Bowman

Village of Orland Park

John Humphrey Drive at 143rd Street Intersection | RFQ No. 21-045 | Orland Park, IL

Proposal for:

Phase II Design Engineering Services

John Humphrey Drive at 143rd Street Intersection

Submitted by:

Bowman
312.614.0380 | bowman.com

Submitted: August 24, 2021

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1 Cover Letter

Bowman

August 24, 2021

Mr. Patrick O'Sullivan
Village Clerk
Office of the Village Clerk
14700 S. Ravinia Avenue, 2nd Floor
Orland Park, IL 60462

RE: Request for Qualifications (RFQ) #21-045
John Humphrey Drive at 143rd Street Intersection, Phase II Design Engineering Services

Dear Mr. O'Sullivan,

Adding turn lanes at every leg of the John Humphrey and 143rd Street intersection will reduce delays and improve the level of service and safety for the motorists who use this intersection to access Orland Square Mall. The designer will need to coordinate with the Illinois Department of Transportation (IDOT), Cook County, Village of Orland Park (the Village), and residents and businesses to make this project a success. This project has no public opposition; therefore, Bowman's goal is to maintain this positive public perception throughout the design process to assist the Village in achieving their goals for this project.

Key critical areas requiring attention include:

1. **Dryland Bridge:** The existing dryland bridge on 143rd Street is proposed to be replaced with a structure that is widened to the north, has an extended service life, and mitigates settlement of the area surrounding the bridge. Bowman staff are familiar with the bridge and existing conditions.
2. **Utilities:** Utilities are always a concern on a project. Comcast, ComEd, AT&T, and Nicor have facilities within the project limits, including overhead lines. There are also two water mains and sanitary sewers both owned and maintained by the Village. Additionally, there is street lighting at the intersection and along 143rd Street and John Humphrey Drive.
3. **Right-Of-Way (ROW):** All four corners of the intersection will require ROW. ROW is also required for portions of 143rd Street and John Humphrey Drive. Temporary easements are also required for construction.
4. **Environmental Concerns:** The project will impact wetlands; however, the impact is expected to be accommodated through banking. The project will also require a Phase II NPDES Storm Water Permit, a Regional 404 Permit, and a PESA due to special waste.
5. **Stakeholders:** Village coordination will be important, specifically with residents and businesses, at the various subdivision streets and commercial driveways.

Bowman understands the Village's concerns. Our staff has performed work for IDOT and Cook County, and has prior experience working in Orland Park.

Project Manager **Eric Grzeskowiak, PE, PTOE** served as Project Engineer for the LaGrange Road (U.S. Route 45) Improvements from 179th to 131st Streets in Orland Park, which included roadway reconstruction, additional lanes, traffic signals, and pedestrian facilities. He is currently providing leadership for IDOT's 55th

311 South Wacker Drive, Suite 1950, Chicago, IL 60606
312.614.0360
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Street Reconstruction, a Phase II design project to improve safety and operational needs and provide expanded pedestrian accommodations along 1.75 miles of 55th Street. The project involves pavement rehabilitation, multi-use path, intersection and traffic signal improvements, and upgrading 35 pedestrian ramps to meet ADA/PROWAG standards. In addition, Eric has led numerous projects involving bridge replacements for IDOT and municipal clients.

Project Engineer **Michael Tomaszewski, PE** possesses a wealth of experience working on similar projects for Orland Park, Cook County, and IDOT. He provided engineering design for LaGrange Road Widening and Reconstruction, 159th Street & LaGrange Road Intersection Improvements, and Southwest Highway at Brook Crossing in Orland Park. Mike is also leading Phase II design for improvements to four (4) intersections in Naperville that include conversion of left turns to protected only phasing, adding dedicated right turns, traffic signals, and drainage improvements.

I will serve as Principal in Charge for this project. I've previously performed Phase I and II engineering services for 143rd Street from LaGrange Road to Harlem Avenue, and am very familiar with the area.

We have carefully selected the following subconsultants to provide their services on this project:

- **Ames Engineering, Inc. (MBE/DBE)** will provide lighting engineering.
- **INTERRA, Inc. (MBE/DBE)** will provide geotechnical engineering.
- **Sanchez & Associates, PC (MBE/DBE)** will provide surveying.
- **Santacruz Land Acquisition (MBE/DBE)** will provide land acquisition and negotiation.

Our team looks forward to renewing our relationship with the Village of Orland Park. In addition to meeting the project budget and schedule, we are committed to close collaboration with Orland Park, IDOT, Cook County, businesses, and residents to successfully execute this important project, which will greatly improve safety and convenience throughout the area.

Thank you for the opportunity to submit our qualifications. We acknowledge receipt of Addendum 1, dated August 13, 2021; and the Questions and Answers in Addendum 2, dated August 13, 2021. Should you have any questions or wish to discuss our submittal further, please contact me at (312) 614-0380 or mletson@bowman.com.

Sincerely,

Matthew Letson, PE
Principal/Branch Manager

Project Understanding & Approach

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A. Project Approach

PROJECT UNDERSTANDING

Bowman staff visited the site on August 18, 2021 to review site conditions and formulate a project approach. The project will add dual left-turn lanes in the eastbound and westbound directions of 143rd Street, and right-turn lanes on the north, south, and east legs. The east and west legs will be divided by a four-foot high barrier median with concrete curb and gutter. The intersection will have modified geometry, reconstructed pavement, and new traffic signal and intersection lighting. The scope will include the installation of new curb ramps; upgrading existing curb ramps to the latest standards; installation of detectable warnings; and new sidewalks, painted crosswalks, and pedestrian push buttons. For the structure, the bridge on the northern half of the westbound approach will be removed and replaced with a new wider bridge to accommodate the improvements and address differential settlement in the area.

PROJECT APPROACH

First and foremost, Bowman's approach is to be a partner with the Village in completing this project. Therefore, upon notice-to-proceed, Bowman will meet with Village staff to fully identify and coordinate their needs, concerns, schedules, and goals for this project. Bowman will identify roadway work and structural work, and begin to develop a plan to meet the three deliverables of this project: Plans, Specifications, and Estimate (PS&E) for the entire project; a PS&E for the Intersection only; and a PS&E for the Bridge Removal and Replacement; and to deliver all related items including design documents, ROW acquisition, construction cost, public meetings, schedules, etc.

It appears that the Village is concerned about funding for the entire project improvements. Bowman is prepared to develop PS&E documents to meet the Village's needs with respect to funding. ROW acquisition is the key to this project's schedule. Bowman is scheduling 14 months, once the ROW is identified, to obtain all necessary ROW, including the necessary temporary, permanent and construction easements required for the project, and any potential utility needs. Additionally, easements have time constraints; therefore, obtaining the necessary easements needs to be coordinated with the available funding so that they do not time out prior to beginning of construction. With this in mind, Bowman will focus on identifying all the ROW needs as soon as possible to start the acquisition process.

We scheduled three to four weeks of survey to obtain all necessary topographic information and ROW information required to perform the above objectives. After the survey is collected, we will advance design while concurrently begin performing work related to environmental assessments such as special waste and the necessary permits, plats of highways, legal descriptions, and title commitments.

Plan Development PS&E: We have scheduled nine to ten months to complete the Phase II Plans, Specifications, and Estimates. This schedule includes a concept submittal, and 95% and 100% submittals with four-week Village, Cook County and IDOT reviews after each submittal. Due to the long lead time for ROW acquisition, the PS&E schedules can be tweaked to meet Village, County, and IDOT staffing availability. These schedules may also need to be tweaked based on available

A. Project Approach *(continued)*

funding if the project needs to be let in separate bridge and roadway packages. Bowman is prepared to assess the status of ROW, funding, and permits, and recommend a course of action to the Village as to which elements of the project should be advanced into construction. Bowman based their Phase II Design schedule on an assumed October 2021 start, and therefore expects that the project can be ready for a Spring 2023 letting. We have attached a proposed schedule to our submittal, and will work with Village staff to firm up project milestones.

Bowman will develop the PS&E in full conformance with the latest Village, County, and IDOT requirements. We have extensive experience working with the Village and have prepared many similar projects for other municipalities, counties, and IDOT. We are prepared to meet with the Village as often as required to advance this project. We understand that Village's staff time is limited, and will ensure that we are prepared for each meeting to make them as productive as possible.

SUMMARY OF BOWMAN'S PROJECT APPROACH

Scope Definition	Task Initiation	Data Collection	Reporting	Collaboration	Documentation	Feedback
Bowman will provide detailed scope, schedule, and budget	An in-person meeting to review project issues, introduce staff, and establish communication protocols	Field investigations are performed, data is acquired and documented, and progress is reported monthly	Progress reports will be communicated with stakeholders	Input from project stakeholders is incorporated into the project	All final work products, including reports,are submitted	We ensure that we have a mutually agreed upon closure of the project and encourage feedback
Outcome / Benefit	**Outcome / Benefit**	**Outcome / Benefit**	**Outcome / Benefit**	**Outcome / Benefit**	**Outcome / Benefit**	**Outcome / Benefit**
Expectations are aligned and project execution is defined	A collaborative process is established for conducting the project activities	Maintain awareness of project activities, project status and any items for resolution	Early coordination and input ensures that all work is well coordinated as it progresses through design	A collaborative design process will help maintain the project budget and schedule throughout design process	A comprehensive record of all project data is maintained for final submission in support of design decisions	Your feedback regarding project performance will be utilized to further optimize project performance in future tasks

OUR TEAM MEMBERS

We have a long-standing professional relationship with our subconsultants on this project and will work as a seamless team to deliver this project to the Village.

- **INTERRA, Inc.** will lead and conduct geotechnical investigations as needed.
- **Ames Engineering, Inc.** will provide intersection lighting design.
- **Sanchez & Associates, P.C.** will perform surveying services.
- **Santacruz Land Acquisitions** will perform the necessary land acquisition and negotiations services. They will work with our design team and surveyor in obtaining the necessary ROW for this project.

A. Project Approach *(continued)*

PERMITTING AND STAKEHOLDER COORDINATION

Bowman is familiar with the submittal and permitting requirements of IDOT, Cook County Department of Transportation and Highways, and all other permitting agencies, and will submit and acquire all necessary permits on behalf of the Village. Likewise, we will coordinate the project with all outside regulating agencies, and will attend, with Village staff, all appropriate meetings with other agencies. Bowman will also coordinate with private utility companies with respect to potential conflicts and relocations. Bowman will prepare a cost estimate, and develop a quality control and assurance plan.

Included with our PS&E work, Bowman construction staff will conduct a constructability review of the plans, and we will utilize their talents in developing options for letting should funding be an issue. Bowman will assist the Village in bidding and award, and prepare a Phase III Construction Observation Engineering Scope of Work for the Village to use in the Phase III RFQ selection process. We will assist the Village in obtaining funding from various Federal/State funding grants and programs. Bowman will lead and assist the Village with meeting residents, businesses and other stakeholders to address their concerns.

HOW WILL THE FIRM ASSIST THE VILLAGE WITH THE COMPLETION OF DESIGN DOCUMENTS IF CONSTRUCTION FUNDS ARE NOT AVAILABLE?

Bowman will assist the Village with completion of the design documents if construction funds are not available by prioritizing the issues that would delay the project in the future. Those issues are ROW, utilities, and permits. If funding is an issue, the first priority would be to obtain all ROW for the project. We would caution against obtaining temporary and construction easements until the project schedule was better defined. This would ensure that if easements were obtained, they would not time out and require further negotiations. We would also recommend constructing any improvement that could accommodate or relocate any utility required for the project. Advancing the bridge work is also a priority. The bridge work would be schedule critical and complicated. The bridge widening is required for the intersection improvement, so advancing that work is recommended. There may also be opportunities to show progress, such as (based on ROW acquisition) constructing sidewalks, even though their curb transitions would be temporary.

Bowman is prepared to coordinate with the Village to develop options to advance elements of this project to show as much progress as possible, while still being cautious against adversely impacting the public with construction that would affect their travel through the intersection.

On the following page is our proposed schedule.

Project Schedule for
John Humphrey Drive at 143rd Street Intersection
Phase II Design Engineering Services

Bowman

Year	Month	Work week beginning date
2021	OCT	4, 11, 18, 25
2021	NOV	1, 8, 15, 22, 29
2021	DEC	6, 13, 20, 17
2022	JAN	3, 10, 17, 24, 31
2022	FEB	7, 14, 21, 28
2022	MAR	7, 14, 21, 28
2022	APR	4, 11, 18, 25
2022	MAY	2, 9, 16, 23, 30
2022	JUNE	6, 13, 20, 27
2022	JULY	4, 11, 18, 25
2022	AUG	1, 8, 15, 22, 29
2022	SEP	5, 12, 19, 26
2022	OCT	3, 10, 17, 24, 31
2022	NOV	7, 14, 21, 28
2022	DEC	5, 12, 19, 26
2023	JAN	1, 8, 15, 22, 29
2023	FEB	5, 12, 19, 26
2023	MAR	5, 12, 19, 26
2023	APR	2, 9, 16, 23, 30

1.0	Notice to Proceed (October 1, 2021)
2.0	IDOT Kick Off Meeting (To be determined)
3.0	Survey - Topographic
4.0	Survey - Construction Easements
5.0	Environmental Assessments - Special Waste, ESR, Wetland Delineation
6.0	Permits
7.0	Plat of Highways, Legal Descriptions, Title Commitments
8.0	Appraisals
9.0	Negotiate ROW
10.0	Plat of Highways, Legal Descriptions, Title Commitments
11.0	Concept (60%) Phase II PS&E- Entire Project
12.0	IDOT, County, Village Review
13.0	Concept (60%) Phase II PS&E- Intersection
14.0	IDOT, County, Village Review
15.0	Concept (60%) Phase II PS&E- Bridge Removal & Replacement
16.0	IDOT, County, Village Review
17.0	Pre-Final (95%) PS&E- Entire Project
18.0	IDOT, County, Village Review
19.0	Pre-Final (95%) Phase II PS&E- Intersection
20.0	IDOT, County, Village Review
21.0	Pre-Final (95%) PS&E- Bridge Removal & Replacement
22.0	IDOT, County, Village Review
23.0	Final (100%) PS&E- Entire Project
24.0	Final (100%) Phase II PS&E- Intersection
25.0	Final (100%) PS&E- Bridge Removal & Replacement
26.0	Bidding Assistance
27.0	Bid Letting

B. Assessment of Project Challenges

THREE IMPORTANT CHALLENGES

Three key challenges that always affect a project are utilities, ROW, and permits (environmental concerns). Bowman staff have extensive experience in delivering high profile projects while accommodating these key challenges. These three challenges impact stakeholder involvement, which is very important for projects. This project already has a positive perception with the public, which goes a long way in determining its success. Residents are willing to accept construction impacts, as long as they know the project will stay on schedule. They want to see the final improvement because it will positively affect their lives. Addressing the following three key challenges are important in making this project a success.

1. **Utilities:** Utilities are always a concern on a project. Comcast, ComEd, AT&T, and Nicor have facilities within the project limits, including overhead lines. There are also two water mains and sanitary sewers that are owned and maintained by the Village of Orland Park. Additionally, there is street lighting at the intersection and along 143rd Street and John Humphrey Drive. Bowman has experience with high profile projects that require extensive utility coordination.

2. **Right-Of-Way:** All four corners of the intersection will require ROW. ROW is also required for portions of 143rd Street and John Humphrey Drive. Temporary easements are required for construction. Acquiring ROW can impact a project's schedule. Bowman will obtain survey; advance the design; and obtain concurrence from the Village, County, and IDOT as soon as possible in order to finalize the property takes. It is important to fully evaluate and determine the ROW need so the acquisition process can be initiated.

3. **Environmental Concerns:** The project will impact wetlands; however, the impact is expected to be accommodated through banking. The project will also require a Phase II NPDES Storm Water Permit, a Regional 404 Permit, and a PESA due to special waste. Bowman will start this process as early as possible in order to meet the project schedule. We will also follow up with the regulatory agencies to check status.

CHALLENGES IDENTIFIED BY THE VILLAGE

<u>Challenge #1</u>: Challenges with removal & replacement of existing Dryland Bridge and settlement from poor soils within the project limits. What are other feasible and economical options that may work for the bridge?

The existing dry land bridge on 143rd Street is proposed to be widened to the north, rehabilitated to extend the service life, and to mitigate settlement of the area surrounding the bridge. Bowman staff are familiar with this structure.

Dryland Bridge Design Approach and Feasible and Economical Options: Bowman will utilize the following approach in determining other feasible and economical options for the removal and replacement of the existing dryland bridge:

1. Perform a geotechnical evaluation of the soil conditions to determine the most economical structure support system.

B. Assessment of Project Challenges *(continued)*

2. Consider latest soil improvement technologies such as: stone columns, soil stabilization with additives; and grouting methods (cement, lime, fly-ash, jet grouting). The purpose of these techniques is to increase the soil bearing capacity and /or decrease the settlement.

3. Consider light-weight concrete to create a "floating slab" which minimizes cracking and settlement.

4. If a typical dry land bridge structural system, which consist of pile bents supporting a reinforced concrete slab, is the preferred alternate, we recommend the following steps:
   - Optimize the span length between pile supports
   - Consider use of full depth precast slab elements and pile caps to accelerate construction
   - Consider constructability and economy of scales

5. Use life cycle cost analysis (LCCA) and cost estimating to support all major decisions and recommendations to the Village.

***Challenge #2*: Design and coordination challenges with three different deliverables for intersection improvements and bridge removal and replacement.**

The challenge with three different deliverables for the intersection improvements and bridge removal and replacement is which deliverable goes first. If the project could proceed with the roadway and bridge work, then the biggest challenge is ROW, utilities, and permits. If the project cannot proceed in this fashion, then the challenge is identifying those project elements that are ready from a ROW and permit standpoint, and those elements that could be advanced in a design submittal that would make a subsequent construction package move faster. The bridge is a key factor in accommodating this improvement, so if funding was limited, Bowman would recommend advancing this work ahead of the intersection improvement.

***Challenge #3*: Challenges with availability of funds for bridge replacement and how they can assist the Village in securing funding.**

Bowman can assist in exploring additional sources of funding through the FHWA "Everyday Counts" (EDC) Initiative. The EDC Initiative was conceived as a collaborative effort between the USDOT and State Highway Departments in 2009, and the EDC Initiative currently sponsors innovative soil roadway embankment improvements as part of the program. Bowman was successful in securing this source of funding for the Village of Northbrook on the bridge superstructure replacement project over the West Fork of North Branch of Chicago River where Ultra-High Performance Concrete (UHPC) was used. We prepared an Experimental Features Work Plan for the use of UHPC for approval by the IDOT's Bureau of Materials and Physical Research.

Experience 3

A. Company Experience

55th Street from East of I-294 to East of Plainfield Road

Western Springs, Countryside, and LaGrange, IL

Client

Illinois Department of Transportation

Size

1.75 miles

Cost

$6,700,000

Schedule

04/2019 - 2021

Services Provided

Phase II Design Engineering

Reference

Helen Pazon, PE
201 West Center Court
Schaumburg, IL 60196
847.705.4523
Helen.Pazon@illinois.gov

Description

Bowman is providing Phase II engineering design services for the enhancement of 55th Street to address safety and operational needs and provide expanded pedestrian accommodations along 55th Street from I-294 to east of Plainfield Road. The 1.75 mile improvement includes the resurfacing of 55th Street from east of I-294 to Wolf Road, widening and resurfacing 55th Street from Wolf Road to Brainard Avenue, and resurfacing 55th Street from Brainard Avenue to east of Plainfield Road.

The project will increase highway user safety by separating opposing lanes of traffic, removing left turning vehicles from through traffic, and expanding the network of pedestrian and bicyclist accommodations. In addition, safety performance along the roadway segment will be improved with rehabilitation of the pavement surface, combined with capacity and geometric improvements. Four existing signalized intersections at Wolf Road, Laurel Avenue, Willow Springs Road, and Brainard Avenue will be replaced to complement the widened roadway and geometric improvements.

The project includes providing ADA compliant curb ramps at all corners of existing intersections within the project limits, as well as a multi-use path along the north side of 55th Street from Wolf Road to east of Brainard Avenue.

Bowman performed a detention analysis and designed open and closed drainage systems. The closed drainage system will be upgraded with new trunk sewers and drainage structures, and includes the extension of a 4'x4' box culvert. All Phase I drainage calculations were checked and validated to confirm sewer sizing and adherence to detention criteria.

A. Company Experience *(continued)*

75th Street Intersection Improvements

Naperville and Unincorporated DuPage County, IL

Client

DuPage County Division
of Transportation

Cost

$3,532,300

Schedule

3/2019 - 8/2021

Services Provided

Phase I Preliminary Engineering
Phase II Design Engineering
Safety Improvements

Reference

Michael Barbier, PE
421 N. County Farm Road
Wheaton, IL 60187
630.407.6895
michael.barbier@dupageco.org

Description

Bowman provided Phase I Engineering Services that include Intersection Design Studies, a Drainage Technical Memo and preparation of a Project Development Report for 75th Street. Ongoing Phase II engineering services include preparation of contract plans, special provisions, and cost estimates.

As a safety improvement project, Bowman is evaluating four intersections to identify improvements that will address the accident history, increase the safety of the intersections, and create continuity throughout the corridor while minimizing impacts to the operational characteristics of the intersections. Bowman staff utilized Highway Capacity Software (HCS7) to analyze the signalized traffic capacity at each intersection. Improvements include traffic signal modernization, incorporation of high visibility backplates, conversion of the left turn 75th Street approaches to protected only phasing and adding a dedicated right turn lane on each 75th Street approach to remove turning vehicles from the thru lane movement.

Work includes:

- 75th & Millbrook Drive - Add WB right-turn lane, extend WB left-turn lane.
- 75th & Modaff Road – Add WB and EB right-turn lanes, extend left-turn lanes.
- 75th & Olympus Drive - Add WB and EB right-turn lanes, extend left-turn lanes. Address pedestrian accident history.
- 75th & Greene Road - Add WB and EB right-turn lanes, extend left-turn lanes.

A. Company Experience *(continued)*

Phase II Various Pavement & Bridge Preservation Projects

District 1, IL

Client

Illinois Department of Transportation

Cost

Varies

Schedule

2020

Services Provided

Phase II Design Engineering

Reference

Jennifer Tobergte, PE
Accurate Group, Inc.
101 Schelter Road, Suite 200
Lincolnshire, IL 60069
847.613.1100 x507
jent@accgi.com

Description

Bowman provided Phase II design engineering services to upgrade twelve (12) existing pedestrian curb ramps to comply with IDOT policy related to ADA (Americans with Disabilities) and PROWAG (Public Right-of-Way Accessibility Guidelines) criteria.

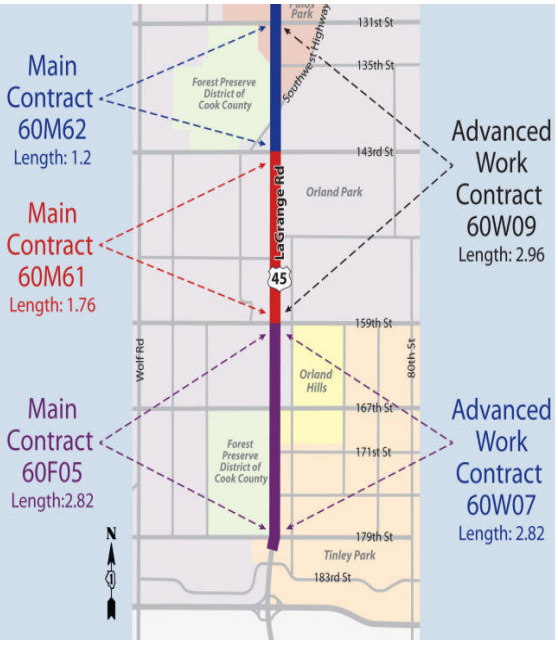
Bowman performed a field inspection to evaluate existing ramp conditions and identified the ramps that required upgrade. Drawings and specifications were prepared that detailed the curb ramp design including appropriate elevations, slopes, and dimensions to facilitate review and construction. The proposed improvements were quantified via current IDOT code numbers and descriptions.

