

DOTD FORM: 24-102

(Revised January 1, 2023)

PROPOSAL TO PROVIDE CONSULTANT SERVICES

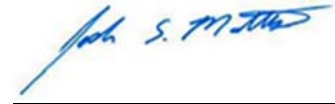
Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

1. Contract Name as shown in the advertisement	IDIQ CONTRACT FOR PROFESSIONAL HYDROGRAPHIC SURVEYING SERVICES STATEWIDE WITH MAJORITY OF WORK IN DISTRICTS 02, 03, 07, 61, AND 62
2. Contract Number(s) as shown in the advertisement	4400027686
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	EMC, INCORPORATED OF MS (EMC) (Charter Number: 36452855F)
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	Mr. Michael O. Cook: PLS.0004879 EMC, Inc. of MS: VF.0000630
6. Prime consultant mailing address	2472 Sunset Drive, Grenada, MS 38901
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Josh S. Mattox, PLS/President (o) 662.226.5166; (m) 662.392.5877 jmattox@emcsurvey.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Josh S. Mattox, PLS/President (o) 662.226.5166; (m) 662.392.5877 jmattox@emcsurvey.com

Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.



Signature above shall be the same person listed in Section 9:

9/14/2023

Date:

11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.

Firm(s): N/A

Firm(s)' %:

12. Past Performance Evaluation Discipline Table:

As indicated in the advertisement, insert the completed table here. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract.

The **only** past performance evaluation disciplines to be used are Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify).

<p>Sub-consultants are not allowed to be used for this proposal. Fill in the table by identifying only those evaluations disciplines consistent with the approach and methodology proposed in Section 18 of the DTOD From 24-102*, and the percentage of work in each past performance evaluation discipline to be performed. The percentage estimated for each evaluation discipline is for the evaluation purpose only and will not control the actual performance or payment of the work.</p> <p>(Add rows as needed)</p>	
Past Performance Evaluation Discipline(s)	% of Overall Contract
Survey	20%
Data Collection	10%
Other Hydrographic Surveying	60%
Other Data Processing and Mapping	10%

13. Firm Size:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify “Other (please specify)” and include the classification title inside the parentheses.

The DOTD Job Classification(s) to be used can be found at the following link:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
EMC, INCORPORATED OF MS (EMC)	Project Office Manager	1	1
EMC, INCORPORATED OF MS (EMC)	Supervisor-Other-Field Surveying	2	2
EMC, INCORPORATED OF MS (EMC)	Supervisor-Other- Office Processing and Mapping	1	1
EMC, INCORPORATED OF MS (EMC)	Surveyor	1	1
EMC, INCORPORATED OF MS (EMC)	CADD Technician	3	7
EMC, INCORPORATED OF MS (EMC)	Party Chief	7	4
EMC, INCORPORATED OF MS (EMC)	Administrative	2	3
EMC, INCORPORATED OF MS (EMC)	Technician	7	8

(Add rows as needed)

14. Organizational Chart:

Project Management & OA/OC Team

Contract and Project Manager

Joshua S. Mattox, PLS

24+ years' experience

Assistant Project Manager

Field Operations

Melvin D. Greene, PLS

41+ years' experience

Assistant Project Manager

LA PLS In-charge & Professional Engineer

Michael O. Cook, PLS, PE

36+ years' experience

Assistant Project Manager

Office Operation

William B. Gray, PLS

16+ years' experience

Field Operations

Field Surveying Supervisor

William Hardy Gross, PLS

SUE Surveying Supervisor

Caine Dearman

Office Operations

Surveying Party Chiefs

1. Ronald J. Hutchinson, Sr.
2. Jimmy Pee
3. Jared Estes
4. Christopher Geoghegan
5. Jason Hill

6. Jacob M. Mattox, LSI
7. Ralph Hutchinson
8. James Cole
9. Ronald J. Hutchinson, Jr.
10. William Moore

CADD/GIS Personnel

1. Zachary L. Underwood, PLS
2. James A. Pettigrew III
3. David Tubbs
4. Scott Ford
5. Brantley Shaw

15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Michael O. Cook, PLS, PE	EMC	PLS # - 4879	LA	09/30/2024
2	Michael O. Cook, PLS, PE	EMC	PE # - 28912	LA	09/30/2024

(Add rows as needed)

16. Staff Experience:

Please find Resumes below.

Name	Michael O. Cook, PLS, PE		Years of experience with this firm/employer	12
Title	Assistant Project Manager, LA PLS		Years of experience with other firm(s)/employer(s)	24
Degree(s) / Years / Specialization			BS / Business / University of Southern Mississippi	
Active registration number / state / expiration date			PLS.0004879/LA/09-30-2024	
Year registered	2001/LA PLS/4879 2000/LA PE/28912	Discipline	Professional Land Surveyor and Certified Hydrographer	
Contract role(s) / brief description of responsibilities			LA Professional Land Surveyor	
<p>With an extensive 36-year tenure in the surveying and engineering realm, Mr. Cook assumes the pivotal role of Louisiana Professional Land Surveyor in-charge for EMC's accomplished team. His seasoned background encompasses diverse projects, notably contributing to numerous surveying and engineering government contracts, with a noteworthy portfolio that includes collaborations with the US Army Corps of Engineers, Natural Resource Conservation Services, U.S. Fish and Wildlife, Coastal Protection and Restoration Authority Projects, etc. Mr. Cook is set to play a proactive role in coordinating seamless survey coordination. His wealth of experience will be instrumental in providing expert guidance for the execution of surveying services, ensuring quality control across fieldwork, and office processes. Mr. Cook is also a registered PLS in MS, GA, AZ, and KS.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	<p>Easement Boundary Surveying Services for the NRCS of Louisiana Throughout the State of Louisiana - For these projects, the NRCS of Louisiana relies on EMC to provide easement boundary surveys for many different NRCS programs. Since 2009, EMC has continued to grow our ongoing relationship with the NRCS of Louisiana, successfully completing more than 200 easement boundary surveys for a total of more than 46,000 acres surveyed throughout the State of Louisiana. As the Project Manager and now the Assistant Project, Mr. Mattox is the lead PLS for this contract. Total Contracts’ Total Value: \$6,339,414.15</p>			
Ongoing	<p>Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico (Client: CEC) - EMC was contracted by CEC to perform the required topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. The purpose of the project is to engineer and design a restoration project benefitting the Chandeleur Islands and the many species that use them with a particular focus on birds. Mr. Mattox is the Professional Land Surveyor in charge and the certified hydrographic surveyor for this project. Cost to-date: \$536,733.40</p>			
2019	<p>Surveys for Vehicle and Pedestrian Barrier Replacement, Tucson Sector 63, Lukeville and Douglas, AZ (Client: Kiewit) PLS In-Charge - As EMC’s registered Arizona Professional Land Surveyor, Mr. Cook was in responsible charge of the field and office operations for this project. He ensured that all data from the field was correct and processed the data to be mapped. He also performed the final quality control before submittal which included performing quality control on all utility location data. This project included static GPS control, aerial control, topographic (including locating and marking utilities) and hydraulic surveys for the vehicle and pedestrian barrier replacement along the national border in Lukeville and Douglas, AZ. Cost to-date: \$335,000.00</p>			
2019	<p>Avondale Shipyard Topographic and Hydrographic Surveys, Jefferson Parish, LA; (Client: USACE District, New Orleans) - This project consisted of a detailed topographic and hydrographic survey at the Avondale Shipyard in New Orleans. We were also tasked to collect all visible private and public utilities, abandoned and active. This project involved static GPS, RTK GPS; automated/manual hydrographic multibeam surveys; mobile and terrestrial laser scans; digital levels; and ground-penetrating radar (GPR) surveys. Mr. Cook was the Assistant Project Manager with the following responsibilities: reviewed work plans, provided</p>			

Name	Joshua S. Mattox, PLS		Years of experience with this firm/employer	25
Title	Contract and Project Manager		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			BS / Land Surveying / 1998 / Mississippi State University	
Active registration number / state / expiration date			3005/MS; 26604/SC; LS8168/ND; 11478/SD	
Year registered	2005 MS #-3005; 2008 SC #-26604; 2012 ND #-11478; 2012 SD #-26604	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities			Project Manager	
Mr. Joshua S. Mattox, a registered professional land surveyor in four states and the President of EMC, Inc. oversees EMC's nationwide operations and has managed 15 successful indefinite delivery/indefinite quantity surveying contracts for government agencies. As the single point of contact for this contract, Mr. Mattox holds authority over decision-making, proposal submission, price negotiation, and contract management. He plays a key role in estimating, negotiating, scheduling, planning, and monitoring every project. Additionally, Mr. Mattox contributes significantly to EMC's QA/QC team, ensuring the accuracy of surveying data before submission.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	Indefinite Delivery Contract (IDC) for Hydrographic and Topographic Surveying; (Client: USACE, New Orleans) - Mr. Mattox is the Contract and Project Manager for this contract. To date under contract W912P820D0002, EMC performed numerous Topographic, Hydrographic, Mobile Lidar, SUE, Deformation, Construction Monitoring, Horizontal and Vertical Control throughout the New Orleans District. EMC has completed approximately 25 task orders. These task orders ranged in size and complexity from \$4,000.00 to just over \$330,000.00 with a total contract value of just over \$1,759,629.79 to date.			
Ongoing	Easement Boundary Surveying Services for the NRCS of Louisiana Throughout the State of Louisiana - For these projects, the NRCS of Louisiana relies on EMC to provide easement boundary surveys for many different NRCS programs. Since 2009, EMC has continued to grow our ongoing relationship with the NRCS of Louisiana, successfully completing more than 200 easement boundary surveys for a total of more than 46,000 acres surveyed throughout the State of Louisiana. As the Project Manager, Mr. Mattox directly oversees all operations for the easement boundary surveys. Total Contracts’ Total Value 2009-Current: \$6,339,414.15; Current Contract Value to-date: \$663,448.74			
Ongoing	Ongoing, Professional Services Contract for Surveying Services with the Coastal Protection and Restoration Authority Projects (CPRA) – Mr. Mattox is the Contract and Project Manager for this contract. Under this ongoing contract EMC has proven it ability to successfully complete topographic, bathymetric, magnetometer, geophysical surveys for the CPRA. Cost to date: \$108,728.00			
2019	Indefinite Delivery Contract (IDC) for Hydrographic and Topographic Surveying; Contract: W912P815D0011 (Client: USACE-New Orleans District - Mr. Mattox was the Program Manager for this contract. Under this contract EMC performed numerous DGPS Hydrographic, Mobile Lidar, Topographic, SUE, Deformation, Construction Monitoring, Horizontal and Vertical Control and Boundary Surveys throughout the New Orleans District. Under our last contract (2015-2019), the New Orleans District Corps of Engineers relied on EMC’s surveying services for approximately 93 task orders. These task orders ranged in size and complexity from \$3,000.00 to just over \$600,000.00 with a total contract value of just over \$5,748,000.00.			

Name	Melvin D. Greene, PLS		Years of experience with this firm/employer	32
Title	Assistant Project Manager, Field Operations		Years of experience with other firm(s)/employer(s)	11
Degree(s) / Years / Specialization			BS / Business / University of Southern Mississippi	
Active registration number / state / expiration date			1822/MS; 1871/TN; 3958/KY	
Year registered	1979 MS # 1822; 1995 TN # 1871; 2010 KY # 3958	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities				
Mr. Greene, with over 40 years of surveying experience and 30 years as an EMC Assistant Project Manager, oversees field operations and established data collection processes. He ensures crews have the necessary resources, equipment, training, and knowledge. Mr. Greene contributes to project estimating, reviews survey and safety procedures, ensures scope compliance, processes field data, and performs quality control. His extensive knowledge is based on years of experience and recent training, including courses in GPS, multi-beam sonar, and safety.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	Easement Boundary Surveying Services for the NRCS of Louisiana Throughout the State of Louisiana - For this project, the NRCS of Louisiana relies on EMC to provide easement boundary surveys for many different NRCS programs. Since 2009, EMC has continued to grow our ongoing relationship with the NRCS of Louisiana, successfully completing more than 200 easement boundary surveys for a total of more than 46,000 acres surveyed throughout the State of Louisiana. As the Assistant Project Manager, Mr. Greene directly oversees the field operations for this easement boundary survey. He manages the data collection; assigns the crews for each task; and performs daily quality control checks of all field operations. Total Contracts’ Total Value 2009-Current: \$6,339,414.15; Current Contract Value to-date: \$663,448.74			
2022	Topographic Survey for St. James Ring Levee Construction, St. James Parish, LA (Client: USACE, New Orleans) - As the Assistant Project Manager, Mr. Greene directly oversaw the field operations for this task order. He created the GPS plan, managed the data collection, and processed Static GPS data. From there, Mr. Greene assigned field crews to collect the RTK GPS and conventional data required for this topographic and cross-section surveys needed for the construction of the Ring Levees around the Grand Point and Grammercy neighborhoods. He also reviewed the data to ensure its quality before transferring it to the office to be mapped. Cost: \$207,357.47			
2021	Monitoring Survey for the Comite River Diversion Reach 2B, East Baton Rouge Parish, LA (Client: USACE, New Orleans) - As the Assistant Project Manager, Mr. Greene directly oversaw the field operations for this task order. He provided his expertise in the planning and estimating for the cross-section and topographic needed to monitor the construction process of the river diversion system. He ensured field crews had the equipment and resources need to complete this project and he also reviewed the data to ensure its quality. Cost: \$51,334.96			
2018	I-10 Crossing Pascagoula River, Black Creek and Escatawpa River Project #: SDP-107213 / 101000 – (Client: MDOT) This project entailed hydraulic bridge surveys along I-10 crossing over the Pascagoula River, Black Creek and Escatawpa River. EMC collected Mobile LiDAR data for interstate (I-10) bridges in Jackson County including cross sections and profiles using RTK and multi-beam data for West Pascagoula River, Creole Bayou, Pascagoula River, Little Black Creek, Black Creek. Mr. Greene was an Assistant Project Manager. Project Cost: \$132,000.00			

Name	William B. Gray, PLS		Years of experience with this firm/employer	18
Title	Assistant Project Manager, Office Operations		Years of experience with other firm(s)/employer(s)	1
Degree(s) / Years / Specialization			BS / Land Surveying / 2005/ Mississippi State University	
Active registration number / state / expiration date			3154/MS; 20162/NM; 6478/TX	
Year registered	2009 MS # 3154; 2010 NM # 20162; 2012 TX # 6478	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities				
Mr. Gray, an EMC Assistant Project Manager, has a strong technical surveying background and has shaped data collection, processing, mapping, and quality control procedures for various government contracts. He has successfully managed these aspects for numerous surveys throughout the United States. Mr. Gray is trained in OPUS-Projects Manager, Trimble GPS, NOAA/NGS GPS data processing, Sensors & Software utility locating, and Riegl USA software.				
Experience dates	Experience and qualifications relevant to the proposed contract;			
2019 - Ongoing	Easement Boundary Surveying Services for the NRCS of Louisiana Throughout the State of Louisiana - For this project, the NRCS of Louisiana relies on EMC to provide easement boundary surveys for many different NRCS programs. Since 2009, EMC has continued to grow our ongoing relationship with the NRCS of Louisiana, successfully completing more than 200 easement boundary surveys for a total of more than 46,000 acres surveyed throughout the State of Louisiana. As the Assistant Project Manager, Mr. Gray directly oversees the office operations for this easement boundary survey. He manages the data processing; assigns CADD Specialist for each task; and performs daily quality control checks of all processed and mapped data. Total Contracts' Total Value 2009-Current: \$6,339,414.15; Current Contract Value to-date: \$663,448.74			
2022 & 2023	Original Seabrook Multibeam Survey, Lakefront Scour Terrestrial LiDAR and Multibeam Survey, Old Bayou Bienvenue Gate Multibeam Survey and IHNC Multibeam Survey (Client: Flood Protection Authority – East) - As the Assistant Project Manager, Mr. Gray supervised the office operations for these annual multibeam surveys to inspect for possible scouring and topographic survey utilizing LiDAR technology. Mr. Gray reviewed field data, assisted in the processing of the multibeam and LiDAR data and assigned CAD Specialists to map the process data. Cost: \$38,600.00			
2022	Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRM), Brazoria County, TX (Client: USACE, Galveston) - As the Assistant Project Manager & the registered Texas Professional Land Surveyor In-Charge, Mr. Gray directed the field and office operations for this project in which EMC performed parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys for specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRM) Project. Cost: \$504,010.60.			
2017	Brazos River / GIWW Hydro Survey; Matagorda & Brazoria County, TX (Client: USACE District, New Orleans) - Party Chief – Assistant Project Manager, Mr. Grey proceeded all single beam and multibeam data and assigned CAD Specialist to map the proceed data. He also was the QC manager for this project. This project included single beam hydrographic surveys along the Brazos River and multibeam soundings in the GIWW canal. Cost: \$89,546.00			

Name	William Hardy Gross		Years of experience with this firm/employer	8
Title	Survey Supervisor		Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization				
Active registration number / state / expiration date			31198/MS/12/31/2023	
Year registered	2020	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities				
<p>Mr. Gross began his surveying career with EMC as an Instrument man and work his way up the ladder to become a party chief. Now with over a decade of surveying experience and knowledge he is one of EMC's Survey Supervisors. As a Survey Supervisor, Mr. Gross has managed many different types of surveying projects. While he has successfully completed numerous projects throughout the United States, most of his experience has been within the Mississippi Valley Division boundaries while working on several Corps and other government contracts. He has supervised the field operations for boundary, horizontal and vertical control, topographic and hydrographic surveys. His training includes First Aid\CPR, Boat & Water Safety Course and Army iWATCH Security Program.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	<p>Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico - EMC was contracted by CEC to perform the required topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. The purpose of the project is to engineer and design a restoration project benefitting the Chandeleur Islands and the many species that use them with a particular focus on birds. For this project, Mr. Gross is the Survey Supervisor. Cost to-date: \$536,733.40</p>			
2023	<p>Annual Multibeam Surveys of Surge Barrier, Seabrook, Old BB Gate, Seabrook Airport Seabrook (Client: Flood Protection Authority – East)- Survey Supervisor - Mr. Gross played a vital role in the planning and execution collecting the field data these annual multibeam surveys. He also provided his surveying expertise to surveying crews as they collected data for this project. Cost to-date: \$63,260.00</p>			
2019 - Ongoing	<p>WRP Easement Real Estate Boundary Survey Services, State of Louisiana (Client: NRCS of Louisiana) - Party Chief - Mr. Gross conducts the meetings with the NRCS and land owners prior to commencing the surveying operations. He also manages the field crews as they use GPS and conventional surveying methods to establish project controls, collect boundary evidence, set monumentation including NRCS post and signs on many different projects located throughout the State of Louisiana for an ongoing Easement Real Estate Boundary Surveying contract EMC for the NRCS. Current Contract Value to-date: \$663,448.74</p>			
2018	<p>Permanent Benchmark For BA-206 Northeast Turtle Bay Marsh Creation and Critical Shoreline Protection Jefferson Parish, Louisiana (Client: NRCS of Louisiana) - Survey Supervisor - Mr. Gross managed the surveying crews as they established the permanent benchmark using Static GPS. He ensued that LA 811 was contacted, right to enter was obtained and that the surveying crews had the proper equipment onsite. In addition, he reviewed the field data before transferring it to the office. Cost: \$30,843.81</p>			
2015	<p>Levee Enlargement Survey for the Atchafalaya Basin Levee St. Mary Parish, LA (Client: USACE, New Orleans) - Party Chief, Mr. Gross was one of the surveying crew leaders that collected the Static GPS data for this project's control network. He also supervised his crew in the collection of the RTK GPS topographic and cross-section data needed for this task order. Cost: \$601,581.00</p>			

