Global Engineering & Contracting Inc.
Engineering, Environmental and Construction Services

Alex Dargham, P.E., CGC

- ***PE #48143, FL***
- ***Certified General Contractor – CGC #1506910, FL***
- ***Building Inspector- 6674, FL***
- ***PACP, MACP, & LACP Certified***

Objective

My commitment to my clients is to provide quality, prompt, affordable, and sustainable service that only a superior engineering firm can offer. I live by our Mission "We design and build for success, and grow long-lasting relationships with our clients".

Profile

More than 25 years of Specialized Professional experience in the fields of water and wastewater engineering, environmental engineering, and construction. Skilled in a*ssuring a seamless project team and a flawless transition in every project stage from design to construction to project closeout with success and excellence in execution.*

Education

- Youngstown University: M.S, Environmental Engineering, 1987.
- Youngstown University: B.S., Civil Engineering, with two concentration areas in Environmental & Transportation Engineering, 1896.

Professional Societies

Florida Engineering Society (FES); National Society of Professional Engineers (NSPE); American Water Works Association (AWWA); American Society of Civil Engineers (ASCE), and Water Environment Federation (WEF).

General Background

Professional experience since 1987 in the fields of water and wastewater engineering, environmental engineering, and construction water & wastewater projects along with residential and commercial buildings. Representative projects include potable and irrigation transmission, distribution pipelines, lift station, water and wastewater treatment plants, wastewater collection and transmission facilities, ***integrated projects (transportation & utilities)***, master planning, modeling, and construction engineering inspection. Project management experience includes coordination of various consultants and contractors activities, state agencies, contract administration, project scheduling, project cost control, and report preparation.

Duties also included development of specifications documents for design, construction, and QA/QC requirements for multiple projects such as roadways, water and wastewater, water resources, and reservoirs projects. During the development of any project while in design, construction, or closeout, I made sure that full implementation of QA/QC requirements at all levels of the project have been achieved in conformance of the established quality control documents.

In addition, prior to construction engineering inspection (CEI) stage, sets of protocols, including tracking, and reporting formats were established prior to starting construction and all inspectors and construction staff made aware of the established standards. Responsibilities include construction phase coordination of multidiscipline projects.

My career reflects finest years of professional experience in the following areas:

- Management and coordination of a wide range of civil engineering and water & wastewater projects from design through commissioning.
- Project engineering work, such as studies, conceptual and preliminary design, and post-design services.
- Planning and achieving simple and complex projects
- Planning and coordinating activities of workers in design, construction, operation and maintenance of waterworks system to ensure adequate water supply for human consumption, industrial or agricultural use.
- Exceptional hands on experience and knowledge in water/wastewater, environmental, water resources, and transportation engineering design and construction.

- Knowledge of water distribution and treatment systems, including master planning/feasibility studies.
- Proven skill in project engineering, project management, strategic planning and business analysis.
- Exceptional ability to lead a multi-discipline design team in a production setting.
- Pioneering, competitive management executive with exceptional general and P&L management, strategic planning, budgeting, financial reporting, training and leadership qualifications with team-focused, results-oriented management style.
- Effective in reorganizing, streamlining and strengthening existing operations as well as identifying and capitalizing new business opportunities.
- Distinguished career spearheading company to build market share, drive revenue growth and outperform competition by creating long-term corporate strategy and cost containment processes, negotiating contracts and being a catalyst for change.
- Combine strong planning, organizational and communications skills with the ability to independently plan and direct business affairs.
- Analytical and decisive; expert negotiator and deal maker.
- Excellent skills and knowledge of local municipal clients as well as state clients.
- Readily visualize target and identify steps required to attain goals.
- Interact with customers, partners and other organizations domestically and internationally.
- Demonstrates exceptional creativity, leadership and visionary focus.
- Committed to achieving outstanding results.
- Exercised key ability to work autonomously within challenging environment.
- Direct multiple contractors and engineering firms on conventional design-bid-build and design-build projects.
- Vast ability to provide technical and software support regarding water & waste water management.

Employment:

- Prince Saad Bin Saud Bin Abed AL-Aziz- Riyadh, Saudi Arabia – Construction Division: 1979-1982
- Greeley & Hansen - Project Engineer:1987-1992
- Sarasota County – Project Manager & Engineering Department Manager:1992-2005
- Global Engineering & Contracting, Inc. - President (Part-Time): 1994-2005
- McKim & Creed - Office Manager: 2005-2007
- Stanley Consultants - Office Manager & Project Principal: 2007-2011
- Global Engineering & Contracting, Inc.: 2011-Present

Project Experience:

Debrecen Road 12-Inch Water Main with Fire Hydrants, Sarasota, FL - Project Manager for designing a 12-Inch water Main from Palmer Boulevard to the Founders Club Subdivision. The design included 3,000 feet of 12-inch PVC, C 900 and 12-inch HDPE. The water main was connected to the 16-inch water main on Palmer Blvd. using the directional drill method under Palmer Blvd. and under Debrecen Road near the Founders Club back gate. The 12-inch water main at the Founders Club was connected to an existing 8-inch pipe. The design of this project was coordinated with the contractor of the 36-inch Force Main on Palmer Blvd., especially for the section under Palmer Blvd. near Debrecen Road.