Bowman also provided Quality Assurance / Quality Control services in the form of peer and constructability reviews of the construction documents at the milestone submittals.

A. Company Experience *(continued)*

LaGrange Road (US 45) Improvements

Orland Park, IL



Client

Illinois Department of Transportation and Village of Orland Park

Size

6 miles

Cost

$98,000,000

Schedule

2000 - 2011

Services Provided

Phase I Preliminary Engineering
Phase II Design Engineering

Description

Bowman staff provided Phase I planning and Phase II design services for improvements to LaGrange Road. Phase I services included the preparation of an ECAD, Location Design Report and Location Drainage Study and public involvement activities for adding lanes to a six-mile section of U.S. Route 45/LaGrange Road from 179th to 131st Streets. Work included data collection, traffic counts and projections, synchro analysis, noise and air quality analyses, wetlands delineation, and surveys.

Phase II services included the preparation of plans, specifications and cost estimates for the additional lanes, bridge replacement and railroad realignment on LaGrange Road. The team prepared roadway plans, TS&L plans, structure plans, geotechnical borings, investigation & analyses, supplemental surveys, drainage & utility investigation, detour route plan, and all applicable permits.

The project also provided uninterrupted access for pedestrians and non-motorized vehicles throughout the six miles of reconstruction. Access was provided with a combination of a multi-use path on one side of the road and sidewalk on the other in the north and south contracts. The middle contract utilized sidewalks on both sides. Paths and sidewalks were designed in accordance with AASHTO and ADA requirements. Traffic signals were also designed to accommodate the pedestrian facilities at the eighteen intersections throughout the project.

Under a separate contract with the Village of Orland Park, the project team prepared design plans for 6,880 feet of new or replacement 8-inch and 12-inch water main along LaGrange Road including connections to existing water mains.

A. Company Experience *(continued)*

159th Street and LaGrange Road Improvements

Orland Park, IL

Client

Village of Orland Park

Cost

$9,000,000

Schedule

2005 - 2007

Services Provided

Phase II Design Engineering

Description

Bowman staff prepared Phase II contract design plans, specifications and cost estimates for 159th at US 45 (LaGrange Road). All legs were widened from 2 lanes in each direction to 6 lanes in each direction. Dual left turn lanes and a single right turn lane were added on all quadrants of the intersection. Curb cuts and signalized access points were determined with the Village of Orland Park after discussions with land developers for the southwest quadrant of the intersection.

The intersection of 159th and Ravinia was designed as part of this contract at an accelerated schedule to accommodate the opening of the retail site at this location.

B. Bridge Design & Cost Estimate Experience

Shermer Road Bridge Improvement

Northbrook, IL

Services Provided

Phase I Preliminary Engineering
Phase II Design Engineering
Phase III Construction Engineering

Date Completed

2018

Key Personnel

Matthew Letson, PE
Arthur Nowak, PE, SE
Karl Hanson, PE, SE
Joseph Middleton, PE, CFM
Jeff Woss, PE

Project Budget

$1,209,716

Client and Reference

Village of Northbrook
Matthew Farmer, PE
655 Huehl Road
Northbrook, Illinois 60062
847.664.4120
matt.farmer@northbrook.il.us

Description

Bowman provided Phase I, II and III engineering services to upgrade Shermer Road Bridge to meet current structural, hydraulic, and geometric requirements. The single span bridge, which spans the West Fork, North Branch, Chicago River was constructed in 1939 and consists of a precast prestressed deck beam superstructure on closed concrete abutments on spread footings. The superstructure was replaced in 1979, and architectural enhancements were added to the parapets and sidewalks in later years.

Bowman's structural engineers proposed utilizing improved deck beams that are similar to IDOT deck beams but have reinforced joints that will guard against premature failure of longitudinal keyway joints. This approach is cost-effective since it allows retaining the substructure which is not in need of repairs. This innovative use of Ultra High Performance Concrete (UHPC) closure pour joint between the neighboring Precast Prestressed Concrete deck was utilized instead of traditionally used grouted keyway for the superstructure. This innovative solution will be used for the first time in Illinois and will significantly extend the life span of the bridge.

Bowman provided Phase II services for the preparation of plans, specifications, and cost estimates; permitting; and bidding in compliance with Village, IDOT, and federal requirements for this federally funded project.

B Bridge Design & Cost Estimate Experience *(continued)*

Lake Shore Drive Viaducts - Bridge Repairs

Chicago, IL

Services Provided
Phase II Design Engineering

Date Completed
2018

Key Personnel
Arthur Nowak, PE, SE
Karl Hanson, PE, SE

Project Budget
$5,000,000

Client and Reference
Chicago Dept. of Transportation
Vasile Jurca, PE
30 North LaSalle Street
Chicago, Illinois 60602
312.744.3591
vasile.jurca@cityofchicago.org

Description
Bowman provided Phase II engineering design services for the federally funded repair/rehabilitation of two Lake Shore Drive (US 41) viaducts over Wilson Avenue and Lawrence Avenue.

The scope of work on these structures included extensive substructure repairs, beam ends repairs of concrete T-Beams superstructure, repair of abutment bearing seats, replacement of the existing lighting system under the bridges, complete reconstruction of the existing bridge parapets, and replacement of bridge terminals meeting Test Level 4 (TL-4) crash test loading requirements. As part of this project, eight-foot bike trails meeting ADA requirements and pier protection countermeasures under the bridges were provided. Final deliverables included plans, specifications, and engineer's estimates of probable cost.

The contract documents and specifications were prepared under an aggressive schedule to meet CDOT's proposed letting date. Critical issues on this project included providing cost-effective repair options to address the most critical structural needs.

B. Bridge Design & Cost Estimate Experience *(continued)*

Phase II Various Projects (PTB 195-016)

District 1, IL

Services Provided
Phase II Design Engineering

Date Completed
Ongoing

Key Personnel
Amit Patel, PE
Arthur Nowak, PE, SE
Amir Soltani, PhD, EI
Joseph Middleton, PE, CFM
Kevin Hejtmanek, PE

Project Budget
WO#1: $1,500,000
WO#2: $4,000,000
WO#5: $950,000
WO#6: $930,000

Client and Reference
Illinois Dept. of Transportation
Jean Alain Midy, PE
201 W. Center Court
Schaumburg, IL 60196
847.221.3056
jean.midy@illinois.gov

Description
Bowman is providing Phase II engineering services for various projects in District One. Work orders include roadway; bridge repairs and improvements; drainage improvement plans; preparation of roadway plans and structure details (TS&L plans, structure plans); ADA ramp details; obtaining pavement composition cores for resurfacing projects and geotechnical borings for structure designs; and providing supplemental field and bridge deck surveying for projects. Work Orders 1, 2, and 6 are 80% federally funded and 20% locally funded.

WO#1 – IL 83 (FAP 344) over Ditch at IL 38 (WB) Ramp, DuPage County, IL
Replacement of the single cell box culvert which carries IL 83 over a drainage ditch tributary to Salt Creek with a triple box culvert. Work included regrading the ditch downstream 760' to improve drainage, and design of a 420' long soldier pile wall.

WO#2 –130th Street Bridge Repair at I-94 & CSSS & IHB RR, Chicago, IL
Substructure repairs, superstructure repairs, and deck overlay for 130th St. Bridge over Chicago South Shore & South Bend Railroad (CSSS) & Indiana Harbor Belt (IHB) Railroad and METRA Electric Line and 130th St. Bridge over Bishop Ford.

WO#5 – Bridge Repairs at Various Locations along I-90/94, Cook County, IL
Repairs to four (4) bridges along I-90/I-94 within the vicinity of the I-55 interchange.

WO#6 – US 52 (Cedar Road) Culvert Replacement at Ditch North of Forked Creek, Will County, IL
Replacement of a culvert with a cast-in place concrete single cell 12' x 4' box culvert. The additional proposed improvements consist of widening the existing shoulders.

B. Bridge Design & Cost Estimate Experience *(continued)*

Phase II Various Pavement & Bridge Preservation Projects

District 1, IL

Services Provided
Phase II Design Engineering

Date Completed
2021

Key Personnel
Arthur Nowak, PE, SE

Project Budget
N/A

Client and Reference
Illinois Dept. of Transportation

Prime: Accurate Group, Inc.
Jennifer Tobergte, PE
101 Schelter Road, Suite B 200
Lincolnshire, IL 60069
847.613.1100 x 507
jent@accgi.com

Description

As a subconsultant, Bowman provided Phase II design engineering services to rehabilitate two bridge structures at I-57 over I-80 in Country Club Hills using federal funds.

SN 016-0052 is a four-span structure consisting of a concrete deck composite with a continuous rolled steel beam superstructure on a concrete substructure consisting of 3 multi-column piers founded on concrete spread footings and open abutments, founded on capped concrete piles, with concrete slope walls. Bowman rehabilitation plans provided new expansion joints over both abutments; new relief joints at the end of approach slabs; bridge deck and approach slabs repair; new latex overlay, repairs to substructure, slope wall, and beam ends; replacement of 6 end diaphragms; crash wall extension at piers; and sealing of bridge parapets and substructure.

SN 016-0053 is a three-span structure consists of a concrete deck composite with a continuous rolled steel beam superstructure on a concrete substructure consisting of 2 multi-column piers founded on concrete spread footings and open abutments, founded on capped concrete piles, with concrete slope walls. Bowman rehabilitation plans provided new expansion joints over both abutments; new relief joints at the end of approach slabs; bridge deck and approach slabs repair; new latex overlay; repairs to substructure, slope wall, and beam ends; replacement of 3 end diaphragms; drainage pipe extension at one scupper; crash wall extension at piers; and sealing of bridge parapets and substructure.

Both structures will be repaired using staged construction.

B. Bridge Design & Cost Estimate Experience *(continued)*

IL 72 at State Street/Getzelman Road

Kane County, IL

Services Provided
Phase II Design Engineering

Date Completed
09/2020

Key Personnel
Arthur Nowak, PE, SE
Karl Hanson, PE

Project Budget
$3,105,000 (total)
$1,000,000 (structural portion)

Client and Reference
Illinois Dept. of Transportation

Prime: Lochmueller Group
Elizabeth (Betsy) Witt, PE
1928 Bradley R. Smith Drive
Troy, IL 62294
618.667.1415
BWitt@lochgroup.com

Description

As a subconsultant, Bowman provided Phase II design engineering services for federally funded improvements to IL 72 (FAP 557) at State Street/Getzelman Road (FAU 98).

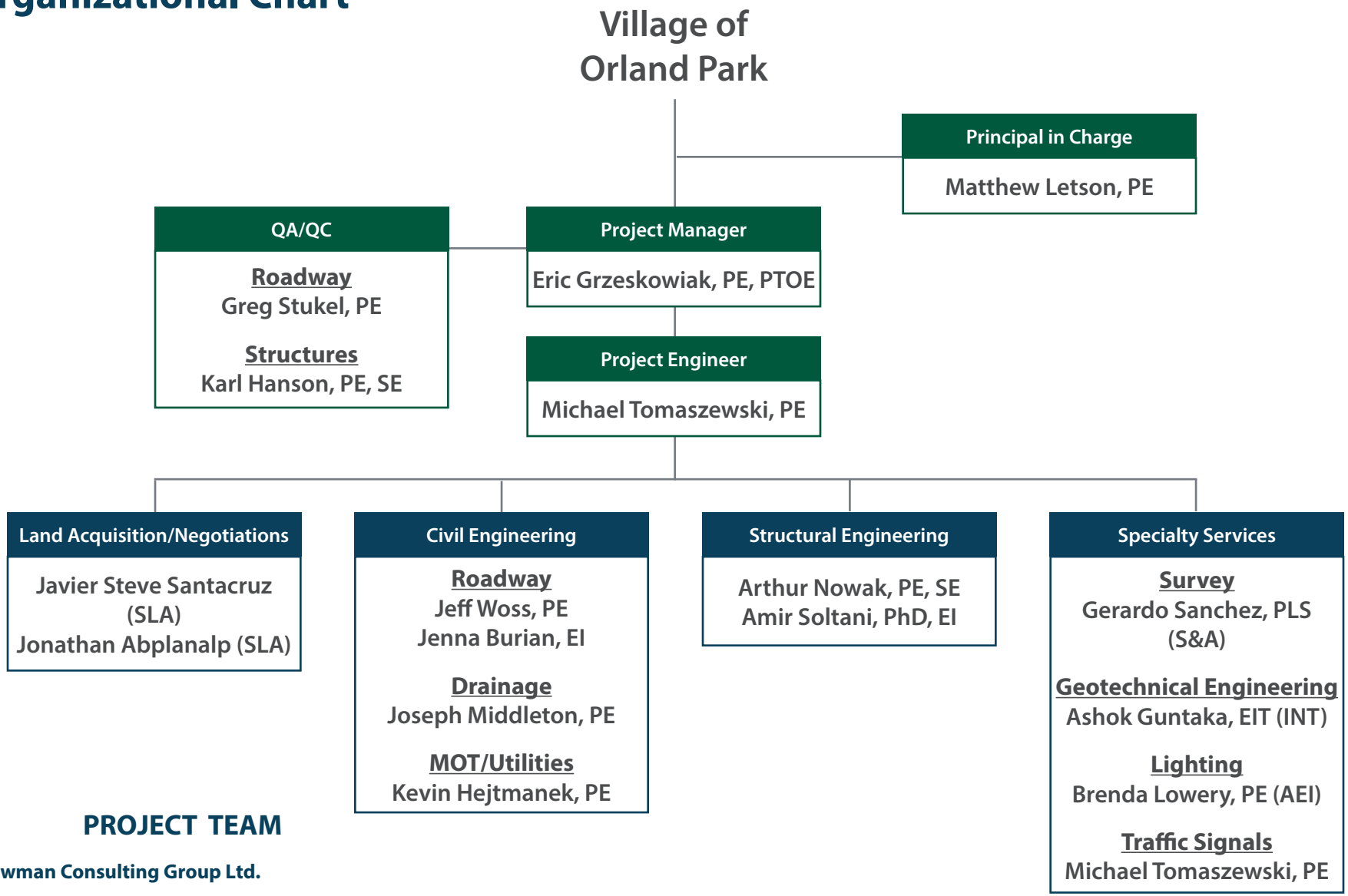
Bowman provided structural engineering for two TS&L plans for IL 72 over Hampshire Creek box culvert and State St. over Hampshire Creek box culvert. In addition, Bowman executed Structure Reports, Plan Development Outline (PDO) and preliminary cost estimates for both structures totaling $1,000,000.

The overall project includes the preparation of plans, specifications, and cost estimates to current standards for the intersection reconstruction at IL 72 and State St./Getzelman Rd. The Illinois Route 72 (IL 72) improvements were needed in order to address safety and operational deficiencies caused by the flooding and icing at the intersection of IL 72, State Street, and Getzelman Road in the Village of Hampshire, IL. The limits of the project included IL 72, an east-west roadway under the jurisdiction of IDOT and State Street and Getzelman Road, north and south roadways respectively under the jurisdiction of the Village of Hampshire. This intersection was within the flood-plain and the sag vertical curve profile has posed a serious concern for pedestrians and motorists during the winter and rain seasons. Undersized culverts were identified to be the cause of the flooding events. The hydraulics study determined that this intersection improvement profile needed to be raised approximately 1-foot to resolve any future flooding issues.

Staff Qualifications

4

Organizational Chart



PROJECT TEAM

Bowman Consulting Group Ltd.

Ames Engineering, Inc. (AEI): MBE/DBE
INTERRA, Inc. (INT): MBE/DBE
Sanchez & Associates, P.C. (S&A): MBE/DBE
Santacruz Land Acquisitions (SLA): MBE/DBE

Matthew Letson, PE

Principal in Charge

Education

B.S., Civil Engineering, Ohio State University, 1988

Registrations

Professional Engineer:
Illinois, #062-050015, 1995
Missouri, #2012000047
Virginia, #402052144
Texas, #101618
Ohio, #78721

Associations

Illinois Society of Professional Engineers

American Society of Civil Engineers

Illinois Association for Floodplain and Stormwater Management

Lambda Alpha International

Years of Experience

33

Mr. Letson has over 30 years of experience in civil engineering that includes significant drainage and sewer design. As Project Manager, he provides oversight for resource management, project schedules and budgets, as well as technical guidance to make sure that all the skills and expertise available to the Project Team are fully utilized to provide clients and their communities with innovative, efficient solutions that are easy to construct and maintain.

Experience

Village of Orland Park | 143rd Street, LaGrange Rd to Harlem Ave | *Orland Park, IL*
Lead Drainage Engineer responsible for preparation of Phase I Location Drainage Report and Phase II drainage plans including ditch and channel design, culvert design, roadway drainage design and storm sewers oversized for detention.

Village of Northbrook | Shermer Road Bridge Rehabilitation | *Northbrook, IL*
Project Manager for Phase I, II, and III engineering services to upgrade the bridge to meet current hydraulic, structural, and geometric requirements. Included topographic and stream surveys, wetland delineations, bridge inspection and Bridge Condition Report, Preliminary Bridge Design and Hydraulic Report, Project Development Report, utility coordination and maintenance of traffic.

Cook County DOTH | Techny Road Improvements | *Cook County, IL*
Project Manager for preparation of Part A Reports and Part B Plans, specifications and estimates for the $5.6 million reconstruction of Techny Road. Included stormwater management and flood relief improvements, in-stream work, signalized intersection, at-grade rail crossings, grade separated rail crossing, bicycle lanes, full topographic survey, environmental studies, and analysis of existing conditions.

Village of Deerfield | Deerfield Road Pedestrian Bridge | *Deerfield, IL*
Project Manager responsible for preparation of contract plans, specifications and estimates for design of $1.2 million bridge improvements at the Metra Station to provide safer and more efficient pedestrian and vehicular transportation including a wider roadway, improved pavement surface, ADA compliance, sidewalks for pedestrians, and improved sight lines for vehicular traffic. The new bridge also serves as an entry and/or gateway to the redeveloped downtown Deerfield.

DuPage County | Drainage Improvements | *DuPage County, IL*
Project Manager for miscellaneous drainage improvement projects to alleviate local nuisance and structural flooding problems. Improvements included storm sewer extensions, inlet capacity improvements, ditch improvements, re-direction of downspouts, and site grading.

IDOT | I-80/94 Reconstruction | *District 1, IL*
Preparation of drainage and utilities plans for reconstruction of 1.68 miles of I-80/94 from Illinois Tollway Oasis to west of IL 83. Included reconstruction and widening to

Matthew Letson, PE

Principal in Charge

provide four lanes in each direction plus an auxiliary lane. A two-lane or three-lane Collector-Distributor roadway was constructed along eastbound and westbound I-80/94 to facilitate traffic exiting and entering the I-94/IL 394 and IL 83 interchanges. Work also included pavement and bridge reconstruction, retaining wall and noise wall construction, intersection improvements, geometric modifications, a new highway lighting system, new expressway signing, and highway drainage system.

IDOT | I-64 Structures over Wabash River | *District 9, IL*
Drainage Engineer responsible for preparation of Hydraulic Report for replacement of a 27-span dual structure over the Wabash River. Hydraulic modeling included development of a HEC-RAS model for a 29,000 square mile watershed with multiple bridges and bridge openings, planform migration analysis, scour analysis and streambank stabilization analysis.

IDOT | I-270 Over Chain or Rocks Canal | *District 8, IL*
Drainage Engineer responsible for preparation of Hydraulic Report; Location Drainage Study (Phase I); and preparation of contract documents for highway drainage including levee relocation, culvert design, storm sewer design, bridge scupper design, detention facilities, compensatory storage and paved ditches.

Illinois Tollway | Tri-State Tollway, Bridge Rehabilitation/Reconstruction, Mile Long Bridge | *Cook County, IL*
Drainage Quality Assurance Engineer as part of a multi-discipline team that determined a preferred replacement/rehabilitation alternative for the Mile Long Bridge. Responsible for Concept Drain Report and Phase II plans, which included storm sewer & culvert sizing, temporary drainage, and detention pond design.

Illinois Tollway | I-88 Reconstruction, East West Connector | *DuPage County, IL*
Design Quality Manager for Phase II engineering services for roadway reconstruction of 1.25 mile ramp pair between I-88 and I-294 and rehabilitation of five bridges.

Chicago Department of Water Management | Sewer Improvements | *Chicago, IL*
Project Manager responsible for overall project management, quality control and supervision for preparation of final contract plans, specifications and estimates for sewer improvements including water main relocations throughout Chicago.

Southgate Market | *Chicago, IL*
Project Manager responsible for the preparation of contract documents, plans and specifications for the site design for Southgate Market located at Roosevelt Road and Canal Street. Services included design for sanitary sewer, storm sewer/stormwater detention/lift station, and water main; grade level site improvements; site grading; and utility coordination. Canal Street improvements included a full access driveway, public way improvements including replacement of vaulted sidewalk with curb and gutter and sidewalk on grade, and required modifications to street lighting and sidewalk appurtenances. approvals required for permit issuance.

Eric Grzeskowiak, PE, PTOE

Project Manager

Education

B.S.C.E., University of Iowa, 1994

Registrations

Professional Engineer:
Illinois, #062-054484, 2001
Michigan, #6201062507

Professional Traffic Operations Engineer, #3485

Years of Experience

27

Mr. Grzeskowiak, Director of Civil Engineering, is a seasoned professional engineer with over 25 years of experience managing all aspects of complex, multi-million dollar infrastructure projects. He is responsible for client and agency communications, coordination across disciplines, and subconsultant direction to complete construction plans, specifications, and estimates. He has solid technical skills associated with horizontal and vertical geometrics, intersection design, traffic signal design, paving, grading, signage, maintenance of traffic, and drainage. His duties include development of project schedules, establishment of project work plan, management of design team, and preparation of construction documents.

Experience

IDOT | U.S. Route 45 (LaGrange Road) Improvement | *Orland Park, IL*
Project Engineer responsible for preparing contract plans and specifications for Phase I and II engineering services for roadway widening and reconstruction from 179th to 131st Streets. Worked on one of the three segments that the project was divided into and was responsible for coordinating roadway design components. The $98 million project included traffic signals, multi-use path, and water main installation.

IDOT | 55th Street Reconstruction | *Western Springs, Countryside, and LaGrange, IL*
Project Manager for Phase II design project in Cook County with an overall length of 1.75 miles. The $6 million project includes roadway widening and resurfacing; traffic signal modernization at Wolf Road, Laurel Avenue, Willow Springs Road, and Brainard Avenue; drainage improvements; ADA compliant ramps; and multi-use path.

IDOT | Various Phase II Pavement and Bridge Rehabilitation Projects | *District 1, IL*
Civil Engineer for Phase II engineering services to upgrade pedestrian curb ramps to comply with ADA and PROWAG criteria. Performed field inspection to evaluate conditions and prepared drawings and specifications that detailed curb ramp design and appropriate elevations, slopes and dimensions. Performed peer and constructability reviews of construction documents at milestone submittals.

