









I-69 is now open to traffic! To recap, the I-69 Reconstruction project is an investment of more than \$113,000,000 that includes over two miles of freeway concrete road reconstruction along with storm sewer, traffic signal modernizations, freeway lighting, ADA sidewalk ramp upgrades, rehabilitation of 19 bridges, mine cap restoration, pavement markings, and maintenance of traffic on I-69 from Fenton Road to M-54 including the I-69/I-475 interchange in the City of Flint.

Now that the project is substantially complete, the corridor is much safer for pedestrians and motorists.

**PROJECT RECAP** on pg. 4

## INSIDE THIS ISSUE



#### Romeo Crosswalk Upgrades

This project constructed new ADA compliant ramps at six intersections, curb extensions at two intersections, and installed a total of nine enhanced crosswalks



### **Argo Park Livery Improvements**

The ROWE team provided the design and construction assistance for the civil-site improvements associated with this project in the City of Ann Arbor.



#### **Baldwin Road Reconstruction**

ROWE provided the topographic survey, design engineering, construction staking, and construction engineering on Phase 2 and Phase 3 of the project.



# ROWE

## **BACK TO THE COMMUNITY**





This winter, ROWE held the annual United Way campaign, sponsored a team of four in Putt for Pups, and helped sort and build holiday food boxes at the Food Bank of Eastern Michigan. Giving back and spending time together was a great way to end 2022!





## A NEW YEAR BEGINS!

## A MESSAGE FROM OUR CEO

Leanne H. Panduren, PE, Principal, President

As the new year begins, we are welcoming some new faces in leadership! I am pleased to announce that Lori Mudge and Mike Royalty have been named to the ROWE Principal group as well as to the Executive Committee. Lori has served as our Director of Human Resources and will now move into a broader, but still people-focused, role as our new Chief Talent Officer. This new role at

ROWE will be focused on the well-being of our team members and will provide oversight to our training and development programs, our safety program and the Human Resource and Administration departments. Mike has most recently led in his position as a Senior Project Manager in our Construction Services Division and will now move into the Director of Business Development role filling the gap left as we say goodbye to Jack Wheatley at the end of 2022. In his new role, Mike will work with our production departments to create and implement business development initiatives as well as provide oversight to the Marketing department. On a side note, Jack is excited to tackle his many retirement plans and spend more time in the Upper Peninsula and traveling.

I am also happy to announce we are adding two new Associates to our shareholder group: Dakota Roberts who is a Senior Project Engineer in the Transportation Group of our Design Division and Mike Roberts who is a Senior Project Manager in our Construction Division. Both gentlemen will be an asset to the overall Associate group, as they join our current 24 team members and help us meet our strategic goals.



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# PROJECT RECAP

The bridge decks on three flyover bridges at the I-69/I-475 interchange were discovered to be in extremely poor condition. Through in-depth analysis of the bridge decks, it was determined that replacement was needed. This added approximately \$9,000,000 to the project and several weeks to the construction timeframe. As a result of the new replacements, significant modifications to maintenance of traffic were required for the second season of construction.

The sheer volume of work was a challenge. Some of the significant items include:

- More than **300,000** collective labor hours to construct this project
- Almost **100,000** tons of crushed concrete for the new road base
  - 100,000 cubic yards of concrete
    - **600,000** pounds of steel











Located in St. Clair County, the City of Port Huron is home to 28,743 people. With 33 parks and recreation opportunities within the city, skatepark in the area. Bikers and skaters from across Michigan are excited for the opening of the new skatepark, which has an expansive layout and provides a space for beginners as well as experts.



A budget of \$750,000 was approved for the design and construction of the Optimist Skatepark with funding assistance from the Optimist Park will be a standout with the only Ralph C. Wilson, Jr. and Tony Hawk Foundations, the Michigan Department of Natural Resources, and local donations. The Port Huron community was heavily involved in the fundraising efforts, hosting free BMX lessons and demonstrations as well as other events to encourage support and donations to the project. The enthusiasm from the local community drove the success of the funding efforts.