Following the design, the permit was obtained and construction was performed by the County in-house construction crew. As the Construction Manager/CEI on this project, I coordinated with the County construction team on a daily basis and made sure that the construction was carried out according to the plans and specifications. Record Drawings were issued and certified. Duties included full responsibility over the project design, construction and QA/QC.

Bent Tree Sanitary Sewer Evaluation Study (SSES), Sarasota County, FL – Project Engineer/Project Manager. The study included a comprehensive SSES of the Bent Tree sewer system. Physical observations of inflow and infiltration were observed and documented during the project. Smoke testing was used to determine where illegal house connections were located. CCTV was used to determine additional infiltration due to the degradation of the joint material located between the clay pipe joints. Clay pipes were sited with brick manholes. The project identified rehabilitation using fold-and-form pipe, joint grouting and manhole lining. Sealed manhole lids with chimney seals were included where surface waters could enter the manholes.

Bent Tree Sanitary Sewer Rehabilitation-Inflow and Infiltration (I/I) Reduction Project, Sarasota County, FL – Project Engineer/Project Manager. Following the SSES study, Alex was responsible for spearheading the program to eliminate the I/I problems in that system. Prior to construction, Alex evaluated multiple applications such as super-coat, FozRock, IET, among others. Few samples of each application were applied in different areas of Bent Tree at the cost of the vendors to see which one will work better or pass the test so the County can allow them to be listed in the specification. Months later, data was collected and evaluated carefully so the right applications would be selected. Shortly after the data was collected and applications were approved, the County began with the Construction of the (I/I) reduction project. After the construction was completed, a thorough investigation was conducted throughout the collection and receiving systems to insure reduction in I/I. Project was a complete success. Duties included full responsibility over the project design, construction and QA/QC.

El Rancho Village 8-Inch Water Line/Fire Line of HDPE DR-11 (Blue Stripe) Directional Drill, Manatee County, FL - This project included surveying, design, permitting & construction management/inspection of 1,600 feet of HDPE and fire hydrants. The design was coordinated with the Manatee County Utilities Department, FDEP, and the County Fire Marshall. Originally, the design included an 8-inch PVC, C 900. The change to an 8-inch HDPE was needed to avoid disturbing the tight roads in the neighborhood. Part of the alignment near the location of the last fire hydrant by the clubhouse was also changed to accommodate the Fire Marshall truck. 100 feet of DR-18 of 6-inch PVC pipe to the clubhouse was added and another 4-inch PVC, DR-14 with two stubs-outs near the clubhouse was installed. One stub was for the Fire Sprinkler system and one was for the Fire Department. A fire connector was installed at the end of the 4-inch pipe to be used by the fire trucks. Hydrostatic pressure test and the bacteriological analysis were passed, record drawings, certification of completion and bacteriological results have been approved as submitted. Following this submittal to Florida Department of Health, the department approved the water distribution system for operation – Permit # W41-113200903. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Fruitville Road Water Main Design & Inspection; Sarasota County; Sarasota, FL - Project Manager responsible for the design and inspection of 2.0 miles of

6-inch and 8-inch water mains in the Fruitville Road service area. The assignment included a complete field investigation for rights-of-way, easements, and selection of feasible routes. This project improved the system in general by closing loops and adding fire hydrants. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Hamlets Boulevard Water Main Design; Sarasota County; Sarasota, FL - Project Manager and Design Engineer responsible for 1.0 mile of 6-inch and 8-inch water mains in the Hamlets Boulevard service area. The assignment included a complete field investigation for rights-of-way, easements, and selection of feasible routes. This project improved the system in general by connecting two service areas to each other, closing loops, and adding fire hydrants. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Center Road Water Main Design; Sarasota County; Venice Gardens, FL - Project Manager and Design Engineer responsible for 5.5 miles of 12-inch water main on Center Road and U.S. 41 in the Venice Gardens service area. The assignment included a complete field investigation for rights-of-way, easements, and selection of feasible routes. This project improved the system in general by closing loops and adding fire hydrants. Duties included full responsibility over the project design, construction/inspection and QA/QC.

Manatee Community College 12-Inch Water Main Modeling, Design and Construction; Sarasota County; South Venice, FL – Engineer of Record responsible for modeling, design, and construction of 5 miles of 12-inch potable water main to provide water for the Manatee Community College, Sarasota Memorial Hospital, and Sarasota County Fire Station. Duties included full responsibility over the project design, construction and QA/QC.

