DPMC PROJECT #J0334-00 · TERM CONTRACT CMF-003

# ATLANTIC CITY RESILIENCE PROGRAM

## WORK ORDER #15

Proposal Submitted To: State of New Jersey, Department of Treasury Division of Property Management & Construction

September 9, 2020

Submitted By:





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State of New Jersey, Department of the Treasury Division of Property Management and Construction Contracts and Procurement Unit 33 West State Street, 9<sup>th</sup> Floor Trenton, New Jersey 08625

Attn: Caitlin Murphy, Coordinator, Consultant Selection

#### Re: DPMC Project #J0334-00, Term Contract CMF-003, Atlantic City Resilience Program Work Order No. 15

Dear Selection Committee:

Michael Baker International, Inc. (Michael Baker) is pleased to submit our proposal for the Department of Property Management and Construction (DPMC) Project #J0334-00, Term Contract CMF-003, Work Order No. 15 - Atlantic City Resilience Program. In Michael Baker's 80 years of providing professional services, our approach to multi-tasked, multi-discipline assignments has proven to be highly successful. Michael Baker brings over 35 years of experience working in New Jersey on some of the most important infrastructure projects in the State, with recent projects specifically addressing flood resiliency.

The Michael Baker Team will be led by Peter Senus, PMP and his Deputy Project Manager, Sean Kahn. Peter is one of Michael Baker's most seasoned construction and design project managers, having overseen a wide variety of projects that include roadway and drainage related improvements, flood reduction improvements, airport runway rehabilitations, New Jersey Turnpike Authority (NJTA) building construction, and a wide variety of Department of Defense (DOD) projects. He has extensive experience managing projects from concept development through construction. In addition, Peter has been managing CMF-003 Work Order No. 3 - Flood Hazard Risk Reduction and Resiliency Grant Program since 2016. Work Order No. 3 follows the same requirements as in this Work Order No. 15 and Peter will be able to provide a seamless transition with a proven program management tracking system.

To complement our strengths, Michael Baker has teamed with our long-standing partner, APTIM, a premier program and construction management firm. APTIM is currently assisting the Michael Baker Team with U.S. Department of Housing and Urban Development (HUD) compliance oversight for Work Order No. 3 - Flood Hazard Risk Reduction and Resiliency Grant Program. This firm has multi-disciplinary capabilities as well, which allows Michael Baker to fully utilize multi-disciplinary capabilities in order to deliver consistent, on-time, budget-conscious, and quality projects.

The Michael Baker Team understands the need for thorough record keeping and government compliance with the grant program under Work Order No. 15. We are also well-versed in the procedures of the NJDCA and DPMC as the result of serving as prime consultant with the NJDEP and DPMC on Work Order No. 3.

We look forward to your favorable review of our proposal and the opportunity to continue our successful relationship with the State of New Jersey.

Sincerely, MICHAEL BAKER INTERNATIONAL, INC.

Magdy Hagag, P.E. Senior Vice President / Principal In Charge

### FIRM/TEAM ORGANIZATION

Michael Baker is a full-service construction management, planning, engineering, architecture, and information technology (IT) company that has been working with New Jersey agencies and municipalities to increase resiliency since Superstorm Sandy. Michael Baker also has recent experience dealing with previous disasters both locally and nationally, including Hurricane Katrina, Hurricane Floyd, and Hurricane Irene. With offices in Hamilton and Newark, Michael Baker has over 150 construction management and inspection professionals, scientists, architects, engineers, and planners with experience in the State of New Jersey. Michael Baker's local offices are supported by more than 3,500 employees in the U.S. and abroad, including nationally and internationally recognized subject matter experts. Our approach to building a team for this Work Order was focused on several key elements as summarized below and throughout our proposal:

- Provide a dedicated New Jersey-based team that has the capabilities and capacity to meet the exact needs of this Work Order. The Michael Baker team has deep local roots, having serviced New Jersey clients for more than 35 years. Our proposed subconsultant APTIM also brings exhaustive qualifications servicing resiliency-based projects nationally and in New Jersey. Collectively, our proven and highly qualified team can successfully address every aspect of the program.
- Provide recognized experts to support this Program. Not only does Michael Baker have the construction management expertise to administer this program, but we also have the track record to engineer complete designs similar to the projects selected for this grant. Many of our project team members bring both construction management and design experience that is highly relevant to this program.
- Provide experienced leadership skilled at program management and knowledgeable in the entire project life cycle. Michael Baker has most recently been working on CMF 003 Work Order No. 3 Flood Hazard Risk Reduction and Resiliency Contract since 2016. Our Project Manager, Peter Senus, PMP, has been leading this Work Order from day one and has precise knowledge of the similar delivery process required under Work Order No. 15.
- Provide a team that has worked together successfully. Our team has a long history of delivering projects together in New Jersey and nationally. Specifically, Michael Baker and APTIM have been working together since 2016 on the similar Work Order No. 3 Flood Hazard Risk Reduction and Resiliency Grant Program and has developed a "fine-tuned" project delivery system.
- Provide a team that knows NJDCA and is in close proximity to Trenton. This Work Order will be managed through Michael Baker's Hamilton office, located just minutes from NJDCA. We are available for meetings on short notice and can arrange for large group meetings in our facilities or via teleconference, as needed. The Michael Baker Team understands the procedures of the NJDCA and DPMC.
- Provide a team with HUD and CDBG experience. The Michael Baker Team has extensive experience working with the Community Development Block Grant (CDBG) and Community Development Block Grant-Disaster Recovery (CDBG-DR) program and a successful history of helping communities across the region to bolster recovery efforts and long-term resilience. Our team members have applied their expertise in the CDBG-DR program to help numerous communities navigate complex program requirements including the development of Action Plans, Consolidated Plans, grant management, application procedures, and compliance review. Our team offers the State the advantage of a full-service, integrated team with both the technical expertise and staff capacity to provide expert guidance in navigating the CDBG-DR program and its requirements.

We understand that daily coordination and communication between the selected consultant and the NJDCA will be required. The NJDCA needs a management team that they are comfortable with and can rely on. We are very

confident that our proposed leadership team will meet your needs. The following section showcases our project leadership and supporting key staff, highlighting relevant project experience and the skills needed to provide monitoring and oversight of the grant program.

The Michael Baker Team, as shown on the following organization chart, has the required experience and will successfully navigate NJDCA through the Atlantic City Resilience Program.



### MAGDY M. HAGAG, PE

Principal In Charge

#### **General Qualifications**

Magdy Hagag has 31 years of experience in the engineering industry. He has managed and delivered more than 10 accelerated projects worth more than \$250 million in engineering design cost and has won many prestigious awards for delivering project ahead of schedule, under budget, and with highest quality. Magdy currently serves as Senior Vice President/New Jersey Operations Executive. Previously, he was Vice President for Michael Baker's overall QA/QC of projects with extensive experience in streamlining QA/QC process of complex projects. Magdy was involved in developing the framework for Project Specific Quality Management Plans (PSQMP) and setting the parameters for a project's quality audit. Magdy has attained a broad range of engineering experience and has managed and/or provided quality review of many complex projects for Michael Baker's New Jersey and New York operations.

#### Years of Experience: 31

#### **Education:**

Certificate, Project Management, Drexel University B.S., Civil Engineering, Rutgers University

#### Licenses/Certifications:

Professional Engineer: New Jersey, New York, Connecticut, Maryland, Indiana & Pennsylvania

NJDOT Value Engineering Workshop

#### **Relevant Experience**

Sixth Avenue Bridge & Central Avenue Bridge Concept Development Studies. New Jersey Transportation Planning Authority. Project Manager for Local Aid Concept Development Studies for major rehabilitation or replacement of the Sixth Avenue Bridge and the Central Avenue Bridge. The Sixth Avenue Bridge is a vital link between the neighboring communities of Paterson and Prospect Park and serves the highly industrialized area of Bunker Hill. The Central Avenue Bridge spans across the Newark City subway and serves as a major transit connection to Newark's Central Business District. Responsibilities included leading and supporting public involvement initiatives, including public information centers, local official briefings for the impacted municipalities and counties, stakeholder and agency coordination meetings, website updates, and public information centers. Baker evaluated no-build, major rehabilitation, and bridge replacement alternatives for each bridge. Each bridge presents a unique structural challenge based on their respective foundations and adjacent land use. Conceptual highway design components included preliminary geometric design, drainage design, traffic signal/safety engineering, ITS design, pavement design, MPT, ROW engineering and utility relocation design. Conceptual structural design components included bridge replacement, superstructure replacement, deck replacement, bridge rehabilitation, geotechnical and foundation design, substructure design and retaining wall design. The project followed the NJTPA Local Capital Project Delivery process and culminated with the selection of the Preliminary Preferred Alternative to be advanced to Preliminary Engineering. The final deliverables included conceptual plans, cost estimates, NEPA classification, a Preliminary Engineering Scope Statement, and an LCD Final Report.

**Delancy Street Roadway Improvements.** *City of Newark, New Jersey.* Project Manager responsible for management of this Local Aid project including engineering and environmental services for comprehensive improvements to Delancy Street, a two-lane arterial roadway located in the southeastern section of the Ironbound neighborhood. The scope of work included plans for horizontal and vertical alignment; signage upgrades; pavement marking and striping; maintenance of traffic; right-of-way; utilities; sidewalk improvements, including high visibility crosswalks to meet Americans with Disabilities Act (ADA) requirements; specifications; cost estimates; construction schedule; environmental permitting; and hazardous waste management.

**Route I-78 Local and Express Roadway Improvement Project, Union and Essex Counties, NJ.** *New Jersey Department of Transportation.* Project Manager responsible for managing this \$175M project. Michael Baker provided engineering services for the rehabilitation of Route I-78 in Union and Hillside Townships, Union County, and the cities of Irvington and Newark. Michael Baker's services included preliminary design, final design and construction administration, including pavement reconstruction plans, drainage design, bridge deck repairs, signage, lighting design, intelligent transportation system (ITS) design, and maintenance of traffic plans.

**Pulaski Skyway Contract 5 Full Rehabilitation of the Broadway and Kearny Ramp in Jersey City and Kearny, NJ.** *New Jersey Department of Transportation.* Pavement Task Lead. Performed a pilot study to evaluate the degree of deteriorations on two piers of Pulaski Skyway. The 90+ piers of Pulaski Skyway exhibit various degrees of deteriorations and a comprehensive assessment of their condition is required for proper rehabilitation of the piers. Performing coring appeared not only costly but also provides limited data only at the core location. Michael Baker was tasked to perform several NDT methods and evaluate the merits of each test method and their applicability to this project.

**Route 3 over Northern Secondary and Ramp A.** *New Jersey Department of Transportation.* Project Manager for the preliminary engineering, final design and construction administration responsible for this bridge replacement including substructure and superstructure design over Northern Secondary (Conrail) Railway, NYS&W Railway, and Ramp A. Responsible for maintaining the project's budget, schedule, scope, quality management and delivery of Design Documents/Study Report. Also responsible for the improvement of geometric deficiencies on the roadway approaches located in Township of North Bergen. Managed geometric design, including preparation of Design Exception Report, MOT using long- and short-term closures, curb ramp design to meet ADA compliance, drainage design and stormwater management plans, right-of-way plans, lighting plans, utilities relocation, pavement design, and environmental permitting. Managed the project's Public Outreach program, which was performed in accordance with NEPA process.

**Route 1 & 9 at Haynes Avenue Bridge Replacement and Interchange Reconfiguration.** *New Jersey Department of Transportation.* Program Manager. Responsibilities included all technical aspects of the project, including staffing, preparation of invoices and monthly progress reports for the final scope development of the project, initial and final design and construction support. Managed the reconfiguration of Route 1 and 9 interchange at Haynes Avenue and the replacement of bridge on Haynes Avenue over Waverly Yards. Services included roadway design, geotechnical design, structure design, highway lighting design, ITS design, and right-of-way plan development. Signing and pavement markings were designed in accordance with the MUTCD and standard NJDOT practices, and included freeway segments, ramps, local streets, and a proposed roundabout construction.