> ROWE provided civil engineering and landscape architecture services for the project, along with surveying and construction observation as a separate contract. The previous existing skatepark had mainly portable features as opposed to the new poured concrete features that will allow for overall longevity of the park and its features. The progressive design by Grindline LLC allows for users of all ages and skill levels to enjoy the park.

The skating community is gaining a great facility in the City of Port Huron. As the park opens, the community hopes to host bigger events and competitions in the future.

Some of the important project design details include:

- 10,400 square-foot skatepark located in Optimist Park that will accommodate skateboards, bikes, and in-line skates.
- Drainage design was a critical factor when designing bowl type features due to the site being mostly flat.
- Accommodation of all ages and skill levels with a transitional park design while providing unique features that attract experienced users and allow for the park to accommodate special events and competitions that attract enthusiasts from the larger metropolitan area and the Canadian market.

Per Tony Hawk Foundation's "Environmental Impact Grant", the design required:

- The use of recycled existing slab when possible. Incorporation of green stormwater practices that protect and conserve water quality.
- •Creation of a rain garden that attracts butterflies and songbirds while providing a green space to observe activities in the park.
- Design and installation of a water bottle filling station.
- •Design incorporating one signature feature unique to this specific project.
- •Design incorporating one universal design (accessible) bench and one recycle/trash bin on a separate concrete slab adjacent to skatepark west side as specified by Land and Water Conservation Trust Grant requirements.





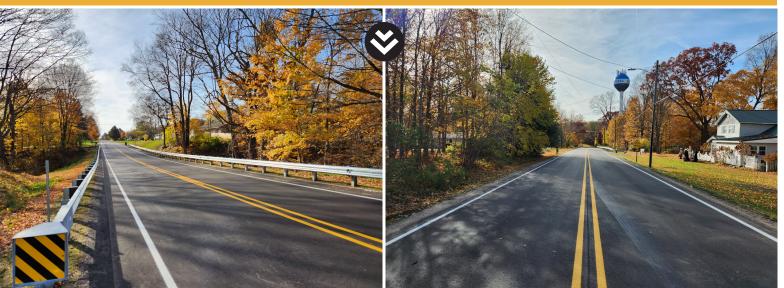
**BEFORE PICTURES** 

# **O HARRISBURG ROAD**

County Road Commission was a success! Located on Harrisburg Road, this project consisted of 1.46 miles of crushing, shaping and HMA overlay, guardrail improvements, and three culvert replacements. One of the culverts was 81 inches by 59 inches and required corrugated steel headwalls to be installed to keep it inside curve, ensure safety on the road.

ROWE's first project with the Muskegon of the county right-of-way after expanding the shoulder. The shoulder width was expanded to 6 feet and included 3 feet of paving. Valley gutter was added to hill sections to prevent shoulders from washing out. These improvements, along with the addition of delineators to increase nighttime visibility outside of the superelevated

## **AFTER PICTURES**



Q1 2023



In the small town of Romeo, new pedestrian crosswalks have been installed! ROWE created a Downtown Master Plan for the village in 2009. In 2020, Romeo turned to ROWE to implement a part of this plan. ROWE wrote a Transportation Alternatives Program (TAP) grant application that resulted in 80 percent federal funding through the Southeast Michigan Council of Governments (SEMCOG). Once the grant was secured, ROWE completed design engineering, and provided full construction services including observation, testing, payments to contractor, and oversight.

The Village of Romeo has a successful, flourishing business community in its downtown center. Before completion of this project, speeds on both Main Street and St. Clair Street were too high through the area with pedestrians walking to the main intersection to find the signalized, marked crosswalk. This discouraged walking along the storefronts, particularly if one was walking near the outer edges of the downtown area. The only marked crosswalks were through

Main Street or St. Clair Street at the central intersection of these two roads. With the majority of the intersection dating to the mid-1990's, it was in poor condition and lacked pedestrian accessibility. With the new improvements, there are several pedestrian loops that allow walkers to park their car and circle around the various blocks of the town.

This project constructed new ADA compliant ramps at six intersections, curb extensions at two intersections, and installed a total of nine enhanced crosswalks.