Whitfield Estate Water Distribution and Road Improvements Design & Construction Inspection; Manatee County, FL - Phases 1, 2, 3 and 4 included design of water lines, sidewalks, road widening and resurfacing, construction management, construction engineering inspection, and public meetings. Total construction cost was over $6 million. Duties included full responsibility over the project design, construction and QA/QC.

Whitfield Estate Sewer Collection System I/I Reduction Improvements Design & Construction Inspection; Manatee County, FL – During the water lines construction Phases 1, 2, 3 and 4, other I/I reduction activities took place. I/I work included repair methods such as cured in place liners (Insituform), cured in place short patches, fold and form liners, sewer main grouting, manhole sand blasting and interior coating, manhole liners, lateral grouting and repairs. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Columbus Court Apartments Lift Station Rehabilitation; Columbus Drive at the Hillsborough River, Tampa, FL - This project included complete rehabilitation design to eliminate the excessive Inflow/Infiltration to the lift station and to the nearby Hillsborough River, surveying and permitting of the lift station. Submitted a "Notice of Intent to Use the General Permit" for the facility. The design was coordinated with the City of Tampa Department of Sanitary Sewers Field Engineering office. Final construction plans were issued and certified and submitted to the developer. Infiltration/ex-filtration test on the new on-site facility, including force main and gravity mains was recommended to be conducted by a reputable testing laboratory and submitted to the Department of Sanitary Sewers. This project designed to eliminate the leak of sewage into the Hillsborough River. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

DeSoto Lakes Water Main Design & Construction Inspection; Sarasota County; DeSoto Lakes, FL - Project Manager and Design Engineer responsible for 1.5 miles of 6" water mains in the DeSoto Lakes service area. The assignment included a complete field investigation of rights-of-way, easements, and selection of feasible routes. This project improved the system in general by closing loops and adding fire hydrants. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

12-Inch Water Main Design, Permitting, and Construction Engineering Inspection; City of Cape Coral; Cape Coral, FL - Project Engineer responsible for the design and permits for 16,240 feet of 12-inch water main. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Water Independency of Cape Coral (WICC), FL- Responsible for modeling/designing/CEI of the water and reuse systems for the WICC program which included all the undeveloped phases in the City (over 1,200 miles of water mains). Duties included full responsibility over the design, construction management/inspection pnd QA/QC phases of the project.

16-Inch Water Main Design, Permitting, & CEI; Collier County, Naples, FL - Project Engineer responsible for the design and permits for 10,298 feet of 16-inch water main. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

16-Inch Water Main Design, Permitting, & CEI; Collier County; Naples, FL - Project Engineer responsible for the design and permits for 5,544 feet of 16-inch water main. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Sheldon Road Wastewater Treatment Plant Effluent Outfall Force Main Evaluation, Design & Inspection; Hillsborough County, FL - Responsible for a study to recommend an economical size for the effluent pipe from the Sheldon Road Wastewater Treatment Plant to Channel "A" in Hillsborough County, Florida. Responsibilities included design and construction management services/inspection.

Force Main and Gravity Sewer Design & Inspection; City of Tampa; Tampa, FL - Project Engineer for design of large force main and several intercepting sewers in FDOT right-of-way for the City of Tampa. The project included 2,200 feet of 42-inch, 3,000 feet of 36-inch, and 1,400 feet of 30-inch RCP of intercepting sewers and 1,700 feet of 36-inch DIP force main. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Relocation Design of Sanitary Sewer System & CEI; City of Alexandria; Alexandria, VA - Design Engineer for design of relocation of existing 60-inch diameter RCP sanitary sewer including lateral sewers, junction chambers, and special stream crossings for the City of Alexandria. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Design & Inspection of Sewer Transmission and Collection Pipelines; City of Cape Coral; Cape Coral, FL - Project Engineer for design and inspection of over 100 miles of low-pressure sewer transmission and collection pipelines utilizing engineering software and personal programs. Duties also included obtaining information from the city and coordination with utility companies providing necessary surveying support to suit the project, and participation in public hearings. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Sheldon Road Force Main; Tampa, FL - Project Engineer for the design and permits for 4,530 feet of 24-inch diameter sanitary force main, which is a segment of the Wastewater Transmission System to Sheldon Road Wastewater Treatment Plant. Duties included full responsibility over the project design, construction management/inspection and QA/QC.

Hendrickson Dam Inspections; City of Punta Gorda; Punta Gorda, FL - Project Principal and QA/QC Manager for a project to inspect the City's only water supply reservoir, the Hendrickson Dam, which consists of 2,000 feet of earthen embankment and 500 feet of sheet pile overflow spillway. The first phase of the project included developing an inspection methodology report for this and future inspections. Underwater and above water inspections following this methodology were then preformed. The final phase of the project documented inspection findings, including a list of necessary repairs. For the hazard classification, extreme flooding events using HMR 52, HEC-RAS, and FLDWAV software were analyzed, considering probable failure modes and downstream flooding. The results classified the Hendrickson Dam a low hazard structure.

