

JUNE 17, 2026



# WASTEWATER TREATMENT PLANT IMPROVEMENTS

CITY OF NORTHFIELD, MN



Real People. Real Solutions.

**Contact:**

Seth Peterson, PE  
612-803-5223  
Seth.Peterson@bolton-menk.com

**Location:**

12224 Nicollet Avenue  
Burnsville, MN, 55337  
952-890-0509 | Bolton-Menk.com



Real People. Real Solutions.

June 17, 2026

12224 Nicollet Avenue  
Burnsville, MN 55337

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Justin Wagner, Utilities Manager  
1101 College Street  
Northfield, MN 55057  
justin.wagner@northfieldmn.gov

**RE: Proposal for Wastewater  
Treatment Plant Improvements**

Dear Justin:

The City of Northfield has initiated the Northfield Wastewater Treatment Plant (WWTP) Improvements project to plan and implement upgrades to the pretreatment, primary treatment, and generator portions of the treatment facility. These upgrades will support reliable operations, regulatory compliance, and long term service to the community. This project will require thoughtful coordination with existing facilities, especially the replacement of the generator. This will require careful consideration of operational impacts, and practical solutions that balance performance, constructibility, and future flexibility. Like you, Bolton & Menk, Inc. takes great pride in designing and managing projects that are safe, sustainable, and functional. We understand what needs to be accomplished for the successful completion of the Northfield Wastewater Treatment Plant Improvements project.

**FAMILIARITY WITH NORTHFIELD**

Bolton & Menk has a long standing working relationship with the City of Northfield and brings first hand familiarity with City staff, expectations, and decision making processes. Our team has a thorough understanding of the Northfield WWTP, including its operational history and recent improvements, which we successfully completed. This experience allows us to hit the ground running and tailor solutions that reflect how the facility is operated. Our local knowledge reduces risk, shortens the learning curve, and supports efficient, well coordinated project delivery.

**PROVEN BIOLOGICAL AERATED FILTER (BAF) EXPERIENCE**

Bolton & Menk has extensive experience planning, designing, and implementing Biological Aerated Filter (BAF) systems for municipal wastewater treatment facilities, including projects where BAF technology was selected to meet stringent nutrient and ammonia limits within constrained sites. Our team understands how to integrate BAF processes with upstream and downstream treatment components to support reliable operations, efficient maintenance, and long term regulatory compliance. This hands-on experience allows us to assist the City with the upgrade and replacement of equipment that is integral to the operation of the BAF system.

**ESTABLISHED TEAMING WITH BARR ENGINEERING**

Bolton & Menk has a proven history of successfully teaming with Barr Engineering (Barr) on complex wastewater treatment projects, allowing each firm to contribute its strengths in a coordinated and efficient manner. The Barr team has worked with the Northfield WWTP since it switched to the BAF process and they know how the facility operates and understand the challenges of replacing the generator and main switchgear. This knowledge from Barr is critical and will ensure the most seamless transition with the generator replacement. These established working relationships reduce coordination risks and supports a smooth project delivery process from planning through construction.

In continued service to the City of Northfield, we are excited at the opportunity to complete the Wastewater Treatment Plant Improvements project. I will serve as your lead client contact and project manager. Please contact me at 612-803-5223 or Seth.Peterson@bolton-menk.com if you have any questions regarding our proposal.

Respectfully submitted,  
**Bolton & Menk, Inc.**

A handwritten signature in blue ink, appearing to read 'Seth A. Peterson'.

Seth A. Peterson, PE  
Project Manager, Principal-in-Charge



# CONSULTANT QUALIFICATIONS | PROFILE

## BOLTON & MENK

Communities rely on safe, reliable wastewater treatment systems to protect public health, support growth, and safeguard the environment. At Bolton & Menk, we take pride in helping communities plan, design, and improve wastewater treatment facilities that work today and adapt for tomorrow.

Our work with municipal clients began in 1949, with a long-standing focus on essential public infrastructure. As our firm has grown in size and expertise, our commitment to trusted partnerships has remained constant. We help communities move forward by listening closely, understanding operational and regulatory needs, and delivering practical, well-reasoned wastewater solutions. At its core, our work is about people helping people. Today, Bolton & Menk has more than 1,000 multiregional employees, including a professional staff of more than 400 engineers, planners, landscape architects, and surveyors.

Our dedication to clients is reflected in the wastewater treatment facilities we help deliver. We support communities through every phase of a project, from evaluating existing plant conditions and planning improvements to securing funding and delivering design solutions that are reliable, cost effective, and maintainable. Because we live and work in the communities we serve, we take a personal interest in providing infrastructure that performs well over the long term.

Strong relationships drive successful wastewater projects. We value face to face meetings, clear communication, and collaborative decision making to keep projects on schedule, within budget, and focused on solutions that operators and communities can rely on.

## WE PROMISE EVERY CLIENT TWO THINGS: WE WILL WORK HARD FOR YOU, AND WE WILL DO A GOOD JOB.

We take responsibility for the work happening around us and do our part to improve quality of life through dependable wastewater treatment infrastructure. At the end of the day, we are **Real People** offering **Real Solutions**.

## Solutions Provided

- Water & Wastewater Engineering
- Civil/Municipal Planning & Engineering
- Transportation Planning & Engineering
- Structural Services
- Architectural & Building Services
- Aviation Services
- Water Resources Engineering
- Environmental Planning & Permitting
- Urban Design & Landscape Architecture
- Community & Area Planning
- Construction Administration & Inspection
- Land Surveying
- Geographic Information Systems
- Project Funding
- Engagement Services
- Visual Communications

## BARR ENGINEERING

Barr provides engineering and environmental consulting services to clients across the Midwest, throughout the Americas, and around the world. They have been employee owned since 1966 and trace their origins to the early 1900s. Working together, their nearly 800 engineers, scientists, and support specialists help clients develop, manage, process, and restore natural resources.

Barr has partnered with Bolton & Menk for more than 25 years and brings direct, hands-on experience with the Northfield WWTP. Their team will deliver electrical engineering services for this project.