**I-78 Newark Metro Intelligent Transportation System.** *New Jersey Department of Transportation*. Project Manager. Scope of work included designing and providing construction support for seven VMS's, two CCTV's, two Real Time Traffic System and fiber optic/ wireless communications network on I-78, Route 1&9, and Route 21 to serve the greater Newark metro area and to serve other construction projects that are underway. Also included providing the development of plans, specifications, cost estimate and construction support for this accelerated project. Required familiarity with the NJDOT Procedures Manual, NJDOT Standard Specifications and guidelines for ITS facilities. This \$4.5M ITS construction project serves the regional needs of the Newark area.

Authority-wide Travel Time Systems Improvements, George Washington Bridge/Lincoln Tunnel/Holland Tunnel /Goethals Bridge/Bayonne Bridge. Port Authority of New York and New Jersey. Quality Manager. Responsible for oversight of quality process. Michael Baker prepared final engineering drawings, technical specifications, and engineer's quantity and cost estimates to upgrade 16 travel time systems and install 11 new travel time systems at various locations in the vicinity of five major bridges and tunnels connecting New York City to northern New Jersey.

### PETER SENUS, PMP, NICET IV

**Project Manager** 

#### **General Qualifications**

Peter Senus has over 29 years of experience in program and project management, construction management, federal grant management, transportation design and site development. He has extensive experience with construction management and field inspection, engineering for site development projects for the Corps of Engineers and engineering for State highway transportation projects. His construction management and inspection experience include a wide variety of roadway, airfield, major outfall structures with pump stations and vertical construction projects. His transportation engineering experience includes Preliminary Design and Final Design contract document preparation for a large variety of site and roadway projects including right-of-way engineering, utility infrastructure coordination, public outreach, cost estimation, project scheduling, sub consultant management and budget analysis.

#### Years of Experience: 29 Education:

B.S., Civil Engineering, Norwich University Military Academy Licenses/Certifications: Project Manager Professional

NICET Level IV

NJ Society of Asphalt

Technologists OSHA 10-Hour Construction Outreach Training

Traffic Control Coordinator

#### Experience

#### CMF-003 WO#3 - Flood Hazard, Reduction & Resiliency Contract. New

Jersey Division of Property Management & Construction. Construction Program Manager responsible for the overall management of eight construction projects associated with Hurricane Sandy HUD grant relief funds. Projects included new outfall structures, pump stations with generators, tide gate upgrades, local road stormwater upgrades and dredge operations. Responsibilities included: reviewing bid documents and RFPs for subrecipients, scheduling and coordinating progress meetings with local municipalities and engineers, conducting regular site reviews and general construction inspections, monitoring local government contractor project progress, maintaining a master program schedule, preparing independent cost estimates for change orders, reviewing local government contractor pay applications, HUD labor monitoring, Section 3 compliance, federal competitive bidding practice reviews and recordkeeping of all program documentation via multiple shared drive systems including SIROMS.

Atlantic City Airport De-Icing Facility. *South Jersey Transportation Authority*. Project Manager for the overall construction of a new deicing facility at the Atlantic City Airport. The project will include bituminous and concrete pavement, water quality detention basins with subsurface drainage features, airport lighting and utility relocations. Responsibilities included management of the overall field construction staff, coordination with airport operations and contractor(s), schedule and overall project finances.

Atlantic City International Airport – Phase 1 & 2 Airport/Terminal Road & Amelia Boulevard Widening Reconstruction. *South Jersey Transportation Authority*. Project Manager/Construction Manager for this roadway improvement project that included full depth pavement replacement and widening, underground utility relocation, upgraded drainage system and traffic signal replacement. Responsible for overall construction management and inspection, reviewing schedule updates, reviewing extra work items, preparing change orders and independent cost estimates (ICE), reviewing submittals, responding to Request for Information (RFIs), as-built plan preparation, final quantities and approving Contractor monthly pay applications with certified payrolls.



Atlantic City International Airport – AOA Gate 11 & Security Fence. South Jersey Transportation Authority. Project Manager/Construction Manager for this security gate and fence improvement project that included removing existing degraded fencing and replacing with upgraded post and fence with barbed wire. Responsible for overall construction management and inspection, reviewing schedule updates, reviewing extra work items, preparing change orders and independent cost estimates (ICE), reviewing submittals, responding to Request for Information (RFIs), as-built plan preparation, final quantities and approving Contractor monthly pay applications with certified payrolls.

Atlantic City International Airport Runway 4-22 Blast Pad Reconstruction. South Jersey Transportation Authority. Project/Construction Manager for this blast pad reconstruction project that included removing existing degraded pavement and replacing entire pavement box, installation of new threshold lighting, basin, underdrains and new striping. Responsible for overall construction inspection, reviewing schedule updates, reviewing extra work items, preparing change orders and independent cost estimates (ICE), reviewing submittals, responding to Request for Information (RFIs), as-built plan preparation, final quantities and approving Contractor monthly pay applications with certified payrolls.

Atlantic City International Airport Taxiway K Rehabilitation. South Jersey Transportation Authority. Construction Manager for this taxiway improvement project that included removing existing degraded concrete pavement and replacing entire pavement box, widening of taxiway shoulders, installation of new lighting and signs, underdrains and new water quality basin. Responsible for overall construction inspection, reviewing schedule updates, reviewing extra work items, preparing change orders and independent cost estimates (ICE), reviewing submittals, responding to Request for Information (RFIs), as-built plan preparation, final quantities and approving Contractor monthly pay applications with certified payrolls.

**Replacement of the State Police Barracks in Galloway.** *New Jersey Turnpike Authority.* Office Engineer and Lead Inspector for this State Police Barracks that was built to contemporary law enforcement agency standards to meet today's requirements and future needs, including a fitness room and locker room facilities, elevator, office space, garage and three holding cells. In addition, the upgrades included a large parking lot, new underground motor fuel tanks, new utility services including emergency generators. Responsibilities included managing inspection staff, quantity estimating, reviewing extra work items, preparing change orders, reviewing submittals, responding to RFI's and managing project costs, including change management on the Galloway State Police Station.

**Route 280/21 Interchange Improvements Post Design Services Contract.** New Jersey Department of *Transportation*. Construction Specialist responsible for construction support services for the Route 280 & NJ Route 21 Interchange in the City of Newark, Essex County, New Jersey. This project involved rehabilitation and replacement of six (6) deficient ramp and mainline structures within the project area while completing missing movesand optimizing traffic flow. Primary responsibilities included attendance of bi-weekly contractor coordination meetings, provided responses to Request for Information (RFIs) and submittal reviews.

**Route 52 Causeway Replacement Post Design Services Contract.** *New Jersey Department of Transportation.* Project Engineer responsible for construction support services for the Route 52 Causeway Replacement project that is approximately 2.8 miles long from Route 9, in Somers Point, Atlantic County, to West Avenue in Ocean City, Cape May County. This project entailed the replacement of two movable bridges over Great Egg Harbor Bay with two fixed structures extending from Somers Point to Ocean City. Construction support services were for approximately five years. Primary responsibilities included attendance of weekly contractor coordination meetings, provided responses to Request for Information (RFIs) and submittal reviews. Other duties included providing field guidance to the Resident Engineer for constructability issues as well as quality control construction inspection reviews.

### **SEAN KAHN**

#### **Deputy Project Manager**

#### **General Qualifications**

Sean Kahn has over 8 years of experience in project management, construction management, transportation design, federal grant management and site development. His multi-disciplinary experience includes construction management and field inspection of highway, drainage and bridge construction projects. Sean's extensive design experience includes roadway geometry, roadside protection, drainage improvements, pavement reconstruction, signing and striping, MPT, sign structures, utilities and site development.

#### **Relevant Experience**

**CMF-003 WO#3 - Flood Hazard, Reduction & Resiliency Contract**. New Jersey Division of Property Management & Construction. Deputy Construction Program Manager responsible for assisting with the overall management of eight construction projects associated with Hurricane

#### Years of Experience: 8 Education:

B.S., Civil and Environmental Engineering, Rutgers University, New Brunswick

#### Licenses/Certifications:

Engineer-In-Training, New Jersey, 2012

NICET I Transportation-Highway Construction, New Jersey, 2012

Sandy HUD grant relief funds. Projects included new outfall structures, pump stations with generators, tide gate upgrades, local road stormwater upgrades and dredge operations. Responsibilities included assisting Project Manager with: reviewing bid documents and RFPs for subrecipients, scheduling and coordinating progress meetings with local municipalities and engineers, conducting regular site reviews and general construction inspections, monitoring local government contractor project progress, maintaining a master program schedule, preparing independent cost estimates for change orders, reviewing local government contractor pay applications, HUD labor monitoring, Section 3 compliance and federal competitive bidding practice reviews.

**OPS No. A3715 & OPS. No. A3778 On-Call Stormwater Engineering Services.** *New Jersey Turnpike Authority.* Task Lead. This contract includes a wide variety of task orders for the Maintenance department for design of stormwater drainage and collection systems, asset management, evaluation of existing drainage infrastructure and supporting CM/CI services. These contracts were identified for drainage repairs based on recent occurrence of immediate response maintenance repairs, such as flooding and sinkholes and the high density of corrugated metal pipes within the project limits. His primary responsibilities include overseeing MPT designs, development of contract plans, specifications, estimates, schedules and performing constructability reviews to mitigate potential conflicts with existing infrastructure and other construction projects.

**Scudder Falls Bridge Replacement, Final Design Services, Bucks County, PA.** *Delaware River Joint Toll Bridge Commission.* Designer. Responsible for MPT design for the New Jersey side of the project. Responsibilities included in-depth design of temporary ramps and crossovers which required a full horizontal and vertical geometric design due to the complexity of the project. Additional responsibilities include assisting with Michael Baker's post-design efforts during construction. Responsibilities include: Finalizing and reviewing responses to contractor submittals, RFI's, Change of Plan documents, and coordinating with the construction management team. Michael Baker is designing replacement of the existing bridge with a twin-span structure carrying six lanes of through traffic (three in each direction), two auxiliary northbound lanes for entry/exit travel, and one auxiliary southbound lane for entry/exit travel. The scope of work also includes drainage upgrades, approach widening, a bicycle/pedestrian walkway, new bridge inside shoulders, a new all-electronic toll (AET) collection system, an intelligent transportation system (ITS) equipment building, and noise-abatement walls.

### MICHAEL YAFFE, AICP, PP, GISP, ENV SP QA/QC Manager

#### **General Qualifications**

Michael Yaffe is an accomplished Community Planner and Geographic Information Systems (GIS) Professional. As a planner and GIS professional, he believes in purpose driven environmentally sensitive design to create places that engage people, nurture community, and enhance urban life. Currently, his focus is on resiliency planning, risk and vulnerability assessment, and hazard mitigation planning. He recently prepared the draft update to the New Jersey State Hazard Mitigation Plan for 2019 and is currently advising New Jersey on their Coastal Resilience Plan and Climate Change Resiliency Strategy. His work as a Senior Fellow at Rutgers University was featured on NPR and NBC News and focused on teaching an urban design studio on resilient design and rebuilding Sea Bright Borough, New Jersey after the devastation of Hurricane Sandy. He is also well versed in Quality Control/Quality Assurance (QA/QC) and has developed numerous project specific QA/QC plans.

#### Years of Experience: 12 Education:

M.C.R.P., City and Regional Planning, Rutgers University

B.S., Environmental Planning and GIS, Rutgers University

#### Licenses/Certifications:

Professional Planner: New Jersey American Institute of Certified Planners

Certified Geographic Information Systems Professional

Envision Sustainability Professional

#### **Relevant Experience**

#### CMF-003 Work Order #04 Resilient NJ Planning Grant Program. New Jersey

Department of Environmental Protection. Project Manager & Community Outreach Lead. Grant management includes community outreach assistance; analysis of riverine vulnerability by modeling future conditions; developing a standardized risk assessment methodology to assist local resiliency planning; developing a standard cost benefit analysis methodology that will be applied across program regions; internal and external program team coordination; and, other areas of grant management including program materials organization and administrative services.

