



Franklin A Torrealba, PE, ENV SP

Regional Growth Director – South Florida Water

OVERVIEW

Mr. Torrealba has managed over 500 projects from conception to completion, including construction management & inspections services. He has provided construction management & inspection services to numerous pump stations, pipeline (water/wastewater) and treatment plant projects. He has spearheaded the design of 185 miles of water and wastewater pipelines ranging from 8 to 144-inch in diameter, and the construction of 45 miles of pipelines ranging 8 to 36-inch in diameter. Mr. Torrealba has functioned in the capacity of Project Manager/Contract Manager, Deputy Program Manager/CM, Program Manager/CM, and Deputy Program Manager/Assistant Chief Engineer for six of the largest Miami-Dade Water and Sewer Department's (MDWASD) renewal, replacement and rehabilitation programs including the SDWWTP HLD, CLIP, SWRP, PMT/PSIP, NAP, and the Government Cut D/B Criteria package. Under these programs, he cumulatively managed the design and construction of over 150,000 LF of water and sewer mains, 500+ pump stations, managed 1,700 deliverables, and satisfied all United States Environmental Protection Agency (USEPA) consent decree settlement agreements and regulatory deadlines. In the process, he has assisted the County in avoiding millions of dollars in potential penalties. He has worked for multiple agencies and municipalities in South Florida and possesses a proven track record in delivering safe projects, under budget and on schedule.

PROJECT EXPERIENCE

Seminole Tribe of Florida (STOF) CR 721 Construction and Turnkey Progressive Design-Build Services – Principal-In-Charge, Brighton Reservation, Galdes County, FL

Mr. Torrealba is the Principal-In-Charge of utilities responsible for the design efforts of this Progressive Design-Build Project along County Road 721. This project will result in much needed improvements to an approximately 11.5-mile segment of CR 721 within Glades County, from SR 78 to the Indian Prairie Canal Bridge crossing. These improvements are needed to support the new Seminole Casino & Hotel Brighton. The scope of work includes milling, resurfacing, widening, pavement reconstruction, utility upgrades, drainage crossing upgrades, a shared use path, temporary traffic control, signing and pavement markings, as well as new lighting, fiber optic conduits and ITS facilities. Extensive utility coordination and environmental permitting within the Reservation boundary and within Glades County is required.

Stormwater Improvements for Sub-Basin U35-S – Principal-In-Charge – Pinecrest, FL

In an initiative to mitigate flooding concerns, the Village of Pinecrest has identified priority Sub-Basins within its jurisdiction to allocate Capital Improvement Projects (CIP). The prioritization of these projects is based on critical water resource issues, flooding occurrences, susceptibility to sea-level rise, and groundwater rise. As Principal, Mr. Torrealba leads the collection of site data, surveying, evaluation of the existing stormwater infrastructure, development design plans, modeling and communication between the Village and relevant permitting agencies. The project encompasses areas along SW 112th Street between SW 69th Avenue and SW 72nd Avenue; and along SW 72nd Avenue between SW 116th Street to SW 112th Street. The existing conditions include a 2-lane undivided roadway with curb and gutters, and sidewalks on both sides.

MDWASD \$215M Pump Station Improvement Program (PSIP) Program, Design & Construction Management and Support Services – Program Manager – Miami-Dade County, FL

Program Manager for the upgrade of the Wastewater Collection and Transmission System (WCTS) including pump stations and force mains pursuant to which each pump station must be certified as capable of meeting a nominal average pump operating time (NAPOT) of less than or equal to 10

KEY QUALIFICATIONS

- Construction Manager & Program Manager for several South FL Multimillion Programs (since 1996)
- Track record for delivering projects on time and under budget
- Managed the design and construction of over 500 pump stations in South FL
- Managed the design and construction of 185+ miles of pipelines (8 to 144-inch diameter)
- Expert in permitting process of Water & Sewer Projects (obtained 2,000+ permits)
- Infiltration/Inflow Expertise
- Public Involvement and Stakeholder Coordinator
- Familiar with South FL specifications & Standards, GIS, eBuilder and Proliance
- American Cancer Society/Making Strides/ Men Wear Pink Chairman 2021; Board of Ambassador since 2023
- Florida International University (FIU) College of Computing and Engineering Department Advisory Board (DAB) Member since 2018
- University of New Orleans (UNO) College of Engineering Advisory Board Member since 2021

EDUCATION

MBA, Loyola University, New Orleans 1992
BS, Civil Engineering, University of New Orleans 1986

CERTIFICATIONS

Professional Engineer No. 56385
Professional Engineer No. 095593-01, NY
Professional Engineer No. 28022, PR
NASSCO, PACP, LACP, MACP
Envision Sustainability Professional
Storm water, Erosion and Sedimentation
Control Certified Inspector

YEARS OF EXPERIENCE

39 years



hours per day. The program aims to bring into compliance 118 sewage pump stations that do not comply with the NAPOT and Peak Flow Criterion. There are a total of 153 projects which include 118 pump stations and 35 force mains. This program is comprised of four main phases: 1) Planning and Engineering which includes the basis of design report development for pump station and force main projects; 2) Design Management of 8 Design Consultants; 3) Construction Management of multiple pump station and force main contractors through the County's MCC 7040 procurement method; and, 4) Infiltration and Inflow Management which entails the management of 4 different contractors for Manhole, Sanitary Sewer Evaluation Survey (SSES), CIPP, and Dig and Replace (D&R) contracts. 300 Engineering worked with the Department on the review, pilot testing, approval, and addition of a new manhole coating product, Geokrete, to MDWASD Specification Section 02536 – Precast Manholes and Covers, among many others such as submersible pumps, water tight hatches, meters, meters boxes, Pamrex Hinged MH covers, low water landscaping to beautify pump stations, wet well construction rings below water, among others. Also, on the set of the Program, our team worked closely with the Department to use MDWASD latest specifications and provide them to the Design Consultants. Updates were performed on a regular basis, and these updates were shared with the Department on a semi-annual basis. In addition, our Team saved MDMDWASD \$37MM from its original budget of \$215MM while adding 40 new projects to the original 113 projects (153 total).

Sunrise Harbor Drainage Assessment – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was Principal in the Sunrise Harbor Drainage Assessment project, which included hydraulic/hydrologic stormwater modeling to analyze existing and future land use conditions, evaluation of future scenarios, and identification and development of potential capital improvement projects. A Basis of Design Report (BODR) was prepared for the upgrade of the stormwater and right-of-way within the area. The team proposed solutions for flood mitigation & water quality treatment alternatives.

MDWASD \$1.9B USEPA Consent Decree Miami Dade County - Program, Design & Construction Management and Support Services – WCTS Task Manager – Miami-Dade County, FL

Task Manager for the Wastewater Collection and Transmission System (WCTS) Task. Mr. Torrealba assisted the Department providing Program and Construction Management Services Related to the Wastewater System Priority Projects, including MDMDWASD's third Consent Decree with USEPA. Mr. Torrealba managed 93 projects (fifty-two (52) Force Mains and forty-one (41) Pump Station projects) including engineering design, permitting, procurement, hydraulic modeling, and construction. Our team worked with the Department hand-at-hand on the review, pilot testing, approval, and addition of several products. Most importantly, our team developed working with MDMDWASD the current \$72MM Trenchless technology blank, among many other items. The PMCM Team was selected as Owner's Representative by MDWASD to provide Program and Construction Management Services Related to the Wastewater System Priority Projects. The 300 Engineering team is responsible/leading the management of four (4) major design consultants divided into the following four (4) programs: 1) Design Services for Wastewater Collection and Transmission Systems (WCTS) Related to CD Projects; 2) CD Capacity Management, Operation and Maintenance Programs (CMOM); 3) Design Services for Wastewater Treatment Plants Related to CD Projects; 4) Regulatory and Compliance Reporting. The Consent Decree requires MDWASD to improve their three (3) Wastewater Treatment Plants. The PMCM team is managing the CEI services of over 52 Projects within these to increase the WWTPs hydraulic capacity. These projects include: Headworks upgrades, Primary clarifiers, Oxygenation trains/Mixers, Secondary Clarifiers, Disinfection, Effluent discharge, Yard piping, Digesters/sludge treatments, Odor Control. 300 Engineering is currently performing design reviews and design Cost estimate reviews, overseeing and supporting the early planning, design and construction phases of the projects, working closely with plant operators to coordinate the design and shutdown sequences to minimize interruptions to plants regular operations, among other activities. The Team also supports MDWASD in monitoring and reporting Consent Decree projects and performance; develops procedures and processes that will be utilized to monitor; and reports on program compliance on the Consent Decree Capital Improvement Programs and the Capacity, Management, Operation and Maintenance (CMOM) Programs. 300 Engineering also conducts WASD internal audits to track and validate all compliance related issues; prepares and submits to EPA/FDEP Semi-Annual and Annual Reports for MDWASD.

City of Coral Gables Journey's End Pump Station and Force Main, Design – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba is the Principal-In-Charge of the engineering services for design and construction of the Journey's End Pump Station Upgrade and Force Main Project. The project involves the construction of a new valve vault, new pumping equipment, and a new electrical control panel as well as flood mitigation components. This project includes the installation of submersible control and watertight hatches capable of withstanding 13 ft of hydrostatic loading. The project also involves the Construction of a new 4-inch discharge force main of approximately 1,600 LF. Mr. Torrealba oversees shop drawings reviews, responses to RFIs, coordination with the Contractor, pay application reviews, and change order reviews.

City of Coral Gables Cocoplum 3 Pump Station Upgrade and Force Main Project – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba is the Principal-In-Charge of Cocoplum 3 Pump Station Upgrade and Force Main Project. The project involves the construction of the upgrade of the Pump Station Cocoplum 3 which includes a new concrete slab for the valve vault and wet well, new submersible pumping equipment, new submersible electrical control panel as well as flood mitigation components. The project also involves the Construction of a new 4-inch discharge force main of approximately 1400 LF. Mr. Torrealba oversees shop drawings reviews, responses to RFIs, coordination with the Contractor, pay application reviews, and change order reviews.



MDWASD Westwood Lakes Facility, PS 536, and PS 1310 Hardening – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba is the Principal-In-Charge of the engineering and design services of the civil, architectural, and structural disciplines for the Westwood Lakes Facility, PS 536, and PS 1310 Hardening. The project involves flood, impact, and wind protection for damage mitigation under severe weather events. The first phase of the project included the preparation of a detailed preliminary design memorandum to evaluate hardening alternatives and select the best solution for each case. This evaluation also included a structural assessment of the PS integrity and definition of the design criteria for the selected hardening alternative. The project is currently at the 90% design stage.

MDWASD Engineering and Design Services for Hardening Upgrades to Pump Station 0002 – Principal-In-Charge – Miami, FL.

Mr. Torrealba was Principal-In-Charge of the preliminary design for hardening upgrades, architectural, HVAC and I&C design, evaluation of hardening alternatives, damage mitigation alternatives, preparation of alternatives criteria and aesthetics improvements. Scope included Project Management, Construction Management, Inspection Services, CMOM for MDWASD's pump stations system, wastewater treatment plants and force mains. Developed Performance Specification for Trenchless Pipe Rehabilitation reducing design cost, procurement time and resulting in an \$8 million-dollar savings. Also, Hydraulic Modeling, Scheduling, Cost Estimates, Engineering Studies, Public Outreach, Development Coordination, Engineering Analysis, Inspection and Document Control.

