. To support negotiations and help the work resume, AECOM leveraged its international reach and expertise, by sourcing and mobilizing a multi-lingual French/Spanish/English-speaking FIDIC Contract Specialist/Claim Evaluator. AECOM was able to identify an individual who met this extremely specialized skill set, Mr. Malek Hamza, enabling his mobilization to Haiti within a week of USAID’s formal request for support. By providing a rapid response, AECOM assisted UTE and the contractor in moving forward with project completion. Following Mr. Hamza’s two-week trip, AECOM was able to precisely quantify responsibilities for each party, allowing the GOH to move forward with negotiations constructively.

Throughout the period of support, AECOM identified issues as they arose, effectively communicated the potential impacts to USAID and the construction management firm, then facilitated proactive resolution between stakeholders. Although progress on the project was frequently interrupted, improvements to the facility resulted in substantial increased capacity of the primary healthcare facility in Port-au-Prince.

AS A RESULT OF AECOM’S ONGOING QUALITY ASSURANCE OVERSIGHT AND SUPPORT, BY LATE 2019 THE PROJECT HAD PROGRESSED TO A POINT WHERE THE CONTRACTOR NO LONGER REQUIRED CONTINUOUS OVERSIGHT TO ACHIEVE COMPLETION.



**HUEH POST-AECOM
SERVICES, NEARING
COMPLETION**

2020: MAINTAINING MOMENTUM DURING COVID-19 PANDEMIC SHUTDOWNS

2020 saw the outbreak of the COVID-19 pandemic across the world with widespread lockdowns and halts to construction work. In Haiti, USAID halted construction on many projects from March until September. During this time, rather than ceasing operations, AECOM maintained an active presence in Haiti.

AECOM maintained momentum across three active technical sectors:



Health: AECOM continued to work with the contractor to complete their material and contractual submittals, and in planning and assisting USAID as they clarified SOW modifications for the six clinic sites. AECOM also established an updated progress tracking system and provided USAID with recommended revisions to drawings and Bills of Quantities (BOQs) to enable USAID to negotiate pricing and changes with the contractor ahead of resumption of work.



WASH: AECOM continued to conduct site inspection visits throughout the shut-down to check work progress, verify actual site conditions matched drawings, tech specifications, BOQs and schedule, providing USAID with valuable insight of the on-the-ground project status.



Housing: During this period, AECOM initiated support of the EKAM Housing Development sanitation repair project, performing the site inspections to troubleshoot issues and prepare recommendations for repairs.

AECOM's continued presence enabled USAID to maintain situational awareness across the active project sectors and progress of other implementing partners. By aggressively focusing on administrative construction submittals with contractors and maintaining procurement schedules, AECOM, USAID and the contractors were prepared to resume construction activities once restrictions were lifted in September.

**BY CONTINUING TO
MANAGE CONSTRUCTION
SUBMITTALS AND
MAINTAINING A REGULAR
INSPECTION SCHEDULE,
AECOM, USAID AND
PROGRAM CONTRACTORS
WERE PREPARED TO RAMP
UP ACTIVITIES BACK UP
ONCE CONSTRUCTION
RESUMED IN SEPTEMBER.**

FROM THE CPARS: *The contractors management team in Haiti and in their home office worked very closely with USAID/Haiti during the unexpected but debilitating Covid pandemic crisis to ensure the USAID/Haiti managed to keep its construction activities ongoing even at a reduced level. In September 2020, when most of the pandemic restrictions were lifted the management team ensured a very quick and highly successful ramp up of construction activities... The contractor used the respite in construction activities to work with USAID's construction contractors to ensure that all processes were in place for a quick and successful ramp up of construction activities. (Interim: 02/2020-02/2021)*



AECOM STAFF IMPLEMENTED
PPE AND SOCIAL DISTANCING
PROTOCOLS FOR
IN-PERSON MEETINGS

2021: EARTHQUAKE RAPID RESPONSE

On 14 August 2021, a magnitude 7.2 earthquake struck southwestern Haiti, resulting in over 2,000 deaths with over 26,000 people displaced. Additionally, there was widespread damage to buildings and infrastructure including over 80 health facilities. At the time, AECOM was supporting USAID with construction oversight on multiple Health and WASH sector sites, including several clinics previously damaged by Hurricane Matthew and at the Les Cayes and Jeremie water system. The structural damage resulting from the earthquake made continuing with the planned work unsafe and required rapid damage assessment and repairs before work could continue.

In response, AECOM reprioritized ongoing work in order to assist USAID in assessing and quantifying the damage. To make efficient use of in-country staff, AECOM quickly re-tasked staff who were already on site and mobilized four additional team members.



On the Health sector projects, AECOM assessed damages to the Dame Marie, Madame Bernard, Les Anglais, Marc, Labiche, and Hinche clinics. Due to our on-the-ground presence and proximity to the site, AECOM also provided USAID with a rapid damage assessment of a nearby, unrelated bridge project.



For the WATSAN project, AECOM provided a rapid assessment of the water towers in Les Cayes and the Centre Techniques d'Exploitation (CTE) office in Jeremie to identify and document any damage.

After completing the assessments, AECOM supported USAID in drafting contract changes for ongoing projects to include the necessary repairs. AECOM also coordinated with contractors on site to propose designs for repairs, which facilitated faster review and approval. AECOM's actions allowed USAID to develop work contracts in a cost-efficient manner and reduce delays created by the earthquake.



AECOM HELPED USAID UNDERSTAND THE MAGNITUDE OF IMPACTS TO MULTIPLE ONGOING PROJECTS AND THEN WORKED WITH EXISTING CONTRACTORS ON SITE TO MAKE FIXES. TOGETHER, WE WERE ABLE TO SUPPORT SAFE RESUMPTION OF WORK.

FROM THE CPARS: *The contractor also provided very thorough review and evaluations of the reasonableness of cost proposals from the construction contractor for repair work required at two clinics that USAID was rehabilitating after they were damaged after the 2021 August earthquake in the South of Haiti. (Interim: 02/2021-02/2022)*

AECOM RE-DEPLOYED STAFF FROM ONGOING WORK TO PROVIDE A DAMAGE ASSESSMENT OF THE LA SAVANNE WATER TOWER





2022: COMPLETION OF THE WATSAN PROJECT

The Water and Sanitation (WATSAN) Project was initiated to respond to the cholera outbreaks that spread across Haiti in the aftermath of the 2010 earthquake due to poor access to clean water and sanitation. WATSAN aligns with USAID's overall water, sanitation, and hygiene (WASH) sector goal of increasing the availability and sustainable management of safe water and sanitation for the underserved and most vulnerable communities. The primary aims of the project were to:

- Help 300,000 people gain basic access or improved access to water,
- Help 75,000 people gain basic access or improved sanitation, and
- Lay the foundation for sustainable increases in access to water and sanitation.

AECOM supported USAID's efforts on the WASH program by providing quality assurance inspections and assistance to projects ranging from water transmission line repairs to solar panel system inspections that powered components of water distribution networks. In 2022, as HIP neared completion, AECOM assisted USAID in issuing completion certificates for 37 of the 42 individual projects in which AECOM was involved.

With USAID's assistance, AECOM coordinated with multiple subcontractors performing the work to identify and document discrepancies, as well as aiding in delivering a solution.

This proactive approach allowed projects to progress, so that completion certificates could be issued by USAID, and projects closed out.

AECOM WORKED WITH USAID AND THE IMPLEMENTING PARTNERS TO CLARIFY DEFICIENCIES AND HELP SUBCONTRACTORS QUICKLY IMPLEMENT SOLUTIONS. AS A RESULT, BY SEPTEMBER 2022, AECOM ISSUED COMPLETION CERTIFICATES TO THE VAST MAJORITY OF THE SITES—37 OUT OF 42.



HAITIAN CITIZENS GAINED ACCESS TO CLEAN WATER FROM A COMPLETED WATER KIOSK AT MIREBALAIS



AECOM MEP ENGINEERS PROVIDED INSPECTION OF THE LIMONADE UNIVERSITY SOLAR PANELS SYSTEM PROJECT PRIOR TO USAID'S ISSUANCE OF A CERTIFICATE OF COMPLETION

PROGRAM OVERVIEW

CREATING AND SUSTAINING A MORE RESILIENT, PROSPEROUS AND DEMOCRATIC FUTURE FOR HAITI

USAID's Haiti Strategic Framework represents commitment to generate measurable progress toward self-reliance with a goal that "Haitians are more engaged in creating and sustaining a more resilient, prosperous and democratic future." Supporting this goal and the resulting framework the strategy outlines, is the USAID/Haiti Office of Infrastructure, Engineering, and Energy (OIEE). The OIEE directly supports USAID/Haiti's development objectives relating to health, education, agriculture, economic growth, and democracy and governance. In October 2017, the OIEE issued a Request for Task Order Proposal (RFTOP) No.: SOL-521-17-000001, requesting architecture and engineering services for a five-year period for a multisectoral infrastructure portfolio of projects.