## QUALIFICATIONS

The Bolton & Menk and Barr team brings unmatched experience with BAFs in Minnesota. The electrical engineering team at Barr have also been involved with this facility for more than 25 years. That depth of knowledge matters, but it is only part of why we are well suited for this project. We also know the Northfield Wastewater Treatment Plant exceptionally well. For more than 20 years, we have completed multiple projects at the facility and understand how its systems function day to day. Our operations staff have even operated the plant directly, supporting the City while staff completed licensing requirements. That hands-on familiarity—combined with our experience at other BAF facilities—positions our team to deliver solutions that are practical, informed, and reliable.

Sustainability and resilience are embedded in how we design wastewater treatment facilities. Our approach aligns with industry best practices, the City's Climate Action Plan, and the Institute for Sustainable Infrastructure's Envision™ rating system. Envision provides a clear framework for evaluating sustainability in civil infrastructure, including wastewater facilities, and helps projects achieve environmental, social, and economic benefits.

Energy efficiency and long term reliability are key drivers of our designs. We design resilient systems with redundant equipment and robust process controls, and we specify proven equipment from manufacturers with local service and maintenance support. Our facilities incorporate LED lighting, high efficiency motors, and variable frequency drives (VFDs) to reduce energy use and improve operational control.

We have highlighted several wastewater treatment plant upgrade projects, including multiple facilities with BAF components. **Bolton & Menk has designed every BAF system in Minnesota**, and that experience—paired with our extensive wastewater treatment improvement portfolio—allows us to deliver a solution that truly works for Northfield. Our résumé includes decades of wastewater facility planning, design, and construction services, and we are ready to bring that experience to this project.

## WASTEWATER TREATMENT PLANT IMPROVEMENTS NORTHFIELD, MN

The City hired Bolton & Menk to complete the last improvements project at the WWTP and the project included the following significant items: New cast-in-place liquid biosolids tank with new blower building; two new influent lift station dry pit submersible pumps; replacement of primary clarifier components; replacement of all BAF blowers; new MCCs for the BAF process; rehab of the existing control building, office and lab areas; miscellaneous HVAC improvements; and roof replacements for multiple building on the site. Bolton & Menk, in collaboration with Barr, who provided electrical engineering services, completed both the design and construction engineering for the full project. Teaming with Barr was critical as they have significant knowledge with the electrical systems at the facility and that experience was critical for the replacement of the BAF MCCs and allowed the City to continue to operate the facility while main electrical components were replaced. The project was very important as it replaced aging equipment and provided redundancy to the operations staff.



### Reference:

Justin Wagner | Utilities Manager | City of Northfield | 507-645-3083 | [justin.wagner@northfieldmn.gov](mailto:justin.wagner@northfieldmn.gov)

## WASTEWATER TREATMENT FACILITY IMPROVEMENTS WORTHINGTON PUBLIC UTILITIES

Worthington Public Utilities sought to modernize its wastewater treatment facility with updated systems and needed to bring its records up to date to support these improvements. Bolton & Menk helped to update documentation of the facility using 3D laser scanning. Worthington Public Utilities now has a 3D point cloud of data and images to reference that will help create a more accurate design, and it was completed significantly faster than traditional documentation methods.



### Reference:

Scott Hain | General Manager | Worthington Public Utilities  
507-360-6724 | [Shain@worthingtonutilities.com](mailto:Shain@worthingtonutilities.com)



## WASTEWATER TREATMENT PLANT DESIGN AND CONSTRUCTION NORTHFIELD, MN

Bolton & Menk evaluated wastewater treatment alternatives for the City's treatment facility. The existing facility was located on a small peninsula along the Cannon River and offered little space for facility expansion. In addition, the Cannon River is classified as an Outstanding Resource Value Water, placing strict discharge limits on the facility—limits that would not be attainable without a significant upgrade of the existing facility.



Bolton & Menk developed a plan to upgrade the facility employing advanced treatment technologies—BAFs and parallel plate clarifiers for wastewater treatment with lime heat stabilization for biosolids treatment. By using the advanced BAF technology and parallel plates, Bolton & Menk creatively solved the City's problem while exceeding their expectations. Their plan was both practical and cost effective since it allowed for the reuse of the existing site and saved more than \$5 million in capital expenditure. The environmentally proactive and sustainable plan included the added benefit of removing phosphorous, BOD, and ammonia to levels below the required standards. The treated biosolids meet the Class A standard and are sustainably reused via land application.

### Reference:

Justin Wagner | Utilities Manager | City of Northfield | 507-645-3083 | [Justin.wagner@northfieldmn.gov](mailto:Justin.wagner@northfieldmn.gov)

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## MISCELLANEOUS WASTEWATER TREATMENT FACILITY IMPROVEMENTS NORTHFIELD, MN

Bolton & Menk has assisted the City with many miscellaneous projects in the last 15 years. These projects have all been relatively small in nature, but they do provide us with a unique insight into the inner workings of the facility. Following is a summary of the projects we have completed:

- Ultraviolet (UV) disinfection improvements
- Influent lift pump replacement
  - This was the precursor to the two-pump replacement for the past project at the WWTP
- BAF stop log replacements
- Primary clarifier scum piping replacement
- BAF valve replacement



Many of these projects were completed due to aging equipment and the City's desire to build resilience to the treatment facility. We also provided a biosolids replacement project after the City experienced a catastrophic fire in their biosolids treatment building. Bolton & Menk performed interim biosolids treatment options and designed a new replacement biosolids treatment facility. Our team expedited the evaluation of various interim biosolids treatment options to help the City during crisis mode. A temporary Class A biosolids treatment was designed and procured for the City for interim treatment. This temporary system was housed in one of the existing dry biosolids storage buildings not affected by the fire.

The fire completely damaged all equipment beyond repair, but the building could be reused. Bolton & Menk evaluated multiple biosolid treatment options to meet the City's needs while fitting within the existing facility. In coordination with City staff, the team selected the Schwing Bioset Class A biosolids treatment process which incorporated two dewatering screw presses and a Bioset Class A system, along with a newly designed odor scrubber system to prevent odor concerns. Bolton & Menk also helped the City with the insurance claim process.