Hendrickson Dam Improvements, Phase 1; Punta Gorda, FL - Project Principal and QA/QC Manager responsible for overall project management, budget and schedule control, client liaison, contract administration, and quality control/assurance for the dam inspection and evaluation of above ground and underwater observation of the sheet pile spillway for the Hendrickson Dam. Recommendations were developed for maintenance and repair and/or replacement of the structure to provide a facility that functions in a safe manner and provides a reliable source of water.

Hendrickson Dam Improvement Phase I Construction Services; Punta Gorda, FL - Project Principal and QA/QC Manager responsible for overall project management, budget and schedule control, client liaison, contract administration, and quality control/assurance for providing construction engineering inspection services for Hendrickson Dam Improvement, Phase I, including construction management services.

Hendrickson Dam Spillway Replacement - Phase II; Punta Gorda, FL - Project Principal and QA/QC Manager responsible for overall project management, budget and schedule control, client liaison, contract administration, and quality control/assurance to design the replacement of the existing 500 ft spillway. The components of the design included structural analysis, geotechnical evaluation, surveying, and permitting.

Lake Hancock P-11 Water Control Structure Replacement; Bartow, FL - Project Principal and QA/QC Manager responsible for overall project management, budget and schedule control, client liaison, contract administration, and quality control/assurance to implement the Lake Hancock Level Modification Project, which includes the final design, permitting, and construction services of the necessary improvements for a lake operating elevation of 100 feet NGVD including replacement of the existing P-11 water control structure. Services include designing the replacement structure for P-11, including structural, mechanical, electrical, and instrumentation and controls engineering services. Duties included full responsibility over the project design, construction and QA/QC.

North Water Reclamation Facility Master Plan; Manatee County, FL - The project represented a planning effort to determine the capability to expand the NWRF within its current site boundaries to provide treatment capability for the entire north service area for the ultimate build-out of the north service area.

Southwest Water Reclamation Facility Effluent Filter Upgrade; Manatee County, FL – Client Service Manager and Project Manager - This design-build project provided an additional three million gallons per day filtration capacity to the plant. Duties included full responsibility over the project design, construction and QA/QC.

Water, Wastewater, and Reclaimed Water Modeling; Sarasota County, FL - Client Service Manager and Project Manager - The project was phased out into three disciplines, but started out with the water to include the whole county service area. The project identified some sections of the county where water was facing some difficulties related to chlorine and pressure issues such as the Founders Club and Dolomite service area. Duties included full responsibility over the project design, construction and QA/QC.

Southwest WRF Primary Clarifier Emergency Effluent Pipe Replacement; FL - Project Manager for providing emergency engineering design, construction administration, and inspection services to install a new elevated channel from the primary clarifiers to the aeration basin splitter box. The channel is to replace the existing 54-inch primary clarifier effluent pre-cast concrete cylinder pipe. Duties included full responsibility over the project design, construction and QA/QC.

United Nations Development Program (UNDP)/TOKEN; 1997-2005; New York, USA and Becharry, Lebanon – Provided a comprehensive Study for two (2) - 500,000 Gallons Per Day Primary Treatment Process Plants for Konnubin Valley in Becharry, Lebanon. The coordination of this effort was through the UNDP/TOKEN in Lebanon and New York. The Study determined the feasibility of constructing two primary wastewater treatment facilities. The study also included a Preliminary Engineering section which is equivalent to 30% of the total design and specifically highlighted all of plants'

components to include: Major gravity lines used as outfalls from both plants into nearby water falls, influent pump stations, headworks (structures, manual by-pass bar screen, mechanical bar screen), flow equalization, aerated grit removal, primary clarifiers, disinfection, de-chlorination, sludge storage, lime stabilization, sludge pumping, lime feed, and control/laboratory/maintenance building.

Phillippi Creek Septic System Replacement Program (PCSSRP); FL - Program Manager for the PCSSRP responsible for coordinating with EPA (Federal Grants), FDEP (State Revolving Funds), and local government agencies on different funds that became available to the program. Managed more than 21 professionals in utilities, consultants, and directed different programs one of which was the Sarasota County Utilities Capital Improvement Program. Duties also included preparing a comprehensive report on a weekly basis to all County Commissioners, County Administrator and Deputy Administrators. Progress reports were published on a designated website for this program along with other valuable information. I also spearheaded an initiative of training the staff on how to design and understand the vacuum sewer system by teaming with AIRVAC on a two day very comprehensive training program at the County Training Facility. In addition, took charge of major system-wide planning and improvement projects. Few months of being the program manager of PCSSP, I drafted a plan for the County's Staff to take charge of running the program instead of having a consultant managing the program. Since that time, the staff has been doing very well in managing the program and this effort has led to saving the tax payers a lot of money annually and will save millions of dollars over the course of the program. Duties included full responsibility over the project design, construction and QA/QC.