## Main Street & Lafayette Street, Main Street & Newberry Street

At these two locations, curb bump-outs were installed at two of the four corners each, allowing the crosswalk distances to be shortened. Storm sewer and catch basin work was required at all four corners to facilitate the narrowed Main Street. In addition, the grade difference of the existing historical building front door compared



to the street was extreme at the southwest then replaced with the decorative crosswalk corner of Newberry Street. In order to make this area more ADA accessible, a planter box was introduced to allow the construction of a two-level sidewalk in this area. ADA compliant ramps and decorative crosswalk materials were installed to provide one main crosswalk at each of these intersections.



St. Clair Street & Rawles Street, St. Clair Street & Bailey Street, Main Street & Washington Street

New ADA accessible ramps were installed at two corners at each of these intersections to provide a new crosswalk with decorative materials where none existed previously.



## Main Street & St. Clair Street

New ADA accessible ramps were installed at the two westerly corners, since the existing were not compliant and in poor condition. The existing painted crosswalks on all four legs were

materials.

## **Challenge & Solution**

Our biggest challenge proved to be the storm sewer layout in the construction area. Main Street was originally constructed as part of M-53 (Van Dyke Road) as a part of a state highway through the middle of downtown Romeo. It was transferred to County jurisdiction in the 1980's when the adjacent M-53 bypass was constructed. The storm sewers in Main Street date back many decades. Some sections of the storm sewer system layout were not known.

Fortunately, the ROWE field team helped locate an existing storm manhole that had been buried under two inches of asphalt for many years, which allowed for new sewers to be redesigned quickly. Even with these challenges, the project was completed in its entirety just in time for Peach Fest - the Village's most important event of the vear!



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included grant application assistance, design, and preparation of site plan review, permits, construction documents, and construction assistance. The final concept plan included input from Mitchell and Mouat Architects, who provided architecture design and construction assistance for restroom demolition and improvements.

As a key portal to the Huron River Water Trail, the Argo Park improvements enhance the parks and recreation opportunities for the Ann Arbor community.



#### Park Features

- · Replacement of a gravel parking lot with a paved surface and landscaped bioswales with native plants.
- Sidewalk replacement with widened sidewalks for accessibility and circulation including more room for gueue lines and a direction divider for livery customers. The paved crosswalk at the parking lot included reinforcement to support trailers for the livery and Americans with Disabilities Act (ADA) tactile plates for this crossing point.
- Benches along walkways that included companion seating areas.
- Replacement of a fishing dock with a new accessible boardwalk and railing. This included companion seating areas, railings for inclusive barrier free use.
- · Replacement of three existing manufactured boat docks.

- •Wayfinding/interpretive signage to assist with Rain garden improvements were used to directing pedestrians from a remote overflow parking area.
- The addition of an accessible EZ dock launch and an EZ kayak launch.



•The existing restroom building was expanded to include two universally accessible family restrooms and additional changing areas. The existing restrooms were updated for accessibility. A grinder pump was included to improve the function of the existing sanitary sewer connection.

mitigate storm water quality issues on site after large rain events.

Functionality and circulation were improved through various efforts to provide multiple access points for users such as: widened sidewalks allowing flow for Border to Border trail users through the site, posts and railings to help direct customers through the check-in process, new wayfinding signage, and additional points of access to the water such as a geocell/aggregate beach and ledgestone steps for



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## NORTHERN MICHIGAN

Working with the Michigan Department of Transportation (MDOT) Bureau of Bridges and Structures, ROWE provided two qualified team leaders with fracture critical certifications to complete three detailed bridge inspections, one fracture critical inspection, and four routine bridge inspections. ROWE completed, submitted, and received all necessary permits to work within MDOT and railroad right-of-way prior to any field work. The permitting process involved heavy coordination between two separate railroads with two separate permitting processes. Due to the limited access caused by railroad right-of-way, the MDOT reachall was utilized at all four structures.