City of Miami Beach Bayshore Park Water Main and Force Main Replacement, Engineering and Design Services – Principal-In-Charge – Miami Beach, FL

Mr. Torrealba is the principal-in-charge for the engineering, design, permitting, bid support and engineering services during construction for the replacement of a 20-inch water main and 30-inch force main within the Bayshore Park project area. 300 Engineering developed and implemented an expedited project schedule in close coordination with the City to comply with the sensitive timeline. The Team was able to develop 90% design drawings and technical specifications for the replacement of ~850 LF of 30-inch force main and 1200 LF of 20-inch water main within 8 weeks. Moreover, permits were obtained in less than 90 days, with the water main extension being approved in 24 hours. During the bidding phase, the Team coordinated with the City's CIP department to consolidate the pipeline replacement technical specifications with the Bayshore Park project specs under the City's CIP 50 Divisions Standard.

MDWASD Replacement of approximately 1,400 LF Water Main at NE 91st Street between NE 10th Court and N. Bayshore Dr. – Principal-in-charge – Miami-Dade County, FL

Principal-in-charge for the replacement of approximately 1,400 LF of 2-inch galvanized iron water main. Road pavement is to be performed in the area within the boundaries mentioned above. This is key to the project since the water main replacement project must be designed, permitted and constructed before the street paving. In addition, the low pressure in this main is limiting the operation of water hydrants within the area which is vital for safety under fire emergencies. An 8-inch ductile iron pipeline was designed, and permits were obtained by 300. Services provided under this project include, but are not limited design, permitting, and limited construction management services.

MDWASD Pump Station 1 Rehabilitation and Hardening, Engineering and Design Services – Principal-in-Charge – Miami Beach, FL

Mr. Torrealba is the Principal-in-Charge for the engineering, design, permitting, bid support and engineering services during construction for the rehabilitation and hardening of the regional pump station PS-1. The project includes replacement of the four (4) pump and motors, process piping, electrical equipment including VFDs, on-site generator, instrumentation & controls, and HVAC equipment. The project also includes the hardening of the pump station with hazard mitigation strategies for flood, wind, and impact protection.

MDWASD Design-Build for the Installation of 36-inch DI Force Main with 54-inch Microtunnel along NW 107th Ave from NW 7th St to NW 25th St – Principal-In-Charge – Doral, FL

Mr. Torrealba is the Principal-In-Charge for this project that consists of constructing approximately 8,000 LF of 36-inch Ductile Iron Pipe (DI) sewer force main in the Central West Area in the City of Doral. The proposed sanitary sewer force main is intended to replace an existing 24-inch force main to reduce pressures and increase capacities for future developments in the area. The proposed project starts south of NW 7th Street and NW 107th Ave, connecting to an existing 36-inch diameter force main, then runs North along NW 107th Ave from NW 7th Street, crossing under a CSX-owned railroad, to NW 25th Street. CSX crossing includes a 36-inch diameter sewer force main carrier pipe with a 54-inch steel casing under an active CSX railway. Services included surveying, geotechnical investigations, engineering design, technical specifications, permitting, construction, testing, commissioning services, and customer coordination.

City of North Miami Beach (NMB) Water Capital Improvement Program (CIP) – Principal-In-Charge (CIP) – North Miami Beach, FL

The CIP Team is assisting the City of North Miami Beach in providing Program and Construction Management Services related to the enhancements of the water and wastewater system currently served by NMB Water. NMB Water is investing approximately \$106M to enhance the quality of the water, reduce possible service interruptions, and ensure compliance with Federal and Local regulatory requirements. Most CIP projects are related to the replacement or repair of the existing infrastructure; the rest serve to install new infrastructure to benefit the growth of the City and its customers in Aventura, Miami



Gardens, Sunny Isles Beach, Golden Beach, and parts of unincorporated Miami-Dade County. Mr. Torrealba has served a PIC on the following projects:

- Norwood Water Treatment Plant Progressive Design-Build Project, which consists in a plant-wide rehabilitation, including the construction of a novel Pellet Softening System to treat water coming from the Biscayne Aquifer, the construction of a new 5MG water storage tank, the rehabilitation of the plant's clearwell structure, the rehabilitation of the high service pump building, the construction of a new workshop building, among others
- The drilling and installation of new raw water wells for Biscayne and Floridan Aquifers
- The installation of new raw water mains to Norwood Water Treatment Plant
- Upgrade of the SCADA and Radio Telemetry System for water and wastewater operations
- The installation of new water distribution mains by horizontal directional drill (HDD) and pipe bursting methods at Eastern Shores
- The upsizing of the water distribution mains at Honey Hill
- The elimination of over 100 septic tanks and installation of new sewage system and pump station at Corona del Mar

MDWASD Standard Operating Procedure (SOP) As-builts to GIS – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba is Principal-in-Charge of assistance and engineering services to review, analyze, optimize and provide recommendations for the business process from As-builts to GIS. Twenty-six (26) Key Personnel Interviews were conducted to various MDWASD staff members in order to produce a Current Business Procedure Value Stream Map (VSM) which depicts the actual process, from the reception of As-builts by the Department to the depiction of information in MDWASD's GIS system. Critical information about MDWASD's As-built to GIS process was obtained through these Personnel Interviews, such as: the understanding of the existing procedure's details, backlogs, incoming As-builts rate/month, issues/concerns, assigned staff, bottlenecks and current resources (information technology) available. Lean Methodology tools were extensively used in the analysis of the business process, such as: Value Stream Map (VSM), Pareto and Spaghetti Diagrams. By means of these Lean Analysis tools, information regarding the current needs for process improvement in terms of reduction of Lead times and a shift from Batch to Continuous Flow of information were obtained.

MDWASD Small Water Mains Replacement Program (SWMRP) Miami Dade County, Phases I and Phase II - Planning, Design and Construction Management and Construction Services– Project/Construction Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for "The Small Diameter Water Mains Evaluation and Enhancements Project" to replace all small water mains (less than 6-inch) while minimizing water losses, improving system pressure and providing fire flow protection. The objective was to identify, rehabilitate, replace or renew the small diameter aging infrastructure.

City of Opa-Locka Emergency Disaster Recovery – Principal-in-Charge – Opa-Locka, FL

Mr. Torrealba was Principal-in-Charge for the hurricane Emergency Disaster Recovery Contract with the City of Opa-Locka. 300 Engineering provided professional consultant and technical assistance services to the City of Opa-Locka to support the City with their post declaration disaster recovery efforts, public assistance application, hazard mitigation projects and reimbursement request through the Federal Emergency Management Agency (FEMA) and the State. Mr. Torrealba worked in the following activities related to the development of the projects considered within Damage Categories A-G, including but not limited to: site inspections, data collection, cost reconciliation, project work-sheet preparation, emergency and permanent work project estimates, detailed damage descriptions, preparation of scopes of work. 300 Engineering's scope of work also included construction management and inspection services for the permeant repair work executed under Categories C-G. Funding sources for this project include: FEMA-PA and HMG.

City of Coral Gables Stormwater System Improvements, Design and Permitting and Engineer of Record Services – Principal-in-Charge – Coral Gables, FL

Mr. Torrealba was Principal-in-charge for the design to upgrade drainage systems within the north side of the City. This project addresses erosion, storm water runoff and drainage situations that impact local roadways and other areas. 300 Engineering provided engineer of record and permitting services for miscellaneous stormwater system improvements, including: approximately 2,000 linear feet of exfiltration trenches, drainage wells, pipeline system and/or outfalls. Performed drainage calculations to estimate the capacity of existing infrastructure and to determine if a new stormwater system (French drains, drainage wells, pipeline system, etc.) was required. Delivered the required grading & drainage plans and construction documents for over 18 stormwater projects, evaluated the existing condition of drainage infrastructure and designed the most cost-effective solution, tailored to each case's needs. Provided among other services: project management, project control, site visits to identify stormwater drainage issues and improvement needs, basin modeling with digital terrain models (D+M) to evaluate and identify flooding issues, base mapping, preparation of construction documents (Drainage Plans and Specifications), drainage calculations for the permitting phase to obtain approval from Miami-Dade County Regulatory and Economic Resources (RER-Formerly DERM) Department, municipal jurisdiction coordination, coordination with regulatory agencies and utilities.



MDWASD Water, Wastewater, and Reclaimed Water Planning and Geological Services for Un-sewered Commercial and Industrial Areas –Principal-in-charge – Miami Dade County, FL

Mr. Torrealba was the Principal-in-charge of the development of Basis of Design Reports (BODR) for the expansion of the gravity sewer system, and the addition of lift stations and associated force mains, as well as water distribution improvements within Miami Dade County. 300 Engineering provided BODR services to extend sewer and water services to commercial and industrial areas for two districts: Project D8-A and Project D9-A. The projects generally encompassed seven (7) phases: 1) Planning studies review and update to confirm all commercial properties within each area have been evaluated, layouts are utilizing existing infrastructure where possible, and all the requirements from the permitting agencies are being addressed; 2) Data collection and site visits, including review of As built and record drawings, GIS shapefiles, Hydraulic modeling files, LIDAR data and site visits to each of the proposed project areas to examine, record, and gather information about site conditions, utility conflict and existing facilities; 3) Review of topographical, 4) geotechnical and 5) environmental and ecological information, 6) Wastewater Hydraulic Modeling; and, 7) Preparation and submission of BODRs including existing conditions evaluation, identification of regulatory requirements and basis of design (material selection, construction methods, pump station evaluation, alternatives selection, cost estimating) As Principal-in-charge, Mr. Torrealba oversaw the execution of services including, but not limited to: cost estimating, field inspection, scheduling, CAD and GIS services, hydraulic modeling assistance, As-built review, water and sewer distribution network analysis, drainage calculations, fire protection, roadway and drainage improvements, paving and grading, and utility coordination.

PortMiami Water Distribution System Analysis, Upgrades Recommendations and Constructability Review, PortMiami – Principal-in-charge – Miami, FL

Mr. Torrealba was the Principal-in-charge of the update of the hydraulic model for the Port Miami water distribution system. Mr. Torrealba supervised the provision of services including, but not limited to: project management, cost estimating, field inspection, scheduling, AutoCAD (CAD) services, GIS services, hydraulic modeling assistance, As-built review, structural analysis, water distribution network analysis, SCADA data analysis, constructability review and utility coordination. The project encompasses four (4) phases: 1) Data collection and review for records from Port Miami, including As-built survey and record drawings for water and metering systems, CAD (.dwg) files, GIS shapefiles and project (.mxd) files, flow and pressure information, among others; 2) Desktop verification and field investigations; 3) Review of 8-inch water Line along the Cruise Terminal Wharf to evaluate the possibility of upgrading this 6,000 LF of 8-inch water line; and, 4) Opinion of Probable Construction Costs Class 5 for the improvements identified within the Port Miami area. The objectives of these services were to address comprehensive planning objectives which will be used to meet regulatory requirements.

MDWASD GIS Water Active As-built Supplemental Information System (AASIS) Projects – Principal-in-charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-in-charge for the On-site GIS assistance to the Water and Sewer Department (MDWASD) to research and correct reported problems in the GIS databases of County wide Water Infrastructure, populating MDWASD's integrated enterprise systems such as the Enterprise Asset Management System (EAMS), DOLFIN, Proliance Project Control and Tracking System (PCTS), Oracle Customer Care & Billing (CC&B) and other MDWASD's systems, through the extensive use of MDWASD's in-house GIS Atlas Maintenance System (GAMS). Assisted MDWASD's Water Transmission and Distribution System with bringing their backlog of over 2,000 AASIS tickets up to date. Skilled resources and Monthly Progress reports were provided documenting progress, pending items, issues, and problem resolution. Responsibilities within the Project included: interpreting As-builts, survey field logs and other documents to accurately update the GIS with utility location and asset properties; used MDWASD's systems to research and resolve data inconsistencies in the GIS, which included Dade On-Line Facilities (DSI), MDWASD's in-house GIS Atlas Maintenance System (GAMS), Engineering database, and others; quality assure completed work prior to promoting production.