### Reference:

Justin Wagner | Utilities Manager | City of Northfield | 507-645-3083 | [justin.wagner@northfieldmn.gov](mailto:justin.wagner@northfieldmn.gov)



## WASTEWATER TREATMENT FACILITY

### ST. PETER, MN

The City of St. Peter and Bolton & Menk worked together over a ten-year period to develop and implement plans for an advanced technology wastewater treatment system. The system is incorporated into a single structure that will meet the needs of the City of St. Peter for years to come.

The City of St. Peter operated the largest stabilization pond treatment system in the state. This facility, located in the flood plain of the Minnesota River, was inundated with floodwater on numerous occasions. Due to the environmental impacts of these flood events, the City began work to relocate the wastewater treatment operations. This planning was further accelerated by the 1998 tornado, which created the need for rebuilding much of the City's infrastructure.

A site within the City's industrial park was chosen for the wastewater treatment facility, maximizing the use of existing public infrastructure and City-owned property.

Bolton & Menk developed a practical and cost-effective plan using new technology, BAF and parallel plate clarifiers for wastewater treatment and lime heat stabilization for biosolids treatment. The compact size of the treatment processes allowed for the facility to be constructed within a single structure, meeting public expectations and provided long term wastewater treatment sustainability. The system removes BOD, ammonia, and phosphorous below standards. The lime/ heat pasteurization process treats biosolids to a Class A level. This process is sustainable as it reduces the amount of storage required for biosolids and increases the options for biosolids disposal and reuse.

In addition, the following wastewater treatment process improvements were implemented:

- New lift station and forcemain
- New grit removal and screenings facilities
- New UV facilities
- New outfall
- New on-site dewatered biosolids storage facility
- New standby generator
- Odor control facility
- New computer control system

The project was completed on time and within budget. St. Peter's new facility complies with the wastewater discharge limits for the Minnesota River and meets the City's sustainability criteria. This facility serves as a successful new model for implementation of wastewater treatment technology.

#### Reference:

Pete Moulton | Public Works Director | City of St. Peter | 507-931-4840 | [petem@saintpetermn.gov](mailto:petem@saintpetermn.gov)



## WASTEWATER TREATMENT FACILITY

### NEW PRAGUE, MN

The City of New Prague was faced with a dilemma many cities face—how to meet the needs of the community with aging wastewater treatment infrastructure. New, more stringent treatment standards were on the horizon, and community development was encroaching on the existing facility site. Community leaders felt a new sustainable approach was needed to meet these demands.

Bolton & Menk collaborated with the City to develop plans for a new, state-of-the-art wastewater treatment facility. The new facility integrated advanced technology to meet the stringent discharge limits. The advanced technology allowed the facility to be completely enclosed and sustainable, minimizing the impact of operations on the community developing around it.

This solution provided the City with a wastewater treatment facility that meets current and proposed treatment requirements, all while moderating the effect of development around the existing facility location.

#### Reference:

James Creaghe | Wastewater Supervisor | City of New Prague | 952-758-3637 | [jcreaghe@ci.new-prague.mn.us](mailto:jcreaghe@ci.new-prague.mn.us)





## WASTEWATER TREATMENT IMPROVEMENTS SIOUX CENTER, IA

The City of Sioux Center needed to update the previous wastewater treatment facility to meet the effluent ammonia and disinfection limits in their new Department of Natural Resources (DNR) permit and to meet Iowa's Nutrient Reduction Strategy. During the planning stages, a comprehensive approach was taken to evaluate the facility and its environmental impacts. The City and Bolton & Menk worked together with businesses and industries to study the needs of the future and design this plant to meet those needs. Numerous treatment options were explored and evaluated, and the extended aeration activated sludge process with biological nutrient removal was selected because this process provides consistent high-quality effluent and operational flexibility.



Bolton & Menk provided the City of Sioux Center with a detailed wastewater facility plan detailing the options available to the City. The work included alternatives for consideration, cost of services study (rate information), meeting with community industries to engage all stakeholders in the solutions, and assistance with State Revolving Fund (SRF) financing. Included with the planning was the Iowa Nutrient Reduction Strategy Report along with an anti degradation alternatives analysis. This comprehensive effort allowed the City to proceed confidently with their wastewater treatment facility expansion of approximately \$26.5 million to replace aging infrastructure, meet nutrient reduction and disinfection goals, and provide the community with a facility to last years into the future, thereby protecting the environment and allowing the community to continue to grow and thrive. The facility began operations in November 2019 and was fully operational by the summer of 2020.

The engineering cost opinion on this facility was within five percent of construction costs. The City staff and council were engaged throughout the process and the report/planning phase involved numerous public presentations (including handouts and graphical displays), stakeholder meetings, publications, newspaper articles, and television interviews to help educate the community on the improvements.

The project included two traveling perforated plate fine screens with a separate washer and compactor. Grit removal was provided with a new vortex grit removal system including a grit cyclone and classifier. The pretreatment screen and grit are rated for 7.0 mgd flow.

### Reference:

Murray Hulstein | Utility Manager | City of Sioux Center | 712-441-0463 | [murrayh@siouxcenter.org](mailto:murrayh@siouxcenter.org)

## WASTEWATER TREATMENT PLANT LONG PRAIRIE, MN

Bolton & Menk was retained by the City of Long Prairie to prepare a Wastewater Facility Plan. Because of more stringent limits and large industrial wastewater organic loading, the most cost-effective and sustainable treatment alternative was to construct a new extended aeration activated sludge treatment facility. The existing stabilization pond facility was used for flow equalization. Bolton & Menk designed the recommended wastewater treatment improvements.



The extended aeration facility included the following major items:

- Improvements to the existing lift station
- Construction of new grit and screenings removal facility
- Construction of aeration basins with biological phosphorous removal facilities
- Construction of new secondary clarifiers
- Construction of new chlorination and dechlorination facilities
- Construction of new aerobic biosolids treatment and storage facilities
- Construction of a new blower/control building

The Bolton & Menk team completed the design with sustainability in mind to ensure the treatment improvements meet the City's needs for the future. Bolton & Menk also provided construction engineering and start-up services. The project was completed within budget and on time.