Phillippi Creek Septic System Replacement Program (PCSSRP, Area A, C, D, E, F, & K) - Design & Construction Engineering Inspection, FL – Program Manager/Project Manager for Areas: A, C, D, E, F, & K. Duties included daily involvement in all construction activities, dealing with multiple contractors and engineers assigned to this program, County staff, AIRVAC, homeowners and County Commissioners. I witnessed all kind of activities from the inception of the project to closeout. It was a complete success. Duties included full responsibility over the project design, construction and QA/QC.

Bee Ridge Water Reclamation Facility – Design, Construction management, & Construction Engineering Inspection; Sarasota County, FL - Project Manager responsible for the design expansion of the facility from 1.5 mgd to 8.7 mgd. The facility included multiple pre-stressed concrete storage tanks with different sizes for reuse water and sludge. Duties included full responsibility over the project design, construction and QA/QC.

Venice Gardens Reverse Osmosis Water Treatment Plant; Sarasota County, FL - Project Manager responsible for expansion of the RO plant. The expansion included adding new major skids and other equipment related to the new expansion in addition to construction management.

Central County Water Reclamation Facility – Design, Construction management, & Construction Engineering Inspection; Sarasota **County, FL -** Project Manager responsible for initiating the design expansion of the facility from 4.0 MGD to 5.4 MGD. The expansions included multiple storage tanks from 750,000 gallons and higher. Duties included full responsibility over the project design, construction and QA/QC.

Central County Water Reclamation Facility Expansion; Sarasota County; Sarasota, FL - Project Manager for managing design and construction services to expand the Central County Water Reclamation Facility from two million gallons per day (2.0 MGD) to four million gallons per day (4 MGD). Duties included representing the county in managing the consultants throughout the design, permitting, and construction of the project. Duties included full responsibility over the project design, construction and QA/QC.

Sarasota County Elevated Tank – Design, Construction management, & Construction Engineering Inspection; Sarasota County, FL - Project Manager assisted in QA/QC of the design and the construction phases of the 2.0 mg water tank with single pedestal. The intent of the project is stabilizing the pressure in the northern system of the County such as Lakewood Ranch area and

to rebuild the pressure coming out of Manatee County into the Sarasota County system. Duties included full responsibility over the project design, construction and QA/QC.

Supervisory Control and Data Acquisition (SCADA) or Telemetry System– Design, Construction management, & Construction Engineering Inspection; Sarasota, Florida - Project Manager for design, programming and configuration, and construction services for a SCADA or Telemetry system for the wastewater system in Sarasota County. The system consisted of 450 lift stations and three major regional wastewater treatment plants. Duties included managing the consultant throughout the design and construction of the project. Duties included full responsibility over the project design, construction and QA/QC.

Gravity Sewer Line Design; Sarasota County; Sarasota, FL - Project Engineer for design and programming a computer program of over 150 miles of gravity sewer lines and over 25 miles of force mains for the South Venice area in Sarasota County. Duties included figuring the assessment per dwelling unit in the special sewer district. Duties included full responsibility over the project design, construction and QA/QC.

Investigation of Copper Piping Leaks; Sarasota County; Sarasota Florida - Project Manager responsible for investigation of copper piping pinhole leaks throughout Sarasota County. To provide a consistent corrosion control throughout the county's water distribution system and potentially decrease occurrence of copper pinhole leaks, a phosphate-based corrosion control strategy was implemented at the Carlton and Peace River main water supplies.

Decommissioning of Vamo Road Wastewater Package Treatment Plant (Near the Sarasota Square Mall); Sarasota County, FL - Prepared a Comprehensive construction plans for decommissioning of the wastewater package plants and replaced it with a master lift station and a new force main. As part of this project, a new 4-inch force main was installed and connected to an existing force main in the vicinity. In addition, the design included a comprehensive hydraulic model of the existing network to ensure an adequate capacity in the system. The final connection was made to the existing system and the operation was very successful. Appropriate steps were taking for the final abandonment of the plant according to the FDEP rules and regulations. Duties included full responsibility over the project design, construction and QA/QC.

Decommissioning of Proctor Road Wastewater Package Treatment Plant; Sarasota, FL - Prepared a comprehensive construction plans for decommissioning of the wastewater package plants and replaced it with a master lift station and a new force main. As part of this project, a new 4-inch force main was installed and connected to an existing force main nearby. In addition, the design included a comprehensive hydraulic model of the existing network to ensure an adequate capacity in the system. The final connection was made to the existing system and the operation was very successful. Appropriate steps were taken for the final abandonment of the plant according to the FDEP rules and regulations.

Sorrento Sanitary Sewer Evaluation Study (SSES), Sarasota County, FL – Project Engineer/Project Manager. An inclusive study was conducted of the sewer system, including manholes, gravity mains, and lift stations. Physical observations of inflow and infiltration were observed and documented during the project. Smoke testing was used to determine where illegal house connections were located. CCTV was used to determine additional infiltration due to the degradation of the joint material located between the clay pipe joints. Clay pipes were sited with brick manholes. The project identified rehabilitation using fold-and-form pipe, joint grouting and manhole lining. Sealed manhole lids with chimney seals were included where surface waters could enter the manholes. Duties included full responsibility over the project design, construction and QA/QC.

