MICHELS®
CONSTRUCTION, INC.

Barton Dam Right Embankment Remediation Project

RFP #24-03
City of Ann Arbor, MI
March 7, 2024

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MICHELS®
817 Main Street, PO 128 | Brownsville, WI 53933
920.583.3132 | www.michels.us

March 7, 2024 | **RFP# 24-03**

Project: Barton Dam Right Embankment Remediation Project

City of Ann Arbor
Procurement Unit
301 E. Huron Street
Ann Arbor, MI 48104

Dear Selection Committee,

Michels is pleased to provide a proposal response for the Barton Dam Right Embankment Remediation Project. Our team has completed an in-depth review of the information provided. Throughout our response to this request, Michels will demonstrate our ability, extensive experience, technical capabilities, and innovation delivered on projects of similar complexity, scope and size. ***Through early collaboration with the City of Ann Arbor, Michels will better identify costs, enhance our ability to help manage project risks, and keep the project on schedule.***

Michels provides safe, reliable solutions for projects across the U.S. Our team of engineers and constructors understand project specific goals, thoroughly evaluate soil and site conditions, and develop cost-effective solutions on our client's most challenging projects. Our infrastructure division focuses on large public and private projects with the ability to improve safety, quality of life, and economic opportunities through federal and civil construction projects. Our team supports United States and allied governments and agencies on transportation, marine, mass excavation, and mass concrete projects. Depending on a project's goals, we self-perform work or partner with local and diverse subcontractors.

Teamwork and communication are the foundation of all successful projects. The complexity of the construction challenges of this project requires a team that not only understands these issues, social impacts, and local sensitivity, but one that is routinely contracted to plan and execute projects of similar size, scope, and complexity across North America and internationally. Our Team's existing relationships, experience, commitment to teamwork, collaboration, innovation, and the professional fortitude developed within the individual team members' cultures provide the ability and depth to come together, commit local resources, and hit the ground running immediately upon receipt of Notice to Proceed.

MICHELS FAMILY OF COMPANY STATS

1959
Founded in

#32
ENR Top 400 Contractors 2023

8,000
Dedicated Team Members

18,000
Pieces of Equipment

50+
Offices Worldwide

Safety is the Cornerstone of Our Culture

0.59
EMR

The Benefits of Partnering with Michels

The success of any project requires the entire project team to come together as a single entity in a collaborative and transparent partnership – working towards a common goal, sharing, and owning project risks, and developing innovative solutions that address project needs and promote a project first approach. This is not a new concept to Michels, but a routine approach to the way we manage similar complex projects daily. ***Before we build a project, we build relationships, and we build trust. Once these key components are in place, strong performance follows.*** We understand the commitment, dedication, long hours, and strong relationships, both personal and professional, necessary to execute and deliver this project. Our team has not only been built based on experience on similar projects, but also on previous professional working relationships that bind the technical qualifications together, creating a successful world class team with each member contributing their strengths to the project.

In closing, the Michels Team thanks you for the opportunity and looks forward to partnering with the City of Ann Arbor on this critical project. If any questions arise, or clarification is required, on any aspect of this response, please contact me directly at 920.539.4436 or by email at ejustman@michels.us

Sincerely,

Eric Justman
President
Michels Construction, Inc.
920.539.4436
ejustman@michels.us

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Section A

Qualifications, Experience & Accountability

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*Blue text denotes questions asked by the owner to guide the reader through the document.

Company Overview

1. *Qualifications and experience of the bidder and of key persons, management, and supervisory personnel to be assigned by the bidder.*

The Michels Family of Companies is a collection of wholly owned infrastructure and energy companies providing comprehensive contracting solutions under the Michels brand. All members of the Michels Family of Companies are united by shared Core Values, quality standards, and a world-class reputation upheld since Michels inception. The Michels Family of Companies allows each company to specialize in their own area while also allowing them to come together as **a single Michels entity to bring the most innovative, cost effective, and risk adverse approach to every project.** Michels is uniquely positioned and able to combine the collective strengths of our employees, heavy equipment, and extensive experience into one team that can manage and construct projects from planning to completion. **With more than 8,000 employees, 46 offices and yards across North America, and more than 18,000 pieces of equipment,** Michels can ensure that, in addition to our current workload, we have the ability, capacity, and resources to accomplish the project within the City of Ann Arbor's required schedule.

Meet Our Team

The Michels Team has intentionally assembled the Barton Dam Right Embankment Team while keeping project goals at the forefront. Michels has selected an integrated team of highly qualified and experienced individuals for the Michels Team. Collectively, the Michels Team features industry-leading design and construction expertise and proven experience from successful deliveries of relevant past projects. Below is the selected Michels Team Key Personnel along with a brief professional biography.

Eric Justman – Technical Advisor: With more than 20 years of experience, Eric is responsible for the development of short and long-term strategies and plans for assigned divisions based on business goals and growth objectives. He ensures that all groups meet or exceed their performance expectations, following company policies and procedures, to meet established gross profit goals. Eric works to identify and secure new business opportunities.

Jim Black – Technical Advisor: Jim has more than three decades of industry experience, with a focus on estimating. He joined Michels in 2008 as a Bid Manager before rising to his current position of Senior Manager of Estimating. For this project Jim will serve as a Technical Advisor, working with the project team to ensure the project stays on-budget and other tasks as necessary. Jim brings a wealth of knowledge and experience to any project, particularly Alternative Delivery projects. He has a plethora of experience working with/on USACE projects and is an invaluable member to this team.

John Israel – Technical Advisor: John has nearly two decades of industry experience in various facets of the heavy construction industry. He has a proven track record of delivering work on-time and under budget with strong safety and quality records. John brings a great deal of management experience in the operations, project controls, engineering, client relations, and contract management aspects of a project. John has extensive experience working with multiple delivery models such as: DB, EPC, CMGC, P3, and traditional low-bid. John will utilize his extensive knowledge and experience to lead this highly seasoned project team, ensuring a completion satisfactory to the project stakeholders.

Bob Martin, P.E. – Project Manager: Bob has almost 45 years of experience in construction and engineering, 22 years spent in the United States Air Force as a civil engineer. Bob has constructed storm water pump stations along the Mississippi and Missouri Rivers and is adept at managing multiple large projects simultaneously. He has a proven track record for building team and client relationships, works with clients for ultimate customer satisfaction, and completing projects on time and within budget. Bob will be responsible for the team's overall performance, including subcontractors, schedule establishment, submittal, site safety, and overall health of the project.

Harsh Baghel – Project Engineer: Harsh brings nearly a decade of industry experience, having joined Michels in 2021 as a Project Engineer. Prior to joining Michels, Harsh worked as a Pipe Engineer and Assistant Project Manager, allowing him to gain valuable insight into multiple facets of the industry. Since joining Michels, Harsh has been involved with multiple projects of similar size and complexity to this remediation project. For this project, Harsh will be assisting with estimating, implementing safety and QA/QC plans, tracking materials and subcontractor progress, as well as any other tasks as assigned.

Rick Schweda – Superintendent: Joining Michels in 2021, Rick has over a decade of experience leading projects from an operational level. Leading multiple projects simultaneously, Rick has a wealth of experience he can, and will, utilize on this remediation project. Rick has experience with estimating, coordinating subcontractor activities, assisting with the development and implementation of a quality control plan, managing field crews, and coordinating materials and resources as necessary. Rick will utilize his experience and expertise to deliver a safe, efficient project in conjunction with the overall Project Team.

Phillip Clouse – Schedule Manager: Phillip has more than 31 years of industry experience, much of that time spent as a scheduler. He has worked on multiple projects over $500 million. His projects have included the private and public sectors, and customers include the federal government (USACE, USAF, DOT, FAA, etc.). Phillip has extensive experience working through earned value reports utilizing scheduling software (P6, Tilos).

Brian Wierzbicki – Safety Manager: Brian has more than three decades of experience as a safety professional. He channeled that expertise to the Marine Construction and Dredging industry as the Midwest Director overseeing daily operations of Safety Coordinators assigned to his area. At Michels, he has managed the health, safety, and environmental programs for two USACE projects. Brian will be responsible for developing and implementing the project-specific safety plan, policies, and procedures, identifying hazards and mitigation measures, conducting safety training for all workers including new employees and subcontractors, performing safety audits, and coordinating with regulatory agencies to ensure compliance with all relevant safety regulations.

Roye Pelletier - Quality Control Manager: Roye is a Quality Management/Quality Control Representative with more than 15 years of experience within the construction industry, refining his commitment to the construction of long-lasting and safe infrastructure. Roye is passionate about providing opportunities for others in their personal and professional development and has helped with the management of the Quality Assurance and Quality Control program for all Pipeline Division projects with Michels. Roye is effective in turning over completed projects by meeting or exceeding customer expectations in performance and life cycle costs.

Damon Brattset – Environmental Manager: Committed to compliant and sustainable project execution, Damon has more than three decades of industry experience in compliance management and oversight. Damon joined Michels in 2017. He specializes in construction inspection and auditing, estimation, environmental due diligence, dredging and marine permitting and assessment, and overall regulatory compliance.

See **Appendix A** for additional information on the Michels Team.

2. *References from individuals or entities the bidder has worked for within the last five (5) years including information regarding records of performance and job site cooperation.*

Previous Experience

Michels has a vast amount of experience providing projects with strategically assembled teams capable of performing each specialized scope at the highest level. Below, are references from individuals and entities that Michels has provided with superior quality, uniform values, and streamlined communication and contracts within the last five years. Contractor Performance Assessment Reports for the appropriate projects can be found in **Appendix B**.

Boardman River Dam Removal and River Restoration

Traverse City, MI
Project Location

May 2018
Completion Date

USACE – Detroit District
Owner

Alec Higgins
313.938.6619
alec.d.higgins@usace.army.mil
Owner Representative

Michels was the general contractor on a project involving the removal of an earthen dam, restoring approximately two miles of river channel and flood plain to its native condition, removing a 100-year-old powerhouse and bridge, and constructing and paving a road. The majority of the work was completed in hilly terrain with low flooded flats where channel and flood plain were excavated. In all, 350,000 yards of material was excavated and transported by off-road haul trucks through wet and muddy conditions to new locations along the project route. Following the lowering of the impounded water, a roughly 1.5-mile-long access road needed to be built through the project to continue working along the river.

River route reconstruction included working with the engineer to identify and excavate to the native channel bottom, reconstructing the channel bed by placing a rock bottom made of cobble-size rock and boulders, working with a subcontractor to build log jams and log structures to protect banks from erosion, and assisting a subcontractor with recreation of riverbank and flood plain vegetation.

Mobilization was impacted by a one-lane, 10-ton bridge at the laydown yard that was later demolished and replaced with a 450-foot, two-lane road. Controlled dewatering impacted the rate at which the channel could be excavated.

The community was heavily involved with this project through its Implementation Team, which consisted of the Grand Traverse band of Ottawa and Chippewa Indians, Grand Traverse County, Conservation Resource Alliance, DNR, DEQ, and EPA. Michels assisted on-site with fish rescue during the dewatering process.

Figure 1: Aerial view of the Boardman Dam Removal and Remediation Project in Traverse City, MI.

To remove the dam, Michels built a siphon system to dewater the impound before orchestrating the controlled breach of the dam through a constructed spillway. The siphon system consisted of 14 30-inch HDPE pipes each spanning 300 feet from the flooded impoundment over the earthen dam to the newly constructed river channel. The siphon system is one of the largest to be constructed in North America, dewatering at 180,000 gallons per minute. The spillway consisted of articulated concrete block mats to reinforce the channel.

Savannah Marsh Restoration and Harbor Expansion

Savannah, GA
Project Location

August 2022
Completion Date

USACE – Savannah District
Owner

Todd McGalliard
912.652.6152
todd.f.mcgalliard@usace.army.mil
Owner Representative

Savannah Harbor is in Savannah, Chatham County on the northern coast of Georgia and the southern coast of Jasper County, South Carolina. The land is owned and operated by the U.S. Fish and Wildlife Service. The project was located within a designated area on Onslow Island. Michels was the Prime Contractor for work that included a complete restoration of approximately 29 acres of brackish marsh. Excavation of material and creation of feeder creeks enabled tidal connectivity on the site, and to tie into adjacent bodies of water. The project included the installation and removal of silt fence and other erosion control measures, clearing and grubbing, marsh restoration and feeder creek excavation, as well as removal/disposal of excavated materials from the site.

Additional, incidental work established vegetation across the face of the slopes. Savannah River channel dredging operations were ongoing during this contract and commercial or Government contractor vessel traffic near the project site during the construction period required coordination. The location of excavated material disposal was coordinated by the Government to include disposal in the Government's upland dredged material containment areas located along the Back River and in-water disposal in the Sediment Basin area of the Back River. Wetlands restoration offers protection for migratory birds, and maintains tidal freshwater wetlands, an important natural resource for numerous species living there, including the endangered Shortnose and Atlantic Sturgeons spawning habitats.

Figure 2: Aerial view of the Savannah Harbor Expansion and Marsh Restoration.

Pender Logan Right Bank

Pender, NE
Project Location

November 2020
Completion Date

USACE – Omaha District
Owner

MAJ Aaron H. Ellinger
402.971.9118
aaron.h.ellinger@usace.army.mil
Owner Representative

Michels repaired damage caused by flooding along Logan Creek in March 2019. The project included channel slope repair and protection, and repairs to interior drainage structures. Work performed consisted of clearing existing flood debris and existing vegetation along the channel bank. Michels was responsible for replacing four interior drainage structures. The existing drainage structure timber pile bents were removed, and new bent structures were constructed on the new channel slope. The existing flap gates were salvaged and replaced on the relocated drainage structures.

Michels restored the channel bank to a constant slope along the entire length of the floodwall. The constant slope was achieved by excavating portions of the slope that currently extend into the channel and by filling portions of the bank where erosion had cut the channel below the constant slope. In addition, Michels placed riprap along the entire restored slope. The riprap had to be placed over geotextile. A layer of seeded soil and erosion control mat was then placed over the riprap. Riprap at the discharge end of the interior drainage structures had to be grouted. A riprap buttress was placed on the channel side of the sheet pile wall.

Figure 3: Pender Logan Right Bank Project in Pender, NE.

North Mill Creek Channel Restoration

Antioch, IL
Project Location

July 2019
Completion Date

Lake County Forest Preserve
Owner

Leslie Berns
847.968.3293
lberns@LCFPD.org
Owner Representative

Michels performed heavy civil work and restored approximately 8,400 feet of the North Mill Creek channel. An earthen dam was removed, and a channel flow bypass was installed. A total of 92,100 cubic yards of material was excavated. The terrain was challenging, as there was no stable ground close to the excavation areas to support equipment. Multiple temporary access routes were constructed using mats to allow equipment mobilization. In-channel habitat features, such as wood toe structures, floodplain wood structures were installed fabric as well encapsulated soil (FES) lifts.

Figure 4: North Mill Creek Channel Restoration Project in Antioch, IL.

FES lifts are biodegradable fabrics that are stacked up the bank to create the desired slope, and then seeded. Stabilized banks help reduce soil erosion in the creek and protect the natural habitat.

Quality

1. *Evidence of any quality control program used by the bidder and the results of any such program on the bidder's previous projects.*

As identified by our Core Values, Michels reputation is largely built on our ability to build complex infrastructure safely, efficiently, without rework and with no harm to the environment, which is conveyed in our separately attached quality control plan (included in our project QHSE plan).

Michels has an in-house Quality Department that is staffed with a core group of highly qualified professionals who are committed to quality. They are Subject Matter Experts (SMEs) in their specific disciplines, cross-trained, and possess certifications in their respective disciplines. While each of these personnel maintains an elevated certification in at least one discipline, they all have additional certifications, and extensive construction experience. All communicate well with other members of the Quality group, availing each to the combined composite knowledge and experience of the entire group.

Michels Quality Department is responsible for all aspects of Michels Quality Assurance and Quality Control obligations on a project. The Quality Assurance group provides the training, tools, and techniques to achieve the quality expectations in accordance with project specifications and standards. Quality Control activities focus on inspecting, auditing, and confirming that the quality requirements are being consistently fulfilled and auditing the construction activities to ensure the integrity and continual improvement of work processes and conformance. Michels strives to continually improve the effectiveness, efficiency and repeatability in which projects are delivered, with concentration on turning over completed projects meeting or exceeding customer expectations in performance and life cycle costs. If additional Quality Assurance measures are needed from our team, we will gladly discuss and revisit.

Prior to the start of the project a Quality Manager from the Quality Department will be assigned to the project. At the field level quality is everyone’s responsibility from each of the laborers on the project on up to the project sponsors. This is communicated to our staff constantly. If anyone on the project sees anything that does not meet the project’s specifications, he or she has the right to stop work and bring the issue to his or her supervisor. Michels planning process has been developed to ensure the work is executed right the first time.

Michels is currently working on the MTA East Side Access – Eastbound Re-Route CH058B Project (CH058B) located within the Harold Interlocking - the busiest railroad interlocking in North America. The project was awarded as “Railway Track and Structures Top Project of 2023” after the team demonstrated a proven record of excellence from the start. This included a project specific Quality Management Plan that was initially created and approved by the Owner in the preconstruction phase. Since the implementation of this plan, Quality Assurance goals have been met throughout this project by the application of the following:

- Self-inspection through proper training and understanding of contract requirements.
- Detailed work plans for each major construction activity.
- Evaluation of subcontractors and suppliers’ capabilities and performance.
- Timely reporting of quality issues with analysis and proposed action plans.

While it is still ongoing, the CH058B Project is planned to be completed by August 2024. More details of the Quality Management Plan used during this project are in **Appendix C.**

See the Michels Quality Management Plan in **Appendix D.**

Subcontracting

2. *A statement from the bidder as to any major subcontractors it expects to engage including the name, work, and amount.*

Michels Construction, Inc. typically self-performs the construction activities it undertakes, and will not have key subcontractors that perform more than 10% of the scope of work. Certain work, such as right-of-way clearing, fencing, landscaping, testing/commissioning, helicopter support, etc. are performed more efficiently and cost-effectively by firms specializing in those services and/or that are based near the project site. Michels has relationships established with highly qualified subcontractors, all of which are/have been subject to a prequalification process that evaluates several factors, including insurance, safety and environmental records, and financial stability.

Every employee at Michels continually seeks ways to improve the quality of life for our people and the communities in which we are entrusted to work. Michels actively supports local, regional, and national charitable organizations in the communities we serve throughout North America. As good corporate citizens, it is our responsibility to help the communities in which we live and work. Upon request, we would be more than happy to provide the Michels 2022 Corporate Sustainability Report.

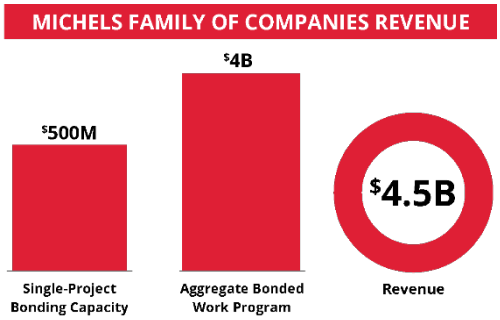
Figure 5: Scan to view Michels Corporate Sustainability Report

Subcontractor Management

Michels has a stringent subcontractor/subconsultant and vendor pre-qualifications process that companies wishing to participate in the project must meet. This includes a detailed review of the financial stability of the company, health and safety records, safety program, etc. All subcontractors and vendors (as necessary) are required to adhere to Michels' strict corporate safety, environmental, and project-specific requirements. Subs and vendors will be included in our overall project specific Communication Plan and in any required site-specific training. Subcontractors are also required to attend our weekly progress meetings. Vendors with long lead time items are also required to call into weekly progress meetings to update our team on agreed-upon delivery schedules.

Financial

Michels has a reputation for steady, successful growth across all the different business sectors within the Michels Family of Companies. Below, are Michels financial figures to properly convey our financial stability and capacity to execute our portion of this project.



As a family-owned and operated business for more than 60 years, we hold our financial information in the utmost confidentiality. If additional financial information is required, please reach out to Boris Veleusic. See attached Bid Bond in **Appendix E**.

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Section B

Workplace Safety

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Safety

1. *Provide a copy of the bidder's safety program, and evidence of a safety-training program for employees addressing potential hazards of the proposed job site. Bidder must identify a designated qualified safety representative responsible for bidder's safety program who serves as a contact for safety related matters.*

Since its inception in 1959, Michels Corporation has been a family-owned and operated company, and we are proud of the fact that we continue to operate with these strong family values to this day.

Michels would like to begin by emphasizing our commitment and dedication to health, safety, environmental, quality management and subcontractor management. These are the foundational pieces of our robust culture and industry-renowned reputation. Creating a strong safety culture takes years of dedication and commitment from leadership and crew members alike. We understand that our culture determines our performance and to have continuous positive performance, Michels must constantly focus on culture.

To empower our employees and keep safety personal, we have intertwined the following themes into our HSE framework on every project:

- **Stop Work Promise** / **Stop Work Authority** – If at any time, an individual feels uncomfortable with their ability to safely complete work or sees work that is or appears to be unsafe, they are encouraged to speak up and use their Stop Work Promise.

- **Accountability** – Holding people accountable for following the Michels' (Michels and all Third-Party Stakeholders) HSE Program, regardless of position or authority. Integrity is a core value of Michels.

- **Make Safety Personal** – We developed and implemented the Michels Promise Me, Mi-Promises, and the My VIP & Me safety campaigns to focus on safety 24/7 at work and at home. The internationally recognized safety campaigns, in which employees and employees' loved ones (i.e. spouses/significant others, children and parents) were filmed imploring their VIPs (Very Important People) to promise them that they would work safely and speak up if an unsafe condition/situation arose, so that they could return home to them, continues to have a profound impact on Michels employees, and has been shared-with and shared by customers to improve the overall safety culture across the industries in which we work. The basic premise of the campaign is to encourage our people (subcontractors and service providers included) to make a personal promise and commitment to their loved ones to work safely, speak-up when they recognize anything that may be unsafe or hazardous, and above all else, to make it home to their families/loved ones at the end of the day.

- **Behavior-Based Safety & Error Reduction Focus** – The implementation of the Human Performance Improvement (HPI) Program, which recognizes employees who actively identify and correct at-risk and undesired behaviors (human errors), for reporting near hits and good catches, and using the Stop Work Promise.

The Michels family is dedicated to the continuous pursuit of excellence in our safety, environmental, and quality performance, practices, and responsibility. As such, the Michels family and leadership team fully support the resources dedicated to ensuring our teams are working safely and are held accountable for their personal safety and that of those around them. We

assign HSE Professionals to the projects as per risk assessment and/or customer requirement(s), and we are confident in our team's qualifications, experience, and ability. In addition to those HSE Professionals at the work location, Michels employs more than 170 HSE Professionals with a wide range of expertise who are available as a resource to support our operations anytime they are needed.

For the Barton Dam Right Embankment Remediation Project, Michels proposes **Brian Wierzbicki** as the Designated Qualified Safety Representative. As mentioned above in our Key Personnel Section, Brian has more than three decades of experience as a safety professional developing and implementing the project-specific safety plan, policies, and procedures, identifying hazards and mitigation measures, conducting safety training, performing safety audits, and coordinating with regulatory agencies to ensure compliance with all relevant safety regulations. Additional information for Brian can be found in **Appendix A.**

Michels recognizes the importance of having a safety-training program for potential hazards of this and any jobsite. In **Appendix F**, Michels has a provided our general Hazard Recognition and Assessment Training Program, that shall be tailored upon Notice of Award.

Due to the large size of our Health, Safety & Environmental Manual (roughly 400 pages) and the requirement to provide a copy, we are unable to supply a full copy of our Health, Safety & Environmental Manual, instead please find in **Appendix G**, a copy of the cover page and table of contents from our manual. Please feel free to reach out if you require a full copy.

2. *Provide the bidder's Experience Modification Rating ("EMR") for the last three consecutive years. Preference within this criterion will be given to an EMR of 1.0 or less based on a three-year average.*

Year	EMR Rating
2024	.59
2023	.58
2022	.59

3. *Evidence that all craft labor that will be employed by the bidder for the project has, or will have prior to project commencement, completed at least an authorized 10- hour OSHA Construction Safety Course.*

Upon award and prior to project commencement, Michels Construction, Inc. will ensure all craft labor employed for the Barton Dam Right Embankment Project will complete a 10-Hour OSHA Construction Safety Course for the Barton Dam High Embankment Project.

4. *For the last three years provide a copy of any documented violations and the bidder's corrective actions as a result of inspections conducted by the Michigan Occupational Safety & Health Administration (MIOSHA), U.S. Department of Labor - Occupational Safety and Health Administration (OSHA), or any other applicable safety agency.*

Michels Construction, Inc. has not had any violations or corrective actions required as a result of inspections conducted by the Michigan Occupational Safety & Health Administration (MIOSHA), U.S. Department of Labor - Occupational Safety and Health Administration (OSHA), or any other applicable safety agency.

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Section C

Workforce Development

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Workforce Development

1. Documentation as to bidder's pay rates, health insurance, pension or other retirement benefits, paid leave, or other fringe benefits to its employees.

For documentation of Michels pay rates, health insurance, pension/retirement benefits, paid leave, or other fringe benefits to employees, see the Benefits and Compensation excerpt from the 2024 Employee Handbook in **Appendix H**.

2. Documentation that the bidder participates in a Registered Apprenticeship Program that is registered with the United States Department of Labor Office of Apprenticeship or by a State Apprenticeship Agency recognized by the USDOL Office of Apprenticeship. USDOL apprenticeship agreements shall be disclosed to the City in the solicitation response.

Michels Construction, Inc. is nationally signatory with the following Labor Unions, and participates in their Registered Apprenticeship Programs:

- IW 25
- OPCMIA 514
- IUOE 324
- LIUNA 499

Please see Apprenticeship Program Certificates in **Appendix I.**

3. Bidders shall disclose the number of non-craft employees who will work on the project on a 1099 basis, and the bidders shall be awarded points based on their relative reliance on 1099 work arrangements with more points assigned to companies with fewer 1099 arrangements. Bidders will acknowledge that the City may ask them to produce payroll records at points during the project to verify compliance with this section.

For the Baton Dam Embankment Project, there will be no non-craft employees working on a 1099 basis.

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Section D

Social Equity & Sustainability

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Social Equity and Sustainability

1. A statement from the bidder as to what percentage of its workforce resides in the City of Ann Arbor and in Washtenaw County, Michigan. The City will consider in evaluating which bids best serve its interests, the extent to which responsible and qualified bidders employ individuals in either the city or the county. Washtenaw County jurisdiction is prioritized for evaluation purposes for this solicitation.

At this time, approximately 0% the workforce resides in the City of Ann Arbor and Washtenaw County, Michigan. However, this percentage is subject to change at any given time. Michels currently has more than 120 employees who reside and work in the state of Michigan.

2. Evidence of Equal Employment Opportunity Programs for minorities, women, veterans, returning citizens, and small businesses.

Michels implements equal employment opportunity programs for minorities, women, veterans, returning citizens, and small businesses. For more information, see EEO/AA Policy in **Appendix J**.

3. Evidence that the bidder is an equal opportunity employer and does not discriminate on the basis of race, sex, pregnancy, age, religion, national origin, marital status, sexual orientation, gender identity or expression, height, weight, or disability.

Michels is an equal opportunity employer and does not discriminate on the basis of race, sex, pregnancy, age, religion, national origin, marital status, sexual orientation, gender identity or expression, height, weight, or disability. For more information, see EEO/AA Policy in **Appendix J**.

4. The bidder's proposed use of sustainable products, technologies, or practices for the project, which reduce the impact on human health and the environment, including raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and waste management.

Michels Construction, Inc. is committed to good corporate citizenship and environmental leadership for a healthy environment. Michels is committed to providing our customers with safe, reliable and responsive construction services in an environmentally responsible manner.

Michels strives for natural resource protection on all projects and promotes environmental initiatives beyond regulatory requirements. Michels believes that our commitment to the environment benefits our customers, our shareholders, and the communities in which we serve.

5. The bidder's environmental record, including findings of violations and penalties imposed by government agencies.

Michels Construction, Inc. has not had findings of violations and penalties imposed by government agencies.

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Section E

Schedule of Pricing/Cost

Section F

Authorized Negotiator

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E. SCHEDULE OF PRICING/COST – 20 POINTS

Barton Dam
Right Embankment
Remediation

Base Bid Form

The City of Ann Arbor is issuing this request for Proposals to qualified contractors to perform earth work and other improvements associated with the Barton Dam Right Embankment Remediation project. The work area is located between Barton Pond and the Barton Nature Area Parking Area. The proposed project will entail the construction of an earthen buttress on the right embankment as well as other site improvements including widening of the existing underpass access path, replacement of the existing underpass canopy, adding a trail along the toe of the dam's right embankment, replacement of the existing stairway to the dam crest, removal of the existing reverse filter at the site, filling of the existing toe drain pond, and ***potentially*** excavation of earth near the canoe launch. This compensatory cut, ***near the canoe launch may be*** needed to offset the fill placed within the floodplain. Any items required for a complete project that are not included in the following table shall be assumed to be incidental.

Name of Bidder: Michels Construction, Inc.

Item No.	Description	Units	Quantity	Unit Cost	Total Cost
1	General Conditions, Bonds, Insurance.	LS	1	$316,605.00	$316,605.00
2	Mobilization and Demobilization	LS	1	$411,836.00	$411,836.00
3	Install, Maintain, and Remove SESC	LS	1	$262,370.00	$262,370.00
~~4~~	~~Chemical Grouting at TD-23 and TD-43~~ ~~Subcontractor:~~ _____ ~~(Estimated Quantity for Bidding Purposes)~~ Item Removed	GAL	~~50~~ 0	-	-
~~5~~	~~Install Cementitious Grout Holes at TD-23 and TD-43~~ ~~Subcontractor:~~ _____ ~~(Estimated Quantity for Bidding Purposes)~~ Item Removed	EA	~~80~~ 0	-	-
~~6~~	~~Cementitious Grouting at TD-23 and TD-43~~ ~~Subcontractor:~~ _____ ~~(Estimated Quantity for Bidding Purposes)~~ Item Removed	CF	~~120~~ 0	-	-

Item No.	Description	Units	Quantity	Unit Cost	Total Cost
7	Site Preparation: Signage and Traffic Control, Clearing and Grubbing, Install, Maintain, and Remove Temporary Haul Route, Relocation of Emergency Stockpiles of Sand and Gravel. Demolish: Wooden Fence along Huron River, Remnant Collector Ditch Weir Posts, Steel C-Channel Toe Drain ID Posts, Block Wall and Geosynthetic Reinforcing Near TD-39, and Aggregate Ballast Upslope of TD-39, etc.	LS	1	$1,315,105.00	$1,315,105.00
8	Underpass Widening: Remove Existing Pavement, Canopy, Railing, and Gabions, Prepare Subgrade, Install Modular Block Wall, Place Backfill and Temporary Surface Course on Underpass.	LS	1	$141,285.00	$141,285.00
9	Remove and Replace Existing Retaining Wall North of Underpass	LS	1	$42,590.00	$42,590.00
10	Strip Topsoil and Raise Grade of the Right Embankment Crest to Elevation 802.0 feet.	CY	630	$88.00	$55,440.00
11	Reverse Filter Dewatering	LS	1	$554,680.00	$554,680.00
12	Remove Reverse Filter and Backfill. Excavation shall be closed on same day it is opened.	TON	1300	$337.00	$438,100.00
13	Topsoil Stripping at the Stabilization Berm	ACRES	2.1	$12,030.00	$25,263.00
14	Excavation to Reach Subgrade of Granular Filter and Removal and Replacement of Unsuitable Soils at the Stabilization Berm, including required cuts to achieve the proposed subgrade elevation at the Stabilization Berm (Estimated Quantity for Bidding Purposes). Excavation shall be closed on same day it is opened.	TON	2000	$130.00	$260,000.00
15	Dewater the Collector Ditch Pond and Surrounding Ground	LS	1	$239,140.00	$239,140.00
16	Remove and Replace Unsuitable Soils from the Collector Ditch Pond (Estimated Quantity for Bidding Purposes)	TON	3200	$152.00	$486,400.00
17	Fill the Collector Ditch Pond with Engineered Fill	LS	1	$79,235.00	$79,235.00

Item No.	Description	Units	Quantity	Unit Cost	Total Cost
18	Realign and Construct the Collector Ditch. Remove, Relocate, and Replace the Existing Culvert. Abandon the existing headwall and construct headwalls for the relocated culvert.	LS	1	$972,590.00	$972,590.00
19	Provide dewatering for collector ditch abandonment and general dewatering as necessary	LS	1	$191,290.00	$191,290.00
20	Inspect and Abandon Toe Drains TD-12 through TD-59.	LS	1	$97,750.00	$97,750.00
21	Place and Compact MDOT 2NS Fine Aggregate for the Stabilization Berm and Granular Filter Above and Below the Mineral Drain	CY	~~**4900**~~ 5400	$160.00	$864,000.00
22	Place and Compact MDOT 17A Coarse Aggregate for the Mineral Drain	CY	4000	$199.00	$796,000.00
23	Place and Compact MDOT Class II Granular Fill for the Stabilization Berm	CY	~~**6300**~~ 6000	$128.00	$768,000.00
24	Place Topsoil on the Stabilization Berm	CY	~~**1400**~~ 2500	$51.00	$127,500.00
25	Demolish Existing Piezometer Surface Monuments. Raise Existing Piezometers and Install Locking Monuments. Install Overland Discharge of Artesian Flow at PZ-3. Install Underdrain (Perforated and Solid-Wall), Including Cleanouts, T Inspections, and Surface Monuments	LS	1	$109,055.00	$109,055.00
26	Construct the Permanent Access Path and Improve Existing Path Areas South of the Underpass and North of the Underpass	LS	1	$47,740.00	$47,740.00
27	Remove and Replace Stairway and Guard Railing atop the Adjacent Spillway Retaining Wall	LS	1	$62,070.00	$62,070.00
28	Remove Temporary Surface Course and Construct Final Pavement at Underpass. Replace Access Path Canopy and Railing	LS	1	$150,680.00	$150,680.00
~~29~~	~~Excavate and dispose of soils for compensatory cut~~ – **Moved to Additional Optional Bid Items**	~~LS~~	~~1~~	-	-

Item No.	Description	Units	Quantity	Unit Cost	Total Cost
30	Revegetation of the Work Area and Final Site Restoration, including repairs to Border-to-Border Path. Fill Ruts in the Existing Site Access Road and the Barton Nature Area Parking Lot.	LS	1	$29,486.00	$29,486.00
31	Miscellaneous Allowance (to be used at the Owner's discretion)	LS	1	$ 75,000.00	$ 75,000.00
32	Permitting and Associated Requirements Allowance (permit fees and other charges paid directly to permitting agencies)	LS	1	$ 95,000.00	$ 95,000.00
33	Allowance for Additional FERC Requirements	LS	1	$ 100,000.00	$ 100,000.00
34	***Allowance for*** Purchase of Wetland Credits per EGLE	LS	1	$ 225,000.00	$ 225,000.00
35	Project Closeout	LS	1	$8,245.00	$8,245.00
36	Administrative Compliance with CWIFP, AIS, Davis Bacon, Certified Payroll and Other Regulatory Reporting.	LS	1	$8,245.00	$8,245.00

ADDITIONAL OPTIONAL BID ITEMS [1]

Optional Item No.	Description	Units	Quantity	Unit Cost	Total Cost
A1	Between Underpass and Spillway: Remove Existing Gabions, Prepare Subgrade, Install Modular Block Wall, and Place Backfill	FEET	142	$1,095.00	$155,490.00
A2	In lieu of A1, between Underpass and Spillway: Remove Existing Gabions, Prepare Subgrade, Install new gabion baskets and Place Backfill	FEET	142	$1,390.00	$197,380.00
A3	***Excavate and dispose of soils for compensatory cut***	***LS***	***1***	$67,090.00	$67,090.00
A4[2]	***Provide an alternate cost for Bid Item No. 8 if the modular block wall elements along the Huron River beneath the railroad underpass are replaced with gabion baskets[2]***	***LS***	***1***	$234,370.00	$234,370.00

[1] To be executed at the direction of the Owner.

[2] Provide a complete cost, not a deduct or add cost.

The bid items identified above include the major items of work anticipated for the project. Detailed requirements for each element of the project are presented on the contract drawings.

Total Base Bid (Items 1 through 36) $ 9,355,700.00

Total Base Bid (Written)
Nine Million Three Hundred Fifty-Five Thousand Seven Hundred and 00/100 Dollars

Proposed Work Start Date 9-3-2024

Total bid amount shall be shown in both words and numbers. In case of discrepancies, the amount shown in words shall govern.

Signature of Bidder J. Black Date 3-7-2024

Notice to Bidders:

1. Bids must be for all work elements and must have each blank space of the bid form completed.
2. The Owner reserves the right to waive any informality in any Bid, to reject any Bid, to reject all bids and to delete any part of the above items.
3. The bidder acknowledges that quantities provided are estimates and are not guaranteed and are solely for the purpose of bid comparison. Final payment for all unit price items will be based on the actual quantities. No minimum or maximum quantities are guaranteed by the Owner.
4. The Contractor is responsible for verification of all Bid quantities and to report to the Owner's Representative any discrepancies found prior to ordering materials or equipment for construction.
5. The bidder hereby certifies it has carefully examined the contract documents (including geotechnical data) provided by the Owner for bidding purposes and finds them compatible with the work requirements.
6. The bidder declares it has familiarized itself with the location of the proposed work and site conditions.
7. The foregoing unit prices shall include all applicable Federal, State and Local Taxes.
8. ***The bidder acknowledges the interim completion date for completion of the underpass widening work elements by March 31, 2025.***

Bidder must sign below that he/she has read and understood all addendums related to this project. Failure to acknowledge any addendum issued may disqualify the Bidder.

Addendum No.	Addendum Date	Signature of Bidder
1	2-15-2024	J. Black
2	2-23-2024	J. Black

F. AUTHORIZED NEGOTIATOR / NEGOTIATIBLE ELEMENTS (ALTERNATES)

Include the name, phone number, and e-mail address of persons(s) in your organization authorized to negotiate the agreement with the City.

Authorized Negotiator

Name: Jim Black

Title: Assistant Secretary

Phone Number: 920-539-3405

Email Address: JiBlack@michels.us

MICHELS®
CONSTRUCTION, INC.

Section G

Proposal Submission Attachments

WE DO THAT ... & **MORE**

Following Addendum 2, the required attachments have been signed by an authorized representative of Michels Construction, Inc. and appended to this proposal.

Attachment	Attachment Name
Attachment B	General Declarations
Attachment C	Legal Status of Bidder
Attachment D	Prevailing Wage Declaration of Compliance Form
Attachment E	Living Wage Ordinance Declaration of Compliance Form
Attachment G	Vendor Conflict of Interest Disclosure Form
Attachment H	Non-Discrimination Ordinance Declaration of Compliance Form
Attachment L	Federal Debarment Certification Form
Attachment Y	Attachment 1 - Certification of Lobbying
	Attachment 2 - Certification Regarding Debarment, Suspension and other Responsibility Matters
	Attachment 3 - SAM Record Search

CONSENT RESOLUTION OF
THE BOARD OF DIRECTORS OF
MICHELS CONSTRUCTION, INC.

JUNE 5, 2023

The undersigned, being all of the Directors of MICHELS CONSTRUCTION, INC., a Delaware corporation (the "Corporation"), pursuant to Section 141(f) of the General Corporation Law of the State of Delaware, do hereby consent to the following acts taken without a meeting:

ELECTION OF OFFICERS

RESOLVED: that the following are elected the officers of the Corporation until the next annual meeting of the Board of Directors, until their respective successors have been elected and have qualified, or until his or her death, resignation or removal:

President	Eric Justman
Vice President – US Foundations Operations	Josh Senk
Treasurer	Eric Justman
Secretary	Michael Weckman
General Manager – West Coast	Lance Rasband
Vice President – Marine Operations	Luke Ploessl
General Manager – Industrial Operations	Peter Wykhuis
Vice President – Infrastructure Operations	David Brummel
Assistant Secretary	Jill La Ronge
Assistant Secretary	Eric DeGroot
Assistant Secretary	Amy Diels
Assistant Secretary	Alissa DeWar
Assistant Secretary	Steven J. Nelson
Assistant Secretary	Daniel T. Plume
Assistant Secretary	Mathew Ricci
Assistant Secretary	Erik Schoneberger
Assistant Secretary	Cody Buerger
Assistant Secretary	Tyler Protiva
Assistant Secretary	Jim Black

[Signature Page Follows]

Dated at Brownsville, Wisconsin, as of the date above written.

DIRECTORS:

DocuSigned by:
Alissa DeWar
D3EFE40FE9AE4B6...
Alissa DeWar

DocuSigned by:
Dan Gellings
B3BFDE764F8B4BB...
Dan Gellings

DocuSigned by:
Jack Westerman
8EA3AB2B2FAB47E...
Jack Westerman

DocuSign

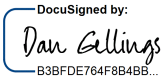
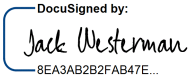
Certificate Of Completion

Envelope Id: 4AE4D131D9A84188A4B9E8DAE7677A0E
Status: Completed
Subject: Complete with DocuSign: Consent Resolution of MCI BoD - Election of Officers - Updated June 202...
Label:
Source Envelope:
Document Pages: 2
Signatures: 3
Certificate Pages: 2
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-06:00) Central Time (US & Canada)

Envelope Originator:
Michael Weckman
817 Main street
Brownsville, WI 53006
mweckman@michels.us
IP Address: 67.53.90.42

Record Tracking

Status: Original
6/7/2023 1:57:53 PM
Holder: Michael Weckman
mweckman@michels.us
Location: DocuSign

Signer Events	Signature	Timestamp
Alissa DeWar adewar@michels.us Security Level: Email, Account Authentication (None)	DocuSigned by:  D3EFE40FE9AE4B6... Signature Adoption: Pre-selected Style Using IP Address: 67.52.43.226	Sent: 6/7/2023 1:59:57 PM Viewed: 6/7/2023 3:17:32 PM Signed: 6/7/2023 3:18:20 PM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Dan Gellings dgelling@michels.us Security Level: Email, Account Authentication (None)	DocuSigned by:  B3BFDE764F8B4BB... Signature Adoption: Pre-selected Style Using IP Address: 173.87.233.160 Signed using mobile	Sent: 6/7/2023 1:59:58 PM Viewed: 6/9/2023 4:02:38 PM Signed: 6/9/2023 4:02:55 PM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		
Jack Westerman JWESTERM@michels.us Security Level: Email, Account Authentication (None)	DocuSigned by:  8EA3AB2B2FAB47E... Signature Adoption: Pre-selected Style Using IP Address: 64.250.103.233	Sent: 6/7/2023 1:59:58 PM Viewed: 6/7/2023 8:22:20 PM Signed: 6/7/2023 8:22:55 PM
Electronic Record and Signature Disclosure: Not Offered via DocuSign		

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	6/7/2023 1:59:59 PM
Certified Delivered	Security Checked	6/7/2023 8:22:20 PM
Signing Complete	Security Checked	6/7/2023 8:22:55 PM
Completed	Security Checked	6/9/2023 4:02:55 PM

Payment Events	Status	Timestamps

ATTACHMENT B
GENERAL DECLARATIONS

City of Ann Arbor
Guy C. Larcom Municipal Building
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including City Nondiscrimination requirements and Declaration of Compliance Form, Living Wage requirements and Declaration of Compliance Form, Prevailing Wage requirements and Declaration of Compliance Form, Vendor Conflict of Interest Form, Notice of Pre-Bid Conference, General Information, Bid, Bid Forms, Contract, Bond Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and the Plans (if applicable) and understands them. The Bidder declares that it conducted a full investigation at the site and of the work proposed and is fully informed as to the nature of the work and the conditions relating to the work's performance. The Bidder also declares that it has extensive experience in successfully completing projects similar to this one.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

The undersigned proposes to perform all work shown on the plans or described in the bid documents, including any addenda issued, and to furnish all necessary machinery, tools, apparatus, and other means of construction to do all the work, furnish all the materials, and complete the work in strict accordance with all terms of the Contract of which this Bid is one part.