### Reference:

Chad Bost | Public Works Director | City of Long Prairie | 320-533-0706 | [lppw205@yahoo.com](mailto:lppw205@yahoo.com)



## WASTEWATER TREATMENT FACILITIES

Bolton & Menk has provided wastewater planning, design, and construction engineering services for more than 150 wastewater treatment facilities. We have provided engineering services to many wastewater treatment clients, as listed below.

Albert Lea, Minnesota  
 Amboy, Minnesota  
 Annandale-Maple Lake-Howard Lake, Minnesota\*  
 Albert Lea, Minnesota  
 Appleton, Minnesota  
 Arlington, Minnesota\*  
 Austin, Minnesota  
 Belmond, Iowa  
 Belview, Minnesota  
 Bemidji, Minnesota  
 Big Lake, Minnesota  
 Blue Earth, Minnesota  
 Buffalo, Minnesota  
 Butterfield, Minnesota  
 Cactus, Texas  
 Calmar, Iowa  
 Cedar Lake Sanitary Sewer District - Chamberlain, South Dakota  
 Chandler, Minnesota  
 Clara City, Minnesota  
 Cherokee, Iowa  
 Claremont, Minnesota  
 Clarissa, Minnesota  
 Cleveland, Minnesota  
 Cologne, Minnesota  
 Comfrey, Minnesota  
 Courtland, Minnesota  
 Darwin, Minnesota  
 Dassel, Minnesota  
 Delavan, Minnesota  
 Dumont, Minnesota  
 Dunnell, Minnesota  
 East Bethel, Minnesota  
 Eden Valley, Minnesota  
 Fairfax, Minnesota  
 Fairmont, Minnesota  
 Faribault, Minnesota  
 Franklin, Minnesota  
 Frost, Minnesota  
 Fulda, Minnesota  
 Gaylord, Minnesota  
 Glacial Lakes Sanitary Sewer and Water District - Hector, Minnesota  
 Holloway, Minnesota  
 Houston, Minnesota  
 Iowa Great Lakes Sanitary District - Jackson, Minnesota  
 Janesville, Minnesota

Jordan, Minnesota  
 Kandiyohi, Minnesota  
 Lake Crystal, Minnesota  
 Lake Henry, Minnesota  
 Lake Lillian, Minnesota  
 Lakefield, Minnesota  
 Lanesboro, Minnesota  
 Lime Springs, Iowa  
 Lambertson, Minnesota  
 Lansing, Minnesota  
 Le Center, Minnesota  
 Le Mars, Iowa\*  
 Le Sueur County, Minnesota  
 Le Sueur, Minnesota  
 Litchfield, Minnesota  
 Long Prairie, Minnesota  
 Lucan, Minnesota  
 Madelia, Minnesota  
 Mankato, Minnesota\*  
 Marshall, Minnesota\*  
 Medford, Minnesota  
 Milford, Iowa  
 Montevideo, Minnesota  
 Monticello, Minnesota  
 Montrose, Minnesota  
 Moose Lake-Windemere, Minnesota  
 Morris, Minnesota  
 Morristown, Minnesota  
 Morton, Minnesota  
 Mountain Lake, Minnesota  
 New Auburn, Minnesota  
 New Germany, Minnesota  
**New Prague, Minnesota**  
 New Richland, Minnesota  
 New Ulm, Minnesota\*  
 Nicollet, Minnesota  
 North Mankato, Minnesota  
**Northfield, Minnesota**  
 Northwood, Iowa  
**Norwood Young America, Minnesota\*\***  
 Olivia, Minnesota  
 Osakis, Minnesota  
 Paynesville, Minnesota  
 Pemberton, Minnesota  
 Pennock, Minnesota  
 Perham, Minnesota  
 Pipestone, Minnesota  
 Postville, Iowa

Redwood Falls, Minnesota  
 Renville, Minnesota  
 Sacred Heart, Minnesota  
 Searles, Minnesota  
 Sherburn, Minnesota  
 Shoreview, Minnesota  
 Spring Hill, Minnesota  
 Sioux Center, Iowa  
 Springfield, Minnesota  
 St. James, Minnesota  
**St. Peter, Minnesota**  
 Staples, Minnesota  
 Trimont, Minnesota  
 Truman, Minnesota  
 Tyler, Minnesota  
 Upper Sioux Community  
 Vermillion, Minnesota  
 Wabasso, Minnesota  
 Walnut Grove, Minnesota\*  
 Watertown, Minnesota  
 Waterville, Minnesota  
 Watkins, Minnesota  
 Webster City, Iowa  
 Welcome, Minnesota  
 Wells-Easton-Minnesota Lake, Minnesota  
 Windom, Minnesota\*  
 Winsted, Minnesota  
 Winnebago, Minnesota  
 Zumbrota, Minnesota

\* = Multiple treatment facilities  
 BOLD = BAF facilities (\*\* current BAF design project)



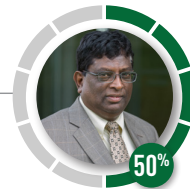


# ORGANIZATIONAL STRUCTURE

We know the City of Northfield and the Wastewater Treatment Plant. We are familiar with the project area and we understand the community concerns. Our team will operate as an extension of Northfield's staff—taking your point of view and promoting your goals. Choosing us will help you avoid the awkward transition stage of getting an unfamiliar consultant up to speed. Project team member bios are on page 8 and full résumés are available upon request.