MDWASD Water Project and GIS Backlog Staff Augmentation Assistance – Principal-in-charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-in-charge for two (2) GIS Technician for the Project and GIS Backlog Assistance to investigate and locate faults in the system that need to be addressed for replacement, repair and change. This type of work required specialized and qualified personnel with the required training and experience to provide safe and reliable information about assets that can be used in the most practical manner, and to create and maintain all data related to the PCCP Assessments and Replacements Program. In addition, project included evaluations of information related to water As-builts, perform research, run SQL reports, and work in a GIS environment while supervising the two (2) qualified GIS Technicians, housed at the MDWASD Water Transmission and Distribution offices.

MDWASD 36-inch Water Main along NW 106th Street from NW 107th Avenue to the Intersection of NW 87th Avenue and NW South River Drive - Engineer of Record Services – Principal-in-charge – Miami-Dade County, FL

Mr. Torrealba was Principal-in-charge tasked with designing and replacing a 36-inch Ductile Iron (DI) Main. The MDWASD requested to upgrade the water system to increase water pressure and provide optimum fire flow protection. The 11,000 LF water main will run along NW 106th Street from NW 107th Ave to the Intersection of NW 87th Avenue and NW South River Drive within the Town of Medley. The project involved the design of a micro-tunneling crossing the FL East Coast (FEC) Railway. Services included design, permitting, cost estimating, technical, site inspections, scheduling, coordination with the Town of Medley, limited procurement and construction support services.



MDWASD Vista Verde Phase II - Replacement of approximately 4,600 LF of 8-inch and 12-inch Water Mains – Principal-in-charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-in-charge for the replacement of approximately 4,600 feet of Asbestos Cement (AC) and PVC Water Mains located around NW 215th Street and NW 39th Avenue in the community of Vista Verde within the City of Miami Gardens. The project goal is to design a new water main network to replace the existing Asbestos-Cement and PVC Water Mains prior drainage construction and road pavement. Services provided includes, but are not limited to design, permitting, preparation of contract specifications, bidding package preparation, and limited construction period services.

MDWASD Installation of 24-inch Force Main discharge of PS 0592 – Principal-in-charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-in-charge for the development of engineering design drawing for the installation of 295 linear feet of a 24-inch Force Main through micro-tunneling crossing CSX Florida rail tracks. The project was required as part of MDWASD's Pump Station Improvement Program. Pipeline required to be encased in a 36-inch Steel Pipe as per Florida East Coast (FEC) requirements Professional Services included data collection, engineering, utility coordination, alternative analysis, tunnel design and calculations, right-of-way acquisition, stake holder coordination, construction management and inspections.

MDWASD \$14.4M Water Main Replacement and Meter Conversions Design Build Criteria Package – Principal-in-charge – City of North Miami Beach, FL

300 Engineering was selected by MDWASD to provide Cadastral Support Services to the Pipeline Improvement Project, Task #2. Mr. Torrealba was the Principal-In-Charge assisting the Department to prepare the D/B Criteria Package for the replacement of outdated and deteriorated water mains in the North Miami Beach area. He worked as the Principal-in-charge of all employees who provided services including, but not limited to, utility coordination support, as-built review, cadastral support, quantities take-off, opinion of probable cost (OPC), field observation support, limited permitting services and scheduling. The Lineal Footage of water main replacement for the overall project is 30,657 LF. A total of 501 water meters are to be installed within the overall project. Moreover, 498 of these meters are to be relocated from the rear to the front of the property.

MDWASD South Miami Heights \$72M Water Main Replacement and Meter Conversions Phase I & II Design Build Criteria Package – Principal-in-charge – South Miami Heights, FL

Mr. Torrealba was the Principal-in-charge to provide Cadastral Support Services to the Pipeline Improvement Project, Task #1 - South Miami Heights. 300 Engineering assisted the Department to prepare the D/B Criteria Package for the replacement of outdated and deteriorated water mains in the South Miami Heights area. Provided services including, but not limited to, utility coordination support, as-built review, cadastral support, quantities take-off, opinion of probable cost (OPC), field observation support, limited permitting services and scheduling. The project was divided into two (2) phases. The Lineal Footage of water main replacement for the overall project is 169,223 LF. A total of 2,800 water meters are to be installed within the overall project. Moreover, 1,943 of these meters are to be relocated from the rear to the front of the property.

MDWASD Feasibility Evaluation of Reuse Alternatives to Comply with Ocean Outfall Legislation – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project manager to assist MDWASD with the evaluation of various alternatives to meet the ocean outfall legislation goal of achieving 117.5 MGD of beneficial wastewater reuse by 2025. The alternatives to ocean outfall evaluation included: Floridian Aquifer Recharge using Reclaimed Water (RCW), Crandon Park Golf Course Irrigation, Irrigation of Doral Golf Courses and Miami International Airport (MIA) Chiller Makeup Water. As Project Manager, Mr. Torrealba was involved in the preparation of general arrangement drawings, identification of major system components (treatment, pumping, wells distribution piping and storage), estimation of capacities and preparation of planning level capital and annual O&M Cost Estimates (including cost of power) for each reuse alternative.

MDWASD's Basis of Design Report (BODR) Assistance Pump Station Engineering Reports (6) and Pump Station 717 Sewer Force Main System Evaluation – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for the BODR assistance of six pump station engineering reports and the associated force main system that included field inspections, pump station evaluation, hydraulic analysis, cost analysis, alternatives analysis, and pump upgrade recommendations. The project involved the analysis of several alternatives in order to best serve the sewer system during 2030 projected flows and pressures. Pump stations were inspected for wet well condition, dry pit condition, pump sizing, mechanical and electrical requirements, and overall siting. Detailed sketches of existing conditions and pro-posed pump station alignment were prepared to support the recommended solution. This evaluation was performed by comparing information provided by the producers of the equipment in addition to the data collected during piloting. Capital, as well as operating costs was developed for equipment bid-ding purposes. The construction cost of the project was estimated at \$250 million.

MDWASD Water and Wastewater Hydraulic Computer Model – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for the development and calibration of steady-state and dynamic wastewater system and dynamic water system hydraulic computer models to assist in meeting the growing needs of 2 million county residents, assist in meeting compliance requirements (EPA/FDEP), and evaluate capacity for new developments to be



connected to the existing system. Managing evaluation of MDWASD's modeling needs for both the water and wastewater systems and providing recommendations on the most appropriate modeling software, developing and calibrating an all-pipe Extended Period Simulation (EPS) model of the water distribution system, developing and calibrating a model of the wastewater collection system for a mixed gravity - pressurized pipe scenario incorporating more than 1,000 pump stations, large gravity interceptors, and a rainfall-derived infiltration and inflow (RDII) component, using the model to perform selected analysis of the water and wastewater systems. The calibrated models will be used as tools in the development of the county's water and wastewater master plans, to evaluate high development areas for site specific permitting requirements, and to verify compliance with current environmental regulations related to wastewater peak flow management. The objective was to develop an alternative hydraulic routing approach to expedite modeling of the gravity system and reduce model run times. Responsibilities also included the identification and correction of outlier gravity system data, addition of 50 new gravity basins, assessment of the accuracy of using extrapolated pipe invert elevations versus as-built data, evaluation of the accuracy of using stage-storage as opposed to numerical routing, and development of stage-storage relationships for 868 gravity basins for use in hydraulic routing of the gravity system. Mr. Torrealba provided engineering, planning, evaluation, analysis, and wastewater modeling services. He also developed a detailed gravity model with as-built invert and rim elevations for various basins.

Town of Lauderdale By The Sea Sanitary Sewer System Evaluation (SSES) Capital Improvement Plan (CIP) – Project Manager – Lauderdale By The Sea – FL

Mr. Torrealba was the Project Manager for the development of the Town's Sanitary Sewer System Capital Improvement Plan. The sanitary sewer collection system consists of two separate wastewater collection basins with approximately 10.5 miles of gravity pipes, 165 manholes and two (2) pump stations with their respective force mains. Activities included closet circuit TV (CCTV) video review of the sewer system, identification of defects, and repair recommendations; flow meter inspection and evaluation; pump station inspection and hydraulic analysis; infiltration and inflow (I/I) evaluation including development of wet and dry weather hydrographs, rain-dependent I/I estimation, and tidal infiltration estimation; 2035 demand projections; recommend improvements, prepare cost estimates, and development of the capital improvements plan. Since the Town currently pays a nearby utility to take its sewer flows, the projected substantial reduction in metered sewer flows will pay-back the cost of repairs within a short period of time.

MDWASD Cleaning and Televising of Small Diameter Sewers in Various Locations – Deputy Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Deputy Project manager for the construction management, evaluation and inspection for cleaning and inspecting manholes and small gravity sanitary sewer pipes 6-inches to 21-inches in diameter under different Contractor Work Orders at different locations anywhere within the limits of Miami-Dade County, Florida during a one-year period. The sanitary sewer collection system to be evaluated consists of approximately 205 miles of gravity pipes and 5,200 manholes within the limits of Miami-Dade County, Florida.

MDWASD BODR for Pump Station 49 Siting Evaluation– Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project manager for the evaluation of siting alternatives for a new wastewater pump station to replace Pump Station (PS) 49. The new pump station is needed to handle the new pressure from North Bay Village's new 16-inch force main which connects downstream of PS 49, as well as provide additional capacity for future flows due to growth in the service area. Further, PS 49 is difficult to maintain because it is in the middle of a residential street, and it is very deep. Several alternatives were analyzed, conceptual designs prepared, rough planning level opinion of probable construction costs calculated, and a ranking of alternatives conducted.

MDWASD Hydraulic Water Modeling Assistance – Deputy Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Deputy project manager providing hydraulic and water quality analysis (trace and water age) of the MDWASD Water distribution system using H2OMAP, prepared water treatment plant service boundary, and water age maps.

City of Hollywood South Lake Drainage Area Stormwater Pump Station Preliminary Basis of Design Report – Project Manager – Hollywood, FL

Mr. Torrealba was the Project manager for the preparation of the basis of design report for a 30,000-gpm stormwater pump station. Activities included a pump station siting study, evaluation of the suitability of various pump types and pump station configurations, preliminary wet well and pump layout, typical plan view and vertical sections, electrical requirements, instrumentation and controls, provision for bypass gravity discharge, construction cost estimate, comparative schedules for various delivery methods, identification of permitting requirements (Broward County, FDEP, USACE), and drafting of Basis of Design Report.

Water Management District, Coastal Water Systems Interconnect Project – Project Manager – Northwest FL

Mr. Torrealba was the Project manager for the Basis of Design Report for the implementation of regional interconnects to increase water supply reliability in 18 coastal utilities along 5 counties in the Florida panhandle. Work included analysis of current and future demands, raw water sources, population growth, and permitted capacities; establishment of utility emergency production capacities and minimum interconnect flow reliability targets; hydraulic modeling (H2ONET) to evaluate and size interconnect infrastructure for various failure scenarios; finished water quality sampling, desktop blending



analysis, and residence time evaluation; route analysis based on ROW/easement requirements, utility conflicts, and cost estimates; preliminary design; operations manual; and final report.