Sorrento Sanitary Sewer Rehabilitation-Inflow and Infiltration (I/I) Reduction Project, Sarasota County, FL – Project Engineer/Project Manager. Following the SSES study, Alex worked on the activities of the construction project which included bidding, and construction services. The intent of this project is to eliminate the I/I problems in system. After the construction was completed, a thorough investigation was conducted throughout the collection and receiving systems to

insure reduction in I/I. Project was a complete success. Duties included full responsibility over the project design, construction and QA/QC.

Reclaimed Water System Study; Sarasota County; Sarasota, FL - Project Engineer responsible for managing, studying, modeling, and designing a large reclaimed water system along with high-pressure pumps for Sarasota County Bent Tree residential area. The project included over 25 miles of reuse transmission and distribution pipelines between 4" and 16", ponds, and reuse water services. Duties also included computation of the assessment and impact fees per dwelling unit.

Analysis and Study of Wastewater Treatment Plants; Sarasota County; Sarasota, FL - Project Engineer responsible for determining the number of wastewater treatment plants needed to ultimately serve Sarasota County. Other factors included in the analysis were disposal of effluent and sludge, population/flow generation patterns and transmission economics and engineering.

Wastewater Collection and Treatment Master Plan; Sarasota County; Sarasota, FL - Prepared a Franchise Acquisition, Consolidation, Implementation Plan for Wastewater Collection and Treatment Master Plan. This plan recommended the consolidation of 114 package wastewater treatment plants into five regional wastewater treatment plants. The Sarasota County Commissioners adopted the master plan on July 27, 1993 for the consolidation of the central sewer system throughout the county.

Reuse Master Plan; Sarasota County; Sarasota, FL - Prepared a reuse master plan for Sarasota County to explore the benefits of developing a regional reuse system, the regulatory environment, marketing reclaimed water for substituting reuse for irrigation from wells or with potable water, taking into consideration previous studies and activities regarding reuse.

Water System - Supervisory Control and Data Acquisition (SCADA) or Telemetry System; Sarasota County; Sarasota, FL - Project Manager responsible for the design, programming and configuration, and construction services for a SCADA or telemetry system for the Sarasota County water system. Duties included managing TRANSDYN CONTROL supplier and consultant throughout the project.

Water System Modeling; Sarasota County, FL - Project Engineer responsible for modeling and calibrating the county's existing water system that is comprised of five major pumping stations and storage tank facilities, and 600 miles of piping between 6-inches and 30-inches. In addition, this project covered modeling of the entire water system to accommodate for year 2020 demands.

Abandonment of Contaminated Wells - Florida Department of Environmental Protection (FDEP); Sarasota County; FL - Project Coordinator between the FDEP and Sarasota County. Assignment encompassed abandoning 14 contaminated commercial business wells and constructing a water main with fire protection, and connecting the businesses to the county water system. Duties included ensuring the performance of the contract met public expectations and fulfilled the agreement between the two parties. The project was financed by the FDEP.

Potable Transmission Pipelines Modeling and Design; Sarasota County; Sarasota, FL - Project Engineer responsible for modeling and design of over 75 miles of potable transmission and distribution pipelines for the South Venice area. Duties included participation in public hearings and in providing the public with necessary information, and determining the assessment per dwelling unit for the project. Duties included full responsibility over the project design, construction and QA/QC.

Selected Project Experience for Alex Dargham in Dams/Spillways/Water Control:

Hendrickson Dam/Spillway Replacement Phase 2, Punta Gorda, Florida

In 2007, as the Project Principal with one of the largest reputable corporations in the US, I was able to put an experienced team together and win one of the most important projects in the Tampa Bay area with the City of Punta Gorda. The City issued multiple work orders as part of the original contract. These contracts included comprehensive scopes of services of phases I and II to include design and construction services for the replacement of their Dam Spillway that was over 40 plus year old at the time of replacement. The team was involved in the performance and the completion of the dam inspection and evaluation program. In 2007, our team prepared construction documents for Phase 1 Improvements recommended in the dam inspection and evaluation report. Implementation of Phase 1 Improvements was completed in 2009.

In 2009, another task order was performed with the City to prepare a comprehensive study with three alternatives for the existing Spillway Replacement – Phase 2. Alternatives Report recommended that the dam be replaced using steel sheet pile. This Alternative was approved by the City Utilities Advisory Board and then by the City Council.