Chicago Dept. of Transportation | Lincoln Yards Redevelopment | *Chicago, IL*
Deputy Program Manager for project management services for design and construction of $500 million transportation improvements that include roadway reconstruction and streetscape, traffic signal modernizations and new installations, utilities, and pedestrian and bicycle-related infrastructure.

Chicago Dept. of Transportation | Reconstruction of North Lake Shore Drive Viaducts over Wilson and Lawrence Avenues | *Chicago, IL*
Project Manager responsible for coordinating design and preparing Phase II contract plans and specifications. Project components include roadway, structures, drainage, utility relocation, maintenance of traffic, erosion control, traffic signals, roadway lighting, landscaping, pavement markings and cross sections.

Eric Grzeskowiak, PE, PTOE

Project Manager

Chicago Dept. of Transportation | Wells Street Improvements | *Chicago, IL*
Project Manager for design engineering services for the improvement of Wells Street, which was reconstructed from Roosevelt Road to north of 9th Street and scarified and overlayed from 9th Street to Polk Street. Included design of a new roadway, 9th Street, from Wells Street to Clark Street; design concepts for a viaduct under the Metra railroad tracks; sewers; water mains; lighting; traffic signals; and landscaping.

Chatham Market | *Chicago, IL*
Design Engineer responsible for infrastructure improvements for a 50-acre retail development. Worked with the developer to design infrastructure improvements within right of way to be dedicated to the City of Chicago. Improvements included roadways, sidewalks, driveways, storm sewers, water main, lighting, and traffic signals.

IDOT | I-39 from N. of Blackhawk Road to I-90, US 20 from I-39 to E. of Kishwaukee River & Harrison Ave. from Bell School to I-39 (PTB 193-020) | *Winnebago County, IL*
Bowman Project Manager for subconsultant Phase II design engineering services for $177.9 million project that include civil engineering for typical sections, maintenance of traffic, and removal and proposed plan and profile sheets for reconstruction and reconfiguration of ramps DB and BD as part of the I-39/US20 system interchange. Bowman is also providing structural design plans and specifications for Ramp DB bridge over Linden Road, and I-39 NB and SB mainline structures over CNRR.

IDOT | North Ave (IL Rte 64) Reconstruction, I-355 to Villa Ave | *DuPage County, IL*
Project Engineer responsible for design for the total reconstruction and widening of the existing North Avenue including new traffic signals and drainage system.

IDOT | I-57 at IL 50 Interchange Reconstruction & Bridge Replacement | *Bradley, IL*
Project Manager for Phase II engineering services for the preparation of contract plans and specifications for the reconstruction of the existing I-57 interchange with IL 50, including dual bridge replacements carrying I-57 over IL 50 and dual bridge replacements carrying I-57 over Illinois Central Railroad. IL 50 will also be reconstructed within the vicinity of the interchange. Work included preliminary and final plans for roadways, ramps, structures, traffic signals, lighting, signing, landscaping, drainage, and maintenance of traffic.

IDOT | IL Route 38 at Kautz Road/UPRR Grade Separation | *DuPage County IL*
Project Manager for Phase II engineering services for reconstruction of IL Rt. 38 on a new alignment, including a new bridge over Union Pacific Railroad. Kautz Road was also realigned and reconstructed to meet IL Rt. 38 at a signalized tee intersection on the bridge over the railroad. Included roadway, structures, drainage, utility relocation, maintenance of traffic, erosion control, traffic signals, roadway lighting, landscaping and pavement markings. Considerable coordination was required with many government agencies including IDOT, DuPage and Kane Counties, Cities of Geneva, and West Chicago, DuPage Airport Authority, and Union Pacific Railroad.

Michael Tomaszewski, PE

Project Engineer and Traffic Signals Engineer

Education

B.S., Civil Engineering, University of Illinois, 1998

Registrations

Professional Engineer:
Illinois, #062-059240, 2006
Michigan, #6201066085
Ohio, #79297
Texas, #127739

Years of Experience

23

Mr. Tomaszewski is responsible for design of various public works and private sector projects including street improvements, intersection design, signal design, roadway rehabilitation and site development. He is responsible for conceptual planning and design of projects including roadway geometrics, cross section development, earthwork quantity calculations, grading, pavement marking, maintenance of traffic and traffic control, and preparation of control documents.

Experience

Village of Orland Park | Southwest Highway at Brook Crossing | *Orland Park, IL*
Design Engineer for Intersection safety improvement to widen and resurface to add left turn lane at intersection.

IDOT | 159th Street & LaGrange Road Intersection Improvements | *Orland Park, IL*
Project Engineer for Phase II engineering services for intersection improvement. Responsible for design of roadway and traffic signalization improvements.

IDOT | LaGrange Road (US Route 45) Improvements | *Orland Park, IL*
Project Engineer for Phase I and II engineering services for a 6+ mile roadway reconstruction project from 179th to131st Streets. The $98 million project included new signals and interconnects at 18 intersections, and a combination of a multi-use path on one side of the road and sidewalk on the other in the north and south contracts, drainage improvements, and water main replacement.

DuPage County DOT | 75th Street Intersection Improvements | *Naperville, IL*
Project Manager for Phase I and II engineering services for four 75th Street intersections to increase safety. Improvements include traffic signal modernization, incorporation of high visibility backplates, conversion of the left turn 75th Street approaches to protected only phasing and adding a dedicated right turn lane on each 75th Street approach to remove turning vehicles from the thru lane movement.

Cook County DOTH | 104th Avenue,167th Street to 159th Street | *Cook County, IL*
Project Manager for Phase II engineering services. Responsibilities included preparation of roadway and detour plans, and calculating compensatory storage requirements for one-mile roadway reconstruction project, including 1,200 foot long section supported on pile supported embankment, and adjacent bike path.

Cook County DOTH | Lake Cook Road Improvements | *Cook County, IL*
Design Engineer for Phase II design services for widening and reconstruction of Lake Cook Road in Deerfield. Responsible for design of roadway, traffic signalization improvements, and traffic staging for roadway widening project.

Kane County DOT | Stearns Road Corridor | *Kane County, IL*
Responsible for traffic signal design for two intersections and interconnect system between IDOT and County signals.

Michael Tomaszewski, PE

Project Engineer and Traffic Signals Engineer

Kane County DOT | Structural Services (Number 18-00498-00-BR) | *Kane County, IL*
Project Manager for Phase I and II engineering services for repair and maintenance of seven (7) structures. Projects included development of Maintenance of Traffic plans; acquisition of all permits from regulatory agencies; and development of Plans, Specifications, and Estimate (PS&E) documents. Two bridges will utilize modifications of existing grouted key-ways between precast deck beam sections to ultra-high performance concrete (UHPC) key-ways and one structure will use UHPC overlay.

IDOT | 55th Street Reconstruction | *Western Springs, Countryside, and LaGrange, IL*
Project Engineer for Phase II design project in Cook County with an overall length of 1.75 miles. The $6 million project includes roadway widening and resurfacing; traffic signal modernization at Wolf Road, Laurel Avenue, Willow Springs Road, and Brainard Avenue; drainage improvements; ADA compliant ramps; and multi-use path.

IDOT | FAP 353, US 30 (Lincoln Highway) at IL 50 (Cicero Avenue) | *Cook County, IL*
Bowman's Project Manager for subconsultant services to provide Phase II plans and specifications for maintenance of traffic (MOT) to facilitate intersection improvements at US 30 and IL 50. Detailed MOT plans, notes and typical sections were prepared using the latest IDOT requirements and criteria, and the Highway Traffic Standards and specifications related to Traffic Control. $6 million project includes modernized traffic signals, improved channelization, pedestrian & bicyclist access, and ADA ramps.

IDOT | IL Route 38 at Kirk Road Intersection Improvements | *West Chicago, IL*
Project Engineer for Phase II engineering services. Responsible for design of roadway and traffic signalization improvements including interconnection and existing surveillance camera system and roadway improvements.

IDOT | I-55 at Arsenal Road Improvements | *Channahon, IL*
Project Engineer responsible for Phase II preparation of contract documents and cost estimates for the relocation of the Arsenal Road Interchange approximately 1 mile south with a new geometric configuration. The new configuration consists of a flyover of I-55 from the southbound exit ramp and a loop ramp for the northbound entrance ramp to include improvement of the frontage roads and extension of Arsenal Road.

IDOT | I-57 at IL 50 Interchange | *Bradley, IL*
Project Engineer for Phase II engineering services for reconstruction of the existing I-57 with IL 50 interchange including dual bridge replacements. $21 million project included 2 traffic signals, new lighting system, and pick up survey.

DuPage County DOT & IDOT | IL 38 at UPRR Grade Separation | *DuPage County, IL*
Project Engineer for Phase I and Phase II design including geometric design and alternatives analysis for intersection realignment and grade separation, as well as final design and contract plan development. Included 2 traffic lanes in each direction, with a 30 foot barrier median and pavement bounded by curb and gutter on both sides and provided a new grade separation and bridge structure.

Greg Stukel, PE

QA/QC - Roadway

Education

M.S., Civil Engineering, Purdue University, 1986

B.S., Civil Engineering, Purdue University, 1985

Registrations

Professional Engineer:
Illinois, #062-053202, 1999

Associations

American Society of Civil Engineers

Awards

Government Civil Engineer of the Year, Illinois Chapter ASCE, 2014

Years of Experience

35

Mr. Stukel has 30 plus years of experience providing engineering and leadership for transportation projects. He spent 28 years with the Illinois Tollway, most recently as the Deputy Chief of Program Controls/Systems Integrity. Mr. Stukel has coordinated with consultants, contractors, the Illinois Department of Transportation, Cook County, DuPage County, Kane County and many municipalities and cities to successfully execute infrastructure projects.

Experience

Principal, Bowman, Lisle, IL, 06/2020 - Present.

- Performs QA/QC on design and construction projects for clients that include IDOT and the Illinois Tollway.
- Provides business development and outreach.

Deputy Chief of Program Controls/Systems Integrity, Illinois State Toll Highway Authority, Downers Grove, IL, 2006 - 06/2020.

Project Management:

- Responsible for over 100 active design and construction projects within the MI.
- Monitored project schedule, scope and budget; and met with consultants, contractors, other government agencies and Tollway Departments to communicate project information; review and approve consultant proposals and agreements; and review contractor bid documents. Value in excess of $1 billion.
- Project Manager for the Tollway's General Consultant Contract currently valued at approximately $25 million per year.

Supervisory:

- Supervised Tollway Deputy Program Managers (3), Project Managers (5), Consultant Project Managers (2) and Consultant Administrative Assistants (2).
- Reviewed and approved the assignment of MI projects to Tollway and Consultant Project Managers to keep projects on schedule.

Administrative:

- Responsible for initiating, defining, writing, editing and advertising the Professional Service Bulletin, and member of Consultant Selection Committee.
- Chairman of three member C5 (Construction Contract Cost Change Committee) which reviews and recommends prior approval of all extra and change work on construction contracts in the CRP.
- Chairman of Errors and Omissions Committee. Assisted in development and implementation of ISO procedures, and standards, specifications & guidelines.

Program Management:

- Responsible for the Tollway's $60 million per year Systemwide program, including improvements to the I-88, I-355, I-90/94, I-294, and I-90.
- Coordinated with Illinois Department of Transportation, Cook County, DuPage County, Kane County, and many municipalities and cities, IRTBA and ACEC.

Karl Hanson, PE, SE

QA/QC - Structures

Education

B.S.E., Civil Engineering, University of Illinois at Chicago, 1980

B.S., Mathematics, Colorado State University, 1974

Registrations

Professional Engineer:
Illinois, #062-042648,1985

Structural Engineer:
Illinois, #081-004642, 1986

Continuing Education

SEOI Welding for Structural Engineers, 2015

SEAOI Soil Primer for Structural Engineers, 2014

SEAOI Midwest Bridge Symposiums, 2004-2010

Seismic Design of Highway Bridges, 2008

Design for Earthquakes using Precast / Pre-stressed Concrete, 2007

Designing with Architectural Precast Concrete, 2007

Fundamentals of Soil and Rock Slope Stability, 2006

Associations

Structural Engineers Association of Illinois

American Society of Civil Engineers

Cold-Formed Steel Engineers Institute

Years of Experience

40

Mr. Hanson's responsibilities include structural planning and design of building, bridges, railway transit, and municipal structures; and technical coordination and training of staff. Mr. Hanson developed the commercially available "DCALC" software applications used by structural engineers.

Experience

Village of Orland Park | Metra over LaGrange Road | *Orland Park, IL*
Structural Engineer for design of a 2-span steel through girder railroad bridge that included modifications to the geometry and configuration of the Metra Southwest Service Line Bridge.

Chicago Dept. of Transportation | Lake Shore Drive Viaducts | *Chicago, IL*
Lead Structural Engineer responsible for repair/rehabilitation of two Lake Shore Drive (US 41) viaducts over Wilson Avenue and Lawrence Avenue. Work included extensive substructure repairs, beam ends repairs of concrete T-Beams superstructure, repair of abutment bearing seats, replacement of lighting system under bridges, complete reconstruction of bridge parapets, and replacement of bridge terminals.

Village of Northbrook | Shermer Road Bridge Improvement | *Northbrook, IL*
Lead Structural Engineer for Phase I and II engineering services for federally funded project to upgrade Shermer Road Bridge to meet current structural, hydraulic, and geometric requirements. The single span bridge consists of a precast prestressed deck beam superstructure on closed concrete abutments on spread footings.

Kane County DOT | 2018 Structural Services (18-00498-00-BR) | *Kane County, IL*
QC/QA for Phase I and Phase II engineering services for repair and maintenance of seven (7) separate structures. Projects included the development of Maintenance of Traffic plans, acquisition of all permits, and development of PS&E documents.

Village of Deerfield | Deerfield Road Pedestrian Tunnel | *Deerfield, IL*
Structural Engineer for design of hydraulically jacked precast tunnel under the Metra railroad tracks.

Town of Fraser | County Road 8 Bridge over Fraser River | *Fraser, CO*
Structural Engineer for replacement of bridge with new prestressed deckbeam bridge on integral abutments for federally funded project.

IDOT | Illinois Route 83 Bridge over Illinois Route 5 | *Oak Brook, IL*
Structural Engineer responsible for preliminary and final design plans for the widening and rehabilitation of 4-span P.P.C. I-beam structure.

Illinois Tollway | Design Upon Request (DUR) (PSB 18-4/03) | *Various Locations, IL*
Coordinated design of pedestrian bridge north of 47th Street and spanning I-294 and Flagg Creek, with 3 steel truss spans 170' long and one PPC deck beams spanning 52'.

Jeffrey Woss, PE

Civil Engineer - Roadways

Education

B.S., Civil Engineering, University of Illinois, 2009

Registrations

Professional Engineer:
Illinois, #062-066553, 2014

Years of Experience

11

Mr. Woss is a Project Manager and Civil Engineer with experience in designing and developing plans, specifications and estimates for roadway and utility projects as well as construction engineering services for roadway projects. For design projects, he is responsible for conceptual planning and design of projects including: roadway geometrics, cross section development, earthwork quantity calculations, grading, and pavement marking.

Experience

IDOT | LaGrange Road (US Route 45) Improvements | *Orland Park, IL*
Design Engineer responsible for signal design for the reconstruction of six-mile section of US Route 45 (LaGrange Road) from 179th Street to 131st Street. The signal design included enhancements to facilitate pedestrian access at 18 intersections throughout the length of the project. The $98 million project also included drainage improvements, a multi-use path, and water main installation.

IDOT | 55th Street Reconstruction | *Western Springs, Countryside, and LaGrange, IL*
Civil Engineer for Phase II engineering services for 1.75 miles of roadway reconstruction. Responsible for roadway geometrics, including geometric design and cross sections. The $6 million project includes roadway widening and resurfacing, traffic signal modernization, drainage improvements, ADA ramps and multi-use path.

Village of Hinsdale | 2015 Street Reconstruction | *Hinsdale, IL*
Project Engineer responsible for design of ADA sidewalks and ramps as part of the 2015 Street Reconstruction Program of 5,600 feet of Village streets. Also included separation of combined sewers and replacement of sanitary sewer. Localized drainage concerns were investigated and addressed in contract plans. Storm and sanitary sewers were televised to determine if sewers should be replaced or lined.

Village of Morton Grove | Dempster St. Roadway Reconstruction | *Morton Grove, IL*
Construction Engineer responsible for Phase III engineering services for roadway reconstruction and streetscape enhancements to Dempster St. Commercial Corridor.

Illinois Tollway | I-88Reconstruction, East West Connector | *DuPage County, IL*
Earthwork Engineer for Phase II engineering services for roadway and bridge reconstruction on ramps between I-294 and I-88. The $25 million project included rehabilitation or reconstruction of 5 structures, maintenance of traffic, utility coordination, roadway drainage, pavement marking and signing, roadway lighting, sustainability design, ITS , erosion, control, erosion control and landscaping.

Chicago Department of Water Management | Sewer Improvements | *Chicago, IL*
Civil Team Leader responsible for design of sewer system, and roadway and sidewalk ADA ramp improvements as part of sewer improvements throughout Chicago. Services include scheduling, coordination of field surveys and geotechnical investigations, public agency and private utility coordination, and permitting.

Jenna Burian, EI

Civil Engineer - Roadways

Education

B.S., Civil Engineering Sciences,
University of Illinois at Chicago, 2019

Registrations

Engineer Intern:
Illinois, #061-040590, 2019

Years of Experience

2

Ms. Burian is a civil engineer that specializes in urban infrastructure design. Her experience includes developing existing condition sheets from survey mapping data and utility atlases in plan and profile view, and developing proposed conditions by utilizing design criteria and the application of standard drawings. She has also assisted in the production of Intersection Design Studies utilizing Highway Capacity Software (HCS7) and Auto-turn. Ms. Burian is proficient in MicroStation, Geopak, Primavera P6, Win TR-20, HY-8, HEC-HMS, HEC-RAS, HCS 2010, and StormCAD.

Experience

DuPage County DOT | 75th Street Intersection Improvements | *DuPage County, IL*
Civil Engineer for Phase I engineering services that included an Intersection Design Study and Project Development Report. Utilized the program HCS7 to determine the traffic signal phasing since the project involved adding right turn lanes at 4 intersections and phasing the traffic signals so that left turns were permitted on green arrow only.

IDOT | 55th Street Reconstruction | *Western Springs, Countryside, and LaGrange, IL*
Civil Engineer that assisted in providing drainage design for a Phase II project in Cook County with an overall length of 1.75 miles. The $6 million project includes roadway widening and resurfacing; traffic signal modernization at Wolf Road, Laurel Avenue, Willow Springs Road, and Brainard Avenue; drainage improvements; ADA compliant ramps; and a multi-use path.

Chicago Department of Water Management | Sewer Improvements | *Chicago, IL*
Civil Engineer responsible for preparing the existing condition plans, including plotting existing utilities based on information provided through the Office of Underground Coordination Information Retrieval (OUC IR) process. Also worked on the development of the proposed sewer line on plan and profile sheets and assisted with restoration plans.

People's Gas Light & Coke (PGL) | Gas Main Replacement Projects | *Chicago, IL*
Civil Engineer responsible for assisting with plan preparation for gas main installations. Project involvement included the development of existing conditions in plan and profile views, including utilities based on information provided through the Office of Underground Coordination Information Retrieval (OUC IR) process. Included development of maintenance of traffic plans, proposed gas main plan and profile sheets, and restoration plans. All plans adhered to PGL CAD standards. Also assisted in the preparation of all milestone submittals and scheduling updates utilizing the required Primavera software.

Joseph Middleton, PE, CFM

Drainage Engineer

Education

B.S, Civil Engineering,
Michigan State University, 2000

Registrations

Professional Engineer:
Illinois, #062-060070, 2007
Virginia, #402052141
Michigan, #6201060358
Texas, #127697
Iowa, #P2552
Idaho, #19670

Certifications

Certified Floodplain Manager:
US-18-10161

IDOT Erosion and Sediment Control Workshop Modules I & II, 2020

NHI - Countermeasure Design for Bridge Scour and Stream Instability

Associations

American Society of Civil Engineers

Michigan Stormwater-Floodplain Association (MSFA)

ACEC-IL US Army Corps of Engineers, Chicago Committee

Years of Experience

20

Mr. Middleton's engineering career has focused on drainage design for public sector projects including street and intersection improvements, roadway rehabilitation, bridge rehabilitation and replacement, and site development. His duties include preparation of plans, specifications, cost estimates, permitting, and project reports.

Experience

IDOT | LaGrange Road (US 45) Improvements | *Orland Park, IL*
Senior Drainage Design Engineer for Phase II design services for reconstruction and widening of 6 miles of LaGrange Road. Responsible for designing storm sewer system, culverts, storm water detention facilities, water quality best management practices, erosion and sediment control plans, and permitting.

DuPage County DOT | 75th Street Intersection Improvements | *Naperville, IL*
Drainage Engineer for Phase I and II engineering services for intersection widening at four locations. Prepared drainage contract plans, drainage calculations, and other documents in order to obtain DuPage County Stormwater Certification for project.

Kane County DOT | IL 38 and Kirk Road | *Kane County, IL*
Project Engineer for Phase I/II engineering services for intersection improvement. Responsible for preparing contract documents, calculating quantities, preparing cost estimates, coordination with utility companies, and designing storm sewer.

Fraser County DOT | County Road 3 Bridge over Williams Fork | *Fraser County, CO*
Drainage Hydraulic Engineer for contract plan development for culvert replacement.

Fraser County DOT | County Road 8 Bridge over Fraser River | *Fraser County, CO*
Drainage Hydraulic Engineer for contract plan development for bridge replacement.

Village of Northbrook | Shermer Road Bridge Improvement | *Northbrook, IL*
Project/Drainage Engineer for Phase I/II engineering services for bridge rehabilitation.

Village of Hinsdale | 2015 Street Reconstruction | *Hinsdale, IL*
Project Manager responsible for engineering services for reconstruction/resurfacing of Village streets, separation of combined sewers, replacement of sanitary sewers, replacement of water mains, and ADA upgrades to sidewalks and ramps.

IDOT | 55th Street Reconstruction | *Western Springs, Countryside, and LaGrange, IL*
Drainage Engineer for Phase II engineering services for 1.75 miles of roadway reconstruction. Responsible for design of open and closed drainage systems, detention analysis, QA/QC of drainage plans, and construction documents.

IDOT | Phase II Various/Various Projects (PTB 195/016) | *District 1, IL*
Project Engineer for phase II contract preparation for projects that have included a culvert replacement and bridge rehabilitation. Duties included verification of Phase I project information, development & review of contract plans and corridor modeling.

Kevin Hejtmanek, PE

Civil Engineer - MOT and Utilities

Education

B.S., Civil Engineering, Michigan State University, 2010

Registrations

Professional Engineer:
Illinois, #062-067844, 2015

Associations

American Society of Civil Engineers

Years of Experience

11

Mr. Hejtmanek has served as the project engineer and project manager on transportation projects. He has extensive knowledge regarding permitting for jurisdictions including City of Chicago, DuPage County, IDOT, CDOT, MWRD, and municipalities. Mr. Hejtmanek has diverse technical skills in all aspects of civil engineering design including stormwater management, grading and earthwork, sewer and utility design, erosion and sediment control, paving and materials, cost estimation, value engineering, and construction specifications.