Name	Caine Dearman		Years of experience with this firm/employer	4
Title	Survey Supervisor		Years of experience with other firm(s)/employer(s)	13
Degree(s) / Years / Specialization	Bachelor of Science Construction Engineering Technology (University of Southern Mississippi) & Bachelor of Business Administration, Marketing Major (University of Mississippi)			
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities	Subsurface Utility Engineering (SUE) Survey Supervisor			
Mr. Dearman serves as EMC's Lead SUE Specialist and one of EMC's GIS Specialists. He has over 17 years of SUE surveying and mapping experience. His experience ranges from collecting data to processing surveying datasets. Mr. Dearman has experience and knowledge of specialized equipment used in SUE surveys, such as ground penetrating radar (GPR), RF line locators and vacuum evacuation systems. He also has experience of mapping and quality control reviewing of the final product. He has successfully processed and mapped hundreds of SUE products throughout the South. Additionally, Mr. Dearman has vast experience in all surveying CADD/GIS Software Packages. He is experienced and trained in Microstation, AutoCAD, and ArcView, etc.				
Experience dates	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
2023	2022, US 49, Topographic and Hydraulic Survey, Yazoo County, Mississippi (Client: HDR) - EMC performed the necessary surveys to complete this topo and hydraulic surveys for US 49. In addition, EMC also located all utilities within the Highway ROW. Mr. Dearman coordinated all SUE operations for this project. He also was apart of the final quality control review prior to the final submittal. Cost: \$173,590.82			
2022	Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRM), Brazoria County, TX (Client: USACE, Galveston)- Mr. Dearman was the SUE Supervisor for this task order which included EMC performing parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys at specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRM) Project. Mr. Dearman conducted for all SUE services using GPR and RF line locators for this task order. He also was a part of the QC team that reviewed the data before submittal. Cost: \$504,010.60			
2022	Pipeline Location at Suntide Placement Area for Corpus Christi Ship Channel, Brazoria County, TX (Client: USACE, Galveston) - As the SUE Supervisor, Mr. Dearman planned and performed the field surveys for this Quality Level A utilities survey to locate a high-pressure petroleum line and any other utilities within the surveying area. To complete this task order, Mr. Dearman used EMC's GPR system, a RF line locator and vacuum evacuation systems to locate all underground utilities. Then he used GPS technologies collect the location of the findings. Project Cost: \$13,914.90			
2020-2021	MDOT Statewide SUE Contract-Hwy 49 (Client: Mississippi Department of Transportation)- GIS & SUE Specialist - Mr. Dearman played a vital role in the planning and execution of collecting the data for this Quality Level A SUE Services and implementing the geo-database of the utilities on the Northbound and Southbound sides of Hwy 49 in Richland and Florence for MDOT's final grading operations. Cost: \$14,000.00			
2019	2021, Subsurface Investigation Valero Gas Station, Pontotoc, MS, (Client: W.L. Burle Engineering)- Survey Supervisor - The purpose of this project was to locate all existing utilities, underground structures, and storage tanks for the client's soil boring installations. We utilized SUE Quality Level B for this investigation. EMC used RF line locators and GSSI 400 mhz GPR to locate the existing utilities and structures. Mr. Dearman was the SUE Field Supervisor for this project. Project Cost: \$8,600.00			

Name	Ronald J. Hutchinson, Sr.		Years of experience with this firm/employer	36
Title	Party Chief		Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Party Chief	
Mr. Hutchinson is a seasoned Party Chief who has worked most of his career on USACE surveying projects. Furthermore, he has taken an active role and supervised the work performed by his surveying crew on many different types of surveying projects, e.g. geodetic control, construction, topographic, real estate boundary, conventional, SUE, GIS field, hydrographic surveys. He has a vast understanding and knowledge of surveying equipment and procedures. His training includes First Aid\CPR and Boat\Water Safety Courses.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2022	Topographic Survey for St. James Ring Levee Construction, St. James Parish, LA (Client: USACE, New Orleans) - Mr. Hutchinson was one of the party chiefs that collected the RTK GPS and conventional data required for this topographic and cross-section surveys needed for the construction of the Ring Levees around the Grand Point and Grammercy neighborhoods. Cost: \$207,357.47			
2022	Cross-section and Topographic Survey for the Mississippi River Levee Enlargement Project from Smithland to Lacour, Pointe Coupee Parish, LA (Client: USACE, New Orleans) - Mr. Hutchinson was one of the party chiefs for this project. He collected the Static GPS data for the control network for this project. He also managed his surveying crew and took an active role in collecting the topographic and utility data using RTK GPS surveying methods. Cost: \$504,010.60.			
2021	Periodic Inspection Program Surveys, Calcasieu Saltwater Barrier, Calcasieu Parish, LA (Client: USACE, New Orleans) - Party Chief, Mr. Hutchinson was one of the party chiefs that performed this cross-section and topographic survey. He also ran first order levels on settlement points on the structure. The data for this survey was compared to historical data to verify if any movement had occurred. Cost: \$23,079.50			
2018	Beaver Bayou Centerline and Cross Section Survey, East Baton Rouge Parish, LA; (Client: USACE, New Orleans) - As a Party Chief, Mr. Hutchinson set and used a Trimble R10 to establish the GPS control network. He also used RTK GPS to collect the topographic data for the centerline profile and cross sections survey. Project Cost: \$188,728.00			
2016	Cross-Section, Profiles and Topographic Surveys for Levee Design, Happy Jack to Nairn, New Orleans to Venice, LA (Client: USACE, New Orleans) - Party Chief - Mr. Hutchinson used Static GPS technology to set five new monuments for project control and create a GPS control network that consisted of 11 benchmarks in total. He also collected cross section and topographic data for this project using RTK GPS along approximately 12.3 miles of the Mississippi River Levee. Cost: \$294,021.00			
2015	Avondale Shipyard Topographic and Hydrographic Surveys, Jefferson Parish, LA (Client: USACE, New Orleans) - Party Chief - Mr. Hutchinson set project control, established the GPS Control Network, performed the topographic and utility survey with GPS and GPR technologies. In addition, he established control targets for the mobile LiDAR survey. Cost: \$446,000.00			

Name	Jimmy Pee		Years of experience with this firm/employer	36
Title	Party Chief		Years of experience with other firm(s)/employer(s)	4
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Party Chief	
Mr. Pee is one of EMC's veteran Party Chiefs whom throughout most of his career has performed land and hydrographic surveys for the USACE throughout the Mississippi Valley Division. He has a proven history of successfully completing many different types of surveys with vast knowledge and understanding of geodetic control, construction, topographic, real estate boundary, conventional, SUE, GIS field, and hydrographic surveys. In addition, Mr. Pee is very familiar with surveying methods and equipment. His training includes First Aid\CPR and Boat\Water Safety Courses.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
Ongoing	WRP Easement Real Estate Boundary Survey Services, State of Louisiana (Client: NRCS of Louisiana) - Party Chief - Mr. Pee has used GPS and conventional surveying methods to establish project control, collect boundary evidence, set monumentation including NRCS post and signs on many different projects located throughout the State of Louisiana for an ongoing Easement Real Estate Boundary Surveying contract EMC for the NRCS. Contract Value to-date: \$663,448.74			
2022	McHugh Road Comite River Diversion Survey, East Baton Rouge Parish, LA - As a party chief, Mr. Pee used static GPS, RTK GPS and conventional methods to collect the cross-section and topographic data for this project. The data was used for the purpose of P and S design layout of the flood protection measures within the area. Cost: \$32,786.85			
2017	Self Forward Land Strip Runway Resurfacing Surveys, Fort Polk, Louisiana (Client: Tarver Land Development, LLC) - Party Chief - Mr. Pee used static and RTK GPS to conduct a detailed topographic survey for the resurfacing of the Self Forward Land Strip Runway. In addition, he established reference marks throughout the survey that were used as mobile and terrestrial LiDAR control. Cost: 97,880.00			
2016	Mississippi River Levee GPS Control Network & Profile Survey, Blackhawk to Venice & Upper Bonnet Carre to Bohemia, LA; (Client: USACE District, New Orleans) - Party Chief - Mr. Pee utilized Static GPS to collect data for the GPS control network. He also used RTK GPS to set Mobile LiDAR control targets and collect levee profile data along the Mississippi River Levee. Cost: \$611,473.20			
2015	Avondale Shipyard Topographic and Hydrographic Surveys, Jefferson Parish, LA; (Client: USACE District, New Orleans) This project consisted of a detailed topographic and hydrographic survey at the Avondale Shipyard in New Orleans. We were also tasked to collect all visible private and public utilities, abandoned and active. This project involved static GPS, RTK GPS; automated/manual hydrographic multibeam surveys; mobile and terrestrial laser scans; digital levels; and ground- penetrating radar (GPR) surveys. As a Party Chief, Mr. Pee performed the control, topographic and overbank surveys for this project. Project Cost: \$446,368.00			
2015	Gulf South Waterway Inspection, Trinity River; Riverside, Texas (Client: Gulf South Pipeline) - Hydrographic Surveyor, Mr. Pee conducted this multibeam survey in an attempt to located exposed and/or suspended pipelines and to determine bottom relief. He also used RTK GPS to collect topographic data of both riverbanks. Project Cost: \$132,775.00			

Name	Jared Estes		Years of experience with this firm/employer	11
Title	Party Chief		Years of experience with other firm(s)/employer(s)	2
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Party Chief	
Mr. Estes serves EMC as one of our Survey Party Chiefs. Mr. Estes takes an active role and supervises the work performed by his surveying crew in the field. He ensures that proper procedures and accurate reporting occurs and that supporting documentation analysis is collected. In addition, Mr. Estes specializes in the technical software and equipment, including but not limited to, Trimble Access software, Trimble GPS satellite positioning systems, Topcon and Nikon total stations, Leica digital levels, etc. His training includes OSHA 10, HAZWOPER, First Aid\CPR, Boat & Water Safety Course.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	WRP Easement Real Estate Boundary Survey Services, State of Louisiana (Client: NRCS of Louisiana) - Party Chief - Mr. Estes manages his survey crew performing these easement boundary surveys throughout the State of Louisiana. His crew sets GPS control, collects boundary data, sets boundary monumentation, performs various checks, records findings and ensures accurate data is being collected. He also provides daily updates to the surveying supervisor and to the office staff. Contract Value to-date: \$663,448.74			
2023	Surveying Services for Morganza Upper Guide Levee Flood Side Erosion Repair, (Client: USACE, New Orleans) - Party Chief, Mr. Estes was one of the crew leaders in-charge of cross-section and topographic data collection, recording field notes, quality control of field survey data and providing daily updates to the surveying supervisor. Cost: \$64,942.59			
2022	Cross-section and Topographic Survey for the Mississippi River Levee Enlargement Project from Smithland to Lacour, Pointe Coupee Parish, LA (Client: USACE, New Orleans) - Mr. Estes was one of the party chiefs for this project. His crew and him was apart of the team that collected the Static GPS data for the control network for this project. He also managed his surveying crew and took an active role in collecting the topographic and utility data using RTK GPS surveying methods. Cost: \$504,010.60.			
2018	Beach Monitoring Surveys, Long Beach Island, Ocean City & Great Egg Inlet, Sea Isle City & Corsons Inlet; New Jersey (Client: USACE, Philadelphia District) - Party Chief - Mr. Estes directly oversaw his surveying crew while collecting the survey data for these coastal monitoring surveys. Surveys consisted of using GPS and single beam technologies to collect 188 topo and hydro ranges to determine beach and shoreline conditions, erosion rates, offshore bar tracking and sediment movement. Cost: \$412,520.00			
2016	Cross-Section, Profiles and Topographic Surveys for Design of NOV-10; Happy Jack to Nairn New Orleans to Venice, LA; Port Sulphur, LA; (Client: USACE District, New Orleans) - Party Chief - Mr. Estes was one of the crew leaders in-charge of topographic data collection, recording field notes, quality control of field survey data and providing daily updates to the surveying supervisor. Cost: \$294,021.00			

Name	Chris Geoghegan		Years of experience with this firm/employer	5
Title	Party Chief		Years of experience with other firm(s)/employer(s)	10
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Party Chief	
<p>With over 14 years of experience, Mr. Geoghegan has gained vast knowledge of the surveying industry. He serves EMC as one of our Survey Party Chiefs. Mr. Geoghegan takes an active role and supervises the work performed by his surveying crew in the field. He ensures that proper procedures and accurate reporting occurs and that supporting documentation analysis is collected (e.g. photographs, sketches, etc). Once all necessary findings are collected, Mr. Geoghegan ensures data is accurately reported to EMC's office operations. In addition, Mr. Geoghegan specializes in the technical software and equipment, including but not limited to, Trimble Access, Trimble GPS satellite positioning systems, Topcon and Nikon total stations, Leica digital levels, etc.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
2022	<p>Topographic Survey for St. James Ring Levee Construction, St. James Parish, LA (Client: USACE, New Orleans) - Mr. Geoghegan was one of the party chiefs that collected the RTK GPS and conventional data required for this topographic and cross-section surveys needed for the construction of the Ring Levees around the Grand Point and Grammercy neighborhoods. Cost: \$207,357.47</p>			
2020	<p>Property Boundary Determination, Border Protection Project Survey Support in Cameron, Hidalgo and Starr County, Texas, T.O. 3 (Client: USACE, Forth Worth District) - Party Chief - Mr. Geoghegan conducted the field surveys utilizing GPS & conventional surveying technologies. EMC provided boundary surveys for this Border Protection Project. Services included boundary surveys, researching deeds of owners and adjoining, locating monuments, setting monuments, mapping, creating legal descriptions and digital plats.</p>			
2019 - Ongoing	<p>Survey Services, State of Louisiana (Client: NRCS of Louisiana) - Party Chief - Mr. Geoghegan has used GPS and conventional surveying methods to establish project control, collect boundary evidence, set monumentation including NRCS post and signs on many different projects located throughout the State of Louisiana for an ongoing Easement Boundary Surveying contract EMC for the NRCS. Contract Value to-date: \$663,448.74</p>			
2020	<p>Property Boundary Determination, Border Protection Project Survey Support in Cameron County, Texas (Client: USACE - Fort Worth District) - Party Chief - Mr. Geoghegan conducted the field surveys utilizing GPS & conventional surveying technologies. EMC provided boundary surveys for this Border Protection Project. Services included boundary surveys, researching deeds of owners and adjoining, locating monuments, setting monuments, mapping, creating legal descriptions and digital plats.</p>			
2019	<p>Beaver Bayou Centerline and Cross Section Survey, East Baton Rouge Parish, LA (Client: USACE, New Orleans District) - Party Chief - Mr. Geoghegan used RTK GPS to collect the topographic/hydrographic data for the centerline profile and cross sections survey. Cost: \$188,728.00</p>			

Name	Jason Hill		Years of experience with this firm/employer	5
Title	Party Chief		Years of experience with other firm(s)/employer(s)	3
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Party Chief	
As a party chief for EMC, Mr. Hill manages and conducts a variety of surveying operations such as boundary, topographic, SUE leveling, and as-built surveys. He can accurately run and adjust survey instruments including levels, GPS equipment, and total stations with electronic data collecting capabilities. He has experience in the acquisition, processing, and analysis of GPS data. Training: First Aid\CPR, Boat\Water Safety Course.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2019 - Ongoing	Survey Services, State of Louisiana (Client: NRCS of Louisiana) - Party Chief - Mr. Hill has used GPS and conventional surveying methods to establish project control, collect boundary evidence, set monumentation including NRCS post and signs on many different projects located throughout the State of Louisiana for an ongoing Easement Real Estate Boundary Surveying contract EMC for the NRCS. Contract Value to-date: \$663,448.74			
2022	West Fourchon Marsh Creation and Nourishment Project TE-134, Lafourche Parish, LA - EMC conducted topographic survey to collect existing marsh elevations and bottom elevations for marsh creation area using survey transects determined by the CPRA. Party Chief, Mr. Hill used GPS and conventional surveying methods to collect the field data. Cost: \$108,000			
2022	Cross-section and Topographic Survey for the Mississippi River Levee Enlargement Project from Smithland to Lacour, Pointe Coupee Parish, LA (Client: USACE, New Orleans) - Mr. Hill was one of the party chiefs for this project. He managed his surveying crew and took an active role in collecting the topographic and utility data using RTK GPS surveying methods. Cost: \$504,010.60.			
2020	Property Boundary Determination, Border Protection Project Survey Support in Cameron, Hidalgo and Starr County, Texas, T.O. 3 (Client: USACE, Forth Worth District) - Party Chief - Mr. Hill conducts the field surveys utilizing GPS & conventional surveying technologies. EMC provided boundary surveys for this Border Protection Project. Services include boundary surveys, researching deeds of owners and adjoining, locating monuments, setting monuments, mapping, creating legal descriptions and digital plats. Cost to-date: \$2,275,056.00			
2020	Property Boundary Determination, Border Protection Project Survey Support in Cameron County, Texas – TO1 (Client: USACE Forth Worth District) - Party Chief, Mr. Hill managed the field crew and used Trimble GPS systems to establish project control, collect existing boundary monumentation, set new boundary monuments and collect the topographic data for these boundary surveys for border protection in the State of Texas. Cost to-date: \$2,050,000.00			
2019	Beaver Bayou Centerline and Cross Section Survey, East Baton Rouge Parish, LA (Client: USACE, New Orleans) - Party Chief - Mr. Hill used RTK GPS to collect the topographic/hydrographic data for the centerline profile and cross sections survey. Cost: \$188,728.00			