THE HIP CONTRACT MODEL PROVIDED USAID WITH A VEHICLE FOR AN ENGINEERING PARTNER TO PROVIDE RIGOROUS, INDEPENDENT QA OVERSIGHT ACROSS MULTIPLE PROJECTS AND SECTORS, WITH THE POTENTIAL TO SCALE UP AND DOWN AS NEEDS AND PRIORITIES CHANGED.

Building on the delivery of the predecessor contract (Haiti Health Infrastructure Program, HHIP), in February 2018, AECOM was issued a task order contract for the Haiti Infrastructure Program (HIP), comprising a multisectoral infrastructure portfolio of projects across Haiti.

Over four and a half years, HIP spanned five diverse technical infrastructure sectors, Health, Water Sanitation and Hygiene (WASH), Housing, Agriculture, and Capacity Building with AECOM providing program management, architectural, engineering, and specialized technical support to the OIEE. HIP provided OIEE immediate access to a team of full-time and short-term architects, engineers, and technical experts both based in Port-au-Prince, Haiti, and in AECOM offices throughout the U.S. and Canada.

The program took place during a very challenging period in Haiti. Protests and civil unrest led to widespread chaos in July 2018 and March 2019, with the US Embassy issuing evacuation orders for some expatriate personnel and travel restrictions on those remaining. The COVID-19 pandemic also brought construction to a halt for part of 2020. Further impeding project progress was the earthquake on 14 August 2021, that, amongst widespread damage to infrastructure, impacted on several active USAID project sites.

Over the course of the performance period, AECOM's in-country and home office management team remained agile and responsive to USAID. The AECOM team provided timely and uninterrupted support by sustaining the frequency of site visits/inspections and reporting which allowed USAID to maintain awareness of project progress across five infrastructure sectors included under the program.

FROM THE CPARS: *Due to the political instability and violent protests, the US Embassy imposed travel restrictions on American personnel and had to evacuate American personnel. ... the Contractor's in country and home office management team remained flexible and highly responsive to USAID's needs. In particular, the Contractor activated its risk management/security plan to provide additional staff and increased the frequency of site visits and inspections infrastructure projects ... [which] allowed USAID to maintain a reasonable degree of insights into the implementation status of and any damage to various projects around the country. This insight enabled USAID to quickly reengage once with implementing partners and their projects during and after the unrest subsided. (Interim: 02/2018-02/2019)*

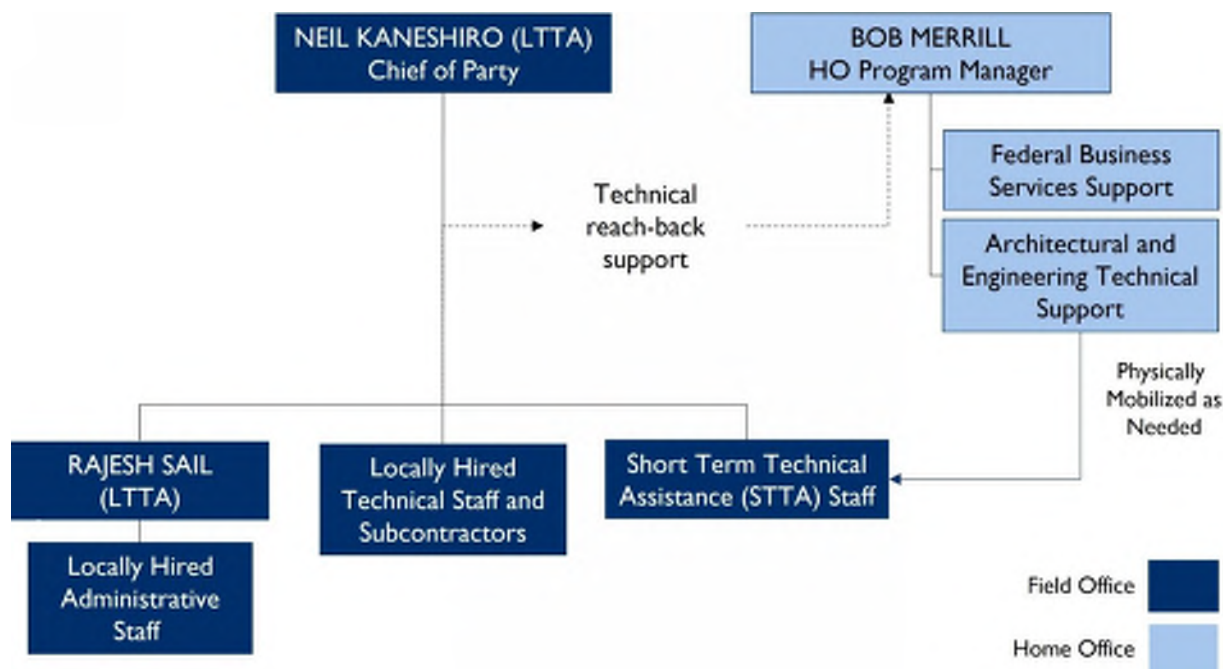
PROGRAM MANAGEMENT APPROACH

A FIELD FIRST ORGANIZATIONAL STRUCTURE

AECOM's management approach throughout the HIP focused on organizing to efficiently provide USAID with a variety of technical options to solve a wide range of infrastructure challenges.

Using a 'Field First' approach, AECOM performed management, technical field engineering, construction inspection, reporting, and administration activities at the local project office in Port-au-Prince to the greatest extent possible. The diagram below shows the HIP Task Organization. Expatriate Long Term Technical Assistance (LTTA) personnel were limited to key personnel: the Chief of Party (COP) Neil Kaneshiro, and the Operations Manager Rajesh Sail. Conducting most of the work at the local office not only reduced cost and was efficient, but it also helped to professionally develop nineteen locally hired staff who worked on the program.

The COP was directly supported by Bob Merrill as Home Office Program Manager and AECOM's US home office staff throughout the entire duration of the program from March 2018 through September 2022 offering continuity in program oversight, stability in administration, and institutional knowledge in resource allocation to meet USAID/Haiti's objectives.



AECOM's FIELD FIRST PROGRAM MANAGEMENT APPROACH ALLOWED DYNAMIC STAFFING OF THE PROGRAM AS NEEDS EVOLVED OVER TIME

AECOM was also well postured to provide immediate reach back support or deploy additional skilled staff as Short-Term Technical Assistance (STTA) to support project activities as defined in the task order, work approval forms, or as directed by USAID. In these cases, Field Office capabilities were supplemented by US-based technical design subject matter experts from across the numerous architectural and engineering disciplines available within AECOM. Home office support staff also provided quality control and compliance reviews, and administrative resources and oversight from the home office in the US.

The Field First approach, combined with the breadth of available technical specialists within AECOM's home office organization enabled cost efficient execution of the work, while also providing USAID with scalable capacity in technical design and subject matter expertise to meet various infrastructure needs across the program.



US-BASED STTA ENGINEERS CONDUCTED A SITE VISIT TO THE DUBRÉ, CHALOPIN, AND MARION RIVER DAM TO IDENTIFY COORDINATION NEEDS WITH UPSTREAM PROJECTS

FROM THE CPARS: *AECOM's cost control strategies is impressive. The Contractor's use of local labor for site inspection and administrative needs allows the Contractor to significantly control costs. Experienced US-based architectural and engineer personnel are engaged when necessary through home office participation and STTA assignments as needed. This allows the Contractor to maintain quality commensurate with the contract while being extremely cost conscious (Interim: 02/2019 – 02/2020)*

EMBEDDING EFFICIENCY AND SCALABILITY

AECOM maintained an agile approach, scaling resources in compliance with Work Approval Forms (WAF) in order to keep costs proportionate with workload. In total, AECOM completed the scope of work for 34 WAFs issued by USAID. Throughout the program AECOM balanced the need to keep cost low, while still retaining the capability to scale the program on short-notice, thereby providing USAID with decision space and a reliable on-call partner for a variety of infrastructure needs across the technical sectors under the program.

Although the total contract value of HIP was initially \$22 million dollars, by employing a disciplined approach toward cost control under a cost-plus fixed-fee program, AECOM ultimately expended less than \$7 million dollars while still supporting every USAID initiative requested and retaining the capability to increase scale should it have become necessary.