In accordance with these bid documents, and Addenda numbered __2___, the undersigned, as Bidder, proposes to perform at the sites in and/or around Ann Arbor, Michigan, all the work included herein for the amounts set forth in the Bid Forms.

The Bidder declares that it has become fully familiar with the liquidated damage clauses for completion times and for compliance with City Code Chapter 112, understands and agrees that the liquidated damages are for the non-quantifiable aspects of non-compliance and do not cover actual damages that may be shown and agrees that if awarded the Contract, all liquidated damage clauses form part of the Contract.

The Bidder declares that it has become fully familiar with the provisions of Chapter 14, Section 1:320 (Prevailing wages) and Chapter 23 (Living Wage) of the Code of the City of Ann Arbor and that it understands and agrees to comply, to the extent applicable to employees providing services to the City under this Contract, with the wage and reporting requirements stated in the City Code provisions cited. Bidder certifies that the statements contained in the City Prevailing Wage and Living Wage Declaration of Compliance Forms are true and correct. Bidder further agrees that the cited provisions of Chapter 14 and Chapter 23 form a part of this Contract.

The Bidder declares that it has become familiar with the City Conflict of Interest Disclosure Form and certifies that the statement contained therein is true and correct.

The Bidder encloses a certified check or Bid Bond in the amount of 5% of the total of the Bid Price. The Bidder agrees both to contract for the work and to furnish the necessary Bonds and insurance documentation within 10 days after being notified of the acceptance of the Bid.

If this Bid is accepted by the City and the Bidder fails to contract and furnish the required Bonds and insurance documentation within 10 days after being notified of the acceptance of this Bid, then the Bidder shall be considered to have abandoned the Contract and the certified check or Bid Bond accompanying this Bid shall become due and payable to the City.

If the Bidder enters into the Contract in accordance with this Bid, or if this Bid is rejected, then the accompanying check or Bid Bond shall be returned to the Bidder.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

SIGNED THIS 07 DAY OF March, 2024.

Michels Construction, Inc. Bidder's Name	J. Black Authorized Signature of Bidder
817 Main Street, Brownsville, WI 53006 Official Address	James Black (Print Name of Signer Above)
920.539.4305 Telephone Number	jiblack@michels.us Email Address for Award Notice

ATTACHMENT C
LEGAL STATUS OF BIDDER

(The bidder shall fill out the appropriate form and strike out the other three.)

Bidder declares that it is:

* A corporation organized and doing business under the laws of the State of **Delaware**, for whom **Michels Construction, Inc.**, bearing the office title of **Secretary**, whose signature is affixed to this Bid, is authorized to execute contracts.

NOTE: If not incorporated in Michigan, please attach the corporation's Certificate of Authority

• A limited liability company doing business under the laws of the State of _____, whom _____ bearing the title of _____ whose signature is affixed to this proposal, is authorized to execute contract on behalf of the LLC.

* A partnership, organized under the laws of the state of _____ and filed in the county of _____, whose members are (list all members and the street and mailing address of each) (attach separate sheet if necessary):

_____

_____

_____

_____

_____

* An individual, whose signature with address, is affixed to this Bid: _____ (initial here)

Authorized Official

_____ **Date** **March 07**, 2024

(Print) Name **James Black** Title **Senior Manager - Estimating**
Secretary of Michels Construction, Inc.

Company:
Michels Construction, Inc.

Address:
817 Main Street, Brownsville, WI 53006

Contact Phone ( ) **920.539.4305** Fax ( ) _____

Email **jiblack@michels.us**

ATTACHMENT D
PREVAILING WAGE DECLARATION OF COMPLIANCE

The "wage and employment requirements" of Section 1:320 of Chapter 14 of Title I of the Ann Arbor City Code mandates that the city not enter any contract, understanding or other arrangement for a public improvement for or on behalf of the city unless the contract provides that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. Where the contract and the Ann Arbor City Code are silent as to definitions of terms required in determining contract compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used. Further, to the extent that any employees of the Contractor providing services under this contract are not part of the class of craftsmen, mechanics and laborers who receive a prevailing wage in conformance with section 1:320 of Chapter 14 of Title I of the Code of the City of Ann Arbor, employees shall be paid a prescribed minimum level of compensation (i.e. Living Wage) for the time those employees perform work on the contract in conformance with section 1:815 of Chapter 23 of Title I of the Code of the City of Ann Arbor.

At the request of the city, any Contractor or subcontractor shall provide satisfactory proof of compliance with this provision.

The Contractor agrees:

(a) To pay each of its employees whose wage level is required to comply with federal, state, or local prevailing wage law, for work covered or funded by this contract with the City,

(b) To require each subcontractor performing work covered or funded by this contract with the City to pay each of its employees the applicable prescribed wage level under the conditions stated in subsection (a) or (b) above.

(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the wage and employment provisions of the Chapter 14 of the Ann Arbor City Code. The undersigned certifies that he/she has read and is familiar with the terms of Section 1:320 of Chapter 14 of the Ann Arbor City Code and by executing this Declaration of Compliance obligates his/her employer and any subcontractor employed by it to perform work on the contract to the wage and employment requirements stated herein. The undersigned further acknowledges and agrees that if it is found to be in violation of the wage and employment requirements of Section 1:320 of the Chapter 14 of the Ann Arbor City Code it shall has be deemed a material breach of the terms of the contract and grounds for termination of same by the City.

Michels Construction, Inc.
Company Name

J. Black 03/07/24
Signature of Authorized Representative Date

James Black, Senior Manager Estimating and Secretary of Michels Construction,vInc.
Print Name and Title

817 Main Street, Brownsville, WI 53006
Address, City, State, Zip

920.539.4305, jiblack@michels.us
Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

9/25/15 Rev 0 PW

ATTACHMENT E
LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a Contractor providing services to or for the City for a value greater than $10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than $10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than $10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here [___] No. of employees__

The Contractor or Grantee agrees:

(a) To pay each of its employees whose wage level is not required to comply with federal, state, or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as $15.90/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than $17.73/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance with Section 1:815(3).

Check the applicable box below which applies to your workforce

[___] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits

[X] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

(b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.

(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

(e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

Michels Construction, Inc. Company Name	**817 Main Street** Street Address
J. Black **03/07/2024** Signature of Authorized Representative Date	**Brownsville, WI 53006** City, State, Zip
James Black, Senior Manager - Estimating and Secretary of Michels Construction, Inc. Print Name and Title	**920.539.4305, jiblack@michels.us** Phone/Email address

ATTACHMENT G

Vendor Conflict of Interest Disclosure Form

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict of interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Conflict of Interest Disclosure*	
Name of City of Ann Arbor employees, elected officials or immediate family members with whom there may be a potential conflict of interest.	( ) Relationship to employee ( ) Interest in vendor's company ( ) Other (please describe in box below)

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that this Conflict of Interest Disclosure has been examined by me and that its contents are true and correct to my knowledge and belief and I have the authority to so certify on behalf of the Vendor by my signature below:		
Michels Construction, Inc.		**920.539.4305**
Vendor Name		**Vendor Phone Number**
J. Black	**03/07/24**	**James Black**
Signature of Vendor Authorized Representative	**Date**	**Printed Name of Vendor Authorized Representative**

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500, procurement@a2gov.org

COI – Ver. 1 – 6/9/16

ATTACHMENT H

DECLARATION OF COMPLIANCE

Non-Discrimination Ordinance

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

(a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy, including but not limited to an acceptable affirmative action program if applicable.

(b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.

(c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.

(d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

Michels Construction, Inc.
Company Name

J. Black — **03/07/24**
Signature of Authorized Representative — Date

James Black, Senior Manager - Estimating and Secretary of Michels Construction, Inc.
Print Name and Title

817 Main Street, Brownsville, WI 53006
Address, City, State, Zip

920.539.4305, jiblack@michels.us
Phone/Email Address

Questions about the Notice or the City Administrative Policy, Please contact:
Procurement Office of the City of Ann Arbor
(734) 794-6500

2016 Rev 0 NDO-2

ATTACHMENT L
FEDERAL DEBARMENT CERTIFICATION FORM

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension (1986) and Executive Order 12689, Debarment and Suspension (1989) at 2 C.F.R. Part 180.

(BEFORE COMPLETING CERTIFICATION, READ THE INSTRUCTIONS ON THE WHICH ARE AN INTEGRAL PART OF THE CERTIFICATION)

1. The prospective recipient of Federal assistance funds certifies, by Response, that it is in compliance with the requirements of 2 C.F.R. Part 180 and that neither it, its principals, nor its subcontractors are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this Response.

ATTESTATION

By signing this report, I certify to the best of my knowledge and belief that the foregoing is true, complete, and accurate. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code Title 18, Sections 3729-3730 and 3801-3812).

Michels Construction, Inc.
Company Name

James Black, Senior Manager - Estimating and Secretary of Michels Construction, Inc.
Name and Title of Authorized Representative

J. Black
Signature

March 7th, 2024
Date

ATTACHMENT 1

CITY OF ANN ARBOR
CORPS WATER INFRASTRUCTURE FINANCING PROGRAM (CWIFP)

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of the undersigned's knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, or the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31 of the U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, **Michels Construction, Inc.**, certifies and affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chapter 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

J. Black
Signature of Contractor's Authorized Official

James Black, Senior Manager - Estimating and Secretary of Michels Construction, Inc.
Name and Title of Contractor's Authorized Official

March 07, 2024
Date

ATTACHMENT 2

CITY OF ANN ARBOR
CORPS WATER INFRASTRUCTURE FINANCING PROGRAM (CWIFP)

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The undersigned bidder, proposer, contractor, or subcontractor, as appropriate, certifies to the best of its knowledge and belief that neither it nor any of its officers, directors, or managers who will be working under the Contract, or persons or entities holding a greater than 10% equity interest in it (collectively "Principals"):

1. Are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency in the United States;
2. Have within a three-year period preceding this proposal, bid, or agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state anti-trust or procurement statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are presently indicted for or otherwise criminally or civilly charged by a government entity, (federal, state or local) with commission of any of the offenses enumerated in paragraph 2 of this certification; and
4. Have within a three-year period preceding this application/proposal had one or more public transactions (federal, state or local) terminated for cause or default.

The undersigned bidder, proposer, contractor, or subcontractor, as appropriate, certifies that they are "Actively" registered with SAM (System for Award Management) and have been assigned the following Unique Entity Identifier (UEI): **CDE7H8M86MB5**. The undersigned further certifies that it shall not knowingly enter any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

I understand that a false statement on this certification may be grounds for rejection of this proposal or bid, or termination of the award or, in some instances, criminal prosecution.

The Contractor, **Michels Construction, Inc.**, certifies as stated above:

J. Black — **03/07/24**
Signature — Date

James Black, Senior Manager - Estimating and Secretary of Michels Construction, Inc.
Print Title and Name of authorized representative

I am unable to certify to one or more the above statements. Attached is my explanation.

_____
Signature — Date

_____
Print Title and Name of authorized representative

ATTACHMENT 3

CITY OF ANN ARBOR
CORPS WATER INFRASTRUCTURE FINANCING PROGRAM (CWIFP)

System for Award Management (SAM) record search for Contractor / Subcontractor business name and business principal – (*Printout or Screenshot of Results SAM.gov entity search results*)

MICHELS CONSTRUCTION, INC. Active Registration

Unique Entity ID:	Doing Business As:	Purpose of Registration:	*Expiration Date*
CDE7H8M86MB5	(blank)	All Awards	Dec 10, 2024

CAGE/NCAGE:
9C1R4

Physical Address:
817 MAIN ST
BROWNSVILLE, WI 53006-1444 USA

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Appendix A

Key Personnel Resumes

WE DO THAT ... & **MORE**

MICHELS®
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Eric P. Justman

Technical Advisor

Eric began his career with Michels in 2008 as an intern, since then he has worked his way up the ranks to become President of Michels Construction, Inc. With his role as President, Eric is responsible for the development of short- and long-term strategies and plans for assigned divisions based on business goals and growth objectives. He ensures that all groups meet or exceed their performance expectations, following company policies and procedures, in order to meet established gross profit goals. Also, works to identify and secure new business opportunities.

TRAINING & CERTIFICATIONS

Certified Pipeline Welding Inspector, CPWI # 63722653

EDUCATION

Moraine Park Technical College | Fond du Lac, WI
Associate Degree: Civil Engineering

University of Wisconsin, Washington County | West Bend, WI
Courses: Geography, Geology, Economics

PROJECT PROFILES

Line 59 Facilities Project | Enbridge
(3 Greenfield Pump Stations IL & MO) (2013-2014)

US Mainline Enhancements Line 61 | Enbridge
(2 Station Upgrades/Expansions WI) (2013)

DRA Skid Installations | TransCanada/Keystone
(6 Skids, 5 States) (2013)

Station Drain Piping, Seal and Injection Line Modifications | TransCanada/Keystone
(29 Stations, 6 States) (2013)

Gulf Coast Facilities | TransCanada/Keystone
(8 Greenfield Pump Stations OK & TX) (2012-2013)

Hay Butte Meter Station | TransCanada/Northern Border
(2013)

Gas In-Line Inspection Launcher Mods | Northern Natural Gas
(10 sites/3 states) (2012)

Pump Station Support/Bracing Project | TransCanada/Keystone
(2011-2012)

Emergency Pump Station Repairs | TransCanada/Keystone
(2011)

Spring Creek Meter Station | TransCanada/Northern Border
(2011)

Stanley & Berthold Civil Construction | Enbridge
(2011)

Erie Mining Launcher/Receiver Installation | Northern Natural Gas
(2011)

Maiden Rock Meter Station | Northern Natural Gas
(2011)

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St. Peter Meter Station | Northern Natural Gas
(2011)

Platteville Odorization Facility | Northern Natural Gas
(2011)

Western 500 Station Work | We Energies
(Launcher, Receiver, and MLV Installations) (2011)

Gas In-Line Inspection Launcher Modifications | Northern Natural
(19 sites / 6 states) (2011)

Hope Pump Station | TransCanada
(2010)

Pierron Pump Station | TransCanada
(2010)

Steele City; Cushing Extension | TransCanada
36-inch Launcher (2010)

Marshfield Meter Station | TransCanada/ANR
(2009)

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James H. Black, Jr.

Technical Advisor
36 years of experience

James has more than 35 years of experience in infrastructure preconstruction and construction with a strong focus on managing estimates for complex projects. His experience includes traditional bid build and alternative delivery pursuits, including design-build, progressive design-build, CM/GC and GMP. James' customer-focused approach to estimating and team leadership revolve around his commitment to value engineering, cost control, schedule oversight and subcontractor development. James is unyieldingly committed to the safety, quality, and value of all projects, regardless of size or scope.

2022 – Present: **Senior Manager, Estimating | Michels Construction, Inc. | Brownsville / Milwaukee, WI**
Responsible for managing and supporting all aspects of estimating for the Infrastructure/Preconstruction Group. Responsible for mentoring and grooming the next generation of construction estimators ensuring that they have the tools and opportunities to showcase their talents, which demands forward thinking, performance driven and quality focused leadership. Opportunities traverse the entire United States and include heavy civil, environmental, USACE/Federal, renewable and infrastructure disciplines in the traditional bid build arena as well as alternative delivery pursuits such as design build, progressive design build, CMGC and GMP.

2019 – 2022: **Senior Manager, Estimating | Michels Corporation, Infrastructure | Brownsville / Milwaukee, WI**
Responsible for managing and supporting all aspects of estimating for the Infrastructure Group. Responsible for mentoring and grooming the next generation of construction estimators ensuring that they have the tools and opportunities to showcase their talents, which demands forward thinking, performance driven and quality focused leadership. Opportunities traverse the entire United States and include heavy civil, environmental, USACE/Federal, renewable and infrastructure disciplines in the traditional bid build arena as well as alternative delivery pursuits such as design build, progressive design build, CMGC and GMP.

2017 – 2019: **Lead Estimator | Michels Materials | Brownsville, WI**
Responsible for overseeing and supporting all estimating for Michels Civil, Highway, Paving and Materials nationwide that include heavy civil, environmental, USACE/Government, renewable and infrastructure disciplines.

2015 – 2017: **General Manager | Michels Civil | Brownsville, WI**
Responsible for managing and overseeing all heavy civil projects nationwide including site preparation, excavation, earthwork, environmental remediation and USACE/government projects while fostering Michels Corporation's commitment to working safely together and preserving the environment.

EDUCATION

Franklin & Marshall College | Lancaster, PA
Bachelor of Arts, Political Science

St. Bernard Preparatory School | Fitchburg, MA
High School Diploma

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2013 – 2015: **General Manager | Michels Wind Energy | Brownsville, WI**
Responsible for the general construction operations across the United States for all wind farm construction projects. Reports directly to the President of Michels Corporation. Worked with the entire Michels Corporation team across all related operations to execute projects as designed, on-time, on-budget, and with superior quality.

2012: **Operations & Quality Manager | Michels Wind Energy | Brownsville, WI**
Managed and supported all operating interfaces and performance standards with the Wind Energy Division. Provided customer support for wind developments and project managed all phases of wind energy projects. Managed the quality program at a divisional level. Continued to develop and refine project management tools and procedures. Acted as liaison to the safety department for tracking of safety statistics, as well as refining safety procedures on projects.

2008 – 2012: **Project/Bid Manager | Michels Wind Energy | Brownsville, WI**
Executed and finalized wind projects according to strict deadlines and within budget. This included acquiring resources and coordinating the efforts of team members and third-party contractors or consultants in order to deliver projects according to plan Managed or facilitated periodic reporting of wind projects; monitored each facility's performance versus expectations; engaged appropriate in-house and external resources as performance issues required. Interfaced with engineering, accounting, development staff, and other individuals both inside and outside the company as required.

2003 – 2008: **Estimator/Project Manager | DK Contractors, Inc. | Pleasant Prairie, WI**
Responsible for project management, including the coordination of labor, equipment, materials, construction scheduling, and production. Managed day-to-day operational aspects of a project and scope. Identified resources needed and assigned individual responsibilities.

1996 – 2003: **Earthwork Division Manager | Westra Construction | Waupun, WI**
Duties included all aspects of estimating and project management for the excavating and site utility division. Responsible for scheduling of approximately 25 employees and developing goals and budgets for the division.

1993 – 1996: **Estimator | York Excavating Company | York, PA**
Duties included all aspects of an excavation and site utility company including asphalt paving. Preparation of contract proposal estimates, including determining appropriate project plans, specification, and constructability.

1989 – 1993: **Estimator/Survey Assistant/General Laborer | H.L. Wiker & Sons, Inc. | Strasburg, PA**

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John Israel

Technical Advisor

John has a diverse skill set and work history. 17 years of professional experience on large and small projects in the Power (generation and transmission), Transportation (rail and road), and Tunneling sectors of the construction industry with a proven track record of delivering work on-time and under budget with strong safety and quality performances. Management experience in the operations, project controls, engineering, client relations, and contract management aspects of a project. Experience leading project pursuits and business development efforts for projects large and small, as part of joint ventures and as sole contractor, and of varying contract delivery models including, Design-Build, EPC, CMGC, P3, and traditional low-bid. Work history includes 6 years of Superintendent experience managing self-perform and subcontracted foundation work including concrete structures, drill and blast operations, and various driven pile operations.

TRAINING & CERTIFICATIONS

USACE CQCM Certification - 2021

South Shore Line - Railroad Contractor Safety Certificate - 2022

AGC - Federal Contracting 101 - 2021

Michels Leadership Bootcamp Course - 2018

Fundamentals of Engineering (EIT) Certification

OSHA 10-hour Construction

OSHA 30-Hour Construction

Caterpillar Equipment Operations Training - 2017

Colorado School of Mines Tunneling Short Course - 2012

EDUCATION

2007 **University of Wisconsin - Madison | Madison, Wisconsin**
Bachelor of Science, Civil Engineering/Construction Management

PROJECT PROFILES

Savannah Harbor Expansion Project and Marsh Restoration | United States Army Corps of Engineers, Savannah District | Savannah, GA

Project includes complete restoration of approximately 29 acres of brackish marsh. Excavation of material and creation of feeder creeks will enable tidal connectivity on the site, and to tie into adjacent bodies of water. The project includes installation and removal of silt fence and other erosion control measures, clearing and grubbing, marsh restoration and feeder creek excavation, and removal/disposal of excavated materials from the site. Incidental work will be to establish vegetation across the face of the slopes.

Harbor Drive Trunk Sewer Replacement | City of San Diego | San Diego, CA

Project includes replacement of 1,044.93 LF of existing 12-inch ESVCP with 18-inch PVC Sewer Main, 279.18 LF of 12-inch ESPVC with 20-inch FPVC and 21-inch PVC under BNSF and MTS Right-of-Way using trenchless methods, 3,175.67 LF of 15 through 24-inch Techite Pipe with 30-inch FPVC inside a 54-inch steel casing using trenchless methods and all other work and appurtenances in Contract Specifications.

Argentine Levee Unit Pump Stations | United States Army Corps of Engineers, Kansas City District | Kansas City, KS

This design-build project included repairing three pump stations, full replacement of Strong Avenue Pump Station and Argentine Main Pump Station, both built in the early 1900s, and structural modifications to the Turner Pump Station. Work included the construction of temporary flood protection, demolition of existing structures; tie-in to existing infrastructure; strengthening and raising the discharge chamber.

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Colorado River Aqueduct Pump Stations | Metropolitan Water District of Southern California | CA

Contracted to demolish and replace existing platforms, pumps, and columns at five different pump stations of the 242-mile-long Colorado River Aqueduct. Scope of work included replacement of concrete, structural support, platforms, grating, handrails, sump covers, pumps, motors, valves, pipes, lighting and ventilation, removal of mud and debris from the sumps, performed electrical upgrades. Crews furnished the new platforms, pump columns, pumps, prefabricated pump piping, electrical, and lead abatement for demolition. Project was in mountainous terrain and had numerous environmental challenges. Crews safely removed hazardous materials abatement including asbestos, coal tar coating, and lead during the demolition phase of this project.

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Bob Martin, P.E.

Project Manager

Bob has 45 years of industry experience, and he has spent the last six years with Michels. He is currently a Program Manager / Senior Quality Control System Manager. Bob is responsible for the development and management of the quality assurance and quality control programs for various divisional projects. Bob is responsible for the development of the Company QMS, development and management of the QA/QC department, personnel, documentation requirements, procedures and forms, archiving, and cross-functional inspections/quality project teams.

TRAINING & CERTIFICATIONS

First Aid/CPR

HAZWOPER 24-Hour

OSHA 30-Hour

Registered Construction Inspector

USACE CQC Quality Control

USACE CQM

EDUCATION

Purdue University | West Lafayette, IN
Bachelor of Science, Civil Engineering

United States Air Force
Civil Engineering - 22 Years

PROJECT PROFILES

Boardman Dam Removal and River Restoration | USACE, Detroit District | Traverse City, MI

Michels removed an earthen dam, restored approximately two miles of river channel and flood plain to its native condition, removed a 100-year-old powerhouse and bridge, and constructed and paved a road. The majority of the work was completed in hilly terrain with low flooded flats where channel and flood plain were excavated. In all, 350,000 yards of material was excavated and transported by off-road haul trucks through wet and muddy conditions to new locations along the project route.

Argentine Levee Unit Pump Stations | USACE, Kansas City District | Kansas City, KS

Michels is the prime contractor for this design-build project which included repairing three pump stations, full replacement of Strong Avenue Pump Station and Argentine Main Pump Station, both built in the early 1900s, and structural modifications to the Turner Pump Station. All three pump stations are on the Argentine Levee Unit, which is in Wyandotte County, Kansas on the right bank of the Kansas River.

Savannah Harbor Expansion Project Marsh Restoration | USACE, Savannah District | Savannah, GA

This project is located within a designated area on Onslow Island. Michels is the Prime contractor which includes complete restoration of approximately 29 acres of brackish marsh. Excavation of material and creation of feeder creeks will enable tidal connectivity on the site, and to tie into adjacent bodies of water. The project includes installation and removal of silt fence and other erosion control measures, clearing and grubbing, marsh restoration and feeder creek excavation, and removal/disposal of excavated materials from the site.

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Devils Garden Slough Wetlands Restoration | USACE, Jacksonville District | Clewiston, FL

Project involved the restoration of 16,000 acres of sugar plantation fields into natural wetlands. Work included the construction of 14,000 linear feet of earthen levees ranging in height from 4four feet above native grade to 10 feet above native grade. Repair of an additional 1,400 LF of existing perimeter levees by clearing of woody debris then capping with soils to return levees back to optimum height. Included seven precast concrete outfall structures to maintain water levels within the wetlands area, 1,800 linear feet of 18-inch RCP drainage pipe to release water into existing local channel system, 10 ditch blocks or plugs to prevent the runoff, 14 aggregate access points providing access from wetlands to existing county roadways, revegetation of all disturbed areas with native plants and grasses, construction of 19,000 linear feet of haul roads capable of supporting 100,000 pound truck loads, and two Florida state highway bridges consisting of 10-foot diameter contec arch culverts.

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CONSTRUCTION, INC.

Harsh Baghel

Project Engineer

Harsh has a diverse skill set and work history. Five years of continuous full-time experience excluding one and a half years of full-time internship experience on large and small projects in the OGC, Residential Housing and Heavy Civil sectors with a proven track record of delivering work on-time and under budget with strong safety and quality performances. Harsh is experienced in project controls, quality control, engineering, and contract management aspects of a project.

TRAINING & CERTIFICATIONS

OSHA 10-Hour Construction

USACE CQM Certification

AutoCAD - CADD Center, Manipal

Construction Planning and Scheduling - Plan Academy

Primavera P6 Professional Fundamentals v18.X - CBA

Procore Technologies - Procore Certification

EDUCATION

2019 **Texas A&M University | College Station, Texas**
Master of Engineering in Construction Engineering and Management

2015 **Manipal Institute of Technology, Manipal University | Manipal, Karnataka, India**
Bachelor of Technology in Civil Engineering

PROJECT PROFILES

Tule River Success Lake Spillway Enlargement Phase II | USACE, Sacramento District | Sacramento, CA

Project Engineer | $31.3M | 2022-Present | Consists of constructing a 10-foot-high 350-foot-long curved reinforced concrete Ogee Weir across Success Lake emergency spillway dam including side walls and downstream apron. Construction of the Ogee Weir increases the gross pool elevation of the reservoir by 10 feet, allowing for greater storage capacity and flood risk management for downstream communities. Additional project improvements include construction of trench drains at the main dam left abutments, flood proofing of existing recreation facilities, and raising and relocation of existing wells and storage tanks. Rock slope protection will be added to Frazier Dike and the Hwy 190 bridge.

Calcasieu Pass LNG | Venture Global LNG | Cameron, LA

$3.5B, (2020-2021) Field Engineer/Office Engineer: LNG Export Facility spread across 85 acres, export 10 MTPA of LNG

Shilpi City | Shilpi Infra Projects Pvt. Ltd | Rewa, India

$12M, (2017-2018) Assistant Project Manager: Over 600 dwelling units spread across 18 acres

Shilpi Plaza | Shilpi Infra Projects Pvt. Ltd | Rewa, India

$23M, (2015-2017) Graduate Engineer: Over 200 shopfronts and 100 office spaces spread across 21 acres

MICHELS®
CONSTRUCTION, INC.

Rick Schweda

Superintendent

Rick's day-to-day responsibilities include managing field crews during project construction. Specific duties include: material and supply coordinator, field liaison between engineering, estimating, and subcontractors; monitor work performance and craft productivity; oversee project quality, safety, and environmental compliance requirements; regulate and manage field construction operations. He provides day-to-day work plans to crew members, and lines up the necessary resources to accomplish the plan. Rick works to communicate directly with customers and third party inspection personnel to resolve issues and concerns.

TRAINING & CERTIFICATIONS

Awareness/ Informative: Worksite Security, Water-Working in or around, Silica, Risk Management, Excavations and Trenching, Environmental, DOT Operations, Dig-In Prevention, Annual Safety Days

BNSF - eRailSafe

Excavation Certified

Fall Protection, Working at Heights

First Aid/CPR/AED Certification

International Road Check - ABS & Cargo Securement

OSHA 10-Hour

OSHA 20-Hour

OSHA 30-Hour

Storm Water Prevention

INDUSTRY INVOLVEMENT

IBEW - 1249, Member

Operating Engineers - Local 324, Member

PROJECT PROFILES

Argentine Levee Unit Pump Stations Design-Build | USACE, Kansas City District | $42M | Wyandotte County, Kansas City, KS

Superintendent | 2019 - 2023 | Project included repairing three pump stations, full replacement of Strong Avenue Pump Station and Argentine Main Pump Station, both built in the early 1900s, and structural modifications to the Turner Pump Station. Work includes the construction of temporary flood protection, demolition of existing structures; tie-in to existing infrastructure; strengthening and raising the discharge chamber. The overall purpose of replacing or modifying the three pump stations is to improve levee safety by reducing the risk of failure of the line of protection at the pump station locations.

Savannah Harbor Expansion Project (SHEP) Marsh Restoration | USACE, Savannah District | $14.5M | Savannah, GA

Superintendent | 2021 - 2022 |This contract/phase will restore approximately 29 acres of brackish marsh, including excavated material and create feeder creeks to enable tidal connectivity on the site. Dredging work is ongoing and collaboration will be necessary to complete the restoration.

Jacksonville to West Palm 500kV | FPL Utilities | Juno Beach , FL

Installation of access roads through out the wetlands of Florida, from the south to the north, for the Foundation crews to install new larger foundations and poles for new 500kV lines. Completed restoration of the site from removing non-native soils and returning the land back to the land owners.

Hilltop Power Plant | Kiewit | Carmichaels, PA

Completed site work and access for a new natural gas power plant, including access and grading for 30 miles of new poles and complete site restoration.

New River 230kV Line Reconstruct | Duke Electric | Zephyrhills, FL

This project involved installing BMP's, de-mucking access roads, installing Geo Fabric, Geo Webbing and 57 Recycled crushed concrete for road base hauling off spoils, grading waterways and completing site restoration after the install.

Carlisle 230kV Line Deconstruction | PPL | Carlisle, PA

Project consisted of timber mat placement through environmental sensitive areas, removal of all materials generated, and restoring the land.

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Mill Creek and Mill Creek Forest Preserve | Kane County, Geneva, IL
Work consisted of removing an old dam, dewatering site, removal of years of sediment and digging and restoring the old channel. Installed wild life habitats and channel materials back into the creek for fish habitat.

Devils Garden | USACE, Jacksonville District | $2.9M | Clewiston, FL
Superintendent | 2017 - 2019 | 10,000 acre site project site. Removed culverts,, graded dikes, built berms, installed spillways to help restrict the red tide, and removed invasive plants. Collaborated with USACE and land owners to complete restoration of the impacted areas.

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Phillip Clouse, PMP, PMI-SP

Schedule Manager
34 years of experience

Phil has more than 31 years of industry experience. He has worked on projects valued up to $500 million. Projects include the private and public sectors, and customers include the federal government (USACE, FAA, etc.).

2022 – Present: **Senior Scheduler | Michels Construction, Inc. | Milwaukee, WI**
Prepare, monitor, and amend project schedules to ensure goals or objectives of projects are accomplished within the time frame parameters by utilizing organizational skills, critical thinking, and effective communication.

2021 – 2022: **Senior Scheduler | Michels Corporation | Milwaukee, WI**
Prepare, monitor, and amend project schedules to ensure goals or objectives of projects are accomplished within the time frame parameters by utilizing organizational skills, critical thinking, and effective communication.

2019 – 2021: **Senior Scheduler - EPC | Wanzek Construction | Fargo, ND**
Developed resource loaded level 2 proposal schedules that showed a clear critical path along with estimated resource needs/histograms. These reports were included in the proposal package that was submitted to the client during the bid process. With the aid of the project team, also created level 3, resource loaded baseline schedules that were used to track past and future progress. Updated the working schedule on a weekly basis, and distributed updated status reports and comments to the site team.

2018 – 2019: **Heavy Equipment Operator Instructor | United Tribes Technical College | Bismarck, ND**
Provided instruction in the operation of heavy equipment to students through various delivery methods, including classroom/laboratory instruction, operating heavy equipment machinery, and learning community activities with a strong emphasis on industry safety methods, procedures, and practices.

2014 – 2018: **Director of Project Controls / Master Scheduler | Dakota Gasification Company | Beulah, ND**
Developed schedules, inclusive of NAS Schedules, and tracked progress for capital improvement projects. Generated Primavera Earned Value Reports of capital improvement progress for distribution to the Board of Directors and upper management.

1996 – 2014: **P6 Scheduler | Strata Corporation | ND**
Using P6, managed the amount of time, effort and cost it takes to complete a project scope of work to its defined quality standards. Numerous projects in size and complexity.

TRAINING & CERTIFICATIONS

Delay Detective - Forensic Schedule Delay Analysis Intensive (2023)

OSHA 30-Hour General Industry

Primavera P6 - Advanced Scheduling (2013, 2016)

Primavera P6 - Fundamentals (2013, 2016)

Project Management Institute - Project Manager Professional (2017)

Project Management Institute - Scheduling Professional (2017)

TILOS Training, 10-Hour (2022)

EDUCATION

North Dakota State University | Fargo, ND
Masters of Construction Management (In Progress)

University of North Dakota | Grand Forks, ND
Bachelor of Science, Accounting

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1991 – 2014: **Various** | **Strata Corporation** | **Devils Lake & Minot, ND**
Held various positions including: Area Manager, Project Superintendent, Project Manager, Chief Scheduler, Quality Control Manager, and Estimator. Managed numerous projects from the Preconstruction phase, up to and including the project closeout. Projects ranged in size from $1,500 up to $41 million. Major customers were DOT, FAA, USACE, and USAF.

MICHELS®

Brian Wierzbicki

Safety Manager

TRAINING & CERTIFICATIONS

Confined Space Entry Training

Fall Protection Instructor Certified

OSHA 30-Hour Construction

Tap Root Incident Investigation

USACE Construction Quality Management for Contractors

USACE EM 385 Certified

EDUCATION

Chippewa Valley Technical College | Eau Claire, WI
Law Enforcement Academy and Certification

Northern Illinois Tech
EMT - Paramedic / Firefighter

Brian is responsible for development and implementation of on-site procedure, emergency response plan, on-site safety inspections, equipment inspections, and reporting to supervisors. Assigned the responsibility for coordinating and maintaining the company safety program. Advises management in matters of safety and health and monitors day-to-day operations to ensure that the company's safety policies and procedures are followed. Brian is currently an HSE Manager.

PROJECT PROFILES

Mississippi River Basin Lock No. 21 and 22 Kevel Rail and Concrete Repairs | USACE, Rock Island District | Quincy, IL and Saverton, MO

Michels is the Prime on the contracted awarded August 15, 2022. Lock No. 21 includes Mobilization and Demobilization, Replace Traveling Kevel Rail, Remove Existing Checkposts, Replace Existing Checkposts, Horizontal Resurfacing, Walkway Installation, Sidewalk, Electrical Work, Remove and Reinstall Appurtenances, Survey Monument Installation and Alignment Survey, and Grading Behind Downstream Guidewall.

Lock No. 22 includes Mobilization and Demobilization, Replace Traveling Kevel Rail, Replace Existing Checkposts, Horizontal Resurfacing, Sidewalk, Electrical Work, Remove and Reinstall Appurtenances, and Survey Monument Installation and Alignment Survey.

Schuylkill River above Fairmount Dam | Dredgit / USACE, Philadelphia District | Philadelphia, PA

Michels Construction utilized hydraulic dredging techniques assisted by an excavator mounted on a barge to mitigate debris and coal deposits to effectively remove dredge sedimentation from the historic Boathouse Row in downtown Philadelphia.

Dredging conditions were extremely challenging due to debris embedded in the mud. Items including trees and branches, old dock pilings, oil and chemical barrels, washing machines, bowling balls, and car tires had to be removed before the dredge could be effective. Conditions changed from silt to mud to sand to coal tailing from long-ago days of coal production on the Schuylkill River. The dredge material was hydraulically transported in a 10-inch HDPE pipe from the dredge through a booster pump that propelled the material through another 2,500-foot pipe over a historic hickory dam built in the 1830's to a moored transload barge. An excavator aboard the barge handled the pipe discharge and loaded a fleet of four scows that were hauled by a push boat approximately eight miles downriver to a second transloading area. At this location, dredged sediment was offloaded by a specialty submersible pump which transported the sediment as a slurry through an additional booster pump enroute to a U.S. Army Corps of Engineers confined disposal facility.

MICHELS®

Roye Pelletier

Quality Manager

Roye is responsible for all aspects of Quality Control. He provides the training, tools, and techniques to achieve the quality expectations in accordance with project specifications and standards. His focus is on inspecting, auditing, and confirming that the quality requirements are being consistently met during construction activities to ensure the integrity and continual improvement of work processes and conformance. Roye strives to continually improve the effectiveness, efficiency, and repeatability in which the project is delivered with concentration on turning over a completed project that meets or exceeds customer expectations in performance and life cycle costs.

TRAINING & CERTIFICATIONS

API RP-1169 Certified Pipeline Inspector

Electrical Quality Assurance Certification

EPA Universal Certification

Lead Auditor RAB/QSA

NACE CIP Level II

QA/QC Certification

EDUCATION

Tarrant County College | Fort Worth, TX

Copperas Cove High School | Copperas Cove, TX

PROJECT PROFILES

Lake Ouachita Raw Water Intake | City of Hot Springs, AR | Mountain Pine, AR

The design-build team of Michels Trenchless, COWI, and Bennett Trenchless Engineers is currently under contract for the installation of a 2,569 foot-long by 54-inch steel pipeline beneath Blakely Mountain into Lake Ouachita in Mountain Pine, Arkansas. The trenchless installation will be conducted via microtunneling through vertically foliated rock formations with compressive strengths upwards of 28,000 psi. The microtunnel boring machine will be retrieved upon completion of the drive on the lake bed of Lake Ouachita, where an intake structure will be installed.

Lockbourne Intermodal | City of Columbus, Dept. of Public Utilities | Lockbourne, OH

Michels used an Akkerman SL82 Microtunnel boring machine to install 10,218 linear feet (LF) of 82-inch direct jack FRPM pipe as a sanitary sewer tunnel. The tunnel was completed in nine drives with lengths ranging from 550 LF to 1,880 LF. The tunnel alignment crossed a wide mixture of geologies, including cobbles and large boulders, with a high ground water table. Michels constructed eight liner plate and ring beam temporary shafts for these tunneling operations. Extensive dewatering plans with multiple wells were required at each shaft.

South Fork Wind | Ørsted | Wainscott, NY

Michels Trenchless, Inc. installed approximately 2,600 feet of landfall conduit by horizontal directional drilling (HDD) for the South Fork Wind Farm. It is a 132 MW wind farm constructed off the coast of Rhode Island with the export cable landfall in the Town of East Hampton, New York. Michels installed a 24-inch HDPE conduit under the beach, traveling to about 1,500 feet into the Atlantic Ocean. This conduit will protect the export cable from any nearshore and onshore activities.

MICHELS®

Loxahatchee River | Florida Power & Light (FPL) | Jupiter , FL

Michels team performed a highly sensitive power project during the winter months in Florida, beginning with the canvasing and translocation of the highly sensitive Gopher Tortoise by FPL Biologists. Michels team then welded and hammered in approximately 150-feet of 48-inch heavy wall steel conductor casing at both ends of the Loxahatchee River crossing to support the loose sandy formation found in the upper strata of the work sites. This mitigated for potential cave-ins and reduced risk for inadvertent release of drilling mud. Two drill rigs worked in unison to orchestrate the pilot hole intersect so the susceptible formation near the entry and exit points would be preserved at either end of the crossing. At each location, a 14-inch threaded wash over casing was advanced outside of the large conductor casing an additional several hundred feet more into the unstable formation to facilitate a flawless pilot hole intersect so that critical circulation of drilling fluids would be maintained.

MICHELS®

Damon Brattset

Environmental Manager

Damon works to provide environmental training and to develop and implement on-site environmental procedures. He attends on-site construction, sensitive work area look ahead meetings. Damon completes HSE audits with environmental emphasis and reports the findings to onsite management. He is also assigned the responsibility for coordinating and maintaining the company and site environmental plans. He advises management in matters of environmental, safety and health, and monitors day-to-day operations to ensure that the company and client policies and procedures are followed. Additionally, Damon reports spills and guides cleanup actions. Also conducts sediment and erosion control inspections as necessary.

TRAINING & CERTIFICATIONS

HAZWOPER with current refresher

Confined Space Entry and Confined Space Rescue

Commercial Driver's License, ABCD, with Hazmat and Tanker Endorsements

OSHA 10-hour Construction

EPA Region 5 Response Manager

First Aid/CPR/AED Certification

Tank Car Specialist (Railroad, TTCI)

Incident Command System (100, 200, 300, 400, 700)

Explosives Recognition and Decontamination

OPA Competent Person

Wisconsin - Asbestos Inspector

Minnesota - Erosion and Stormwater Construction Site Management Certification

USDA foam depopulation unit training and large animal handling equipment training

PROJECT PROFILES

Underwood Creek Restoration Project | United States Army Corp of Engineers, Detroit District | Wauwatosa, WI

Michels was the prime contractor for the Underwood Creek Ecosystem Restoration project, which served to restore connectivity for native fish and increase species diversity along Underwood Creek. The project included installation of sheet pile, backfilling and regrading the existing slope, placement of geotextile and subgrade material, demolition of existing concrete channel, regrading of channel bottom, placing riprap and armor stone, planting and seeding of the slope, and wetland restoration. The project was completed on time and within budget.

North Mill Creek Channel Restoration | Applied Ecological Services, Lake County Forest Preserve | Antioch, IL

Michels performed heavy civil work and restored approximately 8,400 feet of the North Mill Creek channel. An earthen dam was removed and a channel flow bypass was installed. A total of 92,100 cubic yards of material was excavated. The terrain was challenging, as there was no stable ground close to the excavation areas to support equipment. Multiple temporary access routes were constructed using mats to allow equipment mobilization. In-channel habitat features, such as wood toe structures, floodplain wood structures were installed as well fabric encapsulated soil (FES) lifts. FES lifts are biodegradable fabrics that are stacked up the bank to create the desired slope, and then seeded. Stabilized banks help reduce soil erosion in the creek and protect the natural habitat.

Cleveland Clinic Neurological Institute | Cleveland Clinic | Cleveland, OH

Provided design-assist services to coordinate earth retention and deep foundations with other disciplines prior to construction. Designed a 25' deep earth retention system immediately adjacent to a sensitive tunnel structure. The shoring system was comprised of soldier piles, micropiles, and secant piles with tiebacks, deadmen, and internal bracing as required.