**New Jersey State Hazard Mitigation Plan, Statewide, NJ.** *State of New Jersey Office of Emergency Management.* Deputy Project Manager. Provided project administration, research, and GIS and planning analysis required to update the State All-Hazard Mitigation Plan (State HMP). The State HMP outlines a strategy to reduce risks from hazards and serves as the basis for prioritizing future project funding for mitigation projects across the State of New Jersey. All States are required to have a Federal Emergency management Agency (FEMA)-approved hazard mitigation plan to be eligible for disaster recovery assistance mitigation funding. Updates include related tools to support planning, monitoring, Emergency Management Accreditation Program (EMAP) compliance, and severe repetitive loss tracking.

**CMF-003 Work Order #12 New Jersey State Climate Change Resiliency Strategy and Coastal Resilience Plan.** *New Jersey Department of Environmental Protection (NJDEP).* Project Manager. Assisting NJDEP through an expansion of Resilient NJ to create New Jersey's first Climate Change Strategy and Coastal Resilience Plan. By September 1, 2020, the State's Chief Resilience Officer, with the support of the Interagency Council on Climate Resilience, will deliver to the Governor a Statewide Climate Change Resilience Strategy to promote the long-term mitigation, adaptation, and resilience of New Jersey's economy, communities, infrastructure, and natural resources throughout the State.

Atlantic County Post Sandy Planning Assistance. Atlantic County, NJ. Senior Planner. Performed review of relevant planning documents and conducted research to familiarize the team with best practices in resilient design standards, including newest American Planning Association best practices and award-wining guidelines from around the country. Reviewed existing Land Development Standards (LDS) and identified standards that should be revised or enhanced with principles of resiliency and sustainability.

### MARY SHEEHY HUD Compliance Monitoring

#### **General Qualifications**

Mary Sheehy is a Construction Civil Supervisor for APTIM. Mary has experience in management and implementation of State and Federal residential programs for Low-Income Housing development (NJHMFA), Energy Efficiency residential upgrades (Weatherization) and disaster recovery (NJ-Sandy and TX-Harvey). Previous experience includes working on residential and/or green residential development projects; coordinating funding between state agencies for energy efficiency and renewable energy financing for multi-family affordable housing; development of policy and programs for energy efficiency and renewable energy financing in NJ; and writing website content, guidance and tools related to management of government funded programs (CDBG-DR).

Years of Experience: 13 Education:

M.C.P., Environmental Planning, Rutgers University B.Arch., University of Houston

#### **Relevant Experience**

**CMF-003 WO#3 - Flood Hazard, Reduction & Resiliency Contract.** *New Jersey Division of Property Management & Construction.* Led the Statement of Assurances (SOA) task for eight construction projects associated with Hurricane Sandy HUD grant relief funds. Projects included new outfall structures, pump stations with generators, tide gate upgrades, local road stormwater upgrades and dredge operations Section 3 Specialist. Mary is responsible for collecting and compiling quarterly Section 3 and SWMVBE reports for the program; HUD-11 interviews of field workers and reviewing Davis-Bacon Certified payrolls (347's) and associated fringe benefits submitted with contractor draw requests.

**New Jersey Reconstruction, Rehabilitation, Elevation, Mitigation (RREM) Program, Trenton, NJ.** *New Jersey Department of Community Affairs.* Construction Contract Reviewer. Mary was requested to work again on the NJ RREM program. This new role involves reviewing program applicants' construction contracts to ensure they will complete scopes of work and meet program requirements. This role includes making program/project scope changes utilizing the Xactimate program; updating the state reporting system website (SIROMS) with new contract amounts, scope amounts and review documents; and reaching out to homeowners to discuss contracts, scope needs and collect other required documentation.

Houston Harvey Recovery (HoAP) Program, Houston, TX. Eligibility QC Reviewer.

**New Jersey Reconstruction, Rehabilitation, Elevation, Mitigation Program, Trenton, NJ.** *New Jersey Department of Community Affairs.* Community Outreach Manager.

New Jersey Housing & Mortgage Finance Agency, Trenton, NJ. Green Homes Administrator.

### QUALIFICATIONS OF KEY TECHNICAL STAFF

#### KATHERINE DALY, EIT, CFM

#### **Record Keeping Compliance**

Katie understands how essential it is for a program of this size to maintain individual project documentation from bid packages to contractor invoices to project closeout. Katie is an effective member of both the planning and engineering design teams at Michael Baker. Through her experience in both disciplines, she is currently assisting in program management of the NJDEP's Resilient NJ planning grant project. Resilient NJ provides funding and technical assistance to multi-municipal regions within New Jersey's nine most impacted and distressed counties affected by Superstorm Sandy. Katie's work includes developing the methodology and GIS mapping of future riverine floodplains related to worsening storms and sea level rise, as well as developing a standardized risk assessment methodology for grant funding recipients. Additionally, as part of the Resilient NJ program, Katie and the Michael Baker Team assist the NJDEP with program scheduling, tracking, and management of the participating regions and their paired consultant teams. To complement this experience, she continues to perform hydrologic and hydraulic studies, drainage analyses and designs, plans, and reports in support of transportation projects and site work for various public clients throughout New Jersey and Pennsylvania.

#### ANNE NAPOLITANO

#### **Environmental Permitting Review**

Anne is an Environmental Specialist with over 26 years of experience preparing local, State and Federal permit applications and environmental technical studies. She has successfully strategized and executed the environmental process from project development through construction for both public and private development projects. Anne is responsible for preparing various environmental permitting and project impact assessments; site mitigation planning and environmental design services including wastewater, potable water, stormwater and watershed; land use and zoning; and renewable energy projects. Anne has also prepared environmental studies, conducted NEPA documentation, and provided agency, engineering, and design team coordination and consultation on impact avoidance, limitations, and construction techniques from conceptual to final engineering design. Additionally, Anne has prepared grant/loan funding applications including NJ Environmental Infrastructure Trust, Non-Point Source Pollution Grants, NJDEP Green Acres Grants, and SIIA Grants.

#### LORI WADE, PE, CPSWQ

#### Drainage

Lori is a Civil Engineer and Certified Professional in Stormwater Quality with over 18 years of experience in water resources engineering, including stormwater management, floodplain management, and drainage design for local, state, and federal government projects. She is experienced in designing Stormwater Best Management Practices (BMPs) including both above ground and subsurface infiltration and detention basins, swales, and water quality treatment structures and is on the forefront of implementing green infrastructure such as curb bump outs, bio swales, and trenches to the maximum extent feasible in both rural and urbanized areas. She has performed hydrologic and hydraulic analysis of rivers and streams for floodplain studies following regulations under the National Flood Insurance Program (NFIP) and she is skilled in highway and bridge drainage design. Lori is responsible for the final design submission of plans, specification, and Independent Cost Estimates (ICEs) as well as submitting applications and coordinating with various permitting agencies such as Soil Erosion and Sediment Control and Flood Hazard Area permits for approval on various projects.

#### MICHAEL YANG, PHD, PE

#### **Foundations/Structural**

Mike is a Technical Manager with 34 years of experience in geotechnical engineering. His responsibilities include project management; geotechnical exploration; pavement design; soil improvement design and construction; numerical modeling of soil-structure interaction problems; providing innovative foundation solutions for transportation structures; developing Independent Cost Estimates (ICEs); working with contractors to provide Value Engineering ideas and pile testing; and design reviews. Mike brings expertise in a wide range of soil conditions in the southeast region of New Jersey and is experienced in geotechnical engineering for facilities, marine structures (bulkheads), bridges, highways, transit, and industrial facilities. Mike has also published more than 20 technical papers on a wide range of topics from dynamic compaction design and monitoring for deep fills as well as saturated soft soils, to temperature effects on buried earth pressure cells.

#### MATTHEW ULLSTEAD, PE, PTOE

#### **Traffic Signals/Electrical**

Matt is a Senior Transportation Engineer with more than 12 years of traffic, Intelligent Transportation Systems, and electrical experience. He is a licensed Professional Engineer in the state of New Jersey and holds a Professional Traffic Operations Engineer certification. As part of roadway design contracts, he has overseen contract document preparation for traffic signals, Adaptive Signal Control Technology deployments, and radar detection. He also has facility design experience for the installation of exterior lighting, cameras, network equipment, and emergency backup generators. Matt has prepared include design plans, Independent Cost Estimates (ICEs), specifications, and Traffic Impact Reports. In addition to project design, Matt has experience leading construction engineering service efforts, coordinating with the resident engineer and the project team to process Requests for Information (RFIs), and reviewing working drawings. Matt's field experience includes leading traffic data collection efforts, traffic signal inspection, and traffic management.

#### JUAN URIBE

#### **CPM Scheduling**

Juan offers 20 years of extensive experience developing, updating, tracking, and managing schedules, updates, and baselines. He has monitored and reported due dates, critical path progress, and milestone accomplishments. He has coordinated with the appropriate staff on claims mitigation, development of time impact evaluation forms, and tracking impact on the schedules for potential claims or extensions of time. Juan has strong skills in organizing, operating, and executing schedules utilizing project management methodologies, project management tools, and databases. Juan is proficient in the use of Primavera P6, Microsoft Project, and other similar scheduling software.

### EXPERIENCE ON PROJECTS / ASSIGNMENTS OF A SIMILAR SIZE AND NATURE

#### New Jersey Department of Environmental Protection CMF 003 WO#3 Flood Hazard Reduction & Resiliency Grant Program - New Jersey (2016-2022)

#### Project Manager: Peter Senus | Deputy Project Manager: Sean Kahn | SOA Reviewer: Mary Sheehy



The Flood Hazard Risk Reduction and Resiliency Grant Program (Grant Program) provides grants to eligible municipalities and counties to construct shovel–ready flood risk reduction and resiliency projects through a competitive application process. The Grant Program utilizes funding awarded to the State of New Jersey from the U.S. Department of Housing and Urban Development (HUD) under the Community Development Block Grant – Disaster Recovery (CDBG-DR) program. There are eight projects associated with this work order, including construction

of outfall pipes, pump stations, storm water roadway improvements, and trash rakes. Michael Baker's CMF Project Manager Peter Senus and Deputy Project Manager Sean Kahn are responsible for the overall management of the work order assignment and monitoring the day-to-day status of the work in progress. Work order tasks include scheduling and coordinating grant progress meetings; recording meeting minutes; monitoring local government contractor project progress; preparing, maintaining, and monitoring a preliminary and master project CPM schedule for local government contractor projects; preparing budget and independent cost estimates; reviewing/analyzing cost estimate accuracy; reviewing local government contractor reimbursement payment vouchers and recommending payments; reviewing local government contractor bid packages and contracts for compliance with Federal, State, and HUD procurement regulations; reviewing local government contractor proposed agreement amendment (change order) modifications and recommending approval or disapproval; assisting in problem resolution; providing monthly reports to the NJDEP Program Director; compiling documentation; document retention and management; monitoring and verifying adherence to required recordkeeping and recordkeeping practices; HUD compliance monitoring and reporting; monitoring construction labor compliance with Federal and State regulations; and cooperating with the State Integrity Monitor.

#### New Jersey Department of Environmental Protection CMF 003 WO#04 Resilient New Jersey - New Jersey (2018-2022)

#### Project Manager: Michael Yaffe

The State of New Jersey received \$10 million in National Disaster Resilience (NDR) competition funding to support the creation of Resilient NJ to help regions and communities that experience significant flooding to undergo a comprehensive planning process to identify vulnerabilities due to increased flooding risk. Michael Baker is assisting the NJDEP with program management, monitoring, and oversight throughout the project's 5-year lifecycle.