FROM THE CPARS: *This contract was originally designed with a TEC of \$22 million dollars in order to support USAID/Haiti's work in various sectors such as health, education, shelter, economic growth, etc. However, due to various reasons beyond their control, the TEC had to be drastically reduced and the contractor worked in full cooperation to ensure that it adhered to the drastically reduced budget without compromising their work quality. They have managed to leave a structure in place for the mission to respond and to ramp up engineering activities in the event of any unforeseen disaster such as the 2010 earthquake in Haiti. (Interim: 02/2020-02/2021)*

RESOURCING THROUGH SPECIALIST AND LOCAL SUBCONTRACTORS

AECOM subcontracted with strategic and local teaming partners to implement the breadth of work under the program including Haiti Staffing & Business Resources (HSBR), Miyamoto International, Inc., GardaWorld, Inc, Iris Group International, and WI-HER.

HSBR enabled AECOM to maintain a team predominately comprised of locally hired Haitian field engineers and administrative staff throughout the program. HSBR provided curriculum vitae for potential technical and support staff to manage QA and CM services for the Program. Candidates were continuously identified and interviewed, creating a pool of available resources that kept the program flexible and met the diverse and evolving situation across multiple infrastructure sectors.

In addition to technical efforts, AECOM subcontracted with other key partners to provide USAID with studies that contained greater insight on the social conditions that influence infrastructure sectors in Haiti. Iris Group International conducted a gender assessment and produced a Gender Strategy document for USAID. Additionally, WI-HER performed a thorough infrastructure assessment, the results of which were submitted to USAID as *Improving Self-reliance in the Architecture & Engineering Sector in Haiti*.

GardaWorld, Inc provided security services throughout the program, which enabled AECOM to remain active in its supporting role for USAID during a period of increased tensions in Haiti.

AECOM embraced an approach to subcontracts that maximized local technical staffing and leveraged the unique skills of external specialists with deep capacity building experience. This complementary approach provided many local staff with a chance to understand and directly impact capacity building initiatives, while also ensuring the authenticity the capacity building reports submitted to USAID.



AECOM SUBCONTRACTOR AND WOMEN-OWNED SMALL BUSINESS, WI-HER, CONDUCTED FOCUS GROUP DISCUSSIONS AND COMMUNITY ENGAGEMENT AS PART OF CAPACITY BUILDING ASSESSMENT ACTIVITIES.

FROM THE CPARS: *The Contractor exceeded its participation goals for using woman owned, small business (WOSB). Under this task order, the Contractor utilized WI-HER to complete a gender assessment of the architectural and engineering (A&E) sector in Haiti. These efforts lead to the creation of a gender strategy and action plan that contained programmatic responses that USAID/Haiti could exercise to advance gender equity in Haiti and improve self-reliance.*

Moreover, the Contractor also uses a woman owned, Haitian small business called HSBR as a Haitian labor provider for field engineering and QA staff, drivers, translators, and other operational support. (Interim 02/2018-02/2019)

COMBINING PROJECT OFFICE AND STAFF ACCOMMODATION



FOR EFFICIENCY AND STAFF SAFETY, AECOM MAINTAINED A COMBINED PROJECT OFFICE AND STAFF HOUSING

AECOM, having maintained a construction management office in Haiti since 2012, collocated project office operations, LTTA housing, and STTA billeting into a single location in Port-au-Prince, Haiti. This significantly reduced costs through a combination of factors: Reduced rental/leasing costs, reduced security needs at multiple locations and reduced time lost to commuting (and reduction in associated safety risks).

FROM THE CPARS: *The Contractor has continued to consolidate its guesthouse and office in the same building. This action provides significant cost savings along with greater reductions in security and traffic incidents. This step eliminated a rather risky commute throughout Haiti's congested streets every morning and afternoon during rush hour traffic. Furthermore, this consolidation allow the security resources to be focused in one location instead of separate office and living areas. (Interim: 02/2018-02/2019)*

MAINTAINING OPERATIONAL SECURITY

AECOM subcontracted with GardaWorld, Inc. to provide security and protective services/security guards at the project office in Port-au-Prince. GardaWorld, Inc. also provided security escorts and drivers as needed for work travel to sites that were located in designated “red zones” where there were potential risks to personal security. The security contractor also assisted AECOM in creating and implementing a comprehensive security/evacuation plan the covered a wide range of contingencies.

Observing these safety protocols allowed AECOM to remain in-country even during periods where departure from post was authorized. Despite substantial political unrest, numerous localized protests, and an earthquake during the project, AECOM, in close coordination with GardaWorld and USAID, vigilantly maintained situational awareness of local conditions and risks. As a result, AECOM and subcontractor staff remained safe while performing their duties in Port-au-Prince, Petion-ville, Cap Haitien, Crois-des-Bouquets, Hinche, Mirabalais, Les Cayes, Jeremie, Ile-a-Vache and at other project sites throughout the duration of the program. This allowed AECOM to continually make progress on projects and provide situational awareness on the ground on USAID's behalf.

AECOM is proud to complete the program with zero major security incidents.

DEFINING AND IMPLEMENTING A GENDER STRATEGY

Women face deep social and economic disadvantages in Haiti, with economic opportunities primarily restricted to small-scale sales and services as a consequence of gender-based inequalities in ownership of land and capital. They are vulnerable to gender-based violence, and the legal framework protecting women's rights is limited. Haitian women's deprivation was compounded by the 2010 earthquake, with a loss of services of all kinds, increases in sexual and gender-based violence, and male-dominated relief efforts. In support of efforts to address gender inequalities through infrastructure investments, AECOM, with our subconsultant IRIS Group performed an assessment to identify the areas in which women face the most acute gender discrimination in the infrastructure sector, and to develop a strategy for USAID-supported infrastructure work to respond to these inequalities. These recommendations were presented to USAID in the form of the deliverable *Gender Strategy for the Haiti Infrastructure Program (HIP): Findings from September 2018 Gender Assessment and Action Planning*. This strategy provided awareness to USAID of the challenges within the infrastructure industry as well as identifying a path forward to making improvements,

Within the program itself, HIP staff also conducted online and in-person gender integration training at the beginning of the program. This aimed both to create a respectful workplace and to identify opportunities to weave in gender initiatives with our program activities. Women held several program-level functional roles within the local team, and our home office team had women in departmental lead roles for both structural and architectural disciplines. Furthermore, AECOM also subcontracted local technical staffing to a women-owned Haitian small business, HSBR, for field engineering, quality assurance, drivers, translators and other operational staff. Our other subconsultants, WI-Her and IRIS Group, were also women-owned small businesses.

As a result of these activities, AECOM supported USAID in establishing gender integration best practices within our own program team and also in the development of strategies applicable across infrastructure sectors.



AECOM AND SUBCONSULTANT IRIS GROUP CONDUCTED A GENDER INCLUSION ASSESSMENT AND ACTION PLAN

PROGRAM SECTORS

USAID divided the effort for the Haiti Infrastructure Program into different technical and administrative sectors. The table below provides a listing of the program sectors used during the program period of performance (in addition to Sector 01 – Program Management) and identifies the major tasks and sub-projects carried out under each sector throughout the program.