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Lucas County Interceptor Sanitary Sewer Rehabilitation | Lucas County, OH

Michels used geopolymer mortar to rehabilitate 1,800 feet of 90-inch sanitary sewer pipe. The pipe is the main interceptor into the Lucas County Water Resource Recovery Facility in Waterville, OH. Before the sewer interceptor rehabilitation started, a bypass system was established to divert wastewater. The 24-inch fused HDPE pipe carried an average flow of 9,000 gallons per minute and a maximum flow of 13,500 gallons per minute. Michels also drilled a 96-inch diameter steel shaft 50 feet deep to serve as an access shaft for the bypass suction shaft. It will become a permanent structure for maintenance and access for future work. The geopolymer mortar was installed in four passes to create a 2-inch-thick structural pipe within the deteriorating concrete pipe.

Lockbourne IntermodalSubtrunk | City of Columbus | Columbus, OH

Install 10,218 linear feet of 82-inch sanitary sewer tunnel using the direct jacked microtunneling method. Michels tunneled through cobbles, boulders, sand, gravel, rock, and clay under 0.9 bar groundwater pressure.Eight liner plate shafts were built. These shafts ranged from 19-feet to 28-feetin diameter. One additional rectangle shaft had to be built with dimensions of 40-feet by 20-feet

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Appendix B

Contractor Performance Assessment Reports

WE DO THAT ... & **MORE**

CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)
CONSTRUCTION

Contractor Information

Vendor Name:	MICHELS CORPORATION
Division Name:	
Street:	817 W MAIN ST
City, State, ZIP Code:	BROWNSVILLE, WI, 530061439
Country:	USA
Unique Entity ID:	DLHBUYNTJP71
CAGE Code:	

Contract Information

Contract Number:	W911XK17C0002
Business Sector & Sub-Sector:	CONSTRUCTION,
Product/Service Code:	Y1KA
Principal NAICS Code:	237990
Evaluation Type:	Final
Contract Percent Complete:	100%
Period of Performance Being Assessed:	02/07/2019 - 03/29/2019
Location of Work:	Garfield Township, Grand Traverse County, MI
Date Signed:	02/17/2017
Period of Performance Start Date:	02/17/2017
Est. Ultimate Completion Date/Last Date to Order:	03/29/2019
Estimated/Actual Completion Date:	03/29/2019
Base and All Options Value:	$7,714,233.00
Action Obligation:	$7,714,233.00
Complexity:	Low
Termination Type:	None
Extent Competed:	Full and Open Competition
Type of Contract:	Firm Fixed Price

Contracting Office Information

Contracting Office:	W072 ENDIST DETROIT
Contracting Officer:	ROBERT W AUSTIN
Phone Number:	3132266819

Key Subcontractors and Effort Performed

Project Number:	
Project Title:	FY17 Boardman River Dam Removal
Contract Effort Description:	The work included in this contract consists of four major components, and includes installation and maintenance of erosion and sedimentation control measures for each: 1. The breaching and removal of the Boardman Dam earthen embankment. 2. Restoration of the Boardman River for approximately 10,000 linear feet from Sabin Pond through the extents of the former Boardman impoundment. 3. Demolition and removal of the Boardman Dam powerhouse, intake works and existing Cass Road Bridge. 4. Construction of 400 linear feet of Cass Road roadway.

Small Business Subcontracting

Does this contract include a subcontracting plan? YES
Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): Contract Completion

Evaluation Area	Rating
Quality:	VERY GOOD
Schedule:	SATISFACTORY
Cost Control:	N/A
Management:	VERY GOOD
Small Business Subcontracting:	SATISFACTORY
Regulatory Compliance:	EXCEPTIONAL
Other Areas:	
(1)	
(2)	
(3)	

Variance (Contract to Date)

Current Cost Variance (%):	
Variance At Completion (%):	
Current Schedule Variance (%):	N/A
Completion Schedule Variance (%):	

Assessing Official Comments - Quality

This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
Quality Rating: VERY GOOD

Comments: The contractor along with their subcontractors provided a high quality project that meets or exceeds the requirements of the contract. The contractor's quality control plan was thorough and it was followed throughout the duration of the contract. Submittals were provided on time and in accordance with the contract requirements. All materials provided by the contractor met or exceeded the contract requirements.

Assessing Official Comments - Schedule

This is the FAR Definition of SATISFACTORY: *Performance meets contractual requirements. The element being assessed contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.*
Schedule Rating: SATISFACTORY

Comments: The contractor completed the work and provided the required information in a prompt and effective manner. The progress schedule was adhered to and accurate updates were provided throughout the duration of the project.

Assessing Official Comments - Cost Control

Cost Control Rating: N/A

Assessing Official Comments - Management

This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
Management Rating: VERY GOOD

Comments: The contractor demonstrated competence in supervision of the jobsite and their subcontractors. They were cooperative and responsive to USACE and project partner communications throughout the duration of the contract. The contractor successfully managed subcontractors, resources and personnel. The contractor put extra effort into coordination with local project partners. The contractor's personnel have conducted themselves in a professional manner.

Assessing Official Comments - Small Business Subcontracting

This is the FAR Definition of SATISFACTORY: *Demonstrated a good faith effort to meet all of the negotiated subcontracting goals in the various socio-economic categories for the current period. Complied with FAR 52.219-8, Utilization of Small Business Concerns. Met any other small business participation requirements included in the contract/order. Fulfilled the requirements of the subcontracting plan included in the contract/order. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner. Did not have a history of three or more unjustified reduced or untimely payments to small business subcontractors within a 12-month period.*
Small Business Subcontracting Rating: SATISFACTORY

Comments: The contractor fulfilled the requirements of the subcontracting plan.

Assessing Official Comments - Regulatory Compliance

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
Regulatory Compliance Rating: EXCEPTIONAL

Comments: SAFETY: The contractor provided a detailed safety plan and followed it for the duration of the contract. They complied with the EM385-1-1 and all applicable safety regulations. Personal protective equipment and safety devices were used and in place at all times. The contractor responded quickly and effectively when addressing matters of safety. The contractor held mandatory safety briefs with all employees before commencing work each day and every day. The site safety and health officer was onsite at all times when work was taking place and would diligently provide safety orientation to anyone new to the site. The contractor demonstrated that Safety was a top priority.

Assessing Official Comments - Other Areas

Assessing Official Comments - Additional/Other

Recommendation

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I **would** recommend them for similar requirements in the future.

Name and Title of Assessing Official

Name:	ROBERT STANICK
Title:	Area Engineer
Organization:	US Army Corps of Engineers
Phone Number:	920-380-7102
Email Address:	robert.l.stanick@usace.army.mil
Date:	07/19/2019

Contractor Comments

Additional/Other: Contractor agrees with the ratings assigned.

Name and Title of Contractor Representative

Name:	BOB MARTIN
Title:	Regional Manager
Phone Number:	(920)583-1459
Email Address:	bmartin@michels.us
Date:	07/24/2019

Review by Reviewing Official

ADDITIONAL/OTHER: Michels did a great job in executing this contract. The quality of the work was very good and they did so under the pressure of public interest. They represented both themselves and USACE very well during execution. They partnered with the government on this work and provided constant communication throughout the job. They are commended for their attention to safety and the proactive nature they take on safety. Excellent safety program.

Name and Title of Reviewing Official

Name:	PHILLIP ROSS
Title:	Chief, Engineering and Constr
Organization:	CELRE
Phone Number:	313-226-4761
Email Address:	phillip.c.ross@usace.army.mil
Date:	08/19/2019

CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)
CONSTRUCTION

Contractor Information

Vendor Name:	MICHELS CORPORATION
Division Name:	CONSTRUCTION DIVISION
Street:	817 W MAIN ST
City, State, ZIP:	BROWNSVILLE, WI, 530061439
Country:	USA
Unique Entity ID (SAM):	DLHBUYNTJP71
CAGE Code:	09LG0

Contract Information

Contract Number:	W912HN21C5001
Business Sector & Sub-Sector:	CONSTRUCTION,
Product/Service Code:	Y1PZ
Principal NAICS Code:	237990
Evaluation Type:	Final
Contract Percent Complete:	100%
Period of Performance Being Assessed:	08/12/2021 - 08/07/2022
Location of Work:	Savannah, GA, Oslow Island in the Savannah River
Date Signed:	07/13/2021
Period of Performance Start Date:	07/14/2021
Est. Ultimate Completion Date/Last Date to Order:	08/07/2022
Actual Completion Date:	07/28/2022
Base and All Options Value:	$14,576,152.00
Action Obligation:	$14,576,152.00
Complexity:	Medium
Termination Type:	None
Extent Competed:	Full and Open Competition
Type of Contract:	Firm Fixed Price

Contracting Office Information

Contracting Office:	US ARMY ENGINEER DISTRICT SAVANNAH
Contracting Officer:	WHITTNI C. HISCOX
Phone Number:	912-652-5421

Key Subcontractors and Effort Performed

Unique Entity ID (SAM):	DLHBUYNTJP71
Effort:	
Project Number:	w912hn21c5001
Project Title:	Marsh Restoration and DMCA 1S
Contract Effort Description:	a. Project Scope Description: The contractor will complete the restoration of approximately 29 acres of brackish marsh, including excavation of material and creation of feeder creeks to enable tidal connectivity on the site. During excavation for marsh restoration, feeder creeks will be excavated to tie into adjacent bodies of water. The extent of the marsh restoration areas will begin at the toe of excavated 3H:1V cut slopes. Some additional, incidental work should be anticipated to establish vegetation across the face of the 3H:1V cut slopes. The final elevation for the marsh restoration is approximately +7.6 mean lower low water (mllw). The project includes installation and removal of silt fence and other erosion control measures, clearing and grubbing, marsh restoration and feeder creek excavation, and removal/disposal of excavated materials from the site. Savannah River channel dredging operations will be ongoing during this contract and there may be commercial or Government contractor vessel traffic near the project site during the construction period. The location of excavated material disposal will be coordinated by the Government to include disposal in the Governments upland dredged material containment areas located along the Back River and in-water disposal in the Sediment Basin area of the Back River. During the Pre-construction, Engineering and Design phase of SHEP, the Corps conducted three sampling events to identify potential contamination of sediments in the vicinity of Dredged Material Containment Area 1S (DMCA 1S). The results of that sampling and analysis indicate that there are portions of the old disposal area that are unsuitable for the wetland restoration identified in the SHEP Final Environmental Impact Statement (FEIS), containing polycyclic aromatic hydrocarbons (PAHs). Using the results of the follow-on sediment sampling, the Corps reconfigured the restoration boundary and feeder creek system to avoid areas with

Small Business Utilization

Does this contract include a subcontracting plan? YES
Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): 03/31/2022

Evaluation Area	Rating
Quality:	SATISFACTORY
Schedule:	SATISFACTORY
Cost Control:	N/A
Management:	VERY GOOD
Small Business Subcontracting:	SATISFACTORY
Regulatory Compliance:	SATISFACTORY
Other Areas:	
(1) SAFETY	VERY GOOD
(2)	
(3)	

Variance (Contract to Date)

Current Cost Variance (%):
Completion Cost Variance (%):
Current Schedule Variance (%):
Completion Schedule Variance (%):

Assessing Official Comments - Quality

This is the FAR Definition of SATISFACTORY: *Performance meets contractual requirements. The element being assessed contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.*
Quality Rating: SATISFACTORY

Comments: Contract requirements were met. Minimal rework was required

Assessing Official Comments - Schedule

This is the FAR Definition of SATISFACTORY: *Performance meets contractual requirements. The element being assessed contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.*
Schedule Rating: SATISFACTORY

Comments: Contract finished on schedule. No milestones were missed

Assessing Official Comments - Cost Control

Cost Control Rating: N/A

Assessing Official Comments - Management

This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
Management Rating: VERY GOOD

Comments: Work progressed slowly at first but contractor made significant changes to field office personnel and brought in additional workers and equipment to ensure construction finished on time.

Assessing Official Comments - Small Business Subcontracting

This is the FAR Definition of SATISFACTORY: *Demonstrated a good faith effort to meet all of the negotiated subcontracting goals in the various socio-economic categories for the current period. Complied with FAR 52.219-8, Utilization of Small Business Concerns. Met any other small business participation requirements included in the contract/order. Fulfilled the requirements of the subcontracting plan included in the contract/order. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner. Did not have a history of three or more unjustified reduced or untimely payments to small business subcontractors within a 12-month period.*
Small Business Subcontracting Rating: SATISFACTORY

Comments: Contractor meet their small business requirements

Assessing Official Comments - Regulatory Compliance

This is the FAR Definition of SATISFACTORY: *Performance meets contractual requirements. The element being assessed contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.*
Regulatory Compliance Rating: SATISFACTORY

Comments: Contractor meet their regulatory requirements. Some minor issues getting the certified payrolls of the subs in the proper format, but the issues were worked through and everything was submitted in a timely manner

Assessing Official Comments - Other Areas

This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
SAFETY: VERY GOOD

Comments: No reportable incidents occurred during the project. Safety drill were performed quarterly during construction. Infractions were few and minor in nature

Assessing Official Comments - Additional/Other

Comments: Michels had a slow start, but made the changes they needed to do and performed well during this contract. Michels took responsibility for their actions and did not try to blame the their subcontractors. If they had an under performing contractor they would make the changes needed or would self perform if needed. Michels was very conscientious about finishing on time and to the proper standards. The field and home office staff were very good to work with.

Recommendation

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I **would** recommend them for similar requirements in the future.

Name and Title of Assessing Official

Name:	TODD MCGALLIARD
Title:	Administrative Contracting Officer
Organization:	CESAS-CD-STH
Phone Number:	912-652-6152
Email Address:	todd.f.mcgalliard@usace.army.mil
Date:	09/23/2022

Contractor Comments

Additional/Other: I would like to thank USACE personnel for recognizing that Michels took responsibility for our actions and did not try to blame others for short falls.
This is a Michels core value of Doing what we say.
Michels acknowledges that this project started off slower than was scheduled.
Several key pieces of marine equipment did not come available when promise.
This caused Michels to revise our work plan, select a different marine equipment vendor and changed how we planned to execute the work. This revision of the work plan included the ability to move more soils by water enabling the successful excavation and disposal of 351,080 cubic yards of soils within the contract performance period.
Michels home and field staff would like to thank USACE Hunter Field Office personnel for partnering with Michels to make this project a success. This partnering effort made working through issues a team (or should I use collaborative) effort and not a us against them environment.

Name and Title of Contractor Representative

Name:	Bob Martin
Title:	Federal Program Manager
Phone Number:	(920)583-1459
Email Address:	bmartin@michels.us
Date:	10/31/2022

Review by Reviewing Official

ADDITIONAL/OTHER: Review by Reviewing Official not required.

Name and Title of Reviewing Official

Name:	
Title:	
Organization:	
Phone Number:	
Email Address:	
Date:	

CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)
CONSTRUCTION

Contractor Information

Vendor Name:	MICHELS CORPORATION
Division Name:	INFRASTRUCTURE
Street:	817 W MAIN ST
City, State, ZIP Code:	BROWNSVILLE, WI, 530061439
Country:	USA
Unique Entity ID:	DLHBUYNTJP71
CAGE Code:	09LG0

Contract Information

Contract Number:	W9128F20C0026
Business Sector & Sub-Sector:	CONSTRUCTION,
Product/Service Code:	Y1AZ
Principal NAICS Code:	237990
Evaluation Type:	Final
Contract Percent Complete:	100%
Period of Performance Being Assessed:	05/13/2020 - 11/20/2020
Location of Work:	Logan River - Right Bank, Pender, NE
Date Signed:	05/13/2020
Period of Performance Start Date:	05/13/2020
Est. Ultimate Completion Date/Last Date to Order:	11/20/2020
Estimated/Actual Completion Date:	11/20/2020
Base and All Options Value:	$7,409,850.00
Action Obligation:	$7,399,898.00
Complexity:	Medium
Termination Type:	None
Extent Competed:	Full and Open Competition
Type of Contract:	Firm Fixed Price

Contracting Office Information

Contracting Office:	W071 ENDIST OMAHA
Contracting Officer:	DAVID W. NEAL
Phone Number:	402-995-2988

Key Subcontractors and Effort Performed

Project Number:	W9128F20C0026
Project Title:	Pender Logan Right Bank, Logan River, NE
Contract Effort Description:	Perform repairs to the Pender levee system resulting from the 2019 spring flood. This project generally consisted of removing sloughed bank material, stabilizing the river bank toe by installing approximately 2,150 linear feet of 40-foot long metal sheet piles, bank shaping, placing approximately 20,000 tons of riprap as bank stabilization and protection, replacing timber piles, inspecting and repairing drainage structures, replacing reinforced concrete culverts, seeding and installing erosion control measures.

Small Business Subcontracting

Does this contract include a subcontracting plan? YES
Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): Contract Completion

Evaluation Area	Rating
Quality:	EXCEPTIONAL
Schedule:	EXCEPTIONAL
Cost Control:	EXCEPTIONAL
Management:	EXCEPTIONAL
Small Business Subcontracting:	VERY GOOD
Regulatory Compliance:	VERY GOOD
Other Areas:	
(1) SAFETY	EXCEPTIONAL
(2) CLOSEOUT SUBMITTALS & DRAWINGS	VERY GOOD
(3)	

Variance (Contract to Date)

Current Cost Variance (%):
Variance At Completion (%):
Current Schedule Variance (%):
Completion Schedule Variance (%):

Assessing Official Comments - Quality

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
Quality Rating: EXCEPTIONAL

Comments: The final product as delivered by Michels Corporation was of exceptional quality. Michels Corporation established a high-quality standard early on with the submission a highly developed and thorough quality control plan managed by James Palmer (Quality Control Manager) and performed by Timm Schernecker (Superintendent). After addressing some initial discrepancies identified during pre-construction surveys, Michels Corporation's attention to detail and adherence to their quality control plan was instrumental in documenting and providing quality control records to the Government. Michels' quality control manager ensured that all work complied with contract requirements and submitted all transmittals in a complete, accurate, and timely manner for Government review resulting in a smooth construction schedule where all materials were approved prior to the scheduled feature of work. Their quality control system performed all required activities and testing in accordance with the plans and specifications resulting in no deficient work or corrective actions. The Michels Corporation team even went out of their way to ensure that all work areas were clean, properly graded, and left in better condition than initially received to ensure that the end-user received not only a quality product but an aesthetically appealing final product upon completion. The Michels Corporation team and their efforts resulted in the successful completion of the project and all of its contractual requirements.

Assessing Official Comments - Schedule

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
Schedule Rating: EXCEPTIONAL

Comments: Michels Corporation mobilized quickly, worked efficiently, and the project was deemed substantially complete ahead of schedule. They developed and maintained a comprehensive schedule throughout the life of the project, provided weekly updates during all phases of work, and demonstrated their technical competence in synchronizing their efforts with their schedule. This success is magnified by the fact that three prospective bidders were discouraged by their surety from bidding this project due to the short period of performance, high production requirements and site access constraints. All submittals and closeout documents were received in a timely manner and are a testament to Michels Corporation's desire to perform quality work quickly.

Assessing Official Comments - Cost Control

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
Cost Control Rating: EXCEPTIONAL

Comments: Brandon Daniels, Project Manager for Michels Corporation, was instrumental in the cost control for this project. As a firm-fixed-price contract, all of Michels Corporation's pay requests were accurate, complete, and submitted in timely manner. Four additional proposals were submitted in a complete and timely manner, included all pertinent information required for evaluation, and all prices were negotiated to a fair and reasonable amount for both parties. Brandon's ability to quickly propose on these additional scopes of work greatly facilitated the implementation of these change and successful completion of the project with minimal changes to the schedule and staying under budget. This was a skillful performance and unmatched by any other contractor over the past two years performing similar projects.

Assessing Official Comments - Management

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
Management Rating: EXCEPTIONAL

Comments: The Michels Corporation team is easy to work with at all levels. Brandon Daniels (Project Manager) and Bob Martin (Program Manager) were key management personnel that were cooperative, highly responsive, and customer focused. Bob and Brandon really and truly enabled the successes of this project. Communication, a key component to success, was not only frequent but also effective amongst their entire staff regarding all aspects of this project: day-to-day operations, transmittals, requests for information, proposals, contract administration, et cetera. At the beginning of the project, both Brandon and Bob played integral roles in managing a high-risk and unpredictable relationship with a local tribal entity. Proactive in their approach, Bob and Brandon used their experience working with other Native American tribes and reached out to the tribal council liaison officer, negotiated an agreeable solution pertaining to tribal employment rights during the early stages of the COVID-19 global pandemic, and were able to deescalate an already tense situation that most assuredly would have resulted in legal ramifications and significant schedule delays. The on-site and home office managers clearly demonstrated the ability to plan, schedule, resource, organize, and manage the work as evidenced by advanced submission of transmittals and synchronizing their efforts across all aspects of the contract and definable features of work despite a constrained access jobsite. The on-site crew was staffed with knowledgeable and skilled personnel resulting in not only an organized and efficient jobsite, but some creative solutions that involved utilizing a 100-ton crane to drive sheet pile rather than the excavator mounted system originally planned. All sub-contractors utilized for this project performed work in accordance with their subcontract agreements and upheld the high-quality standards required by Michels Corporation and their quality control program.

Assessing Official Comments - Small Business Subcontracting

This is the FAR Definition of VERY GOOD: *Met all of the statutory goals or goals as negotiated. Had significant success with initiatives to assist, promote and utilize SB, SDB, WOSB, HUBZone, VOSB, and SDVOSB. Complied with FAR 52.219-8, Utilization of Small Business Concerns. Met or exceeded any other small business participation requirements incorporated in the contract/order, including the use of small businesses in mission critical aspects of the program. Endeavored to go above and beyond the required elements of the subcontracting plan. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner. Did not have a history of three or more unjustified reduced or untimely payments to small business subcontractors within a 12-month period.*
Small Business Subcontracting Rating: VERY GOOD

Comments: Michels Corporation developed a subcontracting plan and utilized several subcontractors during the course of construction. They made a good faith effort to utilize local and small businesses, purchase materials locally, and they complied with the requirements as outlined in the specifications and FAR 52.219-8.

Assessing Official Comments - Regulatory Compliance

This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
Regulatory Compliance Rating: VERY GOOD

Comments: Compliance with all regulatory and permit requirements was very good. Areas of evaluation include, but are not limited to:

i. Contractor's enforcement of laws and regulations: Very Good
ii. Communication of laws and regulations to subcontractor(s): Very Good
iii. Correction of deficiencies when out of compliance: N/A
iv. Compliance with the Davis-Bacon Act: Satisfactory

Michels Corporation complied with all regulatory requirements identified in the specifications. During the course of construction, on-site personnel uncovered a dilapidated barrel containing an unknown hazardous waste, took the necessary precautions to properly excavate, contain, and dispose of the hazardous material in a seamless manner that did not disrupt their production.

Assessing Official Comments - Other Areas

This is the FAR Definition of EXCEPTIONAL: *Performance meets contractual requirements and exceeds many to the Government's benefit. The element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.*
SAFETY: EXCEPTIONAL
This is the FAR Definition of VERY GOOD: *Performance meets contractual requirements and exceeds some to the Government's benefit. The element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.*
CLOSEOUT SUBMITTALS & DRAWINGS: VERY GOOD

Comments: SAFETY: Michels Corporation provided a thorough safety plan, implemented their plan, and enforced their plan with high standards. No safety deficiencies were identified, and no accidents, injuries, or near misses occurred during construction.

CLOSEOUT SUBMITTALS & DRAWINGS: Michels Corporation provided all closeout submittals and drawings in a timely manner that required little to no revisions prior to acceptance.

Assessing Official Comments - Additional/Other

Comments: Michels Corporation is a professional organization and was an exceptional partner during the performance of this firm-fixed-price construction contract. Their communication, planning, performance, customer focus and high-quality products are unmatched. This company's performance and safety program set the gold standard for the Omaha District's flood recovery program and was emulated by many smaller companies. The efforts demonstrated by Michels Corporation clearly show their ability to perform large-scale, complicated projects to a high standard of quality, within budget and on or ahead of schedule. I highly recommend Michels Corporation for any future civil works construction contracts to include, but not limited to, levee construction or rehabilitation projects.

The final contract value for this project is $7,223,020.71.

Recommendation

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I **would** recommend them for similar requirements in the future.

Name and Title of Assessing Official

Name:	AARON ELLINGER
Title:	Resident Engineer, COR
Organization:	USACE-CENWO-CD-FRCO
Phone Number:	402-971-9118
Email Address:	aaron.h.ellinger@usace.army.mil
Date:	06/22/2021

Contractor Comments

Additional/Other: Michels Corporation fully concurs with the evaluation of the Government. The Omaha District has shown to be an excellent construction partner through the efforts of Resident Engineer Major Aaron Ellinger and his team. It was a great working relationship which provided for a successful, safe, and timely project. We found the communication especially with Engineering Technician Russell Matthews was on point and very responsive. The District was active in resolving issues as they arose onsite which enabled us to continue to perform the work and deliver a quality project. We would not hesitate to entertain any future civil work opportunities and appreciate the skilled USACE team that was involved in this project.

Name and Title of Contractor Representative

Name:	BRANDON DANIELS
Title:	Project Manager
Phone Number:	920-583-1426
Email Address:	bdaniels@michels.us
Date:	07/02/2021

Review by Reviewing Official

ADDITIONAL/OTHER: Review by Reviewing Official not required.

Name and Title of Reviewing Official

Name:	
Title:	
Organization:	
Phone Number:	
Email Address:	
Date:	

MICHELS®
CONSTRUCTION, INC.

Appendix C

Example Quality Management Plan

WE DO THAT ... & **MORE**

ESA Submittals Response

General

Contract Name: CH058B - Eastbound Reroute
Contractor Name: Railroad-Michels Joint Venture, LLC
Creation Date: 01/16/2023 03:32 PM (UTC-5)
Reference:
Record No./Filename: CM 13.0.100809

Specification Section: 014010 - Quality Management Program
Specification Section:
Submittal/Deliverable?: Submittal
Submittal: 014010-0001
Revision No.: 1
Title: Quality Management Plan
Description: The Quality Management Plan is being submitted for review and approval following the requirements provided under Section 014010.

Note: Revision 1 changes are highlighted yellow. Refer to pages 2,3,20, 22 of this PDF file.
Remarks:

Received from Contractor: 12/28/2022 11:38 AM (UTC-5)
Required Start:
Required Finish: 01/27/2023 11:31 AM (UTC-5)
End Date:

Submittal Status

This is a limited review in accordance with General Provision Article 2.01 and Specification Section 01330. This review does not relieve the Contractor of responsibility for any failure to meet all Contract requirements. The Contractor shall confirm and correlate all dimensions, and verify all loads at the job site. The Contractor remains resposible for all fabrication processes and all techniques of construction. This review is not warranted to or in any way for the benefit of the Contractor.

MTAC&D Submittal Status: Proceed (P)
Deliverable Satisfactory?:
MTAC&D Response:
MTAC&D Additional Response:
Construction Manager: Dennis Occhino
Construction Manager Review Date: 01/16/2023 03:32 PM (UTC-5)
Construction Manager:
Date:

Attachments (1) **Linked Records (0)** **Linked Mail (0)**

RAILROAD MICHELS JOINT VENTURE LLC

CH058B - HAROLD STRUCTURES EASTBOUND REROUTE

Quality Management Plan (QMP)

CH058-014010-0001

R001

SUBMITTAL REVIEW	
RCC | MICHELS	**CH058B Harold Structures Eastbound Reroute**
Description: Quality Management Plan (QMP)	
Submittal No.: CH058B-014010-0001	Date: 12/23/22
Prepared by: Sophia Bitler	
Reviewed by: Frank Spinozza	
QA/QC Review by: Andrey Moor	

MTA C&D CH058-B

Prepared By:

RCC/Michels. JV
75-77 Grove Street Paterson,
NJ 07503
(973) 684-0362

December 23, 2022

Item Description:

FOR REVIEW AND APPROVAL

The Quality Management Plan is being submitted for review and approval following the requirements provided under Section 014010.

Note: Revision 1 changes are highlighted yellow. Refer to pages 2,3,20, 22 of this PDF file.

MTA CC
East Side Access – Eastbound Re-Route

(Contract No. CH058B)

DESIGN - BUILDER'S QUALITY MANAGEMENT PLAN (QMP)

Specification Section 01 40 10 – Quality Management Program

Contractor: Railroad – Michels JV (RCCM JV)

Prepared by: Andrey Moor, Quality Manager

Reviewed by: Matt Lawson, Project Manager

MATT LAWSON

Note: Revision 1 changes are highlighted yellow. Refer to pages 2,3,20, 22 of this PDF file.

Revision 1
11/07/2022

TABLE OF CONTENTS

Revision Record

Revision No.	Date Revised /Prepared	Revision Info.	Details of Changes	QM Initials
1	11/07/2022	Annual revision	Revised frequesncy of report submission; updated Org Chart	AM

Project Summary

Construction work to be performed on this design-build project can be summarized to the following activities:

- Building the Eastbound re-route approach structure
- Constructing foundations and catenary poles for the catenary structures
- Performing underpinning of the existing bridge pier at NYC DOT's Honeywell Ave. bridge
- Building track, 3rd rail and catenary for the VX/WV crossover, Loop 2, RT track, Line 3.
- Building Line 1 trackwork, 3rd rail and catenary
- Performing miscellaneous signal, communications and security work

Mission Statement

It is a goal of RCCM JV's project team to supply the owner with the final product consistent with Contract Drawings and Specifications, in conformance with applicable codes, standards and regulatory requirements, with the highest regard for Quality. The JV will strive to complete the project on schedule, within established budget. Our production crews are committed to building the work right the first time, without any rework.

This goal can be accomplished through implementation of the following fundamental measures:

- Self- inspection through proper training and understanding of contract requirements
- Detailed Work Plan for each major construction activity
- Evaluation of subcontractors and suppliers for their capabilities
- Engaging reputable and experienced third party independent inspectors and consultants
- Timely reporting of quality issues with analysis and proposed action plan, which should allow RCCM JV to mitigate any impact on the project and prevent re-occurrence of quality incidents

Purpose of the Quality Management Plan

As required by Specification section 01 40 10 "Quality Management Program", the Project Quality Management Plan [Plan] is written for use and reference by the general contractor RCCM JV, as well as all subcontractors/suppliers involved in the ESA CH058B project. This Plan is based on the provisions of corporate Quality Manuals of the JV members, and is in substantial conformance with the ISO 9001:2015 Quality standard. The Plan meets the requirements of contract documentation issued for this Project, as well as referenced FTA Quality Management System Guidelines (FTA-PA-27-5194-12.1). This document incorporates provisions, requirements and best practices adopted by the construction industry.
The project personnel shall become thoroughly familiar with the procedures established in this document. It delineates authorities, defines responsibilities and establishes procedures to be followed in controlling the quality of supplied materials, workmanship and, ultimately, of the final product.

This Plan outlines minimum requirements, procedures and responsibilities for any third party independent testing agency that shall be contracted by RCCM JV to perform the testing and inspections specified in the contract documents. Any subcontractor(s) that may be involved in the project will be required to submit their own Quality Plan for approval, or agree to the terms, conditions, and provisions established in the document issued by the JV.
All work shall be done in accordance with terms of the contract and as specified in the contract drawings and specifications. The instructions in this Plan are not intended to conflict with any part of the contract documents. However, should any discrepancy appear, the contract drawings and specifications shall take precedence.
This document will be submitted prior to start of the field work and shall contain examples/samples of forms that may be used for QA/QC during construction.
The list of inspections and tests, along with information on responsible parties, Hold Points, frequency of testing, method of inspection/testing, and acceptance criteria will be shown on the Inspection and Test Plan (ITP), which will be submitted separately.

Quality of the design will be addressed in the Design Quality Assurance Plan prepared and submitted by the Design Quality Assurance Manager Terry Winebrenner (Gannett-Fleming).

1. MANAGEMENT RESPONSIBILITY

The JV's executive management has allocated sufficient resources for Quality Assurance and Quality Control activities. Below is the description of the functions and responsibilities of *RCCM JV's* personnel, subcontractors, suppliers and independent testing agency that are part of the Quality Management structure. The Project Organization Chart (See Appendix A – Quality Management System Organization Chart) reflects the interrelationship between those involved in Managing the Construction activities and Project Quality Management responsibilities. When required individual qualifications are submitted to MTACC construction Manager for approval and records are maintained by the Design-Builder.

SENIOR PROJECT MANAGER (SPM)
Frank Spinoza is assigned to this position. He will be overseeing overall performance of the project. Mr. Spinoza will be closely working with RCCM JV Project Manager and with Owner's representatives.

PROJECT MANAGER (PM)
Matt Lawson is assigned to the Project Manager position. He will be overseeing procurement, management, and administration of construction work. The Project Manager is responsible for building the project in accordance with approved design, plans and specifications issued for this project. Mr. Lawson will be a direct contact person for communication with the project Owner.

QUALITY MANAGER (QM)
Andrey Moor is the Quality Manager directly responsible for administration and implementation of the QA/QC program. He has the authority to request removal, replacement or repair of any defective/nonconforming work done by the general contractor or any of the subcontractors. Mr. Moor will schedule, prepare and conduct RCCM JV's internal, as well as subcontractor/supplier audits.

DESIGN QUALITY ASSURANCE MANAGER (DQAM)
Terry Winebrenner representing the Designer Gannett-Fleming has been assigned to this position. Mr. Winebrenner's responsibilities consist of managing quality assurance related to design support during construction, design changes, and completion of all design documents. In addition, verification that required QA and QC procedures are administered and being properly followed. The job duty includes initial, periodic and final auditing of the design packages.

CONSTRUCTION QUALITY ASSURANCE MANAGER (CQAM)
The JV will assign a qualified Construction Quality Assurance Manager (CQAM). The CQAM is responsible for implementing, monitoring and adjusting construction process. Coordination with the QM and DQAM is part of the duties. The CQAM reports directly to the QM and is totally independent from the production activities, has no duties other than the Quality Assurance.

QUALITY STAFF (QS)

The RCCM JV shall assign adequate Quality Staff (QS) consisting of experienced quality control inspectors, auditors and other personnel to ensure proper implementation of the QMP. The QS may consist of the JV's personnel, as well as third party consultants. Primarily, the QS personnel is responsible for assistance in preparation of daily quality reports, technical submittals, etc. In addition, the QS personnel responsibilities include the following:

- Various inspections including material receiving; work In-Process; Final
- Preparation and performance of WQPs and reference materials for pre-activity/ readiness review meetings

QS Personnel are selected on the basis of their trade knowledge and experience. Quality Staff personnel will be on site full-time when work is in progress for their trade.

FIELD SUPERINTENDENT

The Superintendent is responsible for performing work in accordance with contract plans, specifications, and per the approved QMP; managing the work performed by subcontractors. Superintendent will be actively involved in developing the Work Plans for major construction activities. Sean Clevenstine and Mike King were assigned to Superintendent position. They will participate in pre-activity meetings and provide feedback on constructability and review means and methods of performing work proposed by general contractor and its subcontractors.

DOCUMENT CONTROL ADMINISTRATOR

The JV will assign a competent document control administrator. This position is essential for timely documentation flow. The assigned person shall be responsible for assisting Project Engineer with document control duties. It shall include, but may be not limited to the following:

- Request required submittal packages from subcontractors/suppliers
- Log in and transmit the project documentation utilizing Skire Unifier software
- Send notifications to the project personnel regarding the status change of permit applications, submittal's pending approvals
- Other, miscellaneous duties associated with document control

INDEPENDENT TESTING AGENCY/ LABORATORY

RCCM JV shall select an independent, certified testing agency (ITA), preferably located in close proximity to the project site. The selected agency must possesses required certifications (AASHTO, AMRL) and shall have extensive experience in inspections and testing on construction projects in NYC metro area. It is RCCM JV's intent to utilize selected ITA for performing inspections identified in Specification 01 33 40 "Code Compliance" and 01 40 30 "Special Inspections". The rail track work is not in the scope of the ITA, with one exception – testing of the rail welds. The track construction inspections shall be performed by qualified RCCM JV personnel.

SUBCONTRACTORS / SUPPLIERS

All Subcontractors/Suppliers shall be submitted to MTACC CM for approval, and only approved subcontractors/suppliers shall be used on the project. All approval records are maintained by the Project Manager. The QM and or designated QS review subcontractors and suppliers agreements for inclusion of all applicable quality requirements.

2. DOCUMENTED QUALITY MANAGEMENT SYSTEM [QMS]

The RCCM JV Quality management understands the importance of having a fully functional and effective QMS. The periodic (semi-annual) reviews of the QMP will be implemented to ensure efficient administration of the program and adequate control measure that would allow to timely identify and correct any deficiencies that may occur. The scope of review shall include, at the minimum, the following items:

- Follow up on findings from prior review, to ensure closure of all outstanding deficiencies
- Performance of the design and construction process, with emphasis on interdisciplinary interface
- Proper management of nonconformances and corrective actions
- Evaluation of internal and external audit results
- Records of Qualifications (applies to personnel and business entities)
- Issued lessons learned
- Opportunities for improvement
- Desirable / necessary follow up actions that are warranted due to identified deficiencies

The QM or designee shall share the review findings with the project team, assign responsibility for needed corrective actions, and verify performance and closure of outstanding items.

3. DESIGN CONTROL

Due to specifics of the contract, the design control procedures will be prepared and submitted by the group of project designers. The key design personnel involved in the CH 058B project is identified below:

- Design Build Manager Hamed Saghaeian Nejad (RCCM JV), Michael Bacsik (RCCM JV)
- Design Director David Boate` (GF)
- Design Manager Art Misiaszek (GF)
- Design QA Manager Terry Winebrenner (GF)
- System Design Integrator Phil Semler (GF)

Design control activities include carrying out independent checks of design calculations, specifications, drawings and contract documents; conducting and documenting design reviews, which include review for constructability, operability and maintainability.

List of items that may be subject to design checks is shown in quality procedure QP-9. The GF personnel may use their own form for documenting QA/QC process of the design work.

Each design submittal shall include copies of all documents to be reviewed, the purpose of submittal, the elements of the work and the proposed course of action.

All design shall be prepared by, or under supervision of, the Designer of Records.

4. DOCUMENT CONTROL

A robust document control system is essential for success of the project. The RCCM JV project team has established a key measures that shall allow to effectively track all submittals required by the contract.
A list of quality records to be maintained by the project team shall be clearly identified. This information may include a file retention period, storage location, schedule of retrieval of stored documents from the storage area.

Submittal review process consists of review of submittals prepared by all subcontractors, suppliers and consultants. All technical submittals will be reviewed and signed by the project QM. Only the latest, approved version of the documents will be distributed and made available to the project personnel. Obsolete documents must be removed from circulation. This process is responsibility of the Quality Staff. Any changes to document status (namely, revision number, date, title, etc) shall be captured by the document control system and stored as a project record.

RCCM JV will utilize the Skire Unifier document control system provided by the project owner. Proper training with designated users shall be scheduled and administered at early phase of the project (during planning/mobilization).

Prior to the start of construction activities, the project team personnel will review contract plans and specifications and create a submittal log. This log will be periodically updated to track the document turnover and status of submitted items.

Any design field changes shall be effectively communicated to all project participants.

A conformed set of plans and specifications, as well as approved submittals, will be distributed to the field supervisor, and a copy will be maintained at the field office, for implementation of the contract work.
Our field supervisors will implement a production control by utilizing the contract plans, specifications, shop drawings, and manufacturers' procedures to plan the contract work. The production and installation procedures, which may affect quality, will be performed under controlled conditions as follows:

- Document procedures defining the manner of design, production, installation, and servicing, where the absence of such procedures affects quality

- Use of proper equipment and tools in a suitable work environment
- Compliance with contract plans, specifications, quality plan, documented procedures, and reference standards
- Monitoring and control of process parameter and product characteristics
- Acceptable workmanship
- Timely maintenance of equipment

The Field Supervisor will ensure that these procedures are adhered to by directly monitoring the installation of the work. Document control activities associated with the project close-out will be described in the Project Close-out Procedure.
RCCM JV's project personnel will ensure that any changes implemented on the project have been captured and documented on the Redline drawings. As-Built drawings are prepared by Project Manager or assigned engineer. Records of field changes and other relevant documents are marked as record drawings. A set of record drawings are kept in the JV's field office.
As-built drawings shall be properly maintained and timely updated, as required by specification section 01 40 20 "Record Document". Record drawings must be readily available for review upon request. They will be transmitted to the Owner at the completion of the project

The Project Manager or designee shall prepare detailed submittal logs with actual date submitted and due date for the submittals. All documents and document changes are prepared per quality procedure QP-1. All submittals are reviewed and signed by the Quality Manger before submittal to MTA –CM office for approval. A Submittal Log Form F.9.0.0 will be maintained in order to track the status and revisions of the submittals. This in conjunction with the optional Scorecard (refer to form F.21.0.0) will ensure that all document changes are controlled and monitored.

Each drawing or document is assigned an identification number, approved by project manager and/or assigned engineer. Revisions to the documents are monitored and approved by a person or engineer authorized to make changes and approved by the Project Manager and Quality Manager. The controlled documents are distributed to the user staff by electronic means and use of computer. An As-built Log F.22.0.0 will be used to track and manage the As-builts. The drawings will be submitted in the following format: CH-058B-AB-(DWG #)

Electronic filing of documents is maintained on an external server designated as a shared drive. A back-up system including duplication of data is maintained.

5. PURCHASING

Subcontractor and Supplier Control

All the subcontractors and suppliers are submitted to MTACC-CM for approval. Only approved suppliers and subcontractors are allowed to perform construction activity or supply materials to the work site. The CQM shall assure that all subcontractors and suppliers comply with the Quality Requirements specifications as is specified in the quality procedure QP-4.

Subcontractors /Suppliers have the option of either using the CQP or providing their own Quality Plan. If they are to use the CQP they must submit written certification of their intent to comply with the Contractor's Quality Plan. If the subcontractors and/or suppliers elect to not use the CQP, they must provide a quality plan to the Quality Manager for review and approval and then it will be submitted to MTA-CM office for approval.

Purchasing

The purchasing manager or staff shall purchase materials as specified in the contract documents or approved by the MTA-CM.
The project team shall:

- Evaluate and select subcontractors and suppliers based on their ability to meet subcontract requirements and quality assurance requirements.
- Establish and maintain quality records pertaining to subcontractors' work
- Conduct pre-activity meetings with subcontractors
- Conduct a source Inspection on major suppliers

The Purchase Orders for materials, at a minimum, shall contain following information:

- Type, class, grade, and other applicable identification parameters
- Title or other positive identification, and applicable issues of specifications, drawings, process requirements, inspection instructions, and other relevant technical data, including requirements for approval or qualification of product, procedures, process equipment and personnel
- Title, number, and issue of the quality system standard to be applied

All major subcontractors and suppliers will be supplied with project drawings and specifications. Upon completion of the initial review, the subcontractors/suppliers will be required to submit a price quote to the general contractor.
In the process of subcontractor/supplier selection preference will be given to companies known by RCCM JV for reliability, quality of service/product, ease of communication, coordination and issue resolution as well as willingness and capability to promptly correct any issues that may arise.
If warranted by project needs or contractor's means/methods, RCCM JV may request substitution of specific material, equipment, test procedure, etc. Advance written request will be submitted to the project owner/engineer for review.

6. PRODUCT IDENTIFICATION AND TRACEABILITY

Material Receiving and Tracing

The QM in concert with supplier/subcontractor will review the Inspection & Test Plan for all required inspections, tests and certifications required prior to shipment of materials to contractor's site.

The Project Quality Engineer or Quality Manager shall properly identify materials delivered to the site to ensure their suitability for intended use. All materials are inspected by RCCM JV quality staff prior to acceptance. Material certifications indicating the origin, quantity, grades, etc. shall be obtained, verified and submitted to MTA-CM office. Only accepted materials shall be stored for construction. Receiving reports will be generated and kept with material certifications as per QP-2. All materials received on site shall be recorded in the receiving log.