The Resilient NJ program provides funding and technical assistance to multi-municipal regions within New Jersey's nine most impacted and distressed counties affected by Superstorm Sandy to undertake a comprehensive planning process, with selected contractor assistance. Resilient NJ builds on the existing efforts and capabilities within the State to create and implement creative regional planning



solutions to address current and future flood-related hazards, environmental resource protection, and the promotion of sustainable/smart growth development in both riverine and coastal communities. Resilient NJ funds the development and implementation of a Regional Resilience and Adaptation Action Plan (Action Plan) in up to five multi-municipal regions. Resilient NJ also provides funding to implement these actions. Potential actions include planning and concept design of mitigation projects, master plan updates, ordinance development, outreach and education programs, and other planning-related activities to reduce impacts from flooding. Michael Baker is involved in program development, including drafting sample contracting documents and title and rate information for the program contractor Request for Proposals. Michael Baker is also tasked with assistance in program scheduling and community outreach.

#### New Jersey Office of Emergency Management New Jersey State Hazard Mitigation Plan Update - New Jersey (2017-2019)

#### Deputy Project Manager: Michael Yaffe



Michael Baker provided comprehensive hazard mitigation services to the New Jersey Office of Emergency Management (NJOEM) to update the New Jersey State Hazard Mitigation Plan (State HMP). We leveraged our unique understanding of the resiliency planning, design, and construction work taking place in New Jersey to inform updates to the capabilities, mitigation actions, and funding sources included in the plan and to make it more comprehensive. Michael Baker has expertise in hazard

identification and profiling the location, extent, previous occurrence, and probability of future occurrences of natural and human-based hazards. We seamlessly coordinate with state and federal agencies and academic institutions that provide consistent and timely data for updating various hazards.

Michael Baker developed a proven vulnerability assessment methodology that uses GIS analysis to calculate vulnerability and incorporates known behavior of hazard events to identify vulnerable people and places. As part of the risk and vulnerability assessment, the type and location of the State's facilities and infrastructure critical to sustaining community services and functions were identified and evaluated for potential impacts or losses associated with hazards.

**Standard Operating Procedure Enhancements for County Guidance in Updating Hazard Mitigation Plans** Michael Baker reviewed the NJOEM Local Hazard Mitigation Planning Standard Operating Procedures (SOP) to validate the planning process, complete the State Hazard Mitigation Plan, and identify ways to update and enhance the SOP for future use. The SOP provides counties with guidance on how to meet NJOEM and FEMA requirements in developing/updating their hazard mitigation plans, and to highlight the tools necessary to identify risk, assess vulnerability, and develop a mitigation strategy.

Michael Baker worked with counties to update multiple hazard mitigation plans and identified best practices and lessons learned in local hazard mitigation planning to be incorporated into the SOP.

#### City of Hoboken

#### Northwest Resiliency Park – Hoboken, New Jersey (2019-2023)

Michael Baker is providing construction management for a 5.4-acre interactive urban park in the city of Hoboken that incorporates sustainable design, extensive stormwater management features, including collection and storage of all storm runoff into an underground one-million-gallon stormwater storage tank. Michael Baker will oversee extensive soil sampling and testing of this former industrial site, coordinate with local sewer authority for pump station construction, and manage construction of numerous park features, including play equipment, building structures, athletic facilities and other interactive features. Michael Baker will also perform utility coordination, supervise the construction of the extensive stormwater sewer system,



and manage the construction of a park building and community room. Additionally, we will oversee attainment of SITES v2 sustainability certification, conduct public engagement, including updating the project website, and complete and submit all close-out documents.

#### New Jersey Department of Environmental Protections CMF-003 WO #12 NJ Climate Change Resiliency Strategy & Coastal Resilience Plan – New Jersey (2020)



Michael Baker is assisting NJDEP through an expansion of Resilient NJ to create New Jersey's first Climate Change Resilience Strategy and Coastal Resilience Plan. As required through Executive Order 89, the State's Chief Resilience Officer, with the support of the Interagency Council on Climate Resilience, will deliver to the Governor a Statewide Climate Change Resilience Strategy and Coastal Resilience Plan to promote the long-term mitigation, adaptation, and resilience of New Jersey's economy, communities, infrastructure, and natural resources throughout the State. Michael Baker is also advising the Chief Resiliency Officer on policy, strategy, branding, and graphic communication of the Climate Change Resilience Strategy.

#### **Atlantic County**

#### Atlantic County Master Plan Resiliency Element - New Jersey (2017)

Michael Baker performed a review of existing Land Development Standards (LDS) and identified standards that can be revised or enhanced with principles of resiliency and sustainability. Michael Baker also performed a review of relevant planning documents and conducted research of best practices in resilient design standards, including the newest American Planning Association best practices and award-wining guidelines from around the country.



Community Design Standards were developed specific to Flood Hazard Areas for the County's LDS update.

As part of the LDS update, vulnerable areas affected by flooding, storm surge, and sea level rise were identified using GIS. Mapping of vulnerable areas included the most current FEMA flood hazard area delineation and depicts Hurricane Sandy storm surge and sea level rise modeling. These standards and maps helped inform the preparation of Model Resiliency Guidelines for Municipal Implementation.



#### Federal Emergency Management Agency Community Engagement and Risk Communication (CERC) – Nationwide (2015-2020)



Michael Baker was selected for the Federal Emergency Management Agency (FEMA) Community Engagement and Risk Communication (CERC) contract. FEMA has undertaken a multiyear effort to better identify, quantify, and communicate flood hazards and associated risks and promote mitigation actions nationwide through implementation of the Risk Mapping, Assessment, and Planning (Risk MAP) program. An integral component of the Risk MAP program effort is improved engagement with, and communication of risk to, community officials and other key stakeholders. The principal goals of the CERC effort are improving responsiveness to Risk MAP

program stakeholders, increasing awareness and understanding of flood risks and the value of flood hazard mapping, leading citizens and communities toward taking action to mitigate the risk of, and the damages that result from, flood events, providing mitigation support in a response and recovery environment, and promoting the effective and efficient delivery of quality regulatory and non-regulatory risk identification and assessment products. Our team's role to achieve these goals is providing integrated community engagement through planning and collaboration, building trust and awareness, activating and supporting local leaders and partners, introducing decision-making products, and building momentum. Michael Baker's services have included risk assessment, coastal flooding, riverine flooding, economic impacts, mitigation strategies, training, JFO response, risk isolation, and public outreach.

#### Port Authority of New York and New Jersey

#### World Trade Center Water Intrusion Protection Plan & Resiliency Designs – New York, New York (2015)

Michael Baker developed a comprehensive water intrusion protection plan for the new World Trade Center. Michael Baker's services included a complete flood risk assessment and analysis, the development of hazard mitigation strategies, order-of-magnitude cost estimates, and stakeholder coordination. When complete, the new World Trade Center will include five skyscrapers, the National September 11 Memorial and Museum, a multistory transportation hub, 550,000 square feet of retail space, and a 1,000-seat performing arts center. The water intrusion protection plan is designed to protect all completed World Trade Center facilities from water intrusion under severe conditions. The plan is based on a complete flood risk assessment and analysis, including thorough evaluations of site-wide and project-specific vulnerabilities, hazard mitigation strategies, and improvement

alternatives to provide a level of protection that will allow the complex to maintain operations following a storm surge event and subsequent flooding, like Hurricane Sandy in 2012.

Despite the accuracy reflected within the Federal Emergency Management Agency's newly drafted coastal flood elevations, there was no assessment of future conditions, including sea-level rise, within these analyses. Water levels measured at the Battery indicated that sea level has risen at a rate of one inch per decade. Many studies of future conditions note this rate as a minimum and



forecast accelerations in this rate in the future. Michael Baker's expertise in understanding these scenarios and advising on mitigation actions to combat these rising water levels were vital to the risk assessment. The incorporation of sea-level rise scenarios provides a clear understanding of the range of possible flooding risks during the coming decades. Quantifying these future scenarios will also allow proactive choices about the proper level of protection.



The plan includes project-specific and site-wide achievable hazard mitigation implementation strategies and recommendations with an estimated order-of-magnitude cost for each recommendation. The plan provides for an evaluation of the economic feasibility of each proposed mitigation strategy and identifies cost-effective mitigation strategies and actionable steps to achieve their implementation. Michael Baker devised mitigation strategies for implementation as either retrofit work or, where feasible, as part of ongoing or future construction.

As many entities occupy the World Trade Center complex, it was critical to obtain input regarding the implementation of the strategies. Michael Baker met with on-site stakeholders to coordinate the proposed mitigation strategies and their effect on the aesthetics and operations of the site. With the planning phase efforts for site-wide flood resiliency completed, Michael Baker scoped additional work to initiate advanced design for site-wide mitigation efforts through the further development of a bollard protection system. Additionally, professional architectural and engineering services were required to advise the Port Authority on design coordination among other independent mitigation efforts being undertaken by the Port Authority and external stakeholders at the World Trade Center.

#### New Jersey Department of Community Affairs

NJ Reconstruction, Rehabilitation, Elevation and Mitigation Program Management - Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean and Union Counties, New Jersey (2013-2015)

#### SOA Reviewer: Mary Sheehy

APTIM provided program management services for the HUD CDBG-DR funded Homeowner Reconstruction, Rehabilitation, Elevation, and Mitigation (RREM) Program for New Jersey Department of Community Affairs (NJDCA). This program provides up to \$150,000 in grant funding assistance to eligible homeowners for the reconstruction, rehabilitation, elevation, and mitigation of dwellings damaged by Superstorm Sandy. The program has assisted approximately 3,500 homeowners in the nine most impacted and distressed counties along the coast

of New Jersey. APTIM developed program policies and procedures, workflow diagrams, inspection and construction management services, among other duties. The firm also performed damage assessments, develops detailed scopes of work, engineering and architectural design, progress inspections, and project close-outs.

The RREM program faced several challenges, including an aggressive timeline to get damaged residents assistance in the shortest time possible. APTIM mobilized a core team of veteran disaster housing specialists to their established Trenton office and set up a Program Management Office (PMO) in record time. The firm immediately hired local New Jersey



professionals to round out the team, focusing on individuals with residential construction experience. They also brought proven MIS systems to handle work components, and embedded IT personnel to work with APTIM staff and the eligibility contractor (SSHIP) to work through data exchanges needed to progress the work. APTIM personnel coordinated with multiple stakeholders (NJDCA, DEP, SSHIP and others) to identify roadblocks and workarounds to keep the applicant pipeline flowing. APTIM's approach to mitigating the challenges facing this newly launched program were gleaned from experiences in other disasters. One important approach was the development of clear and concise program guidelines, policies, and procedures in concert with state officials to expedite workflow element completion and place program benefits with eligible applicants. As a construction management provider under RREM, APTIM focused on proven approaches to expedite program schedules.

#### New Jersey Department of Transportation Route 52 Causeway Replacement - Ocean City and Somers Point, New Jersey (2008-2012)

Michael Baker led the effort for alternatives analysis, preliminary design, environmental services, final design, and construction support for this multi-faceted, 3-mile transportation improvement project over Great Egg Harbor.



Michael Baker also provided construction management/construction inspection services for this project. The Route 52 Causeway Replacement in Ocean City was one of the largest projects ever undertaken by NJDOT with an estimated construction cost exceeding \$400 million. The full project scope included approximately 7,000 feet of new and widened roadway construction and the construction of a 3,500-square-foot new visitor center with associated utilities. The project is approximately 2.8 miles long connecting Somers Point to Ocean City crossing Great Egg Harbor Bay.

The project was constructed in two construction contracts to minimize

impacts to the traveling public, connecting the busy shore community. Michael Baker was an integral part of the construction management team that delivered the \$140 million Contract A eight months ahead of schedule and was also part of the construction management team on Contract B.