COMPLETE PROJECT LISTING

Project Name	Project Start	AECOM Inspection Start	AECOM Inspection End	Project Completion
HEALTH SECTOR (Sector 03)				
 03-01 Reconstruction of General University Hospital (HUEH)	29-Apr-14	2014 prior to COP arrival	17 July 2019	-
 03-02 Renovation of Hurricane Matthew–Damaged Health Clinics and Hinche MDR-TB Facility				
1. HCR Dame Marie	28-Feb-19	24-Oct-18	05-Apr-22	Dec-21
2. Centre de Santé Madame Bernard	28-Feb-19	22-Oct-18	06-Apr-22	Dec-21
3. CAL Les Anglais	28-Feb-19	23-Oct-18	29-Dec-21	Dec-21
4. CAL Les Anglais – Earthquake Repairs	15-Feb-22	1-Sep-21	25-Mar-22	19-May-22
5. Dispensaire Marc	28-Feb-19	22-Oct-18	27-Dec-21	Dec-21
6. Dispensaire Marc – Earthquake Repairs	15-Feb-22	31-Aug-21	26-Mar-22	12-May-22
7. Dispensaire Labiche	28-Feb-19	22-Oct-18	27-Dec-21	Dec-21
8. Hinche MDR-TB Medical Facility	-	20-Feb-19	6-Jan-22	-
 03-03 Warranty Reconstruction of NCHS <i>Final Close was between USAID and TCG</i>	25-Sep-14	25-Sep-14	20-Sep-18	-
 03-04 JUH Warranty	-	27-Sep-18	20-Sep-19	10-Oct-19
WASH SECTOR (Sector 04)				
 04-01 Cholera Communes Engineering Oversight				
1. Gravel drain installation for fuel tank – Les Cayes CTE	-	10-Dec-20	10-Dec-20	19-Apr-21
2. Jeremie CTE Office doors repairs.	-	9-Dec-20	9-Dec-20	19-Apr-21
3. Painting Jeremie CTE Office	-	9-Dec-20	9-Dec-20	19-Apr-21
4. Shelves construction – Jeremie CTE storage areas.	-	9-Dec-20	9-Dec-20	19-Apr-21
5. Electrical cabling supply & installation – Les Cayes CTE office, Charpentier	-	10-Dec-20	10-Dec-20	19-Apr-21
6. Well field fuel tank provision & installation – Les Cayes	-	10-Dec-20	10-Dec-20	19-Apr-21
7. Electrical installation - Solar system Charpentier Office - Les Cayes CTE	-	10-Dec-20	10-Dec-20	19-Apr-21
8. Network wiring – Jeremie CTE Office	-	9-Dec-20	9-Dec-20	19-Apr-21
9. Electrical installation – Mirebalais Office	-	5-May-21	20-May-21	31-Mar-22
10. Replacement of pipes at bridge crossing – Canaan	-	23-Mar-21	23-Mar-21	-
11. Provision & installation of fuel tank – F10 well field	-	24-Jul-21	24-Jul-21	30-Sep-21
12. Solar system installation – Mirebalais CTE Office	-	5-May-21	5-May-21	30-Jun-21
13. Network wiring – Mirebalais CTE Office	-	5-May-21	5-May-21	30-Jun-21
14. F10 Wellfield Repairs – Cap-Haïtien	22-Jul-19	22-Dec-20	22-Dec-20	19-Apr-21
15. Repairs – Mahotièrè Spring Cap	9-Mar-20	9-Dec-20	9-Dec-20	19-Apr-21
16. Hybrid solar pump installation – Charpentier wellfield	-	20-May-20	27-Oct-20	30-Jun-21
17. Leaks repairs phase I	-	9-Dec-20	9-Dec-20	30-Jun-21
18. Drilling – Balan Test Well	-	22-Dec-20	22-Dec-20	19-Apr-21
19. Internet network cabling – Hinche CTE	-	4-May-21	4-May-21	30-Jun-21
20. Electrical installation – Hinche CTE	-	4-May-21	4-May-21	30-Jun-21

Project Name	Project Start	AECOM Inspection Start	AECOM Inspection End	Project Completion
21. Canaan Pump House and Reservoir	-	14-Dec-20	23-Mar-2021	31-Mar-22
22. Solar panels – University of Limonade	-	7-May-21	7-May-21	30-Jun-21
23. Repairs to seven kiosks	29-Mar-21	5-May-21	10-Sep-21	30-Sep-21
24. Fuel tank supply & installation for well field– Canaan	-	25-May-21	28-Sep-21	30-Sep-21
25. Renovations – Hinche CTE	1-Jun-21	9-Sep-21	9-Sep-21	30-Sep-21
26. Fuel tank – Hinche CTE office	-	9-Sep-21	9-Sep-21	30-Sep-21
27. Electrical & Plumbing work – Morne-à-Cabri	19-Apr-21	31-Jan-22	31-Jan-22	18-Jul-22
28. Supply and Installation of chlorinators for Croix-des-Bouquet & Ouanaminthe CTEs	-	27-Sep-21	27-Sep-21	31-Mar-22
29. Canaan Transmission line	-	15-Dec-20	11-Mar-22	31-Mar-22
30. Drilling two boreholes in Cap-Haitian under Grant In-kind awarded to Movement Femme Soley Nord.	-	24-Jul-21	24-Jul-2021	31-Mar-22
31. La Savanne Water Reservoir Rehabilitation	-	24-Jun-21	18-Mar-22	18-Jul-22
32. Repairs to Croix-des-Bouquets CTE office	-	22-Sep-21	22-Sep-21	31-Mar-22
33. Drilling of exploration wells Plateau Central	-	9-Sep-21	1-Feb-22	31-Mar-22
34. Solar panels for Croix-des-Bouquets CTE	-	25-Mar-22	25-Mar-22	18-Jul-22
35. Leaks repairs phase II	19-Apr-21	21-May-21	13-Jan-22	31-Mar-22
36. Canaan: Construction of distribution network	18-Mar-21	23-Apr-21	4-Feb-22	18-Jul-22
37. Construction of building for 509 incinerator	16-Jun-21	31-Jan-22	19-Jul-22	30-Sep-22
38. Fence construction for reservoir & pumping station	3-Sep-21	10-Sep-21	24-Jun-22	31-Mar-22
39. Drying pads construction for Morne-à-Cabri facility	4-Jun-21	31-Jan-22	7-Sep-22	30-Sep-22
40. Repairs to Charpentier Water Tower	-	11-May-22	9-Aug-22	-
<i>Project incomplete at end of AECOM's contract. New A&E will provide QA services to complete.</i>				
41. Rehabilitation of Charpentier Wellfield in Les Cayes	-	22-Apr-22	9-Aug-22	-
<i>Project incomplete at end of AECOM's contract. New A&E will provide QA services to complete.</i>				
42. Les Cayes Water Distribution System Rehabilitation	-	21-Apr-22	10-Aug-22	-
<i>Project incomplete at end of AECOM's contract. New A&E will provide QA services to complete.</i>				

HOUSING SECTOR (Sector 07)



07-01 Canaan Upgrading Program

1. Canaan 3 Main Road Project	-	23-May-18	1-Aug-18	31-Jul-18
2. Boucambrou Bridge	-	25-May-18	3-Aug-18	31-Jul-18



07-03 Preliminary site investigation at EKAM (Northeast-Caracol)

15-Jul-20	21-Jul-20	29-Oct-20	6-Sep-22
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On 06-Sep-22, USAID Directed AECOM to close the related WAF.

AGRICULTURE SECTOR (Sector 08)



08-01 AVANSE

1. Dubré	-	5-Dec-2018	23-Jan-20	-
2. Chalopin	-	28-Feb-19	24-Jan-20	-

CAPACITY BUILDING & TRAINING



11-01 Capacity Building and Internships

1. HIP Gender Study	10-Sep-18	-	-	28-Nov-18
2. Internship 2018	4-Jun-18	-	-	30-Jul-18
3. Improving Self-Reliance in the A&E Sector in Haiti	2-Apr-19	-	-	2-Jul-19

The following sections provide descriptions of each task executed and works completed under the technical sectors during the Haiti Infrastructure Program, together with challenges and accomplishments for each task.



SECTOR 03: HEALTH

AECOM supported USAID for four tasks in the health sector during HIP, the ongoing reconstruction of Hôpital de l'Université d'Etat d'Haiti, the Renovation, Rehabilitation, Repair, and Utility Upgrade of Hurricane Matthew-Damaged Health Clinics, and Warranty Inspections at National Campus for Health Sciences and the Justinien University Hospital Pediatric Ward.

TASK 03-01: RECONSTRUCTION OF L'HÔPITAL UNIVERSITAIRE D'ETAT D'HAITI (HUEH)

Project Situation

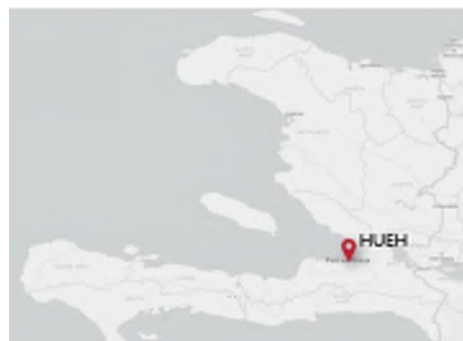
The largest tertiary General University Hospital in the country, HUEH (Hôpital de l'Université d'Etat d'Haiti), suffered from severe maintenance problems prior to the January 2010 earthquake. The earthquake exacerbated these problems and caused the collapse of multiple buildings. The Government of Haiti (GOH) requested the help of the American and French governments in the reconstruction efforts and asked to keep the location of the HUEH at the current site to ensure continuity of medical services in downtown Port-au-Prince, as well as the entire hospital operational during construction.