Upon receipt of the material/equipment at the jobsite, RCCM JV Quality staff will check the delivery ticket for the following:

- Supplier, type/class/grade, Purchase Order No., or other identification
- Title or other positive identification, quantity, applicable issues of specifications or contract plans, inspection instructions and other relevant technical data
- Title, number and issue of the quality system standard to be applied

This information will be checked against what is shown on the purchase order to ensure that the proper material/equipment is furnished. RCCM JV Quality representative will fill out and sign the receiving inspection form. Receiving inspection documentation shall be kept on file.

Delivery, Handling and Storage

On-site storage will be of a limited duration, as deliveries will be scheduled on as needed basis. Delivered material and equipment will be stored per manufacturer/supplier recommendations in adequate storage conditions to prevent possible damage or deterioration. RCCM JV Quality staff shall perform a thorough receiving inspection upon delivery to the jobsite, fill out inspection report and file it along with the supplied documents (MTR, Bill of Lading, Packing Slip, etc.)

Nonconforming Materials

Deficiencies of delivered materials will be immediately brought to attention of the Project Manager, Superintendent, and the supplier. Coordination for repairs or replacement will be performed to facilitate the process. Material delivered to the site will be either accepted, rejected, or held, and will be labeled according to distinctively colored tags. Held material can subsequently be re-labeled as accepted, once all requirements have been met.

Unacceptable materials are identified and separated for return to supplier. An internal RCCM JV Material Rejections Log F.35.0.0 will be used, indicating the reason for return. If a negative trend is identified, the QM will investigate with the supplier to find a root cause. If the Nonconforming material is not returned to the

supplier, the QM will generate an NCR following the methods described in QP-8.

The QM will then submit the NCR report to the MTA-CM for review with the recommendation to either Scrap, Return to Vendor, Use As-Is, Repair or Rework. The Nonconforming material is to remain separated until the MTA-CM has responded with acceptance or rejection of proposed disposition.

7. PROCESS CONTROL

Process Control

In order to ensure satisfactory quality of the product, RCCM JV shall establish effective controls of construction process. This may be accomplished through implementation of the following measures:

- Detailed, timely submitted work plans
- Readiness review process for upcoming activities
- Use of Operation Scorecards (optional)
- Use of three-phase approach for inspection and verification of installed work

Construction Work Plan Format:

RCCM JV Project Engineer(s) and Quality Manager will prepare Construction Work Plans to ensure that the work complies with the contract documents for each definable feature of work. The Construction Work Plans (CWP) are prepared for each definable feature of work using the format shown in Form F:15.0.0 and submitted to MTACC-CM for approval.

Typical Construction Work Plan shall contain the following elements:

- Description of the sequence of the work activity
- Include the responsibilities of key personnel
- Submittals that require approval before commencement of work
- Equipment access plan
- Planned hold points
- Acceptance criteria
- Checklists
- Special inspections
- Tolerances for performances
- Contingency plans
- Traffic maintenance plans and Pedestrian safety plans
- Methods of meeting Environmental Requirements

The Quality Manager and QS will work in conjunction with the Project Manager to

develop procedures for monitoring, coordinating, and documenting construction activities. For each major activity a Work Plan shall be developed and submitted to MTA-CM. Shall be done prior to work commencement. All subcontractors will submit Work Plans for their scope(s) of work. These plans must be reviewed by the Quality Manager, QS, and Project Manager and then submitted to the MTA-CM for approval. When outside inspection is required, the Work Plans shall identify the scope, specific a steps and schedule/sequence of operation. All aspects of the Work Plans will be subject to Audit/Surveillance by the MTA-CM.

Phases of the Construction Work Plan

The CWP shall indicate the feature of work and subcontractor or personnel performing the work.The responsibility and authority for the feature of work shall be indicated in the Construction Work Plan along with inspection and test scope and the acceptance criteria for specific activity.

Construction activity is monitored in the following stages**:**

- Planning Phase
- Implementation Phase

Planning Phase

This phase occurs at least six (6) weeks prior to the start of work.

- RCCM JV Quality team reviews the technical specifications for the definable feature of work under contract CH 058B.
- Subcontractor's team or assigned personnel are identified and responsibility and authority are established
- Safety plan is identified
- Readiness Review meeting held and completed and accepted by the Construction Manager
- Examination of work area to ascertain that required preceding work has been completed, unforeseen conditions, if any, clearly identified and properly documented
- A physical examination on delivered materials, equipment, and sample work shall be performed by the Quality Manager or staff members to assure conformance with the approved shop drawings / submitted data and that the required materials are available. The procedures detailed in QP-2 "Material receiving & Handling", QP-3 "Control of measuring and Testing equipment", and QP-8 "Control of nonconforming condition" shall be utilized.
- Verification that all permits have been obtained and properly documented.
- Development of a Quality Work Plan (QWP). This phase shall be performed at the beginning of a definable feature of the Work and shall include:
    - Document Control

- Identification process of Hold Points
- Specific training/certification/qualification requirements for inspection personnel and for Third Party inspection personnel
- Review of workmanship to acceptable standards or criteria. Shall be discussed during the Readiness Review meeting, to ensure all areas are addressed and the Readiness review checklist F.31.0.0 forms are filled out.
- Verification of existing field conditions
- ITP
- Material/Equipment Verification, Material Storage, Material Quality issues / NonConformances

Implementation Phase

- Daily Checks are performed by QM or QS to ensure that the work conforms to acceptable standards or criteria
- RCCM JV field engineer(s) performs maintenance of the tools and equipment used.
- The QM/QS or staff perform inspections or tests and prepare inspection reports/checklists. The Quality Manager shall coordinate special inspections with Code Compliance representatives and the third party inspectors
- Any nonconforming conditions are identified and corrected prior to continuing work
- Daily Quality Reports are prepared using the form F:13.0.0
- Plan and perform inspection activities
- Document and correct any non-conforming conditions prior to continuing the work
- Perform maintenance for the equipment used in performance of the work
- Identify inspected and accepted features of work and distinguish these from non-accepted features of work.
- Ensure that the Work is performed in accordance with the applicable codes, standards, specifications, or other special contractual requirements using qualified personnel and/or equipment.
- Code Compliance shall be documented with Special Inspection Reports
- Contractor’s design professional shall identify all required Special Inspections.
- Verification that qualified personnel are employed
- Assurance that Hold Points are being documented correctly and honored

- Quality Manager/Staff shall perform periodic internal and external audits. Once audits are complete they shall be submitted to the MTA C&D for information.

8. INSPECTION AND TESTING

The Contractors Quality Manager shall prepare and implement a detailed Inspection and Test Plan (ITP). The ITP shall be based on requirements of specification sections 01 40 10 and 01 40 30. The inspection and test plan is submitted to MTACC-CM for approval.

Quality Manager shall perform periodic reviews to evaluate completeness and adequacy of the Inspection and Test Plan. Qualification of the Inspection and Test

Personnel are submitted to MTACC for approval. Independent test labs are also submitted to MTACC for approval. QP-3 Control of Measuring and Test Equipment further details the requirements for testing laboratories, and equipment.

The Inspection and Test Plan shall provide the following information:

- List of inspection and tests to be performed
- The specification and paragraph containing the inspection or test requirements
- Identification of the contractors, subcontractors or suppliers responsible for the each type of inspection or test
- Schedule of Inspection and test
- Independent test laboratory to be used
- List of specialized equipment and/or personnel training /qualifications required
- Characteristic to be inspected, examined, and tested at each activity point
- Specific inspection and test procedure and acceptance criteria to be used
- Inspection Checklist and Test Reports
- Hold Points as described herein

Written guidelines shall be established in the ITP to assure that suitable education, experience, and technical qualifications are maintained for personnel performing inspections and tests.
A listing of Hold Points shall be established as part of the ITP. The hold points may also be used by the CM to perform verifications of Contractor's Work and/or that required inspections and testing has been performed and quality records completed.

Inspections that fall under Special Inspection category require particularly close attention, as they comprise activities that lead to acceptance or rejection of the performed work. In addition, timely completion of these inspections constitutes requirement and criteria outlined in the specification section 01 33 40 Code Compliance, for which a separate Plan will be prepared and submitted.

An approved testing agency ITA/laboratory will perform inspections and testing that require an independent, third party inspector selected within 15 business days after submission of the QMP. The scope of inspections and testing to be performed by the independent testing agency will include, but may be not limited to the following:

Field testing:

- Concrete field and lab testing
- Compaction testing for fill material density (soil, DGA)
- Structural bolting
- Weld inspection and testing (visual, NDT)
- Deep foundations

Lab testing:

- Concrete compressive strength
- Concrete mix design
- Soil/aggregate Proctor test for moisture/density curve

Records of tests and inspections performed by ITA will be signed/sealed and submitted to RCCM JV. Inspection and test records will clearly indicate the product and process being inspected, location, date, specification requirements, and acceptance/failure status of meeting the contract criteria.

All other work-in-progress verification, testing and inspections shall be performed by the RCCM JV's Quality Manager or Quality Engineer. Examples of such self-performed inspections are: material receiving, formwork and rebar installation, installation of track components. Inspections performed by RCCM JV's Quality staff shall be documented in the form of Daily Quality Report, inspection report and/ or checklist.

9. INSPECTION, MEASURING AND TEST EQUIPMENT

The Quality Manager will maintain two calibrations logs, one for the equipment owner/operated by the RCCM JV, and another for the sub-contractors equipment as detailed in QP-3. Each inspection and piece of test equipment is uniquely identified and calibrated using proper calibration methods to provide; accurate inspection, test results and traceability to NIST standards. Each inspection and test unit is affixed with a calibration sticker showing the calibration status of the equipment, showing date of calibration and due date of calibration. Inspection and Test equipment is made available to MTACC-CM engineer for use when requested. Calibration certifications for the inspections and tests performed out of site operations shall be submitted to MTACC along with the inspection and test results.

An ITA selected and approved for the project is responsible for establishing, documenting and record keeping of the inspecting, measuring and testing equipment. A copy of the lab's written procedures will be provided to RCCM JV for submission to the Owner. This

document will detail conformance to Quality Management System Manual, contract specifications and applicable testing criteria.
The Quality Manager or designee is responsible for proper storage and maintenance of equipment being used on the project. Calibration of equipment will be monitored and timely renewed. The project Quality staff is responsible for verifying that the equipment being used by the 3rd party inspector, as well as company owned equipment has a valid calibration. Initially, this shall be verified during the job start up audit with ITA. Equipment calibration Log will be maintained to facilitate the record keeping of calibration activities.

Out of calibration or damaged equipment will be immediately removed from service, repaired and/ or replaced. Use of damaged/ out of calibration equipment is a subject to Nonconformance report. Quality staff is required to identify and report the locations where non-conforming equipment could have been used.

The Design-Builder will make inspection, measuring and testing equipment available to MTA C&D personnel. In addition, upon request, a qualified personnel will be provided to operate the equipment for use by MTA C&D.

10. INSPECTION AND TEST STATUS

The RCCM JV's Quality Manager is responsible for determination of the status of quality of installed equipment, material, components and systems. A system of color coded tags shall be implemented by the project's QC department to facilitate controls.
Four main categories of tags shall be used:

- ACCEPTED (green)
- HOLD (yellow)
- REJECTED (red)
- CONDITIONAL RELEASE (blue)

The tags will be subsequently numbered and completely filled out, signed and dated by the QS. Only the Quality department personnel is allowed to attach/ remove the tags.
All relevant information shall be entered into the Log indication proper disposition. The Log shall be timely maintained and periodically updated.

When appropriate, The QM shall identify the need for statistical techniques to verify the acceptability of construction processes and capabilities of work characteristic. Statistical techniques can consist of the tracking of nonconformities(QP-8) with frequency charts (trend analyses) and Pareto Charts for the identification of process improvement.

Trending of non-conformances for repetitive deficiencies shall be used for developing preventive and corrective measures.

The Quality Management System allows for tracking of nonconformities via defect codes/root causes. The data shall be used to evaluate and separate non-conformities

from the trivial many and the vital few for process improvement via preventative action. Analyses of the data shall be used to provide information where improvements and preventive action can benefit the most.

11. NONCONFORMANCE

It is responsibility of the Quality personnel to develop and implement effective nonconformance reporting procedure. The objective is to identify, segregate and remove from operation until adequate disposition is made.
Any staff member can report a nonconformance condition to the Quality Manger or QS. If product non-conformance is identified, the project owner will be timely informed. The QM or designee will document the fact of non-conformance and propose a corrective action. The Nonconformance Report will be filled out and entry to Nonconfromence Log will be made. In order to avoid unauthorized use of material that is rejected or approval status is pending (i.e. due to absence of supporting documentation) the material shall be segregated and clearly marked by using color coded tags.
Generally, four main disposition categories will be used for each of the identified nonconformances:

- USE –AS-IS
- REWORK
- REPAIR
- REJECT

A thorough root cause analysis must be performed, with proposed preventive actions listed. The objective of it is to prevent possible recurrence of the issue.

Nonconformances dispositioned as “USE-AS-IS” and “REPAIR” require approval of the design manager.
Items corrected within 24 hours from the time of identification do not require submission of formal NCR.
It is responsibility of the Quality Manager to ensure that all nonconformances are closed prior to completion of the project.

12. CORRECTIVE ACTION

Project personnel is responsible for identifying and reporting of nonconforming conditions. The project Quality staff will officially notify the owner of any failure of materials or work to comply with the contract plans, specifications, or QMS Manual provisions. This notification will detail the corrective action the project plans to take and necessary design changes, if such changes have been approved by the project Owner/Engineer.

Quality Manager / Project Manager shall assign a qualified engineer to investigate the root cause and implement proper corrective and preventive action, as specified in QP-8.

QS in charge verifies implementation of the corrective action and reports the closing of the corrective action to the QM. Use CAR log form F:41.0.0 to monitor corrective actions.

Proposed corrective action issued upon discovery of non-conforming condition shall contain the following information:

- Quality issue identification and cause
- Selection of corrective action to be performed
- Performance of corrective action
- Verification of issue resolution
- Re-occurrence prevention plan

Once corrective work has been performed, the work must be re-inspected by qualified personnel.
In addition, an effective preventive actions shall be developed with involvement of field superintendent to avoid recurrence of the issue. The proposed corrective and preventive actions, along with verification of completion of corrective work, must be documented on the NCR form. In addition, implemented corrective action shall be documented, within 24 hrs of occurrence, on Daily Quality Report.

MTA C&D will be furnished a copy of all NCR reports within one work day of initial generation and upon project closeout. An updated NCR Log shall be provided on the weekly basis.

13. QUALITY RECORD

RCCM JV has made a provision to identify types of quality records as evidence that performed work is in conformance with contract documents and the QMP.
Quality records shall be segregated by specification section and/or by type of work performed, maintained and submitted to the project Owner. Copies of all reports will be securely stored for the time period specified in contract documents. Both paper and electronic files shall be used. Paper copies to be kept at the jobsite for the duration of the project. Electronic files shall be stored on the company server, which is backed up daily to an external server. Inspection and test reports from the 3rd party inspectors will be signed, sealed (if required) and submitted for records. Test and Inspection Report for each test and inspection, with the exception of compressive strength tests of concrete, shall be submitted within 10 days of completion of such test or inspection. Initial reports of compressive strength tests of concrete/ grout - after 7 day test, the final report – within 3 business days after completion of 28 day test.

Quality Records are maintained by RCCM JV to demonstrate and prove that all deliverables and work meets the requirements specified in the contract. Audit reports, Nonconformance Reports and Corrective Actions are kept as Quality Records and are readily available when required by MTA-CM.

The quality records include but are not limited to the following:

- Shop drawings(QP-1)

- As-Built drawings(QP-10)
- Quality checklists(QP-1)
- Internal Audit Records(QP-5)
- External Audit Records(QP-6)
- Inspection and Test Records(QP-3)

- Daily Quality Summary Report(QP-1)
- Quality Records for Conforming Materials(QP-2)
- Quality Records for Non-Conforming Materials(QP-8)
- Any other records such as Subcontractor and Supplier Quality Program, Design Process and Review, Training, etc.

RCCM JV shall maintain Quality Records for a minimum period of three years or as required by law, after final completion of work. The records shall be made available to MTA-CM upon request. Quality records are also stored electronically at a remote location for safety.

Daily Quality Summary Reports QP-1 will be prepared daily, then compiled and submitted monthly (target date for submission is the second Friday of following month).

14. QUALITY AUDITS

There are two main types of audits that RCCM JV will perform:

- Internal audit
- External audit

The objective of internal audits/evaluations is performance assessment of the Quality Management program. This will be done by the Quality Manager or designee. Frequency of audit – minimum once a year. At the completion of the project, a final audit with involvement of corporate upper management will be conducted. The Quality Manger shall provide proper resources to perform internal audit once every six months, and prepare audit reports in accordance with QP-5. MTACC-CM office is notified 14 days in advance of the audit date. Internal Audit reports are submitted to MTA for information and corrective actions if required. In addition, an audit on testing laboratories, subcontractors and suppliers will be performed. Criterial for auditee selection is based on size and scope of their work, level of risk in terms of amount of potential rework and schedule impact.

It may be conducted in the form of "Source Inspection" on project suppliers. At a minimum, RCCM JV shall perform the following audits:

- ITA (Independent Testing Agency) - audit prior to start of field work
- Ready-mix concrete supplier - source inspection
- Pre-cast concrete supplier
- Ballast/ DGA supplier

The QM will issue a schedule and agenda of the Quality Audits to the project owner no later than sixty days after NTP. Owner's participation in quality audits is desirable. Results of performed audits/evaluations will be officially transmitted as a project record.

External audits (by MTACC) - may be conducted, at MTACC Quality Manager's discretion, on Design-Builder's Quality Management program. Schedule of scope of such audit(s) is to be determined and announced by MTACC.

The Quality Manger shall prepare an external audit schedule and submit the external audit schedule to MTACC –CM. The suppliers and subcontractors are audited based on the criticality of the operation and commercial impact of the supplied material, subcontract work on the construction activity and contract work. The QM is required to follow the guidelines included in QP-6 when performing external audits. MTACC-CM is notified 14 days in advance of day of External Audit for audits conducted 50 miles or more from the work site are notified 45 days in advance of the Audit date via the External audit schedule Form F33.0.0. External Audit reports are submitted to MTA for information and corrective actions if required.

15. TRAINING

Prior to the start of work activities in the field, the QM or designee will perform a job start-up training with project personnel directly involved in the project, with the objective to familiarize them with the requirements of the QMP and establish measurable performance goals and expectations.
The QMP training shall include, but may not be limited to the following:

a. Skire (document control software) training
b. Work Plan requirements and format
c. Nonconformance management
d. Material receiving and inspection procedures
e. Hold Point inspections

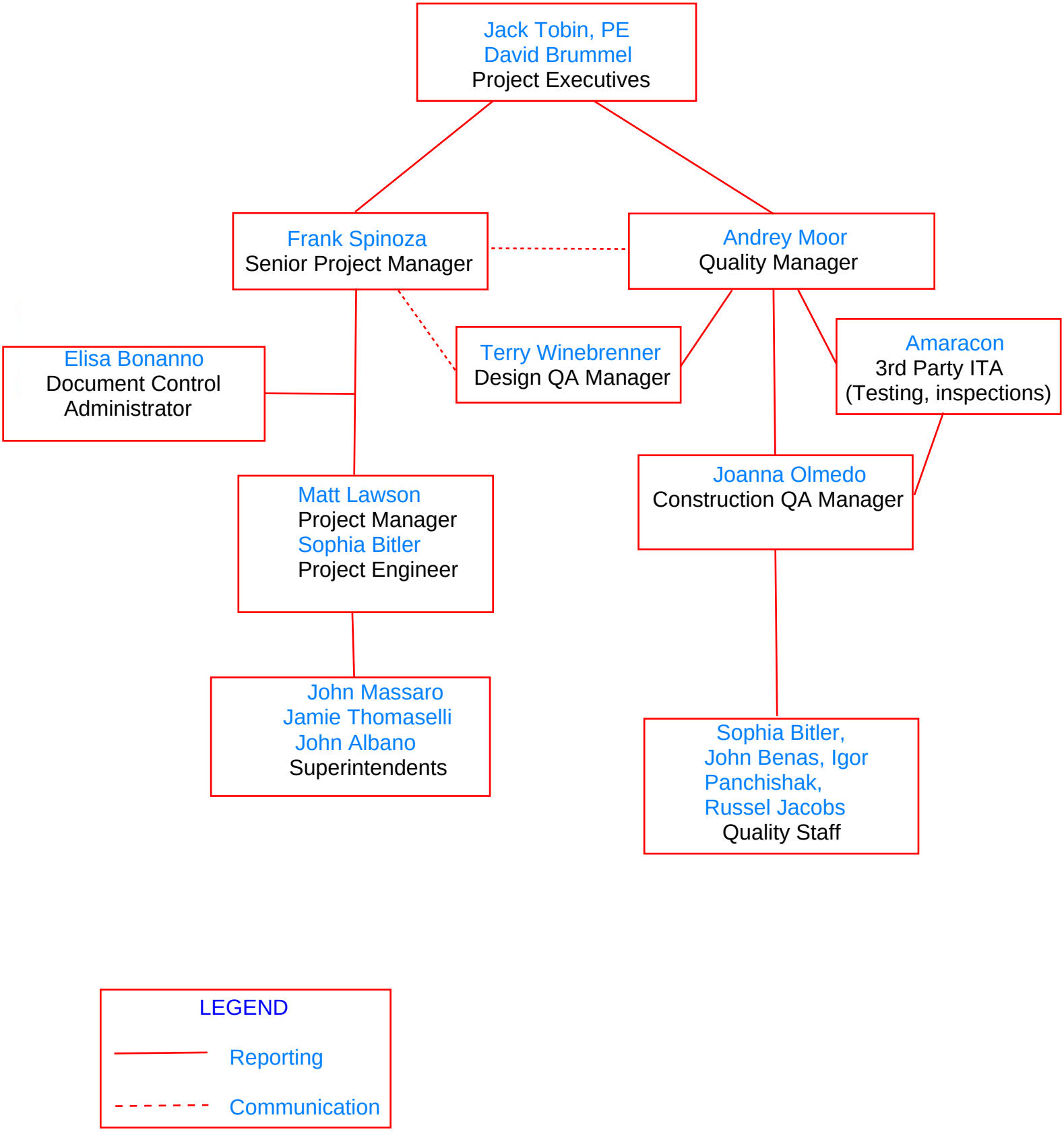
Prior to start of major construction activities, the QM or designee will present an activity specific “Just in Time” Quality training module to field supervision and craft personnel. Cold weather concreting, proper installation of the anchor bolts, soil/DGA placement and compaction procedures, shotcrete placement are some of the examples.

Subcontractors are required to train their own staff on the requirement of specification sections 01 40 10 and project QMP, and keep records of such training. The training records shall reflect agenda, minutes, attendees, training location, date, time, and duration of training, trainer’s name and title. It is the responsibility of the QM to maintain records of all training provided to project staff. These records will be reviewed during internal audits as specified in QP- 5 to verify proper record keeping.

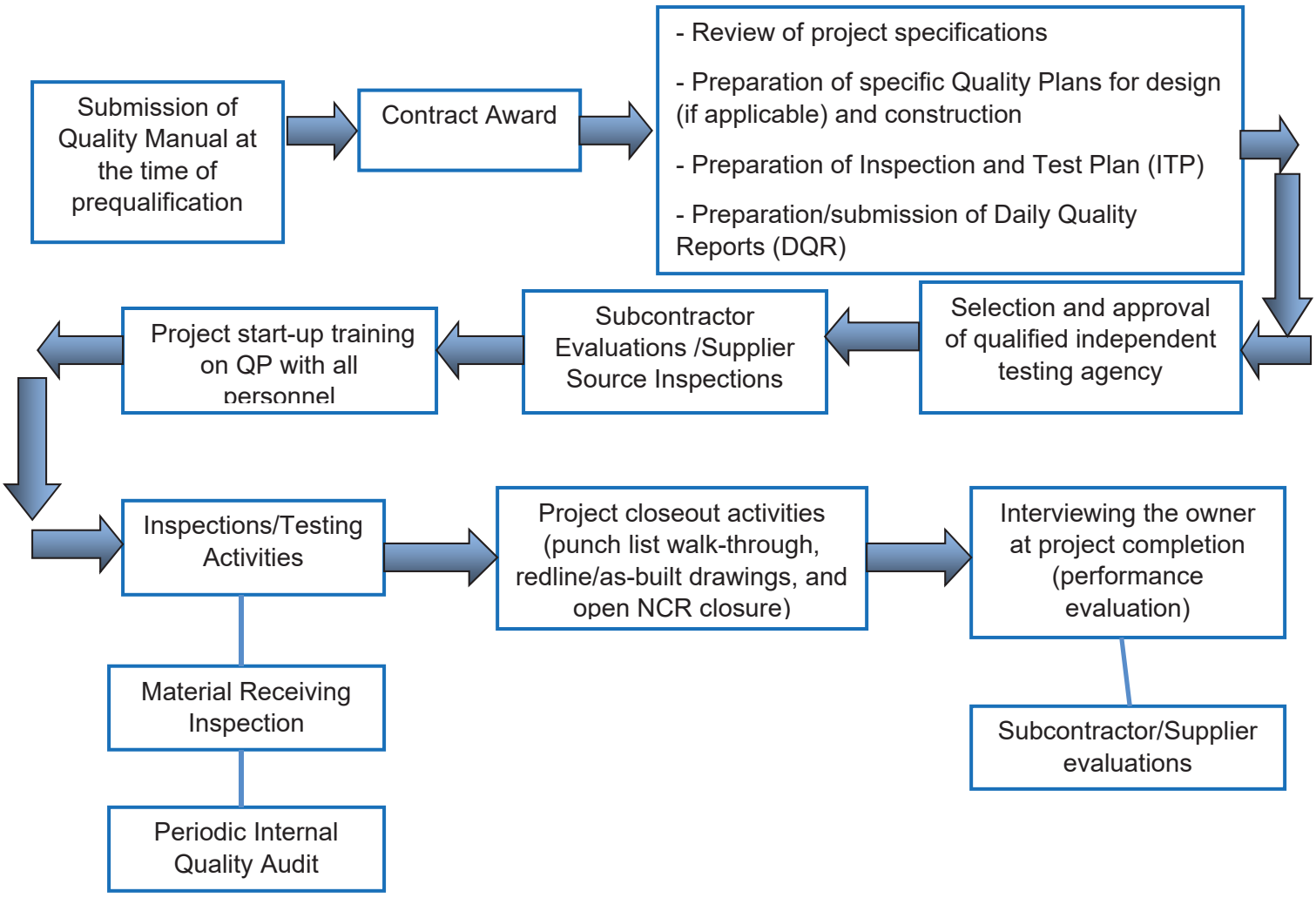
The QM or designee shall notify in writing to MTACC-CM at least 2 days in advance of the date, time, and location of training. Copies of the training records will be submitted to the MTACC-CM no later than one week after such training is provided. This will be tracked through use of the Training log F.24.0.0

Appendix A

QUALITY MANAGEMENT SYSTEMS ORGANIZATION CHART



Appendix B
QUALITY ASSURANCE PROCESS FLOW CHART



Appendix C

Quality Procedures

QP-1 Document Control Procedure

QP-2 Material Receiving and Handling Procedure

QP-3 Control of Measuring and Test Equipment

QP-4 Subcontractor-Suppliers Control Procedure

QP-5 Internal Audit Procedure

QP-6 External Audit Procedure

QP-7 Purchasing Procedures

QP-8 Nonconforming Condition Procedure

QP-9 Design Control Procedure

QP-10 As-Built Drawings

Scope:

This procedure is prepared to have control and manage the documents prepared for ESA CH-058B contract.

Referenced Documents:

a. RCCM JV Quality Management Plan for ESA-CH-058B
b. ESA-CH-058B Contract Specifications 01 40 10 for Quality Procedures
c. Submittal Log Form F:9.0.0

Responsibility:

Project Manager or designee is responsible to comply with the requirements and procedures specified herein

Procedure:

A submittal detailed schedule log is prepared by the Project Manager. Schedule log specifies when a document is due for submittal to MTACC.

Project Manager, Project Engineer or designated engineer is assigned to prepare the document or drawing for submittal to MTACC for approval. Each document or drawing is given a unique identification number. Document Changes are noted in the revision table of each document. The Submittals from the subcontractors are received by the project Engineer and are reviewed for correctness and compliance.

Assigned staff member prepares a submittal using the SKIRE submittal program. Hard copies of the documents are submitted to CM office the same day by hand delivery or by mail. The submittal is reviewed by the Quality Manager or assigned Quality Staff. Submitted document is entered in the submittal log form F: 9.0.0

When document changes are required, the changes are approved by the person authorized to make changes and approved by Project Manager and Quality Representative.

Electronic filing of documents is maintained on an external server designated as shared drive. Electronic copies are available to the staff in the shared drive. Project Manager or assigned staff sends electronic mails about the information about the new or revised documents. Each document has the latest revision and previous revisions. Staff is advised to use latest revision. Individual user shall discard the obsolete drawings and documents.

Scope:

This procedure is prepared to control and manage the materials received by RCCM JV for ESA-CH058B.

Referenced Documents:

a. RCCM JV Quality Management Plan for ESA-CH-058B
b. ESA-CH058B Contract Specifications 01 40 10 for Quality Procedures
c. Material Log form F:3.0.0
d. Material Receiving and Storage Report Form F:4.0.0
e. QP-8 Control of Nonconformance Condition Procedure
f. NCR Form F.5.0.0
g. Materials Rejection Log F.35.0.0

Responsibility:

Quality Manager or designee is responsible to comply with the requirements and procedure specified herein.

Procedure:

1. Assigned Quality Staff receives material delivery ticket from the delivery truck/person.

2. Material Delivery is entered in the delivery log, the following entries are made in the delivery log:
    - Date of delivery
    - Description of the Material Received
    - Purchase Order
    - Quantity Received
    - Condition of Material Delivered
    - Material Certifications
    - Applicable Characteristic(s) is(are) checked, measured and recorded in the inspection report

3. Quality Staff inspects the material delivered by using the appropriate drawing, catalog cuts and approved applicable documents. Materials affected by shelf life are inspected for expired shelf life. For Inspection report-use form F:4.0.0
4. Accepted Materials are placed in an accepted material area and an acceptance tag is attached to accepted materials to identify the inspection status.

5. Rejected Materials are returned to the supplier and the QM is notified. An internal Materials Rejection Log (F.35.0.0) will be maintained in which the reason for return is stated. If a trend develops with a certain supplier, the QM/QS will perform an internal investigation to find the reason for the repeated infractions.
6. If materials are not returned to supplier an NCR will be prepared as specified in QP-8.

Scope:

This procedure is prepared to control and manage the calibration of Measuring and Test Equipment used by RCCM JV for ESA-CH 058B

Referenced Documents:

Quality Management Plan for ESA-CH 058B
Contract Specifications 01 40 10 for Quality Procedures
Calibration Log - JV's Equipment F: 7.0.0
Calibration Log Subcontractors Equipment F: 8.0.0

Responsibility:

Quality Manager or Quality Staff is responsible to comply with the requirements and procedure specified herein. QM/QS shall review the calibration log every month to recall equipment due for calibration.

Procedure:

1. Assigned Quality Staff receives new or calibrated measuring and test equipment. Following entries are made by the QS in the Calibration Log:

    - Date of delivery
    - Description of the Measuring and Test Equipment received
    - Check the accuracy of the received instrument for its intended use precision in measurement.
    - Date of calibration
    - Date of calibration due
    - Measuring and Test equipment is sent to certified lab for calibration.
    - Condition of material delivered
    - Calibration Certifications
    - Actual Calibration readings are filed as Quality Records and verified that calibration is traceable to NIST standard.

2. QM/QS shall verify the calibration of the Measuring and Test Equipment used by the subcontractors. A separate Calibration Log is maintained for the

subcontractor's equipment as Form F: 8.0.0. A copy of the Calibration Record is kept on file as proof of calibration.

3. Measuring and Test equipment found to be damaged or out of calibration is identified and removed from service. All inspections and test performed by using an out of calibration equipment or nonconforming equipment are identified. The unit is checked for calibration if the unit as received condition is with in calibration standard the tests performed by the unit prior to calibration can be accepted. If the unit as received during calibration is out of calibration then the Inspections and Tests performed by the particular unit are retested by using calibrated equipment for acceptance to contract specifications.

Scope:

This procedure is prepared to control and manage the subcontractors/suppliers used by RCCM JV for ESA-CH058B contract.

Referenced Documents:

Quality Management Plan for ESA-CH058B
Contract Specifications 01 40 10 for Quality Procedures, Major
Vendor Form F: 10.0.0
Major Subcontractors Form F: 11.0.0

Responsibility:

Purchasing Manager or designee is responsible to comply with the requirements and procedure specified herein. QM/QS shall review and monitor the implementation of this procedure.

Procedure:

a. Purchasing manager/staff assigned maintains a log of approved suppliers/subcontractors. Purchasing manager/staff identifies need for new subcontractor/supplier as per form F: 10.0.0 and F: 11.0.0. The subcontractor/suppliers qualifications are submitted to MTACC for approval. Only approved suppliers and subcontractors are allowed to work / supply materials.
b. Items to be verified by Purchasing Manager/Staff
    a. Suppliers/subcontractors form is submitted and approved by MTACC
    b. Suppliers/subcontractors will comply with QC requirements
    c. Suppliers/Subcontractors Quality Plan is approved by QM, if subcontractor/supplier decides to use RCCM JV's Quality Management , Plan they must submit a letter in writing in that regard.
    d. External audits are planned to include subcontractors and suppliers
    e. Subcontractors working at construction site are covered by OCIP

Scope:

This procedure is prepared to control and manage the Internal Audit performed to evaluate implementation and effectiveness of the Quality Management Plan for ESA CH 058B contract.

Referenced Documents:

Quality Management Plan for ESA-CH 058B
Contract Specifications 01 40 10 for Quality procedures

Responsibility:

Quality Manager or Quality Staff is responsible to comply with the requirements and procedure specified herein. QM/QS shall review and monitor the implementation of this procedure. Internal Audits will be performed once every six months.

Procedure:

Quality Manager or Quality Staff prepares an Internal Audit schedule and is responsible to provide the resources necessary to perform the Quality Audits and corrective actions, for effective auditing function as per Quality Management Plan.

a. Auditor requirements
a. Auditor must be from a different area of work
b. Auditor cannot audit his or her own work
c. Auditor must have sufficient experience in the field of Quality and Auditing Functions

Functions Performed by Internal Auditor:

- Auditor notifies the auditee about the scope and schedule of the audit
- Performs a desk audit to study the documents and procedures for the area to be audited
- Conducts audit as per the audit schedule
- Prepares Audit reports and submit audit report to the auditee for necessary corrective actions to the audit findings, copy of report is submitted to Corporate Quality Manager for management review.
- The corrective actions are submitted to the auditor along with proper back-up documents to verify corrective action.
- Auditor verifies the corrective actions and the open audit findings are closed.
- Proper closure of the audit findings are also verified by Project Executive.

Scope:

This procedure is prepared to control and manage the External Audit performed to evaluate implementation and effectiveness of Quality Management Plan for ESA-CH058B and Quality Policy to Subcontractors and Suppliers.

Referenced Documents:

Quality Management Plan for ESA-CH058B
Contract Specifications 01 40 10 for Quality Procedures

Responsibility:

Quality Manager or Assigned Staff is responsible to comply with the requirements and procedure specified here in. QM/QS shall review and monitor the implementation of this procedure. External Audits are performed once every six months on major suppliers and subcontractors, based on the work activity and impact on the performance of the contract.

Procedure:

Quality Manager or assigned staff prepares an External Audit Schedule and is responsible to provide the resources necessary to perform the quality audits and corrective actions.

Functions Performed by the External Auditor:

- Auditor notifies the auditee about the scope and schedule of the audit
- Performs a desk audit to study the documents and procedures for the area to be audited
- Conducts audit as per the Audit Schedule
- Prepares audit reports and submit audit report to the auditee for necessary corrective actions to the audit findings, copy of report is submitted to Quality Manager for management review.
- The corrective actions are submitted to the auditor along with proper back up documents to verify corrective action.
- Auditor verifies the corrective actions and the open audit findings are closed.
- Proper closure of the audit findings are also verified by the Project Executive .

OWNER PROJECT MANAGER KEY PERSONNEL

- Engineering Manager
- Construction Manager
- Senior Procurement & Contracts Specialist

OVERVIEW

Undertaking a construction project requires sound decision-making with respect to purchasing equipment, supplies, materials and services used in the engineering, design and construction process.

MANAGING THE PROCUREMENT PROCESS

Mostly, the procurement process is technically owned by the Contractor, but Owner management is involved in the review and approval process for certain procurement decisions. The following description of the Procurement Process applies:

- CB- Company Buyer -Sr. Procurement & Contracts Specialist
- RB- Responsible Buyer
- CE- Company Engineering Manager
- RE - Responsible Engineer
- CM - Company Construction Manager
- RM - Responsible Manager

4.3 Develop Specification

1. Draft the technical Specification for equipment and materials as required.
2. Route the draft Specification for review and comments to RM and CE.
3. Review the draft Specification and provide comments to RE.
4. Review the draft Specification, consolidate one (l) set of Company Comments, and provide to RE.
5. Collect, resolve, and consolidate internal and Company comments and conform the Specification accordingly.
6. Provide to RB the following documents to be incorporated in the RFQ
    - Specification (approved for bid) and all Attachments
    - Recommended Price Breakout
    - Quotation Submittal Checklist- Technical

4.4 Determine Purchasing Method

1. Determine Competitive Quote or Single/Sole Source.

- Single or Sole Source- For situations where it makes sense to single source or sole source a particular purchase >$10K,complete the Single/Sole Source form.
- Competitive Quote-Proceed with next steps

2. Identify type of Purchase Order/Contract based on the table below:
    - All Purchases <$10K- Contractor is not required to obtain multiple quotes. Written confirmation of the quotations from the vendors is required. Contractor may select a vendor and issue a Purchase Order without seeking approval from the Purchasing Manager.
    - All Purchases >$40K- Multiple quotes are required unless a single/sole source justification form has been approved. Written confirmation of the quotations from the vendors is required. A Quotation Summary and Recommendation, including the technical and commercial quotation evaluations is required. Submit Quotation Summary and Recommendation to CB and seek Purchasing Manager approval before proceeding with the purchase.

4.5 Develop Bidders List

1. Draft Recommended Bidders List

    - Start with Vendor Management process
    - Incorporate Bidders recommended by RE and Company
    - Identify any Bidders that are considered a diversity supplier
    - Contact potential Bidders to:
        i. Confirm they can supply the requirements;
        ii. Obtain correct contacts and contact information
        iii. Determine how much time is adequate for quotation preparation
        iv. Confirm e-mail transmittals within the Bidders List.
    - Qualify any new Bidders as appropriate

2. Resolve any Company comments and Finalize Bidders List.

4.6 Prepare Request for Quotation (RFQ)

1. Prepare Request For Quotation (RFQ) using the proper RFQ templates for the type of purchase. RFQ should include at a minimum the following

    - Instruction to Sellers
    - Intent to Submit
    - Quotation response letter
    - Commercial Quotation Sheets
    - Terms Sheet
    - Quotation Submittal Checklist

- Supplier Diversity Initiative Questionnaire Form
- Delivery Dates
- Warranty requirements
- Quotation validity period
- List of proposed Subcontractor and/or Sub-suppliers to execute major portions of Seller's work
- Rates for technical service representatives

2. Issue RFQ to all Bidders listed on the final approved Bidders List.

4.7 RFQ SUPPORT

Provide single point of interface for all communications with Sellers during the quotation cycle.

1. Obtain all Intend to respond letters. Notify Buyer immediately of any declines. If any requests for extensions, before allowing one, obtain Company's approval.

2. Conduct a pre-bid meeting if deemed necessary. Based on meeting minutes, issues an Addendum to the RFQ if necessary.

3. Receive and coordinate questions and written correspondence, pertaining to the Request for Quotation and distribute them internally as appropriate.

4. Ensure that quotation extensions are granted on an exception basis only. If an extension is granted, such extensions shall be granted to all Sellers simultaneously, including those Sellers who may have already submitted its quotation.

5. Maintain all original correspondence generated during the RFQ cycle in the project procurement file.

6. Address all technical questions asked by Sellers and provide responses to the RB.

7. Address all commercial questions asked by Sellers.

8. Provide written responses to the Sellers' questions during the quotation cycle.

9. Submit written revisions for all changes and clarifications to the Specification to the RB

10. Issue a written RFQ addendum identifying the changes and clarifications to the RFQ package, including any change in the quotation due date.

4.8 Quotation Evaluation

1. Receive quotations and distribute as appropriate. Purchasing Assistant retains the original copy of all quotations for the Project records.

2. Review quotations for completeness and complete a preliminary evaluation to determine if any Sellers should be disqualified, eliminated, and/or added to a short list of Bidders. Quotations are evaluated primarily on the basis of cost, delivery and technical and commercial exceptions. All Company and Sellers comments will be gathered and RB will assemble and contact the Seller for resolution.

3. Compile a list of commercial questions for each Bidder or selected short-listed Bidders

4. Compile a list of technical questions for each Bidder or selected short-listed Bidders

5. Conduct all oral and written communications with Bidders or selected short-listed Bidders, including commercial, technical, and construction related issues and clarifications regarding quotations.

6. Prepare a Commercial Quotation Evaluation that lists the commercial pertinent details of each of the quotations in detail.

7. Prepare Technical Quotation Evaluation and forward to the RB for attachment to the Quotation Summary and Recommendation.

8. Coordinate a quotation clarification meeting, if necessary, with one or more of the short-listed Bidders to complete the evaluation and/or to negotiate specific terms.

9. Compile the Technical and Commercial Quotation Evaluation into a Quotation Summary and Recommendation for Purchase, if required.

10. Submit Quotation Summary and Recommendation to CB and seek Purchasing Manager approval before proceeding with the purchase, if required.

11. Review Quotation Summary and Recommendation. Route to CE and/or CM for approval. Provide approval for the purchase to the RB. File Copy of email approval to Desk Site.

Purchase Order/Contact Process

1. Upon receiving approval from CB for the purchase, proceed with final negotiations and contract award.

2. Ensure that the flow down provisions of the Contract are adhered to

Material Management Procedure

5.1 Company Buyer, Project Manager, Engineer and Material Manager to review all contracts in detail. Pay specific attention to delivery schedule.

5.2 Material Inventory Manager on site to pre call on all items to ensure prompt delivery and report any potential delays/breach of contract to project manager.

5.3 RCCM JV Part/Material Management Procedure to be followed on all orders.

5.4 Non Conformance report to be generated on all permanent items, received in unacceptable condition or not conforming to the purchase contract.

6.0 Material Storage

6. 1 Contracts to be reviewed by Material Inventory Manager and Project Manager to ensure proper storage area/facility are available in a reasonable distance from project site

7.0 Post Job

7.1 Project Manager or designeee to review all reports on Inventory levels and identify items to be returned to Vendors if applicable.

7.2 All product not returnable to be evaluate for possibility of selling it (Auction Surplus liquidators, scrap or other contractors/partners) or stock for future projects

Scope:

This procedure is prepared to control, manage, and prevent the Nonconforming Condition during construction on ESA-CH058B project.