Name	Jacob M. Mattox		Years of experience with this firm/employer	19
Title	Party Chief		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			BS – Land Surveying; Mississippi State University	
Active registration number / state / expiration date			LSI-#497/MS	
Year registered	2006	Discipline	License Survey Intern	
Contract role(s) / brief description of responsibilities			Hydrographic and Mobile LiDAR Party Chief	
<p>Mr. Mattox is a Party Chief, who not only has land surveying experience, but he also specializes in hydrographic surveying for EMC. Over his career, he has gained vast hydrographic surveying experience on most major waterways throughout the Southeast, including the Gulf of Mexico, while working for both government agencies (USACE) as well as private clientele. Mr. Mattox specializes in the technical software and equipment, including but not limited to satellite positioning systems, sonars, single and multibeam echo sounders, ADCP, laser scanners and mobile LiDAR. His training includes OSHA 10, Hazwoper, First Aid\CPR, Boat & Water Safety Course and NOAA Shallow-Water Multibeam Sonar Training Courses.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	<p>Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico - EMC was contracted by CEC to perform the required topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. The purpose of the project is to engineer and design a restoration project benefitting the Chandeleur Islands and the many species that use them with a particular focus on birds. For this project, Mr. Mattox was one of EMC’s hydrographic party chiefs for this project. Cost to-date: \$536,733.40</p>			
2023	<p>Interstate 10 Hydrographic and Mobile LiDAR Surveying Services, Mobile, AL - EMC was task to collect hydrographic and mobile LiDAR data at specified areas within the I-10 corridor near Mobile, Alabama. Multibeam data collection was performed using a Reason T50 multibeam coupled with a Applanix PosMV inertial navigation system. Mr. Mattox was a hydrographic party chief for this project. Cost: \$462,500.00</p>			
2019 & 2022	<p>Topographic, Hydrographic, Magnetometer, Aerial Surveys at North Breton Island, Louisiana, Gulf of Mexico - This survey request included the use of RTK GPS, hydrographic sounding as well as the use of a magnetometer system. EMC utilized single beam technology and a Geometrics G882 magnetometer, along with Hypack software to perform the hydrographic surveys. Mr. Mattox was one of the hydrographic party chief for this project. 2019 Cost: \$145,000 & 2022 Cost: \$101,931.00</p>			
2018 & 2019	<p>Multibeam Flow Failure Sites, 10 revetment sites from mile 218.2 to mile 35.2 on both LDB and RDB of Mississippi River within the New Orleans District (Client: USACE District, New Orleans) - Party Chief - Mr. Mattox was one of EMC’s crew leaders who used multibeam technology to collect the surveying data at 10 different revetment failure sites along the Mississippi River. Cost: \$349,127.50</p>			
2016	<p>COG Post Storm Survey - Multibeam and Mobile LiDAR Survey, Galveston Beach, TX (Client: Atkins Global) - Party Chief - Mr. Mattox utilized our Reson 7125 multibeam and our Riegl VMX-450 mobile LiDAR systems to collect the surveying data for this beach and shoreline condition survey along 31 miles of Galveston Beach. Cost: \$170,310.00</p>			

Name	Ralph Hutchinson		Years of experience with this firm/employer	21
Title	Party Chief		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Hydrographic Party Chief	
<p>Mr. Hutchinson is one of EMC's Party Chiefs who has specialized experience in hydrographic surveying. Over the past decade and a half, he has gained tremendous knowledge in hydrographic surveys working throughout the Southeast on many USACE task orders and private contracts. He has vast experience with the technical software and equipment, including but not limited to satellite positioning systems, sonars, single and multibeam echo sounders, ADCP, laser scanners and mobile LiDAR. His training includes Hazwoper, First Aid\CPR, H2S Training and Boat & Water Safety Courses.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
2022 & 2023	<p>Original Seabrook Multibeam Survey, Lakefront Scour Terrestrial LiDAR and Multibeam Survey, Old Bayou Bienvenue Gate Multibeam Survey and IHNC Multibeam Survey (Client: Flood Protection Authority – East) - Project Manager, Mr. Hutchinson perform the multibeam surveys required for these annual surveys to inspect for possible scouring. Cost: \$38,600.00</p>			
2019	<p>Cross-Section Survey of the Conoco Property for Marsh Creation Project, Plaquemines Parish, LA; (Client: Ecosystem Partners, LLC)- EIP tasked EMC to perform cross sections for a marsh creation project located in Plaquemines Parish LA. Mr. Hutchinson was a Party Chief for this project. He used RTK GPS surveying methods to collect the cross-section data. Cost \$90,000.00</p>			
2018	<p>Long Beach Township, Harvey Cedars, Brant Beach and Surf City Refuge and Surf City Beach Monitoring Survey, Long Beach Island, (New Jersey); (Client: USACE District, Philadelphia) - EMC was tasked to collect surveying data to provide coastal monitoring information for assessment of beach and shoreline conditions, erosion rates, offshore bar tracking and sediment movement within the requested areas. The project consisted of 88 predetermined topographic and hydrographic range lines.As one of our team's Party Chief, Mr. Hutchinson performed the hydrographic sections for this survey. Project Cost: \$113,775.00</p>			
2018	<p>Orleans Canal Multibeam Survey, New Orleans, LA (Client: Orleans Levee District) - Party Chief, Mr. Hutchinson and survey crew mobilized and set up the surveying vessel and then performed these multibeam surveys of the Orleans canal. They used RTK while performing the hydrographic to provided project control. The data for this project was used to inspect for possible scouring along the West bank. Cost: \$10,800.00</p>			
2014	<p>Multibeam Hydrographic and Side Scan Sonar Surveys, and Bottom Sampling Western Vicinity of Lake Borgne, Mississippi (Client: DEA & NOAA) - Party Chief - Mr. Hutchinson collected the multibeam, side scan sonar and bottom sample data for this eight-sheet survey which encompassed approximately 151 square nautical miles. Cost: \$76,792.68</p>			
2011	<p>Inland Electronic Navigational Chart (IENC) Feature Collection and Hydrographic Survey for the White River, throughout the Memphis District (Client: USACE, Memphis District) - Party Chief - Mr. Hutchinson used an Odom single beam fathometer along with Trimble DGPS systems, RTK GPS and 3D laser scanner to collect the hydrographic and IENC feature data for this survey along the White River. Cost: \$81,877.35</p>			

Name	James Cole		Years of experience with this firm/employer	19
Title	Party Chief		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Hydrographic Party Chief	
<p>Mr. Cole is one of our Survey Party Chiefs. He ensures that proper procedures are followed, recording of data gathered is accurate, and that supporting documentation analysis is collected (e.g. photographs, sketches, etc). Once all necessary findings are collected, he ensures data is accurate and complete before transferring it to EMC's office operations. In addition, Mr. Cole specializes in the technical software and equipment, including but not limited to, HyPack Softwares, Trimble Access, Trimble GPS satellite positioning systems, single and multibeam echo sounders, ADCP, laser scanners and mobile LiDAR. His training includes First Aid\CPR, Boat & Water Safety Course.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2023	<p>Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico (Client: CEC) - EMC was contracted by CEC to perform the required topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. The purpose of the project is to engineer and design a restoration project benefitting the Chandeleur Islands and the many species that use them with a particular focus on birds. Mr. Cole was a hydrographic party chief for this project. Cost: \$536,733.40</p>			
2021	<p>Surveying Services in support of Mississippi Riverbank Grader Unit, throughout the Mississippi Valley Division (Client: USACE, Memphis) - EMC provided two fully equipped surveying crews for this task order. The Advance crew perform layout, limits of clearing, control, and incidental surveys. The Grader crew performs topographic and hydrographic surveys before the grader unit begins work. They perform periodic checks during the grader unit operations, and they also conduct a final as-built survey when the work is complete. Mr. Cole was the Grader Unit party chief. He has completed the topographic survey, set slope stakes, and completed the first pre and post construction hydrographic surveys. Cost: \$500,000.00</p>			
2018 & 2019	<p>Multibeam Flow Failure Sites, (10 revetment sites from mile 218.2 to mile 35.2 on both LDB and RDB of Mississippi River (Client: USACE District, New Orleans) - This project consisted of performing multibeam surveys at 10 different revetment sites from mile 218.2 to mile 35.2 on both LDB and RDB along Mississippi River within the District. These surveys were conducted to monitor any changes in the river banks during high water along critical flow failure sites on the Mississippi River. Mr. Cole was in-charge of one of our surveying vessels and his crew during this project. Mr. Cole ensured correct system calibrations, collected data using HyPack, ensured data accuracies and completeness, recorded field notes and provided daily file uploads and updates to the office operations. Fees to date: \$176,836.00</p>			
2018	<p>Oyster Habitat Mapping (Phase I), (Gulf of Mexico); (Client: Department Environment Quality (MDEQ)) - This oyster habitat mapping consisted of acquiring multibeam bathymetry and acoustic backscatter with a Reson 7125 SV2, side-scan sonar backscatter imagery with an EdgeTech 4200, sound velocity profiles with an MVP30-350. In addition, the survey data was verified by bottom sampling. As a Party Chief, Mr. Cole was in-charge of one of our surveying vessels and his crew during this project. Mr. Cole also ensured systems were correctly calibrated; collected data using HyPack; ensured data accuracy and completeness; recorded field notes; and provided daily file uploads and updates to the office operations. Fees to date: \$745,066.00</p>			

Name	Ronald J. Hutchinson, Jr.		Years of experience with this firm/employer	9
Title	Party Chief		Years of experience with other firm(s)/employer(s)	2
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Hydrographic Party Chief	
<p>Mr. Hutchinson is a Party Chief who has worked most of his career on government surveying projects. He has taken an active role and supervised the work performed by his surveying crew on many different types of surveying projects, e.g. geodetic control, construction, topographic, real estate boundary, conventional, SUE, GIS field, and hydrographic surveys. He has a thorough understanding and knowledge of surveying equipment and procedures. His training includes First Aid/CPR and Boat & Water Safety Courses.</p>				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2022	<p>2022, Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRM), Brazoria County, TX (Client: USACE, Galveston) - Mr. Hutchinson was an party chief for this task order which included EMC performing parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys at specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRM) Project. Mr. Hutchinson conducted the hydrographic surveys using single-beam methods. Cost: \$504,010.60</p>			
2019	<p>2019, Yazoo 7C Dredge Survey Project, Webb, MS (Client: Affolter Contracting, Inc.) - Party Chief, Mr. Hutchinson used GPS and single-beam technologies to collect the hydrographic surveying data for this project. The data was used to verify the depth after the dredging operations. Cost: \$5,420.00</p>			
2018	<p>North Breton Island Early Restoration Project, Additional Magnetometer, And Bathymetric Surveys; (Client: O’Brien & Gere Engineers, Inc.) -EMC was tasked to perform a Design Level Survey which included collecting beach and hydrographic ranges as specified locations, collecting magnetometer data at prescribed locations around the island and performing a healthy marsh or bio-benchmark survey at requested locations. In addition, we were also tasked to perform geotechnical investigations of prescribed boring locations and staking those locations in the field. Mr. Hutchinson was a Party Chief who conducted the hydrographic surveys for this project. Cost: \$149,139.40</p>			
2016	<p>High Water Survey, Low Sill and Auxiliary Structures, Pre and Post High Water - Construction Survey, Concordia Parish, LA (Client: USACE District, New Orleans) – Party Chief, Mr. Hutchinson operated the vessel performing this pre and post high water surface survey. Hydrographic surveys were performed using a Reson 7125 multibeam sounding system. Hypack software was used in collection and processing of the data. Cost: \$107,510.00</p>			
2015	<p>West Closure Canal (WCC) Project, New Orleans, LA, (Client: Gulf Intracoastal Construction and USACE District, New Orleans) Party Chief - Mr. Hutchinson collected the hydrographic data for this project which included before, in-progress and after dredge-monitoring surveys along the GIWW, Algiers and Harvey Canals, and a temporary Cofferdam, with daily monitoring of pilings. Cost: \$750,613.00</p>			

Name	William Moore		Years of experience with this firm/employer	7
Title	Party Chief		Years of experience with other firm(s)/employer(s)	2
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Hydrographic Party Chief	
Mr. Moore stands as an experienced hydrographic party chief within EMC, with extensive expertise in the operation of various vessel sizes throughout the State of Louisiana. His specialized knowledge encompasses a wide array of technical software and equipment, including but not limited to, HyPack Software, Trimble Access, Trimble GPS satellite positioning systems, and both single and multibeam echo sounders. He has also received training, encompassing vital areas such as First Aid and CPR and Boat & Water Safety.				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
Ongoing	Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico (Client: CEC) – EMC performed topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. Mr. Moore served as one of the hydrographic party chiefs entrusted with the responsibility of utilizing a single-beam sonar system and a magnetometer to gather hydrographic data for this project. Cost to-date: \$536,733.40			
2022	Timbalier Barrier Post Zeta Survey (TE-118), Terrebonne Parishes, LA (Client: CEC) - EMC was contracted by CEC to provide RTK GPS and hydrographic surveying services essential for the Post-Hurricane Zeta assessment along the Timbalier Barrier in Terrebonne Parishes, LA. Mr. Moore was a Party Chief, demonstrating leadership in managing the field crew and upholding rigorous standards for data quality throughout the hydrographic survey operations. Project Cost: \$48,000.00			
2020	Hydrographic Surveys for the McClellan-Kerr Arkansas River Navigation System from Montgomery Point to Murray Lock & Dam 7 - Mr. Moore held the position of Party Chief during the hydrographic survey conducted along the McClellan-Kerr Arkansas River Navigation System (MKARNS). This extensive survey spanned from the confluence with the Mississippi River at navigation mile 0.0 to the downstream approach of Murray Lock & Dam 7 at navigation mile 125.0. The survey gathered cross-sectional data at precisely measured 400-foot intervals, strategically targeting sediment range locations for comprehensive coverage and accuracy. Cost: \$119,810.48			
2017	Brazos River / GIWW Hydro Survey; Matagorda & Brazoria County, TX (Client: USACE-New Orleans District) - In his role as Party Chief, Mr. Moore took measures to ensure the surveying vessel was configured with both single and multibeam systems. After conducting thorough checks and verifications, he skillfully operated the vessel during data collection operations. Mr. Moore utilized the single-beam system for surveying along the Brazos River while transitioning to multibeam technology when surveying the GIWW canal, ensuring the comprehensive acquisition of high-quality hydrographic data. Cost: \$121,028.00			
2016	Depth of Cover Survey, Gulf of Mexico, Fourchon to Venice, LA (Client: Sentinel Corrosion Services) - Party Chief - Mr. Moore operated the surveying vessel that utilized magnetometer, side-scan and single beam technologies to collect the required data for Depth of Cover inspection survey of seven different pipelines located in the Gulf of Mexico, including locating any possible exposures and locating any bottom features that could affect the integrity of the pipeline. Cost: \$ 121,820.00			

Name	Zachary Underwood, PLS		Years of experience with this firm/employer	39
Title	CADD Specialist		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization			AS/ Drafting and Design	
Active registration number / state / expiration date			#2816/MS; #LS28003/MT	
Year registered	MS 2000; MT 2012	Discipline	Professional Land Surveyor	
Contract role(s) / brief description of responsibilities			Senior CADD Specialist	
<p>Mr. Underwood serves as one of EMC's Professional Land Surveyors and as EMC's Senior CADD Specialists. His experience ranges from collecting survey datasets to reviewing the final products. He has successfully processed and mapped hundreds of surveying products for the USACE and other government agencies. With over 39 years of experience, Mr. Underwood has gained vast knowledge of survey methods and procedures. He also has extensive experience in most processing and mapping softwares. Mr. Underwood has training in MicroStation, AutoCAD, and ArcView, Hypack, Chesapeake SonarPro, Sonar Wiz, Caris, etc.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
Ongoing	<p>Boundary Surveys for the Johnson County 202 Flood Risk Management Project, Johnson County, KY - For this project, EMC is providing boundary surveying services for the construction of flood protection in Paintsville, KY. Task included, parcel title research, plotting deeds, searching for boundary monumentation, mapping findings, creating recorderable plats and legal descriptions. Mr. Underwood was one of EMC's Senior CADD specialists for this project. Contract Value: \$609,700.00 Fees to Date: \$585,580.00</p>			
2022	<p>Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRМ), Brazoria County, TX (Client: USACE, Galveston) - Mr. Underwood was a CADD Specialist for this project. This task order included EMC performing parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys at specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRМ) Project. Mr. Pettigrew mapped the topographic, hydrographic and SUE data. Cost: \$504,010.60</p>			
2020	<p>Property Boundary Determination, Border Protection Project Survey Support in Cameron County, Texas (Client: USACE, Forth Worth District) - CADD Specialist, Mr. Underwood processed and mapped the surveying data for these boundary surveys along the national border with Mexico. Project Cost: \$2,275,056.00</p>			
2018	<p>I-10 Crossing Pascagoula River, Black Creek and Escatawpa River Project #: SDP-107213 / 101000; (Client: MDOT) - This project entailed hydraulics bridge surveys along I-10 crossing over the Pascagoula River, Black Creek and Escatawpa River. EMC collected Mobile LiDAR data on the marked interstate (I-10) bridges in Jackson County including cross sections and profiles using RTK and Multi-beam data for West Pascagoula River, Creole Bayou, Pascagoula River, Little Black Creek, Black Creek. Mr. Underwood was the CADD Specialist who processed and mapped the surveying data. Project Cost: \$132,000.00</p>			
2013-2016	<p>Permanent Canal Closures and Pumps, 17th Street, London and Orleans Canals; New Orleans, Orleans and Jefferson Parishes, LA (Client: USACE, New Orleans District, and Kiewit) – CADD Specialist, Mr. Underwood processed and mapped the static GPS; RTK GPS; automated and manual hydrographic mobile and terrestrial laser scans, and digital levels field data. Cost: \$291,363.00</p>			