Experience

IDOT | Phase II Various Projects (PTB 195-016) | *Various Locations, IL*
Civil Engineer for Phase II design projects including:

- **IL 52 (Cedar Road) Culvert Replacement at Ditch North of Forked Creek, Will County, IL.** Civil Engineer for reconstruction of existing culvert under US 52, including design of temporary traffic signal system, maintenance of traffic, permitting, specifications, and status of utilities coordination.
- **IL 83 at IL 38 Culvert Reconstruction, DuPage County, IL.** Civil Engineer for project that involved reconstruction of existing culvert running underneath IL 83, construction of a retaining wall, and drainage adjustments downstream of the culvert. Involved in design, permitting, specifications, and cost estimates, as well as maintenance of traffic, traffic analysis, and status of utilities coordination.
- **130th Street Bridge Rehabilitation at CSSS Railroad, IHB Railroad, and I-94, Cook County, IL.** Civil Engineer for bridge substructure and superstructure repair along 130th Street. Project involved a median crossover maintenance of traffic scheme over the course of the two roadway bridges undergoing rehabilitation. Involved in design, permitting, specifications, and cost estimates; temporary traffic signal design and coordination; maintenance of traffic, detour planning, and traffic analysis; and status of utilities coordination.

Chicago Department of Water Management | Sewer Improvements | *Chicago, IL*
Project Engineer for the preparation of final contract plans, specifications and estimates for sewer improvements including water main relocations. Work includes data collection and initial assessments, coordination of survey and geotechnical engineering, utility coordination, sewer alignments and profiles, structural design, compliance with IEPA water sewer separation requirements, cross sections/ typical sections, traffic control and detours, surface drainage design, permitting, constructability reviews, IEPA bid packaging, and Quality Assurance/Quality Control.

Cumberland Mall | *Cobb County, GA*
Civil Engineer for redevelopment of shopping mall and associated parking lot to mixed-use development. Project included the relocation of a portion of the mall ring road, mill and overlay of existing parking lot, and associated grading, stormwater and utilities. Tasks included due diligence, design, and county permit coordination.

Arthur Nowak, PE, SE

Structural Engineer

Education

M.S., Civil and Structural Engineering, University of Illinois-Chicago, 2000

B.S., Civil Engineering, University of Illinois-Chicago, 1994

Registrations

Professional Engineer:
Illinois, #062-054030, 2000
Ohio, #E-79257
Florida, #78173
New Jersey, #24GE52654
Arizona, #65513
Texas, #127333
Maryland, #52919
Michigan, #6201065917
Colorado, #53499
Georgia, #042074
Virginia, #058418

Structural Engineer:
Illinois, #081-005894, 2002

Certifications

Certified NBI Program Manager for Bridge Inspection (Inspector ID 00508)

Certified Element Level Program Manager for Element Level Bridge Inspection

Associations

American Society of Civil Engineers, Section President - Structural Group Illinois Section, 2004 - 2005

American Railway Engineering and Maintenance-of-Way Association, Committee 15 Member

ACEC Illinois Bridge Committee

Years of Experience

26

Mr. Nowak has 26 years of experience providing Phase I and II engineering services for infrastructure projects involving highway and railroad bridges, culverts, retaining walls, noise walls, communication towers, parking structures, and low rise buildings.

Experience

Chicago Dept. of Transportation | Lake Shore Drive (US 41) Viaducts | *Chicago, IL*
Structural Project Manager for repair/rehabilitation of two Lake Shore Drive viaducts over Wilson and Lawrence Ave. Included extensive repairs to substructure, beam ends of concrete T-Beams superstructure, and abutment bearing seats; replacement of lighting system and bridge terminals; and reconstruction of bridge parapets.

Village of Northbrook | Shermer Road Bridge Rehabilitation | *Northbrook, IL*
Structural Project Manager for Phase I, II & III engineering for bridge over West Fork, North Branch, Chicago River. New superstructure utilizes ultra-high performance concrete (UHPC) key-ways instead of typically used grouted key-ways between the precast deck beams. This project received 80% Federal funding participation.

Kane County DOT | Structural Services (Number 18-00498-00-BR) | *Kane County, IL*
Structural Manager for Phase I and II engineering services for repair and maintenance of seven (7) structures. Included development of Maintenance of Traffic plans; acquisition of all permits; and development of PS&E documents.

Fraser County DOT | County Road 8 Bridge over Fraser River | *Fraser, CO*
Structural Manager for Phase I and II engineering services for federally funded replacement of the existing steel beam bridge at County Road 8 and the Fraser River.

Fraser County DOT | County Road 3 Bridge over William's Fork | *Grand County, CO*
Structural Manager for abbreviated Phase I and detailed Phase II engineering services (PS&E) for the replacement of the existing County Road 3 Culvert at Williams Fork.

IDOT | Phase II Various/Various Projects (PTB 195-016) | *District 1, IL*
Structural Engineer responsible for plans and specifications for following projects:

- **IL 83 at IL 38 Culvert Reconstruction, DuPage County, IL.** New 400 feet long soldier pile retaining wall and 200 feet long precast three-cell culvert structure.
- **130th Street Bridge Repair at I-94 & CSSS & IHB RR, Chicago, IL.** Bridge rehabilitation plans for two bridges at 130th St. over I-94 and Southwest Service Line Railroad Tracks. Included new expansion joints, new relief joints, deck slab and approach slabs repairs, new 2 ½" Latex Overlay, formed concrete repair of pier and abutments, four bearing replacements, pier crash wall extension.
- **Bridge Repairs at Various Locations along I-90/94, Cook County, IL.** Bridge rehabilitation plans for bean repairs for three bridge structures at I-94 and I-55.

IDOT| Phase II Various Pavement and Bridge Preservation Projects | *District 1, IL*
Structural Engineer for bridge rehabilitation plans for two bridges at I-57 over I-80.

Amir Soltani, PhD

Structural Engineer

Education

Ph.D., Structural Engineering, University of Pittsburgh, Pittsburgh, PA, 2011

M.S., Structural Dynamics and Earthquake Engineering, IIEES, Tehran, Iran, 2002

B.S., Civil Engineering; University of Tehran, Iran, 1999

Registrations

Engineer Intern: NCEES

Years of Experience

18

Mr. Soltani is a structural engineer with experience designing prestressed/precast structural members such as beam, columns, wall panels and hollow cores and supporting structures, connections, and erection, and handling hardwares for over 40 mid-raise commercial and residential projects and parking lots.

Experience

IDOT | I-39 from N. of Blackhawk Road to I-90, US 20 from I-39 to E. of Kishwaukee River & Harrison Ave. from Bell School to I-39 (PTB 193-020) | *Winnebago County, IL*
Structural Engineer who designed Ramp DB over Linden Road (Structure No. 101-0212) and designed I-39 over Canadian Railroad (Structure No. 101-0208 EB & Structure No. 101-0209 WB) for $177.9 million project.

IDOT | Phase II Various/Various Projects (PTB 195-016) | *District 1, IL*
Structural Engineer for projects that include: **IL 83 at IL 38 Culvert Reconstruction, DuPage County IL.** Reconstruction of existing culvert running underneath IL 83, construction of a retaining wall, and drainage adjustments downstream of the culvert. Designed Retaining Wall – Structure No. 022-W001.

IDOT | Box Culvert Replacement, IL-47 at Silver Creek | *McHenry County, IL*
Designed and engineered a new triple barrel culvert on 50 degree skewed angle on IL-47 near Cooney Drive. This project required staged construction.

Illinois Tollway | Design Upon Request (DUR) (PSB 18-4/03) | *Hinsdale, IL*
Structural Engineer who prepared calculation book and design documents for the pedestrian bridge north of 47th Street and spanning the Tri-State Tollway and Flagg Creek. The pedestrian bridge will consist of three steel truss spans 170' long and one PPC Deck Beams Span spanning 52'. The selected substructure elements consist of cast-in-place hammer head bents founded on drilled shaft foundations.

Illinois Tollway | Balmoral Avenue Roadway Interchange at the Tri-State Tollway (I-294) | *Rosemont, IL*
Structural Engineer for the widening of Balmoral Road Bridge over I-294 as part of the interchange project. Designed two additional prestressed girders for Balmoral Avenue bridge widening.

Asphalt Operating Service (AOS) | Dockwall Remediation | *Chicago, IL*
Structural Engineer who participated in design of existing dockwall repair.

Township of Hanover | Bridge 1 & 2 – River Park | *Morris County, NJ*
Structural Engineer for design of two bridges.

Metra | Rock Island Metra Station | *New Lenox, IL*
Finalized the design and engineering of Rock Island Metra station platform steel structure with precast concrete deck.

Javier Steve Santacruz

Mr. Santacruz has spent his career as a real estate professional working as a controller for VMS Realty Partners and general counsel of Continental Offices. He has extensive experience in lease negotiation, property management, debt restructuring, acquisitions/dispositions and the development of real estate investment vehicles.

For the past twenty years, Mr. Santacruz has been providing right-of- way services for a variety of governmental agencies. He has assisted on planning of right-of-way during plan development stages, as well as worked as a right-of-way agent in the acquisition and facilitation of right- of-way necessary for the completion of a project. He has extensive experience working with the Illinois Department of Transportation and the Illinois State Toll Highway Authority gaining a thorough understanding of the policies and procedures of those agencies in meeting their right-of-way requirements. Representative project experience includes:

Role:
President/
Right of Way Consultant

Years of Experience: *25+*

Education:
Juris Doctorate
DePaul University Law, 2015
B. S. in Accounting
DePaul University, 1983

Professional Credentials:
International Right of Way Association

- O'Hare Modernization Program, O'Hare Airport expansion for the City of Chicago – Right-of-Way Agent. Completed the acquisition or referral for condemnation of over 300 parcels in a seven month period. Coordinated the acquisition process with relocation agents assigned to provide relocation benefits to displaced property owners under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

- Washington Street in Lake County, Illinois, Lake County Division of Transportation – Right-of-way Agent. Engaged to provide negotiation/acquisition and appraisal services for 135 parcels over a 2.5 mile corridor. Project involved roadway widening and a grade separation of METRA rails from the roadway.

- Grand Avenue Grade Separation, Grand Avenue Railroad Relocation Authority, Franklin Park, Illinois – Right-of-way Agent. Provided negotiation services and facilitated acquisition of over eighty parcels of right-of-way necessary to complete a rail-road grade separation along Grand Avenue in Franklin Park involving the Soo Line Railroad, CP Rail Systems, Wisconsin Central and Indiana Harbor Belt Railroad.

- I57 and I294 Interchange, Illinois State Toll Highway Authority – Right-of-Way Agent. Engaged to provide a combination of negotiation/acquisition and appraisal services for over one hundred parcels for the construction of an interchange connecting two major interstates.

Jonathan Abplanalp

Mr. Abplanalp is in his eighth year providing right-of-way services for a variety of governmental agencies. He has worked as a right-of-way agent in the acquisition and facilitation of right-of-way necessary for the completion of a project. Prior to becoming an IDOT-approved Fee Negotiator, Mr. Abplanalp worked for Santacruz Land Acquisitions as a Right of Way Administrative Assistant. Representative project experience includes:

Role:
Vice-President/
Right of Way Consultant

Years of Experience: *8+*

Education:
B. S. in Architectural Studies
University of Illinois, 2011

Professional Credentials:
International Right of Way Association

- Weiland Road in Lake County, Illinois, Lake County Division of Transportation – Right-of-way Agent. Assisted in negotiation of 48 parcels over a two mile corridor. Project involved several relocations of residences.
- IL 31 in Carpentersville, Illinois, Village of Carpentersville – Right- of-way Agent. Assisted in negotiation of 40 parcels for major intersection reconfiguration. Project involved two relocations of businesses.
- Ohio Street at BNSF Railway Crossing in Aurora for City of Aurora – Right-of-Way Agent. Engaged to provide negotiation/acquisition services for 14 parcels. Project involved a grade separation of railroad from the roadway.
- Washington Street in Lake County, Illinois, Lake County Division of Transportation – Right-of-way Agent. Assisted in negotiation of 135 parcels over a 2.5 mile corridor. Project involved roadway widening and a grade separation of METRA rails from the roadway.
- Lake Cook Road in Lake County & Cook County, IL – Right-of-way Agent. Assisted in negotiation and facilitated acquisition of 48 parcels of right-of-way for major reconstruction of Lake Cook Road. Parcels were acquired on behalf of Lake County, Cook County, and the Illinois Department of Transportation.
- IL 72 at Big Timber Road in Kane County for Illinois Department of Transportation – Right-of-way Agent. Provided negotiation services and facilitated acquisition of eight parcels of right-of-way necessary for the reconstruction of intersection of IL 72 and Big Timber Road.
- Plum Grove Road in Schaumburg, IL for Village of Schaumburg – Right-of-way Agent. Provided negotiation services and facilitated acquisition of 25 parcels of right-of-way necessary to reconstruct 2 sections of Plum Grove Road. One section included the installation of a roundabout.
- National Parkway in Schaumburg, IL for Village of Schaumburg – Right-of-way Agent. Provided negotiation services and facilitated acquisition of 17 parcels of right-of-way necessary to reconstruct National/State Parkway. Project consisted of reduced traffic lanes and the addition of a bike lane.

Gerardo P. Sanchez
Professional Land Surveyor

Illinois Lic. 035-003486
Exp. 11/30/2022
Since 2002

Indiana Lic. 20900177
Exp. 7/31/2022
Since 2011

Background:

Mr. Sanchez is a professional land surveyor with more than 28 years of experience in a wide variety of surveying applications including transportation design surveys, control surveys, quality control, land acquisition surveys, hydrographic surveys, aerial photogrammetry ground control, ALTA/ACSM Land Title Surveys and boundary surveys in a variety of projects including surveys for airports, highways, expressways, bridges, railroads, transit lines, and underground utilities.

Mr. Sanchez is very familiar with the latest technology including Global Positioning Systems (GPS), robotic instrumentation. He has performed calculations for GPS network surveys, numerous large scale horizontal and vertical network adjustments, and complex boundary surveys.

Education

Universidad Del Estado Mexico (UAEM), Specialization on Highway Design, 1985-1986
Universidad de Michoacan (UMSNH), Mexico, BS Civil Engineering, 1977-1982
Rancho Santiago College, Various Surveying and Computer Classes 1991-1995

Professional Experience

Survey Manager – Sanchez & Associates, P.C. (February 2005 - Present)
Responsible for contract negotiation, managing survey projects and responsible for the coordinating and scheduling the work of the field survey work. Field survey of various types of projects ranging from topographic and boundary surveys for Chicago Park District, Cook County Dept. of Highways, boundaries for commercial & residential parcels, and construction stakeout for residential projects.

Project Surveyor for the O'Hare Modernization Program (May 2003 to 2006)
Project Survey Manager (1995 to April 2003)
Survey Technician – (1992-1994)

Major Projects

75th Street, Millbrook to Greene, DuPage County, IL (April 2019 – March 2020)
Survey Manager involved on survey items of work anticipated for design services for the corridor. Supervised topographical survey and ADA survey that were required such as the area within the ROWs. Performed topographical survey and cross sections every 100' plus a half cross section on the driveways within the project limits.

Park Boulevard, Glen Ellyn, DuPage County, IL (June 2017 to April 2019)
Survey Manager for reconstruction of roadway along Park Blvd from Roosevelt Road to Union Pacific Railroad Tracks (CN & W RR). Provided survey control verification and cross section prior to construction, survey of all utility structures. During construction, provided various tasks such as establishing additional survey control, grade and line verification of new pavement. Performed an As-Built Survey obtaining cross sections along new improvements to be used for volume calculations.

Irving Park Road over Chicago River, Chicago, IL (2015-2016)
Survey Manager for the survey tasks as required by team designing bridge improvements and design of a new pedestrian and bike path along the west bank of the river.The scope of work and delivery was to create various Plats of Boundary Survey, Plats of Easements and Plats of Dedication

ASHOK GUNTAKA, E.I.T.

Geotechnical Engineer

Ashok has over 24 years of experience in geotechnical engineering experience that includes subsurface soil explorations including borehole placement determination based on requirements of proposed type of construction, field logging, visual soil classification, soil data interpretation, settlement and bearing capacity calculations, preparation of borehole logs, preparation of geotechnical reports, and technical meetings with structural engineers. Experience also includes supervision of advanced field geotechnical testing such as vane shear testing and pressuremeter testing to determine in-situ bearing capacity.

PROJECT EXPERIENCE

CITY OF EVANSTON, CENTRAL ST. BRIDGE REPLACEMENT:
This project included geotechnical investigation with soil borings up to bedrock elevation and laboratory testing. The Structure Geotechnical Report (SGR) included slope stability analysis and design of pile foundation system for the 168 feet long, 77-foot-wide single span bridge. In addressing the slope movement, adjacent to the fire station driveway, a boring was drilled to a depth of 50 feet in the area of concern. The investigation was performed in accordance with IDOT Geotechnical Manual and the SGR was prepared in accordance with IDOT Bridge Manual guidelines.

IDOT, WILLOW ROAD PHASE II, NORTHFIELD, IL:
The IDOT funded project included drilling, extensive geotechnical laboratory testing and geotechnical report preparation for bridge replacement, roadway widening, intersection improvements, and the traffic signal improvements. Also included a feasibility study of various foundation options such as pile foundations and caisson foundations.

LAKE COUNTY DOT, ELA ROAD AND LONG GROVE ROAD INTERSECTION IMPROVEMENTS:
The Lake County DOT funded project included drilling over 35 roadway borings and associated laboratory testing. The purpose of the project was to investigate various options for reducing congestion and improving traffic flow. The Roadway Geotechnical Report was prepared in accordance with IDOT Geotechnical Manual.

YEARS OF EXPERIENCE

24 YEARS

EDUCATION

UNIVERSITY OF TEXAS AT EL PASO,
M.S. CIVIL ENGINEERING

CERTIFICATIONS AND TRAINING

- IDOT DOCUMENTATION (16-11798)
- IDOT GEOTECHNICAL S-33
- IDOT 5-DAY MIX AGGREGATE
- IDOT HMA I, II, III
- IDOT PCC I, II
- IDOT CONSTRUCTION MATERIAL INSPECTION
- IDOT SUPERPAVE FIELD CONTROL
- OSHA 40-HOUR HAZWOPER
- ENVIRONMENTAL PHASE I ASSESSMENT TRAINING

SPECIALIZED SKILLS

- SUBSURFACE GEOTECHNICAL INVESTIGATIONS & GEOTECHNICAL ENGINEERING
- ENVIRONMENTAL SITE REMEDIATION OVERSIGHT & COMPLIANCE MONITORING
- PHASE I & II ENVIRONMENTAL SITE ASSESSMENTS

VILLAGE OF WILMETTE, HAPP ROAD OVER SKOKIE RIVER, COOK COUNTY:
Work for this project included a variety of environmental services. Duties included a Preliminary Environmental Site Assessment (PESA) and the Clean Construction and Demolition Debris (CCDD) certification of qualified soil. Services also included the collection of subsurface soil samples for chemical analysis to quantitatively determine the concentration of contaminants of concern.

CITY OF EVANSTON, GEOTECH AND ENVIRONMENTAL, 2018 TASK ORDER #5:
INTERRA provided Geotechnical and pavement coring for various Evanston locations for Street and Alley Sites, Water Main Sites, MFT Sites, and Parking Lot Sites. Included locating and drilling soil borings and the collection of pavement cores. INTERRA conducted laboratory testing on samples and prepared geotechnical memorandum.

BRENDA D LOWERY, P.E.
SR ELECTRICAL ENGINEER

EDUCATION
Howard University
Washington D.C.,
B.S in Electrical
Engineering, 1989

REGISTRATION
Professional Engineer
Illinois 2013
(#062065244)

TRAINING
AGI-32
Short circuit
Analysis-IDOT Course

IDOT Protective
Device
Coordination
Studies-IDOT

IDOT Lighting
Seminar-
ACEC/IDOT Course

Grounding and
Overcurrent Protection-
IDOT Course

Documentation of
Contract Quantities
19-15729

COMPUTER SKILLS

AGI-32

Micro Site Lite

MicroStation V8i,
Connect

EXPERIENCE PROFILE
Ms. Lowery has over 30 years' experience as an Electrical Engineer. She worked for the **Illinois Department of Transportation** for over 13 years as an Electrical Engineer on many of their projects. Ms. Lowery is proficient in various electrical designs from concept to completion. Her expertise includes highway lighting of various types including conventional, ornamental, and high mast. Ms. Lowery is also very conversant with IDOT, Tollway and other local agency policies and procedures. She is knowledgeable in all aspects of lighting circuit design and proper application of the National Electric Code.

PROFESSIONAL EXPERIENCE

US Route 20 at IL Route 59, IDOT
Lead Electrical Engineer for Phase II preparation of contract plans, specifications and estimates for upgrading interchange lighting. Included removal plans and temporary lighting plans. Underpasslighting plans were prepared since existing underpass lighting was upgraded, and pedestrian underpass lighting was added. Photometriccalculations and voltage drop calculations were reviewed.

Harlem Ave. (127th St. to 119th St.), Cook County, IDOT/Palos Heights
Phase II preparation of contract plans, specifications and estimates for providing new roadway lighting which included pedestrian LED lighting. Several intersections were included. The length of the project was approximately 1 mile. Ms. Lowery was involved in the design of the major urban arterial roadway lighting which included photometric calculations and voltage drop calculations.

Miller Rd. at Green St. and River Rd. (over Fox River), McHenry County, IDOT
This project involves the Phase II preparation of contract plans, specifications and estimates for the reconstruction of Miller Road from Green St. to River Road and widening of the bridge over Fox river. Ms. Lowery was involved in the design of arterial lighting and bridge lighting. Photometric calculations and voltage drop calculations were performed.

Barrington Rd (Maple Ave. to IL 19), Cook County, IDOT/Hanover Park
Phase II preparation of contract plans, specifications and estimates for providing new LED roadway lighting. Intersection lighting was provided at Barrington Rd. and Walnut Ave. Project length was .75 mile. Ms. Lowery was involved in design of streetscape lighting on this major urban arterial roadway. Photometric calculations were performed, andvoltage drop calculations were reviewed by Ms. Lowery.

IL Route 53 at IL Route 56, DuPage County, IDOT
Phase II preparation of contract plans, specifications and estimates for providing new LED roadway lighting. Included the intersection and transition lighting on each leg of the intersection. The project also included temporary lighting. Ms. Lowery was involved in the design of the major urban arterial roadway lighting which included photometric calculations and the review of voltage drop calculations.

Western Ave. over the Cal-Sag Channel, Cook County, IDOT
Phase II preparation of contract plans, specifications and estimates for the reconstruction of a portion of the Western Ave. bridge. The project included underpass lighting. Ms. Lowery was involved in the design of arterial lighting, underpass, and bridge lighting. Photometric calculations were performed.

US 6 at Gougar Rd., Will County, IDOT/Joliet
Phase II preparation of contract plans, specifications and estimates for the reconstruction of the intersection of US 6 and Gougar Rd. The project involved new lighting at the intersection as well as transition lighting on each leg. Ms. Lowery was involved in the QA/QC of this arterial lighting. Photometric calculations were performed, and voltage drop calculations were reviewed by Ms. Lowery.

I-90 (I-190 East to IL 43), Cook County, IDOT
Phase II preparation of contract plans, specifications & estimates as support for prime lighting designer. The contract involved reconstruction of eastbound lanes and ramps, and included underpass lighting. Project length was 2 miles. Ms. Lowery was also involved in QA/QC for the lighting plans. Design included continuous freeway, complete and partial interchanges, and underpass lighting.

IDOT Prequalifications

5

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

June 24, 2021

Subject: PRELIMINARY ENGINEERING
Consultant Unit
Prequalification File

Michael Bruen
Bowman Consulting Group
12355 Sunrise Valley Drive
Suite 520
Reston , VA 20191

Dear Michael Bruen,

We have completed our review of your "Statement of Experience and Financial Condition" (SEFC) which you submitted for the fiscal year ending Dec 31, 2019. Your firm's total annual transportation fee capacity will be $22,400,000.