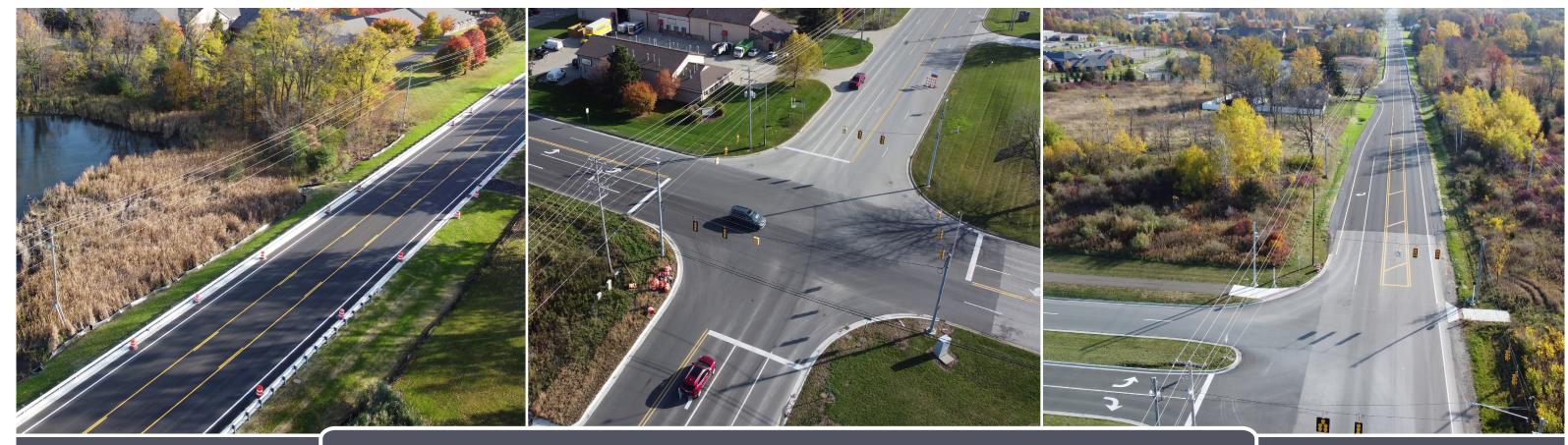
All four structures had a routine inspection completed and included any deficiencies that were noted during the detailed or fracture critical inspection.

Continued inspection of these four structures will help MDOT with future repair items and extend the longevity of each structure. With rising construction costs, it is more important than ever to extend the life of an existing structure. Most importantly, routine inspections ensure safe operation to the motoring public!

## **STRUCTURES**

- Fracture Critical Inspection: Performed at "US-2 over WCL RR"
- Detailed Deck Bottom and Bearing Area Inspections: "I-75 SB over WCL RR & M-80" and "I-75 NB over WCL RR & M-80"
- Detailed Inspection of Substructure and Superstructure Elements: "M-94 over WCL RR"

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## BALDWIN ROAD IMPROVEMENTS



**New jobs opportunities** are coming to Grand Blanc! An 80,000 square foot headquarters office is being constructed for Fessler and Bowman, Inc., a leading national concrete, earthwork, and underground contractor. As a result of this nearly \$10M expansion, there will be 52 new full-time positions available along with the retention of 112 existing positions. As the company made plans for their new headquarters, ROWE collaborated with the Genesee County Road Commission (GCRC) to complete road improvements in the Charter Township of Grand Blanc on Baldwin Road. The overall project included reconstruction of Baldwin Road to all season standards to ultimately create a continuous route to Baldwin Road between the newly constructed S. Dort Highway east to the new world headquarters and future Technology Village development.

Funded through the Michigan Department of Transportation (MDOT) Transportation Economic Development Fund (TEDF) Category A, the project received \$1.7M in funding. ROWE assisted with the funding application as well as developed the required concept plans and cost opinions for the funding application. The 1.56-mile project was constructed in three phases:

**Phase 1:** Holly Road 900 feet to the west of Holly Road (0.17 miles)

**Phase 2:** S. Dort Highway east to the Phase 1 limits (0.71 miles)

**Phase 3:** Gainey Drive east to Ruby Street (0.68 miles)

ROWE provided the topographic survey, design engineering, construction engineering, and construction staking on Phase 2 and Phase 3 of the project. The GCRC provided topographic survey, design engineering, and construction

engineering for Phase 1. Road reconstruction included pavement removal, earthwork, HMA paving, concrete curb and gutter, ditching, guard rails, retaining walls, storm sewer, water main relocations and future service stubs, underdrain, pavement markings, permanent signs, and turf establishment. The existing two-lane sections of Baldwin Road were widened to a minimum of three lanes.