Name	James A. Pettigrew, III		Years of experience with this firm/employer	13
Title	CADD Specialist		Years of experience with other firm(s)/employer(s)	6
Degree(s) / Years / Specialization			AS / 2008 / Architectural Technology	
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			CADD Specialist	
Mr. Pettigrew serves as one of EMC's GIS and CADD Specialists with 19 years of experience with over 10 of those years with USACE mapping experience. His USACE experience ranges from processing surveying datasets and mapping to reviewing the final product. He has successfully processed and mapped hundreds of surveying products. Mr. Pettigrew has vast experience in all surveying CADD/GIS Software Packages. He is experienced and trained in Microstation, Inroads, AutoCAD, and ArcView, Hypack, Chesapeake SonarPro, Sonar Wiz, Caris, etc.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
Ongoing	Hydrographic and Topographic Surveying Services for Chandeleur Island Restoration Project, Chandeleur Island, Gulf of Mexico (Client: CEC) - EMC was contracted by CEC to perform the required topographic, bathymetric, magnetometer, and cultural resource assessment surveys for the Chandeleur Island Restoration Project which is located on the Chandeleur Islands in St. Bernard Parish, Louisiana. The purpose of the project is to engineer and design a restoration project benefitting the Chandeleur Islands and the many species that use them with a particular focus on birds. Mr. Pettigrew is a CADD Specialist for the project. Cost to-date: \$536,733.40			
2022 & 2023	Original Seabrook Multibeam Survey, Lakefront Scour Terrestrial LiDAR and Multibeam Survey, Old Bayou Bienvenue Gate Multibeam Survey and IHNC Multibeam Survey (Client: Flood Protection Authority – East) - As the CADD Specialist, Mr. Pettigrew processed and mapped the survey data for these annual multibeam surveys to inspect for possible scouring and topographic survey utilizing LiDAR technology. Cost: \$38,600.00			
2018 & 2019	2018/2019 - Long Beach Township, Harvey Cedars, Brant Beach and Surf City Refuge and Surf City Beach Monitoring Survey, Long Beach Island, (New Jersey); (Client: USACE District, Philadelphia) - EMC was tasked to collect surveying data to provide coastal monitoring information for assessment of beach and shoreline condition, erosion rates, offshore bar tracking and sediment movement within the requested areas. The project consisted of 88 predetermined topographic and hydrographic range lines. As a CADD Specialist, Mr. Pettigrew processed and mapped both the topographic and hydrographic data using a variety of CADD softwares. He processed the control and topographic data using Trimble Business Center and the hydrographic data with HyPack. Then he mapped the processed data using AutoCAD Civil 3D. He performed quality control on all the field data and was also a part of the final review before submittal. Project Cost: \$113,775.00			
2017	SR-12 over Moccasin Creek (Bridge No. 69.2) Project #: SP-0018-02(054)/107012-101000; (Client: MDOT) - Mr. Pettigrew was a CADD Specialist for this hydraulic, topographic and boundary survey for SR-12 and SR-17 to include bridges 69.2 and 38.7 in Holmes County, MS. Project Cost: Topo \$67,435.58 and Boundary \$77,122.57			
2015	Avondale Shipyard Topographic and Hydrographic Surveys, Jefferson Parish, LA (Client: USACE District, New Orleans) - CADD Specialist - Mr. Pettigrew mapped the topographic and mobile LiDAR data for this complete topographic survey which consisted of: static GPS, RTK GPS; automated/manual hydrographic multibeam surveys; mobile and terrestrial laser scans; digital levels; and ground-penetrating radar (GPR) surveys. Cost: \$446,000.00			

Name	David Tubbs		Years of experience with this firm/employer	10
Title	CADD Specialist		Years of experience with other firm(s)/employer(s)	0
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			CADD Specialist	
As a CADD Technician for EMC, Mr. Tubbs processes and drafts a variety of surveying data, such as boundary, topographic, hydrographic, mobile LiDAR, leveling, as-built, control networks, etc. He prepares and verifies mathematical calculations related to surveying; computes and adjusts angles, distances, bearings traverses and elevations; interprets field data; evaluates for accuracy and completeness. He is experienced and trained in Microstation, Inroads, AutoCAD, and ArcView, Hypack, Chesapeake SonarPro, Sonar Wiz, Caris, etc.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2022	Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRМ), Brazoria County, TX (Client: USACE, Galveston) – Mr. Tubbs was a CADD Specialist for this project. This task order included EMC performing parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys at specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRМ) Project. Mr. Tubbs assisted in the mapping the topographic and hydrographic data. Cost: \$504,010.60			
2018	Beach Monitoring Surveys, Long Beach Island, Ocean City & Great Egg Inlet, Sea Isle City & Corsons Inlet; New Jersey (Client: USACE, Philadelphia District) CADD Specialist - Mr. Tubbs processed the topo and hydro survey data using an array of computer softwares for these coastal monitoring surveys. Survey consisted of using GPS and single beam technologies to collect 188 topo and hydro ranges to determine beach and shoreline conditions, erosion rates, offshore bar tracking and sediment movement. Cost: \$412,520.00			
2018	EBR Ward Creek Survey, East Baton Rouge Parish, LA, (Contract: W912P815D0011; Survey: 19-066C/19-035C; Task Order: W912P819F0015); (Client: USACE District, New Orleans) - CADD Specialist - Mr. Tubbs processed and mapped the survey data for this centerline profile and cross-section survey along Ward Creek in East Baton Rouge Parish, LA. Project Cost: \$ 271,002.50			
2017	Mississippi River Levee GPS Control Network and Profile Survey, Blackhawk to Venice & Upper Bonnet Carre to Bohemia, LA; (Client: USACE District, New Orleans) - CADD Specialist - Mr. Tubbs processed and mapped the mobile LiDAR data for this project along the Mississippi River Levee. Cost: \$611,473.20			
2016	Low Sill and Auxiliary Structures, Pre and Post High Water– Construction Survey, Concordia Parish, LA; (Client: USACE District, New Orleans) - CADD Specialist - Mr. Tubbs mapped the hydrographic and mobile LiDAR data for this project along the Mississippi River Levee. Cost: \$99,000.00			

Name	Scotty Ford		Years of experience with this firm/employer	5
Title	CADD Specialist		Years of experience with other firm(s)/employer(s)	16
Degree(s) / Years / Specialization				
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			CADD Specialist	
<p>Mr. Ford serves as one of EMC's CADD Technicians. His experience ranges from collecting surveying datasets to reviewing the final products. With his 20 years of experience, he has successfully processed and mapped many surveying projects over the years. As a CADD Specialist, Mr. Ford has vast experience in all surveying CADD/GIS Software Packages. He is experienced and trained in AutoCAD, Microstation, and ArcView, Hypack, etc.</p>				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage”, “designed girders”, “designed intersection”, etc.			
2022	<p>2022, Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management (CSRM), Brazoria County, TX (Client: USACE, Galveston) - Mr. Ford was a CADD Specialist for this project. This task order included EMC performing parcel research, planimetric surveys, topographic surveys, bathymetric surveys, and utility surveys at specified locations for the Sabine Pass to Galveston Bay Freeport and Vicinity Coastal Storm Risk Management (CSRM) Project. Mr. Ford assisted in the mapping the topographic and hydrographic data. Cost: \$504,010.60</p>			
2021	<p>2021 - Property Boundary Determination, Border Protection Project Survey Support in Cameron County, Texas; Contract: W9128F-15-D-0012, Task Order 003 (Client: USACE – Omaha, St. Louis & Fort Worth Districts)– CADD Specialist - Mr. Ford helped map the boundary and topographic data for these 148 legal boundary surveys. He also assisted in the writing of legal descriptions and the QC review of the final submittals. Cost \$3,159,800.00</p>			
2020	<p>2020 - Property Boundary Determination, Border Protection Project Survey (Gates) Support in Hidalgo County, Texas Contract: W9128F-15-D-0012, Task Order 001 (Client: USACE - Omaha, St. Louis & Fort Worth Districts) - CADD Technician - Mr. Ford helped map the boundary and topographic data for these 119 legal boundary surveys. He also assisted in writing the legal descriptions and the QC review of the final submittals. Cost: \$2,050,000.00</p>			
2019	<p>2019 - Settlement and Multibeam Survey of Empire Floodgate, Plaquemines Parish, LA (Client: USACE District, New Orleans) – As a CADD Technician, Mr. Ford mapped the processed data from the settlement and hydrographic survey. He was a part of the QC team that reviewed the data before final submittal. Cost: \$41,843.00</p>			
2018	<p>2019 - EBR Beaver Bayou Survey (Mod), East Baton Rouge Parish, LA; (Client: USACE District, New Orleans) – As a CADD Specialist, Mr. Ford processed and mapped the survey data for this centerline profile and cross-section survey along Ward Creek in East Baton Rouge Parish, LA. Project Cost: \$ 271,002.50</p>			

Name	Brantley Shaw		Years of experience with this firm/employer	5
Title	CADD Specialist		Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization			Bachelor of Science in Land Surveying from Mississippi State University	
Active registration number / state / expiration date				
Year registered	2021 UAS Pilot	Discipline	UAS Pilot: 4528907	
Contract role(s) / brief description of responsibilities			CADD Specialist and UAS Pilot	
Mr. Shaw is one of EMC's CADD Specialists and also one of EMC's UAV pilot. He is experienced in an array of computer softwares such as MicroStation, Inroads, Riegl Software, AutoCAD, ArcView, Hypack, Chesapeake SonarPro, Sonar Wiz, Caris, etc. Mr. Shaw became a certified UAS pilot in 2021. He now operates EMC's Harris Carrier H6 HE+, along with our Riegl VUX-1UAV LiDAR and Sony Alpha 6000 camera with a E16mm lens.				
Experience dates	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , "designed drainage", "designed girders", "designed intersection", etc.			
2023	Interstate 10 Hydrographic and Mobile LiDAR Surveying Services, Mobile, AL - EMC was task to collect hydrographic and mobile LiDAR data at specified areas within the I-10 corridor near Mobile, Alabama. Multibeam data collection was performed using a Reason T50 multibeam coupled with a Applanix PosMV inertial navigation system. Mr. Shaw was a CADD Specialist for this project. Cost: \$462,500.00			
2022	Davis Wade Stadium Pre-Construction Aerial LiDAR Survey at Mississippi State University (Client: MSU Athletic/The Bulldog Club, Inc.) – EMC used our Harris Carrier H6 HE+, along with our Riegl VUX-1UAV LiDAR and Sony Alpha 6000 camera with a E16mm lens to survey the pre-existing conditions of the stadium before construction. Mr. Shaw was the UAV pilot for this project. He also processed and mapped the survey data. Contract Value: \$42,500			
2022	North Breton Island Aerial LiDAR Survey Post Construction Assessment Survey (Client: Rambolli Americas Engineering Solutions, Inc.) - EMC used our Harris Carrier H6 HE+, along with our Riegl VUX-1UAV LiDAR and Sony Alpha 6000 camera with a E16mm lens to survey the conditions of the Island after sand and other materials were added to the Island. Mr. Shaw was the UAV pilot for this project. He also processed and mapped the survey data. Contract Value: \$101,931.00			
2019 & 2022	Topographic, Hydrographic, Magnetometer, Aerial Surveys at North Breton Island, Louisiana, Gulf of Mexico - This survey request included the use of RTK GPS, hydrographic sounding as well as the use of a magnetometer system. EMC utilized single beam technology and a Geometrics G882 magnetometer, along with Hypack software to perform the hydrographic surveys. Mr. Shaw was one of the CADD Specialist for this project. 2019 Cost: \$145,000 & 2022 Cost: \$101,931.00			
2021	Periodic Inspection Program Surveys, Calcasieu Saltwater Barrier, Calcasieu Parish, LA (Client: USACE, New Orleans) – CADD Specialist, Mr. Shaw was one of the CADD Specialist that processed and mapped the survey data for this cross-section and topographic survey. The data for this survey was compared to historical data to verify if any movement had occurred. Cost: \$23,079.50			

17. Firm Experience:

Please find Example Projects below.

Firm name	EMC, Inc.	Past Performance Evaluation Discipline(s)*	Survey
Project name	Interstate 10 Hydrographic and Mobile LiDAR Surveying Services	Firm responsibility (prime or sub?)	Prime
Project number	100073596	Owner's name	Kiewit Massman Traylor, Joint Venture
Project location	Mobile, AL	Owner's Project Manager	Todd Shuey
Owner's address, phone, email	9395 NorthStar Road, Williams, Az. 760-403-5869, Todd.Shuey@kiewit.com		
Services commenced by this firm (mm/yy)	04/23	Total consultant contract cost (\$1,000's)	\$463
Services completed by this firm (mm/yy)	07/23	Cost of consultant services provided by this firm (\$1,000's)	\$463

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

EMC was tasked to collect hydrographic and mobile LiDAR data at specified areas within the I-10 corridor near Mobile, Alabama. Multibeam data collection was performed using a Reason T50 multibeam coupled with an Applanix PosMV inertial navigation system. All data was collected using Hypack/Hysweep Survey software. Upon arrival at the project a local patch test and bar check were performed. The patch test ensured all the mounting angles were accounted for between the multibeam and the POS IMU. The bar check ensured the proper draft settings were set inside the software. Hourly sound velocity casts were taken each day during collection to ensure that the speed of sound in the water was properly applied. A real time sound velocity sensor was also used to ensure that the beam steering function was being properly computed to ensure maximum accuracy. The GPS data was always collected for use in post processing to achieve PPK accuracy as well as water's surface shots taken hourly with RTK GPS to ensure the proper tide value were applied to the data. Additionally, we performed lead line readings, at periodic locations and intervals as requested on site to verify soundings. Lead line comparison is shown below. All the data was post-processed and combined inside of the Hypack software. Then the data was tide corrected and edited to remove any bad soundings from the data. Once checks were completed the data was exported to be used in MicroStation mapping software to create the drawing and surface for use in the design. The hydrographic submittal includes the following: Survey Summary Report, XYZ of processed bathymetric data, DGN, and surface containing bathymetric data.

Relevant Components:
▪ Bridge Scour Survey
▪ Hydraulics Survey
▪ GPS Survey
▪ Multibeam Survey
▪ Single beam Survey
▪ Mobile Lidar Survey
▪ Determining Water Elevation
▪ Vessel and Equipment System Checks
▪ Surveyor's Report
▪ Field and Raw Data Provided to Client
▪ Final Files in MicroStation
▪ Topographic Survey
▪ Mobile Lidar Survey
▪ Sufficient personnel and equipment
▪ Quality Control measures
▪ Safety Plan

Mobile Lidar Collection was performed using a Riegl VMX450 running a 360-degree camera system. All lidar and Images were collected using RiACQUIRE acquisition software. EMC ran a local GPS Base station during the entire collection to use in the post processing of the Lidar data. The collection vehicle collected every lane for the entire project area. Upon completion of collection, the data was post processed first using Applanix POSpac software to obtain a PPK trajectory solution. That was then applied using Riegl RiProcess software. All initial processing and checks were completed. Upon receiving the ground targets from the 3rd party contractor EMC imported that data and checked it against the lidar. Once the lidar was verified the data were colorized to produce RGB Laz files for use in data extraction. The images were also exported as jpg images for use in mapping software. Finally, the data was imported into MicroStation. Extraction was performed using TopoDOT software within the Bentley OpenRoads software suite. The final submittal includes the following: Survey Summary Report, Calibrated and aligned point cloud, LAZ/LAS files, tiled for use in TopoDOT software, Colorized point cloud, Fully Classified Point Cloud, Images, and Surface using feature line extraction.

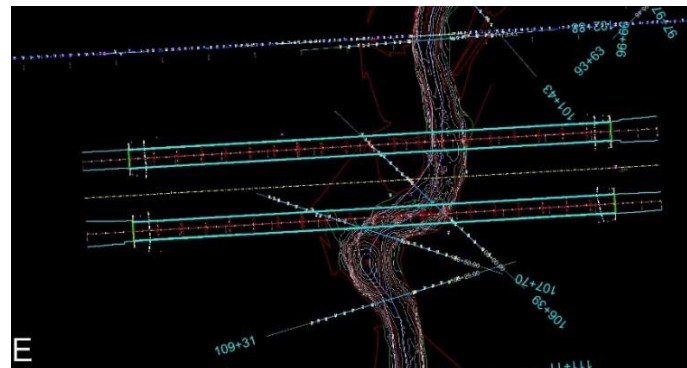
Members Involved: Joshua Mattox, Mark Mattox, Melvin Greene, William Grey, William Gross, Jacob Mattox, Ralph Hutchinson, James Pettigrew, David Tubbs, Brantley Shaw

Firm name	EMC, Inc.		Past Performance Evaluation Discipline(s)*	Survey
Project name	I-10 Crossing Pascagoula River, Black Creek and Escatawpa River		Firm responsibility (prime or sub?)	Prime
Project number	SDP-107213 / 101000	Owner's name	Mississippi Department of Transportation (MDOT)	
Project location	Jackson County MS		Owner's Project Manager	Chad Ainsworth, Project Engineer
Owner's address, phone, email	Address: P.O. Box 1850, Jackson, MS 39215, 601-359-7062, cainsworth@mdot.ms.gov			
Services commenced by this firm (mm/yy)	06/18	Total consultant contract cost (\$1,000's)		\$659
Services completed by this firm (mm/yy)	02/19	Cost of consultant services provided by this firm (\$1,000's)		\$659

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

This project entailed hydraulics bridge surveys along I-10 crossing over the Pascagoula River, Black Creek and Escatawpa River. EMC collected Mobile LiDAR data on the marked interstate (I-10) bridges in Jackson County including cross sections and profiles using RTK and Multi-beam data for West Pascagoula River, Creole Bayou, Pascagoula River, Little Black Creek, Black Creek. Project control and water surface information was collected with a Trimble R6-3 base station with Internal Antenna and a Trimble R6-3 RTK Rover systems. This data was then processed in the office Trimble Business Center, utilizing the OPUS (Online Positioning User Service) control values from NOAA to compute ground control coordinates and provide tide corrections for the multibeam data. The hydrographic survey was performed by a two-man hydrographic surveying crew. Multibeam data was collected from our surveying vessel utilizing a Reson 7125 200-400kHz Multibeam System along with POSMV corrections 2012A. Performance/Patch tests were performed before and after the survey as a quality control check. The multibeam data was tide corrected using RTK water surface elevations. This data was then processed in the office using Hypack. The mobile LiDAR collection along the roadways was performed utilizing a Reigl VMX450, and the RTK GPS topographic data was collected with Trimble R6-3 base station with internal antenna and a Trimble R6-3 RTK Rover systems. Trimble Business Center software was used to process the RTK/GPS data. The final coordinates were utilized in Riegls' mobile processing software to post process the point cloud data. LAS files were exported from the post processed dataset. Bentley MicroStation V8i was used to develop digital MDOT CADD files. **Members Involved: Joshua Mattox, Mark Mattox, Melvin Greene, William Gray, William Gross, Jacob Mattox, Jacob Mattox, Ralph Hutchinson, Ronny Hutchinson, Jr., Ronny Hutchinson, Sr., Chris Geoghegan, James Pettigrew, David Tubbs**

Relevant Components:
<ul style="list-style-type: none"> ▪ Bridge Scour Survey ▪ Hydraulics Survey ▪ GPS Survey ▪ Multibeam Survey ▪ Single beam Survey ▪ Mobile Lidar Survey ▪ Determining Water Elevation ▪ Vessel and Equipment System Checks ▪ Surveyor's Report ▪ Field and Raw Data Provided to Client ▪ Final Files in MicroStation



Firm name	EMC, Inc.	Past Performance Evaluation Discipline(s)*	Survey
Project name	Interstate 20 Bridge Multibeam Hydrographic & Mobile LiDAR Survey	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Ardaman & Associates, Inc.
Project location	Vicksburg, MS	Owner's Project Manager	Megan Bourgeois, PE
Owner's address, phone, email	Address: 316 Highlandia Drive, Baton Rouge, LA 70810, 225.752.4790, MBourgeois@ardaman.com		
Services commenced by this firm (mm/yy)	03/14	Total consultant contract cost (\$1,000's)	\$17
Services completed by this firm (mm/yy)	06/14	Cost of consultant services provided by this firm (\$1,000's)	\$17

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

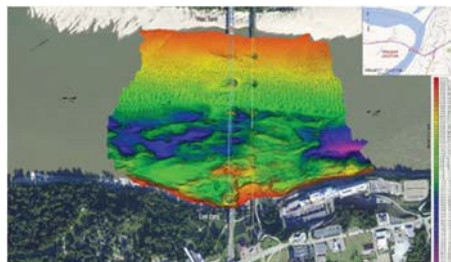
This project consists of performing a multibeam and mobile LiDAR survey of the I-20 bridge. Additional riverbed data was collected to determine the condition of the river bottom and condition of pilings. This survey included developing plan view plots and a 2-foot grid XYZ file of the multibeam dataset.