Your firm's payroll burden and fringe expense rate and general and administrative expense rate totaling 163.06% are approved on a provisional basis. The rate used in agreement negotiations may be verified by our Bureau of Investigations and Compliance in a pre-award audit. Pursuant to 23 CFR 172.11(d), we are providing notification that we will post your company's indirect cost rate to the Federal Highway Administration's Audit Exchange where it may be viewed by auditors from other State Highway Agencies.

Your firm is required to submit an amended SEFC through the Engineering Prequalification & Agreement System (EPAS) to this office to show any additions or deletions of your licensed professional staff or any other key personnel that would affect your firm's prequalification in a particular category. Changes must be submitted within 15 calendar days of the change and be submitted through the Engineering Prequalification and Agreement System (EPAS).

Your firm is prequalified until December 31, 2020. You will be given an additional six months from this date to submit the applicable portions of the "Statement of Experience and Financial Condition" (SEFC) to remain prequalified.

Sincerely,
Jack Elston, P.E.
Bureau Chief
Bureau of Design and Environment

SEFC PREQUALIFICATIONS FOR Bowman Consulting Group

CATEGORY	STATUS
Special Studies - Safety	X
Hydraulic Reports - Waterways: Complex	X
Special Plans - Traffic Signals	X
Hydraulic Reports - Waterways: Typical	X
Special Services - Sanitary	X
Structures - Highway: Simple	X
Structures - Highway: Advanced Typical	X
Airports - Design	X
Special Studies - Traffic Studies	X
Special Studies - Feasibility	X
Structures - Highway: Typical	X
Structures - Railroad	X
Highways - Roads and Streets	X
Special Services - Construction Inspection	X
Highways - Freeways	X
Hydraulic Reports - Pump Stations	X
Location Design Studies - Rehabilitation	X
Special Studies- Location Drainage	X
Location Design Studies - Reconstruction/Major Rehabilitation	X
Location Design Studies - New Construction/Major Reconstruction	X
Special Services - Project Controls	X
Special Services - Public Involvement	A

X	PREQUALIFIED
A	NOT PREQUALIFIED, REVIEW THE COMMENTS UNDER CATEGORY VIEW FOR DETAILS IN EPAS.
S	PREQUALIFIED, BUT WILL NOT ACCEPT STATEMENTS OF INTEREST

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

June 29, 2020

Subject: PRELIMINARY ENGINEERING
Consultant Unit
Prequalification File

Ahsan Siddiqi
AMES ENGINEERING, INC.
6330 Belmont Rd, Suiite 4B
DOWNERS GROVE, IL 60516

Dear Ahsan Siddiqi,

We have completed our review of your "Statement of Experience and Financial Condition" (SEFC) which you submitted for the fiscal year ending Dec 31, 2019. Your firm's total annual transportation fee capacity will be $4,000,000.

Your firm's payroll burden and fringe expense rate and general and administrative expense rate totaling 114.39% are approved on a provisional basis. The rate used in agreement negotiations may be verified by our Office of Quality Compliance and Review in a pre-award audit.

Your firm is required to submit an amended SEFC through the Engineering Prequalification & Agreement System (EPAS) to this office to show any additions or deletions of your licensed professional staff or any other key personnel that would affect your firm's prequalification in a particular category. Changes must be submitted within 15 calendar days of the change and be submitted through the Engineering Prequalification and Agreement System (EPAS).

Your firm is prequalified until December 31, 2020. You will be given an additional six months from this date to submit the applicable portions of the "Statement of Experience and Financial Condition" (SEFC) to remain prequalified.

Sincerely,
Jack Elston, P.E.
Bureau Chief
Bureau of Design and Environment

SEFC PREQUALIFICATIONS FOR AMES ENGINEERING, INC.

CATEGORY	STATUS
Location Design Studies - Rehabilitation	X
Special Studies - Traffic Signals	X
Special Services - Electrical Engineering	X
Highways - Roads and Streets	X
Highways - Freeways	X
Special Services - Construction Inspection	X
Special Studies - Traffic Studies	X
Special Studies - Lighting: Complex	X
Special Studies - Lighting: Typical	X
Special Studies - Safety	X

X	PREQUALIFIED
A	NOT PREQUALIFIED, REVIEW THE COMMENTS UNDER CATEGORY VIEW FOR DETAILS IN EPAS.
S	PREQUALIFIED, BUT WILL NOT ACCEPT STATEMENTS OF INTEREST

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

August 13, 2021

Subject: PRELIMINARY ENGINEERING
Consultant Unit
Prequalification File

Sudhakar Rao Doppalapudi
INTERRA, Inc.
600 Territorial Drive
Suite G
Bolingbrook, IL 60440

Dear Sudhakar Rao Doppalapudi,

We have completed our review of your "Statement of Experience and Financial Condition" (SEFC) which you submitted for the fiscal year ending Jun 30, 2020. Your firm's total annual transportation fee capacity will be $12,000,000.

Your firm's payroll burden and fringe expense rate and general and administrative expense rate totaling 144.85% are approved on a provisional basis. The rate used in agreement negotiations may be verified by our Bureau of Investigations and Compliance in a pre-award audit. Pursuant to 23 CFR 172.11(d), we are providing notification that we will post your company's indirect cost rate to the Federal Highway Administration's Audit Exchange where it may be viewed by auditors from other State Highway Agencies.

Your firm is required to submit an amended SEFC through the Engineering Prequalification & Agreement System (EPAS) to this office to show any additions or deletions of your licensed professional staff or any other key personnel that would affect your firm's prequalification in a particular category. Changes must be submitted within 15 calendar days of the change and be submitted through the Engineering Prequalification and Agreement System (EPAS).

Your firm is prequalified until June 30, 2021. You will be given an additional six months from this date to submit the applicable portions of the "Statement of Experience and Financial Condition" (SEFC) to remain prequalified.

Sincerely,
Jack Elston, P.E.
Bureau Chief
Bureau of Design and Environment

SEFC PREQUALIFICATIONS FOR INTERRA, Inc.

CATEGORY	STATUS
Special Services - Construction Inspection	X
Geotechnical Services - General Geotechnical Services	X
Geotechnical Services - Structure Geotechnical Reports (SGR)	X
Geotechnical Services - Subsurface Explorations	X
Special Services - Quality Assurance PCC & Aggregate	X
Special Services - Quality Assurance HMA & Aggregate	X
Airports - Construction Inspection	A

X	PREQUALIFIED
A	NOT PREQUALIFIED, REVIEW THE COMMENTS UNDER CATEGORY VIEW FOR DETAILS IN EPAS.
S	PREQUALIFIED, BUT WILL NOT ACCEPT STATEMENTS OF INTEREST

Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

October 2, 2020

Subject: PRELIMINARY ENGINEERING
Consultant Unit
Prequalification File

Gerardo Sanchez
SANCHEZ & ASSOCIATES, P.C.
8604 W. Catalpa Ave, Suite 912
Chicago, IL 60656

Dear Gerardo Sanchez,

We have completed our review of your "Statement of Experience and Financial Condition" (SEFC) which you submitted for the fiscal year ending Dec 31, 2019. Your firm's total annual transportation fee capacity will be $1,600,000.

Your firm's payroll burden and fringe expense rate and general and administrative expense rate totaling 104.37% are approved on a provisional basis. The rate used in agreement negotiations may be verified by our Office of Quality Compliance and Review in a pre-award audit.

Your firm is required to submit an amended SEFC through the Engineering Prequalification & Agreement System (EPAS) to this office to show any additions or deletions of your licensed professional staff or any other key personnel that would affect your firm's prequalification in a particular category. Changes must be submitted within 15 calendar days of the change and be submitted through the Engineering Prequalification and Agreement System (EPAS).

Your firm is prequalified until December 31, 2020. You will be given an additional six months from this date to submit the applicable portions of the "Statement of Experience and Financial Condition" (SEFC) to remain prequalified.

Sincerely,
Jack Elston, P.E.
Bureau Chief
Bureau of Design and Environment

SEFC PREQUALIFICATIONS FOR SANCHEZ & ASSOCIATES, P.C.

CATEGORY	STATUS
Special Services - Surveying	X

X	PREQUALIFIED
A	NOT PREQUALIFIED, REVIEW THE COMMENTS UNDER CATEGORY VIEW FOR DETAILS IN EPAS.
S	PREQUALIFIED, BUT WILL NOT ACCEPT STATEMENTS OF INTEREST

6 Operating History

Operating History

Bowman is a trusted, multi-faceted consulting firm offering a broad range of infrastructure, environmental management, energy and real estate solutions to both public and private clients across the country. From large commercial developments, to master planned communities, to local transportation projects, Bowman delivers outstanding project results, builds long-lasting relationships and leverages the growth of our organization to serve the constantly changing needs of our clients.

Since its formation in 1995, Bowman Consulting has been recognized as one of the fastest-growing consulting firms in its region and the industry. Launched by a five-person team in Fairfax, Virginia, the firm has launched 32 regional offices and accomplished a national, diversified project portfolio.

With 45 professionals in the Chicago metropolitan area and 800+ professionals across the country, Bowman has the experience and expertise to successfully meet all of its clients' infrastructure needs.

In 2012, Bowman established its presence in the Chicago area. Bowman has performed engineering services for municipalities such as the Villages of Oak Brook, Northbrook and Steger; City of Chicago Heights; and numerous County Divisions of Transportation; as well as larger projects for the Chicago Department of Transportation, Illinois Department of Transportation and Illinois Tollway. We pride ourselves in providing the same level of professionalism and quality to all projects regardless of size.

Bowman is a established national firm with a 2020 gross revenue of $125 million. Following this page, please find attached Bowman's combined audited financial statements for 2019-2020.

Why We're Different

Success doesn't just happen. It's the result of thoughtful planning and focused action. At Bowman, we work with intention to deliver on-demand technical genius and industry leading talent that, when combined, produces innovative and solution-driven results. Our clients benefit from a balance of deep national resources often associated with large firms, and the flexibility and quick response associated with smaller boutique firms, to effectively navigate their projects through intricate approval processes.

Markets

- Cities/Governments/ Utilities
- Transportation
- Commercial & Industrial
- Education
- Healthcare & Senior Living
- Mining & Exploration
- Mission Critical
- Multi-Family/Mixed-Use
- Power & Energy
- Residential
- Retail

Services

- Transportation Engineering
- Civil Engineering
- Structural Engineering
- Construction Engineering
- Surveying/Geospatial
- Right-of-Way & Land Services
- Landscape Architecture & Planning
- Water/Wastewater
- Environmental Consulting
- Mechanical Engineering
- Electrical Engineering
- Plumbing Engineering

Bowman Consulting Group Ltd and Affiliates

Restated Combined Financial Statements

Years Ended December 31, 2019 and 2020

Bowman

BOWMAN CONSULTING GROUP LTD AND AFFILIATES

INDEX TO COMBINED FINANCIAL STATEMENTS

The accompanying notes are an integral part of these combined financial statements.

Ernst & Young LLP
1775 Tysons Blvd
Tysons, VA 22102

Tel: +1 703 747 1000
Fax: +1 703 747 0100
ey.com

Building a better working world

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Bowman Consulting Group Ltd. and Affiliates

Opinion on the Financial Statements

We have audited the accompanying combined balance sheets of Bowman Consulting Group Ltd. and Affiliates (the Company) as of December 31, 2019 and 2020, the related combined statements of operations and changes in shareholders' equity (deficit) and cash flows for the years then ended, and the related notes (collectively referred to as the "combined financial statements"). In our opinion, the combined financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2020, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Ernst & Young LLP

We have served as the Company's auditor since 2020.

February 23, 2021

BOWMAN CONSULTNG GROUP LTD AND AFFILIATES

COMBINED BALANCE SHEET

(Amounts in thousands except per share data)

	December 31, 2019	December 31, 2020
ASSETS		
Current Assets		
Cash and equivalents	509	386
Accounts Receivable, net	28,555	24,183
Contract assets	10,108	7,080
Notes receivable, current	1,429	1,182
Prepaid and other current assets	2,287	2,271
Total current assets	42,888	35,102
Non-Current Assets		
Property and equipment, net	4,770	15,357
Goodwill	9,179	9,179
Notes receivable, less current portion	8,470	2,200
Other intangible assets, net	691	1,131
Other assets	800	669
Total Assets	**$ 66,798**	**$ 63,638**
LIABILITIES AND EQUITY		
Current Liabilities		
Amounts advanced under loans to shareholders	8,348	3,481
Payments received under loans to shareholders	14,170	12,203
Contract liabilities	7,888	1,943
Notes payable, current portion	1,744	1,592
Deferred rent, current portion	310	619
Capital lease obligation, current portion	143	3,495
Total current liabilities	32,603	23,333
Non Current Liabilities		
Other non-current obligations	—	1,244
Notes payable, less current portion	1,916	2,829
Deferred rent, less current portion	4,057	4,278
Capital lease obligation, less current portion	574	7,503
Deferred tax liability, net	6,046	6,472
Common shares subject to repurchase	8,267	842
Total liabilities	**$ 53,463**	**$ 46,501**
Redeemable common stock	$ 36,618	$ —
Shareholders' Equity		
Common stock	—	17
Additional paid-in-capital	—	58,851
Treasury Stock	(5,925)	(16,022)
Stock subscription notes receivable	—	(609)
Accumulated deficit	(17,358)	(25,100)
Total shareholders' equity (deficit)	**$ (23,283)**	**$ 17,137**
TOTAL LIABILITIES AND EQUITY	**$ 66,798**	**$ 63,638**

The accompanying notes are an integral part of these combined financial statements.

BOWMAN CONSULTNG GROUP LTD AND AFFILIATES

COMBINED INCOME STATEMENT

(Amounts in thousands except per share data)

	For the Year Ended December 31,	
	2019	**2020**
Gross Contract Revenue	$113,724	$122,020
Contract costs: (exclusive of depreciation and amortization below)		
Direct payroll costs	41,230	46,471
Sub-consultants and expenses	16,119	18,360
Total contract costs	57,349	64,831
Operating Expenses:		
Selling, general and administrative	48,427	48,065
Non-cash stock based compensation	4,281	5,085
Depreciation and amortization	797	2,277
(Gain) loss on sale	(113)	(107)
Total operating expenses	53,392	55,320
Income from operations	2,983	1,869
Other (income) expense	419	(110)
Income before tax expense	2,564	1,979
Income tax expense	1,038	989
Net income	**$ 1,526**	**$ 990**
Earnings per share		
Basic	$ 7.57	$ 5.11
Diluted	$ 7.52	$ 5.10
Weighted average shares outstanding:		
Basic	195,599	183,029
Diluted	196,808	183,465

The accompanying notes are an integral part of these combined financial statements.

BOWMAN CONSULTNG GROUP LTD AND AFFILIATES

COMBINED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY (DEFICIT)

(Amounts in thousands except per share data)

	Common Stock		Additional Paid-in Capital	Treasury Stock	Stock Subscription Notes Receivable	Accumulated Deficit	Total Shareholders' Equity (Deficit)
	Shares	Amount					
Balance at January 1, 2019	202,781	—	—	(3,575)	—	(6,279)	(9,854)
Issuance of new common stock	3,968	—	—	—	—	—	—
Purchase and retirement of common stock	(11,611)	—	—	(2,350)	—	—	(2,350)
Issuance of common stock under stock bonus plan	1,598	—	—	—	—	—	—
Collection on stock subscription notes receivable	—	—	—	—	—	—	—
Common shares subject to repurchase liability	—	—	—	—	—	258	258
Fair value adjustment to redeemable common stock	—	—	—	—	—	(12,863)	(12,863)
Net Income	—	—	—	—	—	1,526	1,526
Balance at December 31, 2019	196,736	—	—	(5,925)	—	(17,358)	(23,283)
Issuance of new common shares	4,524	—	—	—	(533)	—	(533)
Purchase and retirement of common stock	(28,822)	—	—	(10,097)	—	—	(10,097)
Issuance of new common shares under stock compensation plan	22,294	—	—	—	—	—	—
Collections on stock subscription notes receivable	—	—	—	—	234	—	234
Reclassification of common shares previously subject to repurchase liability	—	3	11,805	—	—	814	12,622
Conversion of redeemable common stock to permanent equity	—	14	47,046	—	(310)	(9,546)	37,204
Net Income						990	990
Balance at December 31, 2020	194,732	17	58,851	(16,022)	(609)	(25,100)	17,137

The accompanying notes are an integral part of these combined financial statements.

BOWMAN CONSULTNG GROUP LTD AND AFFILIATES

COMBINED STATEMENT OF CASH FLOWS

(Amounts in thousands except per share data)

	For the Year Ended December 31,	
	2019	**2020**
Cash Flows from Operating Activities:		
Net Income	$ 1,526	$ 990
Adjustments to reconcile net income to net cash provided by operating activities		
Depreciation and amortization - property, plant and equipment	514	2,036
Amortization of intangible assets	283	241
Gain on sale of assets	(117)	(110)
Bad debt	510	3,008
Stock based compensation	4,281	5,085
Interest on shares repurchased	14	—
Deferred taxes	431	326
Deferred rent	3,527	530
Changes in operating assets and liabilities		
Accounts Receivable	(5,414)	1,506
Contract Assets	(1,680)	3,028
Prepaid expenses	(796)	623
Deposits and other assets	(145)	(28)
Accounts payable and accrued expenses	4,506	(520)
Contract Liabilities	778	(5,945)
Net cash provided by operating activities	8,218	10,770
Cash Flows from Investing Activities:		
Purchases of property and equipment	(3,366)	(924)
Proceeds from sale of assets and disposal of leases	118	110
Amounts advanced under loans to shareholders	(1,303)	(1,207)
Payments received under loans to shareholders	821	228
Amounts advanced under notes receivable	(5,277)	(420)
Payments received under notes receivable	4,545	19
Purchases of intangible assets	—	(416)
Collections under stock subscription notes receivable	191	196
Net cash used in investing activities	(4,271)	(2,414)
Cash Flows from Financing Activities:		
Net repayments under revolving line of credit	(2,617)	(4,867)
Repayments under fixed line of credit	(195)	(485)
Borrowings under fixed line of credit	—	1,985
Repayment under notes payable	(776)	(1,800)
Payments on capital leases	—	(1,088)
Payment of contingent consideration from acquisitions	(128)	(106)
Payment of offering costs	—	(920)
Payments for purchase and retirement of common stock	(24)	(1,261)
Proceeds from issuance of common stock	130	63
Net cash used in financing activities	(3,610)	(8,479)
Net increase (decrease) in cash and cash equivalents	337	(123)
Cash and cash equivalents, beginning of period	172	509
Cash and cash equivalents, end of period	$ 509	$ 386

The accompanying notes are an integral part of these combined financial statements.

BOWMAN CONSULTNG GROUP LTD AND AFFILIATES
COMBINED STATEMENT OF CASH FLOWS

(Amounts in thousands except per share data)

	For the Year Ended December 31,	
	2019	**2020**
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 634	$ 609
Cash paid for income taxes	$ 362	$ 543
Non-cash investing and financing activities		
Property and equipment acquired under capital lease	($ 722)	($ 11,370)
(Issuance) Settlement of Redeemable Common Stock	($ 13,069)	$ 36,927
Issuance of common stock for a note receivable	($ 7)	($ 533)
Stock redemption for payment of shareholder loans	$ 824	$ 1,457
Stock redemption for payment on note receivable	$ 0	$ 6,130
Issuance of notes payable for purchase of intangible asset	$ 0	($ 165)
Issuance of notes payable for redemption of stock	($ 1,267)	($ 900)

The accompanying notes are an integral part of these combined financial statements.

1. Nature of Business and Basis of Presentation

Nature of Business

Bowman Consulting Group Ltd. and its affiliates ("Bowman" or "we" or the "Company") incorporated in the Commonwealth of Virginia on June 5, 1995 and reincorporated in the State of Delaware on November 13, 2020. Bowman is a professional services firm delivering innovative solutions to the marketplace of customers who own, develop and maintain the built environment. Within that arena, we provide planning, design, engineering, geomatics, survey, construction management, environmental consulting and land procurement services to markets that encompass the buildings people live, work and learn in, the systems that provide water, electricity and other vital services, and the roads, bridges, and transportation systems used to get from place to place. We provide services to customers through fixed-price and time-and-material based contracts containing multiple milestones and independently priced deliverables. Typically, contract awards are on a negotiated basis, ranging in value from a few thousand dollars to multiple million dollars and can have varying durations depending on the size, scope, and complexity of the project.

The Company's workforce typically provides the full scope of engineering and other contract services. With respect to certain specialty services within a particular contract, however, we may engage the assistance of third-party sub-consultants. The Company's headquarters are located in Reston, VA and the Company has 32 offices, throughout the United States.

Basis of Presentation

The accompanying combined financial statements include the accounts of the Company and its subsidiaries Bowman Environmental LC (BELC), Bowman International, Inc. (BII), Bowman Consulting Mexico, LLC (BCM), Bowman North Carolina Ltd. (BNCL). In addition, the financials include Bowman Consulting NC PC (NCPC), Omland Engineering, Land Survey and Landscape Architecture Associates, P.C. (BNY), and Bowman Consulting Group DC PC (DCPC), entities combined with the Company as of December 31, 2019 and 2020 based on common control. The Company eliminates all significant intercompany balances and transactions in its combined financial statements. Founded in Sonora, Mexico in 2017, BCM provides services to the Company exclusively. BELC, BII and BCM had minimal or no activity during the year ended December 31, 2019 and 2020. DCPC was incorporated in the District of Columbia in August 2014 and is owned by Gary Bowman (our founder, Chairman and CEO). NCPC was incorporated in the Commonwealth of Virginia in September 2019 and is owned for licensing purposes by Gary Bowman, Mike Bruen (our Chief Operating Officer) and another Company shareholder. BNY was incorporated in New Jersey in October 2002 and was subsequently acquired for licensing purposes by Gary Bowman in October 2014. DCPC, NCPC and BNY provide services like those of the Company focused on projects located in the District of Columbia, North Carolina and New York, respectively.

On December 22, 2020, the Company acquired HE Wilson Liquidations, Inc., a company incorporated on March 28, 1956 in North Carolina. Concurrent with the acquisition, the Company renamed HE Wilson Liquidations, Inc. as Bowman North Carolina Ltd. (BNCL).

On December 31, 2020, the Company acquired directly the assets of DCPC and NCPC.

2. Significant Accounting Policies

The following is a summary of the significant accounting policies and principles used in the preparation of the combined financial statements:

Emerging Growth Company

Section 102(b)(1) of the Jumpstart Our Business Startups Act ("JOBS Act") exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's financial statements with another public company that is either not an emerging growth company or, an emerging growth company that has opted out of using the extended transition period, difficult or impossible because of the potential differences in accounting standards used.

Adoption of new accounting standard

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers ("ASC Topic 606"). ASU 2014-09 provides a single comprehensive revenue recognition framework and supersedes almost all existing revenue recognition guidance including industry-specific revenue guidance. Included in the new principle-based revenue recognition model are changes to the basis for determining the timing of revenue recognition. In addition, the standard expands and improves revenue disclosures. The Company adopted the new standard effective January 1, 2019, the first day of the Company's fiscal year, using the modified retrospective approach. As part of the adoption of this standard, the Company was required to apply the standard to new contracts and those not completed as of the date of adoption.