Specific Authorizations 5 and 6 include engineering services for design, permitting and contract documents, and construction management/CEI services of 500 feet spillway replacement. **The work includes survey, geotechnical, regulatory permitting, structural and civil design of the improvements, construction plans preparation inclusive of spillway replacement, rehabilitation of ancillary facilities, bulkheads, fenders, pilings, water in-take structure**, boat lifting bays, upland walks and railing, upland and waterside work related to the rehabilitation of the spillway

On December 30, 2009, the City of Punta Gorda gave the Notice to Proceed on the Hendrickson Dam, Phase 2 Spillway Replacement project to Shoreline Foundation Inc. (aka SFI). The City of Punta Gorda with the direction of the same team acquired all steel sheet piling for the project prior to construction which was not part of the lump sum contract of $1,081,856.30. The cost for this material was $859,000. Our team's fee for the design and construction services was close to $692,000.

The following is the approximate schedule of events for completion of this project: The North abutment cap was demoed and 35 foot PZC26 steel sheet pile veneer was installed by the aid of a vibratory hammer. The North side was excavated for placement of reinforced concrete dead man wall and 1-3/4" diameter tie rods. The North abutment reinforced concrete cap was placed along with tie rods and hardware. While all of this was going on, the contractor installed 30 foot PZC 18 cofferdam steel sheet piles by the aid of working barges, crane, and vibratory hammer.

The area between the cofferdam and existing spillway required existing timbers from an old train trestle to be removed. 40 foot PZC26 steel sheet pile was installed and area between old spillway and new spillway sheeting was dewatered and excavated to the design elevation for the placement of a reinforced concrete stilling basin. The reinforced concrete spillway cap and reinforced concrete stilling basin was placed in three segments for a total length of 500 feet.

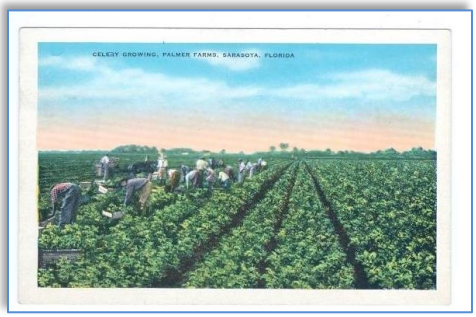
The reinforced concrete stilling basin consisted of a 2 foot thick concrete slab 9 foot in width from new spillway sheeting to old spillway sheeting. A 1.6 foot riser section approximately 3.5 foot wide was added at the existing spillway

sheeting. The old spillway reinforced concrete cap was demoed by the aid of a crane, drop hammer, jack hammers, underwater torch and regular acetylene torch at low tide hours. Five concrete reinforced vacuum breakers were installed at designated locations along the spillway cap with expansion joints located approximately 24 feet either side of the vacuum breakers. The South side was broken up into three segments of construction. 35 foot PZC26 steel sheet pile veneer was added at the South side East of the boat lock wall and at intake piping. The existing 30" wrought iron intake piping was extended through the newly constructed steel sheet pile wall. 30" DIP was slid over the 30" wrought iron pipe 6" and then incased in a reinforced concrete end wall. Monitoring instruments for USGS and timber fender systems were removed. The South abutment reinforced concrete cap East of the boat lock wall was demoed along with boat lift gantry cap. The cap and columns for boat gantry rail cap East and West of boat lock area were also removed.

The boat bay reinforced concrete cap and steel sheet pile was removed. New 35 foot PZC26 steel sheet pile was added for the boat gantry rail cap. The contractor then placed reinforced concrete cap for South abutment East of boat lock wall and cap for boat gantry rail. The reinforced concrete cap for the South abutment West of the boat lock wall was demoed along with boat bay reinforced concrete cap and steel sheet pile. New 35 foot PZC26 steel sheet pile was added for the South abutment West of the boat lock wall and boat gantry rail system. The contractor then placed reinforced concrete caps for South abutment and boat gantry rail West of boat lock wall. The last segment of the South side work included the placement of reinforced concrete cap, boat lock slab, and pedestrian walkway to new 500 foot spillway. 7 foot CS69 steel sheet pile dead man wall with whaler system, tie back rods, and hardware along with 5.5 foot x 5.5 foot x 2-foot thick reinforced concrete dead man anchors was constructed. The new treated timber fender system was added at the intake piping area along with seven treated timber dolphin with USGS staff gage at the end of the boat gantry cap East of the boat lock wall. The boat gantry rails were added to the South abutment cap and boat gantry cap. The boat crane/hoist was reinstalled. Two aluminum ladders were also replaced one on each side of the boat lock walls with the replacement of aluminum pedestrian handrail on boat gantry rail cap and pedestrian walkway. The project also required a 12" PVC drain pipe for the City of Punta Gorda's traveling screens to be re-routed through a FDOT gravity wall.

Overall, the project was a very important and high profile project because the City of Punta Gorda gets their water from the upstream side of the dam. The project completed construction in August of 2010.

Celery Fields Regional Storm water Facility Phase III, Construction Engineering Inspection (CEI) Services, Sarasota, Florida



Celery Fields circa 1925

As a project Principal with his previous employer, Alex Dargham was able to work diligently with Sarasota County and personally spearheaded the write up of a very comprehensive proposal and competed with 12 other major companies. His finest work led to the WIN of this project. His team provided professional CEI (Construction Engineering and Inspection) services for Phase 3 of the Celery Fields Regional Storm water Facility Project.