Due to existing unstable soil support, two existing wetland crossings had areas where roadway was slowly sinking. To combat this issue, GCRC had added pavement to these sections of roadway. In some areas, the existing pavement thickness was up to 25 inches thick. We had two options in mind to solve this inconsistency.

**Option 1:** Complete removal of the unstable soils and replacement with compacted granular material to construct new roadway.

**Option 2:** Construct new roadway using a combination of geotextile / geogrid reinforcements with compacted crushed limestone aggregate layers to bridge the unstable soils and mitigate future settlement.

As the cost-effective solution, we decided to continue with the second option. The roadway cross section was then constructed on the geotextile / geogrid base.

Because Fessler and Bowman, Inc. had a tight desired occupancy date, we had an expedited construction time frame. To keep on schedule, the roadway in Phase 3 had to be constructed in an atypical sequence. Curb and gutter was gapped for drainage structures, paving was completed in multiple phases on the east and west side of I-75, and retaining walls were installed after roadway construction. ROWE worked with the contractor on these issues and the road opened to traffic in November of 2022.



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## MAPPING FOR 7 NEW MICHIGAN SOLAR FARMS

### **Benefits of Unmanned Aircraft Systems:**

seven new solar farms are in the works! Collaborating with Kimley Horn, the ROWE survey team provided one foot contour mapping digital orthophotography, liDAR point clouds, and ALTA surveys to support land acquisition decisions.

To ensure quality and accuracy, land surveying and aerial mapping were conducted to capture



ground topographic measurements. The land surveys were performed to collect elevations Set to be located in the southern half of Michigan, to compare against the aerial mapping and to define areas where terrain conditions were obscured or otherwise invisible in the aerial data. Aerial imagery and liDAR data were gathered to provide digital orthophotos and the site topography. During the ground survey effort, aerial targeted control points were set while aerial imagery and liDAR were collected shortly after the targets were installed.

> Aerial imagery: Captured at a ground resolution of 3-inch pixels

> LiDAR: Collected at a density such that 200 to 300 liDAR pulses were collected for each square meter on the ground

> Digital orthophotos: Delivered at a 6-inch resolution

As a cost-effective alternative to human-piloted aircraft, Unmanned Aircraft Systems (UAS) mapping has gained popularity in recent years. Not only this, but the UAS data has proven accurate and reliable while also remaining less restrictive on weather conditions for flying. While human-piloted aircraft cannot be flown when clouds are present between the camera and the ground, UAS based acquisition eliminates this issue due to the ability to fly below 400 feet above the ground as opposed to 5,000 feet. Because of this, the overall completion schedule for the work is greatly improved.

Conditions at each of the proposed solar sites were a mix of bare earth plowed fields, area of sparse weeds, and areas of trees and overgrown brush where crops had never been planted. Aerial liDAR produced excellent results in the plowed fields and sparse weed areas of the site and produced adequate results in the densely vegetated areas. Ground surveys were conducted to provide the required accuracies for

terrain surface modeling in the heavily vegetated areas of each site.

Interpretation of results is the biggest challenge when using liDAR technology. LiDAR is a tool that allows laser light pulses to be emitted and received from a single sensor. All objects that reflect the emitted laser light pulse produce points in a massive point cloud. For terrain mapping, only the light pulses that are reflected from the ground are used. Separating the ground points from the others is a challenge to all users of IiDAR data. Automatic and semi-automatic tools have been developed to assist in this process, but ultimately our technicians must confirm the accuracy of the final terrain points.

The production of energy that does not rely on fossil fuels is a benefit to everyone. Surveying and mapping services allow energy producers the ability to develop these alternatives in surrounding communities. ROWE is proud to support environmentally friendly energy!