Revenue Recognition

As discussed in Note 1, the Company provides a variety of engineering and related professional services to customers located throughout the United States. The Company enters into agreements with clients that create enforceable rights and obligations and for which it is probable that the Company will collect the consideration to which it will be entitled as services transfer to the customer. It is customary practice for the Company to have written agreements with its customers and revenue on oral or implied arrangements is generally not recognized. The Company recognizes revenue based on the consideration specified in the applicable agreement. Excluded from the transaction price are amounts collected on behalf of third parties for sales and similar taxes.

Long-term contracts typically contain billing terms that provide for invoicing once a month and payment on a net 30-day basis. Exceptions to monthly billing terms are to ensure that the Company performs satisfactorily rather than representing a significant financing component. For example, fixed price contracts may provide for milestone billings based upon the attainment of specific project objectives to ensure the Company meets its contractual requirements rather than having billing monthly. Additionally, contracts may include retentions or holdbacks paid at the end of a project to ensure that Company meets the contract requirements. The Company does not assess whether a contract contains a significant financing component if the Company expects, at contract inception, that the period between payment by the customer and the transfer of promised services to the customer will be less than one year.

As a professional services engineering firm, the Company generally recognizes revenue over time as control transfers to a customer based upon the extent of progress towards satisfaction of the performance obligation.

For services delivered under fixed price contracts, the Company uses the ratio of actual costs incurred to total estimated costs since costs incurred (an input method) represent a reasonable measure of progress towards the satisfaction of a performance in order to estimate the portion of revenue earned. This method faithfully depicts the transfer of value to the customer when the Company is satisfying a performance obligation that entails a number of interrelated tasks or activities for a combined output that requires the Company to coordinate the work of employees and sub-consultants. Contract costs typically include direct labor, subcontract and consultant costs, materials and indirect costs related to contract performance. Changes in estimated costs to complete these obligations result in adjustments to revenue on a cumulative catch-up basis, which causes the effect of revised estimates to be recognized in the current period. Changes in estimates can routinely occur over the contract term for a variety of reasons including, changes in scope, unanticipated costs, delays or favorable or unfavorable progress than original expectations. In situations where the estimated costs to perform exceeds the consideration to be received, the Company accrues the entire estimated loss during the period the loss becomes known.

When a performance obligation is billed using a time-and-material type contract, the Company measures its progress to complete based upon the hours incurred for the period times contractually agreed upon billing rates plus any materials delivered or consumed in the project. When applicable, the Company will recognize revenue under these contracts as invoiced under the practical expedient.

In certain situations, it is possible that two or more contracts should be combined and accounted for as a single contract, or a single contract should be accounted for as multiple performance obligations. This requires significant judgment and could impact the amount and timing of revenue recognition. Such determinations are made using management's best estimate and knowledge of contracts and related performance obligations.

The Company's contracts may contain variable consideration in the form of unpriced or pending change orders or claims that either increase or decrease the contract price. Variable consideration is generally estimated using the expected value method but may from time to time be estimated using the most likely amount method depending on the circumstance. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur or when the uncertainty associated with the variable consideration is resolved. Estimates of variable consideration are based upon historical experience and known trends.

The Company recognizes claims against vendors, sub-consultants, and others as a reduction in costs when the contract establishes enforceability, and the amounts of recovery are reasonably estimable and probable. Reduction in costs are recognized at the lesser of the amount management expects to recover or costs incurred.

Contract related assets and liabilities are classified as current assets and current liabilities. Significant balance sheet accounts related to the revenue cycle are as follows:

Accounts receivables, net:

Accounts receivable, net (contract receivables) includes amounts billed under the contract terms. The amounts are stated at their net realizable value. The Company maintains an allowance for doubtful accounts to provide for the estimated number of receivables that will not be collected. The Company considers several factors in its estimate of the allowance, including knowledge of a client's financial condition, its historical collection experience, and other factors relevant to assessing the collectability of such receivables.

Contract Assets:

Contract Assets are recorded when progress to completion revenue earned on contracts exceeds amounts actually billed under the contract. It may also include contract retainages that can be billed once contract stipulations are satisfied.

Contract Liabilities:

Contract Liabilities are recorded when amounts actually billed under a contract exceeds the progress to completion revenue earned under the contract.

Contract Cost Assets

Contract acquisition costs are comprised of costs to obtain and fulfill contracts. These costs, such as pre-contract costs, mobilization costs, and performance bonds, are capitalized if they are (i) incremental to the contract, (ii) expected to be recovered, (iii) not representative of satisfaction of the performance obligation. Capitalized costs are typically amortized over the life of the contract. The Company has elected the practical expedient to expense as incurred these costs, to the extent incurred, if the amortization period is one year or less. Due to the practical expedient, no costs were required to be capitalized during the years ended December 31, 2019 and 2020.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could vary from the estimates and assumptions that were used.

Cash and Cash Equivalent

The Company considers cash on deposit and all highly liquid investments with original maturities of three months or less when purchased to be cash and cash equivalents. Cash consists primarily of cash in accounts held at a financial institution. Certain of these accounts are designated as zero balance accounts wherein the balance is swept out nightly to reduce the Company's line of credit balance, if any.

Under the terms of the Company's Credit Agreement, the Company's primary lender may make advances to prevent or cover an overdraft on any of the Company's accounts. The lender may make such advances even if the advances cause the outstanding balance to exceed the credit limit under the Credit Agreement. On the accompanying combined balance sheets at December 31, 2019 and 2020, the Company has included $1.7 million and $2.2 million, respectively, of payments in excess of cash on hand in accounts payable and accrued expenses. The total amount of such checks did not exceed the availability under the Company's line of credit as of December 31, 2019 and December 31, 2020.

Concentration of Credit Risk and other Concentrations

The Company's financial instruments that are exposed to concentrations of credit risk consist of cash and accounts receivable.

Cash balances at various times during the year may exceed the amount insured by the Federal Deposit Insurance Corporation. The Company's cash deposits are held in institutions whose credit ratings are monitored by management, and the Company has not incurred any losses related to such deposits.

The Company is subject to a concentration of credit risk with respect to outstanding accounts receivable, however the Company believes no such concentration existed during the years ended December 31, 2019 and 2020. The Company's customers are located throughout the United States. Although the Company generally grants credit without collateral, management believes that its contract acceptance, billing, and collection policies are adequate to minimize material credit risk. Also, for non-governmental customers, the Company can often place mechanics liens against the real property associated with the contract in the event of non-payment.

Allowance for Doubtful Accounts

The Company records accounts receivable net of an allowance for doubtful accounts. The allowance is determined based upon management's review of the estimated collectability of the specific accounts receivable, plus a general provision based upon the historical loss experience and existing economic conditions. The Company charges off uncollectible amounts against the allowance for doubtful accounts once management determines the amount, or a portion thereof, to be worthless. As of December 31, 2019, and 2020, the balance in the allowance for doubtful accounts was $0.9 million and $1.5 million, respectively.

Activity in the allowance for doubtful accounts that accounts for the change in balance consisted of the following:

	December 31, 2019	December 31, 2020
Balance as of beginning of the year	$ 883	$ 939
Provision for doubtful accounts	129	799
Write-offs of uncollectable accounts	(73)	(190)
Balance as of the end of the year	$ 939	$ 1,548

Property and Equipment

Property and equipment are recorded at cost. Improvements and replacements of property and equipment are capitalized. Maintenance and repairs that do not improve or extend the lives of property and equipment are charged to expense as incurred. Upon the sale or retirement of property and equipment, the cost and related accumulated depreciation are removed from the respective accounts and any gain or loss is reported in the combined statements of operations. Depreciation is provided for using the straight-line method over the estimated useful lives as follows for the major classes of assets:

Computer equipment	3 to 5 years
Survey equipment	2 to 5 years
Vehicles	5 years
Furniture and fixtures	7 years
Software	3 to 5 years
Leasehold improvements	the lesser of useful life or term of lease

For the years ended December 31, 2019 and 2020, the Company recognized a $0.1 million and a $0.1 million gain from the disposal of certain pieces of property and equipment in connection with sale-leaseback transactions, respectively. This amount is recorded within gain on sale on the accompanying combined financial statements.

Business Combinations

Business combinations are accounted for under the acquisition method of accounting, which requires recognition separately from goodwill, the assets acquired, and the liabilities assumed at their acquisition date fair values. While best estimates and assumptions are used to calculate the fair value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, when applicable, the estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, adjustments that are based on new information obtained about facts and circumstances that existed as of the acquisition date are recorded to the assets acquired and liabilities assumed with the corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recognized in the combined income statements.

Goodwill and Intangible Assets

The purchase price of an acquired business is allocated to the tangible assets and separately identifiable intangible assets acquired, less liabilities assumed, based upon their respective fair values with any excess purchase price over such fair values being recorded as goodwill. Goodwill and intangible assets acquired in a business combination and determined to have indefinite useful life are not amortized, but instead are reviewed for impairment annually, or more frequently if impairment indicators arise. Intangible assets with estimable useful lives are amortized over such lives and reviewed for impairment if indicators are present.

The Company performs its annual impairment test as of October 1 of each year. As its business is highly integrated and its components have similar economic characteristics, the Company has concluded it has one reporting unit at the combined entity level. The Company performs a Step 1 impairment analysis by comparing the fair value of the reporting unit to carrying amount. Management engaged a third-party valuation firm to assist with the determination of fair value for the years ended December 31, 2019 and 2020. The fair value of the reporting unit derives from multiple weighted valuation techniques. If the fair value of the reporting unit is less than its carrying amount, we conduct a Step 2 impairment analysis to determine the implied fair value of the reporting unit's goodwill. An impairment loss is recognized for the difference of the reporting unit's implied fair value of goodwill and its carrying amount.

The Company performed an impairment analysis for the years ended December 31, 2019 and 2020 and concluded that the fair value of the reporting unit was in excess of its carrying amount, and as such, no impairment was required.

Definite-lived intangibles include customer relationships, contract rights, and non-compete agreements that were acquired through assets acquisition or business combination. These definite-lived intangible assets are amortized over their estimated useful life ranging from two to five years using a straight-line method.

The Company is required to review long-lived assets and definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. Recoverability of assets held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered impaired, the impairment recognized is measured by the amount by which the carrying amount of the asset exceeds its fair value. We report assets to be disposed of at the lower of the carrying amount or fair value, less cost to sell. There were no event or changes in circumstances, for the years ended December 31, 2019 and 2020, that indicated impairment of any long-lived assets.

Deferred Offering Costs

Upon closing of the planned initial public offering ("IPO"), deferred offering costs, consisting of legal, accounting and other fees directly related to the IPO will net against the gross proceeds. As of December 31, 2020, the Company recorded $0.9 million of deferred offering costs that are included in other assets on the accompanying combined balance sheet.

Deferred Rent

The Company recognizes rent expense on a straight-line basis over the term of each operating lease commencing on the date the Company takes possession of the leased premises. In addition, the Company records allowances such as free rent or improvement allowances as deferred rent in the combined balance sheets and amortizes the amount on a straight-line basis over the term of the related operating lease.

Long-term incentive compensation plan

The Company maintains a variable compensation plan and discretionary bonus program for employees and provides individualized long-term incentive plans to certain managers and executives. The variable compensation plan and discretionary bonus program includes cash awards and the long-term incentive plans include issuance of restricted stock grants. The Company periodically grants restricted stock awards to reward performance and incentivize retention.

Stock-based Compensation

Shares originating from the granting of restricted stock bonus awards, stock options and the sale of stock to employees at prices below fair value are subject to Accounting Standards Codification Topic 718, *Compensation – Stock Compensation* ("ASC Topic 718") from the date of issuance until retirement. Prior to December 22, 2020, provisions existed in the various agreements governing the ASC Topic 718 shares requiring the Company to repurchase the shares based on circumstances outside its control. As such, the Company classified shares of its common stock outstanding prior to December 22, 2020, subject to ASC Topic 718, as a liability to common shares subject to repurchase. The Company recognized changes in the fair value of the liability as non-cash compensation expense.

On December 22, 2020 and December 31, 2020, the Company modified its stock-based compensation agreements resulting in a change in classification of the majority of these awards from liability to equity. The modification resulted in a final fair value liability measurement and non-cash compensation expense relating to certain of the shares subject to repurchase and the effective exchange of those shares for permanent equity. Certain stock-based awards for which there were no modifications to the terms of repurchase continue remain classified as liabilities with periodic changes in the fair value measurement recognized as non-cash compensation expense.

For ASC Topic 718 stock-based awards classified as permanent equity, the Company generally recognizes non-cash compensation expense on a ratable basis over the applicable service period based on the award date fair value. The Company has elected to use the Black-Scholes-Merton option-pricing model to determine the grant date fair value of stock options. The Company accounts for forfeitures when they occur.

Non-recourse Notes Treated as Substantive Options

Certain stock subscription notes receivable of the Company are non-recourse. As such, these notes are substantive options under ASC Topic 718 subject to the Black-Scholes-Merton method of computing compensation cost. The option strike price is calculated as the purchase price of the shares plus the estimated interest per share expected to be collected during the term of the note. Because at any time the notes may be pre-paid, the Company recognizes the total calculated compensation cost at the time of issuance. Pursuant to the terms of the notes, the Company collects payments through payroll deductions. The Company considers the payments to be periodic exercises of the options. The Company account for stock purchases through exercise in accordance with ASC Topic 718. No note receivable exists for these non-recourse notes.

Redeemable Common Shares

Prior to December 22, 2020, the Company classified shares issued subject to Accounting Standards Codification 480 – *Distinguishing Liabilities from Equity* ("ASC Topic 480") as redeemable common stock. Prior to December 22, 2020, provisions existed in the various agreements governing these shares requiring the Company to repurchase the shares based on circumstances outside its control. As such, the Company classified shares of its common stock outstanding prior to December 22, 2020 as redeemable common stock. The Company assessed the fair value of its redeemable common stock at each reporting period. The Company recorded changes in the fair value of the redeemable common as adjustments to retained earnings or accumulated deficit.

On December 22, 2020, the Company modified its agreements resulting in a change in classification from redeemable common stock to permanent equity. The modification resulted in a final fair value measurement of the shares subject to redemption and the effective exchange of those shares for permanent equity.

Fair Value Measurements

Accounting Standards Codification Topic 820, *Fair Value Measurements and Disclosures* ("ASC Topic 820") provides the framework for measuring and reporting financial assets and liabilities at fair value. ASC Topic 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

The codification establishes a three-level disclosure hierarchy to indicate the level of judgment used to estimate fair value measurements:

Level 1: Quoted prices in active markets for identical assets or liabilities as of the reporting date;

Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; and inputs other than quoted prices (such as interest rate and yield curves);

Level 3: Uses inputs that are unobservable, supported by little or no market activity and reflect significant management judgment.

As of December 31, 2019, and 2020:

- The carrying amount of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the relatively short duration of these instruments
- The carrying amounts of debt obligations approximate their fair values as the terms are comparable to terms currently offered by local financial institutions for arrangements with similar terms to industry peers with comparable credit characteristics. Accordingly, the debt obligations involve Level 2 fair value inputs.
- The liability related to shares subject to repurchase is recognized at fair value using Level 3 inputs that were primarily determined based on the contractual settlement price as defined by the terms of the Company's Shareholders' Buy-Sell Agreement. *See Note 18 for further discussion.*

Advertising Expense

The Company expenses the cost of advertising as incurred. Advertising expense was $0.1 million and $0.1 million for the years ended December 31, 2019 and 2020, respectively.

Income Taxes

On January 1, 2018, the Company changed it election from an S-corporation to a C-corporation. Prior to January 1, 2018, the shareholders of the Company were responsible for their proportionate share of the Company's taxable income. For the years ended December 31, 2019 and 2020, the Company qualified as a cash basis taxpayer based on our shares being 95% employee owned. As such, we calculate our current tax expense on a cash basis and accrue future tax expenses resulting from associated timing differences as deferred tax liabilities.

The Company recognizes deferred income tax assets or liabilities for expected future tax consequences of events recognized in the combined financial statements or tax returns. Under this method, deferred income tax assets or liabilities are determined based upon the difference between the financial statement and income tax bases of assets and liabilities using enacted tax rates expected to apply when the differences settle or become realized. Valuation allowances are provided when it is more likely than not that a deferred tax asset is not realizable or recoverable in the future.

The Company recognizes the effect of a change in tax rates on deferred tax assets and liabilities in income in the period that includes the enactment date.

The Company assesses uncertain tax positions to determine whether the position will more likely than not be sustained upon examination by the Internal Revenue Service (IRS) or other taxing authorities. If the Company cannot reach a more-likely-than-not determination, no benefit is recorded. If the Company determines that the tax position is more likely than not to be sustained, the Company records the largest amount of benefit that is more likely than not to be realized when the tax position is settled. The Company recognizes interest and penalties, if any, related to uncertain tax positions in income tax expense.

Segments

The Company operates in one segment based upon the financial information used by its chief operating decision maker in evaluating the financial performance of its business and allocating resources. The single segment represents the Company's core business of providing engineering and related professional services to its customers.

Recently Issued Accounting Guidance

Accounting guidance not yet adopted

Leases. In February 2016, the FASB issued Accounting Standards Update 2016-02, Leases (Topic 842) ("ASU 2016-02") to increase transparency and comparability of accounting for lease transactions by requiring lessees to recognize the right-of-use assets and lease liabilities on the balance sheet and to disclose qualitative and quantitative information about lease transactions and enable users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases. The effective date of ASU 2016-02 for the Company is January 1, 2022, with early adoption permitted. The Company is currently evaluating the impact this ASU may have on its combined financial statements and related disclosures.

Financial Instruments – Credit Losses. In June 2016, the FASB issued ASU 2016-13, Financial Instruments—Credit Losses (Topic 326) to replace the incurred loss impairment methodology under U.S. GAAP. This ASU introduces a new accounting model, the Current Expected Credit Losses model (CECL), which could result in earlier recognition of credit losses and additional disclosures related to credit risk. The CECL model will require the Company to use a forward-looking expected credit loss impairment methodology for the recognition of credit losses for financial instruments at the time the financial asset is originated or acquired, and require a loss be incurred before it is recognized. The expected credit losses are adjusted each period for changes in expected lifetime credit losses. The new standard will apply to accounts receivable, loans, and other financial instruments. This standard is effective for the Company beginning January 1, 2023. Adoption of ASU 2016-13 will be applied using a modified retrospective approach through a cumulative-effect adjustment to retained earnings as of the effective date. The Company is currently evaluating the impact of this ASU on our combined financial statements.

Goodwill. In January 2017, the FASB issued ASU 2017-04, Intangibles-Goodwill and Other (Topic 350), simplifying the Test for Goodwill Impairment. ASU 2017-04 eliminates Step 2 of the goodwill impairment test, which required a hypothetical purchase price allocation. Goodwill impairment will now be the amount by which the reporting unit's carrying amount exceeds its fair value, limited to the carrying amount of the goodwill. ASU 2017-04 is effective for us beginning January 1, 2022. The Company does not expect the impact of this ASU to be material to its combined financial statements.

3. Earnings per Share

Basic earnings (loss) per share is calculated by dividing net income (loss) attributable to the Company available to common stockholders by the weighted average number of common shares outstanding for the years ended December 31, 2019 and 2020. Diluted earnings per share reflects the potential dilution that could occur if securities or other contracts to issue common stock were either exercised or converted into common stock or resulted in the issuance of common stock that would share in the earnings of the Company. The Company uses the two-class method to determine earnings per share.

On August 31, 2019, the Company redeemed 1,300 shares of redeemable common shares pursuant to a put right by which the redemption price exceeded fair value. The Company reduced undistributed earnings for the year ended December 31, 2019 by $8,148 to reflect this payment.

For calculating basic earnings per share, for the years ended December 31, 2019, the weighted average number of shares outstanding exclude 4,668 non-vested restricted shares and 304 unexercised substantive options. The computation of diluted earnings (loss) per share for the year ended December 31, 2019 did not assume the effect of restricted shares because the effects were antidilutive.

For calculating basic earnings per share, for the years ended December 31, 2020, the weighted average number of shares outstanding exclude 9,100 non-vested restricted shares and 1,810 substantive options. The computation of diluted earnings (loss) per share for the year ended December 31, 2020 did not assume the effect of restricted shares because the effects were antidilutive.

The following table represents a reconciliation of the net income and weighted average shares outstanding for the calculation of basic and diluted earnings per share for the years ending December 31, 2019, and 2020:

	December 31, 2019	December 31, 2020
Numerator		
Net income	1,526	990
Deemed dividend	8	—
Earnings allocated to non-vested shares	38	55
Subtotal	$ 1,480	$ 935
Demoninator		
Weighted average common shares outstanding	195,599	183,029
Effect of dilutive nominal options	163	175
Effect of dilutive contingently earned shares	1,046	261
Dilutive average shares outstanding	196,808	183,465
Basic earnings per share	$ 7.57	$ 5.11
Dilutive earnings per share	$ 7.52	$ 5.10

4. Acquisitions

Asset Acquisitions

Atherton Engineering, Inc.

On June 30, 2018, BCG acquired certain specified assets of Atherton Engineering, Inc. (Atherton), all of which were deemed to be intangible assets. The total purchase price was $0.4 million, which was comprised of 1,300 shares of common stock at $211.00 per share for a total of $0.2 million and contingent consideration of $0.2 million. Contingent consideration is included in accounts payable and accrued expenses in the accompanying combined balance sheet at December 31, 2019. All contingent consideration associated with the acquisition was settled for cash as of December 31, 2020. The shares of common stock issued contain put option rights at $250.00 per share that vest 12 months post closing. These option rights were exercised during the year ended December 31, 2019. Pursuant to the option agreement, the Company entered into a 30-month promissory note with the holder of the options for $0.3 million. The Company recorded $14,399 of interest at the outset of the note based on a basis of $238.92 per share for the redeemed shares after fair value adjustments. The Company did not incur any signficant transaction costs for the Atherton asset acquisition.

The Company did not acquire an input or substantive processes from Atherton that together significantly contribute the ability to create output. As such, the transaction was deemed an asset purchase, with the intangible assets recorded at their fair market value on the acquisition date. The Company identified intangible assets comprised of customer relationships of $0.1 million to be amortized over an estimated useful life of 5 years, contract rights of $0.2 million to be amortized over an estimated useful life of 2 years, and a non-compete agreement worth $0.1 million to be amortized over an estimated useful life of 3 years.

Westland Resources, Inc.

On September 30, 2018, the Company acquired certain specified assets of Westland Resources, Inc. (Westland), all of which were deemed to be intangible assets. The total purchase price was $0.7 million, which was comprised of cash of $0.1 million, 1,706 shares of common stock at $162.10 per share for a total of $0.3 million, and $0.3 million in contingent consideration based on revenue generated from acquired contracts. The Company expects to pay 100% of the contingent consideration which is included in accounts payable and accrued expenses in the accompanying combined balance sheet at December 31, 2019 and 2020. The Company did not incur any signficant transaction costs for the Westland asset acquisition.

The Company did not acquire an input or substantive processes from Westland that together significantly contribute the ability to create output. As such, the transaction was deemed an asset purchase, with the intangible assets recorded at their fair market value on the acquisition date. The Company identified intangible assets comprised of contract rights of $0.3 million to be amortized over an estimated useful life of 5 years, and customer relationships of $0.4 million to be amortized over an estimated useful life of 5 years.