**Seth Peterson, PE**  
Project Manager/  
Principal-in-Charge



**Herman Dharmarajah, PhD, PE**  
QA/QC Advisor

● Bolton & Menk ● Barr Engineering

## SUPPORT STAFF



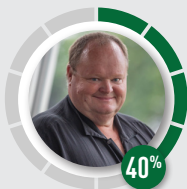
**Brenden Olevson, PE**  
Design Engineer/  
Construction Observation



**Jon Peterson, PE**  
Environmental Engineer/  
Technical Assistance



**Tej Bala, PE**  
Environmental Engineer/  
Technical Assistance



**Kirk Yahnke**  
Environmental Construction Project  
Representative/Operations



**Sheldon Sorensen, PE**  
Electrical QA/QC



**Neil Oftelie, PE**  
Electrical Engineer



**Leslie Brandt, PhD, ENV SP**  
Sustainability Advisor



**Zach Nesler**  
Electrical Engineer



# KEY PERSONNEL

The project team is identified below, and no substitutions or changes to assigned personnel will be made without prior approval from the City.



**SETH PETERSON, PE**  
Project Manager | Principal-in-Charge  
Seth will provide overall leadership, technical oversight, and accountability to ensure the project is delivered efficiently, collaboratively, and in alignment with the City's goals from

planning through completion.

Seth has over 20 years of experience with the City of Northfield, including leading WWTP projects and construction observation, with in-depth knowledge of staff, processes, and facility history to guide effective project delivery.



**BRENDEN OLEVSON, PE**  
Design Engineer | Construction Observation

Brenden will support preparation of design plans and specifications and provide on-site construction observation to verify that work,

materials, and progress conform to project requirements and standards.

Brenden is a water/wastewater project engineer who supports planning, design, and construction of facility projects, including data collection, analysis, reporting, site visits, and construction observation.



**HERMAN DHARMARAJAH, PhD, PE**  
QA/QC Advisor

Herman will use his vast wastewater treatment facility experience to provide QA/QC for the project and be a valued technical advisor.

Herman is a water/wastewater practice expert

with decades of experience leading design, management, and construction of treatment facilities, including Minnesota's first reverse osmosis plant. He provides technical leadership, supports staff, and has led nationwide studies and pilot testing to improve water quality and reduce contaminants.



**TEJ BALA, PE**  
Environmental Engineer | Technical Assistance

Tej will provide environmental engineering support including permitting coordination, regulatory compliance, and technical guidance

throughout the design process.

Tej is a registered water/wastewater project manager and Class B Minnesota Water Operator with extensive experience leading municipal and industrial water/wastewater projects from planning through construction. He specializes in designing treatment facilities that meet regulatory requirements while exceeding client expectations.



**KIRK YAHNKE**  
Environmental Construction Project Representative | Operations

Kirk will provide design review and operational input. He has been involved in every BAF facility Bolton & Menk has completed and is

familiar with the Northfield facility and staff.

Kirk is a senior construction project representative and wastewater operator with extensive experience in inspection, start-up, and quality control of environmental projects. Since 1985, he has supported municipal and industrial water and wastewater facilities, including pilot testing and pretreatment inspection, while working closely with clients during project start-up.



**JON PETERSON, PE**  
Environmental Engineer | Technical Assistance

Jon led the original design of the Northfield Wastewater Treatment Plant more than 20 years ago and designed the more recent UV

disinfection upgrades. He will leverage this experience to provide technical guidance throughout the design process.

Jon is a senior water/wastewater project manager and registered professional engineer with extensive experience leading design, construction, and administration of water and wastewater systems. Since 1985, he has supported treatment facilities, collection systems, and distribution infrastructure through design, inspection, and construction oversight.



**LESLIE BRANDT, PhD, ENV SP**  
Sustainability Advisor

Leslie will serve integrate best management practices and align project improvements with the City's Climate Action Plan to support long-term, resilient wastewater infrastructure.

Leslie is a sustainability and resiliency leader with extensive experience in climate adaptation, natural resource management, and strategic program delivery, recognized for building partnerships, leading teams, and advancing data-driven, equitable solutions.



**NEIL OFTELIE, PE**  
Electrical Engineer

Neil will lead the electrical design and coordination of power, controls, and instrumentation systems to support wastewater treatment plant upgrades,

including integration with utilities, equipment, and plant operations. Neil has more than nine years of experience electrical distribution, lighting, controls, and instrumentation for municipal and industrial facilities, pumping and treatment systems with motor controls, panels, drives, standby power, PLCs, and SCADA.



**SHELDON SORENSON, PE**  
Electrical QA/QC

Sheldon will lead quality control for electrical systems, overseeing design accuracy and ensuring installation of generator and electrical components meets project

specifications and performance requirements.

Sheldon has worked with the Bolton & Menk team on numerous projects for more than 25 years. He has in-depth knowledge and hands-on experience with the City's generator and switchgear, which will be essential to the design process. Sheldon has more than 30 years of experience in the design and construction of power generation, power distribution, and real-time process controls and instrumentation for municipalities and industries, including work at more than 300 water treatment plants, wastewater treatment plants, and large pumping stations.



**ZACH NESLER**  
Electrical Engineer

Zach will support electrical system planning and analysis, including power distribution, controls, and SCADA systems for wastewater treatment improvements, ensuring reliable

design, coordination, and compliance with project requirements. Zach has 18 years of electrical engineering experience in power distribution, motor controls, and SCADA systems, designing power and control systems for municipal and industrial facilities, supported by advanced power analysis.



**SOLUTION DRIVEN**

There is no such thing as a one-size-fits-all solution. We recognize that every project and client is unique and we treat them that way.



# PROJECT APPROACH | WORK PLAN

## PROJECT APPROACH PROJECT COMMUNICATION

Engaging City stakeholders early in the process is essential for a successful project. We believe two-way communication of ideas is a fundamental and often overlooked element in the development and evaluation of engineering solutions. For this reason, Bolton & Menk continually welcomes our client's input throughout all project phases, similar to how we have communicated with the City on previous projects. **Seth Peterson**, our project manager, will be the communication link between Bolton & Menk and the City of Northfield. Actively involving the project manager in day-to-day project tasks streamlines the communication process and facilitates higher levels of project success, client satisfaction, and project effectiveness.

We worked on the most recent project at Northfield's WWTP and we have worked on wastewater treatment projects in numerous communities; our communication approach has contributed to the successful completion of these projects. Critical information will be communicated in a timely and proactive manner, including information related to progress status, schedule, technical findings, stakeholder contacts, and costs. We are committed to maintaining excellent communication with the City of Northfield.