Since 2011, USAID and AFD were engaged as co-donors. The planning process was long and challenging but resulted in substantial capacity building for the Government of Haiti Unite Technique et d'Evaluation (UTE), the GOH's entity in charge of managing the construction of HUEH and other large infrastructure and capital investment projects. UTE issued a Notice to Proceed (NTP) to the contractor on 29 April 2014 for HUEH reconstruction work.

Program Highlights and Major Activities

AECOM previously supported this project under HHIP from 2014-2018 and continued to support USAID under the HIP. In the period 2018-2019, AECOM:

- 1) Performed full-time construction observational oversight services across buildings A through J, communicating QA observations to the CM, USAID, UTE and AFD.
- 2) Observed/reviewed and tracked construction management issues and advised on best practices to facilitate resolution.
- 3) Prepared Quality Observation Reports (QOR).
- 4) Attended weekly construction meetings and QA meetings as a representative of USAID.
- 5) Provided technical guidance to USAID regarding management issues, studies/engineering reports, and architectural/engineering designs.



DATES: Mar 2018 – Jul 2019

SITES: 10 buildings

QORS AND SITE VISITS: 312

**SUPPORTED PROGRAM
MANAGER HIRING PROCESS**

**PROVIDED FIDIC EXPERTISE
FOR NEGOTIATIONS.**



AECOM PROVIDED CONTINUITY OF SUPPORT FROM HHIP INTO HIP
TOP: SUPERVISING CONCRETE POURING AT SUBSTATION;
BOTTOM: INSPECTION OF ELECTRICAL INSTALLATION IN BUILDING B

Over this time, AECOM conducted 148 architectural and 164 Mechanical Electrical and Plumbing inspections, documenting each of these visits in Quality Observation Reports (QORs).

In late 2019 and early 2020, AECOM leveraged local experience by supporting USAID and UTE with the hiring and secondment of an Assistant Program Manager for the program. AECOM helped to gather and screen applicants, providing unbiased feedback from a disinterested party, thereby assisting USAID and enhancing decision-making on this critical project.

Successes and Challenges

AECOM identified and communicated numerous deficiencies through the quality observation process, which provided actionable steps for USAID and the CM to ensure quality of the facility. Because of AECOM's regular presence on site, when issues were recognized, they were quickly communicated to both USAID and the CM, which ensured stakeholders were informed about electrical and structural items which might impact safety and quality of the buildings. When appropriate AECOM also offered recommendations for resolution to provide USAID with options to proceed forward with construction.

Throughout November 2018 and again in February 2019, civil unrest impacted work productivity at the site. Although staff within many firms took administrative leave from Haiti, most AECOM staff continued to work from the local field office, which facilitated immediate re-engagement upon resumption of construction efforts.

In July 2019, a dispute resulted in stalled negotiations between the contractor and GOH, ultimately causing work to stop. To support negotiations and help the work resume, AECOM sourced and mobilized a multi-lingual French/Spanish/English-speaking FIDIC Contract Specialist/Claim Evaluator. AECOM was able to identify an individual who met this extremely specialized skillset, Mr. Hamza, and engaged in preparatory work to identify the most expeditious method of bringing him into the team without a lengthy hiring process, enabling his mobilization to Haiti within two days of receiving Approval of Travel Authorization Request. By providing a rapid response within one week of the initial need being identified by USAID, AECOM was able to assist UTE and the contractor in moving forward with project completion.

As a result of AECOM quality assurance oversight and support, by late 2019 the project had progressed to a point where the contractor no longer required continuous oversight to achieve completion.



AFTER IDENTIFYING STRUCTURAL ISSUES WITH THE ROOFTOP CHILLER INSTALLATION, AECOM SUPPORTED USAID IN IDENTIFYING SOLUTIONS TO PROGRESS THE PROJECT

TASK 03-02: RENOVATION OF HURRICANE MATTHEW-DAMAGED HEALTH CLINICS

Project Situation

In October 2016, Hurricane Matthew, a Category 4 hurricane with 145 mph winds, impacted 1.4 million people in Southern and Northeastern Haiti. Under the previous HHIP contract, AECOM mobilized US-based architects and engineers under to perform rapid building condition assessments of more than 23 clinics. AECOM later also provided design services to USAID for the damaged clinics in 2017.

USAID's 'Renovation, Rehabilitation, Repair and Utility Upgrade' project aimed to renovate, rehabilitate, repair, and upgrade utilities for seven Hurricane Matthew-damaged health facilities to return these health facilities to the pre-hurricane operational level. The clinics identified were the HCR Dame Marie, CAL Les Anglais, MEBSH PSS Bonne Fin, CAL Madame Bernard, Dispensaire Marc, and Dispensaire Labiche.

Additionally, the project initially aimed to repurpose/renovate an existing building in Hinche to create the Hinche Multiple Drug Resistant – Tuberculosis (MDR-TB) Medical Facility.

In September of 2018, USAID issued a construction contract to Tseng Construction Group (TCG) to begin construction on the Hurricane Matthew Reconstruction Project, and AECOM provided QA Services.

Program Highlights and Major Activities

Under the HIP, AECOM provided:

1. Oversight of the contractor's operations.
2. Reviews of construction management plans, submittals and design work submitted by the contractor.
3. Site visits/inspections to observe work described in the SOW for adherence to designs and quality/ safety and health plan.
4. Assessments of the adequacy of materials and resources used by the contractor, including off-site quality control and assurance operations such as store materials and testing labs
5. Deficiency reporting, and regular meetings with the Construction Contracting Officer's Representative (COR) and contractor to identify and implement solutions.
6. Review and certify construction contractor's vouchers.
7. Upon substantial completion of the contract, assist in the preparation of the Certificate of Substantial Completion jointly with the COR, GoH, and the Contractor.

Over the course of 41 months, AECOM conducted 123 site visits across the seven locations, including inspections at project milestones for Substantial Completion (punch lists), Final Completion (punch list reconciliations) and Warranty. AECOM also responded to 3,940 inspection requests, 35 RFIs and approved 258 construction submittals.



DATES: Oct 2018 – Apr 2022

SITES: 7

SITE VISITS PERFORMED: 123

**COMPLETED INSPECTION
REQUESTS:** 3,940

SUBMITTAL REVIEWS: 179



AECOM PROVIDED EARTHQUAKE DAMAGE ASSESSMENT AT LES ANGLAIS MEDICAL CLINIC AND HELPED USAID DEVELOP CONTRACT CHANGES TO INCLUDE THESE REPAIRS IN THE CONTRACTOR'S SCOPE

AECOM provided weekly oversight for many of the clinics throughout the program. Although AECOM initially also assigned a full-time civil engineer to the clinics to mirror the work of the contractor onsite, the frequency of visits was later gradually reduced as the pace of work slowed and neared completion.

From April to September of 2020, construction work at the sites stopped due to the COVID-19 pandemic. However, AECOM continued to work with the contractor to complete their material and contractual submittals and aided USAID in SOW clarifications across each of the project sites. These efforts allowed both USAID and the contractor to restart construction efficiently in October, once pandemic restrictions were lifted.

On 14 August 2021 a 7.2 magnitude earthquake hit Haiti. In response, AECOM reprioritized ongoing work in order to assist USAID in assessing and quantifying the damage. This included site visits from August 30 to September 2 to the Dame Marie, Madame Bernard, Les Anglais, Marc, Labiche, and Hinche clinics. AECOM's inspection teams identified damage at the Les Anglais and Dispensaire Marc clinics and supported USAID in drafting contract changes for ongoing projects to include the necessary repairs. To maintain momentum in the construction efforts, AECOM also coordinated with the contractor on site to propose designs to repair earthquake damages for USAID approval. This minimized the additional funds required and reduced delays. Upon USAID approval, repairs took place from March and May 2022.



LABICHE MEDICAL CLINIC WAS FULLY RENOVATED TO REPAIR DAMAGE FROM HURRICANE MATTHEW



PATIENTS BEGAN TO RETURN IN DECEMBER 2020: NEW WAITING ROOM, LABICHE MEDICAL CLINIC

Successes and Challenges

AECOM was able to reduce submittal review timeframe from the 14 days to an average of 4 days response time. This reduction in review time was accomplished by leveraging both home office and Haiti-based engineering staff and gave the construction contractor and USAID additional time within the period of performance to take action.

During final inspections at the clinics, AECOM identified and helped USAID recover \$ 276,097.80 in cost. AECOM actively engaged with USAID to have the contractor clarify discrepancies between contract drawings and the negotiated priced BOQ, which had been negotiated between the contractor and the USAID Office of Acquisition and Assistance (OAA). Throughout this process, AECOM supported USAID by developing cost evaluations and estimates to help USAID recover funds for work that was not completed, or removed from the contractor's SOW.