Business Combinations

Bowman North Carolina Ltd. ("BNCL")

On December 22, 2020, the Company acquired 100% of the outstanding stock of HE Wilson Liquidation Inc., a dormant North Carolina corporation. Concurrent with the acquisition, the Company renamed HE Wilson Liquidation, Inc. as Bowman North Carolina Ltd. BNCL's activities from the date of acquisition through December 31, 2020 consolidate with the operations of the Company. The Company acquired BNCL for a total purchase price of $0.3 million. BNCL had no assets, no liabilities and no operations. The allocation of the purchase price was recorded entirely to indefinite-lived intangible assets. The benefit to the Company of the acquisition was BNCL's ability to conduct engineering and surveying operations in North Carolina, based on its original date of incorporation, without being a professional services corporation with individual ownership. There were no transaction costs other than general legal expenses included in the selling, general and administrative costs in Company's Combined Statement of Operations for the year ended December 31, 2020. The Company contributed acquired contracts and operations of NCPC to BNCL post-closing. *See Business Combinations – entities under common control below.*

Business Combinations – Entities under Common Control

Bowman Consulting DC PC ("DCPC").

Since its founding in 2014, Bowman Consulting DC PC has operated as a stand-alone engineering enterprise in the District of Columbia, owned 100% by Gary Bowman, our Chairman and Chief Executive Officer. DCPC's results were included in our combined financial statements based on common control. On December 31, 2020, the Company acquired all the assets and operations, and assumed certain liabilities of Bowman Consulting DC PC and thereafter Bowman Consulting DC PC ceased operations.

In connection with the purchase, we issued 2,000 shares of common stock to Mr. Bowman recorded at the carrying amount of the net assets of DCPC or $0.7 million. Because DCPC was an entity under common control combined with the Company's financial results, there was no impact on the Company's combined assets, liabilities or equity from the accounting for the acquisition or the issuance of the stock to Mr. Bowman.

Bowman Consulting NC PC ("NCPC").

Since its founding in 2019, Bowman Consulting NC PC has operated as a stand-alone engineering enterprise in the North Carolina, owned 90% by Gary Bowman, our Chairman and Chief Executive Officer, 5% by Mike Bruen, our Chief Operating Officer, and 5% by another shareholder of the Company. NCPC's results were included in our combined financial statements based on common control. On December 31, 2020, the Company acquired all the assets and operations, and assumed certain liabilities of Bowman Consulting NC PC and thereafter Bowman Consulting NC PC ceased operations.

In connection with the purchase, the Company issued 157 shares of common stock to the sellers, recorded at the carrying amount of the net assets of NCPC or $4,400. Because NCPC was an entity under common control combined with the Company's financial results, there was no impact on the Company's combined assets, liabilities or equity from the accounting for the acquisition or the issuance of the stock to the sellers. After closing, the Company contributed the assets and operations acquired from Bowman Consulting NC PC into Bowman North Carolina Ltd. (*See Business Combinations above).*

5. Disaggregation of Revenue and Contract Balances

Contracts are considered lump sum and evaluated for cost-basis percentage completion revenue calculation if any of the components of the contract are subject to fixed fee or unit pricing. As such, a lump sum contract may contain a mix of hourly and fixed fee components. A contract must contain hourly billed components exclusively to qualify for the as-billed practical expedient in ASC Topic 606. For the year ended December 31, 2020, the Company derived 95.3% of its revenue from contracts classified as lump sum, and 4.7% of its revenue from exclusively time and material contracts. The Company had approximately $81.3 million in remaining performance obligations as of December 31, 2020 of which it expects to recognize approximately 67% within the next twelve months and the remaining 33% thereafter.

The Company recognized $32.7 million of revenue for the year ended December 31, 2019, which was included in the contract liabilities balance as of December 31, 2018 and $32.8 million of revenue for the year ended December 31, 2020, which was included in the contract liabilities balance as of December 31, 2019.

6. Contracts in Progress

The following table reflects the calculation of the net balance of contract assets and contract liabilities. Costs and estimated earnings on contracts in progress consist of the following (in thousands):

	December 31, 2019	December 31, 2020
Costs incurred on uncompleted contracts	$ 112,417	$ 113,856
Estimated contract earnings in excess of costs	160,242	151,423
Estimated contract earnings to date	272,659	265,279
Less: billed to date	(270,439)	(260,142)
Net contract assets	$ 2,220	$ 5,137

7. Notes Receivable

The Company has unsecured notes receivable from related parties including certain officers of the Company and from an unrelated third party. This balance is included as a part of other assets on the accompanying combined balance sheets. The following is a summary of these notes receivable (in thousands):

	December 31, 2019	December 31, 2020
Related Parties - Interest accrues annually at rates ranging from 3.5% - 15.0%. The notes receivable mature through December 2021.	$ 2,109	$ 2,260
Shareholders and officers - Interest accrues annually at rates ranging from 3.5% - 4.0%. The notes receivable mature through December 2020.	6,886	219
Unrelated third party - Interest accrues annually at an interest rate of 18.0%. The note receivable matures in December 2023.	904	903
Total	9,899	3,382
Less: current portion	(1,429)	(1,182)
Noncurrent portion	$ 8,470	$ 2,200

Each borrower may prepay all or part of the outstanding balance at any time prior to the date of maturity. During the years ended December 31, 2019 and 2020, interest accrued on three of the notes receivable at the stipulated rates of 3.50% and 4.00%.

8. Property and Equipment, Net

Property and equipment for fixed assets are as follows (in thousands):

	December 31, 2019	December 31, 2020
Computer equipment	1,427	1,276
Survey equipment	4,444	4,444
Vehicles	473	463
Furniture and fixtures	1,628	1,638
Leasehold improvements	4,635	5,887
Software	283	283
Fixed asset inventory	488	146
	13,378	14,137
Less: accumulated depreciation	(9,330)	(9,912)
Property and Equipment, net	4,048	4,225

Depreciation expense for fixed assets for the years ended December 31, 2019 and 2020 was $513 and $746, respectively.

On September 30, 2020, the Company converted substantially all of its operating leases for equipment and automobiles to capital leases.

Property and equipment for capital leased assets are as follows (in thousands):

	December 31, 2019	December 31, 2020
Equipment	$ 722	$ 8,590
Vehicles	—	3,825
	722	12,415
Less: accumulated amortization on leased assets	—	(1,283)
Capital Leased Assets, net	$ 722	$ 11,132

Amortization expense for capital leased assets for the years ended December 31, 2019 and 2020 was $0 and $1.3 million, respectively.

9. Goodwill

The following is a summary of goodwill resulting from business acquisitions held by the Company at December 31, 2019 and 2020 (in thousands):

	December 31, 2019	December 31, 2020
Goodwill	$ 9,179	$ 9,179

10. Intangible Assets

Total intangible assets consisted of the following at December 31, 2019 and December 31, 2020 (in thousands):

	December 31, 2019			December 31, 2020		
	Gross Amount	Accumulated Amortization	Net Balance	Gross Amount	Accumulated Amortization	Net Balance
Customer relationships	$ 809	$ (225)	$ 584	$ 809	$ (382)	$ 427
Contract rights	150	(112)	38	150	(150)	—
Non-complete agreement	137	(68)	69	137	(114)	23
Domain name	—	—	—	281	—	281
Licensing rights	—	—	—	400	—	400
Total	$1,096	$ (405)	$ 691	$1,777	$ (646)	$1,131

The domain name and licensing rights acquired during the year ended December 31, 2020 for a total of $0.7 million have indefinite useful lives.

The following table summarizes the weighted average useful lives of intangible assets by asset class used for straight-line expense purposes:

	December 31, 2019	December 31, 2020
Customer relationships	4.98	4.98
Contract rights	2.0	2.0
Non-compete agreement	3.0	3.0

Amortization expense for the year ended December 31, 2019 and 2020 was $0.3 million and $0.2 million, respectively.

Actual and future amortization is as follows for the years ending December 31 (in thousands):

2021	$181
2022	158
2023	111
Total	$450

11. Lines of Credit

In 2017, the Company entered into a credit agreement (the Credit Agreement) with Bank of America (the Bank) which included a revolving line of credit (the Revolving Line) and a non-revolving line of credit (the Fixed Line #1). The Revolving Line allowed for repayments and re-borrowings. The maximum advance was equal to the lesser of $12.4 million (the Credit Limit) or the Borrowing Base as defined in the Credit Agreement. The Borrowing Base is computed based upon a percentage of eligible receivables within each aging category under 120 days and is further refined for customer type. Receivables in excess of 120 days and those from related parties or affiliates are not considered to be eligible receivables for the Borrowing Base.

During the year ended December 31, 2019, the Credit Limit increased to $15.0 million. During the year ended December 31, 2019, a second non-revolving line of credit was established (Fixed Line #2). During the year ended December 31, 2020, the Company entered into an additional credit agreement with Bank of America (Facility #4). Both of these credit agreements contain certain cash flow related financial covenants including fixed charge coverage ratio, debt to EBITDA and adjusted debt to EBITDA, all of which the Company was in compliance with at December 31, 2019, and 2020.

The Revolving Line requires monthly payments of interest at the London Interbank Offered Rate (LIBOR) daily floating rate plus an applicable rate which varies between 2.35% and 2.95% based on the Company achieving certain leverage ratios as defined in the Credit Agreement. On December 31, 2019 and December 31, 2020, the interest rate was 3.79% and 3.60%, respectively. All outstanding principal is due upon expiration, which is July 31, 2021 unless the agreement is renewed, or an event of default occurs. The Revolving Line is reported as line of credit on the combined balance sheets.

Fixed Line #1 has a maximum advance of $1.0 million and does not allow for re-borrowings and is included in Notes Payable (see Note 14). Beginning October 1, 2017, the Company began paying interest on a monthly basis at a rate per year equal to LIBOR plus 2.75%. On December 31, 2019 and December 31, 2020, the interest rate was 4.51% and 2.91%, respectively. Commencing the earlier of i) the date no remaining amount is available under the Fixed Line or, ii) August 31, 2018, the Company is obligated to pay the then outstanding principal balance in sixty equal monthly installments through maturity in August 2023. On December 31, 2019 and December 31, 2020, the outstanding balance on Fixed Line #1 was $0.7 million and $0.5 million, respectively.

Fixed Line #2 has a maximum advance of $1.0 million and does not allow for re-borrowings and is included in Notes Payable (see Note 14). As of the year ended December 31, 2019 the company had not yet drawn on this line. Beginning April 1, 2020, the Company began paying interest monthly at a rate per year equal to LIBOR plus 2.00%. On December 31, 2020, the interest rate was 2.15%. Commencing the earlier of i) the date no remaining amount is available under the Fixed Line or, ii) August 31, 2020, the Company is obligated to pay the then outstanding principal balance in sixty equal monthly installments through maturity in September 2025. On December 31, 2020, the outstanding balance on Fixed Line #2 was $0.8 million.

Facility #4 is a term loan with a principal loan amount of $1.0 million and is included in Notes Payable (see Note 14). The loan is to be repaid over thirty-six months beginning April 13, 2020 through maturity on March 13, 2023. The payments consist of principal and interest in equal combined installments of $29,294. The interest rate on this loan is 3.49%. On December 31, 2020, the outstanding balance on Facility #4 was $0.9 million.

The Company secures its obligations under the Credit Agreement with substantially all assets of the Company. DCPC, NCPC and BNY pledge their accounts receivable to the Bank as collateral for the Credit Agreement. Fixed Line #1 is guaranteed by Gary Bowman, the Company's controlling shareholder ("Guarantor"). Obligations of the Company to the Guarantor and certain other shareholders of the Company are subordinated to the Company's obligations under the Credit Agreement and Fixed Line loans. The Company must maintain, on a combined basis certain financial covenants defined in the Credit Agreement.

Interest expense on the Revolving and Fixed Lines totaled $0.4 million and $0.3 million during the years ended December 31, 2019 and 2020.

12. Notes Payable

Notes payable consist of the following (in thousands):

	December 31, 2019	December 31, 2020
Related parties:		
BCG Chantilly, LLC - Interest accrues annually at 12.00%; payable in varying semi-annual installments of principal and interest through maturity in October 2021. This note was paid in full September 30, 2020.	225	—
Shareholders - Interest accrues annually at rates ranging from 0.00% - 6.25%. The notes payable mature on various dates through October 2025.	2,085	2,202
Unrelated third parties:		
Settlement notes payable - see below	625	—
Fixed line notes payable - see note 11	725	2,219
Total	3,660	4,421
Less: current portion	1,744	1,592
Noncurrent portion	$ 1,916	$ 2,829

A note payable was issued in 2019 for $1.3 million in conjunction with the legal settlement of a non-core dispute involving the Company and a previous office lease landlord. Payments are payable in quarterly installments of $0.2 million per quarter through September 2020.

A note payable was issued in 2018 in conjunction with a non-core legal settlement on which interest accrued annually at 3.55%; principal and interest amounts were payable in quarterly installments of principal and interest through maturity in October 2019.

The Company's controlling shareholder guarantees certain of the notes payable, and certain of the notes payable are subordinate to the terms of the Credit Agreement disclosed in Note 11.

Interest expense attributable to the notes payable totaled $0.2 million and $0.2 million for the years ended December 31, 2019 and 2020, respectively.

Actual and estimated future principal payments on notes payable are as follows for the years ending December 31 (in thousands):

2021	$1,592
2022	1,263
2023	886
2024	464
2025	216
Total	$4,421

13. Stock Subscription Notes Receivable

Periodically, the Company offers certain key employees the opportunity to purchase shares of the Company's common stock. Typically, the subscribed shares are financed by the Company and such shares will be issued in the name of the subscriber with the Company retaining possession of, as well as a security interest in, all share certificates until such time as each promissory note is repaid by the subscriber. Promissory note payments include principal plus interest ranging from 3.25% to 4.75% or the Wall Street Journal prime rate. During the years ended December 31, 2019 and 2020, the Company issued $6,683 and $0.5 million, respectively, of stock subscription notes receivable and received $0.2 million and $0.2 million of principal payments from the subscriber, respectively.

On December 31, 2019 and 2020, eighteen and seventeen shareholders owed the Company a combined total of $0.3 million and $0.6 million, respectively, in outstanding principal. These balances are reported as a reduction to redeemable common stock on December 31, 2019 and as a reduction to shareholders' equity on December 31, 2020.

14. Related Party Transactions

The Company leases commercial office space from BCG Chantilly, LLC (BCC), an entity in which Mr. Bowman, Mr. Bruen and Mr. Hickey collectively own a 63.6% interest. On December 31, 2019, notes payable included $0.2 million owed to BCC unrelated to the lease. The Company repaid the note in full with accrued interest on September 30, 2020.

Bowman Lansdowne Development, LLC (BLD) is an entity in which Mr. Bowman, Mr. Bruen, Mr. Hickey have an ownership interest. On December 31, 2019, and 2020, the Company's notes receivable included $0.5 million and $0.5 million, respectively, from BLD.

Lansdowne Development Group, LLC (LDG) is an entity in which BLD has a minority ownership interest. On December 31, 2019, and 2020, our accounts receivable included $0.2 million and $0.1 million, respectively, due from LDG. On December 31, 2019, and 2020, notes receivable included $0.2 million and $0.4 million, respectively from LDG.

Bowman Realty Investments 2010, LLC (BR10) is an entity in which Mr. Bowman, Mr. Bruen, Mr. Hickey have an ownership interest. On December 31, 2019, and 2020, the Company's notes receivable included $0.2 million and $0.2 million, respectively, from BR10.

Alwington Farm Developers, LLC (AFD) is an entity in which BR10 has a minority ownership interest. On December 31, 2019, the Company's accounts receivable included $0.4 million due from AFD. On December 31, 2020 there was no balance in accounts receivable due from AFD. On December 31, 2019, and 2020, notes receivable included $1.2 million and $1.2 million, respectively, from AFD.

During the years ended December 31, 2019, and 2020, the Company provided administrative and accounting services to certain of the related party entities at no cost.

The Company employed Gregory Bowman, the son of Mr. Bowman, as a full-time employee. The Company paid Gregory Bowman $0.1 million and $0.1 million for the years ended December 31, 2019 and 2020, respectively.

Bowman Realty Investments 2013 LLC (BR13) is an entity in which Mr. Bowman, Mr. Bruen, and Mr. Hickey have an ownership interest.

For the years ended December 31, 2019, and 2020, an employee of the Company served as project manager for a real estate development project in which BLD, BR13, and during a portion of 2020 an entity owned and controlled by Mr. Bowman and his family have an ownership interest. The cost of the services provided for the years ended December 31, 2019, and 2020 were $0.1 million and $0.1 million, respectively. After the effectiveness of this offering, the Company will no longer provide these services at no cost to the project.

As of December 31, 2019, the Company had $0.8 million of unsecured advance to Mr. Bowman included in other assets. Mr. Bowman repaid the advance in full with accrued interest on September 29, 2020 through the redemption of our stock.

As of December 31, 2019, the Company had notes receivable from Mr. Bowman and Mr. Labovitz in the amounts of $5.4 million and $0.5 million, respectively. Both Mr. Bowman and Mr. Labovitz repaid their notes in full with accrued interest on September 29, 2020 through the redemption of our stock.

On December 31, 2019, and 2020, the Company was due $0.3 million and $0.6 million, respectively, from shareholders under the terms of stock subscription notes receivable.

On December 31, 2019, and 2020, the Company owed $0.3 million and $0.3 million, respectively, to a retired shareholder and former director in connection with a 2015 acquisition.

As of December 31, 2019, and 2020, the Company owed certain of our current and former shareholders $2.0 million and $2.2 million, respectively. The notes result from repurchases of stock from shareholders upon termination of employment.

15. Income Taxes

The provision for income taxes consisted of the following (in thousands):

	December 31, 2019	December 31, 2020
Current expense:		
Federal	$ 280	$ 1
State	326	662
Total	606	663
Deferred expense (benefit):		
Federal	468	404
State	(36)	(78)
Total	432	326
Provision for income taxes	$ 1,038	$ 989

The Company measures deferred tax assets and liabilities based on the difference between the financial statement and tax bases of assets and liabilities at the applicable tax rates. Components of the Company’s deferred tax asset and liability are as follows (in thousands):

	December 31, 2019	December 31, 2020
Deferred tax assets:		
Research and develoment credit carryover	$ 275	$ 1,557
Deferred rent expense	1,002	1,073
Intangible asset amortization	78	23
	1,355	2,653
Deferred tax liabilities:		
Fixed asset depreciation	(375)	(2,866)
Accrual to cash adjustments	(6,249)	(5,398)
Goodwill amortization	(777)	(861)
	(7,401)	(9,125)
Net deferred tax liabilities	($ 6,046)	($ 6,472)

Based on the Company's operating history and management's expectation regarding future profitability, management believes the Company's deferred tax assets will be realizable under ASC 740, Income Taxes. Accordingly, no valuation allowance exists as of December 31, 2019 and 2020.

Income tax expense differed from the amounts computed by applying the federal statutory income tax rate of 21% to pretax income due to the following adjustments (in thousands):

	December 31, 2019	December 31, 2020
Statutory Rate	$ 528	$ 410
State income taxes, net of federal benefit	76	69
Effective rate differential for DCPC—S-corp	81	(59)
State income tax rate change	83	77
Permanent differences	97	68
Stock repurchase liability	1,078	1,474
Valuation Allowance	—	27
Change in tax status	—	170
Other	53	42
Research & development credit	(958)	(1,289)
Provision for income tax	$ 1,038	$ 989

The adjustment to the statutory rate from state income tax rates for the year ended December 31, 2019 are the result of changes in apportionment of revenue with a higher percentage of the Company's revenue being derived from states with higher state rates such as Illinois. The adjustment to the statutory rate from state income tax rates for the year ended December 31, 2020 are the result of the DCPC acquisition and the impact it had on state rates.

The adjustment to the statutory rate from stock purchase liability changes for the years ended December 31, 2019, and 2020 are the result of permanent differences created by the recognition of non-cash stock compensation expenses in connection with the periodic measurements of the liability to common stock subject to repurchase.

The adjustment to the statutory rate from research and development credits for the year ended December 31, 2019, and 2020 are the result of application of research and development tax credits annually earned by the Company in connection with certain at-risk work performed on behalf of our customers. An unrecognized tax benefit of $83 and $151 for the years ended December 31, 2019, and 2020, respectively is included in the adjustment for the research and development tax credits. The Company is carrying forward unused credits, the earliest of which is from the year ended December 31, 2018. This credit carryforward will begin to expire in 2038. As of December 31, 2019, and 2020, the credit carryforward balance was $0.3 million and $1.6 million, respectively.

The Company files income tax returns in the U.S. federal jurisdiction and certain states in which it operates. The Company's federal income tax returns for tax years 2017 and after remain subject to examination by the U.S. Internal Revenue Service. The statute of limitations on the Company's state income tax returns generally conforms to the federal three-year statute of limitations.

On March 27, 2020, the President of the United States signed into law the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act"). The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer side social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The Company has assessed the impact of the CARES Act and we do not expect there to be a material impact to our income tax expense.

16. Employee Retirement Plan

The Company maintains a tax-deferred savings plan (the "Retirement Plan") in accordance with section 401(k) of the Internal Revenue Code of 1986, as amended, which became effective January 1, 1996. In general, all full-time employees who have attained age eighteen are eligible to participate in the Retirement Plan on the first day of the month following the date of hire. Under terms of the Retirement Plan, the Company makes matching contributions to eligible employee wage deferrals into the Retirement Plan. Matching contributions are subject to a vesting period. Additionally, the Company may, at its discretion, make additional contributions to the Retirement Plan.

For the years ended December 31, 2019 and 2020, employer contributions totaled $1.1 million and $1.3 million, respectively.

17. Stock Options

In 2001, the Company established the Bowman Consulting Group Ltd. Stock Option Plan (the Stock Option Plan), which allows for issuance of Incentive Stock Options (ISO) and Non-Qualified Stock Options (NQSO).

The number of shares for which each option shall be granted, whether or not the option is an ISO or NQSO, the option price, the exercisability of the option, and all other terms and conditions of the option are determined by the Board at the time the option is granted. The options generally vest over a period between two and five years.

For the year ended December 31, 2019 and 2020, 3,796 and 252 NQSOs were granted, respectively, including both nominal and substantive options. Options are valued using the Black-Scholes-Merton Option Pricing Model. The assumptions used to value the options granted include:

	December 31, 2019	December 31, 2020
Expected volatility	39.0%	25.0%
Expected dividend yield	0.0%	0.0%
Expected option term (in years)	2.5	5.0
Risk-free interest rate	2.6%	2.5%

The expected volatility of the options granted was estimated using the historical volatility of share prices of publicly traded companies within the same or similar industry as a substitute for the historical volatility of the Company's common shares, which is not determinable without an active external or internal market. The expected dividends are based on the Company's historical estimated issuance and management's expectations for dividend issuance in the future. The expected term of options granted represents the expected period of time for which options granted remain outstanding. The risk-free interest rate for periods within the expected life of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

A summary of the status of stock options granted, including the substantive options discussed in Note 3, is as follows:

	Number of shares	Weighted Average Exercise Price
Outstanding at January 1, 2019	100	10.00
Granted	3,796	92.96
Exercised	(1,884)	17.13
Expired or cancelled	(100)	10.00
Outstanding at December 31, 2019	1,912	$ 167.67
Granted	252	216.49
Exercised	(358)	174.73
Expired or cancelled	—	—
Outstanding at December 31, 2020	(1,806)	$ 173.09

The following summarizes information about options outstanding and exercisable at December 31, 2019 and December 31, 2020:

	Options Outstanding and Exercisable				
	Exercise Price	Total Outstanding	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Total Exercisable
December 31, 2019	$176.93	1,912	4.5	$ 167.67	1,912
December 31, 2020	$187.80	1,806	4.5	$ 173.09	1,806

The intrinsic value of these options on December 31, 2019 and December 31, 2020 was $89.59 and $189.77, respectively.