Project control and water surface information was collected with a Trimble R6-3 base station with internal antenna and Trimble R6-3 RTK Rover systems. This data was then processed in the office Trimble Business Center, utilizing the OPUS (Online Positioning User Service) control values from NOAA to compute ground control coordinates and provide tide corrections for the multibeam data.

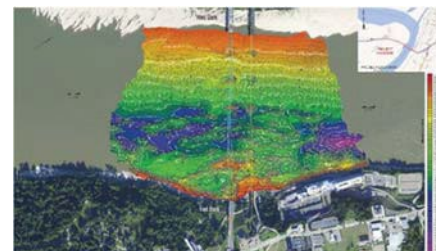
The hydrographic survey was performed by a two-man hydrographic surveying crew. Multibeam data was collected from our surveying vessel, the *Sea Beneath*, utilizing a Reson 7125 200-400kHz multibeam system, along with POSMV corrections 2012A. Performance/Patch tests were performed before and after the survey as a quality control check. The multibeam data was tide corrected using RTK water surface elevations. Single beam data was used as a check and to verify the multibeam data. This data was then processed in the office using Hypack. The mobile scan beneath the bridges was collected utilizing a Reigl VZ400 laser scanner and a POSMV positioning system. The mobile LiDAR collection along the roadways was performed utilizing a Reigl VMX450. Bentley MicroStation V8i and AutoCAD 2014 were used to develop the digital CADD files.

All data was derived from GPS positions and processed through Online Position User Service (OPUS). Horizontal coordinates were referenced to the North American Datum of 1983 (NAD 83) with State Plane Coordinates in U. S. Survey Feet for the Mississippi West Zone. Vertical Elevations were referenced to the North American Vertical Datum of 1988 (NAVD88) using Geoid. **Members Involved: Mark Mattox, Joshua Mattox, Jacob Mattox, Melvin Greene, William Gross, Ralph Hutchinson, Jared Estes, William Gray, James Pettigrew, David Tubbs**

Relevant Components:
<ul style="list-style-type: none"> ▪ Bridge Scour Survey ▪ Multibeam Survey ▪ Single beam Survey ▪ Mobile Lidar Survey ▪ Damage Assessment & Monitoring Survey ▪ Determining Water Elevation ▪ Vessel and Equipment System Checks ▪ Surveyor's Report ▪ Field and Raw Data Provided to Client



Multibeam Data



Multibeam Data with Contours

Firm name	EMC, Inc.		Past Performance Evaluation Discipline(s)*	Survey
Project name	Union Pacific Railroad Bridge Hydrographic and Laser Scan Survey		Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	G and G Marine	
Project location	Forest City, AR, Saint Francis River		Owner's Project Manager	Dan Gilbert
Owner's address, phone, email	25933 Budde Road, The Woodlands, Texas 77380, 281.367.8352, d.gilbert@gg-marine.com			
Services commenced by this firm (mm/yy)	06/13	Total consultant contract cost (\$1,000's)		\$12
Services completed by this firm (mm/yy)	08/13	Cost of consultant services provided by this firm (\$1,000's)		\$12

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

G and G Marine contracted EMC to conduct a multibeam survey of the Union Pacific Railroad Bridge that crosses the Saint Francis River. The purpose of the survey was to determine riverbed conditions, identify any major scouring around the bridge piers and for river bottom sediment purposes within the project area. In addition, we were tasked to find the low steel elevation and to find out if any structural deformation exists.

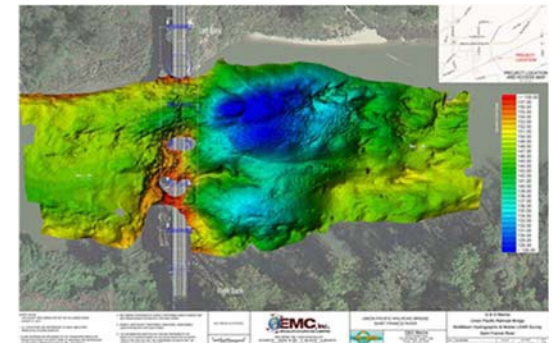
In order to complete this task, EMC utilized one of our surveying vessels, along with a Reson T20 multibeam system. This system allowed us to provide extremely high density sounding over the entire project area. EMC performed all the necessary tests to our multibeam system at the beginning of the survey and all standards set forth by our client and the USACE Hydrographic Survey Manual were met or exceeded. Level runs were collected before, during and after the survey in order to establish the water surface's elevation.

In addition to the multibeam survey, our client also requested us to survey the above water portions of the bridge. EMC utilized our Riegl VZ-400 mounted on our surveying vessel. The data collected with our Riegl provide our client a detailed drawing of each pier and the distance between piers.

Opus corrections were performed for the control points set and the level notes were reduced to provide an accurate water elevation at the time of the survey. The multibeam data was edited and tide corrected using Hypack Software to produce an edited XYZ file. The XYZ file was then imported into MicroStation for contouring and creating plan view sheets of the project area. Data was provided to our client in an XYZ (all Data) file, XYZ file on a 5 x 5 Grid, a plan view sheet showing contours and a plan view sheet showing elevations.

Members Involved: Mark Mattox, Joshua Mattox, Jacob Mattox, William Gross, William Gray

- Relevant Components:**
- Bridge Scour Survey
 - Multibeam Survey
 - Single beam Survey (Check and Verify Multibeam data)
 - Mobile Lidar Survey
 - Damage Assessment & Monitoring Survey
 - Determining Water Elevation
 - Vessel and Equipment System Checks
 - Surveyor's Report
 - Field and Raw Data Provided to Client



Firm name	EMC, Inc.		Past Performance Evaluation Discipline(s)*	Survey
Project name	Single Beam, Multibeam, Sub-Bottom Profiler, Magnetometer, Side Scan Pipeline Depth of Cover Inspection Survey		Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Sentinel Corrosion Services	
Project location	Fourchon to Venice, LA Gulf of Mexico,		Owner's Project Manager	Matthew Henning
Owner's address, phone, email	4411 Navigation Blvd., Houston, TX 77011, 713-225-6661, matthew.henning@sentinelcorrosion.com			
Services commenced by this firm (mm/yy)	03/16	Total consultant contract cost (\$1,000's)		\$122
Services completed by this firm (mm/yy)	05/16	Cost of consultant services provided by this firm (\$1,000's)		\$122

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Sentinel Corrosion Services tasked EMC to perform a Depth of Cover (DOC) inspection survey of 7 different pipelines located in the Gulf of Mexico. In addition to determine the DOC, we were tasked to locate any possible exposures and to locate any bottom features that could affect the integrity of the pipeline.

EMC's management designed project a specific task list and a safety plan for this job. As per our safety plan, the first day on site, we conducted a reconnaissance survey of the area to be surveyed. There were no hazards found that could interfere with operations, so our field crew began to collect the data needed for this survey.

Our field crew worked out of our vessel, the Sea Scanner, which is a 32' Armstrong Catamaran with twin Yamaha 250 four stroke engines. Our catamaran vessel allowed our crews to handle the ruff currents and also get in close to the shoreline due to its shallow draft. In addition to our vessel, our crew was equipped with state-of-the-art hydrographic surveying equipment in order to collect the data. First our crews ran cross sections at 500-foot intervals inside the limits of the survey to locate the pipelines with our Geometrics G882 Magnetometer. This confirmed the as-built locations of the pipeline. The next task was to determine if any of the pipelines had any exposures, scouring or debris located in the pipeline's right-of-way. To accomplish this task, we used our Klein 3000 dual frequency side-scan. Our final task for this project was to determine the depth of cover of the entire survey limits. This was achieved by running cross-sections at every 500 feet with our EdgeTech 424 Sub-bottom Profiler and our Odom Mark III Dual Frequency Transducer. All single beam data was tide corrected using a NOAA tide gauge located at Port Fourchon (8762075).

An array of computer systems was used to process all of the data from the field survey. Side-scan sonar data was processed using Chesapeake SonarWiz Map. Mosaics were created from the Sidescan XTF files and GeoTiffs were created. The data was then imported into AutoCAD. The data from the magnetometer was compared to the XY location from the Sub-bottom Profiler along with the XY locations received from the manual probes. The Sub-bottom files for the Export Lines from shore to the Mean Low Water and were processed using Chesapeake SonarWiz Map. From this data, a table was generated with a point number, station information, Easting, Northing, Mud Cover and Mean Low Water Depth.

Relevant Components:

- Hydrographic surveying and mapping - side scan sonar data; vertical beam echosounder, sub-bottom profiler, Magnetometer
- Determining positions and least depths
- Supporting Data - water level correctors, velocity of sound in the water column, vessel motion correctors
- Processing data - applying water level, vessel motion and velocity of sound correctors; compiling reports, final smooth sheets, and digital data.
- Quality control during data acquisition and processing
- Underwater hazard detection
- Using differential GPS, acoustic and conventional survey techniques
- Horizontal and vertical control
- Cross-sections and profiles
- Computations and compilation
- Drafting, General office work
- Vessel and Equipment System Checks
- Surveyor's Report
- Field and Raw Data Provided to Client
- Final Files in MicroStation

Members Involved Joshua S. Mattox, Mark S. Mattox, Melvin D. Greene, William Gray, Hardy Gross, Jake Mattox, James Cole, Ralph Hutchinson, Ronny Joe Hutchinson, JR., William Moore, Zachary L. Underwood,

18. Approach and Methodology:

Hydrographic Surveys

EMC has hydrographic surveying experience on major waterways, oceans, beaches, and bays from the San Francisco Bay to the U.S. Virgin Islands. This experience includes performing automated and manual hydrographic surveys on numerous rivers throughout the Southeast for 40 years. EMC has all the necessary office and field equipment to provide the client with fully automated RTK and DGPS hydrographic surveys. All hydrographic surveys are planned and checked by our in-house Certified Hydrographic Surveyor.

One of the first and last steps in conducting any hydrographic survey is to collect the supporting data, such as water level correctors, secchi depth readings and sound velocity checks. EMC has set benchmarks, staff, wire weight and DCP gauges and tidal stations to collect the water elevations on lakes, rivers and oceans. Field crews perform clarity checks using a secchi disk and sound velocity measurements before conducting the hydrographic survey with our Odom Digibar. For all our hydrographic projects, EMC collects supporting data to the standards set forth by our clients.

Our hydrographic surveys are planned; and survey lines are created using Hypack software. Horizontal positions are obtained using DGPS, RTK or VRS systems. Bottom elevations are controlled by multiple water surface computations from established vertical control. Hydrographic data collection is performed using Hypack software, along with an Odom Echotrac single beam survey system or a Reson multi-beam system. When the fieldwork is completed, we will then edit the data using Hypack software, and export the processed data to client-specified formats. For single-beam transducer and multibeam surveys, EMC uses Hypack software for data acquisition. The system logs position data, motion data if applicable, and digital depths, as well as the full water column data for on-screen quality review or digitizing during data processing. For side-scan sonar or geophysical surveys, we utilize SonarWiz software which provides a more comprehensive sonar acquisition package providing a more precise time tag and optimum display of sonar and sensors data. EMC frequently takes advantage of the benefits of both systems when conducting multibeam, side-scan sonar or geophysical surveys. During the execution of a survey, the POS/MV (position and orientation system for marine vessels) provides precise time-registering of position, attitude and sonar data. Hypack allows for survey transects, shoreline features, survey limits, and other site-specific parameters to be pre-programmed, thus allowing for extremely efficient field operations. Hypack and SonarWiz provide a real time graphic display of survey coverage, thereby ensuring that the survey area has been mapped before demobilization.

EMC owns and maintains three multi-beam systems, (1) Reson 7101, (1) Reson 7125, (1) Reson T2OP and Reson T50P. These systems can be mounted on any of our hydrographic survey vessels. Each system is equipped with a state-of-the-art Inertial GPS system POS MV. These systems can also be easily mobilized onto a vessel of opportunity if needed. EMC also owns multiple single and dual frequency, echo sounding systems. Our dual frequency echo sounders are Odom MKIII with 200-24 khz transducers. EMC also owns a Klein 3000 Dual Frequency Side-Scan Sonar and Edgetech 4125 (this system is very compact allowing us to mobilize it quickly and efficiently anywhere in the world), along with SonarPro and Chesapeake software for acquisition. These sonar systems allow for acquisition of heading, speed and altitude. This high-resolution, digital, sonar system allows us to collect, target and mosaic, state-of-the-art, highly accurate data real-time with decimeter positioning. EMC has conducted numerous magnetometer and sub-bottom profiler surveys for both government and private entities. Our crews utilize a Geometrics G882 Magnetometer for all our magnetometer projects. This system includes a Differential Global Positioning System (DGPS) and Hypack software. The EdgeTech 216 and 424 Sub-Bottom Profilers are utilized where sub-bottom acquisition is needed, along with a CODA topside acquisition computer. Our marine magnetometer, configured for shallow water operations, incorporates an acoustic altimeter and depth sensor to allow precise height adjustment; and is utilized to locate pipelines, cables or seafloor artifacts. The geophysical instruments provide information to allow volume calculations for dredging or environmental surveys.

For all hydrographic projects, the required QC tests which includes bar checks, velocity casts, patch tests, instrument alignment tests, vessel velocity limitations, multibeam beam-width restrictions, and overlapping coverage based on the accuracy required and the bottom material classification were conducted. In addition, all CADD and USACE Standards were met on all projects, including all the standards outlined in EM 1110-2-1003.

Manual hydrographic surveys can be taken with lead line or manual probing from a survey vessel. Manual hydrographic techniques are used on almost every comprehensive survey project performed by our field crews to aid in the overlapping of hydrographic and topographic data and to collect hydrographic data in areas where automated systems are unable to efficiently operate.

EMC has extensive experience implementing a variety of water level measurement systems and installation techniques to obtain and analyze near-shore and offshore data. EMC has provided tide solutions for many different types of survey areas along open coast environments with slight changes in tidal range and phase, narrow water ways influenced by shallow water and meteorological tidal harmonic constituents and areas of transition from one tide type to another. A majority of these hydrological gauging surveys are initiated by static GPS vertical control networks, stemming from well-established benchmarks in a stable environment. Static control networks are collected and processed; and GPS or leveling procedures are generally the next step to establish vertical control on the gauge or gauges involved in the survey. Furthermore, EMC has set, monitored, analyzed and utilized both conventional and automated sensors throughout the Southeast for NOAA and the USACE Districts, New Orleans, Vicksburg, Memphis, St. Louis, Mobile and Jacksonville. All gauges, DCP and sensors will be set to our clients' and industry standards. EMC has extensive experience in tide and water level work, including planning and reconnaissance; installation of stilling wells and gaging equipment for secondary, tertiary, VDatum and zoning gauges; establishing benchmarks; differential leveling; GPS surveys; maintenance and operation of gauges; tidal datum recovery; data analysis; zoning; and quality control.

EMC has over thirty years of experience utilizing Differential Global Positioning Systems (DGPS) to obtain our horizontal positions while performing our hydrographic surveys. Knowing the position of our surveying vessels is one of the most important parts of any hydrographic surveying project. EMC horizontal positions our surveying vessels using RTK and/or DGPS systems. The bottom elevations are controlled by multiple surface computations from established vertical controls.