All meetings will use appropriate and adequate consultant staffing, suitable graphics and presentation materials, meeting documentation such as notices and minutes, and distribution of information using alternative and multimedia tools and formats. Communication will be the responsibility of our project manager and emphasized and encouraged among project personnel. Our team will be managed as an extension of Northfield staff, allowing open lines of communication throughout the course of the project.

## WORK PLAN

The City of Northfield can be assured that Bolton & Menk and Barr will provide superior project development, exceptional project design, and outstanding project construction stage services in a timely and cost-effective manner. The detailed work plan on the following pages is outlined by tasks addressing all elements of the RFP. Please see page 13 for our detailed schedule.



## PROJECT INITIATION

We expect an initial project kickoff meeting with City staff members and key project team members. The purpose of this meeting is to

- Receive input from staff
- Review existing facility plan and proposed scope of work
- Review and discuss project procedure details
- Review and discuss project schedules
- Adjust work plan to meet City needs

This meeting sets the stage for the coordination and communication that will take place with City staff members throughout the project. Bolton & Menk has a strong history in understanding the challenges facing the Northfield WWTP and can assist the City in developing the best strategy to meet those challenges.

As part of our work, we intend to complete the following major items from the RFP:

- No topographic survey needed as all of the work takes place in existing buildings or we already have the survey as part of a past project
- Design of the following major items:
  - Two new fine screens
  - New grit removal system
  - Three new process centrifugal, submersible pumps
  - Replacement of primary process piping from the pumps to the existing valves
  - Replacement of two 30-inch backwash header valves and actuators and associated controls work
- Replacement of generator and associated switch gear
  - New stationary generator in weatherproof outdoor enclosure
  - New outdoor service entrance switchgear with main and generator circuit breakers, automatic transfer switch, power monitor, and feeder breakers to match existing load distribution
- Complete design and bidding process for the items listed above
- Complete construction services including project close-out for the items listed above

The RFP does not specifically address lighting replacement in the pretreatment and primary process areas. Because lighting is typically updated alongside equipment replacements, we will discuss this with the City at the kick-off meeting and can provide these services for an additional fee.

A key item to figure out through the design process will be how to keep two process pumps in operation during construction. We know this is a critical item that needs to be discussed and thought through during the design phase.



Our current assumption is that the main service and distribution panel will remain outdoors, likely within weatherproof switchgear, with a separate generator installed nearby. Alternatively, we could evaluate constructing a new building—either site-built (brick/mortar) or a prefabricated building—to house the service entrance and distribution panel; however, these options would require additional engineering fees.

Another critical item to work through will be the replacement of the generator and associated switchgear. Keeping the site powered at all times is critical and Bolton & Menk and Barr will develop a plan to ensure continuous power at the WWTP which may require multiple generators and different staging of the work. The project team from Barr includes **Sheldon Sorenson** who has direct experience and knowledge of the generator and switchgear. This knowledge will be critical for successful replacement of these items. We will engage the City through this process to ensure the staff is comfortable with the proposed plan.

The City has traditionally used Automatic Systems Control (ASC) for control/Supervisory Control and Data Acquisition (SCADA) integration work. While there isn't significant SCADA/control work, we will engage ASC during the design process to make sure we are working through the critical design items such as ensuring we have two process pumps in operation at all times and especially working with them as we figure out the generator and main switchgear replacement. Working with ASC during the design phase will make the construction phase smoother.

Following completion of the project initiation meeting, Bolton & Menk will begin the design process to meet the project schedule discussed as part of the project initiation. The project is only replacing existing equipment with similar equipment so no Natural Pollutant Discharge Elimination System (NPDES) permit modification should be required. Regardless, we plan to submit the plans and specifications to the Minnesota Pollution Control Agency (MPCA) for their review. This step is noted in the design services process below.

### TASK 1: DESIGN SERVICES

- Develop design criteria
- Finalize equipment list
- Develop specifications
- Develop instrumentation and controls input/output list
- Develop panelboard schedule
- Develop cable and conduit schedule
- Develop civil plans, sections, and details
- Develop process plans, sections, and details
- Develop electrical plans, sections, and details
- Coordinate and facilitate two design review meetings during the design process (60% and 95% or as deemed necessary during design process)
- Develop electrical site and grounding plan
- Develop single-line diagrams
- Develop electrical schematics
- Develop MCC layout

- Develop functional descriptions
- Develop field instrumentation details
- Develop 60% review plans and cost opinion
- Develop 95% review plans and cost opinion
- Submit plans and specifications to the MPCA
- Present final project to City

Throughout the design process we will use our internal staff to conduct a review of the plans and specifications. Specifically, we will engage our operations staff to review for operational flexibility and ease of operation and maintenance.

A critical design component is figuring out how to complete the generator replacement as the generator enclosure also includes the main switchgear for the facility. Coordinating the removal of the existing generator is critical in order to always keep the plant with power. We will include language that requires the contractor to keep the facility continually powered with backup generator(s). Another critical component is to ensure that they City always has two process pumps in operation as the process pumps feed the BAF system.

### TASK 2: BIDDING ADMINISTRATION

The following items are necessary steps to successfully bid and award a project of this magnitude.

- Gain council approval of plans and specifications
- Get MPCA approval of plans and specifications
- Advertise for bids (consultant to prepare ad for bids, City to advertise)
- Distribute plans and specifications to plan holders
- Answer bidder questions
- Prepare necessary addenda (City to distribute)
- Coordinate and facilitate pre-bid conference for interested bidders
  - It is strongly recommended to conduct a pre-bid meeting for this project to allow contractors to become familiar with the project parameters, especially for the generator and switchgear work
- Attend bid opening
- Evaluate bids for completeness
- Prepare and provide bid evaluation and recommendation

To accommodate the City's budget, we can structure the bid form with various add alternates to include items not part of the original scope. This will allow the City to meet budget constraints.