MDWASD Preliminary Evaluation Prior to Design and/or Other Upgrades to the Sanitary Sewer system within the City of Miami Springs – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for the sanitary sewer evaluation survey (SSES) which included construction management, field inspection, flow and rainfall monitoring, evaluation and recommendations for the "Preliminary Evaluation Prior to Design and/or Other Upgrades to the MDWASD Sanitary Sewer system within the City of Miami Springs, Florida" Project. The sanitary sewer collection system consists of approximately 46 miles of gravity pipes, 925 manholes, and 17 separate wastewater collection basins. The Project Management/Administration services included monthly status reports to MDWASD throughout the project in order to monitor progress versus the project schedule. Inspection services included:

- Monitored and documented the pipe cleaning and closed-circuit TV (CCTV) inspection of the MDWASD sewer collection system by the Contractor for compliance with the project specifications.
- Monitored and documented the inspection of the manholes and lift stations contained within the MDWASD sewer collection system by the Contractor for compliance with the project specifications.
- Monitored and documented the smoke testing of the MDWASD sewer collection system by the Contractor for compliance with the contract specifications.
- Documented and reported any discrepancies found on the MDWASD provided Sewer Atlas Maps on the Department's Atlas Correction Forms.
- Construction Management/Office Support Services included evaluation and reviewing the video inspection recordings and providing repair recommendations according to MDWASD's Repair Criteria and Technology Guidelines (Protocol). Provided contract management to perform planning, engineering, cost estimating, inspections, coordination with construction Managers, administrative, contractor invoicing, work issuances, document control, scheduling, public outreach, permitting, and construction activities.

MDWASD Miscellaneous Basis of Design Reports (BODR) – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for the preparation of preliminary designs, cost estimating and development of Basis of Design Reports for water, wastewater, reclaimed water, water distribution systems, wastewater collection systems (force mains and gravity sewers), pump stations, and treatment plant (water/wastewater/reclaimed water) projects, among others. It included the following projects:

- 48-inch Water Main Alternative Route Analysis in Downtown Miami
- 60-inch CL-1 PS-1 Force Main Alternative Route Analysis
- PS 49 New Site Location Assessment Analysis
- PS 717 Sewer Force Main System Recommendation Report and Engineering Reports

Florida Keys Aqueduct Authority (FKAA) Snake Creek Canal Subaqueous Water Main Crossing Project/Florida Keys Snake Creek Bridge – Principal-In-Charge – Florida Keys, FL.

Mr. Torrealba is Principal-In-Charge for the design and installation of a 36-inch steel water main via horizontal directional drill (HDD) parallel to the existing transmission main. Services provided include development of design documents and technical specifications, permitting, cost estimating, utility coordination, site inspections, project scheduling, coordination with FDOT and Division of Environmental Resource Management (DERM) Water Control Section), development maintenance of traffic (MOT) plans, limited procurement, construction support services, and subconsultant work coordination. The new 36-inch diameter water transmission main will be designed for installation using approximately 2,100 linear feet (LF) HDD method under Snake Creek Canal and two portions of open-cut installation for connecting to the existing water main.

PRASA Improvements to Vieques Wastewater Treatment Plant – Principal-In-Charge – Vieques, Puerto Rico

Mr. Torrealba is currently Principal-In-Charge for this flagship project for the island municipality of Vieques. The plant serves as a key tourism destination, but it is a very old facility (built circa 1990) that has experienced substantial equipment deterioration and climate-related impacts in recent years, including 2 major hurricanes. The new design will include the replacement of the existing 0.5 million gallon per day (mgd) steel-ring package treatment unit with two new 0.3 mgd (each), state-of-the-art 4-stage Bardenpho Biological Nutrient Removal (BNR) treatment units and other associated processes and equipment, including enhanced filtration and UV disinfection. The project not only incorporates innovative technologies for treatment but will also place a great level of focus on increased service life, resilience against climatic impacts and saltwater corrosion, and equipment redundancy to maintain the plant operational during weather events. Great attention will be paid to the use of the appropriate construction materials to maximize operational life and structural integrity. The project has an estimated construction cost of \$30 million.



City of Miami Beach, W-2 Water Booster Pump Station Rehabilitation, Engineering and Design Services – Principal-In-Charge – Miami Beach, FL

Mr. Torrealba is the Principal-In-Charge for the engineering, design, permitting, bid support and engineering services during construction for the W-2 Water Booster Pump Station Rehabilitation project. The project includes: replacement and relocation of process piping and isolation valves (ranging from 12-inch to 24-inch in diameter), installation of new intake/discharge 24-inch water main, installation of new three (3) ton crane and trolley system, structural modification of the pump station building, replacement of three (3) pump and motors, hardening and resiliency upgrades (accessibility upgrades, flood and impact protection pump station and electrical buildings envelope, upgrades to the ventilation and air conditioning system to comply with current building codes and replacement of on-site generator).

City of Miami Beach Pipeline Subaqueous Canal Crossing Replacement along Flamingo Waterway – Principal-In-Charge – Miami Beach, FL

Mr. Torrealba is the Principal-In-Charge of the engineering, design, permitting, bid support and engineering services during construction for the installation of two 30-inch FM subaqueous canal crossing under the Flamingo Waterway. 300 Engineering performed an engineering assessment to determine the best replacement method and the alignment of the proposed pipes. It was determined that a Horizontal Directional Drill (HDD) was the most adequate solution. The pipes will be installed centered along the bridge alignment, at least 12-feet below the piers. In addition, system reliability has been increased by the installation of a new pipe interconnection that allows switching flows from one force main to the other, without the need of service interruptions in case of pipe failure.

City of Coral Gables Pump Station D Engineering and Design Services – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge for the engineering and design services for the upgrades of Pump Station D. The pump station has two (2) 50 HP pumps in a dry well-wet well configuration. These pumps have reached the end of their useful life resulting in multiple O&M issues, including pumps leaking and clogging. The scope of the project includes design of a new wet well, valve vault, new submersible pumps, control panel, yard piping and site civil design. Hardening measures were incorporated in the design with SLR considerations and the design for the installation of a submersible panel and watertight hatches. The 300 Engineering team was also in charge of public outreach and coordination with the community. In addition, the City is interested in obtaining an Envision Award through the Institute of Sustainable Infrastructure (ISI) for this project.

MDWASD PS-0062 Replacement, Gravity Main Extension and Force Main Installation – Principal-In-Charge – Miami, FL

Mr. Torrealba is the Principal-In-Charge of the replacement and relocation of PS-0062, which includes upgrades to the sanitary sewer collection and transmission system with the installation of a new 30-inch gravity main, installation of a new 24-inch force main and replacement of an 8-inch gravity sewer main. 300 Engineering is responsible for the civil, structural, and HVAC disciplines of the project. The pump station serves a large residential area with commercial properties located along major roadways. Due to anticipated increases in sewage flow, MDWASD has identified PS 0062 for relocation and replacement with a higher capacity pump station. The new pump station will be located on a parcel acquired by MDWASD at 7120 NE 2nd Avenue, which is Northwest of the existing PS-0062.

Broward County Water and Wastewater Services (BCWWS) Regional Transmission Master Plan – Principal-In-Charge – Broward County, FL

Mr. Torrealba was Principal-In-Charge for the Master Pump Station Assessment and Emergency Response Tasks of the Regional Transmission Master Plan. The Regional Transmission Master Plan has the main goal of developing a CIP for the wastewater regional transmission system (force main network and master pump stations) focused on risk prioritization.

City of Coral Gables City-Wide Assessment of Pump Station Telemetry System – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge for the assessment of the SCADA system that is used to monitor and control 35 sewer pump stations, 2 stormwater pump stations and a water gate. The assessment includes the evaluation of the current system's reliability, reporting and remote-control and monitoring capabilities. The 300 Engineering team is responsible for coordinating the project activities, including: staff interviews to obtain a clear understanding of the concerns, needs and expectations regarding the SCADA system, market research, alternatives comparison analysis to recommend the most adequate SCADA solution, conceptual design and technical specifications, prioritization of pump stations for project implementation, phased approach (including opinion of probable cost and master schedule), and assistance with the implementation of the project, including procurement support.

Seminole Tribe of Florida (STOF) Supervisory Control & Data Acquisition (SCADA) Services – Principal-In-Charge – Brighton, Big Cypress, Hollywood, and Immokalee Reservations, FL

Mr. Torrealba is the Principal-In-Charge of the Tribal wide SCADA services project being executed for the STOF's Public Works Department. As part of this Project, 300 Engineering is assisting the STOF in the updates of their lift station standard guidelines to include new SCADA and Electrical requirements. 300 Engineering is also assisting the STOF in the implementation of a radio communication network and SCADA upgrades for the integration of the lift stations into the Brighton Reservation current SCADA system. As part of this task 300 Engineering is providing project and construction management services,



design services for the upgrades of nine (9) lift station in the reservation, permitting assistance, SCADA integration services and project certification

Opa-Locka City-wide Verification of Horizontal Impervious Area for Stormwater Utility Fees – Principal-In-Charge – Opa-Locka, FL

Mr. Torrealba was the Principal-In-Charge for the City-wide verification of horizontal impervious areas for the estimation of stormwater utility fees. 300 Engineering verified and measured the impervious area of over 5,000 properties, including 2631 residential and 2,663 industrial/commercial properties. For each of the properties. For each property the following attributes were identified: Impervious area, impervious percentage relative to total horizontal area and corresponding ERU. 300 Engineering performed a desktop verification of the City's properties to evaluate and identify: type of property, status of development, total horizontal area, and impervious area. Based on the geodatabase of the Miami-Dade County Property Appraiser, 300 Engineering developed a new geodatabase adapted for the City's use that includes relevant information for the estimation stormwater utility fees, as well as for engineering and planning functions. In addition, 300 Engineering also developed a user-friendly web viewer that will allow City's staff to access this data without the need of having an ArcGIS license. 300 Engineering is currently working on the implementation phase of the project which involves the allocation of the estimated stormwater ERU's per the City's water accounts for billing purposes. This work is being completed in coordination with the Miami-Dade County Water and Sewer Department (MDWASD) and the City's staff.

Opa-Locka Water Distribution System Assessment and Optimization – Principal-In-Charge – Opa-Locka, FL

Mr. Torrealba was the Principal-In-Charge for the assessment and optimization of the City of Opa-Locka water distribution system. The water system distributes potable water to an area of approximately 3 square miles and has approximately 5,000 service connections. The aging infrastructure experiences a high quantity of unaccounted-for water losses and system failures. In addition, the City needs to bring their operations into compliance with the Florida Department of Environmental Protection (FDEP) and the Florida Department of Health (FDOH). 300 Engineering provided assessment services including: data collection; review and analysis of water system documentation and databases (plans, atlases, operation and maintenance procedures, leak detection reports, CIP projects, others); preparation of assessment and recommendations report; assessment of fire hydrants and coordination of repairs that are out of compliance with the Miami-Dade County Fire and Rescue Department (MDFR); and on-site and on-call water operations optimization and assistance. As Principal-In-Charge, Mr. Torrealba is provided services including, but not limited to: data collection, review and analysis of water system documentation, assessment and identification of operational issues, system optimization recommendations, preparation of assessment report and coordination with the City, MDWASD and MDRF for the repair work related to fire hydrants that are out of compliance.

City of Coral Gables Water Quality Monitoring Assessment Plan – Phase I Municipal Separate Storm Sewer System (MS4) Permit – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge of the creation of a stormwater monitoring assessment plan for the City of Coral Gables. The goal of the Monitoring Plan was to determine the overall effectiveness of the City's Stormwater Management Program (SWMP) in reducing stormwater pollutant loadings from its Municipal Separate Storm Sewer System (MS4) to receiving water bodies. The 300 Engineering team coordinated with the City and prepared the Assessment Program to comply with the Florida Department Environmental Protection (FDEP) MS4 Permit. The Assessment included a Water Quality Monitoring Plan to identify local sources where urban stormwater is adversely affecting surface water resources, a Pollutant Loading Estimate Plan to estimate the Pollutant Loading from the MS4 contributing area, based on land uses and BMPs and an Evaluation and Response Plan to evaluate trends in pollutants loading from the MS4, evaluate trends in water quality (of discharge from the MS4) and identify portions of the MS4 to be targeted for loading reduction/corrective action.