An unforeseen existing condition was discovered at the Hinche MDR-TB Medical Facility during renovations which impacted the existing structure. Upon discovery of the change condition, AECOM provided USAID with analysis, recommendations, and options, enabling USAID to make fully informed decision on the desired renovation approach for that facility.

By maintaining momentum on the Hurricane Matthew-damaged health facilities through multiple periods of unrest, the COVID-19 pandemic, and an earthquake, AECOM helped ensure that the six clinics within AECOM's scope of work reached final completion during the performance period, which increased healthcare access for Haitians living in those affected areas.



RENOVATIONS INCLUDED STRUCTURAL REINFORCEMENT AND REPAIRS TO IMPROVE RESILIENCY AGAINST FUTURE DISASTERS INCLUDING:

LEFT: NEW STEEL-REINFORCED ROOF SLAB AT LES ANGLAIS

RIGHT: NEW CEMENT BLOCKWORK AND PLASTER ON INTERIOR CLINIC WALLS

TASK 03-03: WARRANTY RECONSTRUCTION OF NCHS

The National Campus for Health Sciences (Le Campus des Sciences de la Santé; NCHS) Project included the reconstruction of the Faculty of Medicine and Pharmacy facilities and the NCHS temporary classroom/residence Hall on Rue Oswald Durand in Port-au-Prince and is designed to accommodate 600 students. From April-May 2018 AECOM participated in the warranty and final warranty inspections of the NCHS and provided USAID with the signed certificate of final warranty on 11 June 2018.



AECOM PROVIDED A FINAL WARRANTY INSPECTION FOR NCHS IN MAY 2018

TASK 03-04: JUH WARRANTY

Following the inauguration of the Justinien University Hospital (JUH) Pediatric Ward in April 2018, AECOM inspected the HVAC and fire detection/suppression systems to identify the cause of issues reported by hospital staff with their operation. AECOM performed these inspections in August of 2018 and identified the need to provide training for hospital staff in the correct operation and maintenance of these systems. At USAID's request, AECOM developed BOQs and cost estimates to facilitate the replacement of air filters prior to the end of the warranty period and also designed and costed a training program for hospital maintenance staff. In September 2019, AECOM revisited the Hospital to meet with hospital management and review ongoing maintenance procedures.



US AMBASSADOR, MICHELE J. SISON AND HAITIAN MINISTER OF HEALTH, MARIE GRETA ROY CLEMENT, AND USAID MISSION DIRECTOR, JENE THOMAS, ARRIVE AT THE INAUGURATION FOR THE JUH PEDIATRIC WARD, APRIL 2018



SECTOR 04: WATER, SANITATION, AND HYGIENE (WASH)

TASK 04-01: WATER AND SANITATION PROJECT

Project Situation

USAID's Water and Sanitation (WATSAN) Project is a \$41.8-million, 4.5-year activity implemented in collaboration with Haiti's National Directorate of Potable Water and Sanitation (DINEPA, Direction Nationale de l'Eau Potable et de l'assainissement en HAÏTI) with the overall goal of improving sanitation and water for Haitians. The Project is focused on areas impacted by cholera outbreaks, areas impacted by Hurricane Mathew, and additional areas impacted the August 14 2021 earthquake.

The three primary goals are:

- Helping 250,000 people get to basic or improved access to water
- Helping 75,000 people get access to basic or improved sanitation
- Laying the foundation for sustainable increases in access to water and sanitation across Haiti

Program Highlights and Major Activities

AECOM supported the WATSAN program on a wide variety of projects providing:

- Review of each project's BOQ and specifications
- Monthly site visits to monitor the performance of the IP's QA/QC firm and construction subcontractors across nine locations
- Final site inspections and signed completion certificates.
- A rapid assessment of water towers in Les Cayes and the Centres Techniques d'Exploitation (CTE) office in Jeremie following the earthquake on August 14, 2021

From August 2019 until March 2022, AECOM performed 98 site visits over 42 projects. AECOM site visits included a wide range of activities that were part of the WASH program including water transmission line repairs, pump house and reservoir rehabilitations, and water tanks and water kiosk site inspections.

In addition to planned and site visits inspections, on August 14, 2021, when Haiti experienced a 7.2 magnitude earthquake. At USAID's request, AECOM mobilized our subcontractor Miyamoto to provide a rapid assessment of the water towers (Charpentier and La Savanne) in Les Cayes and the CTE office in Jeremie to identify and document any damage.



DATES: Dec 2020 – Sep 2022

PROJECTS: 42

SITE VISITS PERFORMED: 98

**CERTIFICATES OF COMPLETION
ISSUED:** 37 of 42



TESTING FUNCTION OF WATER KIOSK AT THE
PUBLIC MARKET AT LOUVRETTURE ST
AS IT NEARED COMPLETION

Successes and Challenges

USAID created an environment of exceptional collaboration by facilitating information sharing between the WASH IP and AECOM. AECOM forged a close relationship with the other IP and was granted access to numerous documents including monthly meeting minutes, quarterly reports, final drawings and specifications, and contractor schedules. As a result of this cross-contract transparency, AECOM was able to assist USAID by developing the process for quality assurance and issuance of completion certificates.

Another benefit of the strong relationship between AECOM, USAID, and the IP was that AECOM not only documented deficiencies but was also authorized to help the subcontractors implement solutions so that deficiencies could be mitigated quickly. For example, when safety issues were identified with electrical work at multiple sites, AECOM's electrical QC Engineer worked with the various construction subcontractors helping them perform insulation testing, then re-wire and re-test the work so that a completion certificate could still be issued, and the project closed out. When quantities were mismatched, AECOM worked with the IP to descope items to realign documentation.

Safety of worksites remains a challenge across Haiti, despite documentation. During quality assurance inspections, AECOM observed multiple instances of deficiencies and unsafe work, ranging from poorly welded steel structures supporting solar arrays to open trenching in public streets and worked with IPs and their construction subcontractors at every opportunity to reinforce the need for safe work site best practices.

By working with the IPs to clarify deficiencies and help their subcontractors quickly implement solutions, AECOM was able to ensure that USAID issued certificates of completion for the majority of the WATSAN sites—37 out of 42.



WATSAN INCLUDED A WIDE RANGE OF PROJECTS:
TOP: INSPECTING A WATER KIOSK UNDER
CONSTRUCTION
MIDDLE: INSTALLATION OF NEW HDPE
TRANSMISSION PIPES IN LES CAYES
BOTTOM: LEAK INSPECTION AT THE CHARPENTIER
WATER TANK

FROM THE CPARS: *All site visit reports are documented very clearly with plenty of supporting photographs that make it very easy for USAID's CORs for the two above projects to get a very clear understanding of the site conditions without being able to visit the sites due to very strict Covid and security measures for USAID staff. These visits gave USAID the eyes to closely monitor and make sure that our infrastructure activities were meeting or exceeding the project's quality control requirements. (Interim 02/2020-02/2021)*



SECTOR 07: HOUSING

AECOM supported USAID for two tasks in the housing sector during HIP, the Canaan Upgrading Program and Community Development Project (CUCD) and the EKAM Sanitation System Improvements Project.

TASK 07-01: CANAAN UPGRADING PROGRAM

Project Situation

AECOM's involvement with the CUCD project included the "Canaan 3 Main Road Project" and the "Boucambrou Bridge Project". The constructed main road in Canaan 3 connects Route National 1 (RN1) and Route National 3 (RN3), and the constructed bridge enables vehicles to cross the Boucambrou Canal from RN1, near the community hospital of Bon Repos. The CUCD Project was jointly handled by two IPs, the International Organization for Migration (IOM) and Global Communities (GC).

IOM constructed approximately 1,350 LM of reinforced concrete road, 20 LM after the Boucambrou Bridge. GC constructed the reinforced concrete bridge at Boucambrou Canal, approximately 1,030 LM of asphalt road after the concrete road of IOM, and another 100 LM of the reinforced concrete road before and after the Boucambrou bridge. The construction contractor for both the road and bridge project was HL Construction.

AECOM's scope of work included Quality Assurance inspection of the road construction performed by IOM, and the bridge/concrete road construction work performed by GC. The CUCD project was funded by a grant from USAID to the Government of Haiti (GoH) and was supervised by The Ministry of Public Works, Transport and Communications (MTPTC, Ministère des Travaux Publics, Transports et Communications) through The Housing and Public Buildings Construction Unit (UCLBP, L'Unité de Construction de Logements et de Bâtiments Publics).

The project was nearly three years old, with oversight being performed by another contractor. As the oversight contract was expiring, USAID requested that AECOM take over this role at approximately 80% completion.