Referenced Documents:

Quality Management Plan for ESA-CH058B
Contract Specifications 01 40 10 for Quality Procedures NCR Log F1.0.0
NCR Form F5.0.0

Responsibility:

Quality Manager is responsible for the overall control of the nonconforming process. The Quality Manager is responsible to document the nonconformities, investigate them for root cause, and take corrective/preventative actions.

Procedure:

a. A nonconforming condition can be the result of materials, equipment, or service not meeting the specified documents or quality workmanship standards. The nonconformities can be raised by competent RCCM JV personnel, subcontractor, or CM staff. All nonconformities will be recorded.

b. Any employee can report a nonconforming condition to the Quality Manager. QM determines if a nonconforming condition exists. When a nonconformance is found, a Nonconformance Report (NCR) use form F: 4.0.0 and NCR log F: 1.0.0 is generated and the item is identified with proper tags, labels, or any other appropriate method. All nonconforming materials are segregated to prevent inadvertent use in construction operations. The nonconforming item is evaluated for the root cause by the Project Manager or PM and QC assigned engineer. Nonconforming item is dispositional by Project Manager and Quality Manager. When a nonconforming item is dispositioned to use *AS-IS* or *REPAIR* shall require approval by the MTACC in writing. Items that can be corrected are reworked and re-inspected for conformance to applicable specifications. The re-inspections are recorded and proper reports are submitted to MTACC for acceptance and closure of the NCR.

c. All nonconformities are prioritized for corrective action and preventive action based on the magnitude of problem, risk, and costs. All nonconformities shall be evaluated for appropriate corrective action to prevent reoccurrence.

d. All nonconformance reports shall be submitted to designated personnel for appropriate action.

Scope:

The Design Control for construction atfor ESA-CH058B contract will be submitted separately, as part of the Quality plan for design.

Referenced Documents:

Quality Management Plan for ESA-CH058B.
Contract Specifications 01 40 10 for Quality procedures and Code Compliance.

Responsibility:

Project Manager is responsible for the overall design.

Procedure:

A. The design work may include but is not limited to:
   i. Preparation of extension of design
   ii. Permanent and temporary structural working drawings
   iii. Design details
   iv. Engineering analysis/calculations
   v. Software development

B. The design professional or persons are assigned by the Project Manager. The pairing of designer to specific design work is based on the past design work. The designer's responsibilities and qualifications shall be identified and defined as per contract specifications, code compliance and agency requirements. The resume of Designer is submitted to MTA- CC for approval prior to start of design work.

C. The Project Manager ensures that design requirements and applicable codes are understood when a design detailed plan is developed by Project Manager and design personnel.

D. Design input and output will detail engineering analysis/calculations as well as applicable software.

E. Design reviews at various stages are performed and recorded.

F. Design output is recorded and expressed in terms that can be verified /validated against designs.

Scope:

This procedure is prepared to have control and manage the As Built Drawing prepared for ESA CH 058B contract by RCCM JV.

Referenced Documents:

a. Quality Management Plan for ESA-CH 058B
b. Contract Specifications 01 40 10
c. Document Control Procedure QP-1
d. Monthly Record of Drawing Set Certification F.34.0.0
e. As-Built Drawing Log F22.0.0

Responsibility:

Project Manager and Quality Manager are responsible for preparation of as-built drawings and shall comply with the requirements and procedure specified here in.

Procedure:

Record Drawings (As Build) are records of the ongoing work showing the actual construction and depicting the field conditions/changes. A set of contract drawings showing redline changes, mark up showing field condition and actual construction work. Project Manager or assigned staff prepares a log of the Record Drawings with the actual dates and revision of Record Drawings. Record Drawings are controlled documents and document changes are performed as per QP-1.

- Project Manager, Project Engineer or designated engineer is assigned to prepare the Record Drawings for submittal to MTACC for approval. Each document drawing is given a unique identification number(CM-005-AB-DWG#). Document Changes are noted in the revision table of each document.

- Assigned staff prepares a submittal using Skier submittal program. The submittal is reviewed by the Quality Manager or designee.

- When document changes are required, the changes are approved by the person authorized to make changes and approved by Project Manager and Quality Manager.

- Hard copies are submitted to MTACC construction Manager by mail. Digital copies provided by CD in CADD Microstation V8 ".dwg" format.

- Electronic filing of documents is maintained on an external server designated as shared drive.

- A Monthly Record of Drawing Set Certification F.34.0.0 is submitted with the AS-Built Log F.22.0.0 to the MTA-CC by Michels Project Managers with progress payments.

SAMPLE FORMS

- NCR Log
- Worksite Permit Log
- Receiving Inspection Log
- Material Receiving and Storage Inspection Report NCR
- Inspection and Test Plan
- Calibration Log
- Submittal Log
- Training Attendance
- Daily Quality Report
- Scorecard
- Readiness Review Checklist
- Buy- Ship America Log
- Audit Day Schedule

RAILROAD MICHELS JOINT VENTURE LLC

NCR LOG

ESA CH058B East Bound Re-Route

NCR No.	ISSUE DATE	ASSIGNEE	DESCRIPTION	TARGET DATE	CLOSE DATE
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

RAILROAD MICHELS JOINT VENTURE LLC

WORK SITE PERMIT LOG

JOB #: _____ _____

LOCATION: _____

PERMIT NO.	DESCRIPTION	LOCATION	ISSUE DATE	EXPIRATION DATE

RAILROAD MICHELS JOINT VENTURE LLC

RECEIVING INSPECTION LOG
Major Equipment/Material

ESA CH058B East Bound Re-Route

Report No.	Received Date	Received By	Submittal No.	Subcontractor/Supplier	Description	QTY	ACC	REJ	NCR #	Remarks

RAILROAD MICHELS JOINT VENTURE LLC

MATERIAL RECEIVING & STORAGE INSPECTION REPORT

PROJECT: **MTACC ESA CH061A Track A Cut and Cover Structures**

Prepared By: _____ PMI No. _____ Prepared Date: _____

Submittal/Drawing No.: _____ Report No.: _____

Material Description: _____ Quantity: _____

Vendor Name: _____

RECEIVING INSPECTION

Visual Verification and Measurement, if applicable, are to be performed to approved NYCT material submittals and shop drawings.

Details/Items Checked:

1	Does material received match material type and quantity noted on shipping documents?	☐ Yes	☐ No
2	Does material received match Purchase Order/approved materials submittals?	☐ Yes	☐ No
3	Material Certifications provided, if required?	☐ Yes	☐ No
4		☐ Yes	☐ No
5		☐ Yes	☐ No
6		☐ Yes	☐ No
7		☐ Yes	☐ No
8		☐ Yes	☐ No

Comments:

If Rejected, provide reason, disposition and NCR No. (if applicable):

MATERIAL STORAGE INSPECTION

1. Are hazardous/flammable materials such as paint etc. stored in a segregated area?	☐ Yes	☐ No	☐ N/A
2. Is storage area clean and dry?	☐ Yes	☐ No	☐ N/A
3. Is storage area arranged for easy access?	☐ Yes	☐ No	☐ N/A
4. Any visible signs of post delivery handling damage?	☐ Yes	☐ No	☐ N/A
5. Any visible signs of adverse contact with adjacent material or equipment?	☐ Yes	☐ No	☐ N/A
6. When required is positive material identification visible and intact?	☐ Yes	☐ No	☐ N/A
7. Is rejected material segregated from accepted material?	☐ Yes	☐ No	☐ N/A
8. Have personnel been instructed on proper handling, storage, cleaning and preservation techniques?	☐ Yes	☐ No	☐ N/A
9. Materials effected by shelflife are checked for expired shelflife	☐ Yes	☐ No	☐ N/A
Disposition of any unacceptable observations:	☐ Yes	☐ No	☐ N/A

Signature: _____ Title: Quality Staff/Manager

F: 4.0.0
Revision 0: 8/25/21

NCR

RAILROAD MICHELS JOINT VENTURE LLC

Initiated By:		Date Initiated:		NCR No.:	
Date NCR Occurred:					
Company Name:					
Product/Service Provided:					
Problem reported by/detected at:	☐ - Customer	☐ - Field Construction	☐ - Receiving Inspection		
	☐ - Vendor	☐ - Shop Assembly	☐ - Othe ☐ - Subcontractor		
Nonconformity Description:					
Root Cause of Nonconformity:					
NCR Disposition (for product only):	☐ - USE AS-IS (Customer approval required)				
☐ - Scrap	☐ - REPAIR (Customer approval & re-inspection required)				
☐ - RETURN TO VENDOR	☐ - REWORK (re-inspection required)				
Disposition Description (Describe immediate actions to be taken to remedy nonconformity):					
Assignee:		Anticipated Date of Compliance:			
Corrective Action to Prevent Recurrence:					
Assignee:		Anticipated Date of Compliance:			
Review of Disposition & Corrective Action:					
Project Manager Signature: Date:		Quality Manager Signature: Date:			
Corrective Action Implementation Actual Date of Corrective Action Implementation: Signature Inspected by: Date: Customer Approval for *USE AS IS* and *REPAIR* Disposition		Verification of Corrective Action Implementation Verifier: Date:			
Customer Approver: Re-Inspection for *REPAIR* & *REWORK* Disposition:		Date:			
☐ - Pass ☐ - Fail		Inspected By: Date:			

F: 5.0.0
Revision 0: 8/20/21

CALIBRATION LOG
RCCM JV TOOLS

ESA CH058B East Bound Re-Route

Serial No.	Specific ID No.	Equipment Type (Nomenclature)	Calibrated By	Calibration Date	Calibration Due Date	Remarks

F: 7.0.0
Revision 0: 8/20/21

RAILROAD MICHELS JOINT VENTURE LLC

SUBMITTAL LOG

Contract No.	Project	Ref. No.	Section	Para.	No.	Rev	Description	By	Submit Date	Response Date	Status	Submittal No.	MTA Comments	ID
CH061A	EAST SIDE ACCESS	01320-004	01320	1.06B	004	0	Baseline Contract Schedule	AA	2/10/2017	**2/23/2017**	RR	01320-1.06B-004	Please see attached review comments	156
CH061A	EAST SIDE ACCESS	01450-001	01450	1.06D	001	0	CWP Tone Out and Hand or Vacuum Trenching	AA	1/30/2017	**2/15/2017**	PANR	01450-1.06D-001	Please see attached submittal response	98
CH061A	EAST SIDE ACCESS	01450-002	01450	1.06D	002	0	CWP Fences and Gate	AA	2/6/2017	**2/17/2017**	PANR	01450-1.06D-002	Please see attached submittal review comments .	136
CH061A	EAST SIDE ACCESS	01450-005	01450	1.06D	005	0	CWP Mobilization	AA	2/7/2017	**2/15/2017**	PANR	01450-1.06D-005	Please see attached submittal response	139
CH061A	EAST SIDE ACCESS	01540-004	01540	1.06A1	004	0	Construction Safety and Health Plan	AS	12/12/2016	**2/8/2017**	PANR	01540-1.06A1-004	Make sure that MNR Contact information is removed and replaced with LIRR/Amtrak	5
CH061A	EAST SIDE ACCESS	01570-001	01570	1.06A	001	0	Environmental Compliance Plan	AA	12/15/2016	**12/22/2016**	RR	01570-1.06A-001	Please see attached comments	12
CH061A	EAST SIDE ACCESS	01570-003	01570	1.06D	003	0	Enviromental Manager - J. Zielieke	AS	1/3/2017	**2/3/2017**	RR	01570-1.06D-003	Spec section 01570 1.06D states contractor's Environmental Manager shall be Contractor's single point of contact for all environmental performance, coordination and reporting issues. Environmental Manager shall be a full-time position and the Environment	75
CH061A	EAST SIDE ACCESS	01720-001	01720	1.06A	001	0	Land Surveyor Resume & Qualificatins - M. Batistic, P.E.	AS	12/16/2016	**12/21/2016**	RR	01720-1.06A-001	1. This resume does not meet the requirements of Section 01720-1.06A for the Licensed Professional Land Surveyor. 2. Please clarify the role for which M. Batistic, P.E. is being submitted for as E. Lezalja is accepted as the NY Professional Land Surveyor	45
CH061A	EAST SIDE ACCESS	02495-001	02495	1.06	001	0	Geotechnical Instrumentation Plan	AA	2/7/2017	**2/15/2017**	RR	02495-1.06-001	Please see attached submittal review comments	142

EXAMPLE

Training Attendance

SUBJECT: _____

Documents Reviewed: _____

Instructor: _____ Date: _____ Time: _____

NO.	PRINT NAME	SIGNATURE	DEPT./TITLE	PHONE #

NOTES:

Daily Quality Report

Project ID:			
Description:			
Prepared By:		**Date Prepared:**	
Date of Work Start:		**Date of Work End:**	
QC Activities Observed by Day (provide a brief description of QC activities observed or performed and reference attached reports, if applicable):			
Reviewed By:		**Title:**	Quality Manager
Date:			

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Quality Work Plan (QWP)

Title:	
Contract Spec. Section (s):	
01 33 40	Code Compliance
01 40 10	Quality Management Program
01 40 20	Record Documents
01 40 30	Special Inspections

APPROVALS

Project Manager:	_____
Quality Manager:	_____

Revision Number and Changes Made

Revision: Rev.
Changes:

PURPOSE:
RCCM JV has prepared this document to meet the requirements for Quality Work Plans as specified in Contract Section 01 40 10, Paragraph 3.06 G.3

GENERAL DESCRIPTION OF WORK:
The work to be conducted under this Quality Work Plan (QWP) consists of:

Work Plan/Schedule of Events:

Steel Work Panels
Steel work panels will be an option for lowering materials in the hole.

Construction Teams

Michels Construction Management Team

Project Manager		
Quality Manager		
Safety Manager		
Project Engineer		
General Supt		
Rail Road Coordinator		

MTACC- Construction Team

Construction Manager		
Deputy CM - Field		
Safety Manager		
Safety Representative		
Project Engineer		
Amtrak Representative		
Amtrak Representative		
Amtrak Representative		
LIRR Transportation		
LIRR Transportation		
LIRR Transportation		
LIRR Engineering		

Supplier Team:

QWP ELEMENTS / PREPARATORY PHASE ACTIVITIES:

1. Preparatory Phase Planning

A. Drawings and Material Submittals – The required submittals (catalog cuts, equipment, shop drawings, subcontractors, etc.) are made and approved prior to the start of the work activity. In certain instances (e.g., work is to be performed for the purposes of coordination with other trades, meeting a MTACC milestone or CPM schedule) the Quality and Project Manager can authorize proceeding with the work if the submittal review is in process and not yet completed. If authorized, the work activity will be properly identified and monitored so that when the submittal is approved or becomes available, the work can be completed for contract compliance. All submittals, MTACC and subcontractor communications are recorded and logged, with their status, on the Skire on database. Below is the material and drawings submittal list for the work activity:

Drawing or Material Description	Submittal No.	Current Status	Disposition of Review Comments	Ball in Court	Date Submitted

Working Drawing Number	Working Drawing Title

B. Safe Work Plan (SWP) - The Site Safety Manager has submitted the SWP prior to the scheduled start of this work activity. The SWP addresses any special measures needed to the address impacts to pedestrians and railroad operations.

Name of SWP	Date Submitted	Current Status	Ball in Court	Date Submitted

C. Permits – The CM staff ensures all required permits have been obtained and are current for the scheduled duration of work. Including notification to the New York City One Call Center in accordance with Industrial Code Rule 53, Part 53 of Title 12 (12 NYCRR 53).

Name of Permit	Date Applied	Current Status

D. Personnel Training or Qualifications Required, Independent Test Labs – The PM and the subcontractor management shall ensure that all workers possess the qualifications required or arrange for training prior to the start of work. All workers are provided safety orientation; the CM is provided with Section 01 40 10 and Quality Program training. Arrangements for testing by independent test laboratories will be coordinated when required in the Contract Documents.

Independent Testing	Company Performing Test

E. Materials and Equipment, Measuring & Test Equipment – All materials and equipment specified in the applicable Specification Section shall be submitted for approval and recorded per 1A above. All measuring and testing equipment utilized on the project shall be calibrated and controlled in accordance with the submitted Quality Program.

Production Equipment to be used:	Production Materials to be used:

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Measuring & Testing Equipment

F. Delivery, Receipt, Handling and Storage of Materials and Equipment – All materials and equipment is transported and stored in accordance with the manufacturers recommended methods and or recognized industry methods. Material and equipment received at the job site will be inspected in accordance with approved submittals/catalogue cuts and or shop drawings. Inspection tags; designating inspection status, will be attached to product material when not immediately used. Appropriate handling and storage measures will be taken to prevent damage and deterioration of product in transit and storage. Stored material will be periodically inspected for damage and expiration, when applicable.

Manufacturer / Specification Specific Handling and/or Storage Considerations:

G. Installation Steps, Schedule and Sequence of Work – The methods of installation shall be in accordance with manufacturer's instructions. These methods shall be discussed and planned with the subcontractor team. The Quality Staff will provide monitoring and oversight of all activities. Additionally, a review of the applicable contract drawings for measurements with actual field conditions shall be performed.

Include 8-Week Look-ahead Schedule that shows when this work will be performed, what other activities are scheduled to be performed at the same time, indicate the hold points and indicate any predecessors and successors of the work.

Location of Work:	
Area Superintendents:	Matt Gassner and Al Lombardi

Detailed Sequence of Work	Comments/Hold Points

H. Hold Points and Inspection & Testing Plan – All Inspection and Testing shall be carried as per approved ITP. Proper communication shall be provided to the MTA Representative when witnessing of project inspections identified as hold points, are specified.

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Specification Specified Hold Points

I. Special Processes to Be Used (e.g., welding, NDT, etc.)

Special Processes to be Used (i.e. Welding NDT, etc…)

J. Readiness Reviews – Under the direction of the Construction Manager, readiness reviews are conducted prior to the start of work. The reviews are attended by RCCM JV members, subcontractor and Construction Management staff, as appropriate. At minimum, a review of items A. – I. above will take place to ensure they are in place.

Readiness Review Meeting	
Date of Readiness Review Mtg.	
Date Work will Commence	

K. Checklists

List of Checklists & Inspection and Test Reports

L. Tolerances of Performance of Work

Tolerances of performance of work

M. Protection of the Completed Work

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Protection of the completed work

N. Contingency Plans

Contingency plans

O. MPT/Pedestrian Access

MPT/Highway and Pedestrian Access

MPT/Rail Road

P. Qualifications and Training of Personnel

Number	Personal Training and Qualifications
1	OSHA 10 Hour Training
2	Amtrak and LIRR Training required for all employees working on site
3	RCCM JV Site Specific Orientation
4	Machine operators trained on equipment being used on site
5	FDNY Certificate of Fitness for Burning/Welding and Fire Watch

Q. Methods for Meeting Environmental Requirements

Method for meeting Environmental Requirements

R. Roadway Work Protection (Flagging/Watchmen/ET), Track Outages and Other Railroad Participation

a. All workers will attend the General Site Morning Briefings and Site Specific Briefings before work begins.
b. Flagging by LIRR and Amtrak will be needed for all work activities on site.
c. LIRR and Amtrak 3rd rail protection provided as necessary.
d. ET and 60 cycle provided as necessary by Amtrak when equipment is to be within 15 ft of a catenary line.

S. Site Access Plan

a. To be accessed from designated ramp on 39th street.
b. Other Access/Egress routes to be clearly defined in the drawing attached with QWP.

2. Initial Phase

When the work is started, the Quality Staff will verify that the construction methods, equipment or measuring instruments utilized meet the requirements of the Contract Documents, as per the Specification Section.

The Quality Staff, when applicable, performs a Mock Up and First Article inspection/verification utilizing the appropriate QQP checklists and approved shop drawings.

Identified hold point measurements or testing, if applicable, will be conducted in presence of the Construction Manager staff (see 1 H. above).

Prerequisite Activities
Tone out Area by ESA
Survey Area
Geotechnical and Structural Instrumentation must be in place and Functioning Prior to Start Of Excavation.

3. In-Process Phase

The Quality Staff is responsible for checking the in-process work on the job site to assure it is performed in accordance with the approved; shop drawings, QWP and SWP. All non-conformances shall be removed and work monitored for compliance. Nonconforming inspection results are noted in the daily report and a NCR report is completed and resolved for corrective action in accordance with the QWP.

Construction Work Plan Check List

1	Date Submitted	
2	Description of Work	
3	Sub Number	
4	Crane Location	
5	Operation Radius	
6	Positive Stop	
7	Dimensions and Distances	
8	Crane Rating Sheet	
9	Weight of Pick	
10	Safety Factor	
11	Computations	
12	Pick Over Tracks	
13	Track Outage	
14	Adjacent wires and Structures	
15	Catenary Power Off	
16	Feeder Outage	
17	Sling and Shackles	
18	Lifting Procedures	
19	Time Schedule	
20	Temporary Supports	
21	NYS P.E Sign and Seal	
22	Bonding Grounding of Equipment	
23	Safety Plans	
24	Crossing , Bridging over Tracks	
25	Lighting Plans	

RAILROAD MICHELS JOINT VENTURE LLC

Scorecard

EXAMPLE

Crane Layout at Bellmouth as of 10/02/2013

#	SUBJECT	SPEC SECTION	SPEC CLAUSE	Transmittal # Out	DATE Sent	STATUS	B.I.C.	DATE Returned	Open Issues/Comments
1	Quality Control 01450								
2	Construction Work Plan (CWP)	1450	1.06D			OPEN	MICHELS		
3	Safety Planning 01540								
4	Safe Work Plan (SWP)	1540	1.06B			OPEN	MICHELS		See spec section 1545.3.05.F for critical lifts to be added to the SWP
5	Construction Safety and Health 01545								
6	Cranes and Hoists Inspection and Testing Requirements: For cranes and hoists that are exempt from NYCDOB inspection requirements these shall be inspected and tested in the presence of the manufacturer's service representative for conformance with all applicable codes and regulations. This inspection and testing shall be witnessed by the Professional Engineer performed the design of the crane or hoist system.	1545	1.04C			OPEN	MICHELS		
7	Crane shall meet the requirements of ASME B30.5	1545	3.05A			OPEN	MICHELS		
8	Submit Certification of Inspection	1545	3.05B.1			OPEN	MICHELS		
9	License of Crane operator	1545	3.05B.2			OPEN	MICHELS		
10	Crane manufacturer's load chart for the model and configuration of the crane	1545	3.05B.3			OPEN	MICHELS		
11	Certification (approved by PE licensed in the state of New York)of ground support and submittal of grillage and design of ground support.	1545	3.05B.4			OPEN	MICHELS		
12	All cranes assembled at the work site shall be inspected and tested by the crane supplier or qualified personnel with proof of inspection and testing transmitted tot eh MTA.	1545	3.05E			OPEN	MICHELS		
13	Construction Facitlities and Temporary Systems 01520								
14	Crane rating Sheets, shop drawings, design data and calculations of the support structure, include Load conditions, impact factors, and safety factor of materials. Calculations shall show the system capacity and maximum forces and details of mats, planking or special decking as may be required to provide protection for all surface and subsurface structures and utilities.	1520	1.06.A.12.a			OPEN	MICHELS		The contractor shall place its crane on the existing CM005 Crane Mat identified in contract dwg CM005-GP-0069.
15	Detailed plan and section showing location of crane and all physical limitations, restrictions, or obstructions, operating radii, positive stops and delivery or disposal locations.	1520	1.06.A.12.b			OPEN	MICHELS		
16	Complete detail with supporting data for the demobilization or erection of the crane hoisting operations.	1520	1.06.A.12.c			OPEN	MICHELS		
17	Type, size and arrangemetns of slings, shackles or other connection equipment - Catalog cuts or information sheets specialized in equipment.	1520	1.06.A.12.e			OPEN	MICHELS		
18	Lifting procedures indicating the order of lifts and repositioning of crane.	1520	1.06.A.12.f			OPEN	MICHELS		
19	Temporary support for any components or intermediate stages of erecting crane shall be shown.	1520	1.06.A.12.g			OPEN	MICHELS		
20	Demolition and hoisting procedures and plans	1520	1.06.A.12.h			OPEN	MICHELS		
21	Provide the following:Name, address, phone number and website of the crane/hoist manufacturer	1520	1.06.A.12.i.1			OPEN	MICHELS		
22	Provide the following:Model, year, and manufacturer's rated capaicty	1520	1.06.A.12.i.2			OPEN	MICHELS		
23	Provide the following:Catalog sheets, specifications, and installation instructions	1520	1.06.A.12.i.3			OPEN	MICHELS		
24	Provide the following:Typer of crane or derrick and the power type	1520	1.06.A.12.i.4			OPEN	MICHELS		
25	Provide the following:Number of drums, wire size of each drm, and the wether it is over-wound or under-wound.	1520	1.06.A.12.i.5			OPEN	MICHELS		
26	Provide the following:Type of boom and maximum length.	1520	1.06.A.12.i.6			OPEN	MICHELS		
27	Daily inspection reports of the cranes provided on a weekly basis.	1520	1.07.C			OPEN	MICHELS		
28	CHANGE REQUESTS								
29									
30									

Legend
Closed
GEC
MICHELS to Submit
CM
CCU

STATUS: APP=Approved PRO = Proceed PAN = Proceed as Noted
RSPD=Responded RR = Revise and Resubmit

Readiness Review Check-List

		DATE :	
Meeting Start		Meeting End Time:	

Meeting Requirements	YES	NO	N/A	Initials	
				RCCM JV	MTA
Are all required Michels Management and field staff present					
Is the MTA Construction Manager Present					
Has the Construction Observations Scorecard been completed(All Required Submittals)					
Are all required Permits submitted and approved					
Are all 3rd Party Documentation Submitted and Approved					
Has the QWP been reviewed & approved					
Has the SWP been reviewed & approved					
Has the Sequence of work been outlined and approved					
Do personnel have the required Qualifications and training					
Have all Hold Points(QC Inspections, Tests,) Been evaluated and reviewed					
Have Environmental Issues and requirements been addressed/met					
Has Traffic, and pedestrian access been addressed and accommodated(if applicable)					
Have any Potential Special Construction Security Issues been Discussed					
Have contingency plans been approved					

Reviewed By :

MTA Representative (Print Name)	Signature	Date & Time
RCCM JV Representative (Print Name)	Signature	Date & Time

RAILROAD MICHELS JOINT VENTURE LLC

Buy-Ship America Log

						For Shipments Made by Sea or Navigable Waters			
PO/Material Description	Spec Section	Subcontractor/Contractor Supplied	Manufacturer/Vendor Name, City, Country	Product/Material Country of Origin	Method of Shipment	Name of Carrier	Flag of Carrier Vessel	Weight in Gross Tons	Shipment Manifest/Bill of Lading ID

Audit Day Schedule

Audit Date: Project/Department: Audit Objectives: Audit Scope Responsible Manager/Audit Contacts: Audit Team:	

Time:	Process/Functional Area/01 40 10 Elements:
10:00 - 10:30 am	Opening Meeting - Overview of project and office activities
10:30 - 12:00 pm	Project Management/Project Controls/Reports Control of Project Documentation & Records Purchasing Process Incoming Receiving/Inspection/Storage Management of Subcontractors CWP/Hold Point Inspections/Punch Lists Control of Monitoring and Measuring Devices Review of NCP's/Customer Complaints Project Internal Audit Site Safety/Training of Employees Use of Statistical Analysis and Design Process
12:00 - 12:30 pm	Lunch Break
12:30 - 2:30 pm	Continue with Above Audit Process
2:30 - 3:00 pm	Preparation of Audit Report
3:00 - 3:30 pm	Closing Meeting

* - Previous audit findings will be reviewed thoughout the process

CAR LOG

ESA CH058B East Bound Re-Route

CAR No.	ISSUE DATE	ASSIGNEE	DESCRIPTION	TARGET DATE	CLOSE DATE

CHECKLISTS

- Concrete Placement Inspection Checklist
- Concrete Pre-Placement Inspection Checklist
- Shotcrete Application Checklist
- Crane Pick Checklist
- Shotcrete Pre-Placement Checklist
- Waterproofing Final Acceptance Checklist
- Checklist for Fence Installation
- Pressure Test Report for Drain
- Checklist for Pressure Resistant Doors
- Construction Work Plan Checklist
- Checklist for Trenching
- Corrosion Control Test Checklist

CONCRETE PLACEMENT INSPECTION CHECKLIST

RAILROAD MICHELS JOINT VENTURE LLC

Contract No. CH-058B

Date/Time of Pour:

Approved Concrete Mix:

Concrete Volume:

Pour ID: ***Pump Location:*** _____

ATTR NO.	DESCRIPTION OF ACTIVITIES	Contractor QC INSPECTION √,N/A	Contractor QC INSPECTION REMARKS	MTA QA OVERSIGHT √,N/A	MTA QA OVERSIGHT REMARKS
1.0	PLACING / CONVEYING EQUIPMENT				
	* WEATHER PROTECTION				
	* SUFFICIENT EQUIPMENT / MANPOWER				
	* BUCKETS / HOPPERS SIZED FOR APPLICATION				
	* DROP PIPES SIZED FOR APPLICATION ( )				
	* PUMPING PIPE SIZED FOR APPLICATION (")				
2.0	ACCESS				
	* SUFFICIENT ACCESS FOR PLACEMENT AND VIBRATOR				
	* BLOCKOUT USED WHEN NECESSARY				
3.0	SAMPLING				
	* C.M. / TEST LABORATORY NOTIFIED				
	* BATCH TICKET AGREES WITH MIX DESIGN				
4.0	TESTING (IDENTIFY LAB REPORT NO'S.)				
	* TEST FOR SLUMP 6"MAX AT END OF PUMP LINE (")				
	* TEST FOR AIR CONTENT (%)				
	* CHECKS TEMPERATURE SHALL BE BETWEEN 40-75*F (*F)				
5.0	EQUIPMENT TYPE, CALIBRATION, SERIAL NO.				
	* AIR " PRESSURE PUMP"_____				
	* SCALE _____				
	* THERMOMETER _____				
6.0	CONVEYING				
	* PROPER CONVEYING AND PLACEMENT TECHNIQUE				
7.0	PLACING (MINIMUM 3MIN. MIXING BEFORE DISCHARGE)				
	* NO WATER OR ICE ADDED OUTSIDE READY MIX FACILITY				
	* CONCRETE PLACEMENT RATE IS REGULATED				
	* 5-FT MAX. VERTICAL DROP				
	* REBAR AND EMBEDDED ITEMS NOT DISTURBED				
8.0	CONSOLIDATION				
	* 5-FT MAX. HORIZONTAL CONCRETE MOVEMENT				
	* VIBRATOR RESULTS IN ACCEPTABLE CONSOLIDATION				
9.0	PROTECTION AND INITIAL CURE (HUMIDITY= %)				
	* CONTROL PREMATURE DRYING (AMBIENT TEMP.= F)				
	* GROUND-WATER CONTROLLED				
	* MOIST / CURING COMPOUND APPLICATION				
10.0	CONCRETE FINISHING				
	* LEVEL, PLUMB OR SLOPING TO DRAIN				
	* CORRECT TYPE - FLOAT, BROOM, SCRATCHED				
	* FINISHED SURFACES PROTECTED				

Signature: Date:

Print Name:

Contractor QA Representative

Signature: Date:

Print Name:

Witnessed By: MTA QA Representative

Remarks:

RAILROAD MICHELS JOINT VENTURE LLC

CONCRETE PRE-PLACEMENT INSPECTION CHECKLIST

Contract No. CH 058B

Location of Work: _____

Date/Time of Inspection: _____

Reference Drawing No. _____

Pour ID: _____ ***Pump Location:*** _____

ATTR NO.	DESCRIPTION OF ACTIVITIES	Contractor QC INSPECTION √,N/A		MTA QC OVERSIGHT √,N/A	MTA QC OVERSIGHT Remarks
1.0	LAYOUT AND GRADE				
2.0	FOUNDATION / SURFACE PREPARATION				
3.0	SHEAR KEY AT EACH CONSTRUCTION JOINTS				
	* SURFACE PREPARATION / WATERSTOP INSTALLATION				
4.0	FORMWORK (ALL HARDWARE=NON-FERROUS MATERIALS				
	* CLEANED / OILED / SNAP-OFF TIES 1-1/2" FROM FACE WALL				
	* ALIGNMENT / PROVISIONS FOR SETTLEMENT / OFFSETS				
	* SURVEY CHECK				
	* BLOCKOUT / LOCATION OF OPENING FOR UTILITIES				
	* INSPECTION OPENINGS / KEYWAY / CHAMFERS				
	* BRACING / KICKERS / SUPPORT /ANCHORAGES				
5.0	REINFORCING STEEL AND CONCRETE COVER ☐ **inner** ☐ **outer**				
	* CLEANED, TIED, SPILLED, NO LOOSE RUST				
	* SIZE, NUMBER OR SPACING				
	* CAST AGAINST EARTH = 3", BEAM, COLUMN, WALL, PIERS = 2"				
	* TOP/BOTTOM ELEVATED SLAB, INVERT = 1-1/2"				
	* CAVERN / TUNNEL / PRECAST LINING = 1-1/2"				
	* PROPER COVERAGE BETWEEN WATERPROOFING = 1.5"				
	* PROPER COVERAGE AT FORM SIDE = 2"				
6.0	EMBEDDED ITEMS				
	* ANCHOR BOLTS / STARTER BARS / DOWELS				
	* PIPE SLEEVES, PIPES, CONDUITS, GROUNDING EQUIPMENT				
	* LOWER LONGITUDINAL PVC MEMBRANE TACKED @ 4' O.C.				
	* WATERPROOFING SYS & ACCESSORIES				
	* WATERPROOFING DRAINAGE SYSTEM				
	* TEST TUNNEL DRAINAGE SYSTEM				
	* DRAIN PIPE LATERALS, SUPPORTS, RISERS PROPERLY SEALED				
	* BML SECURED VIA SUPPORT DISC @ 6' O.C.				
	* INTEGRITY OF GEOTEXTILE (AROUND GEODRAIN)				
	* TEST w/ AUTHORITY-STORM DRAINAGE SYSTEM				
	* STRUCTURAL AND MISCELLANEOUS STEEL ITEMS				
	* INSTRUMENTATION / MECHANICAL / ELECTRICAL ITEMS				
	* ALUMINUM ITEMS SHALL BE COATED W/ COAL TAR OR EPOXY				
	* EXPANSION JOINTS				
7.0	* PERSONNEL ACCESS TO WORK AREA				
	* TRUCK / PUMP ACCESS				
	* COLD / HOT / EXTREME WEATHER PROTECTION				
	* PROVISION FOR CURING				
	* DAMPENED SURFACE BEFORE PLACEMENT				
8.0	* AMBIENT AIR TEMPERATURE IS BELOW 90F				
	* FINAL CLEANOUT				
	* VIBRATION EQUIPMENT				
	* WASHOUT PANELS CLOSED				
	* CORROSION CONTROL SYSTEM TESTING AT TRACK INVERT				

Signature: _____ Date: _____ Signature: _____ Date: _____

Print Name: _____ Print Name: _____

Contractor QA Representative **Witnessed By:** **MTA QA Represented**

Remarks: _____

RAILROAD MICHELS JOINT VENTURE LLC

ID: _____

Shotcrete Application Checklist

☐ INITIAL ☐ IN-PROCESS ☐ FINAL

LOCATION:	DATE :	Time:
LOCATION: [ ] EASTBOUND [ ] LL [ ] UL [ ] WESTBOUND [ ] LL [ ] UL	SHIFT(S): [ ] DAY [ ] SWING [ ] GRAVEYARD	

Start STA.:		Clock Position:	
End STA.:		Clock Position:	

	Inspection List	YES	NO	N/A	Initials QC/FE	Initials Super
	Nozzleman Performance					
1	Submitted shotcrete application guidelines & technique were followed					
2	Robotic shotcrete equipment used Pm407/Pm500					
3	Manual shotcrete application used					
	Initial Ground Support D					
1	Lattice girders are properly encapsulated, no shadows, sand pocket formations					
2	Lattice girders have sufficient inside face shotcrete cover					
3	All spacer bars have sufficient inside face cover					
	Reinforcement					
1	WWF/Reinforcing steel is as specified on the approved shop drawings					
2	WWF/Reinforcing steel is properly placed and tied with sufficient clearances					
	Embedded Items					
1	Minimum thickness is equal to the rock support bolts					
2	Shotcrete mix as per approved shotcrete mix design					
3	Shotcrete placement equipment ready and tested					
4	All materials for shotcrete are properly stored					
5	Shot shotcrete test panel at the same orientation as the shotcrete placement					

Observations and Comments:

Witnessed By :

MTA Representative (Print Name)	Signature	Date & Time
Michels Representative (Print Name)	Signature	Date & Time

ID:

Shotcrete Pre-Placement Checklist

INITIAL ☐ IN-PROCESS ☐ FINAL ☐

LOCATION:		DATE :		Time:
		SHIFT(S):	[ ] DAY [ ] SWING [ ] GRAVEYARD	
Start STA.:		Clock Position:		
End STA.:		Clock Position:		

	Inspection List	YES	NO	N/A	Initials QC/FE	Initials Super
	Surface Preparation					
1	Substrate surface preparation has been properly prepared for shotcrete application					
2	Scaled - remove loose material with scalling bar					
3	Wash down - using water through the high pressure spray nozzle					
4	Saturated Surface Dry (SSD)					
5	Rebar shall be secured and free of other coating that impairs bond with shotcrete					
6	Adjacent shotcrete surface is prepared as required (Refer to surface prep #1)					
7	Install repair bolts and wire mesh					
8	Install water leakage drainpipes					
9	Install survey grade pins/rods for spray limits/survey final profile					
10	Install slick line and utilities (power, phone, water, air, etc.)					
11	Is nozzleman qualified					
12	Shotcerete test panel is available on shotcrete placement location					
13	Waterproofing re-verification: Membrane intact/secure to substrate; WB protection					
14	Grouting pipes (Remedial/Contact) secured and protected					
	Waterproofing Membrane					
1	Waterproofing Hold Point inspections are performed and acceptable					
2	Adequate chairs/distancers, membrane secure against substrate					
3	There is no damage to waterproofing during rebar installation, if repaired and acceptable					
	Reinforcement					
1	WWF/Reinforcing Steel is as specified on the approved shop drawings					
2	WWF/Reinforcing Steel inner mat is properly placed and tied with sufficient clearances					
3	WWF/Reinforcing Steel outer mat is properly and tied with sufficient clearances					
4	Splicing of rebar and connections to bar anchors are acceptable					
	Embedded Items					
1	All embedded items are accounted for					
2	All embedded items are at proper locations and secured					
	Shotcrete Conveyance and Placement Equipment and Materials					
1	Shotcrete mix is as per approved shotcrete mix design submitted					
2	Shotcerete placement equipment set is ready and tested					
3	All materials for shotcrete are properly stored					

Observations and Comments:

Witnessed By :

MTA Representative (Print Name)	Signature	Date & Time
Michels Representative (Print Name)	Signature	Date & Time

Waterproofing Final Acceptance Checklist

Water Proofing Subcontractor

PROJECT:

Date: _____

Location _____

(From Station to Station: Unit No., etc.)

I. Final Acceptance of Waterproofing

Membrane Welds (Y/N) _____

Seam Test (Y/N) _____

Geodrain/Fleece (Y/N) _____

General Contractor is responsible for cost of Re-Waterproofing area

Under no circumstances will waterproofing be cut and patched due to tights

Date Defects corrected: _____

Final Inspection Accepted by:

Sub Contractor g Signature: _____ Date: _____

QC Rep: Print Name: _____

RCCM JV

QC Rep: Signature: _____ Date: _____

Print Name: _____

MTACC

QC Rep: Signature: _____ Date: _____

Print Name: _____

Defect Description: _____

_____

_____

_____

_____

_____

_____

_____

ID: _____

Check-List for Fence Installation

☐ INITIAL ☐ IN-PROCESS ☐ FINAL

LOCATION:	DATE :	Time:
	SHIFT(S): [ ] DAY [ ] SWING [ ] GRAVEYARD	
Start STA.: To be Entered at Start of Shift	Clock Position:	
End STA.: To be Entered at the end of Excavation	Clock Position:	

	Inspection List	YES	NO	N/A	Initials QC/FE	Initials Super
1	Is The QWP and SWP approved by MTA - CM Staff					
2	Is the start location as shown in the approved fence installation shop drawing.					
3	Is the Fencing Materials approved by MTA					
4	Is the ground clearance of 2" from ground is acceptable.					
5	Is the footing depth as per approved shop drawing and filled with approved Concrete					
6	Is The Fence posts plum to the ground					
7	Is the fence post spaced as per approved shop drawing					
8	Is the tension wire installed as per approved shop drawing.					
9	Is the fence grounded properly and verified by electrical continuity tests					

Observation and Comments :

Witnessed By :

MTA Representative (Print Name)	Signature	Date & Time
MRCCM JV Representative (Print Name)	Signature	Date & Time

ID: _____

Pressure Test Report for Drain

☐ Hold Point

LOCATION:		DATE :	
Start STA.:		Start Time	
End STA.:		Finish Time	

	Inspection List	YES	NO	N/A	Initials	
					QC/FE	Super
1	Are the drain ends capped properly for pressure Test?					
2	Is the drain and vertical column filled with water 10ft height?					
3	There is no loss of pressure during the test tme period of 15 minutes during inspections					

Obsevation and Comments :

Witnessed By :

ITA Representative (Print Name)	Signature	Date & Time
MTA Representative (Print Name)	Signature	Date & Time
RCCM JV Representative (Print Name)	Signature	Date & Time

ID: _____

Check-List for Pressure Resistance Doors

☐ INITIAL ☐ IN-PROCESS ☐ FINAL

LOCATION:		DATE :	Time:
		SHIFT(S): [ ] DAY [ ] SWING [ ] GRAVEYARD	
Start STA.:		Clock Position:	
End STA.:		Clock Position:	

	Inspection List	YES	NO	N/A	Initials QC/FE	Initials Super
1	Is The Door Identification Match the Location of the Door					
2	Does the Door Opening and Door Direction of openin Match Contract Drawing					
3	is the Electrical Conduit installed as per MTA approved Drawings					
4	Is the Screws for Hinges installed properly uniform gap top and bottom , hinge side and Cross side.					
5	Does Door Open and Close properly, Door Closure Operation adjusted properly.					
6	Does the door hardware match the list of hardware for the marked door(Set8, Set9, Set 9A, Set 9P, Set 10) Check as applicable.					
7	Is the Panic bar installed properly and in the correct direction of the door					
8	No damage to the door. (Scretches,rust marks, paint damage.)					
9	Is the 4 way door lock functions properly.					
10	Is the Kick plate installed					
11	Is the Door Caulked					
12	Is the Frame Grouted					
13	Is the Window Panel Installed					
14	Is the Door Fire Rated					

Obsevation and Comments :

Witnessed By :

MTA Representative (Print Name)	Signature	Date & Time
RCCM Representative (Print Name)	Signature	Date & Time

Construction Work Plan Check List

CH-058B-01 40 10

1	Date Submitted	
2	Description of Work	
3	Sub Number	
4	Crane Location	
5	Operation Radius	
6	Positive Stop	
7	Dimensions and Distances	
8	Crane Rating Sheet	
9	Weight of Pick	
10	Safety Factor	
11	Computations	
12	Pick Over Tracks	
13	Track Outage	
14	Adjacent wires and Structures	
15	Catenary Power Off	
16	Feeder Outage	
17	Sling and Shackles	
18	Lifting Procedures	
19	Time Schedule	
20	Temporary Supportts	
21	NYS P.E Sign and Seal	
22	Bonding Grounding of Equipment	
23	Safety Plans	
24	Crossing , Bridging over Tracks	
25	Lighting Plans	

ID: _____

Check-List for Trench

☐ INITIAL ☐ IN-PROCESS ☐ FINAL

LOCATION:		DATE :	Time:
		SHIFT(S): [ ] DAY [ ] SWING [ ] GRAVEYARD	
Start STA.:	To be Entered at Start of Shift	Clock Position:	
End STA.:	To be Entered at the end of Excavation	Clock Position:	

	Inspection List	YES	NO	N/A	Initials	
					QC/FE	Super
1	Is The QWP and SWP approved by MTA - CM Staff					
2	Is the start location as shown in the approved trench drawing.					
3	Is the width x inches and depth 6Ft of the trench as specified in the shop drawing					
4	Is there any cable , pipes or any other utility with in the 6ft depth of the excavated length					
5	Quality Staff to perform inspection with MTA CM field inspector for acceptance of traench , to be free of utilities , take pictures and attach to daily report.					
6	The excavated trench has to be back filled properly					
7	Protect the opening area at the end of each shist					

Obsevation and Comments :

Witnessed By :

MTA Representative (Print Name)	Signature	Date & Time
RCCM JV Representative (Print Name)	Signature	Date & Time

ID: _____

Corossion Control Test Checklist

☐ Hold Point

LOCATION:		DATE :	
Start STA.:		Start Time	
End STA.:		Finish Time	

	Inspection List	YES	NO	N/A	Initials	
					QC/FE	Super
1	Is the drawing for Corrosion Control approved by MTACC -CM					
2	Is the Corrosion Control cable connections as per the approved Drawing?					
3	Is the person performing Corrosion Control qualified and approved by MTACC - CM? minutes during inspections					
4	Is the resistance test values and calculated resistance are with in the acceptable limits					
6	Signed and Stamped report submitted seperately thru skier.					