Department of Transportation and Public Works (DTPW) - South Corridor (South Dade Transitway) Rapid Transit Project – Utilities Consultant & Permitting Services – Principal-In-Charge - Miami, FL

Mr. Torrealba served as Principal-In-Charge, responsible for managing the utilities design and permitting, as well as complex utility coordination services. This \$300M project served to improve and enhance the infrastructure, operations and safety along the South Corridor, which is one of the six corridors included in the Miami-Dade County Transportation Planning Organization's (TPO) Strategic Miami Area Rapid Transit (SMART) Plan. In August 2018, the TPO selected Bus Rapid Transit (BRT) as the Locally Preferred Alternative for transit service along this corridor, which runs along the South Dade Transitway from Dadeland South Metrorail station to Florida City for approximately 20 miles. The project implements a fixed transitway BRT system that optimizes transit service operations and safety; and avoids, minimizes and mitigates adverse impacts to mixed traffic, pedestrian, and bicyclist operations and safety. The project includes several enhancements and improvements along the corridor, including 14 new BRT stations, rehabilitation of existing stations, improvements to terminal stations, and other corridor improvements. As part of the South Corridor project, a 5 story Park-And-Ride Facility/Garage is to be designed and constructed at the intersection of SW 168th St and the Busway. 300 Engineering is providing Utility Coordination Services, Design of Water Main services and Site/Civil Engineering Services for the Park-and-Ride Facility, including Flood Protection Grading Plan, Pavement Design, and Storm Drainage, as well as the design of water and sewer main extensions.



Department of Transportation and Public Works (DTPW) Drainage, Water and Sewer Engineering Design Services for Roadway Improvements to NW 107 Avenue from NW 138 Street to NW 166 Street – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba served as Principal-In-Charge responsible for managing the design for water, sewer and stormwater management systems for the subject Miami Dade Department of Transportation & Public Works (DTPW) project. The project scope includes the engineering analysis necessary to design 36-inch French drains and solid pipes continuous from beginning to end of the project for a total of 1.9 miles. Additionally, the project includes two (2) water extensions and three (3) sewer extensions over canal culvert pipes for future service expansions.

Department of Transportation and Public Works (DTPW) Underline Phases 3-9 – Principal-In-Charge – Miami, FL

Mr. Torrealba is the 300's Principal-in-charge for the Underline Project which consists of a 10-mile multimodal transportation corridor and urban world class trail providing for separate off-street bicycle and pedestrian paths, landscaping, lighting, street furniture and amenities such as gathering spaces for events, recreational fields, kiosks, gardens, etc. Mr. Torrealba served as Principal-In-Charge responsible for managing the design for stormwater management, drainage and SWPPs for approximately 7.36 miles of the project corridor. 300 Engineering designed Stormwater management improvements for the project in order to comply with municipal, county, state and federal flood prevention and stormwater quality/quantity criteria, consisting of solid pipes, exfiltration trenches, drainage structures, drain basins, inline drains, grates/frames, injection wells, PRBs, rain gardens, etc.

City of North Miami Water & Wastewater GIS Services & Asset Management Integration – Principal-In-Charge – North Miami, FL

Mr. Torrealba is the Principal-In-Charge to assist in the digitization of the required GIS Updates as well as general updates to the City's GIS and integration with their Asset Management System (Cityworks). This included updated to the City's water atlas, sewer atlas, pump station basin & customer information layers. 300 Engineering assisted with the implementation of a Standard Operating Procedure (SOP) which included the processes starting from the reception of as-builts by the City's Public Works Department (PWD) to the depiction of information in the City's GIS systems. The goal is to improve efficiency and productivity, as well as standardize the process for the incorporation of as-builts into the City's GIS system. In addition, 300 Engineering completed a comprehensive process analysis in order to efficiently integrate Cityworks with the City's existing Water and Sewer geodatabases. The purpose of this Task is to streamline and improve the City's enterprise asset management activities, resulting in more timely, accurate, and easy-to-access information.

City of North Miami Sanitary Sewer Evaluation Survey Report, I/I Analysis & City-Wide Smoke Testing – Principal-In-Charge – North Miami, FL

Mr. Torrealba was the Principal-In-Charge for the preparation of the City's SSES Third Cycle Report as required by the Florida Department of Environmental Protection (FDEP) and the Miami-Dade County Department of Regulatory and Economic Resources (RER). The SSES report preparation consisted of data review & validation, determination of I/I severity for overall system, sanitary sewer collection system drawings per Basin, Collection System Inventory & Night Flow Monitoring Summary, Basin Prioritization & Corrective Action Plan. In addition, 300 Engineering conducted smoke testing to 1293,260 LF of the Town's sanitary gravity system and performed visual inspections of 824 sanitary sewer manholes in accordance with the MD-RER SSES guidelines.

MDWASD - Pump Station 0733 Upgrade – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba served as Principal-In-Charge for the PS 0733 pump station relocation project. The project involved the installation of a new pump station as well as gravity main and force main extensions for the pump station relocation. Mr. Torrealba was responsible for the overall Civil, Mechanical and Electrical project management, QA/QC and project execution, including Utility Coordination, engineering plans design, permitting and limited construction support services.

Miami-Dade County Department of Parks, Recreation and Open Spaces (PROS) Haulover Park Sanitary Sewer CCTV Assessment – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba served as Principal-In-Charge responsible for the Closed-Circuit Television (CCTV) assessment of an existing sanitary sewer system in Haulover park, located in north-eastern Miami Beach, for Miami-Dade PROS. Mr. Torrealba coordinated & oversaw the visual assessment of identified sanitary sewer manholes and pump station, along with the review of CCTV footage of all gravity sewer lines and laterals connected to the system. The resulting field work and CCTV footage were then processed and subsequently reviewed in order to determine the extent of the system's defects, deterioration and inflow & infiltration (I/I). The 300 Engineering team provided recommendations for the necessary repairs of the system in compliance with MDWASD and other regulatory requirements.

North Bay Village Inflow and Infiltration (I/I) Plan of Compliance for North Bay Village Sewer System – Principal-In-Charge – North Bay Village, Miami-Dade County, FL

Mr. Torrealba is the Principal-In-Charge for the generation of an I/I Plan of Compliance to assist in bringing the Village's basins into compliance with the County code, in order to facilitate development within the Village and satisfy the RER/DERM requirements for I/I compliance. The main driver of this project was that the Village's pump station basins were placed under INCOMPLETE (IN) Moratorium for being out of compliance with the standard for infiltration and flow (I/I) according to the Miami-Dade County Code. As a result, no certificate of use/occupancy, or municipal occupational license for any project that will increase sewage flows is allowed until the Village has performed all required improvements, repairs, or upgrades required to bring the Basins and Sub-Basins into compliance. 300 Engineering developed a Plan of Compliance for the Village, in coordination with RER/DERM which included Night Flow Testing, Calculation of GDPD and allowable I/I per Basin,



Water Consumption Analysis, Night Flow Isolation & Visual Manhole Inspections, Smoke Testing and subsequent regulatory reporting. 300 Engineering used ArcGIS field maps, for data collection and integration with a GIS dashboard in order to help the Village make decisions, visualize trends, monitor status in real time, and inform their constituents.

City of Coral Gables Sanitary Sewer Evaluation Survey (SSES) – Night Flow Study and Basin Prioritization – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba served as Principal-In-Charge responsible for performing a system flow evaluation in order to identify basins above the 5,000 GPDIM Infiltration and Inflow (I/I) threshold specified in the Miami-Dade County Code. 300 Engineering performed wet season night flow monitoring by a combination of field investigations, and analysis of the City's Supervisory Control and Data Acquisition (SCADA) system data. Additionally, 300 Engineering analyzed the relationship between system-wide wastewater flows and rainfall, groundwater and tidal elevations for the one-year period of 2019. 300 Engineering prepared the City's Third Cycle Phase 1 and 2 SSES Report for submittal to the Miami-Dade County Department of Regulatory and Economic Resources (RER) Division of Environmental Resources Management (DERM). Additionally, 300 Engineering provided recommended priorities, timelines, tactics, initiatives, and the associated preliminary estimated costs to implement a phased I/I reduction program.

City of Coral Gables Traffic Calming along Aragon Ave and Giralda Ave – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba served as the Principal-In-Charge for the design of roadway improvements for two (2) residential roads within the City of Coral Gables. These roads, Aragon and Giralda Ave., run East/West from Segovia St. to S. Le Jeune Rd. The scope of the project included designing a Traffic Calming plan for this area, including but not limited to, installation of a raised intersection (speed table), installation of brick paver entrances from major roads indicating to drivers the area is residential, and the installation of a curbed island. In addition, 300 Engineering was tasked with improving the stormwater infrastructure conditions within this project area through the installation/relocation of stormwater structures, and regarding the roadway. Stormwater structures designed included French drains, catch basins connected to existing trenches with solid pipes, and stormwater manholes. Mr. Fernandez was also the Construction Engineer for the project, ensuring compliance with construction documents, performing field inspections and reviewing contractor's schedule of values among many others.

City of Coral Gables Annual Report for Individual NPDES Permits for Municipal Separate Storm Sewer Systems – Principal-In-Charge – Coral Gables, FL

As Principal-In-Charge, Mr. Torrealba assisted the City of Coral Gables in completing and submitting Annual NPDES Reports for the 2018 and 2019 reporting periods in order for the City to remain in compliance with Miami-Dade County Department of Environmental Resources Management (DERM). Services included reaching out to Florida Department of Environmental Protection (FDEP), DERM, and different municipal departments for data collection and completion of report. The 300 Engineering team performed quality checks to ensure the information received was accurate and correct. 300 Engineering has assisted the City with their annual NPDES Reports since 2017. All reports were performed within the established budget, and the City was able to submit the NPDES Reports ahead of schedule.

City Coral Gables Wastewater Infrastructure Geographic Information System (GIS) Annual Updates – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge for the annual wastewater GIS updates for the City of Coral Gables. As a Volume Sewer Customer to Miami Dade County, the City is required to provide annual updates of their Wastewater GIS Database to the Florida Department of Environmental Protection (FDEP) and the Miami Dade Regulatory Economic Resources (MD-RER) on an annual basis. Tasks include field inspections, As-built digitization to GIS, and GIS optimization for wastewater assets including gravity mains, force mains, pump stations, private pump stations, valves, etc. Additionally, the project includes GIS updates for SSES and CIPP data regarding yearly I/I inspections and repairs carried out by the City. The project also includes updates, hosting and maintenance of a GIS web application to ensure that sewer GIS data is always readily accessible to City staff and from multiple locations, including the field, to facilitate rapid responses to emergencies, illicit connections, and unauthorized discharges.

Drainage Infrastructure Verification & GIS Updates, Phases 1-9 – Principal-In-Charge – City of Coral Gables, FL

Mr. Torrealba leads the project oversight which includes data collection, field verification, GIS digitization of Assets, QA/QC, and the creation and update of a GIS Web-viewer. Data collection efforts include collecting, compiling and analyzing pertinent drainage infrastructure data. Field verification activities include locating drainage assets using a GPS Trimble Unit to geolocate the observed infrastructure (manholes, catch basins, outfalls, infiltration trenches, drainage wells, among others.) and capturing relevant data. Horizontal coordinates and elevations of assets, including rim, invert and bottom of structures are obtained, if accessible. The project also includes a visual asset condition assessment performed and noted, including photographic record of the assets. The GIS digitization phase includes the post-processing of the field verified infrastructure data and the update of the City's drainage geodatabase including point and line features. Standardized formatting, database schema, and symbology (based on the Client's GIS standards) were developed and utilized. Additionally, a GIS Web Viewer was created and updated to allow the City's staff to easily obtain information related to the drainage infrastructure without the need of using a GIS ESRI license.