### TASK 3: CONSTRUCTION SERVICES

The following construction services are based on a construction schedule from notice to proceed to project completion:

- Prepare notice of award
- Prepare contracts to be signed by contractor and owner
- Prepare notice to proceed
- Conduct pre-construction meeting
- Provide surveying control in conjunction with contractor
- Provide 200 hours of submittal review (10 hrs/week for 20 weeks)
- Provide 200 hours of project manager construction administration (10 hrs/week for 20 weeks)
- Provide 300 hours of construction observation (10 hrs/week for 30 weeks)
- Observer conduct weekly construction meetings
- Project manager conduct monthly construction meetings
- Provide monthly updates to city staff and council through a memorandum
- Provide monthly updates to MPCA engineering staff
- Review and approve shop drawings
- Provide digital access to shop drawings by owner
- Provide PLC enclosure and layouts
- Provide I/O drawings
- Provide wiring diagrams
- Provide control panel layouts
- Coordinate systems integrator to provide terminal screen layouts
- Address all construction questions
- Prepare and distribute any field orders and work change directives
- Review and recommend payment of partial pay requests

- Coordinate materials testing
- Assist City staff with interim operations of wastewater plant
- Ensure equipment checkout is completed by contractor
- Attend equipment training
- Review for substantial completion

The schedule for construction and number of hours is taken directly from the RFP. We anticipate that construction will need to be longer than one year to accommodate current delivery schedules for equipment, controls, etc. We will work with the City on the schedule and adjust hours as necessary.

### TASK 4: PROJECT CLOSEOUT

Contract closeout is one of the most important phases of a successful project. It is necessary to clearly communicate between the engineer, owner, and contractor to set and uphold expectations to finish the project.

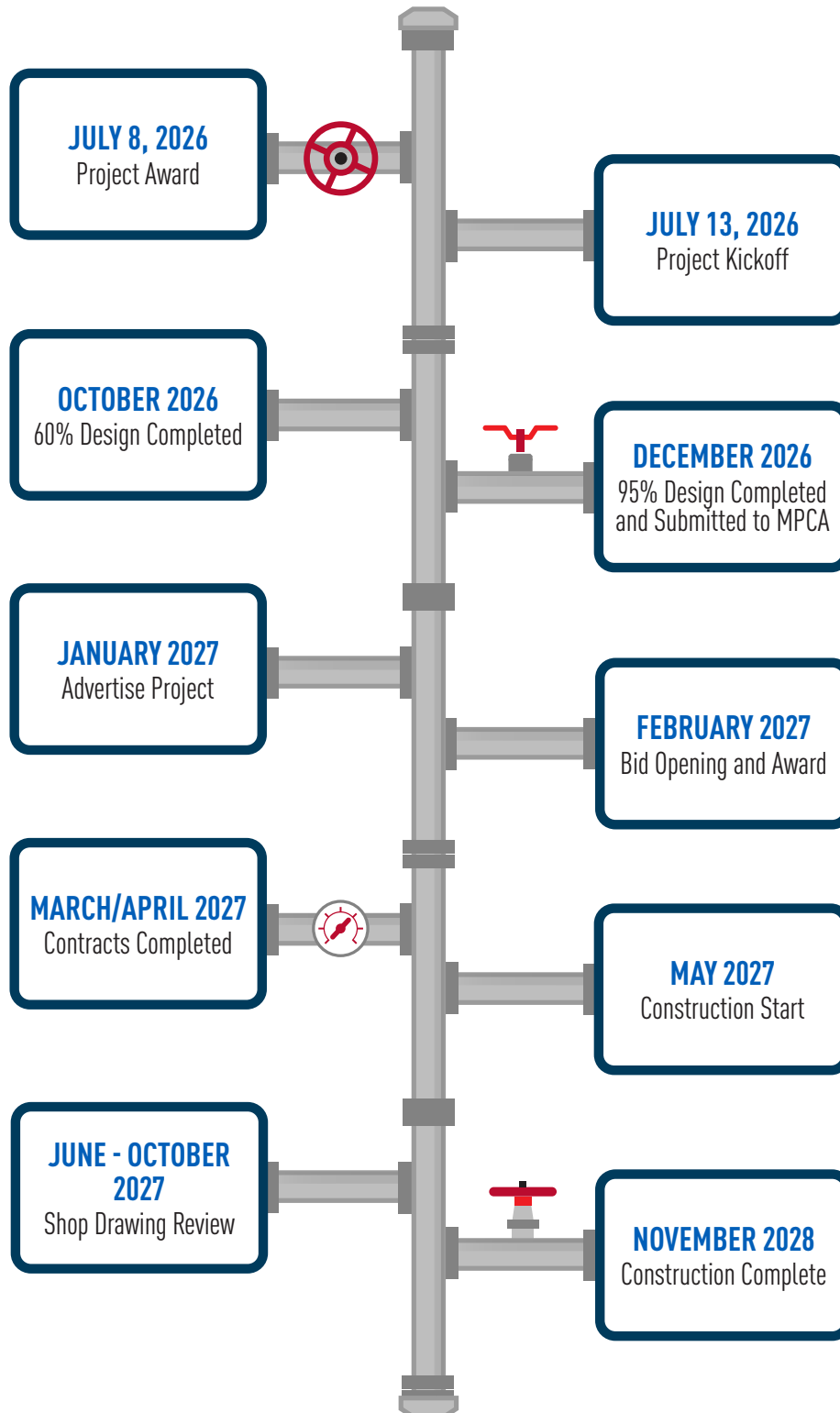
- Direct contractor to finish project completion list
- Verify required spare parts have been received
- Prepare facility operation and maintenance manual—for newly designed portions of wastewater treatment plant only
- Review and compile equipment operations and maintenance manuals for new equipment
- Provide two hard copies (if desired) and one PDF of full operation and maintenance manual
- Complete as-built drawing
- Provide PDF copies of as-built
  - Hard copies provided as desired
- Review and certify final pay request and contractor close-out documents





# SCHEDULE

We have developed a schedule detailing the anticipated work tasks, task relationships, critical path timeline, deliverable due dates, and completion dates. This schedule is based on our review of the project background, description, and scope of services included in the RFP and our experience on other similar projects. The City will support the project schedule by providing timely reviews, decisions, and coordination. Upon selection, Bolton & Menk will work closely with City staff and project partners to refine and update the schedule as needed to support successful project delivery.