Below are some recent hydrographic projects that EMC has completed:

- Atchafalaya River Damage Assessment Survey, Long Lake Revetment to Berwick South Revetment Multibeam (MVN)
- Flow Failure Sites, 10 revetment sites from mile 218.2 to mile 35.2 on both LDB and RDB of Mississippi River within the New Orleans District (MVN)
- Hydrographic Surveys for the McClellan-Kerr Arkansas River Navigation System from Montgomery Point to Murray Lock & Dam 7 (SWL)
- Low Sill and Auxiliary Structures, Pre and Post High Water– Construction Survey (MVN)
- Port Fourchon, West Belle Pass Jetty Repairs
- Lafourche Parish
- Inland Electronic Navigational Chart (IENC) Feature Collection and Hydrographic Survey along the White River, Throughout the USACE District, Memphis (MVM)
- COG Post Storm Survey - Multibeam and Mobile LiDAR Survey, Galveston Beach, TX (Atkins)

- Post Gustav/ Ike Grand Isle Surveying Services, Grand Isle, LA (MVN)
- Mississippi River Revetments Construction and Maintenance Operations, Mississippi River (MVM)
- General Hydrographic Survey, Cairo IL to Gunnison, MS (MVM)
- Mississippi River Multibeam Surveys, Red Eye Dikes 1-6, Mile 224-L and Medora Dikes 1-3, Mile 212.0-L (MVN)
- Mississippi River and Ohio River Low Water Slope Profile Survey Mississippi River–RM 4 Upper MSR to RM 593 MSR Ohio River–RM 977 to Confluence with MSR (MVM)
- Mississippi River Multibeam Survey, Various Parish’s and Levee Districts, LA (MVN)
- Arkansas River Watershed, North Canadian River, Auxiliary Spillway Channel Excavation, Canton Lake, Oklahoma (Kiewit)
- Port of Gulfport - Multibeam Survey - Fill Site Gulfport, Mississippi

Project Spotlights

Interstate 20 Bridge Multibeam Hydrographic & Mobile LiDAR Survey - This project consists of performing a multibeam and mobile LiDAR survey of the I-20 bridge. Additional riverbed data was collected to determine the condition of the river bottom and condition of pilings. This survey included developing plan view plots and a 2-foot grid XYZ file of the multibeam dataset.

Project control and water surface information was collected with a Trimble R6-3 base station with Internal Antenna and a Trimble R6-3 RTK Rover systems. This data was then processed in the office Trimble Business Center, utilizing the OPUS (Online Positioning User Service) control values from NOAA to compute ground control coordinates and provide tide corrections for the multibeam data.

The hydrographic survey was performed by a two-man hydrographic surveying crew. Multibeam data was collected from our surveying vessel the “Sea Beneath” utilizing a Reson 7125 200-400kHz Multibeam System along with POSMV corrections 2012A. Performance/Patch test were performed before and after the survey as a quality control check. The multibeam data was tide corrected using RTK water surface elevations. This data was then processed in the office using Hypack. The mobile scan beneath the bridges was collected utilizing a Reigl VZ400 laser scanner and a POSMV positioning system. The mobile LiDAR collection along the roadways was performed utilizing a Reigl VMX450. Bentley MicroStation V8i and AutoCAD 2014 were used to develop the digital CADD files.

All data was derived from GPS positions and processed through Online Position User Service (OPUS). Horizontal coordinates were referenced to the North American Datum of 1983 (NAD 83) with State Plane Coordinates in U. S. Survey Feet for the Mississippi West Zone. Vertical Elevations were referenced to the North American Vertical Datum of 1988 (NAVD88) using Geoid.

Old Highway 82 Bridge Demolition Survey, Greenville, MS - Granite Construction company relied on EMC to perform the hydrographic surveys required to locate and document any debris that could be a hazard to navigation caused by the demolition of the Old Highway 82 Bridge. The pre-survey was conducted to determine if any debris or other materials were on the river bottom before the demolition and to document any items that were above the elevation of 60.00 feet NGVD 1929. Our survey limits for the pre-survey were between Piers 10 through 13 at a distance of 150 feet either side of the centerline of the existing bridge. In order to complete this task, EMC utilized one of our 26-foot vessels, along with our single beam, multi-beam and side-scan technologies to successfully provide all required data to our client. Then after the demolition, we were asked to come and complete the post-hydrographic surveys. All of the surveys were similar to the pre-demolition, except that we were required to utilize a sweep consisting of a heavy section of railroad rail which was suspended from our vessel to a depth just above river bottom so that we could confirm that the river bottom was safe for navigation.

Topographic Surveying

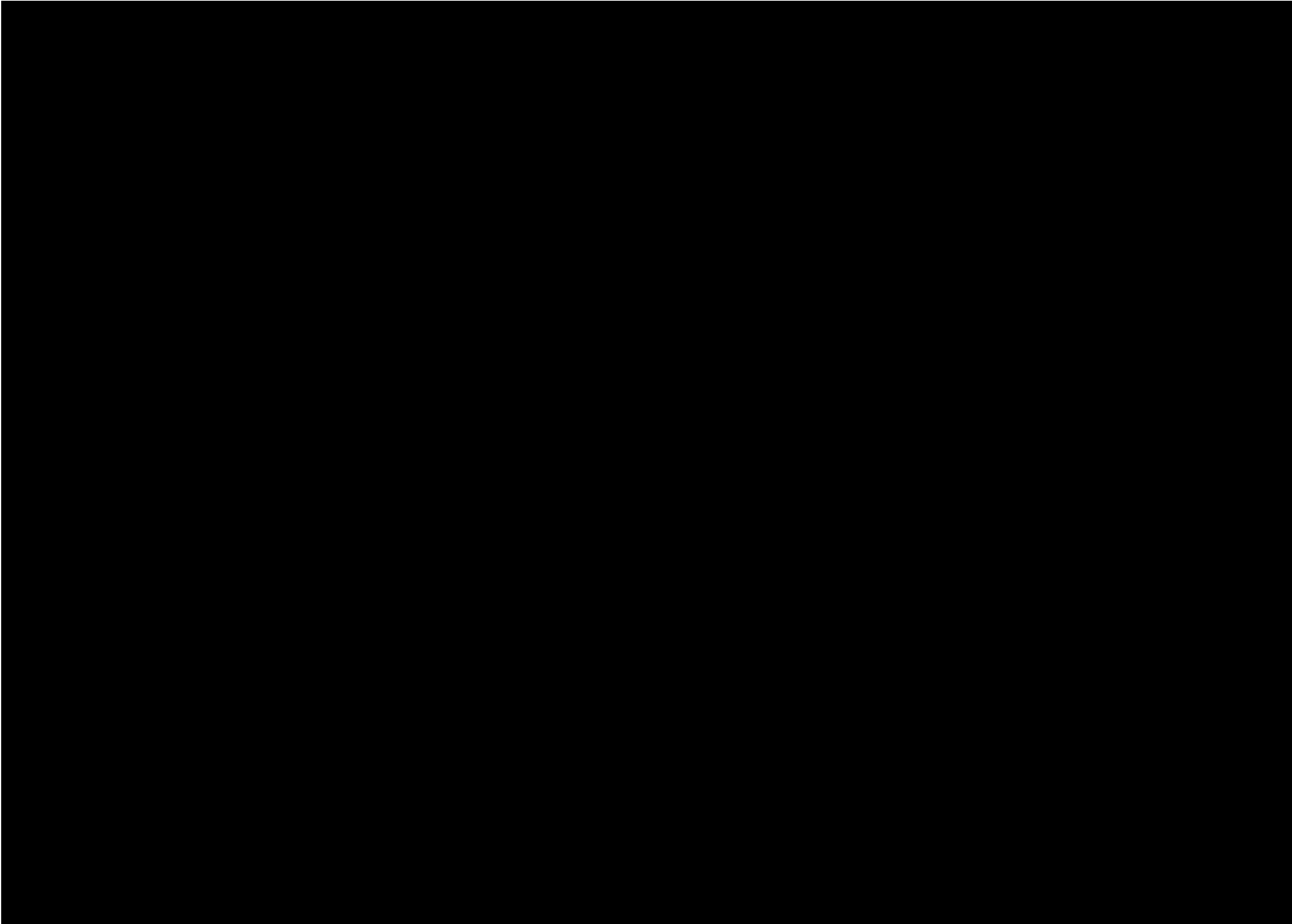
EMC has offered our clients a range of solutions including conventional, GPS and LIDAR surveying methods to gather all land features required in a topographic survey. These solutions are built upon our team's knowledge and experience in these types of surveys. We have invested heavily in the latest technologies, equipment, as well as training our staff to allow us to provide our topographic services in some of the harshest terrain in the United States, including the landscapes throughout the State of Louisiana.

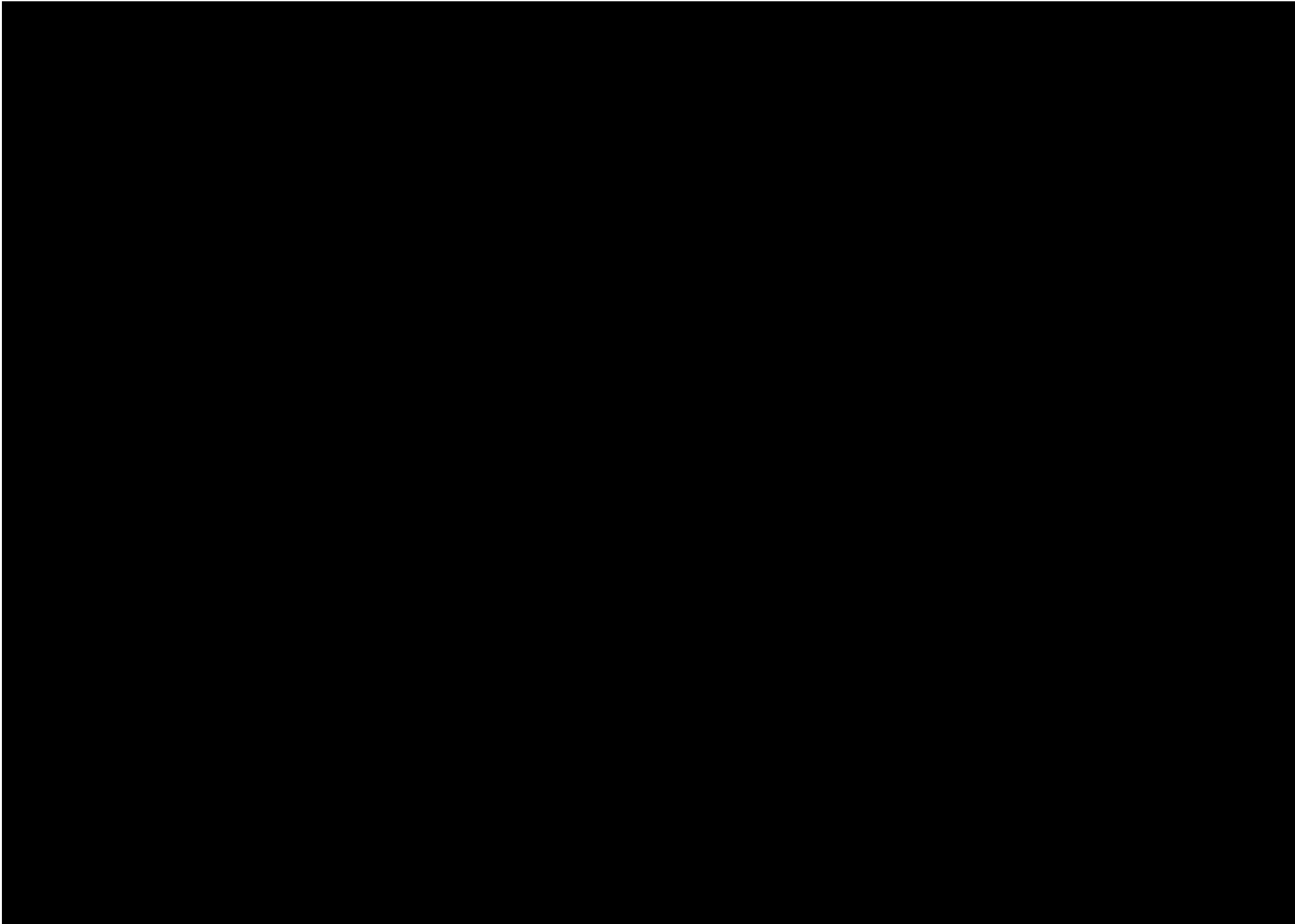
For Static and/or RTK GPS surveys, EMC's field surveying crews utilize Trimble R12, R10, R8 or R6 GNSS GPS receivers along with the Trimble TSC collectors to collect all required data. The data is collected using Trimble system known as Trimble Access. These Trimble GPS systems set the bar for advanced GNSS surveying. These integrated systems deliver unmatched accuracy and performance in a rugged, compact unit. Our Trimble GPS system supports a wide range of satellite signals, including GPS L2C and L5 and GLONASS L1/L2s. For addition support, EMC also has several Trimble 5800's on standby, which also can receive both the L1 and L2 codes. Our conventional topographic surveys are performed with the latest conventional technologies, such as the Trimble S6 robotic total station equipped with Trimble Vision, Trimble/Nikon total stations (1" to 3" guns) and Trimble data collectors. Our conventional and RTK GPS systems directly interface with each other, enabling our crews to use the appropriate system that is best for the field conditions. In addition, our combination of Trimble data collectors and collection software, Trimble Access, allows our crews to quickly "swap" back and forth between surveying techniques on the fly to aid in efficiency and error reduction. Our crews utilize all necessary equipment to work off Virtual Reference Stations (VRS) Networks. We have successfully used the VRS network on various surveying projects. Our standard complete equipment setups allow us to reduce field errors and provide our client with an efficiently produced, professional topographical reproduction of the land being surveyed.

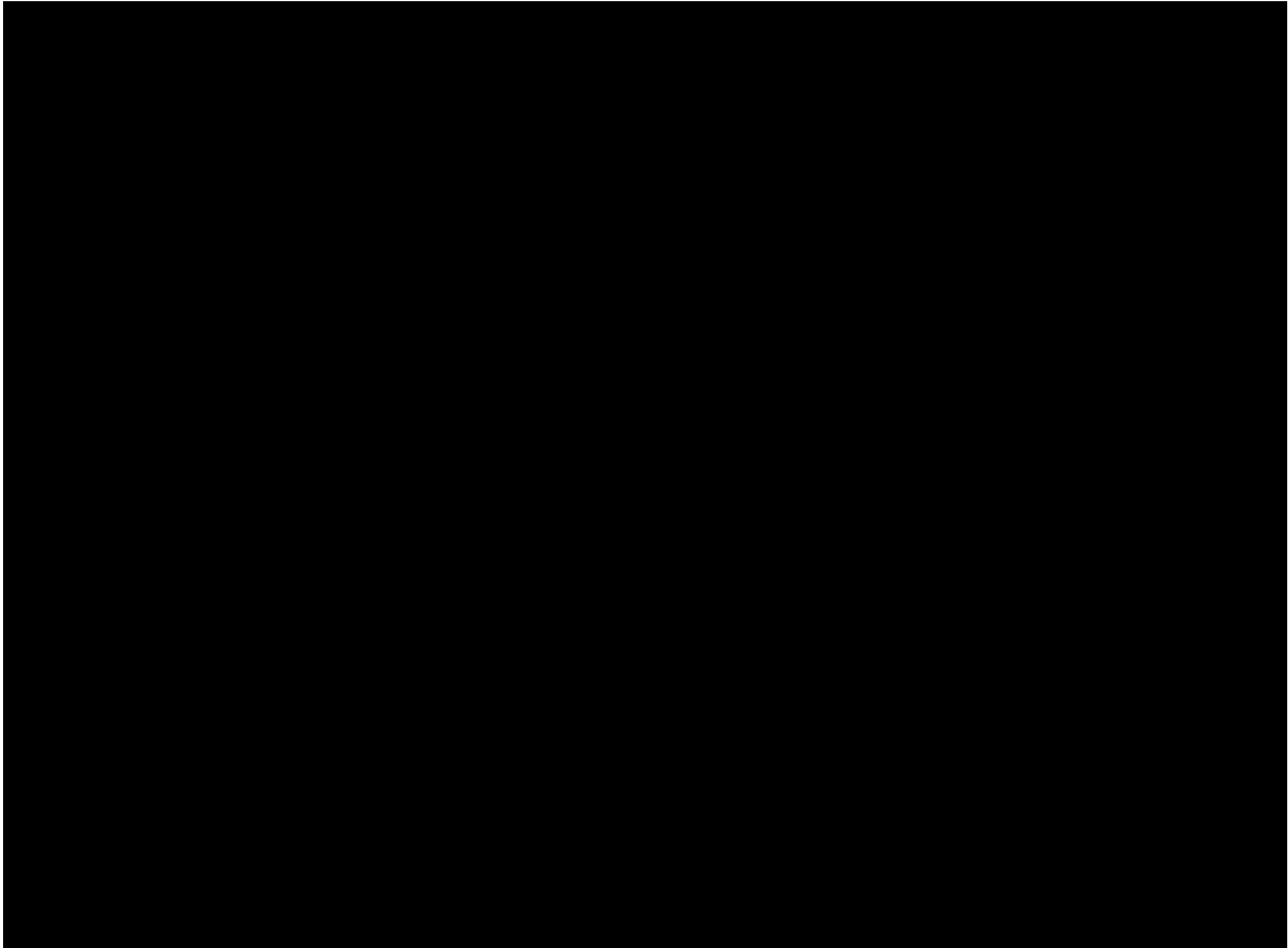
Prior to fieldwork, our surveys are planned in the office. Once the survey plan is approved by all supervisors involved, our field crews are given all pertinent information pertaining to the survey including instructions on how to proceed with data collection. After the field crew collects the required data, the data comes into the office in Trimble's data collector file format (.dc) and job file format (.job). In addition, all other supporting data is provided to the office staff such as field books, static data files, photographs, sheets verifying the control used, etc. Upon delivery, our office personnel utilize Trimble Business Center (TBC) for processing. Static GPS networks are processed and analyzed, if applicable. The RTK GPS and/or conventional data is imported into TBC software where rod heights are checked, and any corrections needed are applied. Once the data is processed, analyzed, and computed, the data is exported for mapping. EMC two most common ways to import data to be mapped is using the latest versions of AutoCAD or MicroStation. After the data is imported, we create horizontal and vertical alignments (.alg) where needed. The topographic features are delineated; cells are placed on appropriate items; and labels are placed where applicable. The data is then imported into a digital terrain model (.dtm), which is triangulated; edited for extraneous triangles; and edges are swapped to produce an accurate digital elevation model of the surface. We then display contours and/or gridded spot elevations, along with planimetrics. Cross sections, volumes and reports are created where requested. Once processing and mapping has been completed in AutoCAD and/or MicroStation, the files can be exported and saved to any client format needed.