Program Highlights and Major Activities

AECOM identified and helped to resolve quality issues on the project and conducted twice weekly visits to monitor work progress. The workmanship and quality issues raised by AECOM in its weekly reports were shared by USAID to IOM and GC. This helped both implementing partners generate punch list items during their substantial completion inspection with MTPTC / UCLBP.

In total AECOM performed 10 site visits to both the Canaan 3 Main Road and Boucambrou Bridge between May and August of 2018.



DATES: May 2018 – Aug 2018

SITES: 2

SITE VISITS PERFORMED: 20

ACCESS PROVIDED: 200,000
citizens given access to RN3

ROAD COMPLETED: 1.3km

Challenges and Successes

During construction, there was a third section of road being repaired under an unrelated contract managed by the Red Cross. In addition to the scope of work, AECOM informally facilitated coordination between contractors to make sure there was clear delineation of responsibilities and that the timing of interfaces was communicated effectively.

Upon beginning inspections, AECOM discovered multiple deficiencies with existing construction that were undocumented. AECOM worked with USAID and GOH to document deficiencies and supported USAID in communicating with the GOH, resulting in acceptance of the as built construction within three months of AECOM's arrival on site.

The area of construction was in a particularly disadvantaged region of Haiti, which presented significant security risks to the team conducting site visits. During the period of civil unrest in July 2018, site visits were temporarily halted due to violent protests.

By coordinating between multiple Implementing Partners and other donor projects, AECOM helped ensure cohesion between adjacent projects, and resolve quality issues. This effort supported USAID in completing and handing over the project to the GoH.

FROM THE CPARS: *The Contractor also identified defects on the honeycombs located at the construction joint between the drainage wall and drainage top slab for the Canaan 3 Road. The Contractor then proposed solutions to the implementing partner that involved removing the honeycomb areas, applying approved bonding materials to the concrete substrate, and applying structural concrete to repair the nonconforming sections. These efforts enabled USAID and its implementing partner to transfer operation & maintenance duties of the Canaan 3 Road to the Government of Haiti as apart their own journey of self-reliance. (Interim: 02/2018-02/2019)*



AECOM PROVIDED QUALITY ASSURANCE INSPECTIONS THROUGHOUT CONSTRUCTION

TOP LEFT: WORK ON CANAAN 3 NEAR THE BOUCAMBROU BRIDGE, APRIL 2018

BOTTOM LEFT: SUB-BASE COMPACTION, JUNE 2018

RIGHT: COMPLETED PORTION OF ROADWAY, AUG 2018



TASK 07-03: EKAM SANITATION SYSTEM

Project Situation

AECOM's support to the USAID for repairs to the EKAM Sanitation system lasted from July 2020 until October 2020.

USAID, in cooperation with the GOH, built the Caracol EKAM New Housing Settlement (EKAM) in the Northern Corridor to provide housing for households impacted by the 2010 earthquake and other critical groups in the Northern Corridor. This 750-house settlement was constructed between October 2011 and October 2013. The Comité d'Approvisionnement en Eau Potable et Assainissement (CAEPA), the local Water and Sanitation Authority, reported issues associated with the lift station and pump equipment for the development's septic system. USAID requested that AECOM provide technical support to identify the issues and provide guidance on the necessary repairs and associated costs to return the system to working order.

Program Highlights and Major Activities

In response to USAID's request, AECOM reviewed the development's design documents, and operations and maintenance procedures for the lift station and pump equipment. AECOM then undertook two site visits to identify and assess potential issues with the system.

Following these site visits and review of the as-built drawings, AECOM was able to assess the causes of damage, and provide a recommended scope of work, with an accompanying cost estimate, to assist USAID in making the necessary repairs.



DATES: Jul 2020 – Oct 2020

SITES: 1

SITE VISITS PERFORMED: 2

**SYSTEM ISSUES IDENTIFIED
AND DOCUMENTED**

**RESOLUTION PLAN AND COST
ESTIMATE PROVIDED TO
USAID**



SUPPORTING USAID IN ASSESSING NEEDED REPAIRS TO THE SEPTIC SYSTEM AT THE EKAM DEVELOPMENT IN CARACOL

Successes and Challenges

AECOM leveraged experienced US based engineers based in the home office to develop a plan for the EKAM site visits. The engineers based in the home office, partnered with field office staff during virtual planning sessions and continuous reach back support to ensure visits were thorough and addressed potential causes of system malfunction. This approach provided USAID with the expertise of a senior water resources engineer, without the full cost of mobilizing an STTA to Haiti, which was not possible during the COVID pandemic.

An additional, benefit of this approach is that the senior engineer was able to mentor local Haitian staff through this process, further developing the capabilities of the local staff assigned to the program.

By leveraging an experienced home office engineer to mentor local Haitian staff, AECOM was able to cost-effectively assess the causes of damage and provide USAID with a proposed scope of work and cost estimate for necessary repairs to return the sanitation system to working order for the residents of EKAM.



AECOM'S MEP ENGINEER INSPECTED
DAMAGE TO LIFT STATION PUMPS AND
DEVELOPED SOLUTIONS IN COLLABORATION
WITH HOME OFFICE SPECIALISTS



SECTOR 08: AGRICULTURE

TASK 08-01: AVANSE: DUBRÉ, CHALOPIN IRRIGATION SYSTEMS

Project Situation

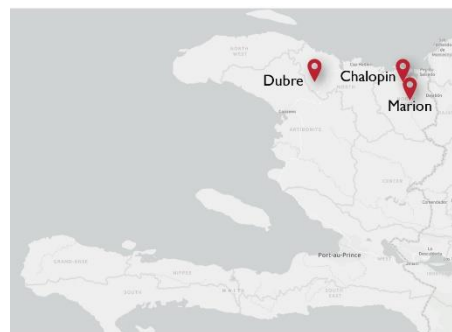
In this sector AECOM supported USAID and its Implementing Partner on the AVANSE Program (Aid to Realize the Agricultural Potential of the North for Economic and Environmental Security / Appui à la Valorisation du Potentiel Agricole du Nord, pour la Sécurité Économique et Environnementale). The program comprised two sub-projects to address repairs to the irrigation systems near Cap-Haitien. Dubré (Commune of Milot) and the existing irrigation system in Chalopin (Commune of Fort-Liberté).

The goals of the “Dubré Irrigation System Rehabilitation and Improvements Project” were to make repairs to the existing 82ha, 22-year-old irrigation system (Dubré 1) and to add another 58ha of irrigable land, benefiting an additional 100 new farmers (Dubré 2). The “Chalopin Irrigation System New Primary Canal Construction Subproject” added 295ha of irrigated land and involved repairs to the primary canal, existing river diversion structure, and riverbank protection work.

Program Highlights and Major Activities

In May of 2018, AECOM’s COP and QA engineer attended the official project launch ceremony for the Dubré Irrigation System project at Cap Haitien. This marked the beginning of a twice per month inspection program and provided an opportunity to coordinate with key stakeholders, obtain current drawings, specifications, schedules, health and safety plans, quality plans and other technical documents from the IP to allow AECOM to fulfill the inspection mandates.

In August 2018 AECOM mobilized two highly experienced US-based dam engineers as STTAs to provide their expertise. Together with AECOM LTTA and local partner staff, they travelled to Northern Haiti and visited the Janm Pantalón diversion structure, Chalopin Irrigation System, Dubré 1 and 2 Irrigation System and the Marrion River Dam that was being constructed by the GoH/Cuba. AECOM also met with the IP to answer questions regarding the evaluation on their Dubré Irrigation System designs.



DATES: Dec 2018 – Jan 2020

SITES: 2

SITE VISITS PERFORMED: 36

LAND AREA IRRIGATED: 435Ha



COP, NEIL KANESHIRO, AT THE CEREMONIAL INAUGURATION OF THE REHABILITATION OF DUBRÉ IRRIGATION SYSTEM IN MAY 2018

AECOM provided design review comments on the drawings and specifications for the Dubré and Chalopin Irrigation Systems and the Janm Pantalón Diversion Structure.

Building on the momentum created by the visit of the US Based Dam Engineers, AECOM initiated QA inspection services for USAID at both sites. In total, over the 14-month program period, AECOM performed 20 site visits at the Dubré site, and 15 at Chalopin. Both projects reached substantial completion by the end of January 2020.