Obsevation and Comments :

Witnessed By :

Corrosion Control Test Person (Print Name)	Signature	Date & Time
MTA Representative (Print Name)	Signature	Date & Time
RCCM JV Representative (Print Name)	Signature	Date & Time

Appendix D

Example of ITP (MTACC ESA Harold 3)

Last updated: 6/15/2018

MTA CC - LIRR/East Side Access Contract No. CH057D

Inspection and Testing Plan (ITP) Revision 1

Specification					Inspection and Testing Plan (ITP) Revision 1								
Division	Section	Title	Page	Paragraph	To be performed by	To be witnessed by	Description	Frequency	Visual / Instrumental / Documentary	Acceptance Criteria	Hold Point (Yes/No)	Submittals	Deliverables
1-General Requirements	01320	Construction Progress Documentation	1	1.05A, 1.06, 1.07A	Envision Consultants, Ltd.	N/A	Monthly CPM updates	N/A	N/A	N/A	No	Scheduler's resume; CPM -based contract schedule; baseline schedule; logic diagrams; monthly schedule update; eight week look ahead schedule; activity list; sample of contractor's proposed shift report	Progress photographs and video footage; shift reports
	1330	Submittal procedures	Not listed									Submittals schedule; contract drawing list; CADD sample; shop drawings	Contract drawing list (4th month after NOA); final contract drawing list
	01380	Code Compliance	2	1.05C	Owner / 3rd party ITA	CCU representative	Special inspection quality standard	When applicable	Visual/Instrumental/Documentary	Meeting requirements of Chapter 17 BCNYS and NYCBC	No	Resume of Code compliance liaison; Code compliance plan; various permits and Applications (when applicable)	Copies of permit filings; monthly status report of Special I inspections; record drawings (as-built)
	01450	Quality Control Procedures	1	1.05A,B	RCC	N/A	Perform work in accordance with BCNYS Title 19 and per submitted CQP	N/A	Visual/Instrumental/Documentary	Meeting requirements of BCNYS	No	CQP within 30 days of NTP; Resumes an qualifications of management team; ITP within 45 days of NOA; Qualifications of 3rd party 30 days prior to being used on the project; Readiness review checklist at least 30 days prior to readiness review; CWPs (construction work plans) shall be submitted not less than 15 days before readiness review meeting	Copies of updated CQP within 7 days; Monthly certification report within 10 days from month end; Special inspections report within 48 hours of inspection; off-site material and equipment fabrication schedule; six-week look ahead schedule; monthly nonconformance summary within 10 days from month end; training schedule within 90 days from NTP; training matrix - 90 days from NOA; record of CQP training - no later than 10 days after each session; daily quality summary report - weekly; Construction operation scorecard - within 7 days before Readiness review; schedules for internal and external audits - within 60 days after NTP
			1	1.05C	RCC	N/A	CQP content and format	N/A	Documentary	Meet requirements of FTA's QA/QC guidelines and ESA Project Quality Manual	No		
			1	1.05D	RCC	N/A	Quality Engineer/Quality Manager	Once, 10 days after NTP	Documentary	Full time position	No		
	01640	Material provided by MTA	1	1.05	RCC	N/A	MTA Material and Equipment Log	Update is due at the time a Contract Option is exercised by MTA	Documentary	N/A	No	Material and equipment acceptance forms and Log within 30 days of NTP;	MTA Material and Equipment Log shall be provided on a monthly basis
			4	3.01A	RCC	N/A	Inspection and Testing responsibilities for owner-supplied material and equipment	Once, prior to taking possession and ownership (if applicable)	N/A	N/A	N/A		
			4	3.01B	RCC	N/A	Scope of Inspection		Visual, at the minimum. Other testing may be required, if deem necessary.	No signs of physical / water damage or any other form of breakage / visible deterioration	No		
	01720	Survey and Layout	3	1.05 A,B,C	Munoz	N/A	Qualification of Surveyor	Once, prior to work start	Documentary	NYS Licensed, shall be approved by MTA	No	Qualification of Land Surveyor / Survey Supervisor within 7 days of NOA; Surveying program (Survey Plan) within 14 days after NOA	Results of survey measurements; complete and accurate Log of ongoing and scheduled survey work; as-built location survey records; instrument calibration certificates prior to use of each instrument and within 5 days of any recalibration
			3	1.05D	Munoz	N/A	As-built survey	Reports shall be generated as work progresses	Instrumental, Documentary	All as-built reports shall be signed/ sealed by NYS licensed Land Surveyor	No		
2-Site Construction	02105	Chemical Sampling and Analysis	Not listed									SWP; Lab qualifications; sampling plan	Lab results; NYSDEC ASP data package deliverables; asbestos survey report; lead-containing material survey report
	02110	Excavation, staging, handling, transportation, disposal of hazardous materials	Not listed									Work plan; evidence of permits; SWP	Copies of shipping documents; results of lab analysis; certificate of final disposal; records of location and quantity of contaminated material
	02112	Excavation, staging, handling, transportation, disposal of hazardous materials	Not listed									Work plan; evidence of permits; SWP	Copies of shipping documents; results of lab analysis; certificate of final disposal; records of location and quantity of contaminated material
	02200	Site preparation, clearing, grubbing	Not applicable										
	02220	Demolition work	Not applicable										
	02230	Track removal	1	1.05	RCC	N/A	Qualification of personnel	Prior to work start	Documentary	Not less than 10 years of documented experience	No	Details of proposed method for track removal	Certification of disposal of wood ties
	02254	Protection of existing facilities, structures, utilities and railroad infrastructure	4	1.05F	RCC	Owner rep	Adequacy of protection measures	Prior to work start	Visual/Instrumental/Documentary	Ensured stability and safety of facilities, structures and public personnel within work limits	No	Qualification of superintendent - 60 days before commencement of work; assessment of potential ground movement and potential damage to facilities, structures, utilities; work plan; maintenance and protection plan; shop drawings; copies of required permits; Action level plans	None listed
	02315	Excavation and fill	4	1.05	RCC, ITA	Construction Manager	Testing ng of fill material	Prior to work start	Instrumental, Documentary	Shall be tested by for maximum dry density by qualified ITA . Comply with ASTM D698 or ASTM D1557. Field density shall be determined per ASTM D1556 or D2922. **Demonstrate to the CM that subgrade is suitable for the support of proposed structure.**	**Yes**	Equipment cut sheets; source of materials; information (qualification) on ITA; Lab test results for each source of backfill or fill material; working drawings for support of excavation; design support calculations signed by NYS licensed PE; permits; contractor's license, registration and applicable certificate(s)	Fill material and field compaction test results; lab test results for each source of fill/backfill; field density test results along with grain size analysis and report of completion and acceptability of stripped and excavated subgrades upon completion of proof rolling
	02320	Trenching and backfilling for utilities	Not applicable										
	02370	Filter fabric	1	1.05	Gateway Demo/Civil Corp.	N/A	Material validation and certification	Prior to order/ delivery	Documentary	Filter fabric shall satisfy requirements and needs of its intended use	No	Product data: manufacturer's catalog cuts, specifications, installation instructions	None listed
	02372	Soil erosion and sedimentation control	Not listed									Proposed method of erosion and sediment control; SWPP, including Erosion and sediment control plan (ESCP)	Notice of Intent (NOI) for SPDES General permit for storm water discharges from construction activities
	02376	Slope protection	Not listed									Vendor's certified statement for seed mixture, limestone and fertilizer	None listed

MTA CC - LIRR/East Side Access Contract No. CH057D

Inspection and Testing Plan (ITP) Revision 1

Specification					Inspection and Testing Plan (ITP) Revision 1								
Division	Section	Title	Page	Paragraph	To be performed by	To be witnessed by	Description	Frequency	Visual / Instrumental / Documentary	Acceptance Criteria	Hold Point (Yes/No)	Submittals	Deliverables
5-Metals	02378	Ditch protection	Not listed									Stone fill samples shall be provided to the CM	Certificates of compliance for stone material
	02620	Sub drainage	1	1.05	Gateway Demo/Civil Corp.	N/A	Pipe manufacturer qualification	Prior to start of manufacturing	Documentary	Shall be capable of supplying pipe and fittings within its own manufacturing facility; shall be capable of training contractor's employees in in butt fusion, electrofusion and socket fusion of HDPE pipe and fittings; shall be capable of renting, selling and servicing of fusion equipment	No	Shop drawings, product data	None listed
	02630	Storm drainage and sanitary sewers	1	1.05	Gateway Demo/Civil Corp.	N/A	Qualification of supervisor	Prior to start of work	Documentary	Work shall be carried out by qualified and experienced personnel	No	Manufacturer's product data sheets and installation instructions/ recommendations for ductile iron pipe and fittings and for the cast iron soil pipe and fittings	None listed
	02723	Ballast	2	1.05	RCC, supplier	N/A	Ballast quality - QA	Prior to start of work	Documentary	Establish and maintain the Quality program that will ensure that delivered material (ballast) will meet the requirements by executing a sampling program and performing qualification and production testing	No	Name and qualification of ballast supplier and testing service; samples of each type of ballast; certified reports of ballast qualification and production testing; certificate of compliance for ballast; transportation documentation	None listed
	02724	Sub ballast	1	1.05	RCC, supplier	N/A	Sub ballast quality - QA	Prior to start of work	Documentary	Meeting requirements of spec and requirements for intended use	No	Quality control program; name and qualification of sub ballast supplier and testing service; samples of each type of sub ballast; certified reports of sub ballast qualification and production testing; certificate of compliance for sub ballast; transportation documentation	Certificate of compliance certifying that sub ballast material meets requirements
	05095	Field welding rail	1	1.05A	RCC/Holland L.P.		Qualification of welding supervisor	N/A	Documentary	Min. 2 years of thermite welding railroad experience; Manufacturer representative shall be on site to witness installation of at least first 10 welds	Yes	Shop drawings; welder's qualifications and certifications; proposed material and equipment; test procedures; written reports on performed inspection shall be submitted within 5 days; performance qualification welding; performance qualification records shall be submitted at least 14 days before production welding	Certification and test reports; copies of calibration certificates; thermit field weld record completed for each rail; thermit field weld summary for groups of rails
			1	1.05B	RCC	CM	Notification of the CM	7 days before any inspection/testing on welds	Documentary	CM reserves the right to witness any testing	Yes		
			2	1.05C	Joadem Corporation, RCC	N/A	Qualification of ITA	Prior to field testing	Documentary	Minimum two years of experience engaged in UT testing of rail welds	No		
			7	3.05	RCC	CM	Welding Supervision and Crew Qualification	Once, prior to production welding	Documentary	Each production crew shall prepare a qualification weld in each weld type and rail size	Yes		
			7,8	3.06	3rd Party ITA	RCC, CM	Qualification testing	Once, prior to production welding	Documentary, instrumental	Qualification welds shall be visually inspected and ultrasonically tested using calibrated equipment and following the testing procedure described in section 3.06 A.5.b	Yes		
	05097	Flash butt rail welding	1	1.05A,B	Holland L.P.	N/A	Qualifications of welding foreman and welding service (subcontractor)	Prior to field welding	Documentary	Foreman shall have min. 5 years of experience; subcontractor's firm shall be experienced with this type of welding	No	Shop drawings; rail welder's foreman qualifications, certifications and experience records; written description of welding capabilities and procedures; testing agency qualifications for approval; welding equipment cut sheets; test reports; CM shall be notified at least 7 days prior to any testing	Certifications and test reports; rail temperature and anchoring record; welding records; welder's qualification and certifications
			2	1.05C	Sperry Rail	N/A	Qualification of testing agency	Prior to field welding	Documentary	Reputable, certified, independent agency; technicians shall be Level II or Level III certified and have at least 1 year experience testing rail welds	No		
			2	1.05D	Sperry Rail	CM	Tolerances	When applicable	Instrumental, Documentary	Full penetration and complete fusion, entirely free of cracks; internal defects not to exceed 0.060 square inch; largest slag or porosity defect shall not exceed 1 /8 "; hardness of weld material tested within 1/2" of center of weld shall be plus or minus 20 Brinell hardness numbers from parent metal	No		
			5,6	3.01	RCC	N/A	Qualification of testing procedure	Once, prior to production welding. Re-qualification may be required if: 1. welding machine was repaired, moved, or any of operating variables were changed; 2. two consecutive welds were rejected	Documentary	Welding procedure specification (WPS) shall be qualified for each flash butt rail welding location and for each machine operator per specified qualification program;	Yes		
	05650	General track construction	2	1.05	RCC	N/A	Qualification of installers	When applicable	Documentary	Track superintendent shall have 15 years of experience, track foreman - 7 years; technical advisor - 3 years	No	Resume of track superintendent, foreman and technical advisor; work plans; shop drawings and product data; details of construction procedures; list and description of equipment; plan for handling and installation of new track; manufacturer's certification for all materials	Rail anchorage record
			4	3.02A	RCC	CM	Track construction tolerances	When applicable	Instrumental, documentary	Gauge shall be 4'-8 1/2" , with deviation +/- 1/16" ; deviation from profile of 62 ft chord may not be more than 1/8"; deviation from 0 cross level at point of tangent may not be more than 1/8"; difference in cross level between two points less than 62 ft. apart on tangents may not be more than 1/8". Alignment - per LIRR MW-2000; Deviation from design to actual location at any point shall be within +/-1/8"; Curved track shall be +/- 1/8" from mid-ordinate on 62 ft. chord; deviation from zero cross level on tangent or design super elevation +/- 1/8"; change in cross-level or super elevation - not to exceed 1/8" in 31 ft.; rate of change in variation of gauge, vert. and horizontal alignment, cross-level and track surface shall be limited to 1/8" in 15 ft. length of track	Yes		
			6	3.06	RCC	N/A	Contractor track tools	Prior to being used on the project.	Instrumental, documentary	Track tools (gauge, torques wrench, etc.) shall be tested for accuracy/calibrated. Track gauge accuracy 1/32"	No		
			8	3.11	Sperry Rail	CM	Ultrasonic rail testing	After completing installation	Instrumental, Documentary	No defects	Yes		
	05654	Installation of special trackwork	1	1.05	RCC	CM	Layout of special trackwork	When applicable	Instrumental	Shall be staked out as indicated in the contract drawings by NYS Licensed Land Surveyor	Yes	Details of proposed construction procedures	Maintenance manuals for trackwork components
	05659	Track appurtenances	1	1.05	RCC	N/A	Certification	When applicable	Instrumental, Documentary	Tests shall be certified by approved testing laboratory	No	Shop drawings and/or catalog cuts of standard bolted joint	None listed

MTA CC - LIRR/East Side Access Contract No. CH057D

Inspection and Testing Plan (ITP) Revision 1

Specification					To be performed by	To be witnessed by	Description	Frequency	Visual / Instrumental / Documentary	Acceptance Criteria	Hold Point (Yes/No)	Submittals	Deliverables
Division	Section	Title	Page	Paragraph									
13-Special Construction	13113	Track-to-earth resistance testing	1	1.05	UTRS	N/A	Verification of track's electric parameters	At completion of work	Instrumental	Employ ITA capable of testing electrical isolation systems per ASTM G165; technician shall be certified as a Corrosion Technologist, Cathodic Protection Specialist or Cathodic Protection Tester	No	Track-to-earth resistance training program shall be submitted at least 30 days prior to commencing installation work; post-construction track-to-earth resistance testing report shall be submitted within 7 days of testing	Not listed
	13281	Lead paint management	Not applicable (unless identified/uncovered in the field)										
	13284	Asbestos removal	Not applicable (unless identified/uncovered in the field)										

Notes:

1. Only Quality-related specification sections are listed in Division 1
2. Following Divisions are not used (not listed in project specifications):

3	Concrete
4	Masonry
6	Wood and Plastics
7	Thermal and Moisture protection
8	Doors and Windows
9	Finishes
10	Specialties
11	Equipment
12	Finishings
14	Conveying Systems
15	Mechanical
16	Electrical

Note: All revision 1 changes are highlighted yellow.

MTA Construction & Development

CH058B Design Build Services for East Bound Re-Route Construction for the East Side Access Project

Design Quality Plan

Rev.00

August 2021

Developed by: Ronald G. Swerdon PMP, CQPA; Design Quality Assurance Manager

Reviewed by: David Boaté PE, GANNETT FLEMING Project Manager

Approved by: Ronald G. Swerdon PMP, CQPA, Design Quality Assurance Manager

Table of Contents

Abbreviations/Acronyms

DQAM	Design Quality Assurance Manager
DQCM	Design Quality Control Plan
DQP	Design Quality Plan
DMP	Design Management Plan
EBRR	Eastbound Reroute
ESA	Eastside Access
FTA	Federal Transit Administration
MTA	New York State Metropolitan Transportation Authority
MTA C&D	MTA Construction & Development
NCR	Nonconformance Report
PMOC	Project Management Oversight Consultant
QA	Quality Assurance
QC	Quality Control
QMP	Quality Management Plan
QMS	Quality Management System
SOP	Standard Operating Procedure
TRCBG	Transit & Rail Corporate Business Group
WI	Work Instruction

Document Version History

DATE	REVISION	PURPOSE
August 26, 2021	Revision 00	Initial issue.

Introduction

This Design Quality Plan (DQP) has been developed to illustrate the scope of the Gannett Fleming Engineers and Architects, P.C. (Gannett Fleming) Quality Management System (QMS) as a part of the Design-Build Team's overarching QMS on the New York Metropolitan Transportation Authority's (MTA's) CH058B Eastbound Reroute (EBRR) for the East Side Access (ESA) Design-Build Project. Gannett Fleming, Inc.'s QMS is ISO 9001:2015-certified, and our Corporate QMS will be utilized in the execution of our design work on this contract. The Corporate QMS is composed of a Corporate Quality Manual, Standard Operating Procedures (SOPs), Work Instructions (WIs), Forms, and Templates, which can be made available upon request. Our QMS is continually audited for compliance with this certification. This document summarizes many of these requirements for the ease of MTA Construction & Development's (MTA C&D's) consumption, though the official guidance provided by these Corporate QMS documents will inform the specifics of our QMS processes.

The Gannett Fleming Corporate QMS is structured in accordance with ISO 9001:2015. This QMP is structured in accordance with the FTA's QMS Guidelines. The below table provides traceability between these.

2019 FTA QMS Guidelines Element	Title	ISO 9001:2015 Paragraph
1.	Management Responsibility	4.1, 4.2, 5.1, 5.2, 5.3, 7.1, 6.2
2.	Documented Quality Management System	4.3, 4.4, 9.1, 9.3
3.	Design Control	8.3
4.	Document Control	7.4, 7.5, 8.2
5.	Purchasing	8.2, 8.4
6.	Product Identification and Traceability	8.5.2
7.	Process Control	8.1, 4.4
8.	Inspection and Testing	8.5.1, 9.1.1
9.	Inspection, Measuring, & Test Equipment	7.1.5
10.	Inspection and Test Status	8.6
11.	Nonconformance	8.7
12.	Corrective Action	10.2, 10.3, 6.1
13.	Quality Records	7.5.3
14.	Quality Audits	9.2
15.	Training	7.2, 7.3

The Gannett Fleming Quality Manual, as well as several relevant Wis, current at the time of this document's development, are provided for reference in Appendix A. This DQP has been developed in accordance with the Requirements put forth in Contract Specification Section 01 40 10, *Quality Management Plan*. Many of the standard Quality Assurance (QA) and Quality Control (QC) procedures employed by Gannett Fleming, such as the checking of our work products, are included in Appendix A, while the body of this DQP addresses those project-specific requirements from 01 40 10. Overall, this DQP is only a portion of the Design-Build Team's QA/QC approach, as the Design-Build Team's overarching Quality Management Plan (QMP) describes QA/QC unrelated to the design team.

Element 1 – Management Responsibility

Roles, responsibilities, and authority on this contract are defined in the Design Management Plan (DMP). The Design Quality Assurance Manager (DQAM) will report directly to the Design-Build Team's Quality Manager. As a co-author of the FTA QMS Guidelines in 2012 and 2019, as well as a history serving as an FTA Project Management Oversight Consultant on the ESA Project in the past, the DQAM is well suited for the role. The DQAM will be supported by a Design Quality Control Manager (DQCM), who will identify the required QC records for Gannett Fleming work products and check that Quality Records are maintained appropriately. The DCQM reports directly to the DQAM on the project, remaining independent of other Gannett Fleming Project Staff.

The DQCM should have a degree in Engineering and is required to have at least five (5) years' experience in engineering design, as well as experience in performing QC reviews of design work products within Gannett Fleming's QMS. No additional Quality Staff are expected to work on the assignment for Gannett Fleming.

An Organizational Chart explaining the reporting structures in the Design Team is included in the DMP.

Element 2 – Documented Quality Management System

The QMP applies to the entire TEAM, including Gannett Fleming and other subconsultants, subcontractors, and suppliers. This DQP is specific to Gannet Fleming and our work products. The QMP has been developed in accordance with the Federal Transit Administration's (FTA's) QMS Guidelines (2019), as well as MTA's East Side Access (ESA) Project Quality Manual, Rev.7 (2014).

This DQP will be reviewed by the DQAM twice per calendar year to ensure that it continues to adequately meet the requirements set forth in 01 40 10 and appropriately addresses the needs of the Project. These reviews will be coordinated with the Quality Manager and incorporated into the QMP as a whole. Upon the review and update to the entire QMP, MTA C&D shall review the QMP/DQP and provide any comments to TEAM for review and incorporation, with a revised QMP/DQP submitted within 10 days' notice of the comments being received. MTA C&D will be notified in writing of any proposed changes within each revision due to the inclusion of a Version History Log, which will describe any substantive change in this DQP. Reviews will be documented, involve the Quality Manager, and will consider the following topics:

- Status of Action Items From Prior Reviews
- Design Process Performance
- Nonconformances/Corrective Actions/Risks/Opportunities

- Audit Results
- Staffing
- Lessons Learned
- Disposition from Review/Changes to be Made in DQP Revision
- New Action Items

Updates to the DQP will result in an email to all Gannett Fleming Project Staff providing the updated document with a brief summary of changes. The Quality Manager will be CC'd in order to distribute as needed amongst the Contractor.

Element 3 – Design Control

Discipline Managers are responsible for assigning QC review within their disciplines. Gannett Fleming's QMS requires review by knowledgeable and independent technical staff. Discipline Managers are identified in the DMP. Gannett Fleming's QMS also requires interdisciplinary/integration/coordination review. Minutes will be taken of these coordination discussions to be maintained as QC records. The review and approval of design work is largely described by the following WIs:

- WI 7.00.01 Work Instruction Supplement
- WI 7.02.01 Calculation Verification
- WI 7.03.01 Drawing Verification
- WI 7.04.01 Construction Specification Verification
- WI 7.05.01 Report Verification
- WI 7.12.01 Supplier Quality Verification Requirements
- WI 7.14.01 Coordination Review
- ICF Interface Control Form
- WI 7.03.TR1 Checking and Verification (TRCBG)

Bluebeam Revu 20 will be utilized for the purposes of design QC. Reports/Specifications may be reviewed using MS Word Track Changes. QC records will be maintained in such a way that specialty software is not required for the review of the records.

PROCESS FOR CONTRACTOR/CONSTRUCTABILITY REVIEW:

The Project Manager assigns constructability review responsibilities. Constructability reviews should be conducted when the construction documents are approximately 70% complete or at a pre-planned level of completion. The timing of reviews may be adjusted to allow for critical elements to be developed sufficiently. A representative from the Construction Management team should participate in the Constructability Review unless another suitable Reviewer with the appropriate construction background is proposed by the project team and accepted by the Construction Management team.

Any constructability reviews should be planned for a three-day duration, with a subsequent two-day comment-and-resolution period before final approval. Constructability reviews and Inter-disciplinary coordination reviews may take place simultaneously, but these must be overseen by the Project Manager.

PROCESS FOR OPERABILITY/MAINTAINABILITY REVIEW: This is integral to the above Constructability Review.

PROCESS FOR SHOP DRAWING REVIEW:

All shop drawings received for review by GF will be given an appropriate disposition ("For record only," "For Review and Approval," or other agreed terms) by the RMJV. This process should follow agreed upon durations for each submission, re-submission for any reviews (to be determined). Submittals to the client will be managed by the Design-Builder (RMJV). All comments will be managed by the Design-Builder as per the QMP. The Design Team will internally manage responses to design-related comments in accordance with the QMP.

The following documents will serve as design inputs for the Project, though additional inputs may be required by the relevant specifications for any feature of work:

- Base survey/reference concept
- General Engineering Consultant Services CADD Manual
- Design Unit Report
- Code Conformance Report
- Design Statement
- Design Criteria Report
- Basis of Design Report

QC Reviews performed in accordance with the above WIs shall include review against the above design inputs through communication within disciplines and under the direction of the DQCM.

DESIGN CHANGES DURING CONSTRUCTION: This section will describe the process to establish a Change Control team, with Discipline Leads, a design team lead, and select DB staff. There would be a Design Change Log at least for tracking purposes. The design change process will be determined in coordination with the design team and described in this section.

Element 4 – Document Control

The Design Team will upload all submittals to the agreed location of Contractor's file repository (to be specified at later date) and provide email notification to the Design-Builder. The Design Builder will perform a high-level review and comment on non-design based submittals before they are considered final for Design Builder delivery. The process for providing, addressing, and closing comment will be described in this section (pending coordination of specific process determination). Note that design-based technical submittals will follow the Constructability Review process described in Element 3 (pending final process determination).

Gannett Fleming will utilize a secure SharePoint site for document control. The team will control access to the files for individuals within Gannett Fleming based upon their role on the Project. The Design-Builder will have access to the repository which will enable them to review and collaborate on work products as needed. The system utilizes cloud storage and is both backed up to prevent loss and allows the storage of historical revisions of documents to "roll back" changes if needed.

Element 5 – Purchasing

This DQP serves as a written certification of Gannett Fleming's acceptance of the QMP for the Project. This DQP is reviewed by the Quality Manager for compliance with the QMP.

Gannett Fleming selected four subconsultants for this project:

- KSE - Survey
- Jensen Hughes – Tunnel Ventilation Study and Code Conformance
- Railpros – Coordination with Stakeholders
- Corrpro – Corrosion Control
- PACO – Document Control (DBE)

They were selected based on the capability to meet the Project's aggressive schedule, experience with MTA C&D, specialty experience, prior working relationship with Gannett Fleming and the Design-Builder, and to meet DBE requirements on the Project. They will be evaluated by Gannett Fleming based on their performance on the Project, with these evaluations filed in Gannett Fleming's Corporate Supplier Evaluation Application. Gannett Fleming will notify the Design-Builder of any issues with subconsultants upon identification. Gannett Fleming will also obtain and maintain evidence of subconsultant QC Review, as well as perform high-level reviews of subconsultant work products. These records will be maintained in SharePoint.

The Design Team will continually meet with subconsultants as a means of proactive subconsultant management. Minutes of these meetings will be posted to a SharePoint folder that can be accessed by the subs for their review and comment, as needed. The Design Team will typically post Subconsultant Meeting Minutes within 2 working days of the meeting, providing a notification to the involved subconsultants. These subconsultants would then have 1 working day to supply and comments or suggested changes before the Minutes are considered accepted as-is. Minutes will be retained as quality records.

Element 6 – Product Identification and Traceability

Design documents will be identified in accordance with the General Engineering Consultant Services CADD Manual. Design Plans and Specifications will contain the detail necessary for the Design-Builder to trace items in the field to the design documents.

Element 7 – Process Control

To achieve accuracy and consistency in design, this Quality Plan should provide for:

- Documented work instructions, including acceptance criteria, where such are needed to ensure quality; a suitable working environment; personnel qualifications and certifications; and conformance with referenced standards/codes and quality plans/procedures.
- Procedures identifying all Hold Points in the design process and describing the Quality Control process for review (this process will be finalized in next revision).

- Monitoring and controlling of processes and documenting product characteristics during the overall design process, including any approvals for special materials in designs.
- Procedures for Request for Information and integration of new information resulting from each Request.
- When required, changes to processes must be controlled.
- If GF will be involved with construction-phase, definition of role in dispositioning of materials (Repair, Use As-Is, Reject).

The Design-Builder is responsible for acquiring permits. The Design Team will provide technical assistance to the Design-Builder with respect to permitting.

Elements 8 through 10 – Inspection and Testing, Equipment, and Status

The Design Team is not expected to perform inspections/tests, but will be performing QC Review on our internal submissions. Submissions and QC Reviews are planned by type of review, dates of review, and expected reviewers and records to be generated. The list of deliverables and QC review plan is included as Appendix B.

Note that the anticipated reviewers may designate alternates at the actual time of review, provided that the alternate has the appropriate level of technical expertise and experience. The DQAM will coordinate reviews in accordance with the plan.

Any surveying activities by contractors and subcontractors that involve equipment should establish basic equipment calibration and maintenance procedures. These procedures should include how equipment is to be calibrated according to national standards or equipment manufacturer's specifications or to other documented standards where neither are defined. The equipment should be recalibrated at regular intervals, and the recalibration properly documented. A record of the equipment calibration status should be maintained, including calibration date and due date. When feasible, a sticker should be secured to the equipment identifying calibration status. If this is not possible, then the calibration record should be traceable to the equipment through other means of identification. The record of calibration should be maintained and show the incoming and outgoing calibration metrics for determining the equipment's fitness for use prior to calibration.

Elements 11 and 12 – Nonconformance and Corrective Action

Internal and external audit findings, as well as formal complaints from MTA C&D or the Design-Builder may result in the creation of a Nonconformance Report (NCR) by the Design Team. In such cases, the NCR Report format from the QMP will be utilized, and the nonconformance will appear on the NCR Log maintained by the Design-Builder. Dissemination of NCR results and corrective actions will be described in the QMP. All other aspects of the NCR/Corrective Action process as defined by the Design-Builder.

NCRs will result in a documented root cause analysis and corrective action to prevent recurrence. The Quality Manager will review the corrective action for appropriateness and verify implementation/effectiveness once completed.

Element 13 – Quality Records

The Design Team will retain records in the SharePoint system related to the following:

- This DQP
- QC Review Records
- Shop Drawing Review Records
- NCRs
- Personnel Qualifications, Resumes, and Approvals
- Meeting Minutes
- Design Submittals
- Training Records

Per their subcontract agreement, the Design Team will not manage the as-built process. The Design Team will redline design documents based upon changes during construction and provide markups to the Design-Builder, who will maintain responsibility for providing the final as-built drawings.

Element 14 – Quality Audits

THE AUDIT PROGRAM: The program will be developed in coordination with JV and the final process disseminated to relevant parties at that time.

Element 15 – Training

Internal Training will be presented to all staff intended to work more than 80 hours on the project. Such staff will be included on a log by the DQAM, which will be maintained to track all such Design Team members who have attended and completed the training. Each individual will be required to complete training once, though additional re-training may be required due to NCR or continual improvement initiatives.

DMP/DQP Training effectiveness will be measured through responses to a brief quiz related to training content. The training agenda/scope will be documented via the training slides. Quiz Records and the Training Log will be maintained in the Design Team's SharePoint site as Quality Records.

Training will be approximately 2-hrs in length (including quiz). Dates of training will be maintained on the Log for each individual's completion. The initial training will be presented live by the DQAM via MS Teams and recorded. Individuals requiring training at later dates will complete the training by viewing the recording and completing the quiz on their own, supplying quiz results to the DQAM for final evaluation of effectiveness.

MTA C&D notification is required 2 WDs in advance. Notification process is pending final determination.

Appendix A – Gannett Fleming Corporate Quality Documents

- Corporate Quality Manual
- WI 7.00.01 Work Instruction Supplement
- WI 7.02.01 Calculation Verification
- WI 7.03.01 Drawing Verification
- WI 7.04.01 Construction Specification Verification
- WI 7.05.01 Report Verification
- WI 7.12.01 Supplier Quality Verification Requirements
- WI 7.14.01 Coordination Review
- WI 7.03.TR1 Checking and Verification (TRCBG)

Appendix B – List of Deliverables

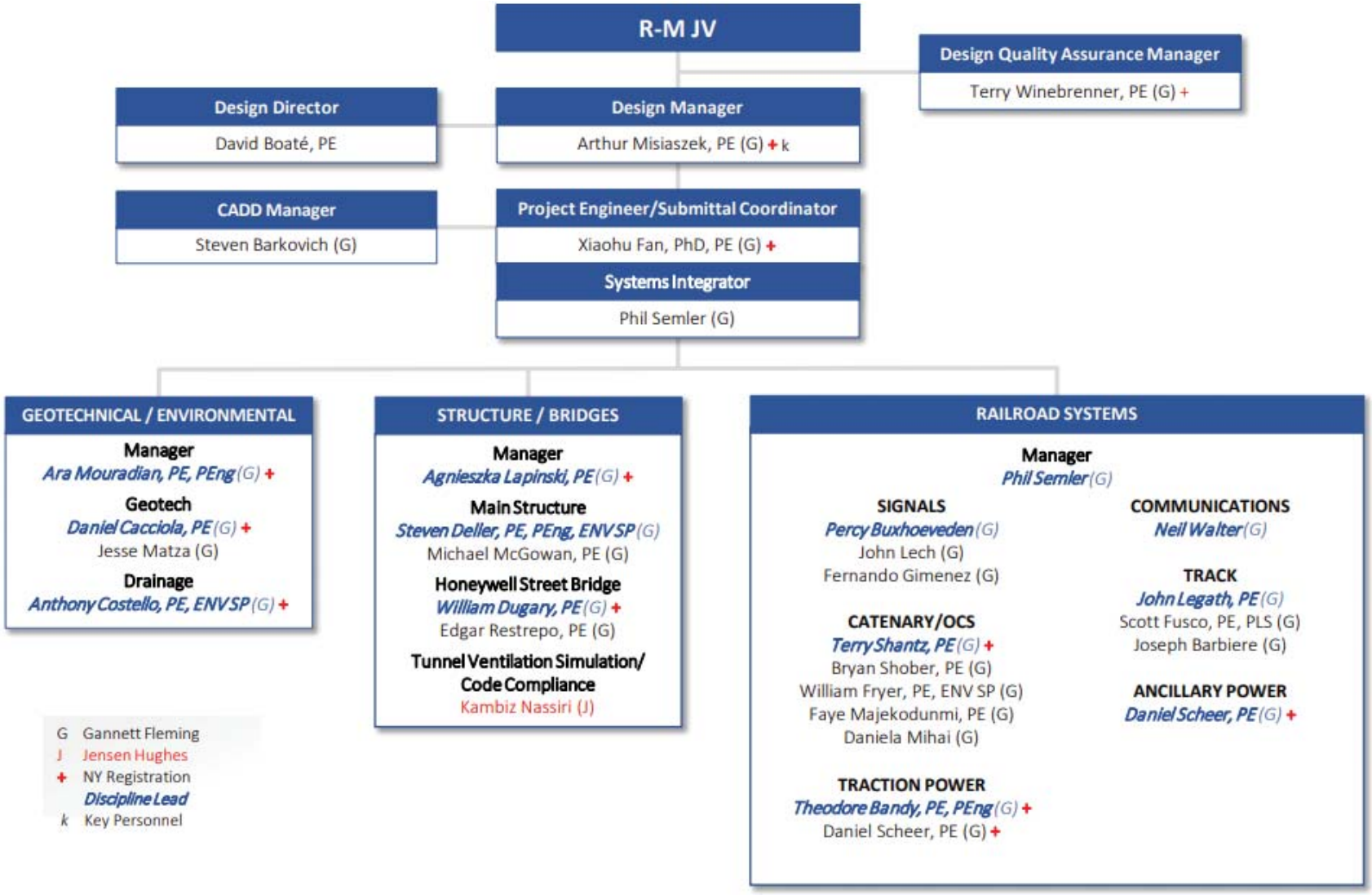
Deliverables List

Made by Xiaohu Fan ***Date*** 8/24/2021

Checked by Zouli Bereddad ***Date*** 8/24/2021

No.	Design Unit	Work Element	Document Type	Discipline	Deliverables	Description	Receipient
DUR-01-MTA	NA	NA	Report	All	Design Unit Report		MTA
DMP-02-RMJV	NA	NA	Report	PM	Design Management Plan		RMJV
DQMP-03-RMJV	NA	NA	Report	Quality	Design Quality Management Plan		RMJV
CCR-04-MTA	NA	NA	Report	Code	Code Conformance Report		MTA
DS-05-MTA	NA	NA	Report	All	Design Statement		MTA
DCR-06-MTA	NA	NA	Report	All	Design Criteria Report		MTA
CAD-07-MTA	NA	NA	Drawings	CADD	CAD Sample for Compatibility		MTA
DU1-Prelim-MTA	DU1	A	Drawings, Report	Civil	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU1-Inter-MTA	DU1	A	Drawings, Report, Specs	Civil	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU1-Final-MTA	DU1	A	Drawings, Report, Specs	Civil	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU1-RFC-MTA	DU1	A	Drawings, Report, Specs	Civil	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU2-Prelim-MTA	DU2	A	Drawings, Report	Structures, Geo	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU2-Inter-MTA	DU2	A	Drawings, Report, Specs	Structures, Geo	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU2-Final-MTA	DU2	A	Drawings, Report, Specs	Structures, Geo	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU2-RFC-MTA	DU2	A	Drawings, Report, Specs	Structures, Geo	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU3-Prelim-MTA	DU3	A	Drawings, Report	Structures, Geo	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU3-Inter-MTA	DU3	A	Drawings, Report, Specs	Structures, Geo	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU3-Final-MTA	DU3	A	Drawings, Report, Specs	Structures, Geo	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU3-RFC-MTA	DU3	A	Drawings, Report, Specs	Structures, Geo	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU4-Prelim-MTA	DU4	A	Report	Bridge	Preliminary Package	Preliminary bridge analysis report	MTA
DU4-Inter-MTA	DU4	A	Report	Bridge	Intermediate Package	Intermediate bridge analysis report	MTA
DU4-Final-MTA	DU4	A	Report	Bridge	Final Package	Final bridge analysis report	MTA
DU4-RFC-MTA	DU4	A	Report	Bridge	RFC Package	RFC bridge analysis report for Record	MTA
DU5-Prelim-MTA	DU5	A	Drawings, Report	Track	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU5-Inter-MTA	DU5	A	Drawings, Report, Specs	Track	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU5-Final-MTA	DU5	A	Drawings, Report, Specs	Track	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU5-RFC-MTA	DU5	A	Drawings, Report, Specs	Track	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU6-Prelim-MTA	DU6	A	Drawings, Report	OCS	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU6-Inter-MTA	DU6	A	Drawings, Report, Specs	OCS	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU6-Final-MTA	DU6	A	Drawings, Report, Specs	OCS	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU6-RFC-MTA	DU6	A	Drawings, Report, Specs	OCS	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU7-Prelim-MTA	DU7	B, H	Drawings, Report	Track	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU7-Inter-MTA	DU7	B, H	Drawings, Report, Specs	Track	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU7-Final-MTA	DU7	B, H	Drawings, Report, Specs	Track	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU7-RFC-MTA	DU7	B, H	Drawings, Report, Specs	Track	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU8-Prelim-MTA	DU8	C, H	Drawings, Report	Traction Power	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU8-Inter-MTA	DU8	C, H	Drawings, Report, Specs	Traction Power	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU8-Final-MTA	DU8	C, H	Drawings, Report, Specs	Traction Power	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU8-RFC-MTA	DU8	C, H	Drawings, Report, Specs	Traction Power	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU9-Prelim-MTA	DU9	D, H	Drawings, Report	OCS	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU9-Inter-MTA	DU9	D, H	Drawings, Report, Specs	OCS	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU9-Final-MTA	DU9	D, H	Drawings, Report, Specs	OCS	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU9-RFC-MTA	DU9	D, H	Drawings, Report, Specs	OCS	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU10-Prelim-MTA	DU10	E	Drawings, Report	Signals	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU10-Inter-MTA	DU10	E	Drawings, Report, Specs	Signals	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU10-Final-MTA	DU10	E	Drawings, Report, Specs	Signals	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU10-RFC-MTA	DU10	E	Drawings, Report, Specs	Signals	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU11-Prelim-MTA	DU11	F	Drawings, Report	Comms & Security	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU11-Inter-MTA	DU11	F	Drawings, Report, Specs	Comms & Security	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU11-Final-MTA	DU11	F	Drawings, Report, Specs	Comms & Security	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU11-RFC-MTA	DU11	F	Drawings, Report, Specs	Comms & Security	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA
DU12-Prelim-MTA	DU12	G	Drawings, Report	Facility Power	Preliminary Package	30% Design Drawings and Basis of Design Report	MTA
DU12-Inter-MTA	DU12	G	Drawings, Report, Specs	Facility Power	Intermediate Package	60% Design Drawings, Specs, Calcs	MTA
DU12-Final-MTA	DU12	G	Drawings, Report, Specs	Facility Power	Final Package	100% Signed and Sealed Design Drawings, Specs, Calcs, and Basis of Design Report	MTA
DU12-RFC-MTA	DU12	G	Drawings, Report, Specs	Facility Power	RFC Package	RFC Drawings, Specs, Calcs for Record	MTA

Appendix C – Organizational Chart (Design Team)



MRCE DESIGN QUALITY CONTROL PLAN
East Side Access Project - Contract CH058B
Harold Structures Eastbound Reroute
Section No. 01 40 10
MRCE No. 14116

Owner: MTACC
Design Builder: Railroad-Michels Joint Venture, LLC

Prepared by:

Mueser Rutledge Consulting Engineers PLLC
14 Penn Plaza - 225 West 34th Street
New York, NY 10122

August 26, 2021

_____
Srinivas Yenamandra, PE, Quality Control

_____
Sitotaw Y. Fantaye, PE, Principal

MUESER RUTLEDGE CONSULTING ENGINEERS PLLC
DESIGN QUALITY CONTROL PROGRAM
SECTION NO 01 40 10 3.06.C

1. **SCOPE**
The following describes the Quality Control requirements applicable to design and development work conducted by Mueser Rutledge Consulting Engineers PLLC (MRCE) in accordance with the objectives of the firm. These objectives are accomplished by working closely with the client and internally coordinating the work from initial site studies or preliminary design through final design documents and/or resident inspection of the work. The implementation of these objectives will result in a sound, safe, practical and economical design.