# COST

The following tables summarize the hours and cost breakdown for each major work task item. The estimated fee includes labor, general business, and other normal and customary expenses associated with operating a professional business. Unless otherwise noted, the fees include vehicle and personal expenses, mileage, telephone, survey stakes, and routine expendable supplies; no separate charges will be made for these activities and materials. Expenses beyond the agreed scope of services and non-routine expenses, such as large quantities of prints, extra report copies, out-sourced graphics and photographic reproductions, document recording fees, outside professional and technical assistance, and other items of this general nature will be invoiced separately.

Our construction phase fees are based on the hours outlined in the RFP; however, given the complexity of the bypass pumping and the generator and switchgear replacement, we anticipate that additional effort may be required. These critical components will demand careful attention to minimize disruptions to facility staff and ongoing operations. If selected, we will collaborate closely with the City to ensure appropriate staffing and coverage are in place to support the construction phase.

Bolton & Menk will provide the scope of services as described for a total fee of \$329,890. We will bill work following our standard hourly billing rates and will not exceed our estimate without prior authorization from the City.

Client: Northfield, MN Project: Wastewater Treatment Plant Improvements		Bolton & Menk, Inc.												
Task No.	Work Task Description	Project Manager/Principal-in-Charge	QA/QC Advisor	Design Engineer	Technical Assistance Engineer	Construction Specialist	Electrical Engineering QA/QC	Electrical Engineer	Sustainability	Administrative Assistant	Design Technician	Total Hours	Total Cost	
1.0	Design	48	14	128	36	10	35	306	24	11	64	676	\$144,870	
2.0	Bidding Administration	6	0	20	4	0	5	24	0	13	4	76	\$15,060	
3.0	Construction Services	190	0	380	20	0	5	114	8	0	0	717	\$160,390	
4.0	Project Closeout	4	0	26	0	4	0	0	0	8	8	50	\$9,570	
<b>Total Hours</b>		248	14	554	60	14	45	444	32	32	76	1519		
<b>Average Hourly Rate</b>		\$290.00	\$330.00	\$195.00	\$275.00	\$195.00	\$250.00	\$200.00	\$205.00	\$110.00	\$210.00			
<b>Subtotal</b>		\$71,920	\$4,620	\$108,030	\$16,500	\$2,730	\$11,250	\$88,800	\$6,560	\$3,520	\$15,960			
<b>Total Fee</b>												\$329,890		

# EXCEPTIONS AND DEVIATIONS

The RFQ includes topographic survey services as part of the project scope. Based on our understanding of the project and available existing information, we anticipate that additional topographic survey efforts may be limited or not required to complete the proposed improvements. We will confirm survey needs in coordination with City staff at project kickoff and, if necessary, refine the scope to include targeted survey work to support design and construction. This approach aligns survey efforts with project needs while maintaining efficiency and cost control.



# ADDITIONAL INFORMATION

## Optional Enhancement: Climate Vulnerability Assessment and Adaptation Strategies

As an optional enhancement, we can develop a comprehensive vulnerability and risk assessment with associated adaptation strategies for the Northfield WWTP using the **American Water Works Association (AWWA) M71 Climate Action Plans framework**. This effort will evaluate climate hazards and other natural risks, assess the vulnerability of critical assets, and identify practical design and operational strategies to improve system resilience and reduce long-term risk.

### Task 1: Existing Conditions and Critical Asset Identification

We will develop an understanding of the wastewater treatment facility and its key system dependencies relevant to climate risk. The team will review available documentation, including the Facility Study Update, asset inventories, and capital plans, and will identify and characterize critical infrastructure components, including pretreatment systems, process lift pumps, primary process piping, and standby power systems. Asset criticality will be evaluated based on operational importance, regulatory compliance, and redundancy requirements needed to maintain continuous plant operations during construction and future conditions.

### Task 2: Climate Hazard Evaluation

We will identify and characterize climate-related hazards that may affect facility operations and the performance of planned upgrades. The team will compile and review available climate data and projections for Northfield and evaluate hazards such as flooding, extreme precipitation, and temperature extremes. The assessment will specifically consider how these hazards could affect screening systems, grit removal, pump performance, piping reliability, and standby power operation.

### Task 3: Vulnerability and Risk Assessment

We will evaluate the vulnerability of critical assets and planned improvements to identified climate hazards and prioritize risks. A screening-level assessment will be conducted using a structured framework that considers exposure, sensitivity, and adaptive capacity. The analysis will focus on maintaining continuous operations, including redundancy for pumps and standby generator availability, and minimizing risks to treatment performance and regulatory compliance. One 1-hour virtual staff workshop will be facilitated to validate findings and confirm priorities.

### Task 4: Adaptation Strategy Development

We will identify and evaluate strategies to reduce risk and improve resilience, with a focus on integration into ongoing design. Strategies will include protective measures for pretreatment equipment, pump and piping reliability enhancements, and generator resilience and redundancy considerations.

Each strategy will be evaluated for feasibility, effectiveness, and relative cost and aligned with planned design elements and construction sequencing requirements.

### Task 5: Design Recommendations and Final Deliverables

This task will develop a clear, actionable roadmap to support integration of resilience measures into project development, design, and construction. Recommendations will be aligned with the project schedule, including 60 percent and 95 percent design submissions, permitting, and construction phases. The final plan will identify priority improvements that can be incorporated into design plans, specifications, and cost estimates to support long-term system reliability and a 20-year design life.

**Deliverable:** Final Vulnerability Assessment and Adaptation Plan that includes:

- Facility conditions and critical assets
- Climate-related hazard analysis
- Vulnerability and risk assessment matrix with prioritized risks
- Adaptation strategies matrix with design and construction-ready recommendations

If the City is interested in pursuing this additional AWWA Climate Action Plan, we will work with the City to develop a fee estimate.