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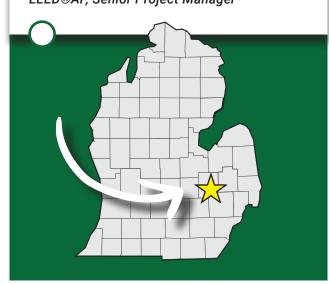
## ROWE WRAPPED

## **Most Rewarding**

Genesee Health System's Center for Children's Integrated Services



ROWE recently had the privilege of attending the ribbon cutting for the Genesee Health System's (GHS) Center for Children's Integrated Services. It was very rewarding to tour the building and talk with the GHS employees about their exciting new facility. ROWE worked with the complete design team over a period of two years to make this project a reality. Knowing that this facility will provide much needed mental health services for children in the City of Flint and surrounding communities made all the late-night meetings and deadlines worthwhile. – Douglas Scott, PE, LEED®AP, Senior Project Manager



NUMBERS

\$120M Total Cost29 Culverts13 Bridges3 Year Schedule77,000 Vehicles Per Day

## **Most Challenging**Interstate I-75



This project was particularly challenging as the scope of the project changed from a \$80 million project with an expedited design schedule into a more comprehensive \$120 million project requiring additional survey, hydraulic, structural, geotechnical, and freeway design services. As MDOT considered each scope and schedule change, ROWE's team responded immediately to provide additional analysis to aid MDOT in their decision-making process. Extensive coordination with MDOT's Metro Region personnel was necessary as we assessed industry materials and labor issues that affected the letting and construction schedules, which also affected the design. With the expanded scope of work, environmental impacts triggered EGLE and USFWS permits, including EGLE permits for 29 culverts, wetland impacts, and 14 acres of disturbance to Eastern Mississauga Rattlesnake habitat. The project requires a 3-year construction schedule that will impact 77,000 vehicles a day and includes staging for work on 13 bridges. - Cheryl Gregory, PE, Senior Project Manager

## **Most Unique**

Fenton Road Bridge Design



The Fenton Road bridge over the Thread Creek is a Luten Arch bridge (earth-filled arch) on a severe skew, originally built in 1924. The I-69 bridge was built in 1970 directly over the Fenton Road bridge on spread footing piers that touch the Fenton Road structures wingwalls. Due to the location of the I-69 bridge and foundations, traditional removal and reconstruction of the Fenton Road bridge in the same location was not feasible. ROWE investigated 11 different layouts for the realignment of Fenton Road and/or the Thread Creek. These options included realigning Fenton Road to the south of I-69, realigning Fenton Road to the north of I-69, relocating the Thread Creek channel, and creating dead ends on Fenton Road. All but one of these options were ruled out due to railroad right-of way constraints, EGLE constraints, and National Highway System (NHS) requirements. This project was funded through the MDOT Local Bridge Program for FY2021, but due to several factors including property acquisition, the proposed bridge and realignment will be built in FY2023. - Amanda Hemeyer, PE, Senior

Project Manager





## Most Exciting

Optimist Skate Park



This was a 2-year effort for ROWE that leveraged extensive stakeholder involvement and coordination with the City of Port Huron's engineering and parks and recreation staff to develop the concept and pursue funding from several sources, including the Tony Hawk Foundation and Michigan Department of Natural Resources. The skate park design includes a unique "flow bowl" element that will be sure to attract users from across the state. ROWE provided multiple roles, from topographic survey to partnering with a national skate park designer, Grindline, for civil site design includina a biowswale feature and providing oversight and testing coordination for the city during construction. - Doug Schultz, PLA, Director of Landscape Architecture

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## **SOUTH CAROLINA 2022 PROJECTS**

# ROWE WRAPPED

## **Most Rewarding**

Horry County Schools
As-Needed IDQ Contract



ROWE will be able to design future school campuses within the community!

## **Most Unique**

Waterbridge Dock Surveys



Involved resurvey of the 1931 Right-of-Way for the Atlantic Intracoastal Waterway!