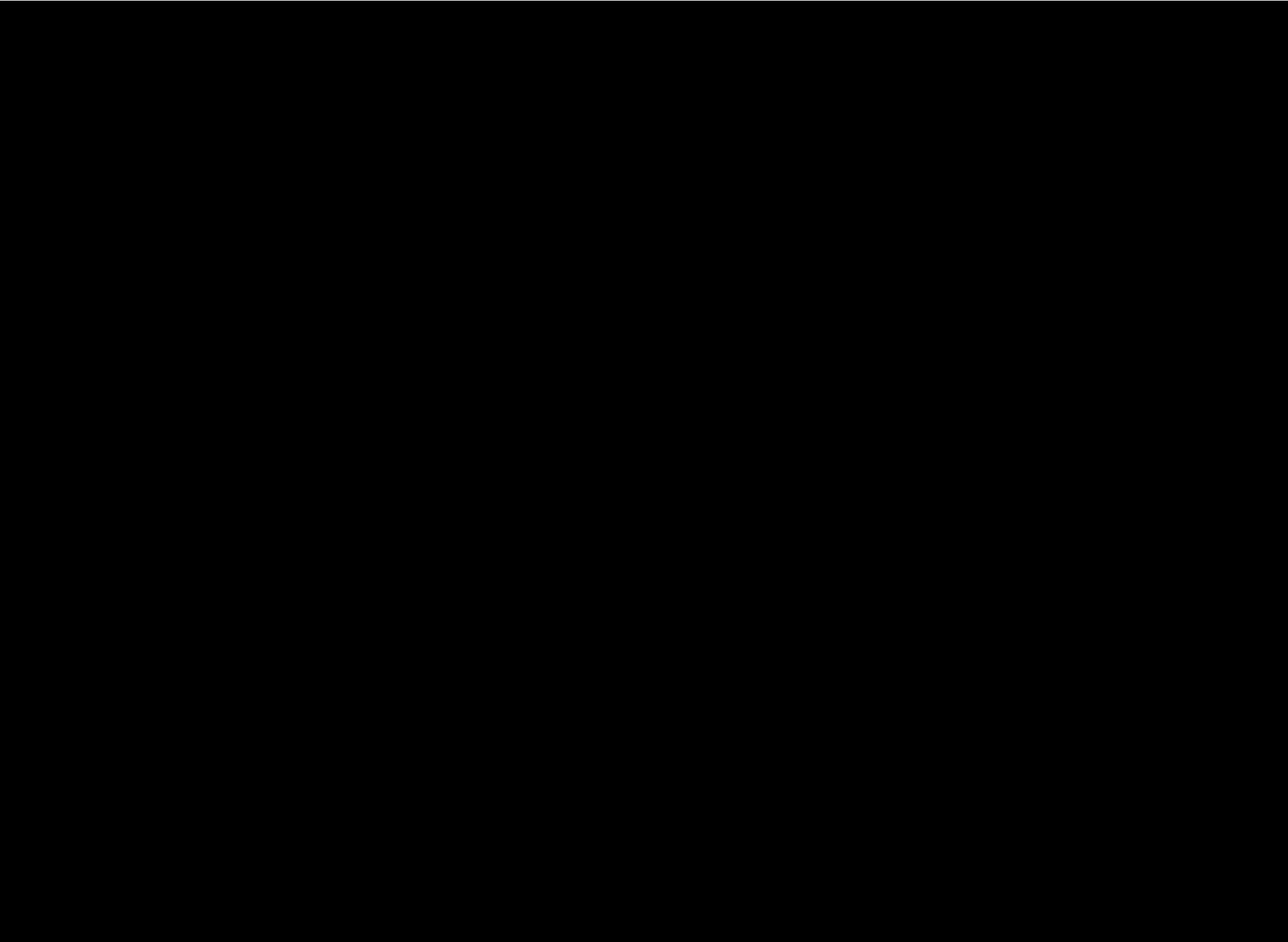
Recent Topographic projects that EMC has completed.

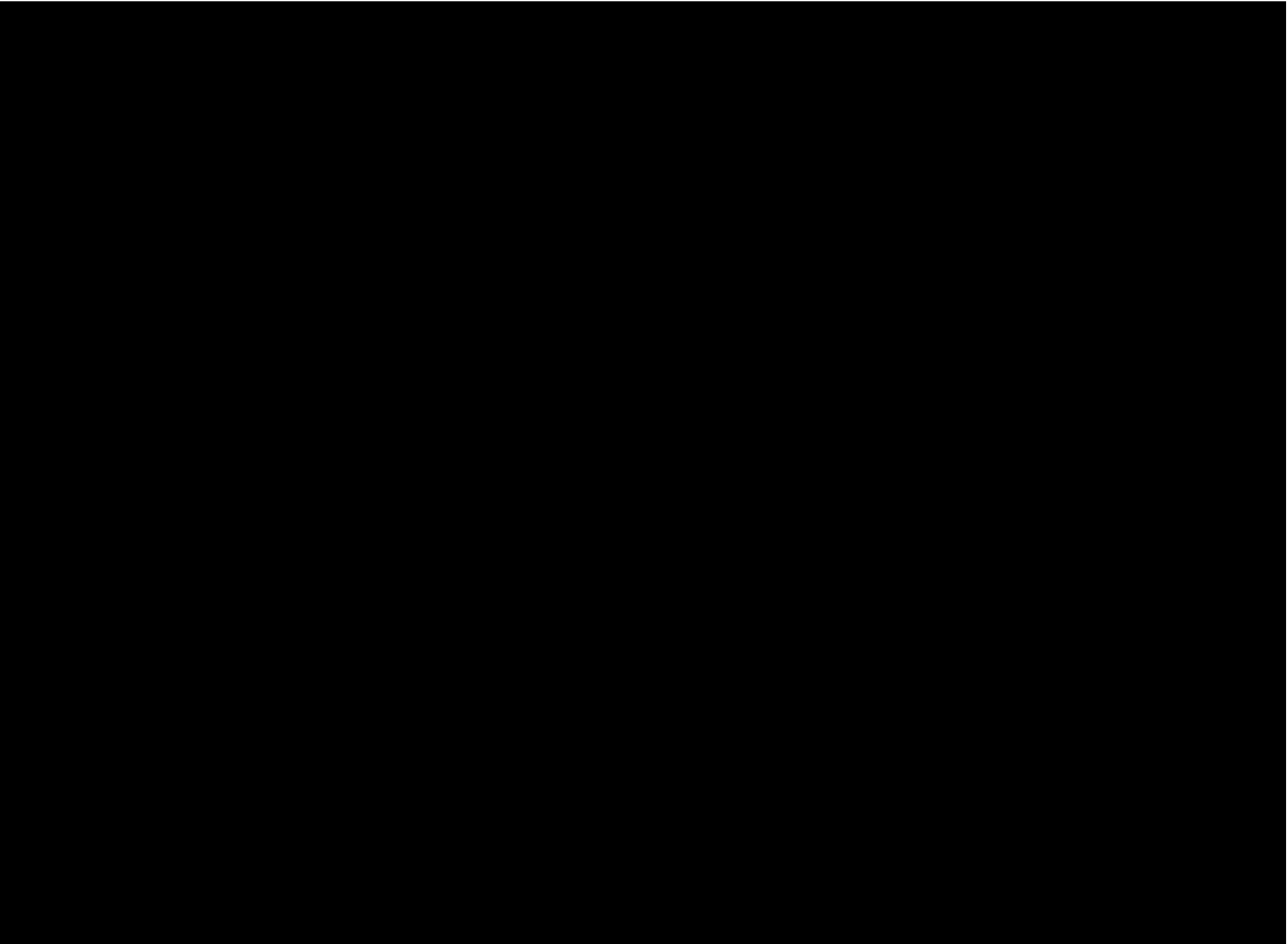
- Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Orange County Coastal Storm Risk Management (CSRМ), Orange County, TX (Client: USACE, Galveston)
- Parcel Research, Topographic, Planimetric, Bathymetric and SUE Surveying Services for the Sabine Pass to Galveston Bay Freeport Coastal Storm Risk Management, Brazoria County, TX (Client: USACE, Galveston)
- EBR Ward Creek, Beaver Bayou and Blackwater Bayou Survey, East Baton Rouge Parish, LA (MVN)
- Cross-Section, Profiles and Topographic Surveys for Design of NOV-10; Happy Jack to Nairn, New Orleans to Venice, LA (MVN)

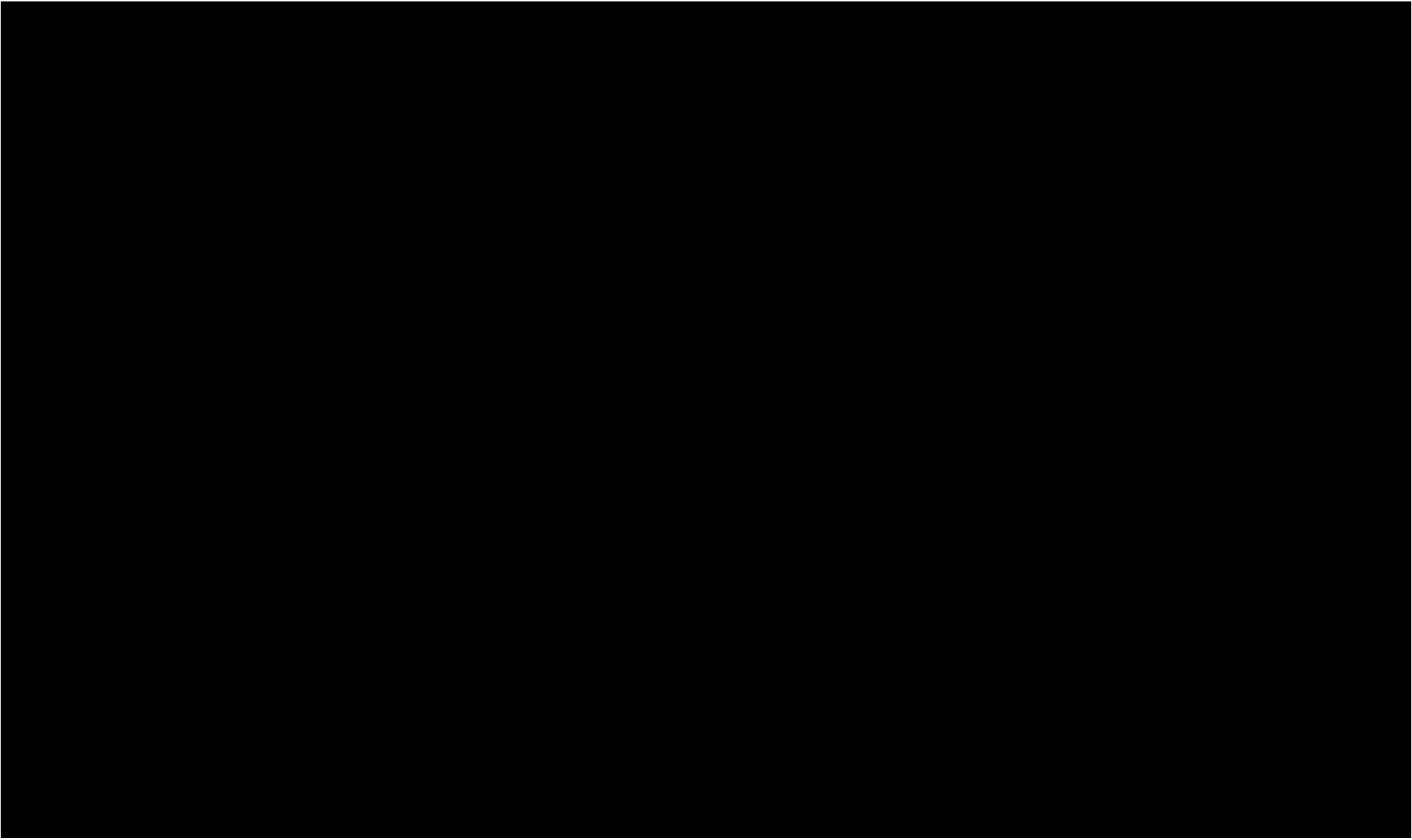


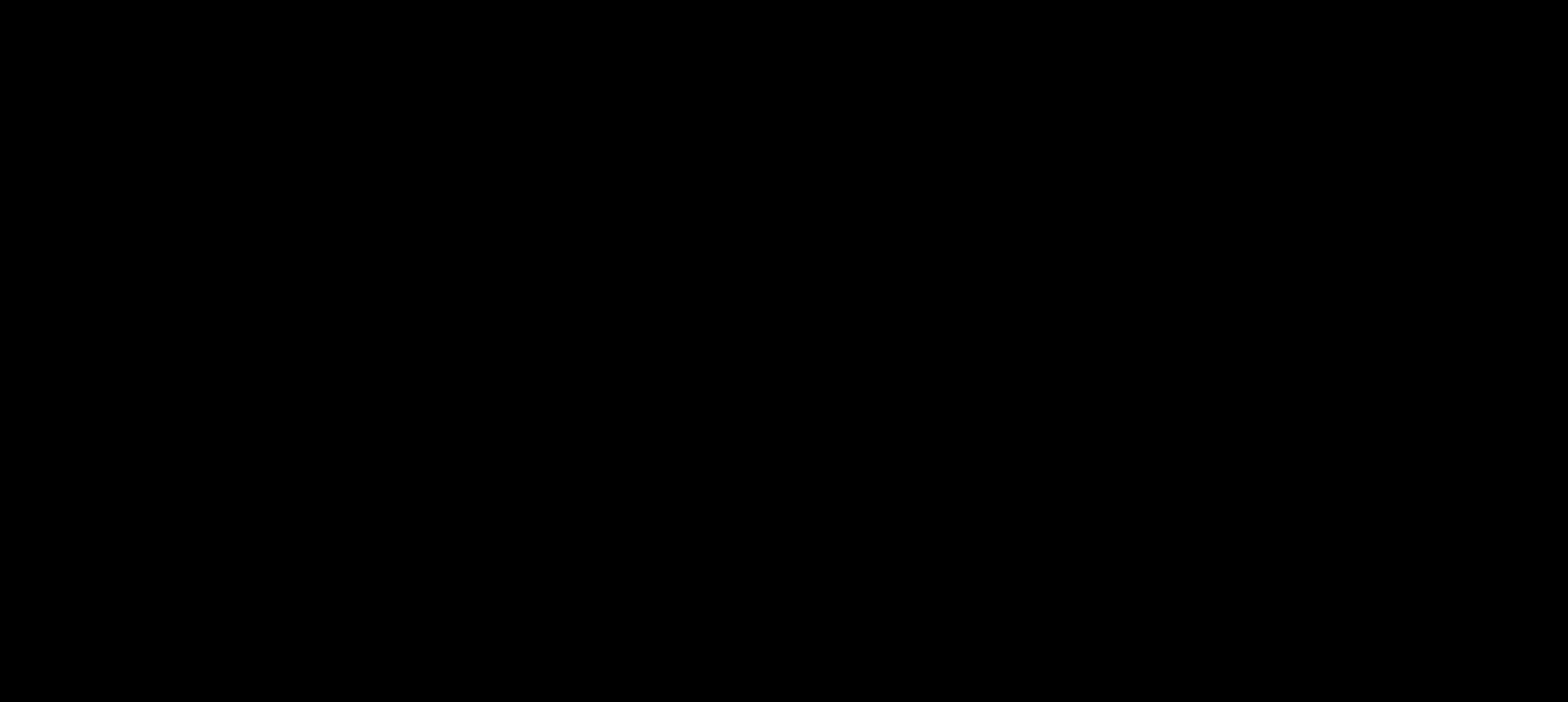


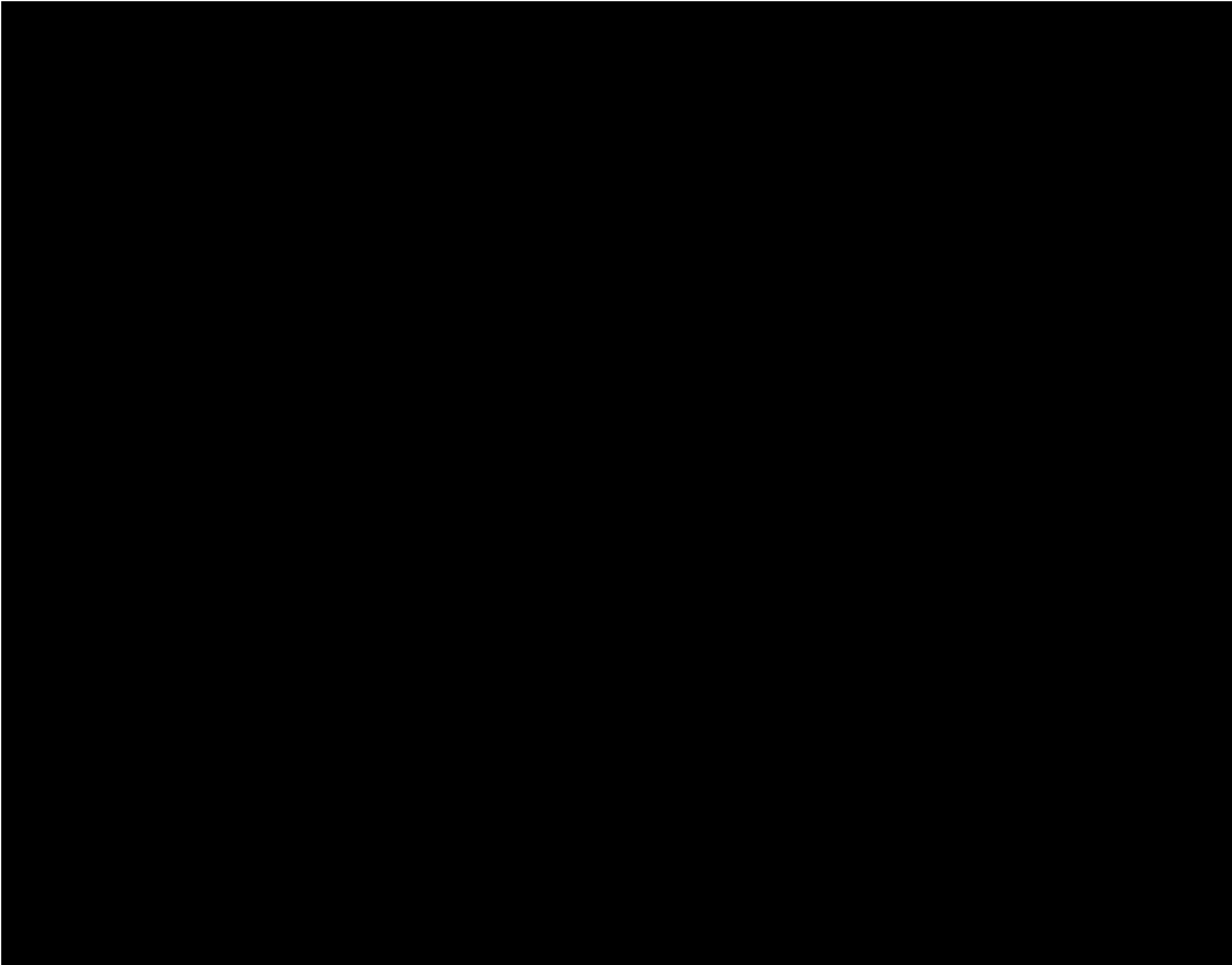














19. Workload:

For all contracts where a firm on the team is a prime consultant or sub-consultant and where **a)** the consultant selection was made by DOTD, and **b)** a contract was executed by the consultant and the contracting entity by the date the advertisement for this proposal was posted, list all work meeting the following criteria:

- 1) one of the team’s firms is responsible for the performance of the work;
- 2) authorization to perform the work has been provided, as provided in the contract between the consultant and the contracting entity;
- 3) the work has not yet been performed and invoiced; and
- 4) the work is not currently suspended for an indefinite period of time.