The Company recorded $121,248 and $22,443 of compensation cost related to stock options associated with the issuance of non-recourse, stock subscription notes during the years ended December 31, 2019 and 2020, respectively.

The Company received cash payments of $32,555 and $62,907 from the exercise of options under the Stock Option Plan in the years ended December 31, 2019 and 2020, respectively.

As of December 31, 2019 and 2020, the total unrecognized compensation costs related to non-vested share-based compensation arrangements granted under the Stock Option Plan were immaterial.

18. Stock Bonus Plan

Effective April 2003, the Company adopted the Bowman Consulting Group Ltd. Stock Bonus Plan (the Stock Bonus Plan), which allows for the awarding of shares of common stock to employees. The Stock Bonus Plan is administered by the Board of Directors (the "Board"). The Board has sole discretion to establish the terms, restrictions, size, and type of award to be granted and to whom it will grant. The Board also periodically defines or restricts the maximum number of shares it will award in each period.

During the years ended December 31, 2019 and 2020, the Board granted 1,598 and 22,294 shares, respectively. The shares have a vesting period of up to four years during which there are certain restrictions as defined by the Stock Bonus Plan and Stock Bonus Agreements. The grant date fair value of the Company's shares, as determined by a third-party valuation and approved by the Board at the time of award ranged from $162.10 to $377.57, per share during the years ended December 31, 2019 and 2020.

The following table summarizes the activity of restricted shares subject to forfeiture:

	Number of shares	Weighted Average Grant Price
Outstanding at January 1, 2019	6,405	161.62
Granted	1,598	174.42
Vested	(2,625)	162.74
Cancelled	(76)	162.10
Outstanding at December 31, 2019	5,302	164.92
Granted	22,294	324.49
Vested	(3,668)	191.55
Cancelled	(100)	162.10
Outstanding at December 31, 2020 [1]	23,828	310.13
Outstanding at December 31, 2020, as modified [2]	23,828	377.57

[1] *Weighted average grant price at December 31, 2020 represents the grant date fair value of Stock Awards as originally issued.*

[2] *Weighted average grant price at December 31, 2020, as modified, represents the as adjusted fair value of the outstanding Stock Awards on the date of modification in connection with the settlement of the liability to common shares subject to repurchase.*

The following table represents the change in the liability to common shares subject to repurchase and the associated non-cash compensation expense in thousands:

	December 31, 2019	December 31, 2020
Beginning balance	$ 4,464	$ 8,267
Non-cash stock compensation expense from ratable vesting	1,468	2,712
Non-cash compensation from change in the fair value of liability	2,335	2,457
Other stock activity, net	—	(786)
Reclassification upon modification	—	(11,808)
Ending balance	$ 8,267	$ 842

As of December 31, 2020, the Company had 18,671 of unvested stock awards that vest between January 1, 2021 and December 31, 2024. Based on the modifications of the stock awards in December 2020, the grant date fair value of the unvested awards was set to $377.57 per share.

The future expense of the unvested awards by year is as follows (in thousands):

2021	$3,449
2022	2,022
2023	1,688
2024	951
Total	$8,110

19. Redeemable Common Stock

The activity of redeemable common stock classified as temporary equity, consists of issuances of new common stock, purchases of common stock and collection on outstanding stock subscription notes receivable. Also included in the activity are compensatory transactions wherein the majority shareholder sold shares to other shareholders at below fair value, thereby causing those shares to be subject to ASC Topic 718.

On December 22, 2020, the Company's shareholders approved a Fourth Amendment to the Shareholders Buy-Sell Agreement that eliminated repurchase features outside the control of the Company (see Note 3). In the absence of such repurchase features, the company no longer considers the common shares redeemable. The Company accounted for the modification as a redemption of the redeemable common stock for permanent equity.

The activity of redeemable common stock for the years ended December 31, 2019 and 2020 is as follows (in thousands, except number of shares):

	Redeemable Common Stock	
	Shares	Amount
Balance as of December 31, 2018	167,526	23,343
Issuances of new common stock	535	97
Purchases of common stock	(9,110)	(1,860)
Controlling shareholder - net sales and purchases	(1,454)	(200)
Collection on stock subscription notes receivable	—	212
Measuring date adjustment to current fair value	—	15,026
Balance as of December 31, 2019	157,497	36,618
Issuances of new common stock	1,940	499
Purchases of common stock	(24,170)	(9,017)
Controlling shareholder - net sales and purchases	57	15
Measuring date adjustment to current fair value	—	18,635
Movement to permanent equity	(135,324)	(46,750)
Balance as of December 31, 2020	—	—

20. Capital Leases

On December 31, 2019, the company financed certain IT related and other equipment under capital lease agreements and certain IT related and other equipment and vehicles under operating lease agreements. The capital lease agreement requires 48 monthly payments, totaling $15,562 per month. The interest rate necessary to calculate the present value was an incremental borrowing rate of 3.8%, which is the rate on the revolving line of credit as of December 31, 2019.

On September 30, 2020, the Company converted the remaining operating leases for equipment and vehicles to capital leases and recorded the associated equipment purchases and capital lease liability, current and non-current. The payment terms on the lease agreements range between 30 and 50 months with payments totaling approximately $0.3 million per month. The interest rate necessary to calculate the present value was an incremental borrowing rate of 3.25%, which is the rate on the revolving line of credit as of September 30, 2020.

Future minimum commitments under non-cancelable capital leases are as follows for the years ending December 31 (in thousands):

2021	$ 3,916
2022	3,583
2023	2,341
2024	307
2025	—
Total minimum lease payments	10,147
Less: amount representing interest	(922)
Present value of total net minimum lease payments	9,225
Less: current portion of net minimum lease payments	(3,495)
Long-term portion of net minimum lease payments	$ 5,730

The above table is exclusive of the $1.9 million bargain purchase price associated with the $11.0 million total liability to capital leases as presented on the combined balance sheet.

21. Commitments and Contingencies

Operating leases

The Company leases office space, equipment and vehicles. The Company financed vehicles, certain IT and other equipment under the terms of three primary master lease agreements accounted for as operating leases until September 30, 2020, when the Company converted the equipment and vehicles to capital lease as referenced in Note 21. Rent, vehicle and equipment lease expense for the years ended December 31, 2019 and 2020, was $7.4 million and $7.3 million, respectively.

Aggregate actual and future minimum lease payments of the remaining operating leases for equipment and rent are as follows for the years ending December 31:

2021	$ 5,380
2022	5,000
2023	3,838
2024	3,330
2025	2,844
Thereafter	5,975
Total	$ 26,367

22. Restatement of Financial Results

The Company is restating its previously issued combined financial statements for the year ended December 31, 2019 and related disclosures, to correct an overstatement of the combined retained earnings of the Company and other corrections in accounting for the Company's liabilities and combined earnings (collectively the "Restatement").

In addition to the error corrections, certain adjustments were made to the previously issued December 31, 2019 combined financial statements to reflect the adoption of accounting standards required for public companies in anticipation of a potential Form S-1 filing. The Company reclassified certain equity from permanent equity to temporary equity to reflect the adoption of Accounting Standards Codification (ASC) Topic 480 at December 31, 2019. Adjustments to reflect the adoption of public company accounting standards are not included in the Restatement.

The error corrections relate to the following:

Application of ASC 718, Stock Compensation, and ASC 480, Distinguishing Liabilities from Equity

Depending on the nature of the shares and the provisions of the related agreements, either ASC 718 or ASC 480 provides applicable guidance regarding the classification and accounting of shares subject to redemption. ASC 718 addresses the classification of redeemable shares issued to employees under compensatory arrangements while ASC 480 addresses the classification of redeemable shares issued under other arrangements and circumstances.

In February 2001, the shareholders of Bowman entered into a shareholders' buy-sell agreement subsequently amended and modified in 2002, 2007, 2019 and 2020. The agreement as amended universally governs the ability of shareholders to transact in the Company's stock and gives the Company and the shareholders put and call rights upon the occurrence of certain events. In addition, certain shareholders have entered into addenda to the agreement with respect to establishing individual share-based rights. We refer to the agreement, along with all amendments and addenda as the "Buy-Sell Agreement."

The Company has outstanding shares of common stock comprised of founders' shares, shares purchased by employees, shares issued in connection with providing incentive compensation to key members of management and employees, and shares used as currency in connection with certain acquisitions. All shares are subject to the Buy-Sell Agreement. Shares issued as restricted stock or option grants are additionally subject to stock bonus agreements that may include put, call and other provisions that supersede the Buy-Sell Agreement.

Shares issued originating from the granting of restricted stock bonus awards, stock options and the sale of stock to employees at prices below the Company's Agreed Value are compensatory and subject to ASC 718. We refer to these shares as the "ASC 718 Shares". Because the Buy-Sell Agreement and certain stock bonus awards contain provisions under which repurchase of the shares could be required, the Company is required to assess whether to classify such shares as a liability or equity.

The Company has the ability to exercise call rights and redeem shares at less than fair value upon the occurrence of events not under the control of the Company. As such, the Company identified an error as all ASC 718 Shares should have been recorded as a liability through and until the elimination of such features in connection with the fourth amendment to the Buy-Sell Agreement. Because the settlement provisions of the Buy-Sell Agreement require the selling shareholders/grantees enter into a 5-year note at a below market interest rate in exchange for the surrender of their shares, the Company measures the repurchase liability at the present value of the 5-year cash flow, discounted at a market rate of interest.

Measurement of the repurchase liability associated with liability-classified awards is required at each reporting period. The liability is measured at its fair value, with changes in the fair value of the liability recorded as non-cash compensation expense. The Company measures the fair value of the repurchase liability at the end of each reporting period and recognizes compensation cost (benefit) accordingly.

i. At December 31, 2019, the fair value of the Company's liability for the repurchase of shares was $8.3 million, resulting in a decrease of $3.3 million to net income for the year ended December 31, 2019, a decrease of $4.0 million to retained earnings at December 31, 2018 and a cumulative decrease of $7.3 million to retained earnings at December 31, 2019. This correction also resulted in a $1.2 million decrease to additional paid in capital at December 31, 2019.

Non-Recourse Notes Treated as Substantive Options

From time to time, the Company sells stock to employees financed under promissory notes. Most of these notes include recourse to provide repayment security in the event of default. In these cases, the Company accounts for the sale as a subscription receivable and records equity pursuant to the provisions of ASC 718 or ASC 480 outlined above. Periodically, the Company has issued non-recourse stock purchase notes. Based on the reassessment of the application of ASC 718, the Company now treats the non-recourse notes as substantive options, which resulted in an error. When the notes have pre-payment allowances, the Company records the compensation cost at the time of the grant as opposed to ratably over the life of the option. Payments on the outstanding balance of the note (principal and interest) are periodic exercises of the option with the shares purchased through exercise recorded as liability or equity pursuant to ASC 718.

ii. The reclassification of non-recourse, stock purchase notes to substantive options resulted in a correction that reduced stock subscription notes receivable by $0.2 million and reduced additional paid in capital by $0.3 million. Net income and retained earnings increased $0.1 million for the year ended December 31, 2019. There was no impact on retained earnings for the year ended December 31, 2018.

Put Options Related to Acquisitions

iii. The Company identified an error related to the accounting for put option rights related to the common shares issued in connection with business combinations and asset acquisitions. The put option price is no longer considered a liability for which the Company accretes the issue price to put price as an operating expense over the term of the option but rather the put value of shares issued is used as the basis for determination of consideration when issued in connection with business combinations and assets acquisitions.

During the year ended December 31, 2019, the correction resulted in a cumulative increase of $38,000 in intangible assets related to the Atherton asset acquisition and a cumulative increase of $1.1 million in goodwill related to other business combinations consummated prior to 2019. The correction also resulted in a $13,000 increase in net income for the year ended December 31, 2019, an increase to retained earnings of $0.8 million at December 31, 2018, and a cumulative increase to retained earnings of $0.8 million at December 31, 2019. The correction also resulted in a $1.4 million cumulative increase to additional paid-in capital at December 31, 2019.

Accounting for Income Taxes

iv. The aggregate income tax effects of the corrections and adjustments described herein had the net effect of decreasing net income by $0.2 million for the year ended December 31, 2019, increasing retained earnings by $0.3 million at December 31, 2018 and a cumulative increase to retained earnings of $0.1 million at December 31, 2019. The corrections decreased the deferred tax liability by $0.1 million, increased the current accrued tax liability, net by $0.1 million and increased the current tax receivable by $30,000.

Other Corrections

v. Adjustment to correct revenue recognized for contracts acquired from the Omland acquisition. The correction resulted in a decrease of $1.3 million in net income for the year ended December 31, 2019. The correction resulted in a $0.4 million decrease to retained earnings at December 31, 2018 and a cumulative decrease of $1.6 million to retained earnings at December 31, 2019.

vi. Adjustment to record $0.1 million of revenue reversed in prior years. The correction resulted in an increase in net income for the year ended December 31, 2019. The correction decreased retained earnings at December 31, 2018 by $0.1 million and had no cumulative impact to retained earnings at December 31, 2019.

vii. Adjustment to reclassify $22,000 of security and other related deposits at December 31, 2019 from long-term to current. This correction had no impact on net income or retained earnings at December 31, 2019 or December 31, 2018. Adjustment of $0.1 million to reclassify work-in-process (WIP) from accounts receivable to contract asset. This adjustment had no impact to net income or retained earnings at December 31, 2019 or December 31, 2018.

viii. Adjustment to reverse the fees associated with modifications to the revolving and non-revolving line of credit agreements and instead amortize the fees over the life of the loans. These fees were initially expensed in full when incurred. This resulted in a decrease of $20,000 to net income for the year ended December 31, 2019. The correction resulted in an increase of $23,000 to retained earnings at December 31, 2018 and a cumulative increase of $43,000 to retained earnings at December 31, 2019. The correction also resulted in a balance of $38,000 in deposits and other assets as well as a contra liability of $6,000 in notes payable. These will be amortized on a straight-line basis through July 2021 and August 2025, respectively.

ix. Adjustment to derecognize $0.4 million of prepaid expenses, for which the Company did not make payment as of December 31, 2019 along with an equal amount of accounts payable, which the Company was not legally obligated to pay at December 31, 2019. The correction had no impact to retained earnings at December 31, 2019 and December 31, 2018.

x. Adjustment to increase additional carrying value of properties subject to capital lease and reclassify the Company's capital lease liability between long-term and current. The correction had no impact to net income for the year ended December 31, 2019 or retained earnings at December 31, 2019 and December 31, 2018.

xi. Adjustment to certain intercompany transactions resulted in an increase of $26,000 to prepaid expenses and a decrease of $18,000 to accrued expenses. It also resulted in a $36,000 increase in gross revenue and a $36,000 increase in direct project expenses. There was no impact to overall net income for the year ended December 31, 2019. The correction resulted in a $45,000 increase to retained earnings at December 31, 2018 and December 31, 2019.

xii. Adjustment to record additional previously unrecorded liabilities for the year ended December 31, 2019. The adjustment resulted in an increase of $0.4 million to accrued expenses and a decrease of $0.1 million to net income for the year ended December 31, 2019. The correction resulted in a decrease of $0.3 million to retained earnings at December 31, 2018 and a cumulative decrease of $0.4 million to retained earnings at December 31, 2019.

xiii. Adjustment to record a cumulative $0.1 million allowance on the Company's deferred income tax asset related to research and development tax credit. The correction resulted in a $52,000 decrease in the Company's net income for the year ended December 31, 2019. The correction resulted in a decrease to the Company's retained earnings of $42,000 at December 31, 2018 and a cumulative decrease of $94,000 at December 31, 2019.

xiv. Adjustment to reclassify accrued interest expense. This adjustment resulted in an increase of $62,000 to accrued expenses and a decrease of $21,000 and $41,000 to line of credit and notes payable, respectively. There was no impact to net income for the year ended December 31, 2019 or retained earnings at December 31, 2018 or December 31, 2019.

xv. Adjustment to reclassify $5.9 million to treasury stock from additional paid in capital and common stock. This represents 42,317 shares repurchased by the company between 2004 and 2019, accounted for using the cost method. This adjustment had no impact on net income for the year ended December 31, 2019 or to retained earnings for the years ended December 31, 2018 and 2019.

xvi. Adjustment to record stock compensation expense related to shares earned but not yet issued under the long-term compensation plan. The correction resulted in a decrease to net income of $0.2 million for the year ended December 31, 2019 and a decrease to retained earnings of $0.2 million at the year ended December 31, 2019. There was no impact to retained earnings at December 31, 2018.

Adoption of ASC 480

The Company has certain shares of outstanding common stock that are categorized as founder's shares, shares issued in connection with acquisitions or otherwise acquired by the holders outside the arrangements contemplated under ASC 718. We refer to these shares as the "ASC 480 Shares". Like the ASC 718 Shares, the Company's ASC 480 Shares are subject to the provisions of the Buy-Sell Agreements but are not considered compensatory awards.

Although the ASC 480 Shares are subject to repurchase based on events that were certain to occur (such as death and retirement), it is not certain that a shareholder would own their shares upon the occurrence of such an event. As such, the ASC 480 Shares historically were classified as equity as a non-public company. In anticipation of a public filing, however, the Company adopted ASC 480 and, as a result, classified the ASC 480 Shares as temporary equity because of the repurchase features that are outside the Company's control. The Company has also adjusted the temporary equity value to redemption value with a corresponding reduction to retained earnings (deficit) in the period presented.

The previously reported restatement adjustments and restated amounts including reclassifications above for those accounts affected by this restatement and reclassification in the combined income statement for the year ended December 31, 2019 and on the combined balance sheet as of December 31, 2019 are listed in the tables below. The accounts primarily affected by the adjustments above have been footnoted accordingly.

Restated Combined Balance Sheet and Income Statement

The presentation of the statements included in this restatement footnote are in conformity with the Company's originally audited financial statements. Certain 2019 amounts in the income statement have been reclassified to conform with the current presentation.

Combined Balance sheet
At December 31, 2019

		Previously Reported	Restatement Adjustments	Adoption of ASC 480	Restated
($ in 000s, except per share and percentages)					
Assets					
Accounts receivable, net	vii	28,660	(105)	—	28,555
Contract assets	v, vii	11,549	(1,441)	—	10,108
Prepaid and other current assets	iv, vii, viii, ix, xi	2,530	(243)	—	2,287
Total Current Assets		**$ 44,677**	**$ (1,789)**	**$ —**	**$ 42,888**
Property and equipment, net	x	4,746	24	—	4,770
Goodwill	iii	8,090	1,089	—	9,179
Other Intangible Assets	iii	653	38	—	691
Other assets	vii	822	(22)	—	800
Total Assets		**67,458**	**(660)**	**—**	**66,798**
Liabilities					
Amounts advanced under loans to shareholders	xiv	8,369	(21)	—	8,348
Payments received under loans to shareholders	iv, ix, xi, xii, xiii, xiv	13,780	390	—	14,170
Contract liabilities	v	7,802	86	—	7,888
Notes payable, current portion	viii, xiv	1,786	(42)	—	1,744
Capital lease obligation, current portion	x	183	(40)	—	143
Total Current Liabilities		**$ 32,230**	**$ 373**	**$ —**	**$ 32,603**
Notes payable, less current portion	viii, xiv	1,921	(5)	—	1,916
Capital lease obligation, less current portion	x	511	63	—	574
Deferred tax liability, net	iv, xiii	6,177	(131)	—	6,046
Accrued Put Option Liability, unexercised	iii	1,160	(1,160)	—	—
Common shares subject to repurchase	i	—	8,267	—	8,267
Total Liabilities		**$ 46,056**	**$ 7,407**	**$ —**	**$ 53,463**
Redeemable common stock		—	—	36,618	36,618
Shareholders' equity					
Common stock		20	—	(20)	—
Additional paid-in-capital	i, iii, xv	6,522	5,861	(12,383)	—
Treasury Stock	xv	—	(5,925)	—	(5,925)
Stock subscription notes receivable	ii	(548)	238	310	—
Retained earnings (Accumulated deficit)		15,408	(8,241)	(24,525)	(17,358)
Total Shareholders' equity		**$ 21,402**	**$ (8,067)**	**$ (36,618)**	**$(23,283)**
Total Liabilities and Stockholders Equity		**67,458**	**(660)**	**—**	**66,798**

Note – only the line items that were subject to restatement have been presented above

Combined Income Statement
Year ended December 31, 2019

		Previously Reported	Restatement Adjustments	Restated
($ in 000s, except per share and percentages)				
Revenue				
Professional Services	v, vi, xi	108,051	(1,146)	106,905
Total Revenue		**$ 114,870**	**$ (1,146)**	**$ 113,724**
Direct Expenses				
Sub-Consultants	xi	12,723	35	12,758
Other direct expenses		3,010	-	3,010
Total direct expenses		**15,733**	**$ 35**	**$ 15,768**
Net Service Revenue		**99,137**	**$ (1,181)**	**$ 97,956**
Operating expenses				
Indirect Expenses	i, ii, iii, iv, viii, ix, xii, xvi	57,265	3,628	60,893
Total operating expenses		**89,898**	**3,628**	**93,526**
Income from operations		**9,239**	**$ (4,809)**	**$ 4,430**
Other (expense) income				
Interest Income	ii	207	(1)	206
Interest Expense	iii, viii	(565)	(43)	(608)
Accretion on put option liability	iii	(44)	44	-
Total other expense, net		**(1,866)**	**$ -**	**$ (1,866)**
Income before provision for income taxes		**7,373**	**$ (4,809)**	**$ 2,564**
Provision for income taxes - (expense) benefit, current	iv, xiii	(457)	(149)	(606)
Income before deferred income taxes	iv	6,916	(4,958)	1,958
Provision for income taxes - (expense) benefit, deferred	iv	(343)	(89)	(432)
Net income (loss)		**$ 6,573**	**$ (5,047)**	**$ 1,526**

Note - only the line items that were subject to restatement have been presented above

23. Other

The Company is subject to legal proceedings and claims which arise in the ordinary course of business. In the opinion of management, the ultimate outcome of these matters will not be material to the Company's combined financial position, results of operations or cash flows.

24. Subsequent Events

The Company has evaluated subsequent events through February 23, 2021, the date that the financial statements were issued.

On January 4, 2021, the Company completed the acquisition of assets and operations of KTA Group, located in Herndon, Virginia. In connection with the acquisition, the Company issued 1,802 shares of common stock to the sellers.

25. Additional Disclosures

COVID-19 Impact

It is not possible at this time to estimate the full impact that COVID-19 will ultimately have on our business, as the impact will depend on future developments, which are highly uncertain and cannot be predicted. We are evaluating, and will continue to evaluate, the impact of COVID-19 on current projects, but the full effects COVID-19 will have on our operations are still unknown. Early on in the course of the pandemic we were considered an essential operation in all states and local jurisdictions where we operate. While there was some degree of disruption in all markets, we were able to continue serving customers without interruption. As of the date of this prospectus, we have not experienced any material financial distress resulting from the COVID-19 pandemic. We did not qualify for the PPP Loan program under the CARES Act. We have taken advantage of the opportunity to defer $2.5 million of employer payroll taxes during the year ended December 31, 2020 as afforded us under the CARES Act. The duration and extent of the impact from the COVID-19 pandemic depends on future developments that cannot be accurately predicted at this time, such as the severity and transmission rate of the virus, the extent and effectiveness of containment actions, and the impact of these and other factors on our employees and clients. The implementation of shelter-in-place orders within the cities and municipalities we operate in could further negatively impact future results as well as the re-designation of infrastructure spending to non-essential services. At this time, we are monitoring, and will continue to monitor, the safety of our employees during the COVID-19 pandemic.

Required Forms *(attached separately)*

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