City of North Miami Assessment and Prioritization for a Small Water Mains Evaluation Project – Principal-In-Charge – North Miami, FL

Mr. Torrealba served as Principal-In-Charge ensuring the project objective was met. This included developing a prioritization methodology and ranking of small water main improvements based on pipe location, pipe size, leakage history, fire hydrant coverage, and upcoming development projects, to serve as a guide for the City's small water main replacement efforts. 300 Engineering used GIS to analyze and map the City's data by specific attributes to better visualize the water distribution information. Available information from the City's Water GIS was utilized to generate an inventory of the City's water mains, classified by pipe lengths, diameter size and material. Additionally, service point connections were estimated based on a geospatial analysis of the water main location with respect to the parcel data. A series of geo-processing tools were used to extract water mains less than or equal to 6-inches, areas with water mains in the backyards, or alleyways, and areas lacking in fire hydrant coverage, as well as parcels requiring a water meter relocation and new service connection. Additionally, available water leakage reports were geospatially analyzed to identify areas to be prioritized for water main replacement. With the analysis results, 300 Engineering performed a preliminary GIS based water main replacement prioritization and planning level cost estimate.

City of Coral Gables City-Wide Smoke Testing of Sanitary Sewer System – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba served as the Principal-In-Charge in which 300 Engineering provided smoke testing services for the City's entire sanitary sewer system of approximately 65 miles of gravity mains as part of the SSES requirements of the Florida Department of Environmental Protection (FDEP) and the Miami-Dade County Department of Regulatory and Economic Resources (RER). The project scope included identifying locations where smoke is observed which can be caused by structural damage in pipes or manholes, cross-connections with roof gutters, sewer cleanouts, leakage in laterals, area drains, and stormwater drain cross-connections. The field team utilized methods to locate smoke leakage including: triangulating the defect with respect to the distance from two fixed objects (house corners, power poles, fire hydrant, etc.) and recording on a location sketch; sub-meter GPS coordinates; or recording the distance from the upstream manhole to a point perpendicular to the defect, as well as the distance left/right to the defect. In addition, the project included performing a visual inspection to the sanitary sewer manholes.

MDWASD Standard Operating Procedure (SOP) As-builts to GIS – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-In-Charge for the review, analysis and optimization of the business procedure from the reception or production of As-builts by MDWASD until they are digitized in their Geographic Information System (GIS). The goal of this project was to improve the efficiency and productivity of the incorporation of existing As-builts into MDWASD's GIS. Mr. Torrealba oversaw procedure review, personnel interviews, procedure analysis, procedure redesign, generation of Flowchart Diagrams, resources studies, staffing analysis projections, solutions and recommendations. Mr. Torrealba utilized Lean Methodology tools in the analysis of the Current Business Procedure from As-builts to GIS to generate a Value Stream Map of the business process and assess the potential for a shift from Batch to Continuous Flow of information.

MDWASD 24-inch Force Main NW 170th Street Sanitary Force Main Improvements – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba was the Principal for the installation of 2,500 LF of 24-inch FM along NW 170 St from NW 82 Ave to NW 75 Pl. The scope was based on the need to improve MDWASD's wastewater collection and transmission system capabilities by installing a 24-inch force main in an unincorporated Miami-Dade County along NW 170th St. The 300 Engineering team was directly responsible for all coordination efforts between MDWASD, local municipalities, and permitting agencies. This new 24-inch force main route crosses the FDOT highway I-75 and MD-RER's Peter Pikes Canal where special design conditions were made to satisfy both governing regulatory agencies. The trenchless construction method of micro tunneling was chosen to cross the I-75 highway with sufficient depth and separations as required by FDOT. As required by MD-RER, an open-cut design was chosen to cross the canal while providing sufficient depth, separations, and canal embankment stabilization. Services provided by the 300 Engineering team included design, permitting, cost estimating, preparation of technical specifications, utility coordination, site inspections, scheduling, coordination with MDWASD Operations Division, limited procurement, and construction support services.

MDWASD Rehabilitation/Replacement of 2.5 Miles of 48-inch PCCP FM - Planning and Feasibility Assessment Services – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba served as Principal-In-Charge of the BODR. According to USEPA Consent Decree (CD), MDWASD is required to rehabilitate/replace 2.5 miles (13,300 LF) of 48-inch PCCP force main running along the Biscayne Canal between NW 57th Avenue and NW 32nd Avenue. The BODR analyzed four (4) alternatives by comparing construction cost, public impact, schedule, pipe material, constructability, hydraulic and traffic impact, maintenance, accessibility, permitting, and easement acquisition. Hydraulic modeling was prepared to confirm BODR results. Recommendations were provided and approved by MDWASD.

MDWASD Engineer of Record Services for 60-inch Transmission Force Main, Phase 4, Professional A&E Services Relating to the State of Florida's Ocean Outfall Legislation and Miami-Dade County's Wastewater System – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-In-Charge for engineering design, permitting, procurement support, and value engineering services for the proposed 60-inch PCCP force main from SW 134th Ave and SW 208th St to SW 132nd Ave. This section corresponds to approximately 4,000 LF of Phase 4 of the overall SL 2.2 force main project. Services provided by the team



included design, permitting, cost estimating, preparation of technical specifications, utility coordination, site inspections, scheduling, coordination with MDWASD, limited procurement, and construction support services.

MDWASD 16-inch Water Main Replacement Along NW 36th Street from Curtis Parkway to NW 42nd Ave North of Miami International Airport (MIA) – Engineer of Record Services – Principal-In-Charge – Miami, FL

Mr. Torrealba was the Principal-In-Charge for the replacement of an undersized 8-inch Cast Iron (CI) Water Main with a new 16-inch Ductile Iron (DI) Water Main. As part of the Agreement with the City of Miami Springs, the MDWASD is required to upgrade the water system to increase water pressure and provide optimum fire flow protection. The 8,900 LF water main will run along NW 36th Street from Curtis Parkway to NW 42nd Ave (N. Lejeune Rd). Services provided by 300 Engineering included, but were not limited to design, permitting, cost estimating, preparation of technical specifications, utility coordination, site inspections, scheduling, coordination with stakeholders (City of Miami Springs, FDOT, etc.) limited procurement and construction support services.

City of Coral Gables Pump Station “F” Upgrades – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge for the design of Pump Station F upgrades. The City of Coral Gables owns and operates thirty-five (35) wastewater pump stations, with Pump Station “F” requiring several upgrades to its electrical and SCADA components. The 300 Engineering team worked primarily with CAD software to design and develop design drawings detailing a new layout of electrical equipment, including a new control panel, SCADA RTU, stand-by generator, and other ancillary electrical equipment. As part of the drafting responsibilities included with the design, a new SCADA system was selected and incorporated into the upgrades for Pump Station F.

City of Coral Gables Damage Assessments (Hurricane Irma) – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge for professional services for damage assessment of the infrastructure affected by Hurricane Irma, including City’s owned, operated and maintained pump stations. The 300 Engineering team assisted in the inspection of all thirty-five (35) sanitary sewer pump stations and two (2) stormwater pump stations. These were impacted by Hurricane Irma, specifically the electrical control panels and telemetry equipment. Mr. Torrealba completed the field assessment; pump station damage inventory and preliminary costs estimates in an expedited manner.

MDWASD Electrical Pump Station Designs – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-In-Charge for the electrical design of several MDWASD wastewater pump stations, including over eighteen (18) stations through all of Miami-Dade County. For all designs, 300 Engineering was responsible for the electrical design portions of the project, including primary power coordination, control panel design layouts, level control systems, and radio telemetry design. The 300 Engineering team was responsible for the development and coordination of the electrical design sheets for each station and producing 30%, 60%, 90%, and 100% drawings plans through AutoCAD. He was also in charge of coordinating design elements with FPL and procuring technical specifications for the Instrumentation and Controls of all stations.

City Coral Gables Wastewater and Stormwater Pump Station Upgrades – Principal-In-Charge – Coral Gables, FL

Mr. Torrealba was the Principal-In-Charge of the electrical design of the City’s two Stormwater Pump Stations and three wastewater pump stations. 300 Engineering was responsible for the electrical design portions of the project including planning, control panel designs, and permitting coordination. The 300 Engineering team developed design drawings in AutoCAD and managed the project from design to the completion of construction.

MDWASD Consumer Line Relocation Program (aka Meter Relocation Program) – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba was the Principal-in-charge of this project. 300 Engineering was selected by the Miami Dade Water and Sewer Department (MDWASD) to perform research and summarize all efforts done to date regarding progress towards the Consumer Line Relocation (also known as the Meter Relocation Program). The tasks were to obtain the list of approximately 16,648 properties originally identified by MDWASD as meter relocation candidates in Ordinance No. 08-140, approved in 2008; and to then provide a list of all completed and pending service relocations to date. As Principal-In-Charge, Mr. Torrealba and the team were responsible for all project engineering and drafting responsibilities for the projects civil work related to this study. The 300 Engineering team created Geographic Information System (GIS) tools as part of the meter relocation program to eliminate dual water main systems as part of the County’s water conservation efforts.

MDWASD Owner’s Representative of the Implementation of Advanced Metering Infrastructure (AMI) – Stakeholder & MDWASD Liaison – Miami-Dade, FL

Mr. Torrealba serves as Stakeholder & MDWASD Liaison for the supervision, oversight, inspection, management, and control of the Turn Key AMI Implementation. Services include technical, engineering, fiscal, and scheduling support for the project. Services also include engaging with stakeholders, both advising the department with key change management decisions and with external stakeholders. As part of the external stakeholder’s coordination Mr. Torrealba and the team will provide informational graphics and videos if necessary to supplement the work being completed by the AMI implementation team. The goal is to ensure compliance with all standards, internal timelines or requirements, permits and Right-of-Way requirements, and private property requirements for the AMI network infrastructure. MDWASD provides potable water & wastewater collection services to over 2.3 million residents and visitors through approximately 470,000 metered accounts



located within the County. A total of thirty-five (35) meter readers are assigned to read the 470,000 accounts either quarterly or monthly.

City of Fort Lauderdale \$120M Consultant Services for City-Wide Inflow and Infiltration Reduction Program – Principal-In-Charge – Fort Lauderdale, FL

Mr. Torrealba is Principal-In-Charge of the planning, development, implementation, and management of a comprehensive, on-going city-wide sanitary sewer Inflow and Infiltration (I&I) Reduction Program which will benefit the City operationally, economically, and environmentally. With a current, estimated volume of 2040MGD of non-effluent water (i.e., I&I) entering the City's sewer system during heavy rainfall events, the City identified I&I reduction as a top priority. The purpose of this Program is to implement a cost-effective and successful I&I reduction program, over the next five (5) years, to significantly reduce the amount of surface stormwater and subsurface groundwater entering the City's sanitary sewer system. The City currently has approximately 368 miles of gravity sewer pipes, 10,000 sewer manholes, 186 wastewater pumping stations, and 3 wastewater re-pump stations. The reduction plan includes flow analysis, sanitary sewer evaluation survey (SSES) inspections, cost effective corrective action plan, and rehabilitation/repair post rehabilitation monitoring.

City of Doral General Engineering and Architectural Services – Principal-In-Charge – Doral, FL

Mr. Torrealba is Principal-In-Charge to provide general engineering and architectural services for miscellaneous planning, design and/or construction management projects, such as roadways, drainage, structural, bridge, electrical, mechanical, traffic engineering, civil/site planning, water and sewer, environmental assessments and engineering, permitting, land use and zoning, architectural design and space planning, construction management, and project management. Additionally, services include construction engineering inspections, threshold inspections, plans review, and landscape architecture services.