2. **PROGRAM PLANNING**
Proposed projects that are to be undertaken by MRCE are identified by a Principal and assigned to the appropriate Project Engineer. The Project Engineer establishes a framework for developing these projects within the scope of the program and oversees the day-to-day design activities of the projects. This supervision provides responsible direction for the duration of the project within MRCE and for meeting overall quality objectives in terms of program content, budget limitations and forms the basis for development of the schedule.

3. **PROJECT DEVELOPMENT**
After individual projects are assigned to the Project Engineer, schedules are determined and technical objectives are established in conformance with MRCE procedural requirements. The project development process involves the review of available information, meetings with the client, further definition of client needs, and other activities necessary so that the overall project objectives and constraints are established and that the needs of the potential users are being satisfied. Within MRCE, the Project Engineer has overall responsibility for this activity. Support is provided by all of the appropriate units: (structural, geotechnical, drafting and laboratory). The client should identify a project representative so that decision-making and coordination responsibility can be established, information transmitted and project changes managed responsibly and expeditiously.

MRCE design schedules are established for these programs as a whole by determining overall staff availability within different groups and evaluating the project schedule and staff requirements for each to determine whether the client's schedule requirements can be met with available staff on a regular time basis. This process is managed on an overall basis by the Principals, by utilizing various staff leveling and scheduling techniques so that each project engineer can provide design start and duration dates for each project in the current inventory of active and planned projects.

4. **DESIGN QUALITY CONTROL**
Design definition is the responsibility of the designated Project Engineer with the approval of the Principal-in-charge. Guidelines and instructions are established for design criteria and parameters, a format for preparing and reviewing design calculations, data prepared for the acquisition of permits, preparing and reviewing technical specifications, approval and signature of drawings, and the preparation of estimates. Procedures require that periodic or milestone design meetings be held between the Project Engineer and the Principal-in-charge.

At the start of design, the requirements which define the construction, staging, maintenance and operating objectives of the project are established using data developed during the previous design phases, if any. Design descriptions are prepared for components and elements of the project in

accordance with the requirements of the client, engineering standards, and required codes. Any changes or deviations from such design requirements will be identified and documented during the design process.

Design criteria are established which define the appropriate codes and standards to be used in the project. Codes and standards utilized are generally those described by applicable local building code or law, federal, state or municipal environmental or safety regulations, codes of professional societies, specifications of nationally recognized trade associations and design standards established by MRCE. Design standards will be selected so that project quality is appropriate to its use. Exceptions or modifications to professional and trade codes or MRCE standards will be identified and justified by the Project Engineer to the Principal-in-charge.

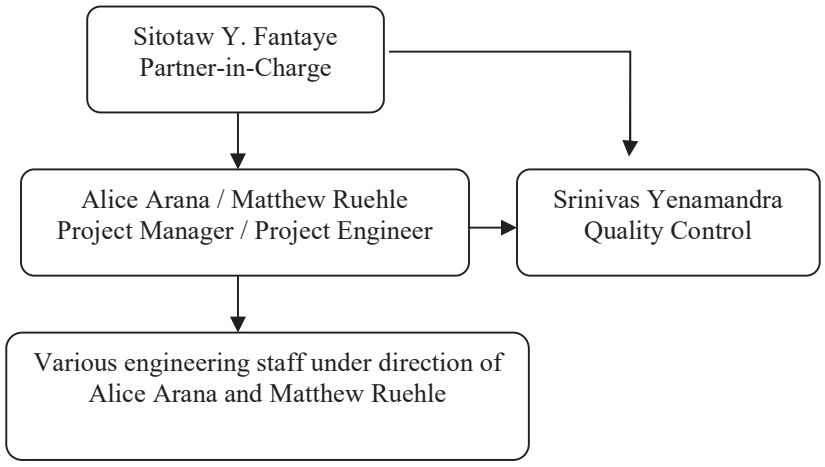
The Project Engineer is generally responsible for the preparation of design calculations, the preparation of drawings, technical specifications and manuals or other technical documents as required to define the detailed design of the project. The preparation of the technical specifications is coordinated with design drawings. The quality control procedures for calculations, drawings, specifications and manuals will:

- Provide that applicable codes and standards are used in the development of the design.
- Provide that Contract Documents contain any special fabrication, production or construction requirements.
- Provide that Contract Documents define any testing requirements.

These technical documents develop and detail the design so they may be used in construction or purchasing activities.

Documents used to define acceptable testing or performance criteria of project elements will contain sufficient information so that the tests performed and data acquired are sufficient to ascertain that these elements meet or exceed the required performance as called for in the design. Testing will be performed in accordance with approved written procedures.

Organization Chart



5. **REVIEWS AND CONTROL**
   Technical calculations, testing programs, specifications, contract drawings and construction estimates will be reviewed prior to final use. Reviews of plans and specifications will be conducted systematically from the guidelines and instructions that indicate the extent of review necessary. Reviewers verify completeness and adequacy of design and that all the requirements have been included as outlined in the guidelines and instructions. Calculations and drawings are initialed documenting the completion of the review.

   Technical specifications and drawings are checked and commented upon by all groups involved and all comments resolved prior to presentation for stamping and/or signature by the Principal-in-charge. An engineer of equal or greater experience in the work compared to the originator checks calculations and testing programs and makes any comments resolved prior to approval.

6. **DESIGN REVIEWS**
   The functional aspects of the project are reviewed to confirm compliance with scope and current needs of the client. These design reviews will consider all or portions of the following areas:

   - Applicable studies are completed and current, including those relating to the clients' needs, cost, function, engineering requirements, safety, reliability, durability, maintainability and constructability.
   - In-service inspection, maintenance and repair are considered in the design.
   - Acceptable criteria for testing and performance specifications are delineated.
   - Functional design requirements are defined.
   - The design is consistent with the information currently available.

7. **QUALITY RECORDS**
   The Project Engineer will provide that Procedures on filing systems and records management that are in use will provide uniform filing systems and provide for the appropriate retention periods of such records.

8. **QUALITY SURVEILLANCE**
   Each Principal or his designee will perform periodic planned auditing or surveillance of the design and development activities conducted in MRCE.

9. **MRCE STAFF**
   MRCE staff will have demonstrated experience in the design of structures and foundations. The Project Engineer will have as a minimum a Bachelor's Degree in their discipline Other "Engineer" positions will also have as a minimum a Bachelor's Degree in their discipline. Only a Principal may sign and seal design documents for MRCE.

MICHELS®
CONSTRUCTION, INC.

Appendix D

Michels Corporate Quality Management Plan

WE DO THAT ... & **MORE**

MICHELS®

QUALITY MANAGEMENT SYSTEM MANUAL

February

2017

"We are committed to continual improvement, providing the highest level of quality service and exceeding our customer's requirements."

Quality Control/ Quality Assurance Manual

Reviewed and Approved:

Pat Michels
President, Michels Corporation

Jon Connaway
Director of Quality Management and Integrity

Revision History

Revision #	Revision Date	Accepted By Signature	Accepted Date	Revision Comment
Rev 0	02 Feb 2017	JDC	07 Feb 2017	Initial Release
Rev 1	10 Dec 2019	JDC	11 Dec 2019	Update of Appendix B (Corp Org Chart)

User Guidance:

- Michels Quality Management System (QMS) applies to our scope of work and the scope of work of lower tier subcontractor, vendor, supplier, testing or professional consultant and any other party under our direction or control on a project site.
- Michels' leaders ensure proper understanding and implementation of the QMS and Site Specific Quality Plan (SSQP) for their respective projects.
- Project Managers and superintendents adapt the SSQP as required by the scope of work for each project and owner.
- Each project team inserts and utilizes division-specific forms, correspondence forms and other related quality documents under the SSQP.
- Project Managers and Superintendents assigned to projects will be responsible for implementing the QMS along with the SSQP for their assigned area of responsibility. A Project representative includes, but is not limited to project managers, site construction managers, project supervisors/superintendents, field quality control managers, and craft foremen.
- Subcontractors, vendors, suppliers, testing or professional consultants (Subcontractors) comply with and meet the expectations for completion of their respective scope of work as required by this QMS and the project SSQP.
- Only the Division Quality Manager has the authority to modify or change the QMS. Any recommended or suggested changes can be submitted to the Quality Manager for review, consideration and approval.

Introduction

Michels has refined and updated its Quality Management System (QMS), which includes a template Site Specific Quality Plan (SSQP) for its construction projects and operations. This updated QMS is based upon the principles and processes developed under the International Organization for Standardization (ISO) and other equivalent quality procedures.

The goals of the updated QMS are to:

1. Improve the quality of overall operations, materials and processes used in the various construction projects.
2. Reduce the life-cycle costs for owners.
3. Build efficiencies for Michels and our customers and owners.
4. Facilitate better control over process and construction quality on Michels projects.
5. Increase good catches to ensure good communication with project customers and owners.
6. The SSQP provides an emphasis on quality control and quality assurance during the operations and installation of material and equipment. Compliance with the SSQP will ensure:
    a. Michels' focus on quality is met through established standards and processes, inspection, sampling, and testing.
    b. An independent reviewer can inspect, sample or test Michels' completed or installed work to verify that Michels is meeting the contract specifications.
    c. Michels can evaluate completed projects using assurance procedures to identify the operations that require improvement.

Terms & Definitions

Calibration: Using a traceable standard as a means of comparison to validate a specific measurement device's operation within a specified tolerance

Certification Audit: A formal audit by a certified ISO registrar to ensure the QMS complies with the ISO standard. Usually conducted in two parts with at least the second part on site at the company being audited

Code: Latest edition and addenda of the referenced standard, unless otherwise noted.

Controlled Documents: These are documents required by the QMS. Control over these documents is required to ensure only the correct and current versions are legible, identifiable, and readily available to those within the organization who need access.

Corrective Action: A process of taking action needed to eliminate the causes of nonconformities to requirements and to prevent recurrence.

Company: The owner, customer or prime contractor in the event Michels is a subcontractor.

Contractor: Michels Corporation and any operating Division or Subsidiary

Design Review: An evaluation that occurs at strategic points in the design and development process to ensure a project is on track and to identify and remove roadblocks to success.

Design Validation: An evaluation of the designed capability of a product or service to meet the needs of the customer's application or use.

Design Verification: An evaluation of final design results to ensure that they meet specified requirements for the product or service that was developed before the design effort began.

Document Control: A system or procedure that records how QMS documents are written, reviewed and approved, to ensure that only current documents are available, legible, and identifiable

DOT: Department of Transportation

Exclusion: An explanation of why a part of the standard does not apply is required to be included in the quality manual

Infrastructure: The entire system of facilities, equipment, services, and information systems that an organization needs in order to function

Internal Audit: An audit of all or part of the QMS conducted by employees of (or a contractor for) the company. The purpose is to determine if the QMS complies with the ISO standard and if the day to day operation complies with the documentation.

ISO: The International Organization for Standardization; An international federation of national standards bodies headquartered in Geneva, Switzerland, whose primary purpose is promulgating worldwide industrial and commercial standards.

ISO 9001: A standard defining minimum business practices for the production and delivery of a company's products and services through the implementation of a formal Quality Management System (QMS).

Job File: A job file is an electronic and/or hard copy file, which contains all records and documents that are essential to ensure the quality of the product. The file shall be assigned the number of each job as a means of identifying each job file. Michels' project number will be cross-referenced with client project numbers. A job file will identify both numbers and the client.

Management Rep (Management representative): An employee appointed by top management who is responsible for ensuring compliance with the ISO standards and internal policies and procedures.

Management Review: A regular, top-management review of the QMS to ensure that it remains suitable, adequate and effective to satisfy the company's quality policy and accomplish the organization's quality objectives; it includes assessing opportunities for improvement and any QMS changes needed.

Non-Conformity: Any condition that renders an item or service unacceptable or indeterminate for use because it does not comply with applicable codes and standards, the OSHA Safety Codes, the Customer's specifications, design specifications, and this QMS. Examples of non-conformities include defects, test failures, improper documentation, loss of material identification and deviation from drawings, specifications, or procedures.

Policy: A first-tier quality document that is a statement by management, that helps guide decisions and formulate procedures to achieve the desired outcome.

Preventative Action: A process of taking action to eliminate the potential causes of non-conformities

Procedure: A procedure is a second-tier quality document that specifies a series of tasks or activities, and defines the controls, responsibilities, and requirements to achieve planned results and to ensure customer expectations are met.

Process Approach: The application of a system of processes within an organization that are used to control and improve the company's ability to meet customer expectations

Process Validation: The use of objective evidence to confirm that the production and service processes are capable of producing planned results in cases where the product or service cannot be evaluated until after it is in use or delivered

Product Realization: All the processes that are used to convert raw materials and other inputs into finished products and services capable of meeting customer requirements

QMS (Quality Management System): A set of processes, policies, procedures, documentation, and other formal practices that control internal company operations to ensure customer requirements are consistently met.

Qualified Personnel: An employee or other designated person that possess the relevant experience and certifications, if required by contract or by standard of practice, to qualify or perform the task identified.

Quality Manual: A document that states the scope of the quality management system, the quality policy, other policy statements related to the QMS, a list of quality procedures, a description of the interaction between the QMS processes, and a description of the contractor's organization.

Quality Objectives: Objectives developed by top management, which are measurable, consistent with the quality policy, and, ideally, aligned with business objectives. Quality objectives serve as the foundation for continual improvement.

Quality Policy: A formal statement developed by management, which is linked to the business and marketing plan and customer needs. The quality policy is understood and followed at all levels and by all employees.

Safe Work Practices and Procedures: The guidelines for performing specific tasks, which, when followed, protect persons from illness, injury, or property damage.

Subcontractor: A lower-tier subcontractor, vendor, supplier, testing or professional consultant and any other party under our direction or control on a project site hired to complete specific work and paid directly by the Contractor.

Traceability: The ability to identify, track and document the history, distribution, location, and application of products, parts, and/or materials as they come from suppliers and are processed and ultimately distributed as end products.

Work Environment: All working conditions and factors needed to achieve conformity to product requirements, including physical, environmental and other conditions and factors, such as noise, temperature, humidity, lighting, weather, etc.

Work: Work is the total construction and the performance of related services required by the contract documents or a portion thereof to complete the project.

Work Instruction: A third-tier quality document that lists specific tasks and instructions necessary to ensure that results are consistent and customer expectations are met.

QMS Manual Control

The Quality Manager is responsible for the contents of the SSQP and revisions therein. The Project Quality Control Manager reviews the SSQP to assure compliance with the contract relating to Michels' Scope of Work.

This Quality Manual is maintained on Michels' corporate server. The latest approved version on the SharePoint website is considered the controlled version; other copies, either paper copy or electronic is considered uncontrolled.

- Copies of this plan may be made available upon written request. Transmitted copies of the QMS or SSQP are considered "uncontrolled" and need not be labeled.
- Quality Manual and QMS changes that are unique to a project may be made and notified by the notification letters identified in the Appendix and under the relevant SSQP. The Project Manager and the Field Quality Control Manager is notified of any such changes via transmittal record.
- Changes in titles, document forms and material that do not change the intent of this QMS or related SSQP are not considered revisions. Special addenda can be issued to address governmental, site and/or client specific requirements.
- Subcontractors that do not have a QMS that is approved by Michels are required to follow this QMS and related SSQP to complete their contract quality requirements. However, the contents of this QMS and any SSQP are proprietary and are to be used in connection with Michels and its respective customers or owners. This QMS or SSQP, or parts thereof are not reproduced in any form without the express written consent from the Division Quality Manager.

Exclusions

We exclude the following clauses as defined in the ISO 9001 Standard from this manual and our QMS. We do not intend to perform these processes. Additional exclusions may be identified within appropriate sections of this manual and are excluded for reasons mentioned above.

8.3 Design and development of products and services

Customer product design and development (D&D) is excluded at this time from the scope of this QM and QMS.

4 Context of the organization

4.1 Understanding the organization and its context

We determine external and internal issues that are relevant to its purpose and its strategic direction and that affect our ability to achieve the intended result(s) of our quality management system (QMS).

We monitor and review information about these external and internal issues.

4.2 Understanding the needs and expectations of interested parties

We determine:

a) the interested parties that are relevant to the QMS;

b) the requirements of these interested parties that are relevant to the QMS

We update such determinations in order to understand and anticipate needs or expectations affecting customer requirements and customer satisfaction.

We consider the following relevant interested parties:

a) direct customers;

b) end users;

c) suppliers, distributors, retailers or others involved in the supply chain;

d) regulators; and

e) any other relevant interested parties

4.3 Determining the scope of the quality management system

Michels determines the boundaries and applicability of the QMS to establish its scope.

When determining this scope, we consider:

a) the external and internal issues;

b) the requirements of relevant interested parties;

c) the products and services of our organization

We apply the requirements of ISO 9001 if they are applicable within the determined scope of our QMS

The scope of our QMS is available and is maintained as documented information. The scope states the types of products and services covered, and provide justification for any requirement of the International Standards that we determine is not applicable to the scope of our QMS.

Michels is an industry-leading utility contractor offering Pipeline Construction, Horizontal Directional Drilling, Transmission, Substation and Distribution Construction, Cured-in Place Pipe, Direct Pipe, Fiber Optic Networks, Rail Plowing, Heavy Civil Work, Deep Foundations, Tunneling, Paving, Dewatering, Custom Crushing and Road Building.

4.4 Quality management system and its processes

4.4.1 General

We establish, implement, maintain and continually improve a QMS, including the processes needed and their interactions, in accordance with the requirements of the International Standards.

We determine the processes needed for the QMS and their application throughout Michels, and:

a) determine the inputs required and the outputs expected from these processes;

b) determine the sequence and interaction of these processes; (See appendix A)

c) determine and apply the criteria and methods (including monitoring, measurements and related performance indicators) needed to ensure the effective operation and control of these processes;

d) determine the resources needed for these processes and ensure their availability;

e) assign the responsibilities and authorities for these processes;

f) address the risks and opportunities as determined in accordance with the requirements;

g) evaluate these processes and implement any changes needed to ensure that these processes achieve their intended results;

h) improve the processes and the QMS

4.4.2 Process Approach

To the extent necessary, we:

- determine the processes needed for the quality management system and their application;
- determine the inputs required and the outputs expected from each process;
- determine the sequence and interaction of these processes;
- determine the risks to conformity of goods and services and customer satisfaction if unintended outputs are delivered or process interaction is ineffective;
- determine criteria, methods, measurements, and related performance indicators needed to ensure that both the operation and control of these processes are effective;

- determine the resources and ensure their availability;
- assign responsibilities and authorities for processes;
- implement actions necessary to achieve planned results;
- monitor, analyze and change, if needed, these processes ensuring that they continue to deliver the intended outputs; and
- ensure continual improvement of these processes

See risk procedure (Pro – Risk Management)

5 Leadership

5.1 Leadership and commitment

5.1.1 Leadership and commitment with respect to the quality management system

Michels' top management demonstrates leadership and commitment with respect to the QMS by:

a) taking accountability for the effectiveness of the QMS;

b) ensuring that our quality policy and quality objectives are established for our QMS and are compatible with the context and strategic direction of our organization;

c) ensuring the integration of the QMS requirements into our business processes;

d) promoting the use of the process approach and risk-based thinking;

e) ensuring that the resources needed for our QMS are available;

f) communicating the importance of effective quality management and of conforming to the QMS requirements;

g) ensuring that the QMS achieves its intended results;

h) engaging, directing and supporting persons to contribute to the effectiveness of the QMS;

i) promoting improvement;

j) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility

5.1.2 Leadership and commitment with respect to the needs and expectations of customers

Top management demonstrates leadership and commitment with respect to customer focus by ensuring that

a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;

b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;

c) the focus on enhancing customer satisfaction is maintained

5.2 Quality policy

5.2.1 Establishing the quality policy

We establish, implement and maintain a quality policy that:

a) is appropriate to the purpose and context of Michels and supports our strategic direction;

b) provides a framework for setting quality objectives;

c) includes a commitment to satisfy applicable requirements;

d) includes a commitment to continual improvement of the QMS

5.2.2 Communicating the quality policy

Our quality policy is:

a) available and be maintained as documented information;

b) communicated, understood and applied within our organization;

c) available to relevant interested parties, as appropriate

The Michels Quality Policy:

> "*We are committed to continual improvement, providing the highest level of quality service and exceeding our customers' requirements*."

Our QMS addresses corporate policy, regulations and meeting customer satisfaction through project management, continual improvement, and adherence to project schedules and objectives. Michels, through the utilization of this QMS, strives to obtain a uniform, high-quality level of workmanship throughout our Scope of Work. To assure this end, Michels will observe the following principles:

- Focus on continual improvement of operations and processes through clear communication and critical reviews by all levels of project participants.
- Assure the highest quality through supervised controls and written instructions governing quality control procedures and practices; establish clearly defined responsibility and authority for compliance.
- Conform to contractual requirements, specifications and Michels' QMS. Compile accurate records of test certifications and other required documentation.
- Notify Project Managers of quality discrepancies for immediate corrective action. Assure that corrective action is implemented properly.
- The Corporate and Divisional Quality Managers work closely with on-site project staff, with the cooperation and authority of the Site Project Manager.

5.3 Organizational roles, responsibilities and authorities

We ensure that the responsibilities and authorities for relevant roles are assigned, communicated and understood within our organization.

Top Management assigns the responsibility and authority for:

a) ensuring that the QMS conforms to the requirements;

b) ensuring that the processes interact and are delivering their intended outputs;

c) reporting on the performance of the QMS and on opportunities for improvement in particular to top management;

d) ensuring the promotion of customer focus throughout our organization;

e) ensuring that the integrity of our QMS is maintained when changes to our QMS are planned and implemented

Management may choose to delegate responsibility and authority as necessary.

Statement of Authority and Responsibility

This QMS manual will be used in accordance with any SSQP of Michels Corporation, 817 W. Main Street, Brownsville, Wisconsin 53006, for construction projects. Unless otherwise directed by the customer or owner, this QMS and SSQP may be used for work and projects as agreed upon by Michels and its customers or owners.

Independent Authority

Quality Manager: is responsible for the contents and distribution of this QMS Manual and all related forms and documents, and has the authority and responsibility for assuring its implementation. **Quality representatives and positions within the division are sufficiently independent from operation and production and have the authority to stop work for quality reasons.** When there are differences, which cannot be resolved through the organizational structure described under this QMS, such issues are brought first to the Quality Manager and then to the Vice President, respectively.

Persons performing quality assurance functions have the authority and organizational freedom to:

- identify quality problems;
- initiate, recommend, or provide solutions through the designated and approved channels;
- verify implementation of solutions; and
- control further processing, delivery, or installation of a nonconforming item, deficiency, or unsatisfactory condition until proper disposition has occurred

All designated Michels' employees and Subcontractors will be responsible for implementing the QMS along with the SSQP for their assigned area of responsibility. Designated employees include, but are not limited to project managers, site construction managers, project supervisors/superintendents, field quality control managers, and craft foremen.

Project Manager: is responsible for assuring that applicable phases of construction and scopes of work are implemented to comply with the requirements of the QMS and SSQP. The Project Manager is assigned authority and organizational freedom to implement the SSQP, identify quality problems, initiate, recommend and provide solutions, verify implementation of solutions, and limit and control further processing or installation of nonconforming item or unsatisfactory condition until proper disposition has occurred. The Project Manager may, at their discretion, direct queries to the Field Quality Control Manager for resolution.

Any issues, differences or nonconformance that cannot be resolved in accordance with this plan are brought to the attention of the Vice President for resolution.

Project Superintendent: Manage field crews on the installation of assigned projects. Specific duties include material and supply coordinator, field liaison between engineering, estimating and subcontractors to ensure construction compliance, monitor work performance and craft productivity, enforce project quality, safety and environmental issues, regulation and resolution of field construction problems. Plan day-to-day operations onsite and line up the necessary resources to accomplish the plan. Work hand in hand with customers and third party inspection personnel to resolve issues.

Organization

General

Michels is a diversified utility and infrastructure construction contractor with critical expertise in linking systems for energy, communications, transportations and distribution. Michels is divided into divisions offering national and international services to various heavy civil and utility industries. Each Division and Subsidiary has unique operational and customer requirements. The organizational structure identified here varies between Divisions and Subsidiaries.

Delegation and Performance of Duties

Managers or Supervisors may delegate the performance of any of his duties to those who report directly to him/her; however, the responsibility for those duties cannot be delegated.

Managers or Supervisors may perform the duties and assume the responsibility of those who report directly to him, if duly qualified to do so.

Individual Responsibilities and Authorities

A summary of the principal responsibilities of personnel follows. Specific responsibilities of personnel are described in detail in Sub-Sections of the QMS, as applicable. Specific titles and obligations may vary under Divisional and project SSQP's.

The **Vice President or General Manager** is responsible for the overall operation of their respective Division and for reviewing inquiries, customer purchase orders and reports on the effectiveness of the QMS.

The **Corporate Quality Manager** is responsible for the contents and distribution of this QMS Manual and related forms and documents, and has the authority and responsibility for assuring its implementation. This position is sufficiently independent from operation and production, has the authority to stop work for quality reasons, and is responsible for defining, measuring and regularly reporting to Vice President of Business Administration the effectiveness of the QMS Program. When there are differences, which cannot be resolved through the organizational structure described under this QMS or SSQP, such issues are brought first to the Corporate Quality Manager and then to the Vice President of Business Administration, respectively.

The **Project Manager** reports to the Vice President or General Manager and is responsible for reviewing inquiries and customer purchase orders; preparing, approving and distributing drawings, bills of material construction plans, instructions and procedures; control of the SSQP on site; vendor qualification; audits; records files; and supervising personnel under their direction. The Project Manager is responsible for the direction and performance of field operations, which includes the supervision of Project Superintendents and Foreman, as well as administration of the Site Equipment/Logistics Manager and Site Office Administrative Staff working on the construction site. The Project Manager ensures the work is performed in conformance with the project objectives and requirements.

Principal areas of responsibilities are safety, cost, schedule, construction operations, quality, material control, field-based procurement, labor relations, and accounting. The Project Manager may delegate any tasks to support staff, including but not limited to Assistant Project Manager(s).

The **Assistant Project Manager** reports to the Project Manager and is responsible for assisting the Project Manager in completing the project within budget, schedule and in conformance with customer specifications and contract documents. In addition, the Assistant Project Manager is responsible for assisting with project administration, including submittals of timely and complete billing information and control reports, project schedules, project plans, permits, change orders and other job records. The Assistant Project Manager may delegate any tasks to support.

The **Division Quality Manager** reports to the Corporate Quality Manager and is responsible for defining and measuring quality requirements and providing quality support to operations under his/her Division. This position is independent from operation and production and has the authority to stop work for quality reasons. The Division Quality Manager coordinates Divisional quality requirements and provides oversight with QMS and SSQP. They provide regular updates to Vice Presidents, General Managers, Project Managers and Field Quality Control Managers regarding industry developments and compliance with the QMS and SSQP for Divisional projects. The Division Quality Manager develops and participates in the development of corrective action plans and remedies for Division projects.

The **Field Quality Control Manager** reports to the Division Quality Manager and Project Manager and is responsible for performing, scheduling, and witnessing inspections, testing, monitoring construction activities and documenting results. The Field Quality Control Manager ensures that work performed complies with the contract drawings, specifications, and submittals. Field QCM also identifies quality control problems, recommends, and assists in the implementation of solutions and corrective action plans, issue reports for Subcontractors regarding quality performance, including conformation compliance reports, deficiencies and remediation requirements, inspect materials equipment and workmanship, assist in developing punch list and final inspection and acceptance. **This position is sufficiently independent from operation and production and has the authority to stop work for quality reasons**.

The **Health and Safety Coordinator** reports to the Project Manager and the Director of Health and Safety and is responsible to ensure that laws, ordinances, regulations and standards concerning health and safety issues are complied with and that any identified deficiencies are corrected as efficiently as possible. Along with Michels employees, the Health and Safety Coordinator or the Safety Inspector has the authority to "stop work" for any party, including all Subcontractors or other parties, when the health and safety of construction personnel or others are in danger.

The **Third Party Testing Consultant** is subcontracted by Michels in the form of a Site Quality Specialist, Non Destructive Evaluation (NDE) Technician, Welding Specialist, Civil Specialist, Mechanical Specialist, or any other technically specialized personnel. This Third Party Testing Consultant is commensurate with the project's Scope of Work. These technical specialists report to the Field Quality Control Manager or Project Manager. The Field Quality Control Manager can assign field technical responsibility to a Third Party Testing Consultant.

The **Purchasing Agent** works with the Project Manager and is responsible for purchasing functions.

The **Estimator** reports to the Vice President, General Manager or authorized Project Manager and is responsible for preparing estimates, drawings, bills of material and construction plans as directed.

The **Superintendent** reports to the Project Manager and is responsible for oversight and coordination of the Scopes of Work under their authority for the project.

The **Foreman** reports to the Project Manager or Superintendent and is responsible for receiving, materials inspection and storage activities at the job site, including maintaining identification of items throughout storage and installation; recording the identification of installed items on the layout drawing; and supervising Journeymen and Apprentices.

The **Yardman** reports to the Project Manager and is responsible for project warehouse operations including receiving, materials inspection, storage and shipping, and maintaining identification of items throughout these activities.

NOTE: Job titles, descriptions etc of positions as stated may vary from one division to another.

6 Planning

6.1 Actions to address risks and opportunities

6.1.1 When planning for our QMS, we consider the issues and the requirements and determine the risks and opportunities that need to be addressed to:

a) give assurance that our QMS can achieve its intended result(s);

b) enhance desirable effects;

c) prevent, or reduce, undesired effects;

d) achieve improvement

6.1.2 We plan:

a) actions to address risks and opportunities;

b) how to:

1) integrate and implement the actions into our QMS processes (see 4.4);

2) evaluate the effectiveness of these actions

Actions taken to address risks and opportunities are proportionate to the potential impact on the conformity of products and services.

6.2 Quality objectives and planning to achieve them

6.2.1 We establish quality objectives at relevant functions, levels and processes needed for our QMS.

Our quality objectives:

a) are consistent with the quality policy;

b) are measurable;

c) take into account applicable requirements;

d) are relevant to conformity of products and services and to enhancement of customer satisfaction;

e) are monitored;

f) are communicated;

g) are updated as appropriate

We maintain documented information on the quality objectives.

6.2.2 When planning how to achieve our quality objectives, we determine:

a) what will be done;

b) what resources will be required;

c) who will be responsible;

d) when it will be completed;

e) how the results will be evaluated

Michels Quality Objectives:

a) Continual Improvement and Reduction of Rework;

b) Compliance with Project Requirements, Governing Laws and Regulations;

c) Foster Good Public Relations

6.3 Planning of changes

When we determine the need for changes to our QMS, the changes are carried out in a planned manner.

We consider:

a) the purpose of the changes and their potential consequences;

b) the integrity of our QMS;

c) the availability of resources;

d) the allocation or reallocation of responsibilities and authorities

7. Support

7.1 Resources

7.1.1 General

We determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the quality management system.

We consider:

a) what are existing internal resources, capabilities and limitations, and

b) which goods and services are to be sourced externally

7.1.2 People

We determine and provide the persons necessary for the effective implementation of our quality management system and for the operation and control of our processes.

7.1.3 Infrastructure

We determine, provide and maintain the infrastructure necessary for our operations and to assure product and services conformity.

7.1.4 Process environment

We determine, provide and maintain the process environment necessary for our operations and to assure products and services conformity and customer satisfaction.

7.1.5 Monitoring and measuring resources

7.1.5.1 General

We determine and provide the resources needed to ensure valid and reliable results when monitoring or measuring is used to verify the conformity of products and services to requirements.

We ensure that the resources provided:

a) are suitable for the specific type of monitoring and measurement activities being undertaken;

b) are maintained to ensure their continuing fitness for their purpose

We retain appropriate documented information as evidence of fitness for purpose of the monitoring and measurement resources

7.1.5.1 Control of Measuring and Test Equipment

Michels may establish programs by qualified personnel to maintain and document measures to control tooling, gauges, instruments and other equipment used in the testing program to assure the quality of testing and inspections of facilities.

Michels' measuring and test equipment is utilized, maintained and controlled in accordance with Michels' specifications and applicable industry and manufacturers' requirements and standards.

7.1.5.2 Measurement traceability

When measurement traceability is a requirement, or is considered to be an essential part of providing confidence in the validity of measurement results, measuring equipment is:

a. calibrated or verified, or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; when no such standards exist, the basis used for calibration or verification is retained as documented information;

b. identified in order to determine their status;

c. safeguarded from adjustments, damage or deterioration that would invalidate the calibration status and subsequent measurement results

Michels determines if the validity of previous measurement results has been adversely affected when measuring equipment is found to be unfit for its intended purpose, and take appropriate action as necessary.

7.1.6 Organizational Knowledge

We determine the knowledge necessary for the operation of our processes and to achieve conformity of products and services. This knowledge is maintained and is made available to the extent necessary.

When addressing changing needs and trends, we consider our current knowledge, and determine how to acquire or access, necessary additional knowledge and required updates.

7.2 Competence

Michels:

a) determines the necessary competence of person(s) doing work under our control that affects its quality performance, and

b) ensures that these persons are competent on the basis of appropriate education, training, or experience;

c) where applicable, takes actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken, and

d) retains appropriate records as evidence of competence

7.3 Awareness

Persons doing work under Michels' control are aware of:

a) the quality policy;

b) relevant quality objectives;

c) their contribution to the effectiveness of the quality management system, including the benefits of improved quality performance, and

d) the implications of not conforming with the quality management system requirements

7.4 Communication

We determine the need for internal and external communications relevant to the quality management system including:

a) on what it will communicate;

b) when to communicate;

c) with whom to communicate;

d) how to communicate, and

e) who communicates

Request for Information (RFI): As necessary, the RFI system is used to confirm the interpretation of a detail, specification or note on the construction drawings or to secure a documented directive or clarification from the engineer, architect or owner, in order to continue work. An RFI may be issued electronically or with paper copy. As each RFI is generated, the Site Administrator maintains the RFI Log.

RFI procedures assist in meeting project and/or customer requirements by addressing potential issues including, but not limited to, the following:

- Routine questions and answers for all project subjects;
- Customer questions, concerns, issues and complaints;
- Changes to schedule;
- Changes to vendor information;
- Changes in requirements brought about by regulatory, client request, operating experience, change in scope, or other requirements;
- Revision(s) to original design(s) or specification(s);
- Additional technical (or other) information/clarifications; and/or
- Non-conformance issues

The Site Administrator, supported by the Site Project Manager and Project Team, ensures that the RFI is properly processed.

The customer, owner or Michels authorized employee can generate an RFI.

The Project Manager or designated project personnel initiate and documents the resolution of RFI.

RFI's should use standard abbreviations and minimize the use of slang or colloquial "jargon."

7.5 Documented Information

7.5.1 General

Our quality management system includes:

a) documented information required by ISO 9001:2015;

b) documented information determined by Michels as being necessary for the effectiveness of the quality management system

7.5.2 Creating and updating

When creating and updating records we ensure appropriate:

a) identification and description (e.g. a title, date, author, or reference number),

b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic),

c) review and approval for suitability and adequacy

7.5.3 Control of Documented Information

7.5.3.1 Documented information required by the quality management system and by ISO 9001:2015 are controlled to ensure:

a) it is available and suitable for use, where and when it is needed, and

b) it is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity)

7.5.3.2 For the control of documented information, we address the following activities, as applicable:

a) distribution, access, retrieval and use,

b) storage and preservation, including preservation of legibility,

c) control of changes (e.g. version control), and

d) retention and disposition

Documented information (records) retained by Michels is securely stored at Michels' home office until no longer necessary. After checking with Senior Management, the Quality Manager or designate ensures that the records are securely destroyed. Records are available to customers and regulatory authorities upon request.

Documented information of external origin determined by Michels to be necessary for the planning and operation of our quality management system is identified as appropriate, and controlled.

This QMS **does not** control the installation, alignment, and performance of materials and equipment, and software that is controlled by customer or owner requirements or other vendor manuals, documents and programs.

The performance and documentation of activities stated under the QMS or SSQP can be documented either in paper copy or in electronic format as appropriate with the project specifications or as determined by the Project Manager.

Substitution of forms and other recording documentation included under this QMS or SSQP is only allowable under the authorization of the Quality Manager. The forms and other recording documentation referenced or included under the QMS or SSQP can be substituted with customer, or owner required forms or similar forms when approved by the Divisional Quality Manager.

Subcontractors that do not have a QMS that is approved by Michels are required to follow this QMS and related SSQP. In fulfilling the requirements of a customer or owner contract, and the Michels QMS, Subcontractors and any Third Party Testing Consultant employs adequate qualified personnel by any Michels' acceptable means, as required by qualified agencies, laboratories, consultants, etc., to perform the necessary services.

We may use documents for training, guideline and reference purposes only. These documents are controlled through our document control system but may not be followed precisely as written. When applicable, we coordinate document changes with customer and/or regulatory authorities.

8. Operation

8.1 Operational planning and control

We plan, implement and control the processes needed to meet the requirements for the provision of products and services, and to implement the actions determined by:

a) determining the requirements for the products and services;

b) establishing criteria for:

   1) the processes;

   2) the acceptance of products and services;

c) determining the resources needed to achieve conformity to the product and service requirements;

d) implementing control of the processes in accordance with the criteria;

e) determining, maintaining and retaining documented information to the extent necessary:

   1) to have confidence that the processes have been carried out as planned;

   2) to demonstrate the conformity of products and services to their requirements

The output of this planning is suitable for our operations.

We control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

We ensure that outsourced processes are controlled.

8.2 Requirements for products and services

8.2.1 Customer communication

Communication with customers includes:

a) providing information relating to products and services;

b) handling enquiries, contracts or orders, including changes;

c) obtaining customer feedback relating to products and services, including customer complaints;

d) handling or controlling customer property;

e) establishing specific requirements for contingency actions, when relevant

8.2.2 Determination of requirements related to the goods and services

When determining the requirements for the products and services to be offered to customers, we ensure that:

a) the requirements for the products and services are defined, including:

1) applicable statutory and regulatory requirements;

2) those considered necessary by our organization;

b) we can meet the claims for the products and services it offers

8.2.3 Review of the requirements for products and services

8.2.3.1 We ensure that we have the ability to meet the requirements for products and services to be offered to customers.

We conduct a review before committing to supply products and services to a customer, to include:

a) requirements specified by the customer, including the requirements for delivery and post-delivery activities;

b) requirements not stated by the customer, but necessary for the specified or intended use, when known;

c) requirements specified by Michels;

d) statutory and regulatory requirements applicable to the products and services;

e) contract or order requirements differing from those previously expressed

We ensure that contract or order requirements differing from those previously defined are resolved.

The customer's requirements are confirmed before acceptance, when the customer does not provide a documented statement of their requirements.

8.2.3.2 We retain documented information, as applicable:

a) on the results of the review;

b) on new requirements for the products and services

8.2.4 Changes to requirements for products and services

We ensure that relevant documented information is amended, and that relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

8.4 Control of external provision of goods and services

8.4.1 General

We ensure that externally provided processes, products and services conform to requirements.

Michels determines the controls to be applied to externally provided processes, products and services when:

a) products and services from external providers are intended for incorporation into our own products and services;

b) products and services are provided directly to the customer(s) by external providers on our behalf;

c) a process, or part of a process, is provided by an external provider as a result of a decision by us

We determine and apply criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers, based on their ability to provide processes or products and services in accordance with requirements. We retain documented information of these activities and necessary actions arising from the evaluations.

8.4.2 Type and extent of control

We ensure that externally provided processes, products and services do not adversely affect our ability to deliver consistently conforming products and services to our customers.

We:

a) ensure that externally provided processes remain within the control of our QMS;

b) define both the controls that we intend to apply to an external provider and those it intends to apply to the resulting output;

c) take into consideration:

1) the potential impact of the externally provided processes, products and services on our ability to consistently meet customer and applicable statutory and regulatory requirements;

2) the effectiveness of the controls applied by the external provider;

d) determine the verification, or other activities, necessary to ensure that the externally provided processes, products and services meet requirements

8.4.3 Information for external providers

We ensure the adequacy of requirements prior to their communication to the external provider.

We communicate to external providers its requirements for:

a) the processes, products and services to be provided;

b) the approval of:

1) products and services;

2) methods, processes and equipment;

3) the release of products and services;

c) competence, including required qualification of persons;

d) the external providers' interactions with Michels;

e) control and monitoring of the external providers' performance to be applied by us;

f) verification or validation activities that we, or our customer, intends to perform at the external providers' premises

8.5 Development of goods and services

8.5.1 Development processes

We implement production and service provision under controlled conditions.

Controlled conditions include, as applicable:

a) the availability of documented information that defines:

1) the characteristics of the products to be produced, the services to be provided, or the activities to be performed;

2) the results to be achieved;

b) the availability and use of suitable monitoring and measuring resources;

c) the implementation of monitoring and measurement activities at appropriate stages to verify that criteria for control of processes or outputs, and acceptance criteria for products and services, have been met;

d) the use of suitable infrastructure and environment for the operation of processes;

e) the appointment of competent persons, including any required qualification;

f) the validation, and periodic revalidation, of the ability to achieve planned results of the processes for production and service provision, where the resulting output cannot be verified by subsequent monitoring or measurement;

g) the implementation of actions to prevent human error;

h) the implementation of release, delivery and post-delivery activities

Processes that may be specialized in nature and not performed by Michels are outsourced processes and are validated through our receiving process. When required, we validate special processes. Validation demonstrates the ability of these processes to achieve planned results.

8.5.2 Identification and Traceability

Where appropriate, we identify process outputs by suitable means.

We identify the status of process outputs with respect to monitoring and measurement requirements throughout realization of goods and services.

Where traceability is a requirement, we control the unique identification of the process outputs, and maintain it as documented information.

8.5.3 Property belonging to customers or external providers

We exercise care with property belonging to customers or external providers while it is under our control or being used by us.

We identify, verify, protect and safeguard customers' or external providers' property provided for use or incorporation into the products and services.

When the property of a customer or external provider is lost, damaged or otherwise found to be unsuitable for use, we report this to the customer or external provider and retain documented information on what has occurred.

8.5.4 Preservation of goods and services

We preserve the outputs during production and service provision, to the extent necessary to ensure conformity to requirements.

8.5.5 Post-delivery activities

We meet requirements for post-delivery activities associated with the products and services.

In determining the extent of post-delivery activities that are required, we consider:

a) statutory and regulatory requirements;

b) the potential undesired consequences associated with its products and services;

c) the nature, use and intended lifetime of its products and services;

d) customer requirements;

e) customer feedback

8.5.6 Control of changes

We review and control change for production or service provision to the extent necessary to ensure continuing conformity with requirements.

We retain documented information describing the results of the review of changes, the person(s) authorizing the change, and necessary actions arising from the review.

8.6 Release of products and services

We implement planned arrangements, at appropriate stages, to verify that the product and service requirements have been met.

The release of products and services to the customer does proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority and, as applicable, by the customer.