#### New Jersey Turnpike Authority

Replacement Turnpike District 6 Maintenance Facility & 3 State Police Stations - Newark, Moorestown, and Galloway Township, New Jersey (2013-2015)

Michael Baker provided construction management and inspection services for approximately \$60 million of construction associated with Contract Nos. T500.192, T500.272, and A500.274. The antiquated Troop D Stations

were brought up to contemporary law enforcement agency standards to meet today's requirements and future needs. The improvements included new buildings, expansion of parking and site development, new underground motor fuel tanks, new utility services (electrical, water, sewer, etc.) including emergency generators, HVAC, and a helipad at Moorestown. The new District 8 Maintenance Facility building provides updated equipment, expanded capabilities, and contemporary amenities for turnpike maintenance personnel to replace the overcrowded and obsolete facility. This project served as the prototype for proposed improvements and replacement buildings for the Turnpike and Parkway maintenance yards. Michael Baker proactively maintained continuous lines of communication with the Authority to maintain the yard's operational functions and address design changes originating from field conditions and engineering as the program evolved. Michael Baker managed multiple, concurrent sites while coordinating with the NJDCA.

#### New Jersey Turnpike Authority Rehabilitation of the Turnpike's Toll Plaza Utility Buildings and Tunnels – New Jersey (2013-2015)



Michael Baker completed construction management and inspection services for the rehabilitation of 25 Toll Plaza Utility Buildings spread across three contracts: South, Central, and North on the NJ Turnpike. These contracts addressed the toll plaza's immediate needs for functionality such as stand-by power (utility building and ETC huts), public health (water and sewer), improved employee working conditions (HVAC, waterproofing, avoidance of mold, and asbestos abatement), electrical/lighting, security upgrades (doors, windows, and lighting), and structural repairs (slab replacements/repairs, tunnel repairs, and roofs).

Michael Baker proactively shifted resources between the 25 discreet sites to manage a spectrum of issues while keeping toll plaza operations unaffected.

#### South Jersey Transportation Authority

## Atlantic City International Airport Apron Expansion Phases I & II – Egg Harbor Township, New Jersey (2009-2012)

#### Project Manager / Construction Manager: Peter Senus

Michael Baker was selected to design the Phase 1 and Phase 2 Apron Expansions at the Atlantic City International Airport. Construction items included stormwater system, earthwork, concrete and asphalt pavement, reconstruction of parking areas and landside facilities, taxiway and site lighting, airfield signage, and pavement marking. The Phase 1 design provided an airside apron area to allow remote overnight parking, while considering and preparing for the future development of a finger terminal extension. The stormwater system is designed to accommodate the future Phase 2 build-out. The deicing operations of the facility were reviewed to prepare for both short-term needs and the long-term intent



to construct a new deicing apron adjacent to the Phase 1 apron. Michael Baker developed an intricate phasing plan to allow much of the work to be performed in non-AOA areas and to expedite the AOA work that impacts active airside operations. The stormwater design reflected current Pinelands and NJDEP criteria that emphasize infiltration, while also complying with the mitigation measures mandated by the EIS.

### PROJECT APPROACH TO SCOPE OF WORK

Michael Baker fully understands the importance of The Atlantic City Resilience Grant Program (Grant Program) for the State of New Jersey. These projects will continue the efforts to protect vulnerable communities from the impacts of future storms along flood prone areas. The \$20 million program consists of seven (7) projects; four (4) projects involve the installation or repair of bulkheads and three (3) additional projects include the flood-proofing of the Atlantic City Town Hall and the All Wars Memorial Building, check valve inspection and repair, and the replacement of storm-damaged traffic signals. Michael Baker's construction management and design experience with large multi-faceted construction and resiliency projects, as detailed in the experience section, has prepared the team to assist the NJDCA with required monitoring and oversight tasks for the selected projects.

Magdy Hagag, PE, leads Michael Baker's New Jersey operations and is especially familiar with large infrastructure projects involving numerous disciplines as well as multiple consultants. His many years of NJDOT program management work, combined with a robust resume of New Jersey Local Aid infrastructure improvements, provide him with a unique outlook into efficiently managing this program. Additionally, he has served as Principal In Charge on numerous construction management engagements. Magdy is a working principal and plans to be very much involved in the projects funded under this program using his hands-on management style.

Magdy has entrusted Peter Senus, PMP, with the important role of managing this work order. Peter has a wellrounded 29-year background in the disciplines required for these projects with an especially strong focus on construction management, maintaining schedules and budgets. Specifically, Peter's experience managing the NJDEP's Work Order No. 3 project included regular reporting to clients, reviewing contractor invoices and deliverables, labor monitoring, conducting Independent Cost Estimates (ICE), and project scheduling and forecasting. Sean Kahn, Peter's Deputy Project Manager, is well versed in these activities as well and provides the vital support needed for this program. Magdy, Peter and Sean will work closely together and maintain regular communication with the project team to maintain continuity of knowledge and project requirements.

Peter's project management philosophy is centered on delivering high quality projects that exceed the expectations of our clients. His approach is to continually develop ways to manage costs and schedule more effectively through proper contract documentation and thorough reviews of project deliverables. On previous projects, he has accomplished this through innovative approaches to resolving issues in the field, the use of new technologies, thorough constructability reviews and risk assessments, and often just through excellent project documentation skills and organization. Observations made in the field and subsequent determinations made in problem solving or quantity measurements must be kept in neat, concise records. Peter's credo in documenting field work and labor monitoring is to always report the work so that a reviewer unfamiliar with the project will understand it clearly. These experiences will help Peter manage the Grant Program by starting with a clear and in-depth understanding of the projects and then translating this into a comprehensive work plan. Peter realizes how critical the schedule is and will utilize the resources of the Michael Baker Team to meet project specific needs and rigorously hold local government contracts to interim milestones so that key delivery dates are met. Peter will manage construction cost budgets by performing detailed invoice reviews and performing independent cost estimates for change orders as required. Cross-checking contractor invoices, tough yet fair negotiations for extra work, and diligent analysis in terms of entitlement and ownership of alleged delays and costs will be performed to monitor and control overall project costs. This will enable the NJDCA to make informed decisions on project fiscal issues.

### PROJECT TASKS

Michael Baker is very familiar with the individual tasks identified in the scope of work as they are very similar to the tasks under Work Order No. 3 - Flood Hazard Risk Reduction and Resiliency Grant Program. Our Team currently



has a system of handling and tracking all identified tasks in an organized and concise way that has been time tested for over four years.

#### TASK 1: DESIGN OVERSIGHT

Michael Baker understands this Work Order not only requires experienced knowledge of construction management, but also design. Without a thorough knowledge of the scope of work during the design phase, one cannot perform effective construction management. Under this Work Order there are seven projects that will require equal knowledge from the design phase through construction. As highlighted in our Project Experience, Michael Baker is skilled in performing independent cost estimates to analyze budgets prepared by the subrecipient's engineer consultant. In addition to project budgets, Michael Baker understands the design requirements for the seven projects identified under this Work Order. Our expertise will allow us to play an active role as required, to assist with value engineering of design alternatives to ensure budgets are met and solutions fulfill the project needs and required functions. Under this task, Michael Baker will closely monitor the following:

- Projects remain within eligible scope
- The design phase is proceeding per project and Master Schedule
- Permit, regulatory, and code compliance requirements are met
- Documents are ready for permit review by the DCA, DEP, Atlantic City and/or applicable regulatory agency
- Safety and security responsibilities are clear and appropriate in the contract documents

It is also understood that permitting will drive the final design schedule. Our permitting technical expert, Anne Napolitano, will review the permitting progress to verify that each subrecipient's engineer consultant is on track with submissions to ensure timely permits. Michael Baker will provide necessary oversight of the subrecipient's engineer consultant, requiring attendance at regularly scheduled design progress meetings. Formal memorandums will be prepared, and the master project schedule will be updated accordingly to accurately track each project's progress. Most importantly, these progress meetings will ensure the DCA stays informed of any potential critical issues or problems. Michael Baker will offer potential solutions to aid the DCA with any decision-making requirements to progress the projects to ensure a timely completion by June 2022.

#### **TASK 2: GENERAL REPORTING REQUIREMENTS**

The scope of work associated with Task 2 is nearly identical to activities Michael Baker is currently performing under Work Order No. 3 - Flood Hazard Risk Reduction and Resiliency Grant Program. Michael Baker has developed multiple tracking tools, checklists and handbook guides that can be used under this task. Michael Baker sees Task 2 as a critical path task with the goal of expediting the overall program. Providing timely reviews with proper record keeping matching pace with the local government contractor deliverable submission schedule is the key to successful grant management. Monthly reporting is one of the key communication methods for a consultant to keep an owner informed. The NJDCA Grant Manager is relying on the CMF to ensure that the project is meeting scope, schedule, and budget goals established for the project. Monthly progress reports will be submitted by the 15th of each month. The report will summarize in a clear concise manner the following:

- Invoices and change orders
- Meetings (coordination meetings and site meetings)
- Contract amendments
- Procurements (professional and construction)
- Progress reports including monthly Master Schedule updates (refer to Task 5 Master Project Schedule)
- Suggested modifications to individual projects and/or reallocation of funds within the Grant Program
- Project closeout

The Michael Baker Team is poised to provide an effective, uniform deliverable tracking system capable of handling multiple projects. The tracking system will provide overall monitoring of all procurements, amendments, invoices, change orders, coordination meetings, site visits, photo logs (for each site visit), monthly labor monitoring (including HUD-11s), Independent Cost Estimates (ICEs), project closeout and other deliverables requested for review by the NJDCA not specified in the RFP. Michael Baker will verify required contract specific deliverables are complete, accurate, and are being submitted in a timely fashion for the necessary technical reviews in order to avoid unwarranted project delays.

Michael Baker has developed two tracking spreadsheets in addition to the Master Project Schedule that will be submitted monthly. These spreadsheets were specially designed for Work Order No. 3 and have been well received by NJDEP and NJDCA and can be effectively utilized for this work order. The first tracking spreadsheet is called the "Monthly Status Update." This spreadsheet will have tabs for each project and track the items listed above. Michael Baker will include key dates when items are received and will involve daily e-mail logs as required. This has proven to be very beneficial for tracking progress and developing timelines for key project milestones. The second spreadsheet is entitled "Monthly Issues Update." Michael Baker developed this stand-alone tracking tool to document key issues that may arise and will indicate what the issue is, date it was initiated, impact to project, ball-in-court, tracking comments, and when the issue was resolved. Michael Baker has the technical staff with qualifications ready to support the task and meet the unpredictable "highs and lows" of the contractor submittal process. The tracking system will provide the NJDCA with clear and concise updates for every monthly progress update.

Michael Baker understands that each step in a project's life cycle requires unique forms and supporting documentation. We have developed a series of checklists for every step of the way. These



Michael Baker has developed a comprehensive COVID-19 Mitigation Plan which will be implemented for all construction management staff assigned to this project. Our plan will be periodically updated as conditions dictate. Michael Baker will also assist the contractor as necessary with development and implementation of a COVID-19 plan as part of its comprehensive, sitespecific Health and Safety Plan.

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checklists were utilized for Work Order No. 3 and can be easily transferred to this project for a seamless transition. The checklists developed include:

- Procurement packages (both professional and contractor)
- Invoice reviews
- Plans and specifications
- Independent Cost Estimates
- Closeout

Michael Baker will include a checklist with each review conducted which will be updated regularly as items are received. There is also a column to indicates where the forms can be found in SIROMS for easy access. Please refer to **Appendix A** for a sample checklist for a construction bid package. In addition to the checklists, Michael Baker has also developed handbooks for each step in a project's life cycle that include:

- Bid Package Preparation Handbooks (both professional and contractor)
- Preconstruction Conference (incl. Davis Bacon guide) Handbook
- Closeout Handbook

These handbooks are distributed early in the project to the subrecipients and their consultants and include not only the above-mentioned checklists, but all the blank forms as well for reference. Michael Baker found that distributing these handbooks early on will eliminate any surprises for the contractors and consultants as to what is expected for each bid package, invoice, change order, and closeout.

A key critical task for successfully managing the grant award projects for this Work Order will be record keeping. Michael Baker understands that all documents and records produced by the local government contractor or CMF are to be submitted to the Sandy Integrated Recovery Operations and Management System (SIROMS) FHRR Document Library. In addition to this mandatory tracking, Michael Baker offers more robust document management solutions as detailed above.