MDWASD Engineering Planning, Design and Related Services for the Water and Wastewater Infrastructure Projects – QA/QC and Technical Advisor – Miami-Dade County, FL

Mr. Torrealba is QA/QC and Technical Advisor to assist with the implementation of the Capital Improvement Program. The projects will include all collection, distribution and transmission system assets within MDWASD's water and wastewater systems and service areas. This includes water mains, force mains, gravity sewers, water pump stations, sewer pump stations, trenchless pipelines, rehabilitation technologies and any related facilities. The project additionally includes regional assets outside of the treatment plants, maintenance facilities, maintenance yards, warehouses, and other buildings essential to MDWASD operations. The scope of services also encompasses ancillary engineering services including, but not limited to, coordination and evaluation of volume sewer and water customer service areas, roadway and pavement design, and maintenance of traffic. The goal is to assist MDWASD with the rehabilitation, replacement, upgrade, and new water and sewer assets and related facilities that are part of the Multi-Year Capital Improvement Program. The team is to provide preliminary site investigations; environmental and geotechnical services; surveying; hydraulic modeling and analysis; coordinating with other utilities; preparing basis of design reports; evaluation of existing equipment condition; capacity analysis, evaluation of useful life expectancy; design services for improvement/upgrade/renovations; preparation of design drawings and engineering reports; preparation of contract specifications, structural engineering; mechanical engineering; electrical engineering; and instrumentation and control engineering. Services also include obtaining necessary permits; coordination with MDWASD; engineering evaluations; planning services, existing utility location, procurement services, public outreach, engineering services during construction, landscape architecture services, architecture services, and inspections.

Bay Harbor Islands Engineering Consulting Services Continuing Contract (CCNA), Bay Harbor Islands, FL

Mr. Torrealba is Principal-In-Charge of providing Professional Services related to a continuing contract for Civil Engineering Consultant Services. Scope of work includes full design and construction contract document development; construction specification development; contract and bidding document development; code analysis; jurisdictional review and permitting assistance; bid/award support and concurrence; negotiation support; construction/contract administration services; construction phase field support services; inspections, construction observation and project progress documentation; post-occupancy surveys and related services; surveying; photographic and video-graphic project support; plan review; GIS and CADD project support; other data and information system project support, among others.

North Bay Village Professional General Architectural & Engineering Services – PIC – North Bay Village, FL

Mr. Torrealba is Principal-In-Charge for General A/E Services that encompass the two (2) Capital Improvement Programs (CIPs) in the Village: the Roadway & Stormwater Management CIP and the General CIP. The scope of work for Roadway & Stormwater Management CIP projects includes roadway and stormwater engineering design, and post design services according to the Village's Stormwater Master Plan. Responsibilities include survey, design, permitting, community outreach, construction administration and post design services. Services for the General CIP include General Consulting Services to serve as advisor, administrative consultant, or technical consultant to the Village. Also, project specific assignments on a work-order basis to prepare planning documents, engineering studies, construction plans, specifications, schedules, cost estimates and/or provide project management and construction management services for specific projects as defined by the Village. Additionally, construction management services. Other professional services include Construction Engineering Inspection (CEI), architectural services for miscellaneous projects; design and/or construction management for projects such



as marine construction, transportation, traffic signalization, traffic calming, drainage, water, sanitary sewer, site plan, architectural planning, and design, sustainability, environmental and landscaping

MDWASD \$60M Needs Assessment Program (NAP)– Program Manager – Miami-Dade County, FL

Mr. Torrealba was the Program Manager/Construction Manager for the \$60M water and sewer infrastructure improvement program to identify, plan, design, and construct water and sewer utilities within areas of special needs with the goal of stimulating the economy. The program to date involved 40 separate water and sewer projects involving design and construction of 17,815 linear feet of pressurized sewer force main from 4-inch to 12-inch diameter; 91,451 linear feet of 8-inch to 16-inch pressurized water main; 39,000 linear feet of 8-inch gravity sewer from 8-inch to 12-inch; and six pump stations.

MDWASD \$640M South District Wastewater Treatment Plant (SDWWTP) High Level Disinfection (HLD) – Project/Construction Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager providing construction engineering/inspection services for the 285 mgd upgrade of the plant, involving 14 construction packages totaling over \$640 million. Provided field inspection/oversight services for the expansion of oxygen train, deep bed filters, final clarifiers, transfer pump station, sodium hypochlorite generation system, chlorine contact tanks, effluent pump station, fat oil and grease (FOG) system, and ancillary site preparation and yard piping activities.

MDWASD \$17M Comprehensive Lateral Investigation Program (CLIP) – Deputy Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Deputy Program Manager for this two-year, \$17 million pilot program, which evaluated the effectiveness and costs of repairing public and private sewer laterals to reduce wastewater peak flows during rain events. Provided contract management to perform planning, engineering, cost estimating, inspections, coordination with construction Managers, administrative, contractor invoicing, work issuances, document control, staffing resources, scheduling, public outreach, permitting, and construction activities. From the 52 basins selected, a total of 6,972 work orders were issued with 6,312 laterals inspected and tested, and 1,222 laterals repaired.

MDWASD Government Cut Tunnel Design-Build Criteria Package – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for the development of the design criteria package for the replacement of the 54-inch sanitary sewage force main from Miami Beach to Virginia Key and replacement of a 20-inch water main between Port Island and Fisher Island. Managed data collection, engineering (geotechnical, survey, utility coordination, alternative analysis, tunnel design, and construction methodology), land acquisition, stake holder coordination, permitting, and public involvement programs associated with over 8,000 linear feet of sub aqueous crossings, with five shaft locations impacting four islands.

Department of Environmental Resource's Management (DERM), FEMA DORM Drainage Design – Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project manager for the design of drainage improvements to alleviate flooding and water quality problems in flood prone neighborhoods throughout Miami-Dade County. Managed preparation of 57 design packages, covering about 2 square miles, and with a construction value of \$4 million. Designs included catch basins, exfiltration trenches, pavement restoration, maintenance of traffic plans, hydraulic calculations, cost estimates, and utility conflict coordination.

South Florida Water Control District (SFWMD), Lake Belt In-Ground Reservoir and L-31 North Seepage Management Pilot Project – Assistant Project Manager – Central Miami-Dade County, FL

Mr. Torrealba was the Assistant Project Manager for both pilot projects. The South Florida Water Management District partnered with the US Army Corps of Engineers to implement the Comprehensive Everglades Restoration Plan (CERP). To evaluate the application of these tasks to the Everglades restoration, several pilot projects including these two projects were launched to study the effects of CERP. The purpose of these two pilot projects was to provide the data needs (from existing sources) for performance evaluation of these two pilot projects to quantify the uncertainties in related technologies prior to construction of the full-scale CERP components.

Department of Environmental Resources Management (DERM), FEMA-DORM Canal Dredging-Sediment Design– Project Manager – Miami-Dade County, FL

Mr. Torrealba was the Project Manager for 6.5 miles of canal dredging-sediment removal, embankment restoration and stabilization, and culvert design. Project is funded by FEMA due to major flooding in the area. Ensured compliance with FEMA, FDOT, and Miami-Dade County procedures and design standards. Manages ongoing drainage design projects. Proposed drainage improvements include the design of exfiltration trenches to meet the 5-year storm water quality criteria set by DERM and FEMA. Tasks included preparation of plans, profiles, specifications, quantity takeoffs using Geopak, and coordination with surveyors and geotechnical engineers. All deadlines were met on this fast-track project. Reference: Marina Blanco-Pape, Email: marina.blanco-pape@miamidade.gov, Ph: (305) 372-6950.



MDWASD Wastewater Improvement Program for the \$240M Pump Station Improvement Program (PSIP 1993-2001) – Deputy Program Manager & Assistant Chief Engineer – Miami-Dade County, FL

Mr. Torrealba was Deputy Program Manager and Assistant Chief Engineer of the program management team that managed a \$1B wastewater system improvement program, with detailed management responsibility for the \$240M Pump Station Improvement Program. The program was created to achieve regulatory compliance by correcting a series of wastewater overflows to surface water. The Team provided program monitoring and reporting on a regular basis on the progress of more than 1,700 separate deliverables. The program included the upgrade of its pump stations and force mains, a reduction of the infiltration, exfiltration, and inflow in the collection system and an increase in the capacity of its wastewater treatment plants to minimize the occurrence of sanitary sewer overflows. As Assistant Chief Engineer, he reviewed and prepared capacities evaluations, construction drawings, engineering reports, data collection, SCADA information, as-built information, and necessary field information. Mr. Torrealba coordinated with I/E/I consultant and MDWASD to obtain night flow information. He was part of MDWASD's SAC and TAC teams assisting MDWASD in bringing over 500 pump stations into compliance with 10 hour per day NAPOT criteria and addressing peak flow issues, respectively.

City of Miami Beach 8-inch Water Main and 10-in Force Main Replacement on Sunset Islands – Principal-In-Charge – Miami Beach, FL

Mr. Torrealba is the Principal-In-Charge for the engineering, design, permitting, bid support and engineering services during construction for the installation of 8-inch water main and 10-inch force main subaqueous canal crossings under Sunset Lake between Sunset Islands 2 and 3. The pipes will be installed using Horizontal Directional Drill (HDD). 300 Engineering is conducting an engineering assessment to optimize the length of pipe that can be installed using HDD pipe to minimize disruptions to the project area caused by open trench construction. In addition, the project will include pavement restoration of the entire right of way (ROW) affected by the pipeline installation. 300 Engineering, and its team of subconsultants, is providing full engineering services required for the adequate design of a subaqueous crossing which include: detailed topographic survey and easement investigation, geotechnical services including rock coring and soil testing, bathymetric survey, and benthic survey of Sunset Lake. 300 Engineering in collaboration with the City is developing the technical specifications of the project using the CSI 50 Division format and ensuring full compliance with the City's requirements included in the City of Miami Beach Public Works Manual implemented in 2021.

Comprehensive Citywide Septic to Sewer Conversion Assessment Plan – Principal in Charge – City of Coral Gables, FL

Principal In Charge to provide civil & environmental engineering services for a sanitary sewer collection master plan, including pipe route size and length, pump station locations, connection points, hydraulic system modeling, preliminary estimated cost for implementation, funding opportunities and environmental and water quality evaluations. The project will enhance, preserve, improve environmental or fish and wildlife quality by minimizing algae blooms and oxygen depletion. The study included a complete Identification of Initial Planning Areas for Septic Conversion, Septic Tank Vulnerability Assessment, Water Quality Impacts of Nutrient Loads, Collection System & Disposal Alternatives Evaluation, Septic to Sewer Evaluation & Ranking (Impact Factors), Draft Basin Layout Concepts, Planning Level Cost Estimates, Hydraulic Capacity Analysis (Modeling performed by Ardurra) and Recommended Improvements and Capital Improvement Plan.

Miami-Dade County Parks, Recreation and Open Spaces (PROS) Homestead Bayfront Park Wastewater Treatment Plant Replacement – Principal-In-Charge – Homestead, FL.

Mr. Torrealba served as Principal to provide PROS with Engineering & Design Services, Permitting Support, Bid & Award Services, Limited Engineering Services during Construction, and Startup & Commissioning Support for the replacement of the existing WWTP at the park location. The main goal of the project was to replace the existing WWTP, keeping the permitted treatment capacity, collection system and treated effluent disposal unchanged. Additionally, water quality analysis was performed to evaluate the presence of excess chloride in wastewater and determine if it was a contributing factor to the observed corrosion issues.