GPS Controlled Dozers Grade the Slope

The $7.2 million project is a multi-function project that includes; flood protection, storm water treatment and wetland mitigation project designed to provide treatment for over 3600 acres of storm water runoff of north-central Sarasota County within the Phillippi Creek drainage basin. The Celery Fields were an area once used extensively for row crops such as celery since the early part of the 20th century. Prior to its agricultural use, it was a low lying area of extensive wetlands and sawgrass marshes. This project seeks to restore the treatment function the original wetland had for drainage to Sarasota Bay. The other benefit to this project is the flood protection it offers to the downstream urban area in the Phillippi Creek drainage basin that received extensive flooding of structures in the "no-name" storm of June 1992 as well as several other 100-year rainfall events that have occurred since that time.

The individual components of this project included adding 260 acre-feet of floodplain storage area with two major water control structures; overseeing 115 acres of wetland mitigation plantings in the Walker Tract and the South Mitigation Cell; culvert replacement and upsizing on Leewynn Place; Grading and hydraulic improvements to Canal CA; creation of an 85-foot high observation hill with mountain bicycle trails and pedestrian walking paths; a storm water treatment lake and piping infrastructure for the future Cattlemen Road project; utility adjustments and site preparation for 4 County owned land parcels; and a shell parking lot for a future nature interpretive center that will provide information about Sarasota's history and pre-history in this area. The observation mound is the second highest point in the county. **Double 8 x 10 box culvert with water control lift gates** and stop logs to control water elevations in the Mitigation Area was constructed.

Weir and Stilling Basins

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An additional component to this project is the two year water quality sampling and monitoring in cooperation with the Southwest Florida Water Management District (SWFWMD) and the Florida Department of Environmental Protection (FDEP). Water samples will be taken at 7 locations and calibrated with rainfall and flow rates from actual storm events. The goal is to quantify the pollutant removal efficiency of the water control system from +3600 acres of contributing area. Stanley Consultants will oversee the sampling and monitoring procedures of our sub-consultant.

The construction phase of the project has been marked by constant changes to the scope of work due to unexpected site conditions encountered and corrections to and value engineering of the design documents. Documentation of the work progress and changes to this joint funded project has been a critical component to its current success in meeting time and budget restraints. Construction cost of project: $7,200,000 originally, reduced to $6,800,000 as of the latest change order.

Wetland Area at the Observation Mound

There are approximately 15,000 residential properties downstream of this project will benefit from the increased floodplain protection offered by this project. This project also increases the public park space available to residents by 120 acres that can be used for walking, biking and bird watching. The local Audubon Society has been nationally promoting the extensive wetland mitigation as a major bird watching destination that fits with the desire of the Sarasota County Board of County Commissioners

SWFWMD Lake Hancock P-11 Water Control Structure Replacement Project - Bartow, Florida

As a Project Principal with his previous employer and due to Mr. Dargham's leadership and his perseverance and strong interest in starting a working relationship with SWFWMD, Mr. Dargham was able to win three major contracts with the Water District related to water control structures. First project that Alex was able to attain with the District for his previous employer was the Lake Hancock water control structure as a sub-consultant to DMK. Lake Hancock is a large lake located southeast of the City of Lakeland and north of the City of Bartow in Polk County. The surface area of Lake Hancock is approximately 4,550 acres. Discharge from the lake occurs at the District's structure, P-11 and forms South Saddle Creek.

NEW CONSTRUCTION OF THE P-11 STRUCTURE

Alex led a team of professionals in designing the replacement structure for P-11, including structural, mechanical, electrical, and instrumentation and controls engineering services. At the 30 percent design stage, the structure consists of four gates: two 20 feet wide roller gates and two 10 feet wide weir gates. Gate lifting mechanisms include drum and cable hoists for the roller gates and dual stem actuators for the weir gates. The structure includes dewatering needles, an elevated operating platform, stilling basin, sheet pile wing walls, and an access bridge.

The design also includes a propane generator for backup power, control building, weather station, and upstream and downstream water level gauging stations.

The weir gates will allow the client to maintain a set lake level without constant operation of the gates. The roller gates will pass large flows associated with storm events. This combination of weir gates and roller gates is a new solution for Southwest Florida Water Management District.

Built in 1963, Carbonation, Vehicular Access, Separate Bridge, & Stability Issue

Instrumentation and control design centered around Allen Bradley MicroLogix 1200 PLC for local control and monitoring for four-bay gated structure; two weir gate for flow control, and two roller gates for lake level adjustments. Full weather station with ten meteorological sensors interfaced with local PLC. All data and remote operation of the gate positions interfaced with the District's Central SCADA locations via Verizon T-1 phone line with future radio frequency backup telemetry.