#### **TASK 3: PAYMENT REVIEW**

Michael Baker understands the local contractor is being administered by the municipality. However, NJDCA requires review of invoices above and beyond that performed by the municipality. Michael Baker has allotted time to review invoices associated with each project on a monthly basis for the task order duration. During this process, contractor invoices will be reviewed to:

- Verify that each payment is consistent with applicable federal, state, and local laws, and that there is no duplication of benefits, process and payment errors, waste, fraud, abuse, malfeasance, or mismanagement of funds.
- Verify that contract deliverables are provided within acceptable timeframes for the duration of the engagement.
- If weaknesses, gaps, or errors are detected, develop recommendations and strategies to ensure maximum federal recoveries, compliance with applicable laws, and prevention of associated risks.
- Verify that all invoices are complete (i.e. including all contract-required documentation), accurate, and have been uploaded to the SIROMS FHRRR Document Library.
- Report findings to NJDCA and DPMC Contracting Officer.

Initial invoice reviews are considered critical and will be completed promptly with comments returned to the City's grant management consultant within 2 days. Michael Baker has developed an "Invoice Checklist" under Work Order No. 3 (refer to Appendix B) that can be used to streamline the review process. In addition, Michael Baker shall assist the NJDCA in any disputes or negotiations with local government contractors as needed.

#### TASK 4: PROVIDE INDEPENDENT COST ESTIMATES (ICE)

The primary goal of Task 4 is to estimate costs and fees of local government contractor agreement amendments (change orders) at the request of the NJDCA. Performing independent cost estimates is a primary example of providing the proper checks and balances for the local government contractor. Michael Baker understands that certain complex issues often arise during construction served by considering multiple solutions or assumptions and sometimes require amendments to successfully complete a project.



#### LESSONS LEARNED

Michael Baker has learned from Work Order No. 3 that meticulous tracking and logging in of <u>ALL</u> correspondence including emails, submittals and other deliverables can pay big dividends.

On numerous occasions, Michael Baker was asked to create timelines for issues that arose with subrecipients and their agreement requirements. Our team was able to provide specific dates of actual e-mail notifications and responses for issues that began a year or two prior. These timelines were then used to support program requirements with subrecipients and ensure all the facts were straight.

This has been proven time and time again to be a critical reason that proper reporting requirements are followed to ensure a successful program. Michael Baker's New Jersey-licensed professional engineers have extensive experience preparing ICEs and know that requested ICEs must be completed with number of hours needed for each task, specifying pay grade, task allowances, hourly rates, and total costs for each. The Michael Baker Team is highly skilled in estimating the manhours required to complete change orders proposed by local government contractors as a result of our extensive Rebuild by Design project experience.

Michael Baker understands the importance of ICEs for evaluating local government contractor fee proposals since discrepancies between the two may result in negotiations with the local government contractor. Michael Baker is prepared to provide cost reasonable analyses should explanations be required for differences between the ICE and fee proposal.

Michael Baker's comprehensive life-cycle approach utilizes a standard process to develop estimates, tracking trends and historical indexes, analyzing bids, and assessing the risks and probability of high-impact events and their influence on cost. This includes maintaining relationships with local resources, including affiliations with contractors and construction associations. Michael Baker maintains a dedicated, multi-disciplined estimating staff, including Certified Construction Managers, cost engineers, and professional estimators. Our estimating staff includes Certified Construction Managers and Associate Value Specialists, as well as professionals affiliated with the American Society of Professional Estimators and the Association for the Advancement of Cost Engineering

Michael Baker's key technical staff includes Michael Yang (Structural/Foundations), Lori Wade (Drainage) and Mathew Ullestad (Traffic Signals), all of whom possess NJ Professional Engineering licenses. They will be called upon to assist with ICEs as needed to provide sound engineering advice and recommendations. Construction cost estimates will be verified by leveraging construction costs of similar projects throughout the state. Various databases have been developed by state agencies as well as RS Means Cost Estimating Software that maintains records of past construction bids. Michael Baker's estimators leverage these databases and national cost experiences to develop estimates that consider quantity, seasonal variations, market factors, and travel timing among others.

We understand that cost control is a very important component of project delivery. A design to cost approach will be applied correlating change order construction costs with available budget. Should deviations be observed, we will immediately alert and work with you to refine the design to work within the available funding. Michael Baker will perform cost reasonable analyses and explain any differences between ICEs and fee proposals. Standard procedures will be developed by Michael Baker to systematically review, analyze, and assess estimates. This procedure will include the development of technical independent estimates, constructability input, and management concurrence. The procedure will be formalized through project specific checklists submitted to the DPMC and NJDCA with the recommendations.

#### TASK 5: MASTER PROJECT SCHEDULE

The Michael Baker Team firmly believes that CPM schedules are an essential and powerful tool in completing a project on-time and within budget. The development of the Master Project Schedule is very dynamic, and the Michael Baker Team will help ensure the overall program's schedule path is clear of obstacles and optimizes the project delivery process to ensure all contracts are completed by June 2022 or earlier. Michael Baker will review the initial and final network schedules submitted by the project engineers for each project and, in concert with the City Engineer, make recommendations for acceptance, revision, or rejection by DCA. Our scheduler, Juan Uribe will evaluate project schedules for activity duration and compliance with the contract documents as they compare to key program milestone dates and fiscal expenditures.

Michael Baker is currently using a schedule that was specifically developed to track similar progress and fiscal expenditures for Work Order No. 3 (refer to Appendix C). This schedule will track not only the design phase through

the construction phase but will also include monthly/quarterly anticipated expenditures versus actual expenditures. This schedule can be easily reformatted with the seven proposed projects for a seamless transition into a working schedule. The Master Project Schedule is only part of driving the project. Accountability for project submittals and issue resolution must be diligently tracked and recorded to guard against delays and minimize the NJDCA's liability in the event of a claim.

#### TASK 6: STATEMENT OF ASSURANCES COMPLIANCE

Mary Sheehy of APTIM will lead this task for Statement of Assurances Compliance. For more than 40 years, our subconsultant APTIM has provided technical services for numerous CDBG-DR Federal programs including specialized compliance and monitoring, end-to-end policy development, training, and operational implementation. APTIM is familiar with HUD reporting and specific regulations including Davis-Bacon and Related Acts, Hatch Act, and Section 3. Recently, they provided Davis-Bacon monitoring services statewide to the Louisiana Association of Community Action Partnerships (LACAP) American Recovery and Reinvestment Act (ARRA) funded Weatherization Assistance Program. APTIM's leadership in developing and administering the first disaster recovery construction programs in the U.S. has produced many of the practices seen today. Having this rich history allows APTIM to navigate the complex regulatory requirements of HUD CDBG-DR federal programs.

APTIM has an extensive compliance toolbox containing regulatory, operational, and financial processes for use on CDBG-DR programs. These templates will help quick start program compliance. In addition, the firm also has indepth experience with CDBG-DR program phases including planning/initiation, execution, and closeout and is an industry leader in applying compliance measures to minimize cost, reduce risks, and optimize performance.

Michael Baker also understands that this task involves detailed record keeping and documentation. We are very familiar with SIROMS FHRRR Document Library System and the importance of maintaining accurate uploads.

#### TASK 7: MEETINGS AND CONFERENCE CALLS

Effective project management starts with good communication. Our approach to this work order is to ensure our key leadership stays "plugged in" into each of the seven projects. As such, Project Manager Peter Senus will attend all meetings, as appropriate. If required, Michael Baker will arrange conference calls and/or meetings with each local government contractor and municipality/county to discuss progress of the work, critical items affecting the schedule of the project, and change order disputes.

Michael Baker understands that it is our responsibility to prepare an agenda for certain meetings, conduct the proceedings, and prepare the meeting minutes for NJDCA and the entire AC Project Team following the standard meeting minutes format. At other meetings, Michael Baker will be present to document the meeting, document schedule changes, document budget alterations, and build the lessons learned document. Prior to these meetings and during regular project execution, Michael Baker will inform NJDCA of any meetings or correspondence with other agencies, government officials, and other stakeholder groups that may be required. Following meetings and at appropriate intervals, Michael Baker will prepare and subsequently update an Weekly To-Do-List that details pertinent activities and deliverables along with assigned responsibility that are critical to the advancement of the projects. This list will be distributed to all team members including NJDCA to clearly communicate project responsibilities and keep the projects on schedule.

#### TASK 8: PROJECT CLOSEOUT

Project Closeout is as important as the activities that occur while the project is in design and construction. Closeout starts with proper documentation that the punch list was completed by the contractor. Once verified, the following documents will be collected: as-built plans (w/ survey), Operation and Maintenance Manuals, maintenance bonds,

Contractor and Subcontractor Release(s) of Liens, Engineer/Consultant's Certification: For Acceptance and Final Payment, and any other documents required by the Grant Program. Michael Baker developed a "Closeout Handbook" for Work Order No. 3 that can be utilized similarly under this task to track the progress of each requirement and ensure all documents are received prior to the release of final retainage. In addition, we have found that distributing this Closeout Handbook early in the project's life cycle to the subrecipient's consultant grant manager is helpful in ensuring these items are obtained in a timely manner.

#### **QUALITY ASSURANCE / QUALITY CONTROL**

Michael Baker's takes Quality Control/Quality Assurance (QA/QC) seriously on all our projects. It is the backbone of how we do business. A project specific QA/QC plan will be developed for Work Order No. 15 based on past project experience and integrated into Michael Baker's comprehensive Project Management Plan. This effort will be led by Michael Yaffe, who has extensive experience on CMF 003 Work Order No. 12 and understands the importance of developing and implementing these plans. Mike will work directly with Peter Senus to monitor project performance, including conducting periodic audits of the project records. QA/QC forms will be utilized as an internal checking system for all major deliverables as identified in the tasks above.



### WHY CHOOSE THE MICHAEL BAKER TEAM?



The Michael Baker Team is well versed in the requirements of this Work Order due to our experience successfully administering CMF 003 Work Order No. 3 since 2016.



The DPMC will have access to a deep bench of local, multi-disciplinary resources that will efficiently and effectively deliver the seven projects identified—from design and permitting to construction and closeout.



The Michael Baker Team will leverage the tools we developed for Work Order No. 3 to ensure a seamless transition that enables us to hit the ground running.