City of North Miami Beach, \$14.4M Water Main Replacement and Meter Conversions Design Build Criteria Package – Principal-In-Charge – Miami-Dade County, FL

Principal for the preparation of the D/B Criteria Package for the replacement of outdated and deteriorated water mains in the North Miami Beach "Donut Hole" area. Services provided included, but were not limited to utility coordination support, as-built review, cadastral support, quantities take-off, opinion of probable cost (OPC), field observation support, limited permitting services and scheduling. The Lineal Footage of water main replacement for the overall project is 30,657 LF. A total of 501 water meters are to be installed within the overall project. Moreover, 498 of these meters are to be relocated from the rear to the front of the property.

Muss Park Drainage & Stormwater Pump Station Improvements, City of Miami Beach – Principal-In-Charge – Miami Beach, FL

Principal for Mus Park Drainage Improvements Project. The City's Stormwater Master Plan identified Critical Needs Projects to address localized flooding and improve water quality. One priority is upgrading drainage in the low-lying Muss Park area, currently reliant on a temporary diesel pump system due to ineffective exfiltration trenches and high groundwater levels. The proposed improvements include replacing the temporary system with a permanent water quality stormwater pump station, removing outdated infrastructure, installing new conveyance/storage pipes, and regrading roads to enhance



drainage. This project aims to improve water quality and flood management, with plans to further address the basin's stormwater needs.

GOB Basin 1264 W&WW System Improvements – Septic to Sewer Neighborhood Improvement, MDWASD, Miami-Dade County, FL

Mr. Torrealba serves as Principal for the design, permitting, and coordination of proposed sanitary sewer and water distribution system upgrades within Basin 1264, located in unincorporated Miami-Dade County. The project includes the installation of approximately 9,600 linear feet (LF) of PVC gravity sanitary sewer, 1,300 LF of 8-inch ductile iron (DI) force main, and 9,900 LF of 12-inch DI water main. Responsibilities include overseeing the review and coordination design efforts across disciplines, preparation permitting packages for all involved agencies, and overseeing the implementation of Miami-Dade Water and Sewer Department (MDWASD) standards and requirements. Project scope includes providing technical guidance to the CAD team, reviewing plan sets for quality and accuracy and supporting utility conflict coordination and providing engineering services during construction.

Jet Blue/Terminal 5 Project – Drainage, Water and Sewer Engineering Design Services, Broward County BCAD, FLL/Hollywood International Airport Terminal 5 – Principal-In-Charge – Fort Lauderdale, FL

Mr. Torrealba acts as Principal for water, sewer, and drainage design components for the new Terminal 5 at Fort Lauderdale Hollywood International Airport. The project involves drainage and stormwater management systems for the Airside and Landside to accommodate the additional runoff generated by the new Terminal 5. The stormwater design features a trench drain system for the Airside and enhancements of the storage volume with the StormBrixx for the entire project, ensuring compliance with the existing master system without negatively impacting peaking stages. Additionally, the project includes the design of a new water and wastewater system supply for the new Terminal 5 building. As well as the relocation of existing utilities in conflict with the new building foundations. The project is currently at the Permit Set stage.

WASD Small Diameter Water Main Replacement Program Water Atlas P-16 – Principal-In-Charge – Miami-Dade County, FL

Mr. Torrealba is the Principal for the design, permitting, and coordination of a large-scale water main replacement project identified under the Water Atlas P16-C initiative. The project includes the installation of approximately 30,000 linear feet (LF) of new water mains to replace existing undersized pipelines within the designated project area. These improvements are based on criteria outlined in a pre-study Technical Memorandum by Ardurra (dba 300 Engineering) in accordance with MDWASD standards. Mr. Torrealba's responsibilities include overseeing the coordination with internal and external stakeholders, tracking project milestones and deliverables, the review of technical documents, and deliverables for utility coordination and permit submittals. The project also includes a consumer line relocation task (CLR) for approximately 400 properties, with 400 individual sketches showing proposed water meter locations to the private property plumbing connections. The project scope includes overseeing the design process, coordinating plan production, addressing utility conflicts, ensuring compliance with MDWASD standards, facilitating QA/QC reviews, and supporting construction-phase services.

Jefferson Parish Regional Sewer District, \$340M Force Main and Gravity Sewer and Pump Station Design Packages – Project Manager – Jefferson Parish, LA

Mr. Torrealba was the Project Manager and Engineer for a \$340M Program Consisting of 17 Force Main and Gravity Sewer Design Packages and 20 Pump Station Design Packages for a Regional Sewer District in Jefferson Parish. Construction Manager in charge of the preparation of construction drawings, detailed specifications, contract documents, and record drawings, including new sewers and collection system rehabilitation. Ductile iron, concrete and PVC pipes ranged from 8-inch to 36-inch in diameter and totaled over 100 miles. Used open cut, trenchless technology, and jack-and-bore construction methodology. Project included several canal and roadway crossings.

Tampa Regional Water Supply System, Brandon and South-Central Connection Transmission Water Main – Design Manager – Tampa, FL

Mr. Torrealba was the Design Manager for this \$10M transmission water main project connecting existing well field to the regional water supply system for Tampa. Services included design of 34,000 feet of 30-inch ductile iron pipe with cathodic protection, flow control hardware, and three underground crossings using jack-and-bore casings for the installed pipe. Coordinated design of a 180-foot span bridge river crossing for two pipelines, one 30-inch and one 24-inch. Provided management and oversight of the property acquisition for 15 discrete parcels of land. Coordinated and acquired permits from the Florida Department of Environmental Protection (FDEP), the U.S. Corps of Engineers (USACE), the Southwest Florida Water Management District (SWFWMD), Port Authority, and the Health Department.

Aguas Argentinas Privatization Program, Pump Station – Buenos Aires, Argentina – Pump Station Project Manager – Argentina.

Mr. Torrealba was the Pump Station Project Manager for a program which included water and wastewater pump station design of up to 120-mgd water pump station. The project included design of interconnections with proposed 12-foot-diameter water pipes. The concrete pipes were constructed with micro tunneling machines down to 107 feet deep. Prepared preliminary studies, conceptual designs, detail cost estimates, detail designs, and construction bidding documents, including plans and specifications.



City of Sunrise Water and Wastewater Master Plan Update – Project Manager – Sunrise, FL

Mr. Torrealba was the Project Manager for update of the master plan to account for acquired and new facilities within the utility system. Reviewed existing master plan populations, water demands and wastewater flows. A revised capital improvement program was developed comprised of a review of the 1995 master plan, significant system changes and modifications, and a detailed evaluation of the newly acquired Southwest water and wastewater facilities (formerly South Broward Utilities).

Elf Atochem North America, Inc., Conceptual Wastewater Facility Design – Project Manager – Beaumont, TX

Mr. Torrealba was the Project Manager for the development of a conceptual wastewater design project. Oversaw the development of the process flow diagram, P&IDs, cost estimate, hydraulic calculations, kinetics estimates, and equipment selection list.

US Air Force, Feasibility Study – Project Engineer – Homestead Air Force Base, FL

Mr. Torrealba was the Project Engineer who conducted research and evaluation of previous remedial investigations and risk assessments. Participated in the development of appropriate and applicable regulatory standards, establishment of cleanup criteria, and evaluation of alternate solutions.

3M, Industrial Landfill Disposal Permit Renewal Application – Project Engineer – Guin, AL

Mr. Torrealba was the Project Engineer for the development of a permit renewal application and development plans for the facility.

Numerous Municipal and Industrial Clients, Spill Prevention Countermeasures Control (SPCC) Plans – Project Manager and Project Engineer – Multiple Sites – Miami-Dade County, FL

Mr. Torrealba was the Project Manager/Engineer for the preparation of SPCCC plans for several municipal and industrial clients. Conducted field investigations and product inventories. Evaluated handling procedures, drainage, and emergency procedures. Prepared plans in accordance with USEPA, local, and state guidelines

Numerous Municipal and Industrial Clients, Stormwater and Pollution Prevention Plans (SWPPP) – Project Engineer – Multiple Sites – Jefferson Parish, LA

Mr. Torrealba was the Project Engineer on SWPPP projects for various municipal and industrial clients, including the preparation of a Stormwater Permit Application for Jefferson Parish, Louisiana.

Boise Cascade Corporation and other Industrial Clients, Phase I Site Audits – Project Manager – Various States, USA

Mr. Torrealba was the Project Manager for several Phase I site assessments, including 12 multi-state audits for Boise Cascade. Conducted field research and associated documentation, evaluated data, and coordinated with offices throughout the Country.

Jefferson Parish East Bank Consolidated Sewer District, Mini-System Force Main Testing, Design, and Construction – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer for preventive and corrective actions for force mains that were inadequate to accommodate the increased operating pressures and flow rates imposed by upgraded pumping systems. Participated in identification of force mains requiring repair or replacement, design of remedial measures, and implementation of the corrective measures.

Jefferson Parish East Bank Consolidated Sewer District, Water Treatment Plant Expansion – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer performing hydraulic calculations and prepared construction drawings for the modification to a wastewater pump station related to the expansion of the P3 treatment unit from 34 to 51 mgd.

Jefferson Parish Gilmore Subdivision Force Main & Pump Station – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer who participated in the preparation of construction drawings, detailed specifications, and contract documents to build a new pump station and related force main.

East Baton Rouge North, Central, & South Plants Expansion– Staff Engineer – East Baton Rouge, LA

Staff Engineer for expansion and rehabilitation of the North secondary sludge pumping facility; design of a 300-gpm submersible pump station for the belt press filtrate returns for the Central plant; and design of the sludge/scum pumping station and the flow splitting junction box between clarifiers at the South plant.

East Baton Rouge Sewerage Improvements – Staff Engineer – East Baton Rouge, LA

Mr. Torrealba was a Staff Engineer who participated in the design of a hydraulic model for a sewer collection system. The model included flow projections, preliminary pipe sizing, preliminary pump station sizing, and cost estimating based on the modeling.



Baton Rouge Sewer Improvements – Staff Engineer – Baton Rouge, LA

Mr. Torrealba was a Staff Engineer for the development of a hydraulic model for manifolded sewer force main systems. The model was used for checking sub consultant's design of individual pump stations and force mains.

Hickory Subdivision Front Foot Assessment – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer providing engineering assistance for the preparation of construction plans and specifications for a front foot assessment for sanitary sewerage improvements.

Jefferson Parish Management Study – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer who participated in a study to determine the current method of operation of the parish, develop alternatives based on the problems identified, and provide a report of the recommendations.

City of Kenner Infiltration/Inflow Program – Project Engineer – Kenner, LA

Mr. Torrealba was the Project Engineer for the I/E/I program. Performed infiltration and inflow (I/I) evaluation for gravity sewer and storm drainage pipes including the development of wet and dry weather hydrographs, rain dependent I/I estimation, and tidal infiltration estimation

City of Kenner Sunset Boulevard Roadway Improvements – Staff Engineer – Kenner, LA

Mr. Torrealba was a Staff Engineer who participated in general roadway improvements including preloading the area, pavement design, horizontal and vertical alignments, surface and subsurface drainage, and preparation of plans and specifications.

Jefferson Parish Manufacturing Site Audit – Staff Engineer – Jefferson Parish, LA

Mr. Torrealba was a Staff Engineer assisted in the environmental audit of a major manufacturing site, which included the preparation of a sampling and analysis plan to characterize potential contamination on the property. Prepared plans and specifications, conducted waste sampling/lab analyses, monitored and documented cleanup activities, and prepared interim status reports and a final report at completion of the work. Developed a remedial investigation work plan, additional sampling remedial investigation report, feasibility study report, and remedial action plan. Provided extensive observation to assist the parish in complying with LaDEQ requirements.

PRASA Puerto Rico-Infrastructure Financing Authority \$34.4M, Mayaguez Secondary Wastewater Treatment System Design-Build – Project Manager – Mayaguez, Puerto Rico

Mr. Torrealba is the Project Manager for engineering design support and construction management services.