Successes and Challenges

Although AECOM's scope was limited to the irrigation area at the Chalopin site, AECOM's outreach efforts by AECOM confirmed multiple projects funded by other NGOs and governments, including the Janm Pantalón Diversion Structure and the GOH/Cuba-funded Marion River hydro-electric dam upstream of the site. USAID was not informed of these projects, which could have had significant impacts on the viability of the Chalopin project. Following this discovery, AECOM LT/TA, STTA and local partner staff travelled upstream to visit these other sites, meet with the contractors to gain an understanding of the likely impacts and coordination needs.

While completing the design review of the IP's irrigation drawings at Dubré AECOM identified several elevation errors that would impair the irrigation system's function. Upon identifying this deficiency, AECOM worked with the IP to remedy the issue during construction.

The nature of irrigation projects makes them particularly challenging to communicate progress and challenges in an easy to comprehend manner. In site reports, AECOM made significant efforts to report to USAID using annotated visuals and diagrams to effectively communicate and document clearly deficiencies and impediments to progress. AECOM also incorporated GPS tracking and geolocation of photos to track locations of deficiencies.

AECOM drew on STTA specialists to provide a depth of expertise which enhanced overall project quality. In addition to quality efforts, AECOM coordinated with adjoining projects to support USAID in developing a risk mitigation strategy and plan to maintain awareness of ongoing upstream activities.



THE CHALOPIN SYSTEM REHABILITATION WAS COMPLETED IN 2020, PROVIDING FARMERS WITH INCREASED ACCESS TO IRRIGATED LAND



AECOM PROVIDED ANNOTATED VISUALS TO AID COMMUNICATION OF ISSUES AND WORK PROGRESS

FROM THE CPARS: *When concerns were raised about the impact of a proposed above stream dam project upon the constructability of a USAID funded irrigation activity, the Contractor reviewed the proposed drawings based on conventional industry standards for consistency, completeness, and provided recommendations to minimize the hydrological effects of Marion River Dam upon the downstream irrigation system. These efforts allowed USAID's implementing partner to improve the accuracy of their final design via the verification of design and structural specifications. USAID, subsequently, was able to issue the notice to proceed on this 6 month delayed project due the Contractor's quality assurance efforts. (Interim 02/2018 – 02/2019)*



SECTOR II: CAPACITY BUILDING

Project Situation

In addition to work in technical sectors, AECOM fully embraced capacity building initiatives.

AECOM's approach to build capacity included three primary lines of effort:

1. Reliance on a primarily Haitian team for program work, thereby developing host nation capacity.
2. Partnering with subcontractors, experienced in facilitating studies, and focus groups aimed at improving gender equity and improving self-reliance.
3. Implementing an internship program early in the project, with the intent to provide college students exposure to both technical and diplomatic aspects of the program.

Program Highlights and Major Activities

In September 2018, AECOM partnered with Iris Group, who helped facilitate and conduct a Capacity-Building Workshop for HIP staff on Gender Integration and creating a respectful workplace at the HIP office. The Iris Group also conducted interviews with 18 stakeholders during the workshop including representatives from numerous Haitian construction companies, other implementing partners, nongovernmental organizations, and USAID. As an output of this workshop, AECOM and Iris Group produced the HIP Gender Strategy.

To support USAID's goal of self-reliance, autonomy, resiliency, and sustainability, in April 2019, WI-HER mobilized to conduct an infrastructure sector assessment in Port-au-Prince and Cap-Haitien. The goal of this assessment was to identify common weaknesses or gaps in local capacity, systems, commitment to reform, policies, training, and the supportive environment related to Haiti's advancement. The framework used for this assessment connected to the larger vision for the Journey to Self-Reliance, while focusing on organizational development.

Over the course of three weeks of field work in these communities, WI-HER collected surveys and conducted focus group discussions and key informant interviews with USAID, the Government of Haiti, implementing partners, architecture and engineering students, local organizations and general contractors in the infrastructure sector.

Based on assessment findings, WI-HER identified recommendations to capitalize on opportunities, fill gaps, and address challenges to better support improved infrastructure sector outcomes, build capacity of local contractors and firms, and contribute to sustainable development and greater self-reliance.

Following this assessment, a comprehensive report titled ***Improving Self-Reliance in the Architecture & Engineering Sector in Haiti*** was submitted to USAID.



DATES: Mar 2018 – Sep 2022

SITES: Nationwide

SITE VISITS PERFORMED: 2

LABOR HOURS PERFORMED BY LOCAL HIRES: 80% (over 90,000 hours)

A benefit of AECOM's field first management focus were the opportunities for Haitians hired into HIP to gain experience in engineering and construction projects based on internationally acceptable standards. AECOM provided on-the-job training both for our own local staff, and for the other IPs as part of the quality assurance process during site investigations.

Additionally, as part of AECOM's capacity building and knowledge exchange efforts, during the summer of 2018, AECOM mobilized a Liberty University engineering student (Carson Farmer) as an intern. In line with efforts to transfer skillsets between the US and Haiti, Carson mobilized to the Port-au-Prince field office in June 2018. While in Haiti, Carson was able to assist the team, gaining both technical experience in his field, and also with administrative support to USAID and the home office program management team.

Successes and Challenges

AECOM's commitment to staff in both technical and operational roles on the program with local hires will leave a legacy of experience with those who worked on the program. Across the duration of the program, 80% of the labor hours were performed by locally hired staff (equivalent to over 90K hours).

AECOM's capacity building initiatives occurred during times of increased security risk, which limited AECOM's ability to fully realize capacity building goals. Nevertheless, the two reports: **HIP Gender Strategy** and **Improving Self-Reliance in the Architecture & Engineering Sector in Haiti** provided USAID with a larger view than solely technical feedback on specific projects. They served as documents to help frame USAID's strategic perspective on how to understand issues such as gender equity, and self-reliance in Haiti across infrastructure sectors.

In summary, AECOM's approach toward capacity building resulted in over 80% of work being performed by local hires. This approach will leave a lasting legacy after program completion, which can continue to benefit infrastructure initiatives in Haiti. Additionally, AECOM supported gender integration through the development of both a strategic roadmap, and practical implementation.



CONSTRUCTION COMPANY OWNER, MONIQUE DUPERVAL PARTICIPATES IN STAKEHOLDER WORKSHOP AS PART OF THE HIP GENDER STRATEGY DEVELOPMENT



CARSON FARMER, AECOM INTERN, MOBILIZES TO PORT-AU-PRINCE FIELD OFFICE TO PARTICIPATE IN KNOWLEDGE EXCHANGE AND GAINING TECHNICAL FIELD EXPERIENCE

PROGRAM FINANCE

Summary of total expenditures FROM March 2018 to September 2022

AECOM implemented the Haiti Infrastructure Program through LTTA and Subcontract Labor, with Home Office reach back support. LTTA staff provided daily supervision of subcontractors such as HSBR, developing and training local Haitian staff in the administrative, construction inspection and reporting trades to gain quality performance while maintaining maximum cost efficiency. The field office was demobilized in late September 2022, and no further technical activity related charges were incurred past the 30 September 2022 performance period. The table below reflects the cost of the Haiti Infrastructure Program, with the exception of administrative closeout cost for trailing activities after the end of the performance period.

Item	Total Billed	Contract Budget
<i>Personnel - Direct Labor</i>	\$1,346,211.64	\$1,733,203.65
<i>Personnel - Allowances</i>	\$560,389.81	\$561,261.20
<i>Travel</i>	\$68,576.82	\$198,216.00
<i>Equipment</i>	\$1,995.37	\$11,008.84
<i>Subcontracts</i>	\$1,755,329.77	\$1,987,444.50
<i>Other Direct Costs</i>	\$649,683.76	\$822,726.40
Total Direct Costs	\$4,382,187.17	\$5,313,860.59
<i>Indirect Costs (OH for HO and FO staff)</i>	\$1,510,556.93	\$2,059,411.30
Total Costs	\$5,892,744.10	\$7,373,271.89
Fee-Profit	\$500,883.23	\$626,728.11
Total Cost-Plus Fixed Fee	\$6,393,627.32	\$8,000,000.00

PROPERTY MANAGEMENT

In coordination with USAID, AECOM transferred US government inventory assigned to the Haiti Infrastructure Program to the following entities:

1. Impact Youth (Caris Foundation), USAID Contract No. 72052119CA00001
2. WATSAN (DAI), USAID Contract No. AID-OAA-I-14-00049 / 720521
3. HLP/HRH/CFET, USAID Contract No. 72052122CA00003
4. HLP/HF/GC, USAID Contract No. 72052122CA00004
5. Auction City (USAID Authorized Auction Vendor)

The complete package with transfer sheets reflecting the beneficiary's acceptance of custody and control of the assets will be submitted to USAID under a separate document.