#### **APPENDIX A – SAMPLE CONTRACTOR POST BID PACKAGE CHECKLIST**

#### Flood Hazard Risk Reduction, and Resiliency (FHRRR)

Grant Program Prime Contractor Past Bid Package Checklist Project Location.

| Projec | t Name: |
|--------|---------|
|        |         |
| Name   |         |

Date

| Bid Package   | Yes | No | N/A | SIROM S Folder   | Uploaded into<br>SIROMS (YES/NO) | Comments                |
|---|-----|----|-----|--|----------------------------------|-------------------------|
| FORM #1 - General Contractor's Schedule of Small, Women's,  |     |    |     |  |                                  |                         |
| Minority.<br>and Veteran Dwned Business Enterprise Utilization Worksheet<br>Sandy CDBG-DR Economic Revitalization   |     |    |     | Bid/S-W-M-V-BE Utilization   |                                  |                         |
| FORM #2 - Verification of Contractor Eligibility  |     |    |     | Bid/Suspension/Debarment   |                                  |                         |
| FORM #3 - Notice of Contract Award (Signed Contract between<br>Prime Contractor and Subrecipient)   |     |    |     | Bid/Notice of Contract Award   |                                  |                         |
| FORM 44 - Certification of Subrecipient and General Contractor<br>Affirmative Action/ EEO/ Section 3/ Prevailing Wage SWMVBEs<br>Addendum to Construction and Bid Documents |     |    |     | Bid/Affirmative Action Certification                                   |                                  |                         |
| Documentation effort made to advertise to SWIMVBE qualified<br>contractors.   |     |    |     | Bid/Bid Requests   |                                  |                         |
| Sample #1 - A dvertisement for Bids   |     |    |     | Bid/Bid Requests   |                                  |                         |
| Evidence of method Bid Request was publicized (i.e. Public Notice<br>Advertisement Affidavit)   |     |    |     | Bid/Bid Requests   |                                  |                         |
| Sample #2 - Information for Bidders   |     |    |     | Bid/Bid Requests   |                                  |                         |
| Sample #3 - Bid Bond  |     |    |     | Bid/Bid Requests   |                                  |                         |
| Sample #4 - Bidder Qualifications   |     |    |     | Bid/Bid Requests   |                                  |                         |
| FORM #5 – HUD 4720 Project Wage Rate Sheet.   | н.  |    | Ц   | Project Wage Rate Sheet  |                                  |                         |
| FORM #6 - AA Form 1 – Initial Construction Project Workforce<br>Manning Report  |     |    |     | Labor Monitoring/Monthly Project<br>Workforce Report                   |                                  |                         |
| New Jersey Public Works Contractor Registration & NJ Business<br>Registration Certific ale  |     |    |     | Bid/Submitted Bids Packages  |                                  |                         |
| FORM #8 – Ownership Disclosure Form   |     |    |     | Bid/Ownership Disclosure   |                                  |                         |
| FDRM #9 – Disclosure of Investigation and other actions involving<br>Bidder Form  |     |    |     | Bid/Disclosure of Investigation  |                                  |                         |
| FORM #10 - Disclosure of Investment Activities in Iran  |     |    |     | Bid/Distlosure of Investment   |                                  |                         |
| Blank   |     |    |     | Actionics  |                                  | 2<br>2<br>              |
| FORM #12 - Anti-Lobbying Certification  |     |    |     | Contract Management/Anti-Lobbying<br>Certification                     |                                  |                         |
| FORM #13 - AIA G703 or Similar - 1992 Continuation Sheet<br>Contract Schedule of Values   |     |    |     | Contract Management/Schedule of<br>Values                              |                                  | <u>`</u>                |
| FORM #14 - HUD-50070 Certification for a Drug-free Workplace  |     |    |     | Contract Management/Drug-Free<br>Workmane                              |                                  |                         |
| Sample #5 - Certificates of Insurance   |     |    |     | Contract Management/Liability  |                                  |                         |
| Sample #6 - Performance B onds  |     |    |     | Insurance<br>Contract Management/Performance                           |                                  |                         |
| Sample #7 - Payment Bond  |     |    |     | Contract Management/Payment Bond                                       |                                  | 7                       |
| Sample #8 - Certificate of Owner's Attorney   |     |    |     | Contract Management/Certification of                                   |                                  |                         |
| Sample #9 - Notice to Proceed   |     |    |     | Construction Management/Notice of                                      |                                  |                         |
| FORM #15 - Certification Regarding Equal Employment   | п   |    |     | Contract Award<br>EEO/EEO Certification                                |                                  |                         |
| Opportunity<br>FORM #16 - SWIMVBE Monthly Contract & Subcontract Activity   | -   | -  | -   | FEOKSMORE  |                                  | Provide Quarterly       |
| Report (Quarterly)<br>FORM #17 - WH-347 - U.S. Department of Labor Payroli (OMB   |     | -  | -   | Leton Menderine  |                                  | Provide Monthly         |
| No. 1235-0008) (Weekly)   |     | -  | -   | Labor Monitoring   |                                  | Demide Monthly          |
| FORM #18 - WH-348 - Statement of Compliance   |     |    |     | Labor Monitoring   |                                  | Provide Monthly         |
| FORM #19 - Monthly Project worklorde Report   |     |    |     | Caust Monitoring   |                                  |                         |
| FORM #20 - HOD 4010 (Freibid -Subredgrein to sign only)   | -   |    |     | Section 3/Section 3/Hilitration Plan                                   |                                  |                         |
|   |     | _  | -   | Section 3/Certification of Bidder                                      |                                  |                         |
| FORM #23 - Certification of Bidder Regarding Section 3 and<br>Segregated Facilities   |     |    |     | Regarding Section 3 and Segregated<br>Facilities                       | a)                               |                         |
| FORM #24 - Section 3 Certification for Subrecipients Receiving<br>More than \$100,000   |     |    |     | Section 3/Section 3 Certification SUB<br>Receiving More Than \$100,000 |                                  |                         |
| FORM #25 - Section 3 Resident Certification Form  |     |    |     | Section 3/Section 3 Resident<br>Certification Form                     |                                  |                         |
| FORM #26 - Section 3 Quaterly Report (Quarterly)  |     |    |     | Section 3/Section 3 Utilization Plan                                   |                                  | Provide Quarterly       |
| FORM #30 - Pre-Construction Meeting   |     |    |     | Construction Management/Pre-<br>Construction Meeting                   |                                  |                         |
| Attachment M - HUD 4010   |     |    |     | NA   |                                  |                         |
| Attachment O - Performance Standards and Guarantees   |     |    |     | NA   |                                  |                         |
| Attachment P- Debarment & Suspension C ertification   |     |    |     | Bid/Suspension-Debarment   |                                  |                         |
| Statement of Assurances - Contractor Version  |     |    |     | NA   |                                  |                         |
| Conflict of Interest Statement (Preparer)   |     |    |     | ŇĂ   |                                  |                         |
| Non-Collusion Affidavit (Preparer)  |     |    |     | NA   |                                  |                         |
| Blank   |     |    |     |  | -                                |                         |
| Contract (Signed) with Subrecipient   | п   |    |     | Bid/Notice of Contract Award   |                                  | ******** See Note****** |
| And a second  |     | -  |     |  |                                  |                         |

#### **APPENDIX B – SAMPLE CONTRACTOR INVOICE REVIEW CHECKLIST**

Flood Hazard Risk Reduction, and Resiliency (FHRRR)

#### Grant Program

|         | ALL DESCRIPTION OF THE PARTY OF |           |
|---------|--|-----------|
| Invoice | Package  | Checklist |

Project Location:

Comment

| Name:   |     |    |     |  | Date:  |
|---|-----|----|-----|--|--|
| Subrecipient Agreement  | Yes | No | N/A | SIROMS File Location   |  |
| Cover Letter  |     |    |     |  |  |
| NJDEP Payment Voucher   |     |    |     | Construction Management / CDBG<br>Invoices with Supporting<br>Documents    |  |
| 347/348 (CPRs) w/##Pay Stubs  |     |    |     | Labor Monitoring / WH-347  | **Pay stubs needed for first invoid<br>invoice 347s, they will not be requ |
| Union & Cash Fringe Back-Up   |     |    |     | Labor Monitoring / WH-347  |  |
| Wage Rates  |     |    |     | Labor Monitoring / WH-347  |  |
| Pay Application used between Subrecipient<br>and Contractor                                       |     |    |     | Construction Management /<br>Borough Payments in Support of<br>the Project |  |
| Cancelled Check/Electronic Wire Proof<br>from Subrecipient and Contractor for<br>previous Invoice |     |    |     | Construction Management /<br>Cancelled Check                               |  |
| Schedule of Values (Schedule K):  |     |    |     | 2  |  |

Project Name:

| Cover Letter  | <br> |  |  |
|---|------|--|--|
| NJDEP Payment Voucher   |      | Construction Management / CDBG<br>Invoices with Supporting<br>Documents    |  |
| 347/348 (CPRs) w/**Pay Stubs  |      | Labor Monitoring / WH-347  | **Pay stubs needed for first invoice from Contractor/Subs. Once paystubs are received and verified against first<br>invoice 347s, they will not be required again unless determined necessary. |
| Union & Cash Fringe Back-Up   |      | Labor Monitoring / WH-347  |  |
| Wage Rates  |      | Labor Monitoring / WH-347  |  |
| Pay Application used between Subrecipient<br>and Contractor                                       |      | Construction Management /<br>Borough Payments in Support of<br>the Project |  |
| Cancelled Check/Electronic Wire Proof<br>from Subrecipient and Contractor for<br>previous Invoice |      | Construction Management /<br>Cancelled Check                               |  |
| Schedule of Values (Schedule K);  |      |  |  |
| Stored Material Tracking (If Applicable)  |      |  |  |
| Engineer's Certificate No. 1 (Attachment L);  |      |  |  |
| Request for Information (RFI) Log   |      |  |  |
| Submittal Log   |      |  |  |
| Material backup documentation   |      |  |  |
| Monthly Inspection Summary reports  |      |  |  |
| Contractor's Form AA-202  |      | Labor Monitoring / Monthly Project<br>Workforce Report                     |  |
| HUD 11s   |      | Labor Monitoring / HUD 11 -<br>Record of Employee Interview                |  |
| Contractor's Form #16 SWMVBE<br>Contract & Subcontract Activity Report X<br>Quarter 2020          |      |  |  |
| Contractor's Form #26 Section 3<br>Utilization Plan for the X Quarter 2020                        |      |  |  |
| Contractor's letter authorizing signatory for<br>CPRs   |      | Labor Monitoring / WH-347  | Ensure this was obtained prior to first invoice and filed in SIROMS.   |

#### **APPENDIX C – SAMPLE MASTER PROJECT SCHEDULE**

#### GRANT FUND MASTER SCHEDULE AND EXPENDITURE FORECAST CMF-003; W0 #3, DA01 - 2nd Round Projects Flood Hazard Risk Reduction & Resilience Grant Program DPMC #J0334-00 (Baker PN 154451)