We retain documented information on the release of products and services. The documented information includes:

a) evidence of conformity with the acceptance criteria;

b) traceability to the person(s) authorizing the release

8.7 Control of nonconforming outputs

8.7.1 We ensure that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

We take appropriate action based on the nature of the nonconformity and its effect on the conformity of products and services. This also applies to nonconforming products and services detected after delivery of products, during or after the provision of services.

We deal with nonconforming outputs in one or more of the following ways:

a) correction;

b) segregation, containment, return or suspension of provision of products and services;

c) informing the customer;

d) obtaining authorization for acceptance under concession

Conformity to the requirements is verified when nonconforming outputs are corrected.

8.7.2 We retain documented information that:

a) describes the nonconformity;

b) describes the actions taken;

c) describes any concessions obtained;

d) identifies the authority deciding the action in respect of the nonconformity

9 Evaluation of Performance

9.1 Monitoring, measurement, analysis & evaluation

9.1.1 General

We determine:

a) what needs to be monitored and measured;

b) the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;

c) when the monitoring and measuring is performed;

d) when the results from monitoring and measurement is analyzed and evaluated

We evaluate the performance and the effectiveness of our QMS. We retain appropriate documented information as evidence of the results.

9.1.2 Customer satisfaction

We monitor customers' perceptions of the degree to which their needs and expectations have been fulfilled. We determine the methods for obtaining, monitoring and reviewing this information

9.1.3 Analysis and evaluation of data

We analyze and evaluate appropriate data and information arising from monitoring and measurement.

The results of analysis are used to evaluate:

a) conformity of products and services;

b) the degree of customer satisfaction;

c) the performance and effectiveness of the QMS;

d) if planning has been implemented effectively;

e) the effectiveness of actions taken to address risks and opportunities;

f) the performance of external providers;

g) the need for improvements to the QMS

9.2 Internal Audit

9.2.1 Michels conducts internal audits at planned intervals to provide information on whether the quality management system;

a) conforms to:

1) our own requirements for our quality management system; and

2) the requirements of ISO 9001;

b) is effectively implemented and maintained

9.2.2 We:

a) plan, establish, implement and maintain an audit program including the frequency, methods, responsibilities, planning requirements and reporting, which take into consideration the importance of the processes concerned, changes affecting Michels, and the results of previous audits;

b) define the audit criteria and scope for the audit;

c) select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;

d) ensure that the results of the audits are reported to relevant management;

e) take appropriate correction and corrective actions without undue delay;

f) retain documented information as evidence of the implementation of the audit program and the audit results

We may choose to outsource our internal audit process, as necessary.

9.2.2.1 Reviews and Audits

A system of planned and documented reviews and audits determines the adequacy of and adherence to established procedures, instructions, specifications, codes and standards, or other applicable contractual and licensing requirements. The effectiveness of the implementation of these rules is also gauged in the review and audit process.

Information from these audits is used to verify and enhance the development of the current program. Types of activities covered by the audit program include audits of the purchasing, handling, testing, the installation process, inspecting, maintaining, repair facilities and records management. These audits are performed, documented, and reported according to established audit procedures.

9.2.2.2 Audits

The Project Manager or authorized Michels personnel of the assigned Michels Corporation department may perform audits of Subcontractors to assure compliance with applicable quality requirements.

Vendors and manufacturers may be audited by the assigned Michels Corporation department.

The Project Manager and the Field Quality Control Manager determine if an audit of Subcontractor's Work and documentation is warranted. If so determined, the Project Manager and the Field Quality Control Manager audit this scope of work and documentation, or delegate this responsibility to a competent party.

9.2.2.3 Audit Reports

Results of internal audits are sent to the Project Manager. The Project Manager distributes a copy of the Audit Report to the Field Quality Control Manager.

Results of other audits are sent to the Project Manager who determines further distribution, including the customer/owner or its respective representative or agent when required by contract.

Audit reports are reviewed by the Project Manager to determine the appropriate follow up or corrective action as required or recommended and are made available to the Owner when required and requested in writing.

9.3 Management review

9.3.1 General

Management reviews our QMS, at planned intervals, to ensure its continuing suitability, adequacy, effectiveness and alignment with our strategic direction.

9.3.2 Management review inputs

The management review is planned and carried out taking into consideration:

a) the status of actions from previous management reviews;

b) changes in external and internal issues that are relevant to our QMS;

c) information on the performance and effectiveness of our QMS, including trends in:

   1) customer satisfaction and feedback from relevant interested parties;

   2) the extent to which quality objectives have been met;

   3) process performance and conformity of products and services;

   4) nonconformities and corrective actions;

   5) monitoring and measurement results;

   6) audit results;

   7) the performance of external providers;

d) the adequacy of resources;

e) the effectiveness of actions taken to address risks and opportunities;

f) opportunities for improvement

We retain records as evidence of the results of management reviews including actions taken.

9.3.3 Management review outputs

The outputs of the management review include decisions and actions related to:

a) opportunities for improvement;

b) need for changes to the QMS;

c) resource needs

We retain documented information as evidence of the results of management reviews.

We may not review each of the inputs and outputs during every management review. The above referenced inputs and outputs will be reviewed within a 3-year timeframe.

10. Improvement

10.1 General

We determine and select opportunities for improvement and implement necessary actions to meet customer requirements and enhance customer satisfaction.

These include:

a) improving products and services to meet requirements as well as to address future needs and expectations;

b) correcting, preventing or reducing undesired effects;

c) improving the performance and effectiveness of our QMS

10.2 Nonconformity and corrective action

10.2.1 When nonconformity occurs, including any arising from complaints, we:

a) react to the nonconformity and, as applicable:

1) take action to control and correct it;

2) deal with the consequences;

b) evaluate the need for action to eliminate the cause(s) of the nonconformity, in order that it does not recur or occur elsewhere, by:

1) reviewing and analyzing the nonconformity;

2) determining the causes of the nonconformity;

3) determining if similar nonconformities exist, or could potentially occur;

c) implement any action needed;

d) review the effectiveness of any corrective action taken;

e) update risks and opportunities determined during planning, if necessary;

f) make changes to our QMS, if necessary

Corrective actions are appropriate to the effects of the nonconformities encountered.

10.2.2 We retain documented information as evidence of:

a) the nature of the nonconformities and any subsequent actions taken;

b) the results of any corrective action

10.2.3 Problem reporting and corrective action

Michels establishes problem reporting and corrective action measures to ensure that events and conditions that adversely affect quality are controlled, promptly reported and corrected. Adverse conditions or events are those activities that result in failures, malfunctions, deficiencies, deviations, defective materials and equipment, and non-conformance to specifications referenced by customer/owner specifications.

The measures may determine and document the alleged cause of the condition or events and provide for corrective actions so that these conditions or events are not repeated. Adverse events and conditions are identified, investigated and documented in accordance with Michels' standard procedures.

Upon receipt and review of audit reports, the Project Manager and Quality Manager ensure that appropriate corrective actions have been recommended and implemented and measures taken to prevent or minimize recurrence of the condition.

The Project Manager determines the schedule for implementation and completion of corrective action and required re-audit. This schedule requires that corrective actions be started and completed as soon as practical and that action will be taken to determine the cause and to correct significant conditions adverse to quality.

Personnel responsible for corrective action report to the Project Manager when that corrective action is completed and the specific action taken.

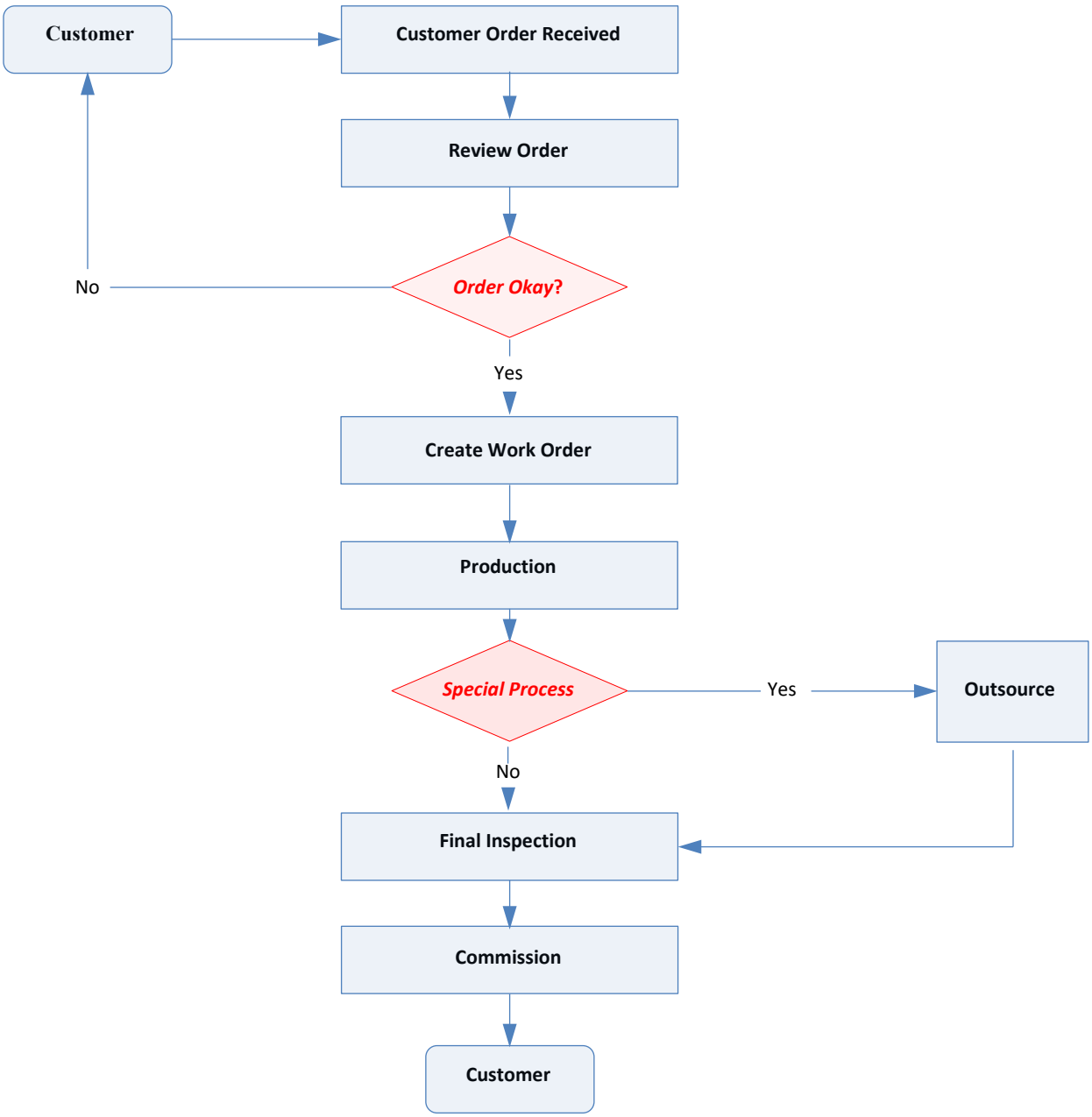
10.3 Continual improvement

We continually improve the suitability, adequacy and effectiveness of our QMS.

We consider the results of analysis and evaluation, and the outputs from management review, to determine if there are needs or opportunities that are addressed as part of continual improvement.

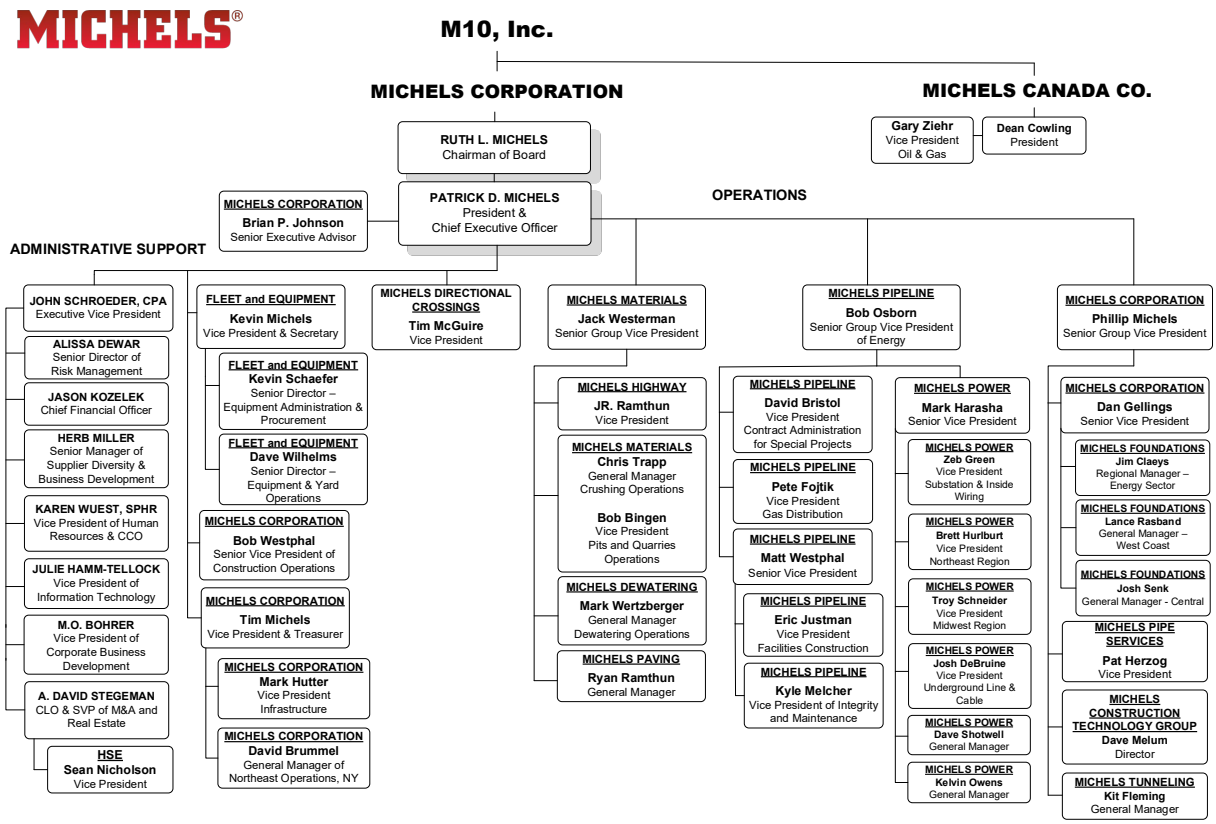
Appendix A

Process Interaction



Appendix B

2019 Corporate Organizational Chart



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Appendix E

Bid Bond

WE DO THAT ... & **MORE**

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:
(Name, legal status and address)

Michels Construction, Inc.
210 West Becher Street, Suite 800
Milwaukee, WI 53207

SURETY:
(Name, legal status and principal place of business)

Liberty Mutual Insurance Company
175 Berkeley Street
Boston, MA 02116

Mailing Address for Notices

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:
(Name, legal status and address)

City of Ann Arbor
301 East Huron Street
Ann Arbor, MI 48107

BOND AMOUNT: Five Percent of Amount Bid (5%)

PROJECT:
(Name, location or address, and Project number, if any)

Barton Dam Right Embankment Remediation, RFP# 24-03

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 23rd day of February, 2024.

(Witness)

Michels Construction, Inc.
(Principal) *(Seal)*

By: J. Black
(Title) Assistant Secretary

MICHELS CONSTRUCTION, INC. CORPORATE SEAL STATE OF DELAWARE

(Witness)

Liberty Mutual Insurance Company
(Surety) *(Seal)*

By:
(Title) Heather R. Goedtel, Attorney-in-Fact

LIBERTY MUTUAL INSURANCE COMPANY INCORPORATED 1912 MASSACHUSETTS

Surety Acknowledgment

State of Minnesota }
} ss.
County of Hennepin }

On this 23rd day of February 2024, before me personally came Heather R. Goedtel, to me known, who being by me duly sworn, did depose and say that she is the Attorney-in-Fact of Liberty Mutual Insurance Company described in and which executed the above instrument; that she knows the seal of said corporation; that the seal affixed to said instruments is such corporate seal, that it was so affixed by order of the Board of Directors of said corporation, and that she signed her name to it by like order.

Notary Public

BLAKE S. BOHLIG
Notary Public
State of Minnesota
My Commission Expires
January 31, 2026

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8209239-190003**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Blake S. Bohlig; Brian D. Carpenter; Craig Olmstead; Erik T. Gunkel; Haley Pflug; Heather R. Goedtel; Jessica Hoff; Kelly Nicole Enghauser; Laurie Pflug; Michelle Halter; Michelle Ward; Nicole Langer

all of the city of Bloomington state of MN each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 12th day of January, 2023.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 12th day of January, 2023 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.
Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.
Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 23rd day of February, 2024.

By: _____
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

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CONSTRUCTION, INC.

Appendix G

Health, Safety & Environmental Table of Contents

WE DO THAT ... & **MORE**

MICHELS®

Health, Safety & Environmental Program

April 2022

Introduction

NO INJURIES TO PEOPLE - **NO** DAMAGE TO PROPERTY
NO HARM TO THE ENVIRONMENT

Michels Corporation, Inc. (hereinafter referred to as "Michels") HSE (Health Safety and Environmental) program is designed to meet (yet more commonly exceeds), all applicable regulatory/legislated HSE requirements as well as the HSE expectations of our most safety conscientious customers. While our operational innovation is fundamental to our success, we strive to ensure that at the end of every day, everyone goes home in the same or better health that when they came to work.

OUR HSE CULTURE:

We develop and promote our "safety culture" through consistent active and visible safety leadership, positive recognition for safe work behaviors, and by holding our people accountable. The bottom line…People take precedence over everything else!! Regardless of the size and scope of the project, maintaining the safety and health of our employees, contractors, customers/clients, public and the environment is our paramount obligation – No exceptions!

APPLICABLE REGULATIONS:

Michels HSE Programs and policies are regulated by the following:

- OSHA (Occupational Safety & Health Administration)
  - 29 CFR (Code of Federal Regulations) Part 1926
  - Cal/OSHA – Title 8 Regulations
- DOT (Department of Transportation)
  - 49 CFR (Code of Federal Regulations) Part 40 – Drug and Alcohol Testing
- PHMSA (Pipeline Hazardous Material Safety Administration)
  - 49 CFR (Code of Federal Regulations) Part 199 – Drug and Alcohol Testing
- U.S. Department of Transportation – Federal Motor Carrier Safety Administration (FMCSA)
- U.S. Department of Transportation – Federal Highway Administration
  - 23 CFR (Code of Federal Regulations) Part 655, Subpart F (Manual on Uniform Traffic Control Devices

UPDATES AND REVISIONS TO THE MICHELS HSE PROGRAM – MANAGEMENT OF CHANGE:

The Michels HSE Program is a living document that is reviewed and revised on a regular basis. Revisions may be necessary for a number of reasons which include but are not limited to the following;

- Changes or updates to the regulations under which our work is governed.
- Identification of trends which may necessitate a change to a process or policy within the program.
- Changes to equipment or best management practices within the industry.
- Recommendations or requirements from major customers.

While changes or revisions are often necessary, no modification shall be made to the HSE Program, equipment, control systems or operating procedures without authorization from the HSE Department's Director(s) of HSE (services provided via Professional Service Agreement).

All proposed modifications must be evaluated for HSE impact before the change can be implemented. The Management of Change (MOC) procedure is geared to safe process and equipment modification.

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Appendix H

2024 Employee Handbook

WE DO THAT ... & **MORE**

Benefits and Compensation

We believe in the importance of the health and wellbeing of all our employees.

Non-union employees can reference their Health & Benefits Guide for additional information. Union employees should contact their local union hall if they have any questions regarding their benefits. When discrepancies occur between the handbook and any collective bargaining agreement, the language of the collective bargaining agreement will prevail.

Employee Assistance Program

Company Employee Assistance Program (EAP), LifeMatters, provides free confidential, experienced, and professional assistance to our employees and their family members with all of life's challenges and goals. The EAP offers a wide range of resources, including but not limited to: counseling; health and wellness; financial and legal consultations; searches for child and elder care; home improvement, travel, and relocation services.

Employees and their families may access this confidential service by calling LifeMatters at 1-800-634-6433 or go on-line to www.mylifematters.com and enter the password MICHELS1.

Employment Classifications Policy

Company has established employment classifications for payroll record maintenance and benefit purposes. Employment classification is determined by the hiring or reporting manager and can be changed upon proper notice to Michels Corporation Human Resources.

Wherever discrepancies occur between Company handbook and a collective bargaining agreement (CBA), the language of the collective bargaining agreement will prevail for covered union employees.

1. Full-Time Core

A full-time core employee is an employee (union or non-union) who is regularly scheduled to work 30 or more hours per week, who has been hired into a non-project based role, is not anticipated to return to the union hall for reassignment, and is considered to be part of the regular staffing complement. It is anticipated that full- time core employees will be scheduled regular hours with little or no seasonal variation.

2. Part-Time Core

A part-time core employee is an employee (union or non-union) who is anticipated to be scheduled to work an average of 29 hours or less per week, their schedule is unknown or lacks clear definition, and is considered to be part of the regular staffing complement. A temporary change in the number of weekly hours may not necessarily change an employee's employment classification.

3. Temporary/Non-Core

A temporary non-core employee is a transient employee who can work a variable hour or a fixed schedule. A temporary non-core employee is hired to provide additional staffing either on a seasonal or job/project basis, is employed intermittently, returns to the union hall for the next assignment, and will likely be placed on permanent layoff following the project or job completion. At the end of project or assignment the employee's employment relationship with Company ends.

Family and Medical Leave Policy

It is the policy of Company to comply with the requirements of the Federal Family and Medical Leave Acts (FMLA). The function of this policy is to provide employees with a general description of their FMLA rights. In the event of any conflict between this policy and the applicable law, employees will

be afforded all rights required by law. An eligible employee will be granted up to 12 weeks of FMLA during any calendar year period provided they meet the policy requirements. The leave may be paid, unpaid or a combination of paid and unpaid, depending on the reason for the leave and the benefits to which the employee may be eligible.

Some state's laws differ from FMLA. When the reason for a leave qualifies under both state and federal law, the following guidelines apply:

- The employee is deemed to be exhausting his/her entitlement under both laws concurrently; and
- The provision(s) most generous to the employee will apply.

The taking of leave under this policy will not be used against an employee in any employment decision, including the determination of promotions, discipline, compensation, etc.

Eligibility

To be eligible for leave under this policy, an employee must have been employed by the company for at least 12 months. In addition, in the 12 months immediately preceding the commencement of the leave, the employee must have worked at least 1,250 hours to qualify under federal law.

Amount of Leave Available

As stated above, an eligible employee is generally eligible for up to a total of 12 weeks of protected leave within a calendar year for any combination of reasons.

Types of Leave Covered

A. Birth, Bonding or Placement for Adoption or Foster Care

Family leave will be available to eligible employees for the birth of a child or for placement of a child with the employee for purposes of adoption or foster care. Such leave must generally be completed within 12 months of the birth or placement.

B. Serious Health Condition of Employee

An eligible employee who experiences a serious health condition, as defined by the state and/or federal law, may take medical leave under this policy. A serious health condition will generally occur when the employee:

- Receives inpatient care in a hospital, hospice or nursing home;
- Suffers a period of incapacity of more than 3 full calendar days accompanied by continuing outpatient treatment/care by a health-care provider; or
- Has a history of a chronic condition which may cause episodes of incapacity.
- Has a permanent or long-term condition which requires continuing treatment by a health care provider.

Medical leave may be taken all at once or, when medically necessary, in smaller increments. The need for leave must be documented by the employee's treating health-care provider through the medical certification process.

An employee may be paid for all or part of a medical leave to the extent the employee is eligible for benefits such as short-term disability.

A fitness-for-duty statement will be required in order for an employee to return from a medical leave. Failure to provide the statement will result in a delay in the return to work.

C. Serious Health Condition of Immediate Family Member

An eligible employee may take family leave under this policy in order to care for a child, spouse or parent with a serious health condition (see above section for general definition). This leave may be taken all at once or, when medically necessary, in smaller increments. It will be necessary for the family member's treating health-care provider to document the need for leave through the medical certification process.

D. Qualifying Exigency for Military Family Leave

An eligible employee may take family leave under this policy while the employee's spouse, child, or parent (the "military member") is on active duty or call to active duty status for any qualifying exigency under federal law. This leave may be taken all at once or, in smaller increments. It will be necessary to submit a complete and sufficient certification for FMLA leave due to a qualifying exigency. Qualifying exigency leave may be taken by family members of regular armed service members, as well as family members of Reserve and National Guard members, provided the service member is deployed to a foreign country.

E. Military Caregiver Leave

An eligible employee may take up to an additional 14 weeks (not to exceed 26 weeks total) of family leave in a single 12-month period under this policy to care for a current member of the Armed Forces, including a member of the National Guard or Reserves, or, the National Guard or Reserves who is on the temporary disability retired list, who has a serious injury or illness incurred in the line of duty on active duty (or existed before the beginning of the member's active duty and was aggravated by active duty) for which the covered service member is undergoing medical treatment, recuperation, or therapy; or otherwise in outpatient status; or otherwise on the temporary disability retired list. A covered servicemember may also be a veteran who is undergoing medical treatment, recuperation, or therapy, for a serious injury or illness and who was a member of the Armed Forces (including a member of the National Guard or Reserves) at any time during the period of 5 years preceding the date on which the veteran undergoes that medical treatment, recuperation, or therapy.

This entitlement will be applied on a per-covered-servicemember, per-injury basis. The covered servicemember must be the eligible employee's spouse, child, parent, or next of kin. It will be necessary for the covered servicemembers treating health-care provider, as defined by law, to document the need for leave through the medical certification process.

Notifying the Company of the Need for Family or Medical Leave

Employees can request leave by calling 920-924-4300 and asking to speak to a member of the Michels Corporation Human Resources Compliance Team or contacting their supervisor. A notice containing eligibility / rights and responsibilities will be provided. If eligible an FMLA Application will be provided. If applicable a medical certification will be provided. When the need for leave is foreseeable, the employee should provide notice at least 30 days in advance. When this is not possible, notice should be provided as soon as the employee learns of the need for leave. In cases of emergency, verbal notice should be given as soon as possible (by the employee's representative if

the employee is incapacitated), and the application form should be completed as soon as practicable. Failure to provide adequate notice may, in the case of foreseeable leave, result in a delay of the leave. Leave application forms are provided by the Michels Corporation Human Resources Department.

Calling in “sick” does not qualify as FMLA leave. An employee must provide sufficient information regarding the reason for an absence for the company to know that protection may exist under this policy. Failure to provide this information as requested will result in the employee’s forfeiting all rights under the policy. This means the absence may then be counted against the employee for purposes of discipline for attendance, etc.

Medical Certification of a Serious Health Condition

The company will require medical certification to verify that an employee or family member’s illness meets the definition of serious health condition and to determine the nature and duration of the leave. In the case of a family illness, the provider must also verify that the employee is needed to care for the family member.

Periodic recertification to verify that a condition is ongoing may be required as provided by the law. The certification form should be obtained from the Michels Corporation Human Resources Department and should be returned within 15 days. Failure to provide this certification may result in delay or denial of the leave.

Additional Certifications

If the company has reason to question the validity of a medical certification, an employee may be required to provide a second certification from a health-care provider selected and paid for by the company. If the second opinion differs from the first, a third opinion may be required. The health-care provider for the third opinion must be mutually chosen by the employee and the company and paid by the company. The third opinion, by law, is binding on all parties.

Adoption/Foster Care Placement Certification

Generally, the company will require an adoption/foster care placement certification to establish the need for time off related to the adoption/foster care placement of a child. In addition to the certification other documentation may be requested to establish reasonable proof of the adoption/foster care placement. Examples include but are not limited to: court records, birth certificate, adoption papers.

Use of Paid and Unpaid Leave

FMLA provides for unpaid leave to eligible employees. However, an employee or employer may elect to substitute a paid benefit for which the employee is eligible in order for the employee to receive pay during the leave. When paid benefits are substituted for the otherwise unpaid time, the employee is using the benefits concurrently with FMLA leave, and those benefits will not be available to the employee later. When paid benefits are substituted, the employee may be required to satisfy any procedural requirements of the organization’s paid leave policy (for example, advance notice to use paid leave, use of paid leave in established increments, etc.).

In cases where substitution of a paid benefit is not possible, the employee will receive reduced compensation consistent with the number of hours the person actually works.

Intermittent or Reduced Schedule Leave
Intermittent and/or reduced schedule leave will be permitted when it is medically necessary and, in some cases, for birth or placement for adoption. In all cases, the total amount of leave taken in a calendar year should not exceed the 12 weeks defined earlier in this policy.
Intermittent and reduced schedule leave must be scheduled with minimal disruption to an employee's job. To the extent an employee has control, medical appointments and treatments related to a serious health condition should be scheduled outside of working hours or at such times that allow for a minimal amount of time away from work.

The company may, in some cases, reassign an employee to an alternative position, with equivalent pay and benefits, in order to better accommodate the need for intermittent or reduced schedule leave.

Benefit Continuation During Leave

Employees that maintain eligibility under the Plan(s) may elect to continue group health insurance while on leave but must continue to pay their portion of the premium. Other employment benefits, such as group life insurance, etc., will also be continued during the leave, so long as the employee continues to maintain eligibility and pay any required contribution. Payment arrangements will be discussed with individuals upon their request for leave.

Rights Upon Return From Leave

An employee who takes leave under this policy will be reinstated to the same job or an equivalent position upon completion of the leave. If an individual has exhausted all leave under this policy and is still unable to return to work, the situation will be reviewed on a case-by-case basis to determine what rights and protections might exist under other company policies.
The law provides that an employee has no greater rights upon a return from leave than the individual would have had if the employee had continued to work. Therefore, an employee may be affected by a layoff or other job change if the action would have occurred had the employee remained actively at work. In such cases, the official date of the layoff will mean the end of FMLA leave of the employee. If the employee is recalled, if FMLA leave is still required, it may then continue.

Worker's Compensation Absences

When an employee is absent due to a work-related illness or injury which meets the definition of a serious health condition, the absence will be counted against the employee's allotment of FMLA under federal law. In other words, the employee is using Federal FMLA concurrently with the worker's compensation absence.

Early Return from Leave

An employee who wishes to return to work earlier than originally anticipated should provide at least two days' notice of such request. A fitness-for-duty certification may be required.

Enforcement

If there are any questions and/or concerns regarding this policy, please call 920-924-4300 and ask to speak to a member of the Michels Corporation Human Resources Compliance Team.
Employees may file a complaint with the U.S. Department of Labor, Wage and Hour Division, or may bring a private lawsuit against an employer.

The FMLA does not affect any federal or state law prohibiting discrimination or supersede any state or local law or collective bargaining agreement that provides great family or medical leave rights.

For additional information or to file a complaint:
1-866-4-USWAGE, (1-866-487-9243)
TTY: 1-877-889-5627
www.dol.gov/whd

Jury Duty

Company encourages all employees to be civic-minded when selected for jury duty.
It is required that you present documentation to your Manager of jury duty or court attendance. You must return to work if jury duty dismisses at or before a half day based upon your permanent schedule. Any questions can be directed towards the Michels Corporation Benefits Team (services provided via Professional Service Agreement) at (920) 583-1573.

Leave of Absence

Leaves of absence may be considered on a case-by-case basis unless otherwise regulated by federal, state, or local law. A limited amount of unpaid time off as a reasonable accommodation for a disability will be separately considered on a case-by-case basis. The spirit of the leave of absence policy is to assist employees with time away from work specific to their own personal injury or illness. The full Leave of Absence Policy can be found on the SharePoint HR site. If you have questions regarding Leave of Absence please contact Michels Corporation Human Resources.

Meal/Rest Periods

To promote a productive and energized work environment, Company provides unpaid meal and paid rest periods consistent with local law. Supervisors determine and advise employees of the rest period length and schedule consistent with local law. Specific break periods may be scheduled by supervisors to accommodate operating requirements. Hourly employees must record time in and time out at the beginning and end of the meal period. Unpaid meal periods must be at least 30 minutes, duty free and uninterrupted, and during such periods an employee is free to use the time as they wish, including leaving the premises.

Military Leave

An unpaid military leave of absence will be granted if an employee enlists, is inducted, or is recalled to active duty in the Armed Forces of the United States, for a period of up to five (5) years. Employees who perform in and return from military service in the Armed Forces, the Military Reserves or the National Guard will retain their rights with respect to reinstatement and length of service, as required under the Uniformed Services Employment and Reemployment Rights Act (USERRA). You will also be eligible to continue health and dental benefits under certain conditions.

Appropriate leave will be provided for employees who serve as reservists and members of the National Guard and participate in annual encampment or active duty training, emergency service or specialized training if all legal requirements are met. Compensation during leave will be paid according to and in compliance with USERRA and FLSA guidelines.

Unless military necessity prevents it, or is otherwise impossible or unreasonable, an employee should provide their supervisor and/or Michels Corporation Human Resources with notice of the need for leave along with, if available, a copy of the applicable orders as far in advance as is reasonable under the circumstances.

Overpayment of Wages

All wage or earnings overpayments should be brought to the attention of the Michels Corporation Payroll Department as soon as possible. In the event Company incorrectly or inadvertently deposits funds into an employee's account, or in the case of an overpayment made by Company, we are authorized to deduct the amount incorrectly or inadvertently deposited or overpaid from one or more future wage payments, at Company sole discretion.

Overtime Pay

Company complies with all applicable Federal, State and Local laws or regulations concerning your rate of pay. Non-exempt employees are subject to overtime pay under the Fair Labor Standards Act (FLSA) and applicable state law. Under the FLSA "Overtime" means "time actually worked beyond a prescribed threshold." Unless prescribed differently under state or local law, Company defines overtime as authorized hours worked by a non-exempt employee in excess of 40 hours in a workweek. Overtime, including any time worked before or after your scheduled shift, must be approved in advance by the employee's supervisor; if not, an employee is not authorized to work the overtime. Any employee who works overtime without authorization from their supervisor will be subject to disciplinary action, up to and including termination of employment. When overtime is scheduled, you will be expected to work the hours required of the job and/or the department. If the occasion arises that you must work overtime, every attempt will be made to give you as much advance notice as possible.

Paid and Unpaid Leave

It is the intent of Company to comply with the requirements of all federal, state, and local sick, leave or otherwise similar regulations and/or laws. Leave which may be paid or unpaid will be granted in accordance with the requirements of applicable federal, state, or local law in effect at the time the leave is granted. Reasons for leave may include but are not limited to: Paid Sick, Paid Family, Paid Family Medical, Bereavement, Court and Jury Duty, Donor, Family and Medical, Prenatal, Pregnancy, Military, Sick, School Activities, Victim, Witness, Emergency Responder, Voting, Election Official, Adult Illiteracy and Alcohol and Drug Rehabilitation.

If you believe you are entitled to leave benefits under a specific regulation and/or law, or have questions regarding these leave laws, please contact Michels Corporation Human Resources. Employees who are eligible for paid sick leave due to state, local or other applicable laws, will be provided notice of such leave entitlements separately.

Pay Transparency

Company will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or (c) consistent with the contractor's legal duty to furnish information.

Payroll Deductions and Garnishments

As required by law, Company takes deductions from each employee's wages. Company is required by

law to withhold payroll taxes from an employee's paycheck to comply with government regulations. Your paycheck or earnings statement will give you a complete record of your earnings and deductions. A summary of your earning in any given year (W-2 Form) will be sent to your home.

Any employee who receives a wage garnishment or assignment form should immediately send that form to the Michels Corporation Payroll Department. The garnishment notice provides specific instructions on the employer's obligations. Garnishments will be processed according to the specifications of the law. Unless a fee has already been established by the garnishment, Company may charge an appropriate cost, to each garnishment and/or child support wage assignment to cover administrative fees the Company incurs.

Payroll Schedule and Paycheck Distribution

The Michels Corporation Payroll Department is responsible for ensuring the timely payment of wages to all employees. Our payroll week begins on Monday and ends on Sunday. Employees are paid weekly on the following Friday. Pay slips will be mailed to your home address. If a holiday falls on a scheduled payday, your pay slip will be mailed to your home, typically prior to the holiday. Employees who have elected to receive their pay slip electronically will have it submitted to the authorized email address we have on file Final pay slips to an employee who resigns or is discharged will be sent on the regularly designated payday, unless otherwise specified by state law.

You have the option of having your pay directly deposited into a banking institution of your choice. We encourage all employees to utilize direct deposit for the assurance of knowing that your funds will be in your account in a consistent and timely fashion. The policy for stopping payment of payroll checks due to postal service changes or reissuing a replacement paycheck is one week; therefore, we strongly encourage utilizing direct deposit. Please contact the Michels Corporation Payroll Department at (920) 583-1383 with questions or to sign-up for direct deposit.

Time Off for Voting

Company encourages its employees to fulfill their civic responsibilities by participating in elections. Generally, employees are able to find time to vote either before or after their regular work schedule or can vote by mail. If employees are unable to vote in an election during non-working hours, they must provide reasonable notice to their supervisor requesting time off to vote. Advance notice is required so the necessary time off can be scheduled at the beginning or end of the work shift, whichever provides the least disruption to the normal work schedule.

Time Reporting

Under the Fair Labor Standards Act and similar state laws, Employers are required to track and record time for non- exempt employees (employees paid an hourly rate for their work); therefore, all non-exempt employees are required to maintain accurate time records. It is the responsibility of each employee to report their time worked and meal periods. All absences such as paid time off (PTO), holidays, reporting to work late or leaving early, or other leaves of absence are to be included on the time record and approved by your supervisor. Employees will submit their time records weekly as directed by their managers, either online or in hard copy. Time records must be received by 10:00 am Central Standard Time on the Monday following the end of the pay period. Altering, falsifying, or tampering with time records may result in disciplinary action, up to and including termination of employment. In addition, failure to submit timely and accurate time records may result in disciplinary action up to and including termination of employment.

All exempt employees are required to account for their time to their immediate supervisor. In accordance with the Fair Labor Standards Act regulations, it is a violation of company policy to make deductions from exempt employees' pay for the quantity or quality of work performed.

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Appendix I

Apprenticeship Program Certificates

WE DO THAT ... & **MORE**

The United States Department of Labor

Office of Apprenticeship

Certificate of Registration of Apprenticeship Program

Michigan Laborers' Training and Apprenticeship Institute

Perry, Michigan

for the Trade Classification of: Construction Craft Laborer

Registered as part of the National Apprenticeship System in accordance with the basic standards of apprenticeship established by the Secretary of Labor

Registered: January 24, 1997
Revised: November 13, 2017

Date

MI007970001

Registration No.

Administrator, Office of Apprenticeship

The United States Department of Labor

Office of Apprenticeship

Certificate of Registration of Apprenticeship Program

Iron Workers Local 25 Training Center

Wixom, Michigan

For the Trade Classification of: STRUCTURAL STEEL WORKER, REINTORCING METAL WORKER.

Registered as part of the National Apprenticeship System in accordance with the basic standards of apprenticeship established by the Secretary of Labor

Registration Date: December 31, 1978 ; Revision Date March 31, 2019

Date

MI015780028

Registration No.

Administrator, Office of Apprenticeship

The United States Department of Labor

Office of Apprenticeship

Certificate of Registration of Apprenticeship Program

Michigan O.P.C.M.I.A. Apprenticeship and Training Fund

Flint, MI

See program standards for occupations

Registered as part of the National Apprenticeship System in accordance with the basic standards of apprenticeship established by the Secretary of Labor

December 31, 1978

Date

MI011780016

Registration No.

Administrator, Office of Apprenticeship

The United States Department of Labor

Office of Apprenticeship

Certificate of Registration of Apprenticeship Program

OPERATING ENGINEERS LU 324 JATF
275 E. Highland Rd. Howell MI. 48843
For the Occupation of:
OPERATING ENGINEER (0365 V1)
Time-Based 6000 Hours

Registered as part of the National Apprenticeship System in accordance with the basic standards of apprenticeship established by the Secretary of Labor

December 31, 1978
(Revised) January 14, 2022

Date

MI015780065

Registration No.

Administrator, Office of Apprenticeship

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Appendix J

EEO/AA Policy

WE DO THAT ... & **MORE**

MICHELS®
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Equal Employment Opportunity/Affirmative Action Policy Statement

Michels Construction, Inc. ("Company") provides equal employment opportunity to all employees and applicants. The Company prohibits discrimination and harassment on the basis of race (including hairstyle or texture), creed, color, religion, sex (including pregnancy, childbirth, and related medical conditions), age, national origin/ancestry, disability, military and veteran status, sexual orientation, gender identity or expression, marital status, familial status, genetic information (including family medical history), work-related injury, arrest and conviction record, use of public assistance, local human rights commission activity, work authorization status, or any other characteristic protected by federal, state or local law. The policy also applies to the selection and treatment of independent contractors, personnel working on our premises who are employed by temporary agencies and any other persons or firms doing business for or with the Company.

The Company is committed to ensuring that any Human Resources activity or action impacting terms and conditions of employment, including recruiting, hiring, placement, formal or informal training (such as on-the-job training, co-op programs, apprenticeships and management trainee programs), job classifications, work assignments, transfers, assignment of overtime hours, promotion, lay-off, recall and termination and other related programs are provided fairly to all persons. Similarly, all salaries, wages and benefit programs will be administered in conformity with this Policy. The Company encourages each employee to develop their skills so that they can achieve their fullest potential. Therefore, we encourage all employees to continually seek opportunities to upgrade their skills and job knowledge and to ask their supervisor about training programs that might be appropriate for the goal of furthering their career path.

The Company pledges that it will maintain a working environment free of harassment, intimidation, and coercion at all its locations. Harassment of any type and against any protected class will not be tolerated and may result in sanctions up to and including immediate dismissal. Employees who believe that they have been victims of discrimination or harassment of any kind are urged to immediately report such incidents to their supervisor and/or the Michels Corporation Human Resources Department, who has the overall responsibility of investigating and resolving complaints at the Company. The Company maintains and enforces a separate policy on harassment prevention, complaint procedures, and penalties for violations.

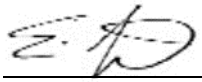
The Company's Equal Employment Opportunity (EEO)/Affirmative Action Policy is a public document. All managerial personnel, supervisory personnel, and employees must share in the responsibility to ensure the Company's compliance with the EEO/Affirmative Action Plan. This Policy is available on our web site (www.michels.us) and is posted at all offices and job sites. Our EEO commitment appears on our company letterhead and all our employment advertisements.

The Company is interested in qualified job applicants. All employees are urged to refer qualified job candidates, including women, minorities, and those with disabilities, to the Company. In seeking referrals of craft workers from the union hall, we will specify that women, minorities, and those with disabilities are to be included in all such referrals. In soliciting bids for subcontracts, minority, female and disadvantaged business enterprise construction contractors and suppliers will be contacted.

The Company prohibits employees, subcontractors and their employees, suppliers and others doing business with us to engage in any form of discrimination, human trafficking and forced labor activities.

Jamie Crouse, Michels Corporation Vice President of Human Resources, has been appointed to serve as the EEO Officer. The EEO Officer will ensure that the Company is in full compliance with EEO requirements and has full authority to carry out all required EEO-related duties. Should you have any questions about this Policy, please contact the EEO Officer during normal business working hours (8 a.m. to 5 p.m. CST) at 920-583-3132.

It is the Company's intention that all actions and decisions will support the spirit of this Policy and program. It is incumbent upon every employee to do the same. The Company does not tolerate retaliation or threats of retaliation against anyone who raises a concern under this policy or who assists with an internal or governmental audit or investigation.



Eric Justman, President

1/01/2024
Date