# **OVERALL**

## **BIGGEST TEAM ⊗**



**24 ROWE staff** onsite consistently throughout the life of the project.



**15 ROWE staff** onsite consistently throughout the life of the project.

## **ODEST STRETCH**



**15 miles** and includes 5 interchanges, from M-15 to the Genesee County Line in northern Oakland County.



**11.8 miles** from I-275 to Kent Lake Road including multiple ramps, and the I-275/M-5/I-696/I-96 interchange.



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# **PROMOTIONS**

Michael A. Royalty, PE
Director of Business Development

Principal

Lori L. Mudge, PHR

The contract Chief Talent Officer

Principal

**Michael A. Royalty** and **Lori L. Mudge** have been named to the ROWE Principal group as well as to the Executive Committee.

### **Shareholder Additions**

Two new Associates have been added to our shareholder group. Both gentlemen will be an asset to the overall Associate group, as they join our current 24 team members and help us meet our strategic goals.

• Dakota P. Roberts, PE - Senior Project Engineer in the Transportation Group of our Design Division.

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• Michael J. Roberts, PE - Senior Project Manager in our Construction Division.

## AWARDS

- ASCE President Award After serving as The American Society of Civil Engineers West Michigan Chapter President from 2021-2022, Senior Project Engineer Hailey Savola, received an award for her many contributions to the chapter and passed down her presidency. Now, she will continue to serve on the committee and hopes to help with the state board in the near future!
- > IRWA Award Congratulations to both Henry Horton, PS, and Kent Edwards, PE, on being presented the International Right of Way Association Chapter 7 Professional of the Year award! Thank you for your hard work and passion for all things right-of-way.
- Sommunity Service Award During the ACEC National 2022 Fall Conference in Colorado Springs, ROWE CEO and President, Leanne Panduren, PE, FNSPE, was awarded the Community Service Award.

#### **Announcements**

- Impactful Opportunity in SC We are excited to start working with Horry County Schools in South Carolina! Delivering future education design services, our team is looking forward to making an impact on the community with our "safety-first" vision and focus on long-term functionality and value.
- Michigan Works ROWE CEO, Leanne Panduren, PE, FNSPE, has joined the Michigan Works! Association Board of Directors! Bringing her expansive knowledge of our industry and business experience, Leanne will be working with leaders across the state to fulfill the Michigan Works! mission to "create opportunity and build stronger communities through voice, knowledge, and connection."

# SOCIAL









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# ROWE CAREERS

We recognize talented, selfmotivated, and open-minded professionals are the key to ROWE's continued success and growth.

- Competitive benefits
- 401(k) with company match
- Telework opportunities
- Flex time scheduling
- Paid holidays
- Generous PTO program
- Overtime pay

Email: employment@rowepsc.com
ROWE is an Equal Opportunity Employer.

## MICHAEL K. FLOWERS

Job Title: Project Surveyor Office: Mt. Pleasant, Ml Month: November 2022

### **QUENTIN K. ANDREWS**

Job Title: Engineering Technician I
Office: Lapeer, MI

Month: November 2022

#### ALEXANDRU C. HRITCU. AICP

Job Title: Senior Planner Office: Flint, MI Month: December 2022

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**ESTABLISHED** 

**PROFESSIONALS** 

**LOCATIONS** 

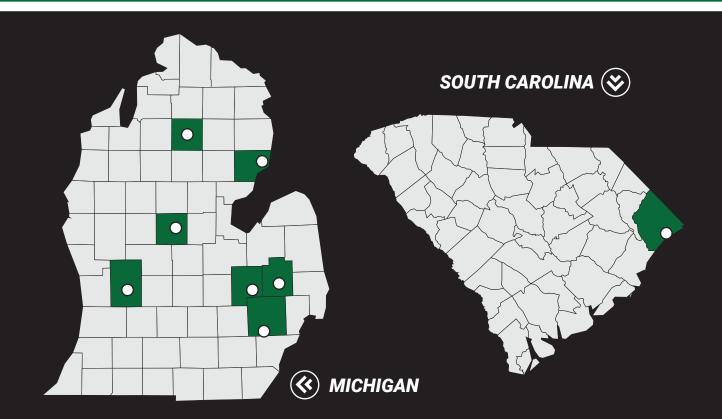
**ENR TOP 500** 

1962

220+

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