|  | JUL AUG SEPT | OCT NOV DEC | JAN FEB MIAR | APR MAY JUN    | JUL AUG SEPT   | OCT NOV DEC    | LAN FEB MAR    | APR MAY IJN                           | JUL AUG SEPT   | OCT NOV DEC  | IAN FEB MAR  | APR MAY JUN | JUL. AUG SEPT | 1                      |                              |                           |                |
|--|--------------|-------------|--------------|----------------|----------------|----------------|----------------|---------------------------------------|----------------|--------------|--------------|-------------|---------------|------------------------|------------------------------|---------------------------|----------------|
| Project  | Q3 2019      | Q4 2019     | Q1 2020      | Q2 2020        | Q3 2020        | Q4 2020        | Q1 2021        | Q2 2021                               | Q3 2021        | Q4 2021      | Q1 2022      | QZ 2022     | Q3 20 22      | Driginal Approved Cost | Projected/Revised Cost       | Total Involced<br>To Date | Balance        |
| North Wildwood   |              |             |              |                | 1              |                |                |                                       |                |              |              |             |               | \$9,933,638.00         | \$9,933,538.00               | er sond er sond sond      |                |
| \$ Actual Expenditures                                 |              |             |              | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                                | \$0.0D         | \$0.00       | \$0.00       | \$0.00      |               |                        |                              | \$0.00                    | -9,933,638,00  |
| \$ Forecasted Expenditures                             |              |             |              | \$0.00         | \$993,363.80   | \$2,235,068.55 | 53,017,342.54  | \$2,397,111.02                        | \$968,064.07   | \$25B,150.42 | \$5B,083.84  | \$6,453.76  |               |                        |                              |                           | 9,933,638.00   |
| Activities (Permitting, easements, Construction, etc.) | Design Phase |             | Bid          |                |                |                |                | Construction                          | n TED          |              |              |             | Close Out     |                        |                              |                           |                |
| * Overall Construction % Complete                      |              |             |              |                | 10%            | 25%            | 45%            | 65%                                   | 75%            | 80%          | 90%          | 100%        |               |                        |                              | er some let som se i some |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
| Wildwood   |              |             |              |                |                |                |                |                                       |                |              |              |             |               | \$12,352,557.50        | \$15,000,000.00              |                           |                |
| \$ Actual Expenditures                                 | \$0.00       | \$0.00      | \$0.00       | 51.152.480.00  | \$564,715.20   | \$0.00         | \$0.00         | \$0.00                                | \$0.00         |              |              |             |               | 1                      | 1                            | \$1,717,195 2D            | -13.282.804.80 |
| \$ Forecasted Expenditures                             | \$0.00       | \$0.00      | \$750,000.00 | \$1,425,000.00 | \$3,847,500.00 | \$4,488,750.00 | \$3,366,562.50 | \$897,750.00                          | \$224,437.50   |              | 0            |             |               |                        |                              |                           | 15,000,000.00  |
| Activities (Permitting, easements, Construction, etc.) | Bid          |             |              |                |                | Cons           | truction       |                                       |                | Close Out    |              |             |               |                        |                              |                           |                |
| * Overall Construction % Complete                      |              |             | 5%           | 30%            | 30%            | 50%            | 7.5%           | 80%                                   | 100%           |              |              |             |               |                        |                              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
| Stone Harbor   |              |             |              |                |                |                |                |                                       |                |              |              | 1           |               | \$2,703,804.50         | \$2,703,804.50               |                           |                |
| \$ Actual Expenditures                                 | \$0.00       | \$0.00      | \$0.00       | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                                | 50.00          | \$0.00       | \$0.00       | \$0.00      |               | and the second second  |                              | \$0.00                    | -2,703,804.50  |
| \$ Forecasted Expenditures                             | \$0.00       | \$0.00      | \$0.00       | \$0.00         | \$0.00         | \$270,380.45   | \$486,684.81   | \$584,021.77                          | \$545,086.99   | \$449,696.76 | \$275,950.29 | \$91,983,43 |               |                        | A conservation of the second |                           | 2,703,804.50   |
| Activities (Permitting, easements, Construction, etc.) | 2            |             | Design Phase | 1              | 1              | Bid            |                |                                       | Construction   |              |              |             | Close Out     | 1                      |                              |                           |                |
| * Overall Construction % Complete                      |              |             |              |                |                | 10%            | 20%            | 30%                                   | 40%            | 55%          | 75%          | 100%        |               | 1                      |                              | C 2000 C 200 C 2000 C     |                |
|  |              |             |              | **             |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
|  | 2            |             |              |                |                |                |                |                                       |                |              | £            |             |               |                        |                              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              | 2            | 1           |               |                        |                              | 1                         |                |
| ·  |              |             |              |                |                |                |                | 1                                     |                |              |              |             |               |                        |                              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
|  |              | 1           | -            |                |                |                |                |                                       |                |              |              |             |               |                        |                              |                           |                |
|  | 1            |             |              | L              | 1.             |                | 1              |                                       | ,              | Totals       |              |             |               | \$25,000,000,00        | \$27,637,442,50              |                           |                |
|  |              |             |              |                |                |                |                |                                       |                |              |              | -           | <u>.</u>      | 100,000,000,000        |                              |                           |                |
|  |              |             |              | a              | [              | a              |                | · · · · · · · · · · · · · · · · · · · |                | 12 C         |              |             |               |                        |                              |                           |                |
| QUARTERLY FORECASTED TOTALS                            | \$0.00       | \$0.00      | \$750,000.00 | \$1,425,000.00 | \$4,840,863.80 | \$6,994,199.00 | \$6,870,589.85 | \$3,878,882.79                        | \$1,737,588.55 | \$707,847.18 | \$334,034.13 | \$98,437.19 | \$0.00        | \$27,637,442.50        | ]                            |                           |                |
| QUARTERLY ACTUAL TOTALS                                | \$0.00       | \$0.00      | \$0.00       | \$1,152,480.00 | \$564,715.20   | \$0.00         | \$0.00         | \$0.00                                | \$0.00         | \$0.00       | \$0.00       | \$0.00      | \$0.00        | \$1,717,195.20         | 2                            |                           |                |

\* Note: Projected Construction % Complete in Dark Blue





#### CMF SERVICES FEE PROPOSAL ATLANTIC CITY RESILIENCE PROGRAM

THIS FEE PROPOSAL TO BE RETURNED IN A SEPARATELY SEALED ENVELOPE TO: DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION 33 WEST STATE STREET, 9TH FLOOR., PLAN ROOM P.O. Box 034 Trenton, NJ 08625-0034 Attention: Caitlin Murphy 
 Date: September 29, 2020

 PROJECT #:
 J0334-00

 WORK ORDER #:
 15

#### THIS PROPOSAL DUE DATE, NO LATER THAN 2:00 PM,

FIRM NAME: Michael Baker International, Inc.

THE UNDERSIGNED PROPOSES TO PROVIDE ALL PROFESSIONAL SERVICES REQUIRED IN THE SCOPE OF WORK AND THE IDIQ TERM CONTRACT CMF-003 AGREEMENT BETWEEN THE STATE OF NEW JERSEY AND THE CMF.

| SUB-TOTAL CMF TASK/LABOR/FEE SHEET - Tasks 1 -5  | \$<br>589,286.00   |
|--|--------------------|
| SUB-TOTAL CMF TASK/LABOR/FEE SHEET - Tasks 6 - 8 | \$<br>310,523.00   |
| TOTAL NOT TO EXCEED (NTE) FEE FOR CMF SERVICES   | \$<br>899,809.00   |
| REPRODUCTION ALLOWANCE                           | \$<br>2,000        |
| TRAVEL   | \$<br>3,000        |
|  | \$                 |
|  | \$                 |
| TOTAL WORK ORDER NTE AMOUNT                      | \$<br>\$904,809.00 |

THE LEVELS AND CORRESPONDING HOURLY RATES INCLUDED IN THIS WORK ORDER PROPOSAL WILL BE FOR THE BASE PERIOD OF TERM CONTRACT CMF 003. WORK ORDER PROPOSAL GOOD FOR 60 DAYS AFTER THE DUE DATE.

SIGNATURE

Magdy Hagag, Senior Vice President TITLE

> By: PS Ck: MP

#### CMF TASK/LABOR/FEE SHEET FIRM: Michael Baker International, Inc.

`

#### Project # J0334-00; Work Order# 15 Project Name: ATLANTIC CITY RESILIENCE PROGRAM

| PROJECT                               | CMF's LEVEL OF EFFORT IN HOURS/FEE |            |              |              |              |             |         |         |              |  |  |
|---------------------------------------|------------------------------------|------------|--------------|--------------|--------------|-------------|---------|---------|--------------|--|--|
| PHASE OR                              | LEVEL                              | 7          | 6            | 5            | 4            | 3           | 2       | 1       | PER TASK     |  |  |
| TASK                                  | *HOURLY                            |            |              |              |              |             |         |         | HOURS        |  |  |
|                                       | RATE                               | \$225.00   | \$197.00     | \$167.00     | \$152.00     | \$123.00    | \$78.00 | \$64.00 | \$ AMOUNT    |  |  |
| Task 1                                | HOURS                              | 0          | 98           | 28           | 294          | 0           | 0       | 0       | 420          |  |  |
| Design Oversight                      | AMOUNT                             | \$0.00     | \$19,306.00  | \$4,676.00   | \$44,688.00  | \$0.00      | \$0.00  | \$0.00  | \$68,670.00  |  |  |
| Task 2                                | HOURS                              | 22         | 264          | 0            | 352          | 352         | 0       | 0       | 990          |  |  |
| General Reporting Requirements        | AMOUNT                             | \$4,950.00 | \$52,008.00  | \$0.00       | \$53,504.00  | \$43,296.00 | \$0.00  | \$0.00  | \$153,758.00 |  |  |
| Task 3                                | HOURS                              | 0          | 288          | 0            | 1152         | 0           | 0       | 0       | 1440         |  |  |
| Payment Review                        | AMOUNT                             | \$0.00     | \$56,736.00  | \$0.00       | \$175,104.00 | \$0.00      | \$0.00  | \$0.00  | \$231,840.00 |  |  |
| Task 4                                | HOURS                              | 0          | 84           | 112          | 448          | 0           | 0       | 0       | 644          |  |  |
| Provide Independent Cost<br>Estimates | AMOUNT                             | \$0.00     | \$16,548.00  | \$18,704.00  | \$68,096.00  | \$0.00      | \$0.00  | \$0.00  | \$103,348.00 |  |  |
| Task 5                                | HOURS                              | 0          | 62           | 0            | 128          | 0           | 0       | 0       | 190          |  |  |
| Master Project Schedule               | AMOUNT                             | \$0.00     | \$12,214.00  | \$0.00       | \$19,456.00  | \$0.00      | \$0.00  | \$0.00  | \$31,670.00  |  |  |
|                                       | HOURS                              | 22         | 796          | 140          | 2374         | 352         | 0       | 0       |              |  |  |
| NOT TO EXCEED TOTALS                  | AMOUNT                             | \$4,950.00 | \$156,812.00 | \$23,380.00  | \$360,848.00 | \$43,296.00 | \$0.00  | \$0.00  | \$           |  |  |
|                                       |                                    |            |              | 3684         |              |             |         |         |              |  |  |
|                                       |                                    |            |              | \$589,286.00 |              |             |         |         |              |  |  |

### CMF TASK/LABOR/FEE SHEET FIRM: Michael Baker International, Inc.

#### Project # J0334-00; Work Order# 15 Project Name: ATLANTIC CITY RESILIENCE PROGRAM

| PROJECT                              |         | _        | CMI         | s LEVEL OF E                                | FFORT IN HOL | JRS/FEE  |         | -       | TOTALS       |  |  |  |
|--------------------------------------|---------|----------|-------------|---|--------------|----------|---------|---------|--------------|--|--|--|
| PHASE OR                             | LEVEL   | 7        | 6           | 5   | 4            | 3        | 2       | 1       | PER TASK     |  |  |  |
| TASK                                 | *HOURLY |          |             |   |              |          |         |         | HOURS        |  |  |  |
|                                      | RATE    | \$225.00 | \$197.00    | \$167.00                                    | \$152.00     | \$123.00 | \$78.00 | \$64.00 | \$ AMOUNT    |  |  |  |
| Task 6                               | HOURS   | 0        | 0           | 288   | 576          | 0        | 0       | 0       | 864          |  |  |  |
| Statement of Assurance<br>Compliance | AMOUNT  | \$0.00   | \$0.00      | \$48,096.00                                 | \$87,552.00  | \$0.00   | \$0.00  | \$0.00  | \$135,648.00 |  |  |  |
| Task 7                               | HOURS   | 0        | 199         | 0   | 456          | 0        | 0       | 0       | 655          |  |  |  |
| Meetings and Conference Calls        | AMOUNT  | \$0.00   | \$39,203.00 | \$0.00                                      | \$69,312.00  | \$0.00   | \$0.00  | \$0.00  | \$108,515.00 |  |  |  |
| **Task 8                             | HOURS   | 0        | 56          | 0   | 364          | 0        | 0       | 0       | 420          |  |  |  |
| Project Closeout                     | AMOUNT  | \$0.00   | \$11,032.00 | \$0.00                                      | \$55,328.00  | \$0.00   | \$0.00  | \$0.00  | \$66,360.00  |  |  |  |
|                                      | HOURS   | 0        | 0           | 0   | 0            | 0        | 0       | 0       | 0            |  |  |  |
|                                      | AMOUNT  | \$0.00   | \$0.00      | \$0.00                                      | \$0.00       | \$0.00   | \$0.00  | \$0.00  | \$0.00       |  |  |  |
|                                      | HOURS   | 0        | 255         | 288   | 1396         | 0        | 0       | 0       |              |  |  |  |
| NOT TO EXCEED TOTALS                 | AMOUNT  | \$0.00   | \$50,235.00 | \$48,096.00                                 | \$212,192.00 | \$0.00   | \$0.00  | \$0.00  |              |  |  |  |
|                                      |         |          |             | 1939  |              |          |         |         |              |  |  |  |
|                                      |         |          |             | SUB-TOTAL CMF SERVICES - Tasks 6 - 8 AMOUNT |              |          |         |         |              |  |  |  |

\*\*Please note that the tasks were renumbered to match the Scope of Services tasks identified in the RFP. Since there was no "Contract Modification" task, it was removed and the "Project Closeout" task was renumbered to Task 8.