For indefinite delivery/indefinite quantity (IDIQ) contracts, list open Task Orders individually.

List only the portion of the fees attributable to firms on the team.

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
EMC	Survey	N/A	N/A	N/A
EMC	Data Collection	N/A	N/A	N/A

(Add rows as needed)

DO NOT SUM

* The **only** past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify). If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.

** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. NOTE: ALL FIRMS MUST BE REPRESENTED IN THIS TABLE. LEAVING THE “REMAINING UNPAID BALANCE” COLUMN BLANK IS NOT ACCEPTABLE.

While EMC has held many government contracts including State Department of Transportation contracts, we currently do not have any ongoing contracts or projects with the Louisiana Department of Transportation.

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. **Otherwise, leave this section blank.**



Fax Numbers
225.932.5317 (Admin. Services)
225.932.5314 (Corporations)
225.932.5318 (UCC)

Name	Type	City	Status
EMC, INCORPORATED OF MS	Business Corporation (Non-Louisiana)	GRENADA	Active

Previous Names

E.M.C., INC. OF GREENWOOD (Changed: 12/14/2009)

Business: EMC, INCORPORATED OF MS

Charter Number: 36452855F

Registration Date: 5/17/2007

Domicile Address

2472 SUNSET DR
GRENADA, MS 38901

Mailing Address

2472 SUNSET DR
GRENADA, MS 38901

Principal Business Office

2472 SUNSET DR
GRENADA, MS 38901

Registered Office in Louisiana

3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Principal Business Establishment in Louisiana

3867 PLAZA TOWER DR.
BATON ROUGE, LA 70816

Status

Status: Active

Annual Report Status: In Good Standing

Qualified: 5/17/2007

Last Report Filed: 4/18/2023

Type: Business Corporation (Non-Louisiana)

Registered Agent(s)

Agent:	C T CORPORATION SYSTEM
Address 1:	3867 PLAZA TOWER DR.
City, State, Zip:	BATON ROUGE, LA 70816
Appointment Date:	9/16/2021

Officer(s)

Additional Officers: No

Officer:	MARK MATTOX
Title:	Executive Vice-President
Address 1:	2472 SUNSET DR
City, State, Zip:	GRENADA, MS 38901

Officer:	JOSH MATTOX
-----------------	-------------

Title: President
Address 1: 2472 SUNSET DRIVE
City, State, Zip: GRENADA, MS 38901

Officer: JAKE MATTOX
Title: Vice-President
Address 1: 2472 SUNSET DRIVE
City, State, Zip: GRENADA, MS 38901

Amendments on File (4)

Description	Date
Disclosure of Ownership	11/24/2009
Name Change	12/14/2009
Stmt of Chg or Chg Prin Bus Off	9/16/2021
Stmt of Chg or Chg Prin Bus Off	1/6/2023

[Print](#)

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name: EMC, Inc. of MS
Public Address: Mr. Joshua S. Mattox
2472 Sunset Drive
Grenada, Mississippi 38901

License/Certificate Information w/ Supervision


License	Status	First Issuance Date	Expiration Date	Supervisor(s)
VF.0000630	Active	01/21/2010	03/31/2024	Mr. Michael Cook # PLS.0004879



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 11/29/2023, the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Michael Olyn Cook
20051 Old Scenic Hwy, Apt. 307
Zachary, Louisiana 70791

	LOUISIANA PROFESSIONAL ENGINEERING & LAND SURVEYING BOARD (LAPELS)
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com
Mr. Michael Olyn Cook	
License/Certificate Type - Number	Expiration Date
PE.0028912	09/30/2024
Status: Active	
<p>Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).</p> <p>LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.</p>	

Cut Here

Fold Here

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Disclaimer

All information provided by LAPELS on this web page, and on its other web pages and internet sites, is made available to provide immediate access for the convenience of interested persons. While LAPELS believes the information to be reliable, human or mechanical error remains a possibility, as does delay in the posting or updating of information. Therefore, LAPELS makes no guarantee as to the accuracy, completeness, timeliness, currency, or correct sequencing of the information. Neither LAPELS, nor any of the sources of the information, shall be responsible for any errors or omissions, or for the use or results obtained from the use of this information. Other specific cautionary notices may be included on other web pages maintained by LAPELS.

If you need to make changes to your contact information, please choose one of the following options below:

Contact update for [Individuals and Firms](#)

License/Certificate Types:

EF = Engineering Firm

VF = Land Surveying Firm

CPD = Continuing Professional Development Sponsor/Provider

*PE = Professional Engineer

*PLS = Professional Land Surveyor

*EI = Engineer Intern

*LSI = Land Surveyor Intern

*PE Discipline Codes


AG	Agricultural	ME	Mechanical
AR	Architectural	MI	Mining or Mineral
CH	Chemical	MT	Metallurgical
CE	Civil	MU	Manufacturing
CS	Control Systems	NV	Naval Architecture & Marine
EE	Electrical & Computer	NU	Nuclear
EV	Environmental	ST	Structural *
FP	Fire Protection	PT	Petroleum
IE	Industrial		
* An engineer that has passed the Structural I exam is listed as a Civil Engineer. An engineer that has passed both the Structural I and II exams is listed as Structural (ST) and a Civil (CE) Engineer.			



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 11/29/2023, the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Michael Olyn Cook
20051 Old Scenic Hwy, Apt. 307
Zachary, Louisiana 70791

	LOUISIANA PROFESSIONAL ENGINEERING & LAND SURVEYING BOARD (LAPELS)
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com
Mr. Michael Olyn Cook	
License/Certificate Type - Number	Expiration Date
PLS.0004879	09/30/2024
Status: Active	
<p>Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).</p> <p>LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.</p>	

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Disclaimer

All information provided by LAPELS on this web page, and on its other web pages and internet sites, is made available to provide immediate access for the convenience of interested persons. While LAPELS believes the information to be reliable, human or mechanical error remains a possibility, as does delay in the posting or updating of information. Therefore, LAPELS makes no guarantee as to the accuracy, completeness, timeliness, currency, or correct sequencing of the information. Neither LAPELS, nor any of the sources of the information, shall be responsible for any errors or omissions, or for the use or results obtained from the use of this information. Other specific cautionary notices may be included on other web pages maintained by LAPELS.

If you need to make changes to your contact information, please choose one of the following options below:

Contact update for [Individuals and Firms](#)

License/Certificate Types:

EF = Engineering Firm

VF = Land Surveying Firm

CPD = Continuing Professional Development Sponsor/Provider

*PE = Professional Engineer

*PLS = Professional Land Surveyor

*EI = Engineer Intern

*LSI = Land Surveyor Intern

*PE Discipline Codes

AG	Agricultural	ME	Mechanical
AR	Architectural	MI	Mining or Mineral
CH	Chemical	MT	Metallurgical
CE	Civil	MU	Manufacturing
CS	Control Systems	NV	Naval Architecture & Marine
EE	Electrical & Computer	NU	Nuclear
EV	Environmental	ST	Structural *
FP	Fire Protection	PT	Petroleum
IE	Industrial		
* An engineer that has passed the Structural I exam is listed as a Civil Engineer. An engineer that has passed both the Structural I and II exams is listed as Structural (ST) and a Civil (CE) Engineer.			

Mississippi State Board of Registration for

Professional Engineers
and

Land Surveyors

State of



Mississippi

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING;

BE IT KNOWN THAT

Mark Sanders Mattox

having satisfactorily met the requirements prescribed by law has been duly registered as a Land Surveyor, is entitled to all the rights and privileges of a registered Land Surveyor, is hereby entitled to engage in the practice of Land Surveying in accordance with the laws of the State of Mississippi, and is issued this certificate of registration as a

Land Surveyor

IN WITNESS WHEREOF, the Mississippi State Board of Registration for Professional Engineers and Land Surveyors grants this Certificate No. **LS-02027** under its seal at Jackson, Mississippi this **10th** day of **February, 1989**



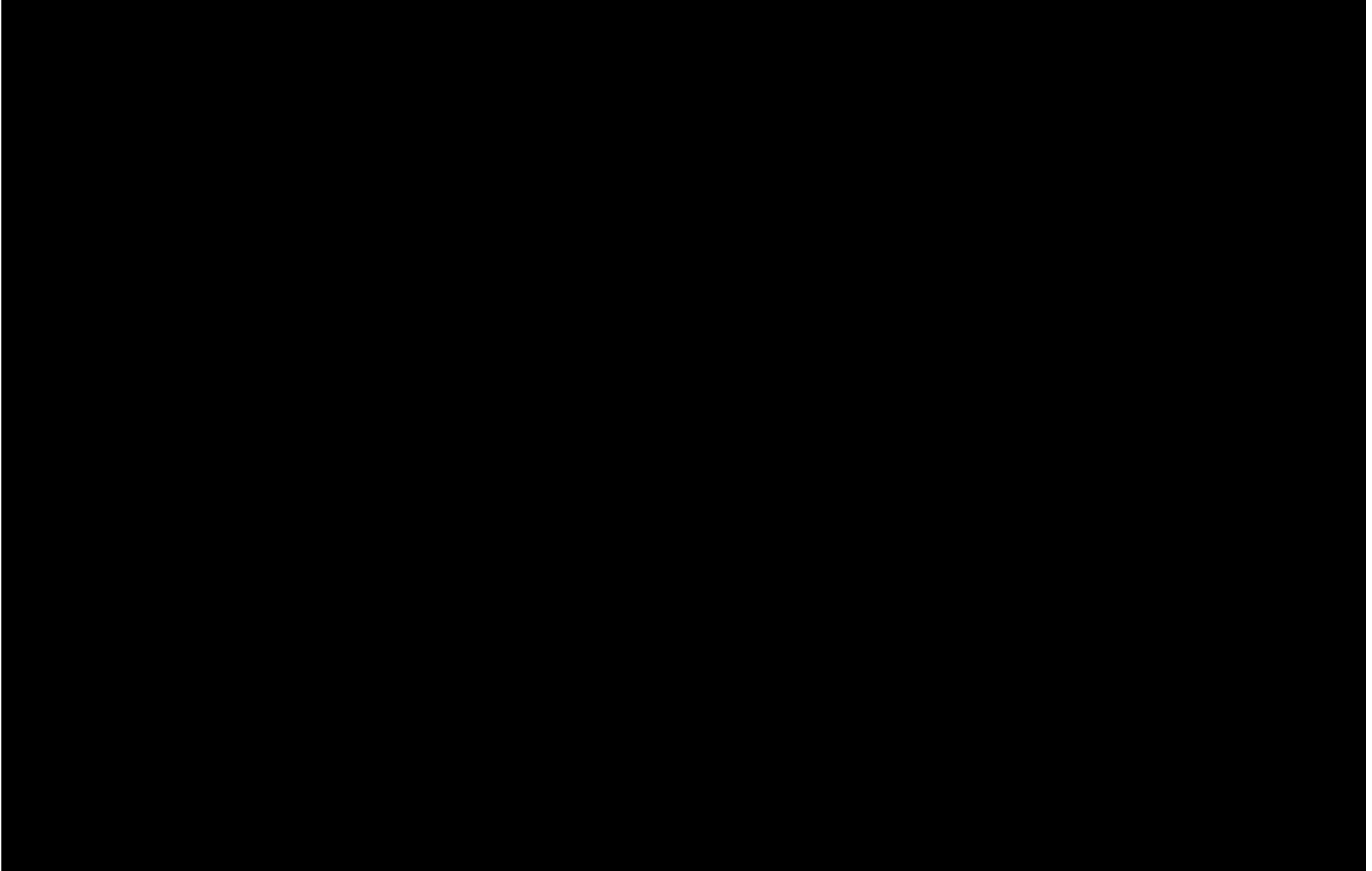
Robert L. Gandy
Samuel H. North

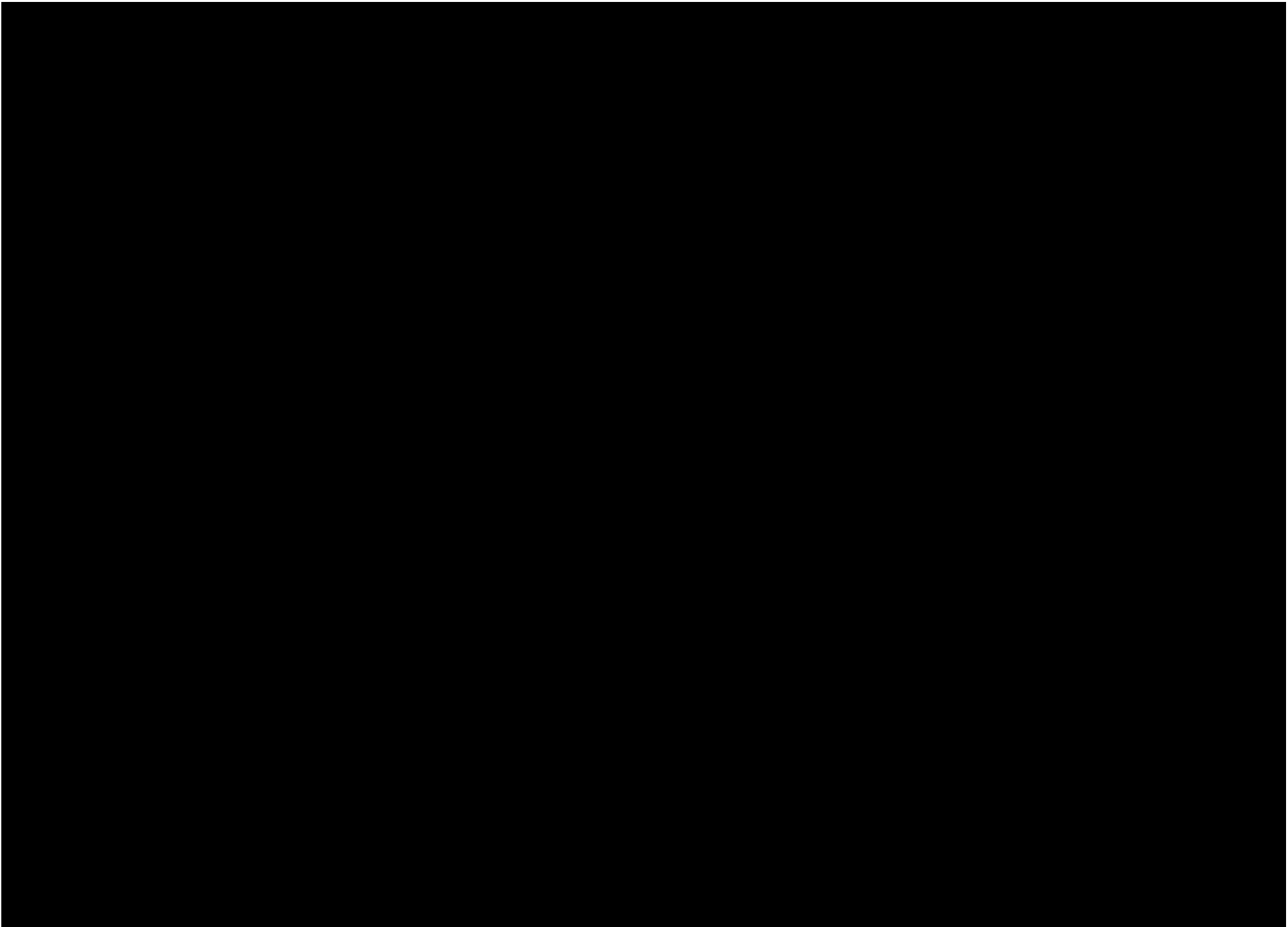
PRESIDENT

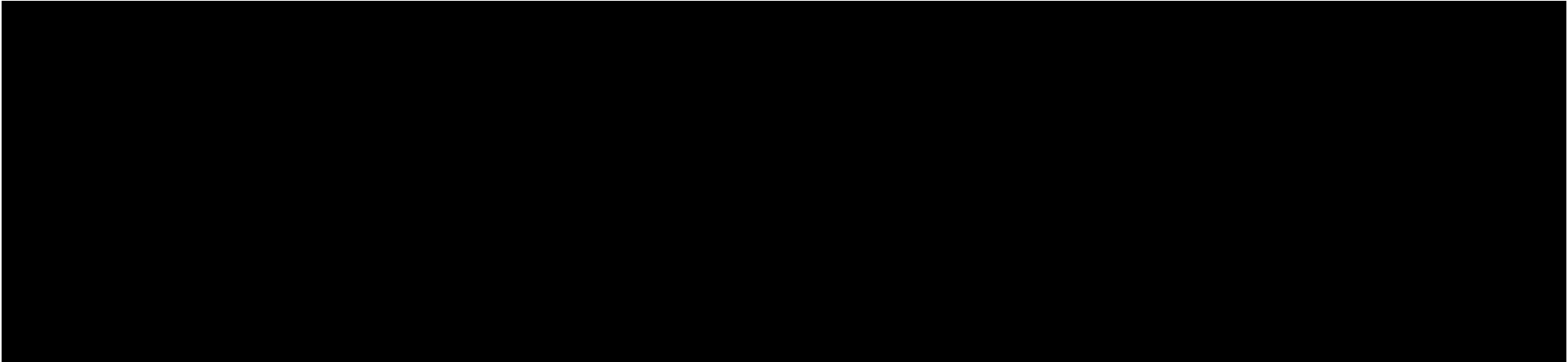
SECRETARY

21. QA/QC Plan:

If the advertisement requires submission of a QA/QC plan, include it here. **Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted.**







22. Sub-consultant information:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (Name must match as registered with Louisiana’s Secretary of State)	Address	Point of Contact and email address	Phone Number
N/A	N/A	N/A	N/A

(Add rows as needed)

23. Location:

