VILLAGE OF FREEBURG

FREEBURG MUNICIPAL CENTER
14 SOUTHGATE CENTER, FREEBURG, IL 62243
PHONE: (618) 539-5545 • FAX: (618) 539-5590
Web Site: www.freeburg.com

September 14, 2018

NOTICE

COMMITTEE AS A WHOLE MEETING
VILLAGE OF FREEBURG

A Committee as a Whole Meeting of the Village of Freeburg will be held at the Municipal Center, Executive Board Room, **Monday, September 17, 2018, at 5:30 p.m.**

COMMITTEE AS A WHOLE MEETING AGENDA

I. Items to be Reviewed

A. Old Business

B. New Business
   1. 5:30 p.m.: Rhutasel & Associates Statement of Qualifications for Wastewater System Improvements
   2. 6:30 p.m.: TWM Statement of Qualfications for Wastewater System Improvements

C. General Concerns

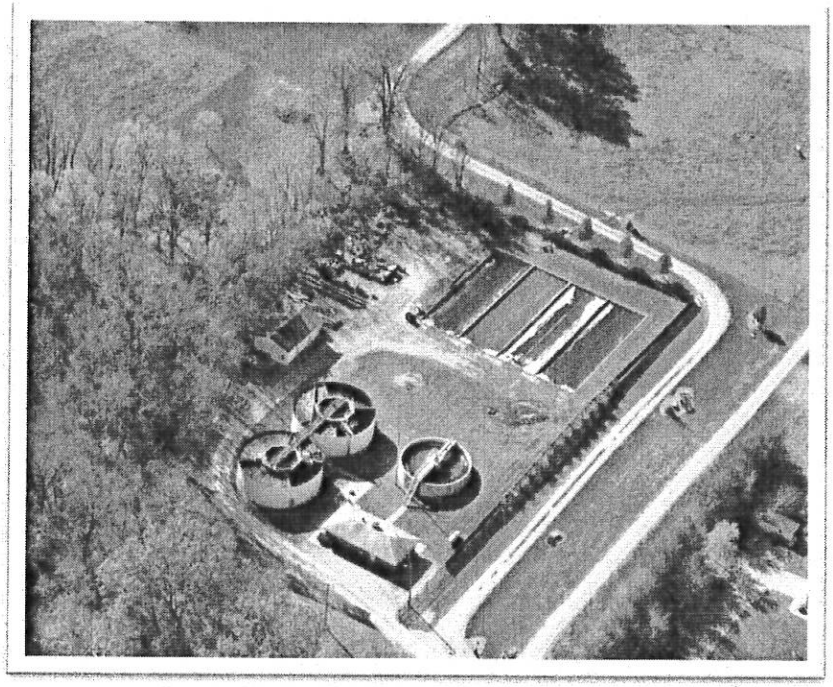
D. Public Participation

E. Adjourn

At said Committee Meeting, the Village Trustees may vote on whether or not to hold an Executive Session to discuss the selection of a person to fill a public position [5 ILCS, 120/2 – (c)(3)]; litigation [5 ILCS, 120/2 - (c)(11)] personnel [5 ILCS, 120/2 – (c) (1)]; real estate transactions [5 ILCS, 120/2 - (c)(5)]; or collective negotiating matters between the public body and its employees or their representatives [5 ILCS 120/2 – (c)(2); discussion of executive session minutes, 5 ILCS, 120/2 – (c)(21)

Statement of Interest and Qualifications
To Provide Consulting Engineering Services For
Wastewater System Improvements

VILLAGE OF FREEBURG, ILLINOIS



Prepared and Submitted by:

RHUTASEL and ASSOCIATES, INC.
Consulting Engineers • Land Surveyors

4 Industrial Drive
Freeburg, Illinois 62243
618-539-3178

7 Carpenter Drive
Salem, Illinois 62881
618-532-1992

Illinois Design Firm License No. 184-000287
July 2018

RHUTASEL and ASSOCIATES, INC.

CONSULTING ENGINEERS • LAND SURVEYORS

July 25, 2018

Village of Freeburg
Sewer Plant RFQ
14 Southgate Center
Freeburg, Illinois 62243

RE: Wastewater System Improvements

Dear Sir/Madam:

We are pleased to submit the attached Statement of Interest and Qualifications for Professional Engineering services related to the wastewater system improvements, design and construction for the Village of Freeburg. We have enjoyed working with you in the past, and our familiarity with Freeburg's current wastewater treatment system would be of great benefit as this project is executed.

This year we celebrate our 49th year of business as a consulting engineering firm based in the Village of Freeburg. During that time, it has been our privilege to provide professional engineering and land surveying services not only to the Freeburg community but also for a vast number of the surrounding municipalities. Rhutasel and Associates, Inc. has in-house capability and expertise in a wide variety of civil engineering specialties including: Wastewater Engineering, Potable Water Engineering, Site Work Engineering, Structural Engineering and Surveying.

With this Statement of Interest and Qualifications, we wish to express our sincere interest in working with the Village of Freeburg to implement the needed improvements and updates to the Village's wastewater treatment system. We pledge to take the utmost care in providing our services to you. We will work hard to achieve the best possible outcome for the Village on this project. We also herein provide a summary of our firm, its people and its capabilities.

Rhutasel and Associates, Inc. has unique insight into the wastewater treatment and collection needs of the Village of Freeburg following many years of experience and projects completed while serving the community. Our professional staff has worked regularly, and successfully, with many Mayors, Village Boards, Village Administrators and Public Works staffs for the last 49 years. We have qualified experience on projects of this nature. We regularly work with numerous funding and regulatory agencies including but not limited to the Illinois Environmental Protection Agency, U.S Army Corps of Engineers and the Illinois Department of Natural Resources. We have successfully completed numerous projects through the IEPA Revolving Loan program. We are familiar with the policies of these agencies, and have a good working relationship with them.

4 Industrial Drive, P.O. Box 97
Freeburg, Illinois 62243-0097
Phone: (618) 539-3178
FAX: (618) 539-3174
E-Mail: raai.freeburg@rhutasel.net
Website: www.rhutasel.net

As head of the Environmental Department at Rhutasel and Associates, Inc. I will be the Project Manager, and will be responsible for oversight of all aspects of the project. Rhutasel and Associates, Inc. is extremely interested in, and looks forward to, working with the Village of Freeburg to improve and upgrade your wastewater system. Please feel free to call me at (618) 539-3178 should you require any additional information.

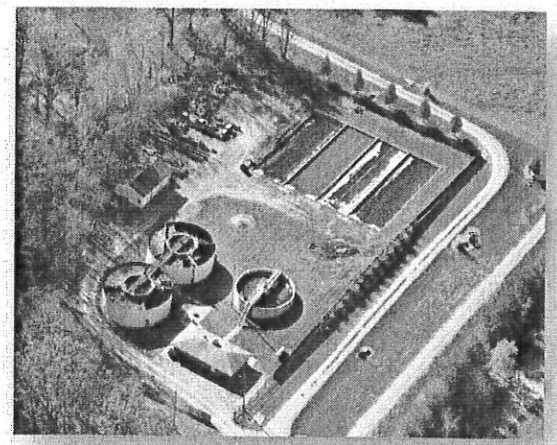
Very truly yours,
RHUTASEL and ASSOCIATES, INC.

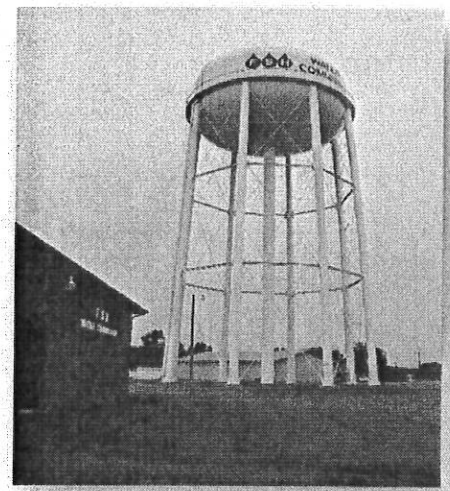
Tim Pruett, P.E – Vice President

HISTORY OF WORKING WITH THE VILLAGE OF FREEBURG

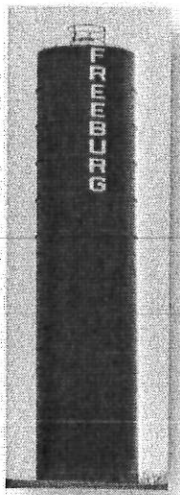
In 1969 Barttelbort, Rhutasel and Associates was hired to inspect a newly constructed trunk sewer line which diverted a portion of the wastewater flow from the Village to the newly constructed East wastewater treatment lagoon system. That was the first project for which the firm provided services to the Village and was the first of many notable projects over the next nearly 50 years. In 1981 Richard Barttelbort left the firm and the name was changed to Rhutasel and Associates, Inc.

In 1973 the current West wastewater treatment facility was constructed to replace the aging wastewater treatment plant located on Kessler Road, which had been constructed in the 1940's. The new plant utilized a state of the art treatment process at that time, known as contact stabilization activated sludge. This plant has served the Village and has performed well for over 45 years. Also, as part of the 1973 project the East Lagoon system was upgraded by the addition of aeration and tertiary treatment facilities.



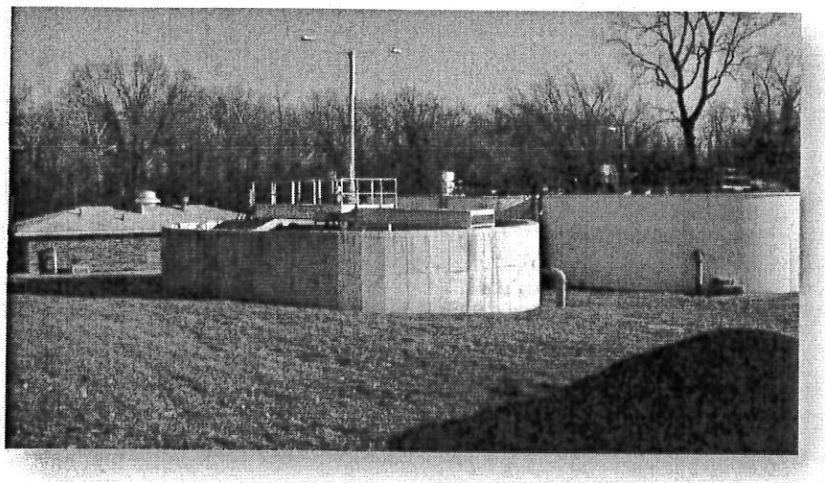


In 1977 working with the Village and other area communities, the Freeburg Smithton Hecker Water Commission water transmission system was constructed after several years of study, planning, and design. The construction of the FSH system allowed the Village of Freeburg to discontinue use of their water treatment plant which took water from Silver Creek. Freeburg continues to purchase water from the FSH Water Commission as it has for the past 40 plus years.



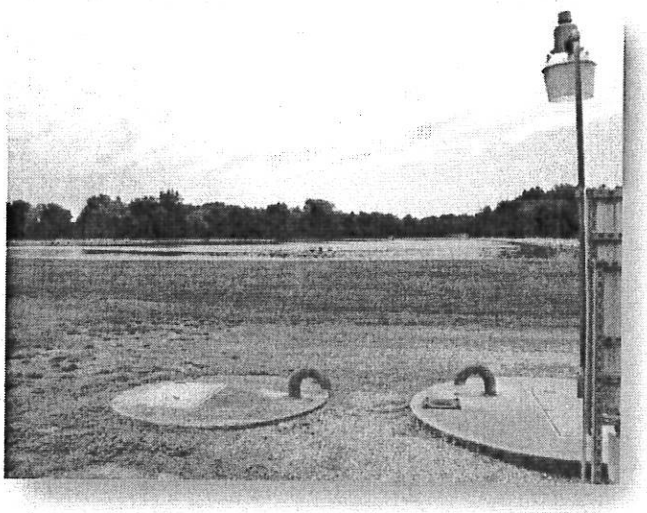
In 1997 another significant project was undertaken and the waterline to the S.A.V.E. site at the north edge of the Village was constructed. This system includes a water pumping station and a water storage stand pipe at the S.A.V.E. site. This system supplies a finished water supply to the S.A.V.E. Site as well as to many adjacent properties along the way.

HISTORY OF WORKING WITH THE VILLAGE OF FREEBURG



In 1999 an excess flow clarifier was constructed at the West wastewater facility to provide treatment for excess wastewater flows that are received during wet weather periods. This unit allows the treatment plant to meet effluent requirements during high flow wet weather periods.

In 2011 the East wastewater treatment lagoon system was upgraded by the removal of sludge, which had accumulated over many years, from both lagoon cells. Additionally, rip rap was placed on the lagoon berms to protect them from erosion.



In 2015 a trunk sewer to the northern part of the Village was constructed along with a relief sewer to alleviate sewer backups in the area of the Deerfield Mobile Home Park and Meadow Brook subdivision.

In addition to these major projects, Rhutasel and Associates has provided engineering services to the Village for dozens of smaller projects including sewer line extensions, water line extensions, subdivisions, streets, sidewalks and drainage projects. During the nearly 50 years of working with the Village we have accumulated a vast knowledge, and valuable records of the Village's infrastructure.

COMPANY HISTORY

RHUTASEL and ASSOCIATES, INC. is an association of professionals each bringing a unique specialty to the organization to create a multi-disciplinary consulting civil and structural engineering, and land surveying professional services firm.

RHUTASEL and ASSOCIATES, INC. started business under the name of Barttelbort and Rhutasel in 1969 when Larry J. Rhutasel and Richard A. Barttelbort began providing consulting engineering services in St. Clair County and surrounding areas of southwestern Illinois. The firm was incorporated in 1972. In 1978, Richard A. Barttelbort left the firm to pursue construction related interests, and in 1981, the company name was changed to RHUTASEL and ASSOCIATES, INC.

In 1995, the firm purchased the assets of The Pyle Company, and opened a branch office in Centralia, Illinois. In 2003, a new and larger office building was constructed in Freeburg, Illinois. In June, 2010 the company expanded by acquiring the assets and personnel as a result of AECOM's closure of its Salem office, and expanded the Centralia office operations to include a materials testing laboratory. In January, 2017 the company moved its Centralia office to Salem, Illinois and moved the materials testing lab to its Freeburg, Illinois office.

Our multi-disciplined company allows us to serve a wide array of clients including, but not limited to, local, state and federal governmental agencies, industrial and manufacturing companies, architects and other consulting engineering firms, and residential, commercial and industrial land developers. Our present staff size ranges between 20 to 30 professional engineers, licensed structural engineers, professional land surveyors, engineering technicians, construction inspectors, and administrative personnel. The company is organized into four technical departments: Transportation, Environmental, Structural and Surveying.

PERSONNEL

RHUTASEL and ASSOCIATES, INC. has the professional capacity to accomplish your work within the required time frame. At the present time, the firm has 20 employees, 11 of which are registered professionals, broken down as follows:

Professional Engineers	6	Professional Land Surveyors	2
Surveyor Crew	2	Draftsman/CADD	2
Construction Inspectors	2	Administrative	3
Professional Engineer and Structural Engineer Registration			3

Our present project schedules will allow us to immediately assign a project team to the Village of Freeburg for your Wastewater System Improvement project. We will complete our work in a professional and efficient manner to allow adequate time for Village and regulatory agency review of the various stages of the work. This will enable the project to remain on schedule and meet your needs.

Following are resumes of key personnel who would be assigned to your project based on the type of work required.

RHUTASEL and ASSOCIATES, INC.

CONSULTING ENGINEERS • LAND SURVEYORS

Resumes of key personnel:

Timothy W. Pruett, Vice President

EDUCATION and REGISTRATION

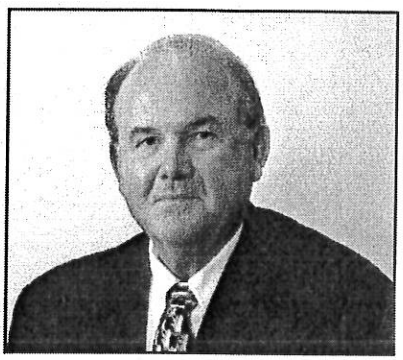
B.S. Civil Engineering / 1994 / University of Missouri at Rolla
Professional Engineer: Illinois and Missouri

REGISTRATION

Professional Engineer, Illinois

EXPERIENCE and QUALIFICATIONS

Experience in civil engineering, specializing in the environmental area. Expertise includes the design, permitting, construction, operation and maintenance of wastewater and water projects/facilities. Performs studies, reports and planning in the environmental field. Coordination of funding through grants and loans with various agencies including IEPA and USDOA Rural Development. Experience in the design of commercial and residential developments. Coordination of projects with local, regional, and federal codes in the design of site layout, utilities, hydrology reports, drainage and detention calculations, and site grading.



Larry J. Rhutasel, Founder

EDUCATION

B.S. Civil Engineering / 1963 / University of Iowa
M.S. Sanitary Engineering / 1983 / University of Illinois

REGISTRATION

Professional Engineer: Illinois, Iowa, Minnesota, Missouri

EXPERIENCE and QUALIFICATIONS

Mr. Rhutasel has over 50 years' experience in civil engineering, specializing in the environmental area since 1963. Expertise includes studies, reports, design, construction, operation and maintenance of wastewater collection and treatment facilities, water distribution, solid waste management facilities and swimming pools. Established Rhutasel and Associates, Inc. in 1969. Sanitary Engineer with Illinois Department of Public Health from 1963 – 1969. Holds Illinois Class 1 Wastewater Operators Certification and Illinois Class A water Operators Certification

Tracy M. Lawless, President

EDUCATION

B.S. Engineering Mechanics / 1987 / Southern Illinois University at Carbondale
M.S. Civil Engineering / 1995 / Southern Illinois University at Edwardsville

REGISTRATION

Professional Engineer: Colorado and Illinois Structural Engineer, Illinois

EXPERIENCE and QUALIFICATIONS

Experience in over 30 years of various civil and structural engineering projects. Expertise includes studies, conceptual planning, reports, funding applications, design, and construction administration of numerous projects including: streets, highways, bridges, culverts, land development, storm sewer systems, storm water detention, dam spillways, water distribution, storage and treatment facilities, and wastewater collection & treatment facilities. Structural experience includes the analysis, design and detailing of numerous structures including: bridges, multi-cell culverts, buildings, water & wastewater facilities and foundations. These structures employed the use of structural steel, reinforced concrete, masonry, and timber construction materials.

Gary L. Hahn, Treasurer, Salem Office Manager

EDUCATION

B.S. Civil Engineering / 1981 / University of Illinois at Urbana-Champaign
M.S. Civil Engineering / 2011 / Southern Illinois University at Edwardsville

REGISTRATION

Professional Engineer: Illinois, Missouri, and Indiana Structural Engineer: Illinois

EXPERIENCE and QUALIFICATIONS

Mr. Hahn has over thirty years of experience in the civil engineering field that includes over twenty years in consulting engineering and over nine years in precast prestressed concrete product sales and engineering. Projects include the analysis, design, and detailing of various structures and components employing the use of steel, conventional and/or precast prestressed concrete, masonry, and timber construction materials. Design experience includes buildings, bridges, multi-cell box culverts, water and wastewater facility structures, foundations and shoring, and various utility structures. Clients include the Illinois Department of Transportation, Illinois Capital Development Board, consulting engineers, architects, general contractors, county highway departments, municipal public works departments, other governmental agencies, and private entities.

RHUTASEL and ASSOCIATES, INC.

CONSULTING ENGINEERS • LAND SURVEYORS

Resumes of key personnel

Monica S. French, Project Engineer

EDUCATION

Associates in Science / 1995 / Kaskaskia College

B.S. Civil Engineering / 1981 / University of Illinois at Urbana-Champaign

REGISTRATION

Professional Engineer: Illinois

EXPERIENCE and QUALIFICATIONS

Experience includes over 18 years as a consulting engineer on a wide range of civil engineering projects. Project experience includes involvement in all phases of the project including funding applications, preliminary reports, topographic data collection, design, utility coordination, permitting, specifications, construction bidding, construction observation and administration. Projects include local street design, highway design, residential subdivision development, commercial site development, water distribution, and sanitary sewer collection. Experience in coordinating with regulatory agencies including but not limited to the Illinois Department of Transportation and Illinois Environmental Protection Agency. Clients include municipalities, rural water companies, county highway departments, general contractors, private developers, and architects.

Brent L. Taylor, Project Engineer

EDUCATION

A.A.S. Drafting Technology / 2002 / Kaskaskia College

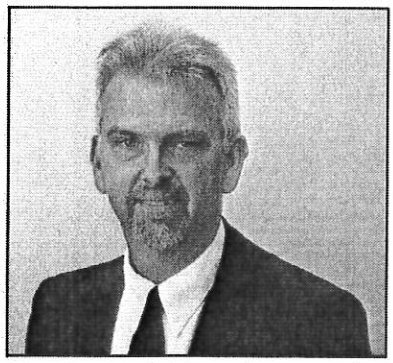
B.S. Civil Engineering, Summa cum Laude / 2010 / Southern Illinois University at Carbondale

REGISTRATION

Professional Engineer: Illinois, Kentucky and Tennessee

EXPERIENCE and QUALIFICATIONS

Over ten years experience in a broad range of civil and structural engineering projects. Project experience includes both engineering design and construction observation / inspection. Experienced in design / detailing of building and bridge structures; and in design and detailing of building sites, parking lots, and roadways. Experienced in field observation / inspection and materials testing including: soils, aggregate, asphalt, and concrete. Experienced in dam inspections, field investigations; as well as, crew member on boundary surveys, topographic surveys, and construction staking. Proficient in AutoCAD, Civil 3D and MicroStation computer drafting software, RISA and EnerCalc structural modeling and analysis software, and HEC-RAS bridge and open channel hydraulic analysis software.



Gale E. Hake, Secretary, Surveying Department Head

EDUCATION

B.S. Civil Engineering Technology / 1976 / Southern Illinois University at Carbondale

REGISTRATION

Professional Land Surveyor: Illinois

EXPERIENCE and QUALIFICATIONS

Since joining Rhutasel and Associates, Inc. in 1976, he has been involved in the various types of research, field work, and office calculations associated with land surveying. His experience in boundary surveying includes retracement surveys, subdivision layout and design, ALTA and condominium surveys, and other land development projects. He has performed construction layout and control work on various types of construction and topographic projects, and has been involved with right-of way projects for roads and highways at the township, county, and state levels. Obtained Professional Land Surveyors license in 1981 and currently serves on the Board of Illinois Professional Land Surveyors Association.

Greg J. Hahn, Project Surveyor

EDUCATION

B.S. Civil Engineering / 1998 / Southern Illinois University at Carbondale

REGISTRATION

Professional Land Surveyor: Illinois

Engineer Intern: Illinois

EXPERIENCE and QUALIFICATIONS

Experience includes boundary surveys for residential and commercial subdivisions, surveys for right-of-way acquisition, and topographic surveys. In addition to field work and reconnaissance, he has performed court house research, field note reduction, and rad data processing. Experienced in construction staking for projects including water lines, sanitary sewers, utility extensions, subdivision, highways, commercial developments, and dams. Office work includes easement preparation, raw data processing, point calculations for site layout, production of preliminary plats utilizing AutoCAD, final plats, land development layouts, topographic maps including digital terrain models, earthwork volume calculations, and production of roadway and site plans.

Resumes of key personnel:

Richard J. Daubach, Senior Engineering Technician

EDUCATION

A.S. Civil Engineering / 1974 / Belleville Area College

CERTIFICATION

Professional Nuclear Density Gauge – Safety and Operation, IDOT Documentation Certification
IDOT Bituminous Concrete Density Tester, Troxler Electronic Laboratories Radiation Safety Officer
IDOT Bituminous Concrete Level I Technician, IDOT Bituminous Concrete Level II Technician
IDOT Hot Mix Asphalt Level III Technician, IDOT Mixture Aggregate Technician
IDOT Mixture Aggregate Technician Upgrade, ACI Concrete Field Testing Technician – Grade I
IDOT Portland Cement Concrete Level I Tech, IDOT Portland Cement Concrete Level II Tech
IDOT STTP-S33 Soils Field Testing & Inspection, IDOT Pavement Construction Inspection
IDOT Drainage Structure Construction Inspection

EXPERIENCE and QUALIFICATIONS

Involved in both the design and construction phases of various projects in the transportation, environmental and land development fields since joining Rhutasel and Associates, Inc. in 1974. Inspection experience includes highway, railroad and bridge construction, conveyor – bulk material handling systems, water distribution, treatment and storage projects, and wastewater collection and treatment facilities. Has performed design work on bridge rehabilitation / replacement projects, and has extensive involvement with the Illinois Abandoned Mined Lands Reclamation Council projects, where his responsibilities included surveying, sampling, testing, design, cost estimating, construction contract administration, and project coordination. Has worked with land developers in the design and construction layout phases of residential subdivision projects.

John M. Williams, Senior Engineering Technician

EDUCATION

A.A.S. Drafting / 1992 / Kaskaskia College

REGISTRATION

Nuclear Density Gauge and Hazmat Certification
IDOT Level I PCC Technician (QC/QA) Certification
IDOT Bituminous Concrete Level I Technician
ACI Concrete Field Testing Technician – Grade I
IDOT STTP-S33 Soils Field Testing & Inspection
Fundamentals of Storm Water Pollution and Erosion and Sediment Control
Inspection of Erosion and Sediment Control Best Management Practices
IDOT Aggregate Technician
IDOT Documentation Certification
IDOT Division of Aeronautics,
Resident Engineer / Inspector Certification

EXPERIENCE and QUALIFICATIONS

Mr. Williams has been directly involved in the design and plan preparation for civil site portions of architectural projects, urban and rural roadway improvements, hydraulic analysis and drainage area reports for existing and proposed structures, storm sewer and miscellaneous drainage structures, wastewater and water treatment facilities, water line and sanitary sewer extensions. His responsibilities involve existing site topographic data collection, site analysis, site development including site layout, storm water drainage/detention, grading, erosion control, utilities, and coordination with state and local officials. Mr. Williams' projects include municipal streets, FAU and FAS streets, rural and urban roadway sections, County bridges, parking lots, airport design and construction services. Mr. Williams' responsibilities also include design of earthwork, sanitary & storm sewer, waterlines, fencing, paving, landscaping, streets, highways, airports, correctional facilities, wastewater treatment structures, parking lots, bridges, and concrete retaining walls. His experience also includes roadway and site construction inspection including field and lab testing of soils, concrete aggregate and asphalt materials. Mr. Williams is proficient in and utilizes AutoCAD, MicroStation, Eagle Point and HecRAS.

Resumes of key personnel:

Joe Niederhofer, Senior Engineering Technician

EDUCATION

A.S. Civil Engineering / 1974 / Kaskaskia Junior College

EXPERIENCE AND QUALIFICATION

Over thirty-five years experience in a broad range of civil engineering projects. Project experience includes plan preparation, traffic control layout for staged construction, and quantity calculations for bridge rehabilitation, bridge replacement, and box culvert replacement projects; perform open-channel hydraulic analysis using HEC-RAS for local bridge projects; perform roadway design, including horizontal and vertical alignments, earthwork calculations, and processing of field survey data; Troxler Electronic Laboratories nuclear density gauge training, HAZMAT certification; computer-aided design and drafting for electronic plan preparation utilizing MicroStation/GEOPAK and other computer software applications.

Mark A. Luechtefeld, Senior Engineering Technician

EDUCATION

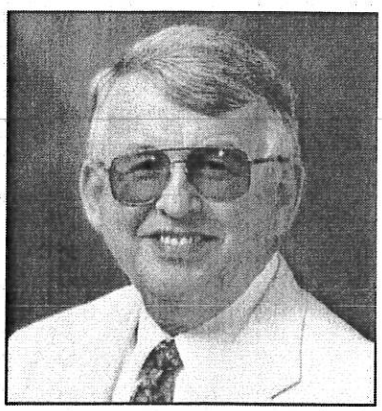
A.A.S. Drafting / 1985 / Belleville Area College

CERTIFICATION

IDOT Documentation Certification
IDOT Bituminous Concrete Density Tester
Troxler Electronic Laboratories Training
Troxler HAZMAT Certification
IDOT Bituminous Concrete Level I Technician
IDOT Bituminous Concrete Level II Technician
IDOT Mixture Aggregate Technician
IDOT Mixture Aggregate Technician Upgrade
ACI Concrete Field Testing Technician – Grade I
IDOT STTP-S33 Soils Field Testing & Inspection
IDOT Portland Cement Concrete Level I Technician
IDOT Portland Cement Concrete Level II Technician

EXPERIENCE and QUALIFICATIONS

Involved in both the design and construction inspection phases of various projects in the transportation, environmental and land development fields. Experience includes layout and CADD drafting of roadway and subdivision plans, wastewater treatment, collection and pumping system plans, water distribution, storage and pumping system plans, storm sewer and storm water detention system plans, and earthwork computations. Has extensive knowledge and experience in utilizing computer software applications for the design and drafting of infrastructure improvement projects including Land Development and GEOPAK. Construction inspection experience includes layout and staking, material inspection, and documentation of contract quantities.



William D. Lueking, Senior Civil / Structural Engineer

EDUCATION

B.S. Civil Engineering / 1976 / University of Illinois

REGISTRATION

Professional Engineer: Illinois
Structural Engineer: Illinois

EXPERIENCE AND QUALIFICATIONS

Mr. Lueking has over forty (40) years experience in the civil and structural engineering fields. Projects include the analysis, design, and detailing of various structures and components employing the use of steel, conventional and/or precast prestressed concrete, reinforced masonry, and timber construction materials. Past design experience includes: Illinois tollway, state and county bridges, commercial and public buildings, specialty foundations, various utility structures, and dam inspections.

WASTEWATER COLLECTION AND TREATMENT

Rhutasel and Associates, Inc. has successfully completed wastewater collection and treatment facility planning, design and construction administration for numerous clients over the past 49 years. We are very familiar with the design and permitting requirements of the Illinois Environmental Protection Agency (IEPA), the low interest loan program of IEPA, and have a close working relationship with their personnel. Following is a partial listing of related wastewater treatment projects that we have provided such services for:

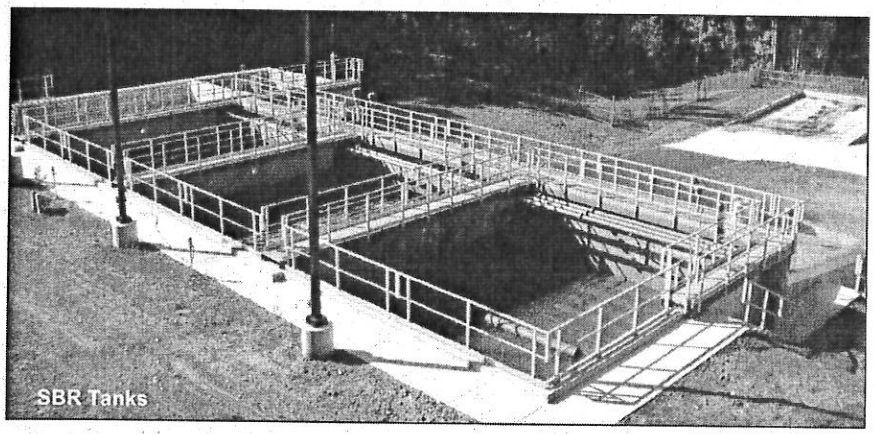
OWNER	LOCATION	SERVICES
Caseyville Township	Fairview Hgts., IL	P/CSP/T/RS
Village of Hecker	Hecker, IL	P/T/RS
St. Clair Township	Swansea, IL	P/CSP/T/RS
Village of Freeburg	Freeburg, IL	P/CSP/T/RS
Village of Smithton	Smithton, IL	P/T/RS
Village of New Athens	New Athens, IL	P/CSP/T/RS
Village of Okawville	Okawville, IL	P/T/RS
City of Osage	Osage, IA	P/T/RS
Village of Panama	Panama, IL	P/CSP/T/RS
St. Clair Township	Belleville, IL	P/T/RS
City of Lebanon	Lebanon, IL	P/CSP/T/RS
Village of Irvington	Irvington, IL	P/T/RS
Village of Ruma	Ruma, IL	P/CSP/T/RS
Village of Damiansville	Damiansville, IL	P/CSP/T/RS
City of Pine Island	Pine Island, MN	P/T/RS
City of West Concord	West Concord, MN	P/T/RS
Village of Baldwin	Baldwin, IL	P/T/RS
Village of Bethany	Bethany, IL	P/T/RS
Village of Summerfield	Summerfield, IL	P/CSP/T/RS
Village of Steeleville	Steeleville, IL	T
City of Stewartville	Stewartville, MN	P/T/RS
City of Mantorville	Mantorville, MN	P/T/RS
City of Stacyville	Stacyville, IA	P/T/RS
Lou Del Sanitary District	Waterloo, IL	P/T/RS
Village of Hoyleton	Hoyleton, IL	P/T/RS
Village of Freeburg	Freeburg, IL	P/T
Village of Smithton	Smithton, IL	P/T
Roma Pizza Works Co.	Waterloo, IL	T
City of Red Bud	Red Bud, IL	P/T
Clear Lake Sanitary Dist.	Clear Lake, IA	P/CSP
Village of New Athens	New Athens, IL	P/CSP/T
Ill. Dept. of Conservation	Rend Lake, IL	CSP/T
St. Clair Township	Belleville, IL	P/CSP/T
Ill. Dept. of Transportation	Hamel, IL	P/CSP/T
Village of Smithton	Wildwood Subd., IL	P/CSP
Village of Smithton	Smithton, IL	P/T
Village of Prairie du Rocher	Prairie du Rocher, IL	P/T
City of Osage	Osage, IA	P/T/RS
Village of Freeburg	Freeburg, IL	P/CSP/T
Ill. Dept. of Corrections	Ina, IL	T
City of Red Bud	Red Bud, IL	P/CSP/T/RS
Village of Steeleville	Steeleville, IL	P/CSP/T/RS
City of Sparta	Sparta, IL	P/CPS/T
Village of Marissa	Marissa, IL	P/CSP/RS
City of O'Fallon	O'Fallon, IL	P
Village of Marine	Marine, IL	P/CSP

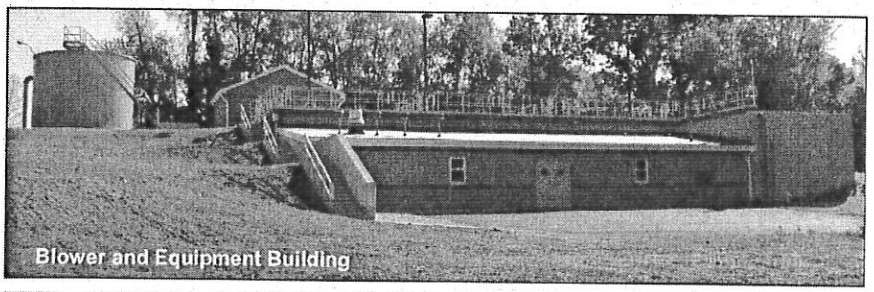
Services Abbreviations: ***P(Planning), CSP(Collection System & Pumping), T(Treatment), RS(Rate Study)***

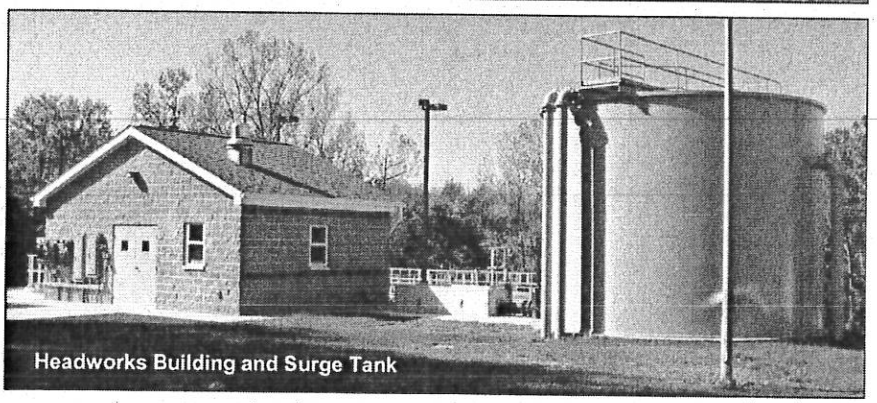
The following pages provide example projects that illustrate our experience and capabilities in Wastewater System Improvement Projects.

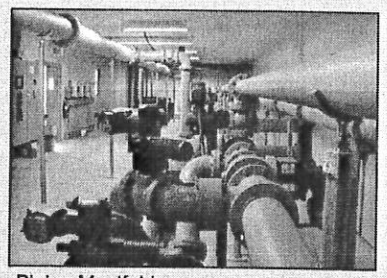
VILLAGE OF NEW ATHENS WASTEWATER TREATMENT FACILITY IMPROVEMENTS

The Village of New Athens retained Rhutasel and Associates, Inc. to upgrade their WWTF built in 1978. It was decided to replace the existing facility with a Sequencing Batch Reactor (SBR) plant. The project included a new headworks facility which included a mechanical bar screen and vortexing aerated grit chamber ahead of the SBR. The 3-tank SBR was designed for a peak flow of 1.05 MGD while utilizing their existing surge tank. The project included sludge digester and sludge thickener tanks. The project also included updating the existing laboratory building, back-up power generation and additional sludge drying facilities. ***This project received an Engineering Excellence award from the American Council of Engineering Companies – Illinois.***


SBR Tanks


Blower and Equipment Building


Headworks Building and Surge Tank


Piping Manifold

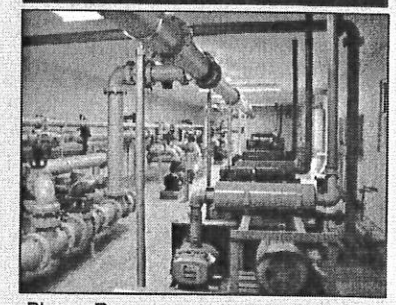
Owner:
Village of New Athens, Illinois

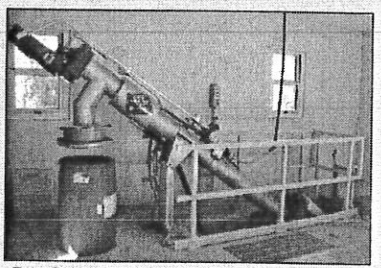
Address:
905 Spotsylvania Street
New Athens, Illinois 62264

Phone:
(618) 475-2144

Project Location:
New Athens, Illinois

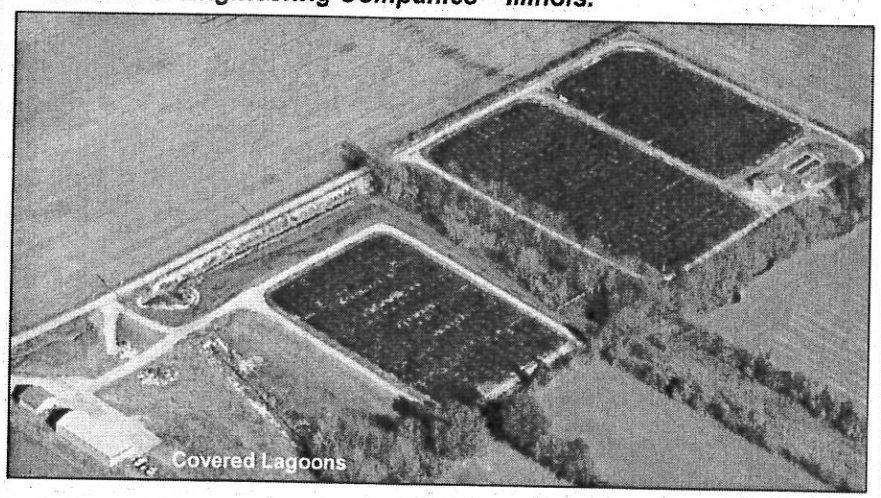
Construction Cost:
$3,021,000

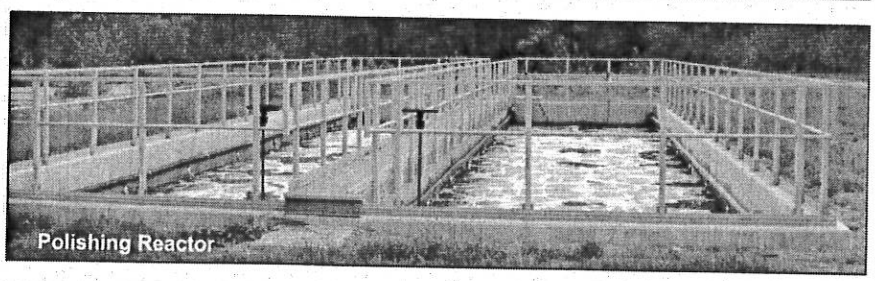

Blower Room


Bar Screen

VILLAGE OF SMITHTON WASTEWATER TREATMENT FACILITY IMPROVEMENTS

The Village of Smithton has experienced substantial growth in recent years, which overloaded their wastewater treatment facilities and necessitated the expansion of their treatment capacity to meet present and future needs. Rhutasel and Associates, Inc. was responsible for planning, design, preparation of plans and specifications, shop drawing review, contract administration, construction observation and start-up services. During the planning phase of the project, the use of a mechanical wastewater treatment facility was evaluated, and found not to be the most cost effective solution for Smithton. ***This project received an Engineering Excellence award from the American Council of Engineering Companies – Illinois.***


Covered Lagoons


Polishing Reactor


Terminal Lift Station with Sampler


Aeration Equipment

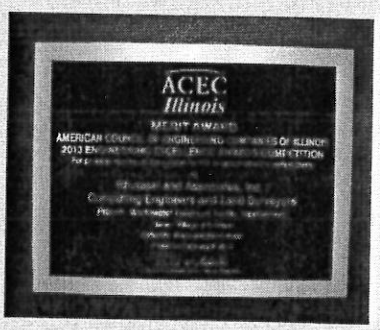
Owner:
Village of Smithton, Illinois

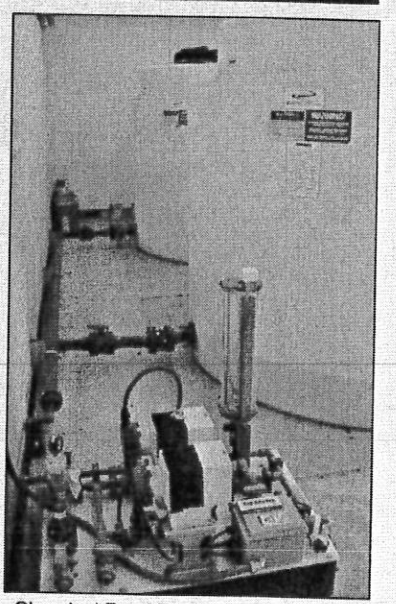
Address:
101 South Main Street
Smithton, Illinois 62285

Phone:
(618) 233-4180

Project Location:
Smithton, Illinois

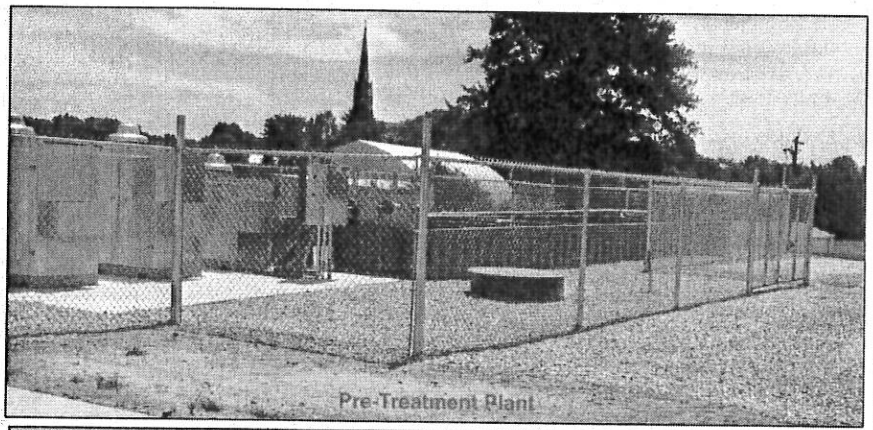
Construction Cost:
$5,073,000

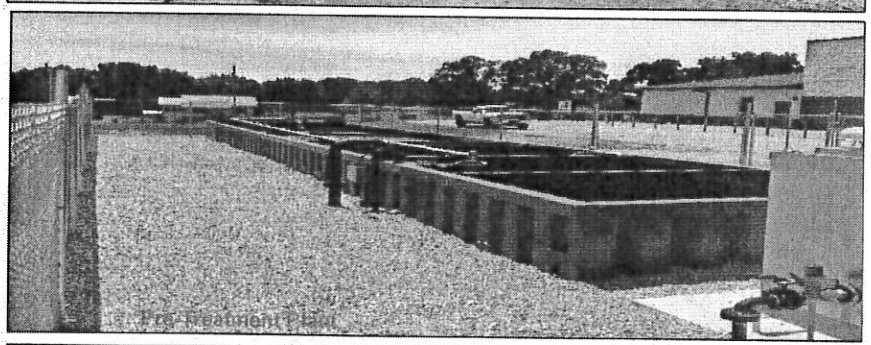


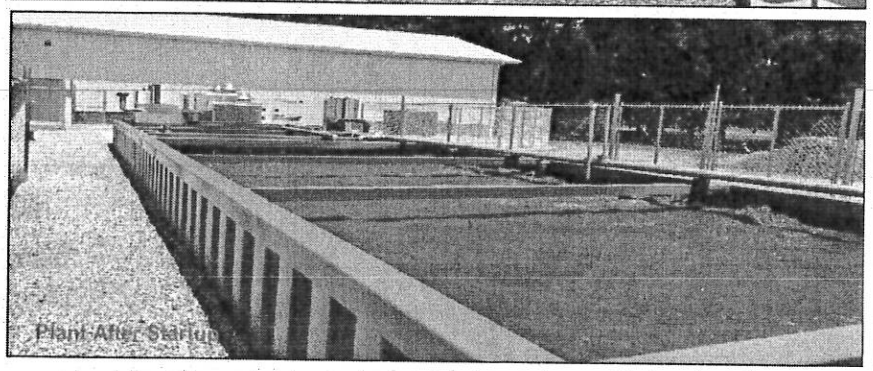

Chemical Feed Pump

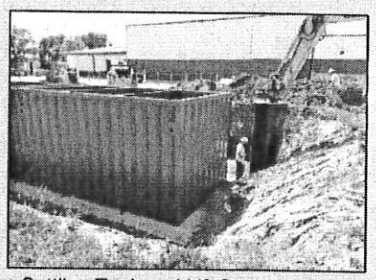
WENNEMAN MEAT COMPANY WASTEWATER PRE-TREATMENT FACILITY

Wenneman Meat Company retained Rhutasel & Associates, Inc. to design a wastewater pre-treatment facility to reduce loadings to the Village's sewer system. The pre-treatment facility included a lift station, manual bar screen, flow equalization basin, two aeration zones, sludge holding, clarifier and back-up power. Wenneman's produces approximately 8,000 gallons of wastewater per day. The 50,000 gallon plant utilizes coarse bubble aeration, return activated sludge and waste activated sludge, clarifier skimmer, two 15 HP rotary displacement blowers and one 3 HP rotary displacement blower with stainless steel sound control covers, and a stainless steel control panel.


Pre-Treatment Plant




Plant After Startup


Settling Tank and Lift Station

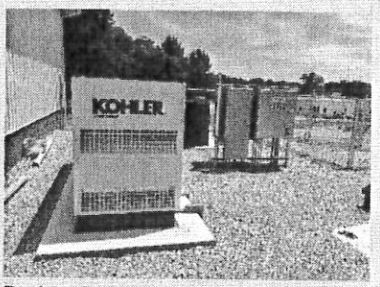
Owner:
Wenneman Meat Company

Address:
7415 State Route 15
St. Libory, Illinois 62282

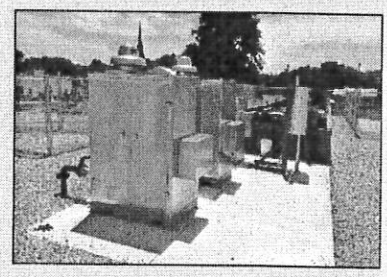
Phone:
(618) 768-4328

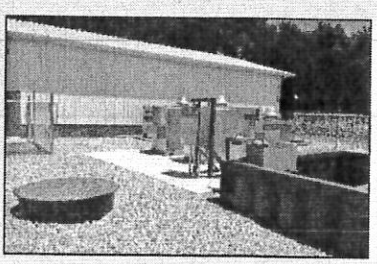
Project Location:
St. Libory, Illinois

Construction Cost:
$700,000



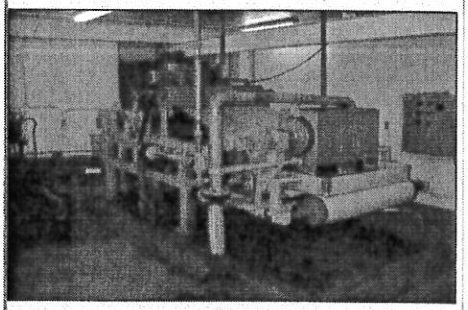
Backup Generator and Control Panel


Blowers


Lift Station & Bar Screen

ST. CLAIR TOWNSHIP ULTRAVIOLET DISINFECTION SYSTEM

The IEPA recently required St. Clair Township to begin disinfecting their wastewater effluent. The facility had operated with a disinfection exemption for many years. Alternative disinfection systems were evaluated and ultraviolet disinfection was chosen. This is the latest project that Rhutasel and Associates, Inc. has designed for this facility. The firm was responsible for planning, design, preparation of plans and specifications, shop drawing review, construction observation, O&M manual preparation, and start-up services for numerous projects at the St. Clair Township wastewater treatment facility over the last forty years, which included collection system improvements and wastewater treatment. In recent years, the tertiary filters have been upgraded, an emergency power generator added, and ultraviolet disinfection (UV) facilities are currently under construction.

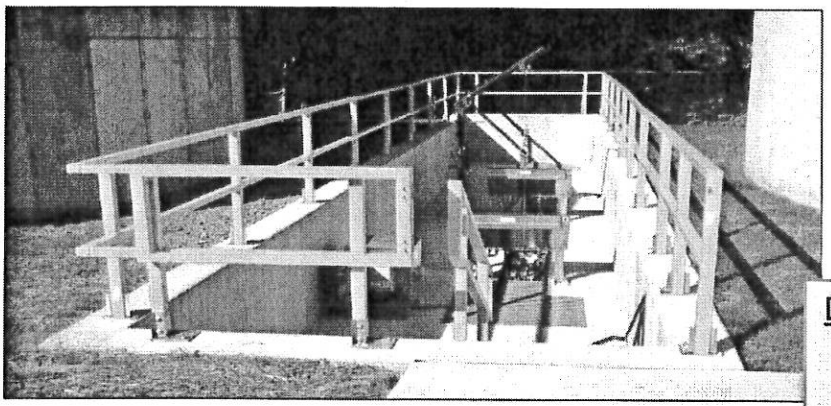


Sludge Belt Press

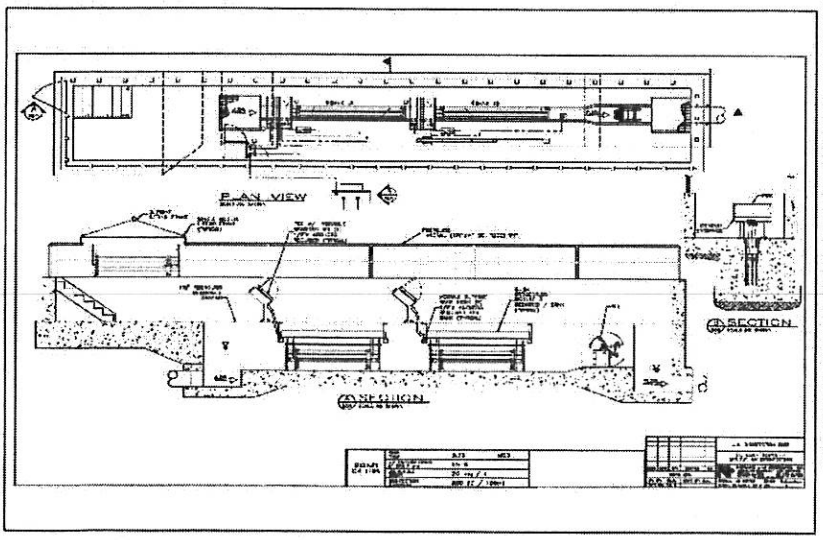
Owner:
St. Clair Township, St. Clair County, Illinois

Funding Agency:
IEPA Loan

Construction Cost:
$410,000



UV Disinfection



DESIGN CAPACITY:

Average Design Flow – 1.5 MGD
Maximum Design Flow – 3.75 MGD
Population Equivalent – 15,000

TREATMENT PROCESS:

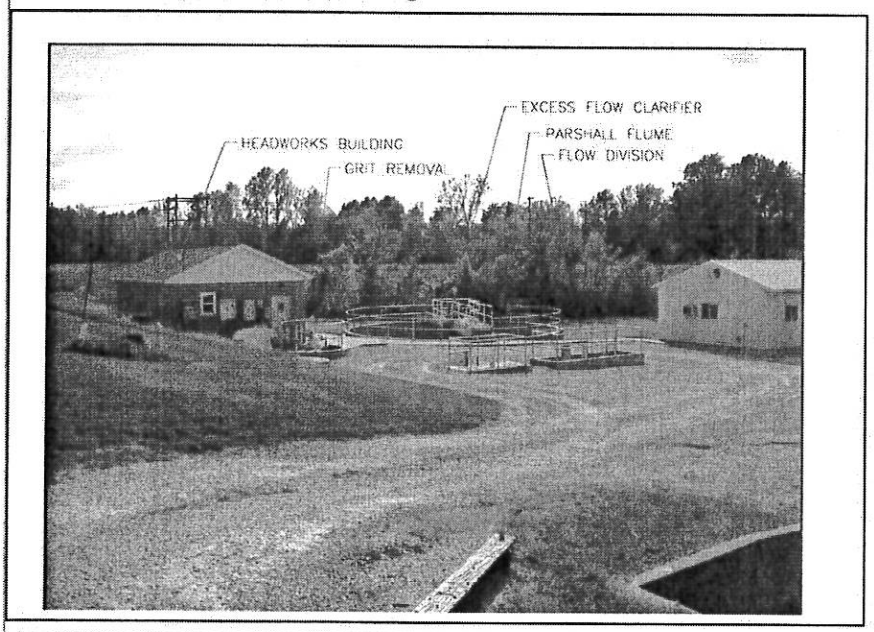
- Mechanical Bar Screen
- Pumping 2 @ 2600 gpm (variable speed)
- Activated Sludge/Aerobic Sludge Digestion
- Tertiary Filters (Hydro Clear/Zimpro)
- Excess Flow –
  - Pumping – 2@1100 gmp/ea
  - Clarifier – 45' Diameter
- Emergency Power – 750 KW Generator
- Disinfection - Ultraviolet

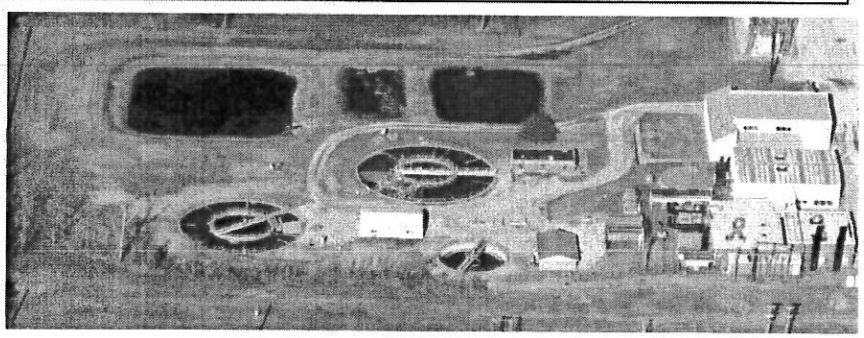
CITY OF RED BUD WASTEWATER TREATMENT FACILITY IMPROVEMENTS

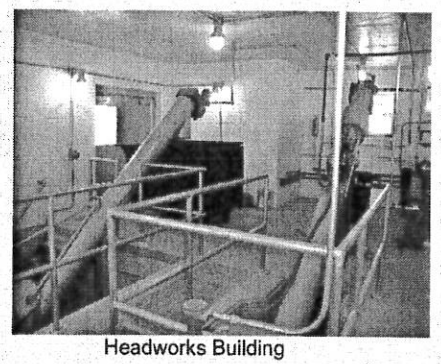
The City of Red Bud retained Rhutasel and Associates, Inc. to upgrade their Wastewater Treatment Plant. The upgrades include new screening and grit removal facilities, an excess flow clarifier with chlorination facilities, additional aeration capacity for the activated sludge treatment units, and complete re-painting and rehabilitation of one of the existing activated sludge treatment plants.

Addition of the excess flow treatment unit will bring the plants hydraulic capacity to 3.6 MGD with future addition of a third activated sludge plant. Expansion of the activated sludge system is not required at this time, however with the new expansion the hydraulic capacity of the plant will be capable of handling the future addition when it is required.

The new raw wastewater cylindrical screening unit augers the screenings into a disposal container, while it dewaters and compacts the screenings to minimize the quantity of material to be disposed of. The vortexing aerated grit chamber provides grit separation and washing. Grit is transferred from the chamber to an auger type grit classifier which dewaters and consolidates the grit before discharge to a disposal container. Grit is discharged into a wheeled dumpster for easy removal from the headworks building. The 40' diameter excess flow clarifier is designed to handle 1.8 MGD which provides capacity to handle the projected hydraulic loadings far into the future. For ease in operation, a multiple 150 pound cylinder manifold system is utilized for chlorination. The chlorine system is activated when flow commences to enter the excess flow clarifier. Following a storm event, the contents of the clarifier are pumped back to the activated sludge units for processing.






Headworks Building

Owner:
City of Red Bud, Illinois

Address:
200 East Market Street
Red Bud, Illinois 62278

Phone:
(618) 282-2315

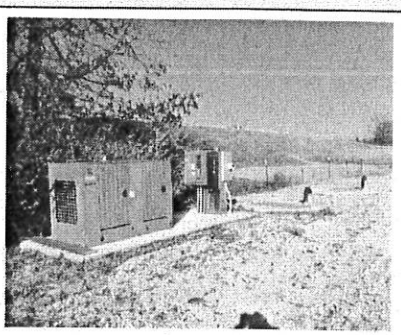
Project Location:
Red Bud, Illinois

Construction Cost:
$1,100,000

Funding Agency:
IEPA Loan

VILLAGE OF SMITHTON COLLECTION SYSTEM IMPROVEMENTS

The Waste Water Treatment Plant project for the Village of Smithton included the design and construction of 2 new lift stations (WWTF and old Wildwood Lift Stations) and the renovation of 1 existing lift station (Stonegate). The unique aspect of this project was the Wildwood LS and Stonegate LS where separated by approximately 3,000 lineal feet of 10" force main, at this point the force mains connect and the 2 lift stations work in parallel pumping into approximately 9,000 lineal feet in a common force main to the new WWTF. The Lift Stations were designed to operate with either pump running or both pumps running simultaneously. The Wildwood Lift Station was constructed with auxillary power moving the generator from the old WWTF.



Wildwood Lift Station

DESIGN CAPACITY:

WWTF Terminal Lift Station – 15 HP Triplex
1081 gmm @ 32' TDH each
Wildwood Lift Station – 20 HP Duplex
605 gpm @ 79' TDH
Stonegate Lift Station – 15 HP Duplex
465 gpm @ 73' TDH

Owner:
Village of Smithton, Illinois

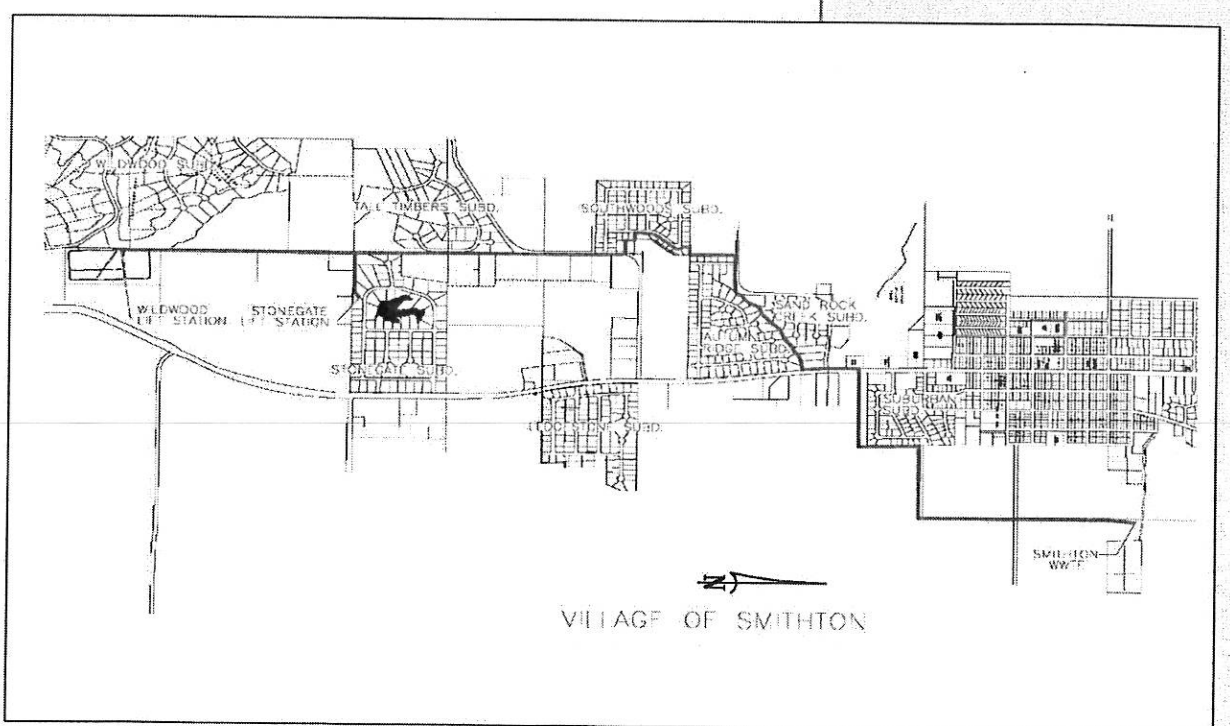
Address:
101 South Main Street
Smithton, Illinois 62285

Phone:
(618) 233-4180

Project Location:
Smithton, Illinois

Construction Cost:
$5,073,000

Funding Agency:
IEPA Loan



ST. CLAIR TOWNSHIP WWTF EMERGENCY GENERATOR

St. Clair Township completed the addition of a new 750 KW stand-by generator at their 1.5 MGD wastewater treatment plant. The diesel powered generator, manufactured by Cummings Power, allows the full plant to continuously operate all treatment processes throughout a power outage. The power is automatically transferred from utility to the generator in the case of a power outage. Rhutasel and Associates, Inc. provided the design, bidding, and construction observation for the project.

ST. CLAIR TOWNSHIP
FOUNDED 1884

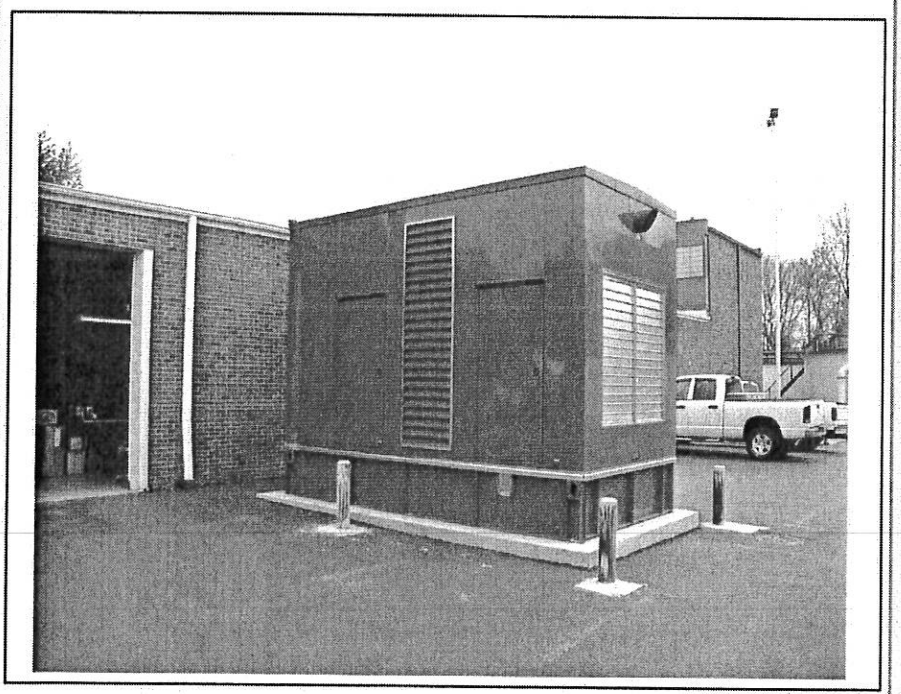
Owner:
St. Clair Township

Address:
Swansea, Illinois

Phone:
(618) 233-3437

Project Location:
Swansea, Illinois

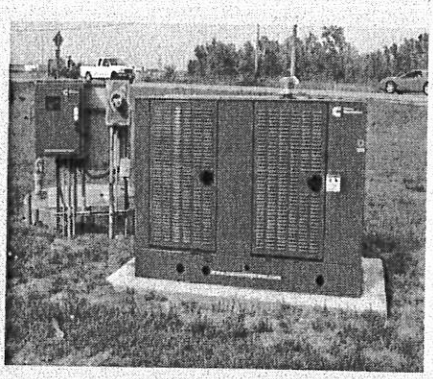
Construction Cost:
$150,000

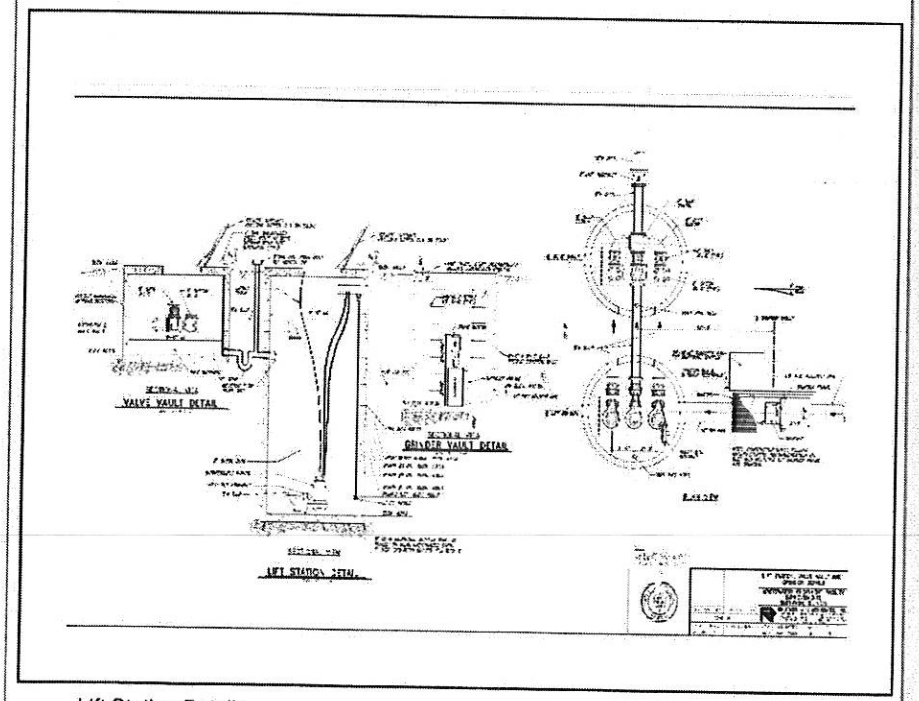


Emergency Generator

ST. CLAIR TOWNSHIP LIFT STATION EMERGENCY GENERATOR

St. Clair Township completed the installation of a 35 KW generator at the Weatherstone Lift Station, near the Southwestern Illinois College campus. The project also includes an automatic transfer switch, which automatically starts and transfers power to the lift station when utility power is off. The new generator is fueled with natural gas. Also as part of the project, St. Clair Township purchased a portable 50 KW trailer mounted generator and modified 12 other lift stations with manual transfer switches to allow for an easy transition to generator power during power outages.





Lift Station Details

Owner:
St. Clair Township

Address:
Swansea, Illinois

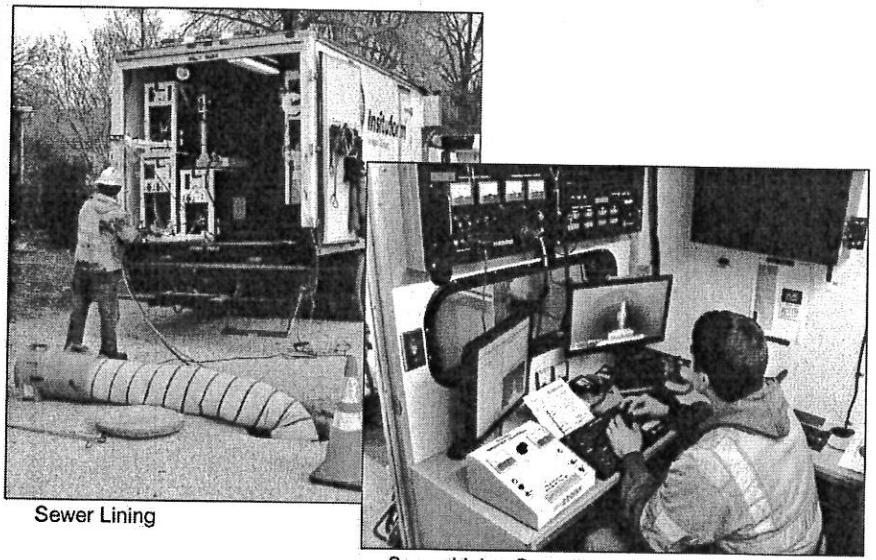
Phone:
(618) 233-3437

Project Location:
Belleville, Illinois

Construction Cost:
$75,000

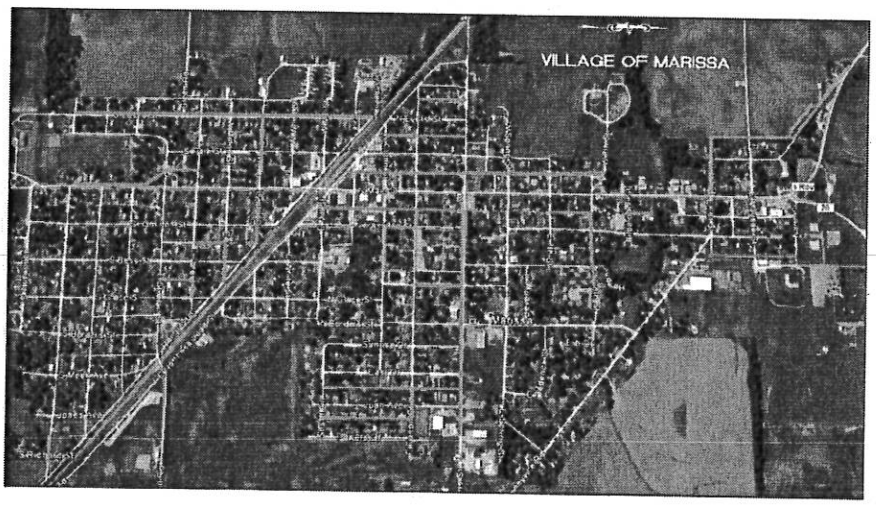
VILLAGE OF MARISSA SANITARY SEWER REHABILITATION

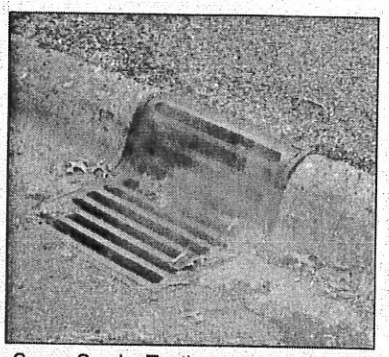
The Village of Marissa was experiencing a high volume of infiltration due to aging and deteriorated infrastructure. The Village repaired approximately 17,000 lineal feet of gravity sewer main by Cured-In-Place Pipe Lining. The project consisted of 13,300 lf of 8", 1,300 lf of 10", 1,600 lf of 12", 550 lf of 15" and the reconnection of 260 service laterals. The Lining project was part of a $2.5 Million Project that also included the complete removal and replacement of 17,500 lineal feet of sewer main. During the planning, design and construction of the project, Rhutasel and Associates, Inc. worked with U.S. Dept. of Agriculture Rural Development Agency to fund the project through their Loan/Grant Program and provided the planning, loan/grant administration, design and construction observation for the project.



Sewer Lining

Sewer Lining Operator





Sewer Smoke Testing

Owner:
Village of Marissa, Illinois

Address:
212 North Main Street
Marissa, Illinois 62257

Phone:
(618) 295-2351

Project Location:
Marissa, Illinois

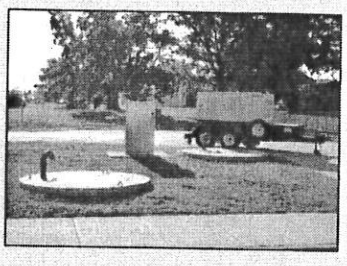
Construction Cost:
$425,000

Excavation for Sewer

Directional Boring On Grade Sewer

BALDWIN SANITARY SEWER REHABILITATION

The Village of Baldwin was experiencing a high volume of infiltration during rainfall events and this project was undertaken to address the problem. The first phase of the project included smoke testing and televising the sewer system to locate the problem areas and to determine what rehabilitation steps were needed. The project included 1,300 feet of gravity sewer replacement and approximately 11,000 feet of CIPP (Cured in Place Pipe) Lining. The project also included a 570 foot on-grade directional bore approximately 20 feet deep which had to be completed due to the proximity of the Canadian National Railroad and IL Route 154. A new primary lift station and 35 KW portable generator were provided and sludge was removed from Baldwin's two-cell lagoon. During the planning, design and construction of the project, Rhutasel and Associates, Inc. worked with U.S. Dept. of Agriculture Rural Development Agency to fund the project through their Loan/Grant Program and provided the planning, loan/grant administration, design and construction observation for the project.



Owner:
Village of Baldwin, Illinois

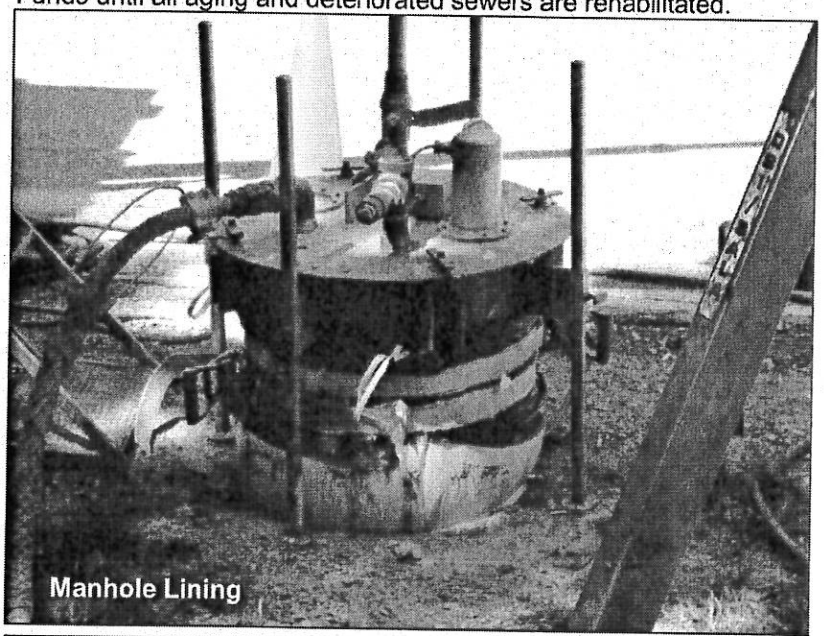
Project Location:
Baldwin, Illinois

Construction Cost:
$1,067,000

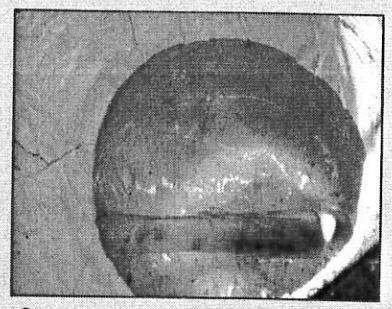
Funding Agency:
U.S. Department of Agriculture – Rural Development

VILLAGE OF MARINE SANITARY SEWER REHABILITATION

The Village of Marine has been completing Sanitary Sewer Lining Projects with the assistance of Madison County Community Development Grants since 2006. Since 2006, the Village has been able to Line approximately 16,100 L.F. over 4 different projects. These projects have removed a considerable amount of storm water infiltration and the Village is extremely happy with the results. The Village plans to continue to apply for Community Development Grant Funds until all aging and deteriorated sewers are rehabilitated.



Manhole Lining



Completed Lining

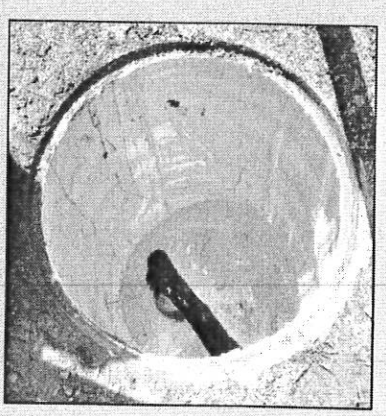
Owner:
Village of Marine, Illinois

Address:
320 North Vernon Street
Marine, Illinois 62061

Phone:
(618) 887-4531

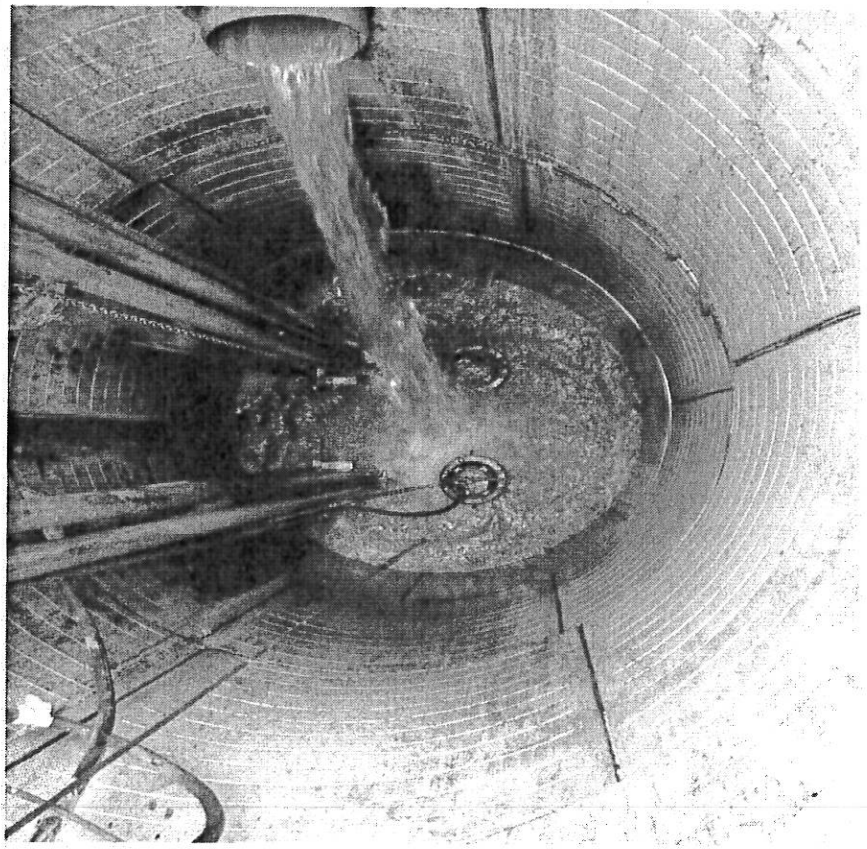
Project Location:
Marine, Illinois

Construction Cost:
$355,200



VILLAGE OF MARINE TERMINAL LIFT STATION REHABILITATION

The Village of Marine's terminal lift station was aging and the precast concrete was severely corroded from exposure to hydrogen sulfide gas. The Village retained Rhutasel & Associates to design the replacement for the 45 hp duplex lift station. The design included the construction of a series of new manholes to divert flow, create a temporary lift station and by-pass pump during construction. A new wet well which included a H2S resistant, acrylic, PVC liner precast in the structure. The project also included replacement of the existing electrical control panel.



Lift Station with Liner

Owner:
Village of Marine, Illinois

Address:
320 North Vernon Street
Marine, Illinois 62061

Phone:
(618) 887-4531

Project Location:
Marine, Illinois

Construction Cost:
$150,000

SUBCONSULTANTS

RHUTASEL and ASSOCIATES, INC. will subcontract design services for Mechanical, Electrical, and Plumbing (MEP) Engineering Design and Architectural services required for the project. The following are our partners for these services:

- MEP Engineering:
  Total Systems Design
  Mr. John Scherr, P.E.
  11 N. 32nd Street
  Belleville, IL 62226
  (618) 235-7172

- Architecture:
  FGM Architects
  Mr. Art Hayhurst, AIA
  475 Regency Park, Suite 200
  O'Fallon, IL 62269-1895
  (618) 624-3364

Rhutasel has worked with FGM and Total Systems Design on a number of projects over the past several years. Projects we have successfully completed working together as a team include:

- New Athens Wastewater Treatment Facility Improvements
- Smithton Wastewater Treatment Facility Improvements
- St. Clair Township Wastewater Treatment Facility Upgrades
- Red Bud Wastewater Treatment Facility Upgrades

Please note: Neither Rhutasel and Associates, Inc. or our proposed subconsultants are certified as DBE, MBE, WBE or SBE firms.

REFERENCES

Mr. Richard Klein
Mr. Tyler Liefer, Public Works Director
Village of New Athens
905 Spotsylvania Street
New Athens, Illinois 62264
(618) 475-2144

Mr. Dave Barnes
Supervisor
St. Clair Township
107 Service Street
Swansea, Illinois 62226
(618) 233-3437

Mr. Herb Roach
Mayor
City of O'Fallon
255 South Lincoln Street
O'Fallon, Illinois 62269
(618) 624-4500

Mr. Tim Lowry, Mayor
Mr. Josh Eckart, City Superintendent
City of Red Bud
535 Power Street
Red Bud, Illinois 62278
(618) 282-3339

Mr. Raymond Klein, Village President
Mr. Scott Seager, City Engineer
Village of Smithton
101 South Main Street
Smithton, Illinois 62285
(618) 233-4180

Mr. Gary Schoenbeck,
Public Works Director
Village of Baldwin
212 W. Elm Street
Baldwin, Illinois 62217
(618) 785-2225

Mr. Chad Easton, Mayor
Mr. Travis Liefer, Public Works Director
Village of Marissa
111 N. Main Street
Marissa, Illinois 62257
(618) 295-2351

Mr. Bill Gruen
City Manager
City of Salem
101 South Broadway
Salem, Illinois 62881
(618) 548-2222

CONSULTING ENGINEERING
GEOSPATIAL SERVICES

THOUVENOT, WADE & MOERCHEN, INC.

CORPORATE OFFICE
4940 OLD COLLINSVILLE ROAD
SWANSEA, IL 62226
618.624.4488
TWM-INC.COM

July 27, 2018

Village of Freeburg
ATTN: Tony Funderburg
14 Southgate Center
Freeburg, IL 62243

Re: Wastewater System Improvements RFQ

Dear Mr. Funderburg and members of the Selection Committee,

The Village of Freeburg has done an outstanding job maintaining and extending the useful life of the existing West Wastewater Treatment Plant for over 40 years. However, given its age, probable new IEPA permit regulations and potential growth of the Village, now is the right time to upgrade the West Wastewater Treatment Facility.

The improvements are substantial - increasing capacity, altering the treatment process and improving sludge treatment. The TWM team has extensive experience to help the Village successfully design and construct a new wastewater treatment plant that will last for many years and our staff is ready to hit the ground running on your project.

By selecting TWM to complete the proposed improvements, you will receive significant benefits:

- A treatment facility that is straightforward to operate and maintain due to our experience in working together with operators on past treatment plant designs - *see pages 19-22*
- Expert assistance in the IEPA State Revolving Fund Loan Application Process and the knowledge of new loan rules to help the Village maximize principal forgiveness - *see page 23*
- Minimal change orders during construction through our knowledge gained on other SBR projects and our experienced construction observation staff representing the Village's interests - *see pages 13-18*
- The comfort in knowing your design team truly cares about benefiting the community since our local presence gives us a vested interest in seeing a successful project outcome - *see page 12*

We look forward to working with the Village on the treatment plant improvements. Should you need any additional information or have any questions, please feel free to contact me.

Respectfully,

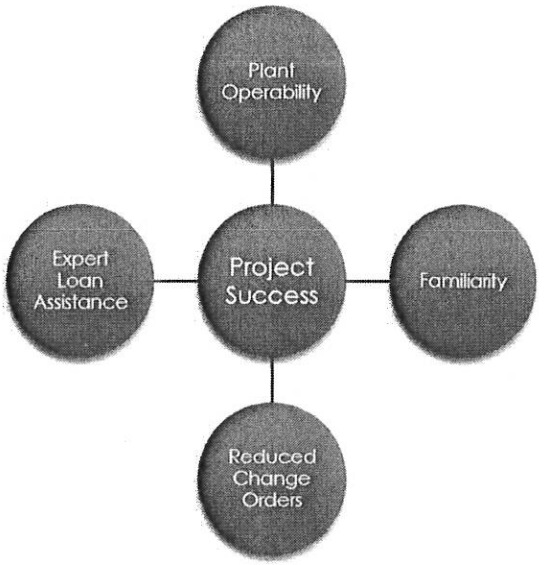
Thouvenot, Wade & Moerchen, Inc.

Todd Peek

Joseph "Todd" Peek, PE
Water Infrastructure Services Manager
618.624.4488
tpeek@twm-inc.com

At over 40 years old, the Village of Freeburg's West Wastewater Treatment Plant has exceeded its expected useful life. The equipment has aged and the Village's wet weather flows have grown beyond the plant's capacity.

The TWM team will provide numerous benefits to the Village in terms of plant operability, expert loan assistance, reduced change orders and familiarity.



Plant Operability

During design of improvements to any treatment facility, it is vital to understand the level of maintenance you desire. We understand through our project experience that occasionally a slight increase in initial capital costs can pay dividends through reduced long-term operation and maintenance costs. The Village may wish to consider the inclusion of a SCADA system to aid your operators and increase the plant's efficiency.

We will work together with the Village to provide a plant that is straightforward to operate and maintain, all while remaining cost effective.

Expert Loan Assistance

Coordination with the Illinois Environmental Protection Agency throughout the project is a critical component to a successful outcome. TWM's experience with the IEPA State Revolving Fund loan process will allow us to assist the Village in the loan acquisition in a simple and pain-free manner. We will also use our knowledge of the loan rules to assist the Village in receiving principal forgiveness and a reduced small community interest rate, while still offered by the IEPA.

TWM will be able to assist the Village in receiving a loan from the IEPA by using our strong working relationships with IEPA staff to anticipate their requests, answer questions and avoid potential issues throughout the loan application process.

Reduced Change Orders

Reducing the number of change orders that occur during construction will help ensure the project remains within the Village's budgetary limits. With our experience in multiple SBR technologies, we are already aware of some of the items that may commonly be overlooked during the design process and would require field changes. By incorporating these items into the plans during the design phase, their overall cost impact will be reduced.

TWM can help the Village further reduce costly requests by providing a strong presence in the field. We have a strong staff experienced in construction observation, specifically on wastewater treatment facilities, and our design engineers are intimately involved throughout construction. We will work together with the Village and the contractor to ensure that if any minor issues arise, they are addressed as quickly and inexpensively as possible.

Familiarity / Proximity

TWM has employees who live, play, shop and dine in Freeburg, so we are truly vested in our community. Our staff will be looking out for the Village's best interests every step of the way, from design through the end of construction.

With offices in both Swansea and Waterloo, our firm's proximity to the Village will allow for quick and easy visits to the Village Hall or job site. That way we can efficiently and effectively help solve problems for the Village. Having served numerous municipalities in the Metro East over the past 70-plus years, we know the importance of being readily available to our clients.

OUR COMPANY'S MISSION...

OUR EMPLOYEES' PROMISE...

EXCEPTIONAL SERVICE.

NOTHING LESS.

If you want every employee to know your mission by heart, then make it concise, notable, and bold.

If you want them to live it every day, make sure your clients know it and remember it as well.

TWM did that when we shortened our mission statement to just four words.

We offer that to you... not just as our mission, but as a promise from each employee to you as our client.

Thouvenot, Wade & Moerchen, Inc. is a 100% employee-owned firm providing Civil, Structural & Rail Engineering, Land Surveying and other Geospatial services. We serve both the public and private sector in the St. Louis metropolitan area as well as throughout Illinois, Missouri, the Midwest and beyond.

Over the last 70-plus years, TWM has diversified into six primary disciplines – Water Infrastructure Services, Transportation, Structures, Site Development, Rail and Geospatial. Within each of those disciplines, TWM has developed expertise with a broad range of design projects, including:

- wastewater treatment plants, collection systems and lift stations
- water distribution systems and water treatment
- storm water management
- roadways, highways, rail, streetscape and pedestrian facilities
- bridges, retaining walls, large structures and buildings
- recreational, commercial, industrial, institutional and residential sites
- land surveying, 3D scanning, mapping and GIS

We have a long history of serving public sector clients—in fact, TWM has served as the municipal engineers or consulting engineers for more than 40 different governmental clients. Those communities we have served can attest to our focus on the details, our commitment to project schedules, and our care toward the client as a vested partner.

With more than 90 licensed professionals and support staff, our firm is an ideal size—large enough to take on major projects but small enough to respond to your needs quickly. Our employees have a natural passion for solving problems and care deeply about providing exceptional service to you as a client. For that reason, more than 85% of TWM's work comes from repeat business, built upon a solid reputation for getting the job done right. Clients in each of our primary disciplines call TWM their 'go-to' firm.

WATER INFRASTRUCTURE HISTORY

Our Water Infrastructure Services department has completed several major wastewater treatment plant projects over the last 30-plus years, including:

- Village of Swansea WWTP - *1991*
- City of Troy WWTP - *1999*
- Village of Marissa WWTP - *2002*
- Caseyville Township WWTP - *2006*
- Village of Millstadt WWTP - *2008*
- Village of Swansea WWTP - *2010*
- City of Belleville WWTF - *2014*
- Stookey Township WWTP - *2014*
- Village of Fayetteville WWTP - *2016*
- City of Lebanon WWTP - *2018 (construction start)*

The Water Infrastructure Services department has also helped lead the way in evaluating and permitting new technologies in Illinois, including:

- First UV Disinfection System - Village of Swansea WWTP - *1991*
- First SBR Systems - Village of Marissa WWTP - *2002*
- First Synthetic Compressible Media Filtration System - City of Belleville - *2014*
- First Non-contact UV Light Disinfection System - City of Belleville - *2014*

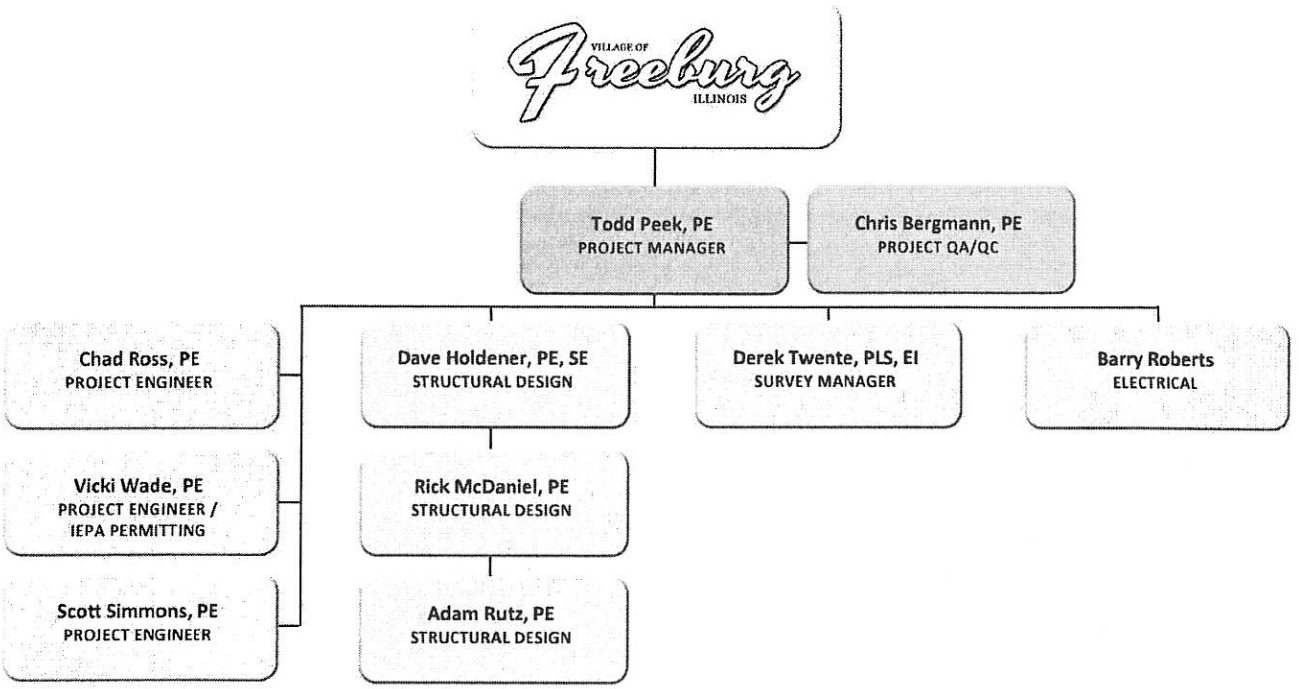
DBE/MBE/WBE/SBE STATUS

TWM is a self-certified Small Business Enterprise (SBE), which is owned by an Employee Stock Ownership Plan. Approximately 22% of the ESOP shares are owned by women. TWM is also proud to be an equal opportunity employer. We have a voluntary affirmative action plan and actively recruit through channels that reach diverse applicants. We believe building a diverse team provides the best synergy to accomplish our mission - *Exceptional Service. Nothing Less.*

PROJECT PERSONNEL

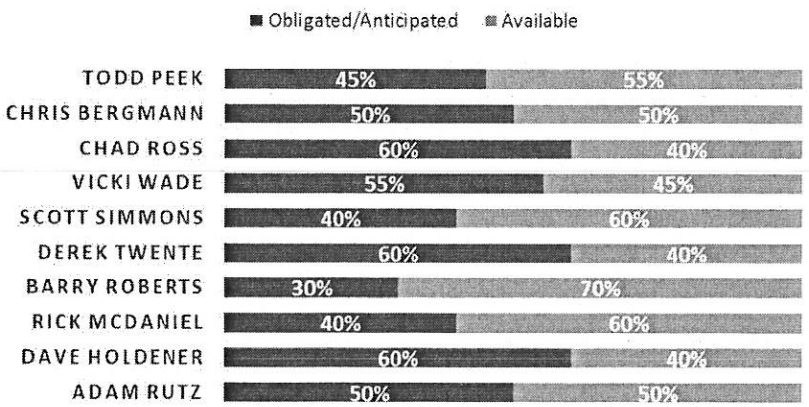
TWM proposes that Todd Peek, PE serve as project manager and point of contact for the Village of Freeburg. Todd has more than 14 years of experience in the management and design of wastewater treatment plant expansions, lift stations, sanitary sewer collection systems and water distribution systems.

Todd will be supported by a full team of local engineers, surveyors and technical staff. The organizational chart below outlines the project team proposed by TWM.



The Village of Freeburg is obviously interested in whether TWM and other submitting firms, in light of their current workloads, have the capacity to take on an additional project and complete that new project on time. In consideration of our current projects, none would prevent us from taking on this project from the Village and meeting an accelerated schedule upon notice to proceed. As seen in the matrix of key team members below, we currently have ample capacity within TWM to dedicate the resources necessary for timely completion of the project.

TEAM AVAILABILITY



The size of our firm allows us to be nimble enough to respond quickly, yet we possess the depth of staff and professional expertise to effectively manage and deliver complex projects to your satisfaction.

While TWM staff have existing contracts and thus workload obligations, there is sufficient availability to meet the demands of your project. Our depth gives us the capacity to deliver work orders quickly and efficiently. Our team's current workload of major projects is outlined below. This shows we will be ready to start your project at your soonest convenience without sacrificing deadlines we have already committed to.

Major Projects	***Percentage Complete***
Park Street Pump Station City of St. Peters, MO	95%
Lebanon WWTP Improvements - Construction City of Lebanon, IL	0%
Belleville LTCP Phase 5 - Stormwater Management Basin UV Disinfection - City of Belleville, IL	75%
West Lift Station Upgrades City of O'Fallon, MO	0%
Shiloh Archview and Church Lift Station Improvements Village of Shiloh, IL	35%
Belleville LTCP Phase 4 - 23rd Street CSO Lift Station Construction - City of Belleville, IL	50%
North Oak Street Infrastructure - Phase I City of O'Fallon, IL	15%
Old Freeburg Road Water Main Extension Village of Freeburg, IL	10%
Watkins Creek Pump Station Upgrades - St. Louis MSD	30%
Watermain Replacement City of O'Fallon, MO	85%

TESTIMONIAL

"Since 1986, we have worked with the staff at TWM on a wide variety of collection system and water reclamation projects. Their ability to work hand in hand with the Township is exceptional. Together we work as a team, which allows me and the Township to receive plans and specifications tailored exactly to our goals and desires. This team approach has resulted in both cost savings in design fees, reduced construction costs, and ease of operation and maintenance."

Joseph Hogg
Manager *(retired)*
Caseyville Township Sewer System
Current - Randy LePere, Collection System Supervisor
618.632.2414

TWM BY THE NUMBERS

- **72** *Years in Business*
- **37** *Licensed Civil Engineers, including:*
  - **6** *Licensed Structural Engineers*
  - **3** *Professional Traffic Operations Engineers*
- **6** *Engineers in Training*
- **7** *Licensed Land Surveyors*
- **2** *Surveyors in Training*
- **15** *Survey Crews*
- **10** *States in which staff hold licenses: CO, FL, IL, IN, KY, MO, NE, OH, TN, TX*

ACEC
American Council of Engineering Companies

ENGINEERING EXCELLENCE AWARDS

2016 Honor Award *(Top State Award)*
& National Recognition Award
in Transportation
First IL Diverging Diamond Interchange, Marion

2015 Honor Award *(Top State Award)*
& National Recognition Award
in Waste & Storm Water
Water Treatment Facility Expansion, Belleville

2012 Merit Award
in Structural Systems
MetroBikeLink Signature Bridge, Swansea

2011 Honor Award *(top category award)*
& National Recognition Award
in Surveying & Mapping Technology
3D Scanning of Rock City Business Complex, National Archives & Records Admin. / National Personnel Records Center, Annex II, Valmeyer

As the Water Infrastructure Services Manager at TWM, Todd is responsible for management of wastewater treatment plant expansions, lift stations, sanitary sewer collection systems and water distribution systems in the Illinois market. He is involved in all phases of projects including facilities planning, designing, permitting, loan administration and construction management. Todd has designed or managed several wastewater treatment plants designs that use different types of sequencing batch reactor (SBR) systems. He has also served as a Resident Engineer on several TWM-designed projects.

EDUCATION

Bachelor of Science - 2003
General Engineering -
University of Illinois,
Urbana-Champaign, IL

REGISTRATIONS

Professional Engineer
Illinois | 2009
Missouri | 2011

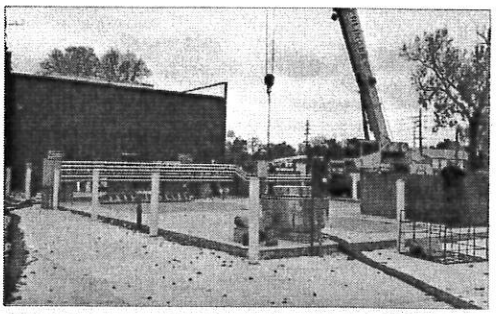
RELATED EXPERIENCE

Management of Wastewater Treatment Plant and Collection System Projects

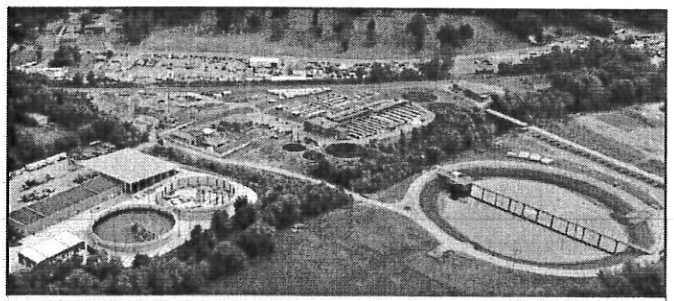
- Lebanon Wastewater Treatment Plant - Lebanon, IL
- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL
- Tertiary Filter Building Modifications - Belleville, IL
- First Flush Basin Modifications - Belleville, IL
- Harmon Drive Lift Station Improvements - Lebanon, IL
- Archview and Church Lift Station Improvements - Shiloh, IL
- Indian Springs LS Improvements - O'Fallon, IL
- North Oak Street Infrastructure Improvements - O'Fallon, IL

Design of Wastewater Treatment Plant and Collection System Projects

- Wastewater Treatment Plant Upgrade - Caseyville Township, IL
- Millstadt Wastewater Treatment Plant - Millstadt, IL
- Wastewater Treatment Plant Improvements - Swansea, IL
- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Stookey Township Wastewater Treatment Facility - Belleville, IL
- Western Avenue Lift Station - Swansea, IL
- Belle-Valley Lift Station and Interceptor Sewers - Belleville, IL



Todd and his team have designed numerous challenging lift station projects.
BENEFIT: TWM has developed a team of seasoned professionals with diverse specialties to complete your project.



Todd's team has successfully designed several large WWTPs like this one in Belleville.
BENEFIT: Todd is familiar with the many processes of a treatment plant and collection system and the complex sequencing needed at times during construction.

TWM receives the ACEC Honor Award with the City of Belleville for the upgrades to its WWTF.
BENEFIT: Todd is adept at anticipating his clients' needs. He will ensure you are given the individual attention you require to achieve your goals.

CHRIS BERGMANN, PE, LEED AP BD+C - PROJECT QA/QC

As the Water Infrastructure Services Lead at TWM, Chris is responsible for ensuring consistency across all sanitary sewer collection systems, wastewater treatment facilities, lift stations/pump stations, hydraulic analysis and water distribution systems in all TWM markets. He has experience in all phases of these projects, including design, permitting and construction management, as well as funding, when applicable. His experience at the Illinois EPA also provides insight into the regulatory challenges faced by municipalities. He successfully incorporates knowledge gained through his MBA with his engineering background to help guide municipalities through all aspects of capital improvement planning, including finance, scheduling and long-term planning.

EDUCATION

MBA - 2004
University of Illinois,
Springfield, IL

Bachelor of Science - 2001
Materials Science & Engineering
University of Illinois,
Urbana-Champaign, IL

REGISTRATIONS

Professional Engineer
Illinois | 2008
Missouri | 2011

Leadership in Energy & Environmental Design
Accredited | 2008

RELATED EXPERIENCE

Design / Management / Observation of WWTP Projects

- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Wastewater Treatment Plant Expansion - Stookey Township, IL
- Wastewater Treatment Plant Expansion - Fayetteville, IL
- Wastewater Treatment Plant Improvements - Millstadt, IL

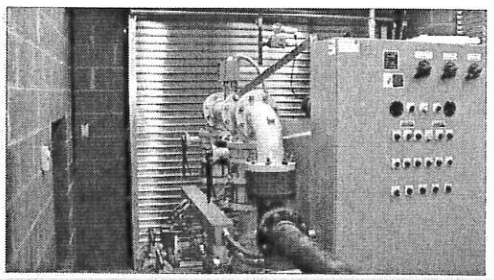
Design / Management of Collection System Projects

- Watkins Creek Pump Station Upgrades - St. Louis MSD
- Terminal Lift Station and Interceptor Sewers - Shiloh
- Park Street Lift Station and Force Main Upgrades - St. Peters, MO
- Elsie Kohlmer Lift Station Modifications - Waterloo, IL

Design and or QA/QC of Collection System Projects

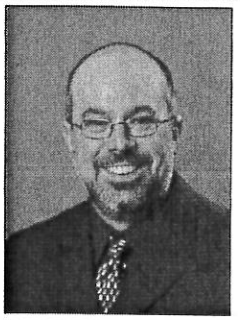
- Wastewater Treatment Plant Expansion - Stookey Township, IL
- Water Reclamation Facility Upgrade - Belleville, IL
- Terminal Lift Station - Fairmont City, IL
- Fairview Hills Lift Station - Caseyville Township, IL

The TWM team gives the City of St. Peters a tour of one of the plants they designed.
BENEFIT: You can rest assured knowing you are partnering with a team who is well-equipped to get the job done right.



Chris and the TWM team have designed numerous electrical systems for pump stations like this one in Fayetteville.
BENEFIT: Chris is experienced in cutting-edge solutions to address client needs, all while ensuring designs are cost effective.

CHAD ROSS, PE, CPESC - PROJECT ENGINEER



As a lead project engineer, Chad is responsible for the design of wastewater treatment facilities, lift stations/pump stations, sanitary sewer collection systems and water distribution systems. He is involved in all phases of projects including design, permitting and construction management.

RELATED EXPERIENCE

Design / Management of WWTP Projects

- Wastewater Treatment Plant Upgrade - Caseyville Township, IL
- Wastewater Treatment Plant Expansion - Stookey Township, IL
- Wastewater Treatment Plant Improvements - Millstadt, IL
- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Swansea Wastewater Treatment Plant Improvements - Swansea, IL
- Wastewater Treatment Plant Expansion - Fayetteville, IL
- Lebanon Wastewater Treatment Plant Improvements - Lebanon, IL

Design / Management of Collection System Projects

- Fairview Hills Lift Station and Odor Control - Caseyville Township, IL
- Pleasant Ridge Lift Station Upgrade - Caseyville Township, IL
- Park Street Lift Station - St Peters, MO
- Belle-Valley Lift Station and Interceptor Sewers - Belleville, IL

REGISTRATIONS

Professional Engineer
Illinois | 2004
Missouri | 2011

Certified Professional in Erosion and Sediment Control

EDUCATION: Master of Science | 2001
Environmental Engineering | Missouri University of Science and Technology | Rolla, MO

Bachelor of Science | 1998 | Civil Engineering
Missouri University of Science and Technology
Rolla, MO

VICKI WADE, PE - PROJECT ENGINEER / IEPA PERMITTING

Vicki has served as municipal engineer for the Village of Swansea for many years and understands municipal infrastructure needs. She is responsible for the design of wastewater treatment facilities, sanitary sewer collection systems, and lift/pump stations. She is equally adept with general civil engineering and design and played a significant role in the design of streets within the relocated Village of Valmeyer after the flood of 1993.

RELATED EXPERIENCE

Design / Management of WWTP Projects

- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Swansea Wastewater Treatment Plant Improvements - Swansea, IL
- Troy Wastewater Treatment Plant Expansion - Troy, IL
- Wastewater Treatment Plant Upgrades - Caseyville Township, IL
- Wastewater Treatment Plant Improvements - Millstadt, IL
- Lebanon Wastewater Treatments Plant Improvements - Lebanon, IL

Design / Management of Collection System Projects

- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- Archview and Church Lift Station Improvements - Shiloh, IL
- Western Lift Station Upgrades - Swansea, IL

REGISTRATIONS

Professional Engineer
Illinois | 1997
Missouri | 2006

EDUCATION: Master of Science | 1992 |
Environmental Engineering | Southern Illinois University | Edwardsville, IL

Bachelor of Science | 1990 | Civil Engineering |
Southern Illinois University | Edwardsville, IL

SCOTT SIMMONS, PE - PROJECT ENGINEER

Scott has performed water / wastewater engineering through all phases of planning, design and construction. His technical experience covers a wide range of projects including sanitary sewers, storm sewers, water distribution, hydraulic modeling, drainage, erosion control, pump station design, elevated storage design, and construction drawing and specification preparation. He is skilled in various software applications including AutoCAD, MicroStation, ArcGIS, Bentley WaterGEMS, KYPipe and XPSWMM.

RELATED EXPERIENCE

- Wastewater Treatment Plant Expansion - Fayetteville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL
- 11th Street Interceptor Sewer - Belleville, IL
- Highway Z Water Main Upgrade - St. Charles County, MO
- Waterford Crossing Water Main Relocation - St. Charles County, MO
- Frank Scott Parkway & Hartman Lane Sewer - Caseyville Township / O'Fallon, IL
- Manhole Rehab Project - Caseyville Township / O'Fallon, IL
- Northeast Manhole Lining Project - Caseyville Township / O'Fallon, IL
- Gravois Creek OMCI Stormwater Design - St. Louis MSD

REGISTRATIONS

Professional Engineer
Illinois | 2009

EDUCATION:
Bachelor of Science | 2003 | Civil Engineering
Southern Illinois University | Carbondale, IL

DEREK TWENTE, PLS, EI - GEOSPATIAL MANAGER

As Manager of TWM's Geospatial Services Group, Derek works closely with the firm's survey crews and other Professional Land Surveyors, creating standards for operating at the highest level of quality with professionalism and integrity. His responsibilities include project coordination, project management, proposal review and communication with clients. His technical background includes boundary and ALTA/NSPS Land Title surveys, topographic and hydrographic surveys, drainage studies, flood certifications, construction layout, field/COGO computations, interpreting plans, data analysis and document research. Having worked previously in the field as a Crew Chief, Derek is skilled in the use of the latest survey technology.

RELATED EXPERIENCE

- Lebanon Wastewater Treatments Plant Improvements - Lebanon, IL
- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL
- Wastewater Treatment Facility Survey - Caseyville Township, IL
- IGD Sewer Improvements - Swansea, IL
- Terrie Lane Storm Sewer Improvements - St. Charles, MO
- North Oak Street Infrastructure Improvements - O'Fallon, IL
- Swansea Sewer Improvements - Swansea, IL

REGISTRATIONS

Professional Land Surveyor
Illinois | 2012
Missouri | 2013
Tennessee | 2017

EDUCATION:
Bachelor of Science | 2004 | Civil Engineering
Southern Illinois University | Edwardsville, IL

Land Surveying Specialization Program | 2007
Southern Illinois University | Carbondale, IL

RICK MCDANIEL, PE - STRUCTURAL DESIGN

Experienced as a structural engineering designer, Rick is highly skilled in the use of CAD, Excel, Ram Advanse, RetainPro, Flow Master and other structural and civil analysis software. Since joining TWM, Rick has completed his civil engineering degree and obtained his Professional Engineer license. He provides the structural design on wastewater treatment plant expansions and other wastewater infrastructure components, which has given him an understanding of the operations and processes of a WWTP.

RELATED STRUCTURAL DESIGN EXPERIENCE ON WWTP AND LIFT STATIONS

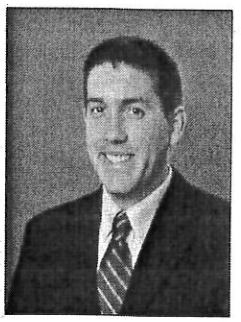
- Wastewater Treatment Plant Upgrade - Caseyville Township, IL
- Wastewater Treatment Plant Expansion - Stookey Township, IL
- Wastewater Treatment Plant Improvements - Millstadt, IL
- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Swansea Wastewater Treatment Plant Improvements - Swansea, IL
- Wastewater Treatment Plant Expansion - Fayetteville, IL
- Lebanon Wastewater Treatment Plant Improvements - Lebanon, IL
- Wastewater Treatment Plant - Marissa, IL
- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL

REGISTRATIONS

Professional Engineer
Illinois | 2006
Missouri | 2007

EDUCATION:
Bachelor of Science | 2003 | Civil Engineering - Structural Emphasis | Southern Illinois University | Edwardsville, IL

DAVID J. HOLDENER, JR., PE, SE - STRUCTURAL DESIGN



Dave joined TWM in 2008 after earning his master's degree in Civil Engineering with a structural emphasis. As a Structural Engineer at TWM, Dave performs structural design and analysis of highway bridges, trail bridges, buildings, wastewater treatment plants and lift stations. He has extensive experience with construction engineering projects; designs include complex soil retention systems, cofferdams and intricate shoring.

RELATED STRUCTURAL DESIGN EXPERIENCE EXPERIENCE ON WWTP

- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL
- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Lebanon Wastewater Treatment Plant Improvements - Lebanon, IL
- Wastewater Treatment Plant Expansion - Stookey Township, IL

REGISTRATIONS

Professional Engineer
Illinois | 2011
Missouri | 2010

Structural Engineer
Illinois | 2011

EDUCATION: Master of Science | 2008 | Civil Engineering, Structural | Missouri University of Science & Technology | Rolla, MO

Bachelor of Science | 2004 | Civil Engineering | University of Missouri, Rolla | Rolla, MO

ADAM RUTZ, PE - STRUCTUAL DESIGN

Adam joined TWM in 2013 after three years working in the field of heavy civil construction, specializing in value engineering railroad bridge projects. He performed project management duties as well as construction related structural designs. His experiences include re-designs of steel superstructures, driven pile foundations, drilled shaft foundations, cast-in-place substructures, temporary soil retention and re-alignment of rail lines. He now performs a variety of structural engineering design work for TWM.

RELATED STRUCTURAL DESIGN EXPERIENCE EXPERIENCE ON WWTP

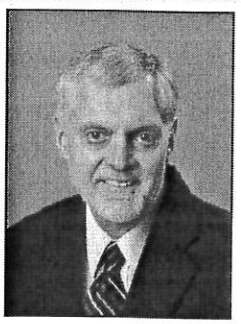
- Wastewater Treatment Plant Upgrades - Fayetteville, IL
- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL
- America's Central Port, South Harbor Terminal - Granite City, IL
- Wastewater Treatment Plant Improvements - Lebanon, IL

REGISTRATIONS

Professional Engineer
Illinois | 2015

EDUCATION:
Bachelor of Science | 2009 | Civil Engineering - Structural Emphasis | University of Missouri | Columbia, MO

BARRY ROBERTS - ELECTRICAL



With more than 46 years of hands-on experience, Barry produces complete, quality electrical designs for a variety of projects. He provides control panel designs for wastewater collection system lift stations and complete electrical system designs for wastewater treatment plants. He developed design specifications for lift station control panels, which are issued to developers as required standards. Barry's design solutions frequently result in significant reduction in maintenance problems and costs.

RELATED ELECTRICAL DESIGN EXPERIENCE ON WWTP AND LIFT STATIONS

- Wastewater Treatment Plant Upgrade - Caseyville Township, IL
- Wastewater Treatment Plant Expansion - Stookey Township, IL
- Wastewater Treatment Plant Improvements - Millstadt, IL
- Water Reclamation Facility / CSO Lift Station - Belleville, IL
- Swansea Wastewater Treatment Plant Improvements - Swansea, IL
- Wastewater Treatment Plant Expansion - Fayetteville, IL
- Wastewater Treatment Plant Improvements - Lebanon, IL
- LTCP Phase 3 - Relief Sewers and South Side Park CSO Lift Station - Belleville, IL
- LTCP Phase 4 - 23rd Street CSO Lift Station - Belleville, IL
- LTCP Phase 5 - Stormwater Management Basin UV Disinfection - Belleville, IL

EDUCATION:
IDOT Technical Training Program | 1970
University of Illinois | Urbana-Champaign, IL

FAMILIARITY

From a personal standpoint, TWM is embedded in and familiar with the Village. Having done work in the Village and surrounding communities for many years, a number of the staff have developed relationships with some of the residents of the Village. Further, a number of past and current employees for TWM have lived in Freeburg and understand the Village's needs. We currently have eight employees that live in or attended school in Freeburg, including Chad Ross, who is one of the proposed engineers on this project.

From a professional standpoint, our history of work with the Village and surrounding communities provides us with a wealth of knowledge. TWM has previously completed topographic surveys, boundary surveys and design work in the Village, as well as a few current projects. Recently, we prepared an updated facility plan for the West WWTP Improvements, which was submitted to the IEPA, and we also assisted the Village with their NPDES permit renewal.

We have completed a number of other various projects in Freeburg and also host the Village's GIS mapping of the water and sewer systems. Our knowledge of the Village's infrastructure is already strong and will continue to grow as our relationship is strengthened by coordinating and learning from the Village staff throughout this project and into the future.

PROXIMITY

TWM has five office locations in the immediate St. Louis area. Our Corporate Swansea office, where this project will be managed from, is located just 13 miles from Freeburg Village Hall. Our team members would be highly accessible to the Village staff and available to meet on short notice, essentially functioning as an extension of the Village's own staff.

TWM Projects in Freeburg

- West WWTP Improvement IEPA Facility Plan Update
- Old Freeburg Road Water Main Extension
- Cloud GIS Mapping
- Hill Mine Road Drainage Improvements
- East Apple Street Improvements
- Potter Street Drainage
- Cherry Tree Lane Sanitary Sewer Extension

TWM Water Infrastructure Services staff Chris, Todd and Scott at the 2018 Freeburg Police & Public Safety golf outing

TESTIMONIAL

"During the entire project, TWM ensured that I was consulted throughout the design. TWM not only met tight schedule constraints but also ensured that the complex design was financially viable for the City. I feel that TWM is an exceptional firm and would encourage other municipalities, especially those with CSO issues, to employ their services."

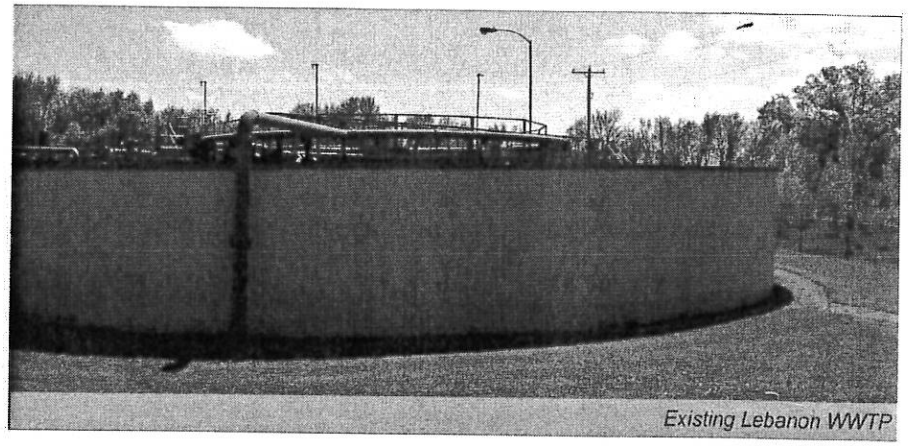
E. Royce Carlisle
Director of Wastewater Treatment Plant & Sewer Lines
City of Belleville, IL • 618.233.7146

LEBANON WASTEWATER TREATMENT PLANT IMPROVEMENTS

CONTACT:
Penny Pinkstaff
312 West St. Louis Street
Lebanon, IL 62254
618.537.4976

COMPLETION DATE:
2017 (design)
Construction beginning fall 2018

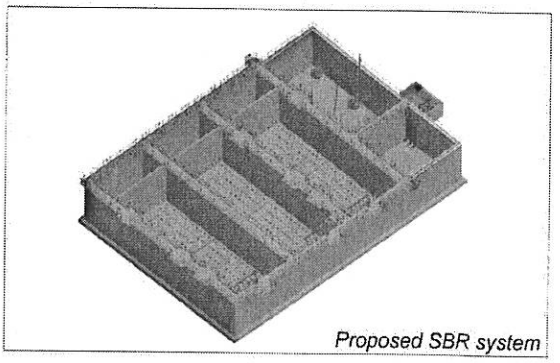
CONSTRUCTION COST:
$12,132,000

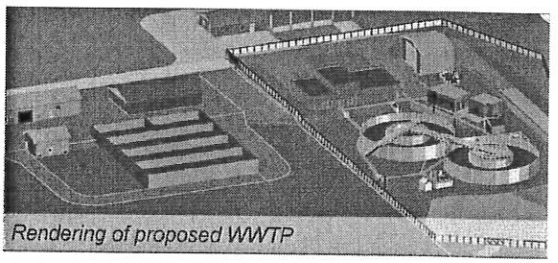

Existing Lebanon WWTP

TWM designed improvements to Lebanon's wastewater treatment facility, which included replacing the influent screening, construction of a new continuous flow sequencing batch reactor (SBR) treatment system, tertiary filtration, upgrades to the sludge processing and dewatering systems, and integration of new and existing process components into the facility modifications.

TWM prepared an updated Facility Plan, IEPA loan application, new user charge system, IEPA permits and bidding documents. We also coordinated with the City and IEPA during the loan approval process to ensure the City met the recent IEPA loan rule changes. This effort resulted in a loan agreement with 15% principal forgiveness for the City.

We will also provide observation once the project is under construction.


Proposed SBR system


Rendering of proposed WWTP

RELEVANCE TO FREEBURG

- Mechanical Influent Screening
- Continuous Flow SBR System with Enhanced Biological Nutrient Removal
- Fine Bubble Diffusers and Mechanically Controlled Decant Weir
- Cloth Disk Tertiary Filtration
- Perforated Plate Drum Screen
- Terminal LS Modifications with Dedicated Storm Flow Pumps and Holding Tank

KEY PERSONNEL

Todd Peek, PE - *Project Manager*
Chad Ross, PE - *Lead Design Engineer*
Vicki Wade, PE - *QA/QC Engineer*
Rick McDaniel, PE - *Structural Design*
Adam Rutz, PE - *Structural Design*
Dave Holdener, PE - *Structural QA/QC*
Barry Roberts - *Electrical Design*

BELLEVILLE WASTEWATER TREATMENT FACILITY IMPROVEMENTS

CONTACT:
Royce Carlisle
Director of Waste Water Treatment Plant
450 Environmental Drive
Belleville, IL 62220
618.233.7146

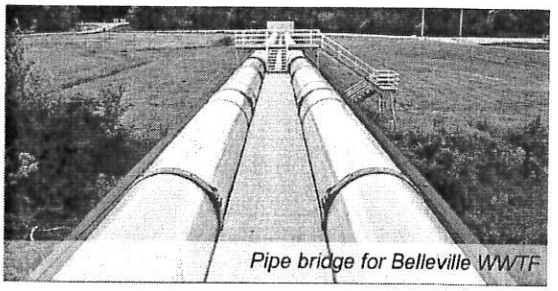
COMPLETION DATE:
2014

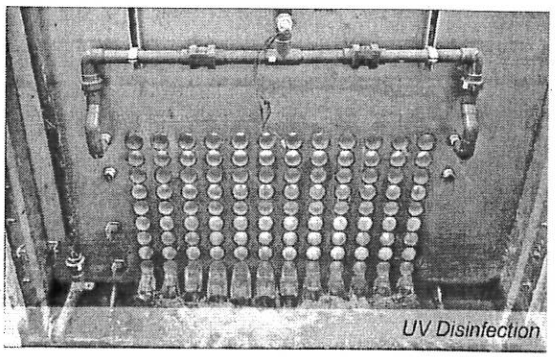
CONSTRUCTION COST:
$41,469,000

TWM provided the design of this treatment plant expansion, from facility planning through construction phase engineering, increasing design capacity over 50%—from a daily average flow of 8.0 MGD to 12.4 MGD.

The project included a counter-current aeration system for both energy savings and nutrient removal, UV disinfection, and conversion of existing anaerobic digesters to autothermal thermophyllic aerobic digestion. The project also included a new 200 MGD CSO lift station and modifications to existing sludge storage lagoons into storm management basins, as required by the City's Long-Term Control Plan for Combined Sewer Overflows.

TWM prepared the Facility Plan, IEPA loan application, new user charge system, IEPA permits, bidding documents, and also performed construction observation for the project. We were also able to design the process system for the new West Plant to not include tertiary filtration, but accommodations were made if it needs to be added in the future.


Pipe bridge for Belleville WWTF


UV Disinfection

RELEVANCE TO FREEBURG

- Mechanical Influent Screening
- New Terminal Lift Station and Pumps
- Enhanced Biological Nutrient Removal
- Reuse Existing Tankage for Sludge Digestion
- Control Building with Laboratory, Blower Room, Electrical Room and Sludge Pumps

KEY PERSONNEL

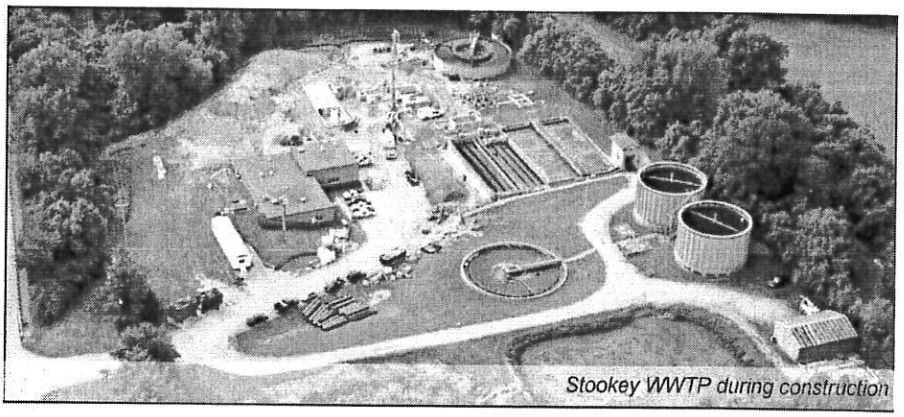
Todd Peek, PE - *Project and Resident Engineer*
Chad Ross, PE - *Lead Project Engineer*
Vicki Wade, PE - *Project Engineer*
Rick McDaniel, PE - *Structural Design*
Chris Bergmann, PE - *Project Engineer*
Barry Roberts - *Electrical Design*

STOOKEY TOWNSHIP (BELLEVILLE) WASTEWATER TREATMENT PLANT UPGRADES

CONTACT:
David Bone
Supervisor
Stookey Township
618.398.6925

COMPLETION DATE:
2014

CONSTRUCTION COST:
$11,392,000


Stookey WWTP during construction

TWM designed expansion of this plant in an unincorporated area near Belleville from a capacity of 1.4 to 1.75 MGD.

Plans included rehabilitation of the existing digester, conversion of existing extended aeration tanks to sequencing batch reactors (SBR) basins, replacement of the existing sand filters with cloth media filtration system, and construction of a new headworks, terminal lift station, UV light disinfection system, chemical feed system for phosphorus removal, and a SCADA control system for the plant and wastewater collection system.

TWM prepared the Facility Plan, IEPA loan application, new user charge system, IEPA permits, bidding documents, and also performed construction observation.


SBR basin with floating aerators

Cloth disk tertiary filtration

RELEVANCE TO FREEBURG

- SBR System with Enhanced Biological Nutrient Removal
- Floating Aeration and Mixers and Mechanically Controlled Decant Weir
- Mechanical Bar Screen
- Cloth Disk Tertiary Filtration
- Terminal LS with Dedicated Storm Flow Pumps and Holding Tank

KEY PERSONNEL

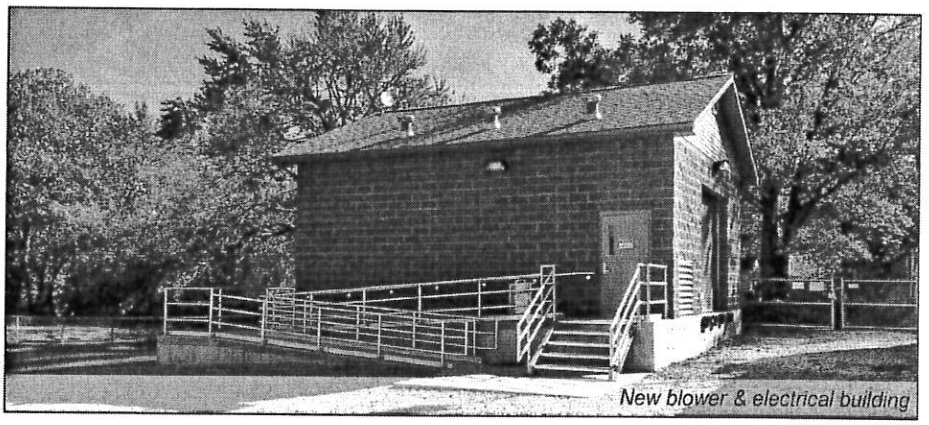
Todd Peek, PE - *Project Engineer*
Chad Ross, PE - *Project Manager*
Vicki Wade, PE - *Project QA/QC*
Rick McDaniel, PE - *Structural Design*
Chris Bergmann, PE - *Project Engineer*
Barry Roberts - *Electrical Design*

FAYETTEVILLE WASTEWATER TREATMENT PLANT UPGRADES

CONTACT:
Brian Funk
Village President
2212 Main Avenue
Fayetteville, IL 62258
618.677.3343

COMPLETION DATE:
2016

CONSTRUCTION COST:
$1,693,988


New blower & electrical building

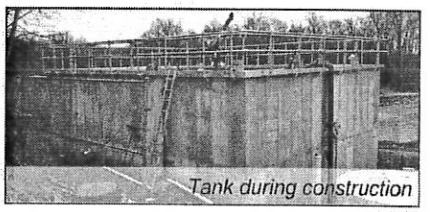
At 50 years old, the existing facility had significant rust and deterioration of structural components, and its limited capacity frequently resulted in flooding issues and breakdown in treatment ability.

TWM's design worked within the space constraints to increase the plant's capacity from a daily average flow of 0.05 MGD to 0.065 MGD. The existing lagoon, formerly used as part of the treatment process, was converted to an excess flow basin.

The mechanical plant was replaced with a sequential oxidization process. Since this process contained few moving parts and limited submerged equipment, maintenance costs were reduced.

The project was funded by a loan from USDA-Rural Development. TWM was responsible for the grant/loan administration.


Return activated sludge to process


Tank during construction


New aeration tank

RELEVANCE TO FREEBURG

- Design of Control Building with Blower / Electrical
- Enhanced Biological Nutrient Removal
- Terminal LS with Provisions for Storm Flow to Lagoon

KEY PERSONNEL

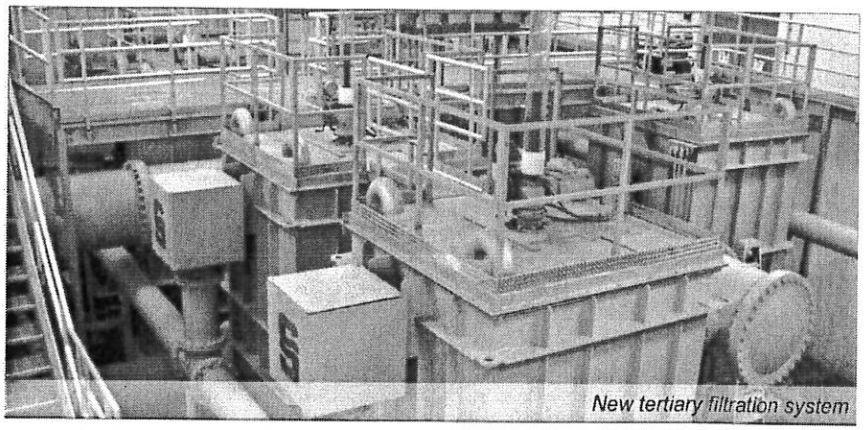
Chris Bergmann, PE - *Project Manager*
Chad Ross, PE - *Project Engineer*
Vicki Wade, PE - *Project QA/QC*
Adam Rutz, PE - *Structural Design*
Rick McDaniel, PE - *Structural Design*
Scott Simmons, PE - *Resident Engineer*
Barry Roberts - *Electrical Design*

BELLEVILLE TERTIARY FILTER BUILDING MODIFICATIONS

CONTACT:
Royce Carlisle
Director of Waste Water Treatment Plant
450 Environmental Drive
Belleville, IL 62220
618.233.7146

COMPLETION DATE:
2014

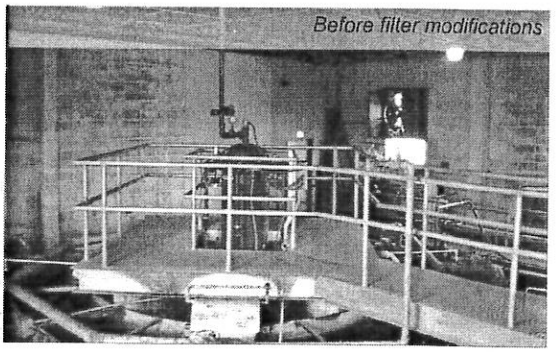
CONSTRUCTION COST:
$3,138,511

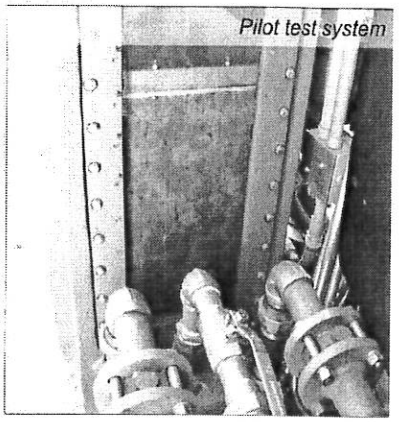

New tertiary filtration system

TWM provided the design and construction engineering of this tertiary filter rehabilitation and expansion for the City's East Plant, which increased the filter system's design capacity from a peak flow of 8.0 MGD to 16.0 MGD.

The project included the removal of the existing sand filters, structural and electrical modifications to the existing building, a non-potable water system and a synthetic compressible media filtration system. The project also included the analysis of pilot testing of the filtration equipment.

TWM prepared the design plans, IEPA permits, bidding documents, and also performed construction observation for the project. This project was the first synthetic compressible media filtration project permitted in the state of Illinois.


Before filter modifications


Pilot test system

RELEVANCE TO FREEBURG

- Tertiary Filtration
- Reuse/Rehabilitation of Existing Building
- Non-potable Water System

KEY PERSONNEL

Todd Peek, PE - *Project Manager & Resident Engineer*
Vicki Wade, PE - *Project QA/QC*
Rick McDaniel, PE - *Structural Design*
Barry Roberts - *Electrical Design*

The five wastewater treatment plant projects detailed earlier are not the only projects where TWM has experience that will prove critical to the Village's West Wastewater Treatment Plant Improvements. As stated previously, our Water Infrastructure Services department has completed several other major wastewater treatment plant projects over the last 30-plus years, including:

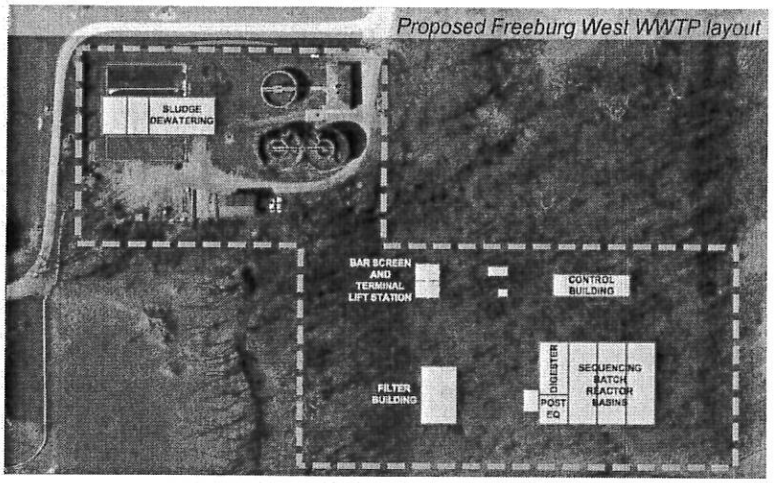
- Village of Swansea WWTP - *1991*
- City of Troy WWTP - *1999*
- Village of Marissa WWTP - *2002*
- Caseyville Township WWTP - *2006*
- Village of Millstadt WWTP - *2008*
- Village of Swansea WWTP - *2010*

The table below lists relevant projects and information on their funding, major components and other technical features. As you can see, our team has a wide variety of experience to serve the Village in its upcoming project.

	Belleville Tertiary Filter Modifications	Belleville WRF Improvements	Caseyville Twp. WWTP Improvements	Fayetteville WWTP Improvements	Lebanon WWTP Improvements	Marissa WWTP Improvements	Millstadt WWTP Improvements	Stookey Twp. WWTP Improvements	Swansea WWTP Improvements	Troy WWTP Improvements
IEPA Facility Plan and Loan		x	x		x		x	x	x	x
Sequencing Batch Reactor System			x		x	x	x	x	x	
Enhanced Biological Nutrient Removal		x	x	x	x		x	x	x	
Energy Efficient Aeration		x		x	x			x	x	
Tertiary Filtration	x		x		x	x	x	x	x	x
Mechanical Influent Screening		x	x	x	x		x	x	x	x
New Terminal Lift Station		x	x	x		x	x	x	x	
Rehab of Terminal Lift Station					x					x
Sludge Dewatering			x		x		x	x	x	x
Advanced Sludge Treatment		x								
Reuse of Existing Tankage/Buildings	x	x	x	x	x		x	x	x	
Ultraviolet Light Disinfection		x	x				x	x	x	
Non-potable Water System	x				x		x	x	x	
SCADA System	x	x	x		x		x	x	x	

The main component of this project involves improvements to the wastewater treatment plant. Within the design of these improvements are more specific design components, which are detailed in our approach. In addition to the design elements, the project will also involve acquiring an IEPA construction permit and an IEPA State Revolving Fund Loan. TWM can also benefit the Village with assistance in analyzing your collection system and by using advanced geospatial services.

To approach the wastewater treatment plant improvements, it is easiest and most effective to break the project into individual components. While all the pieces eventually fit together, our design is most effectively streamlined when each component is its own task.



In working with Village staff to prepare the IEPA Facility Plan Update, we developed the proposed layout above and have identified the major components below:

- Influent Processes (screening and pumping)
- Tertiary Filtration System & UV Disinfection
- Additional On-Site Buildings
- Sequencing Batch Reactor (SBR) Treatment System
- Sludge Treatment
- Structural Design

Influent Processes

The influent processes consist of the influent piping, headworks and terminal lift station. In the table below, we have included some of the issues we feel will be key during design and potential solutions.

Influent Processes - **Key Issue**	**TWM Approach**
Avoid redundant creek crossings	• Possibly re-route the influent gravity sewer on the east side of the creek • Eliminate at least one creek crossing • Decrease depth needed for influent screening
Reduce debris in treatment process without removing organics	• Reduce or eliminate rags and debris entering new secondary process with a mechanical bar screen • Include washing press to keep organics in the plant while removing debris
Handle peak flow pumping	• Use of actuated control valves to pump to Excess Flow Clarifier during high flow; OR • Dedicated pumps for each SBR basin; high flow pump to the Excess Flow Clarifier

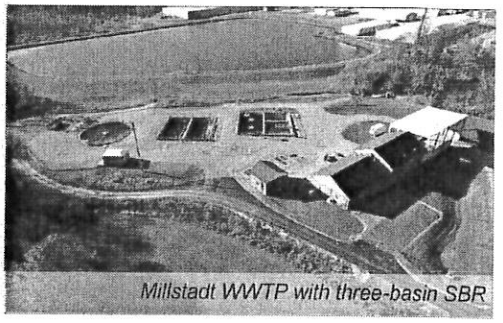
Why TWM?

In the majority of the wastewater treatment plants TWM has designed, we have accounted for high flows when designing the terminal lift station. We will build upon this experience to address the Village's wet weather flow rate problems.

Sequencing Batch Reactor (SBR) System

The primary component of the proposed WWTP improvements is the construction of a three-basin SBR System. We agree that an SBR is an appropriate process to meet forthcoming effluent limits, which include 1 mg/L phosphorus and potential future limits of 10 mg/L total nitrogen, as it will minimize future modifications to the treatment process. As was the case with the influent process, there are some key issues and solutions we have identified.

TWM has designed SBR Systems in previous projects for Marissa, Caseyville Township, Millstadt, Swansea, Stookey Township and Lebanon.



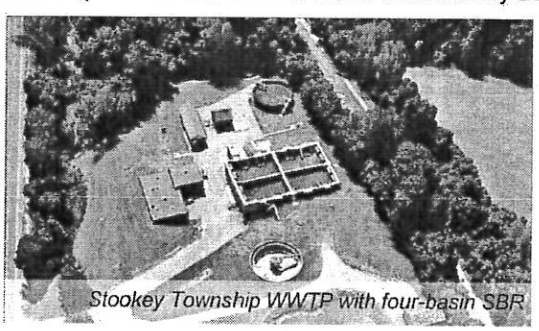
Millstadt WWTP with three-basin SBR

SBR System - **Key Issue**	**TWM Approach**
Accounting for varying and peak flow rates	• Incorporate multiple flow scenarios into the controls, including "storm flow" • Shorten aeration cycles during storm events to treat additional flow • Potential use of SBR variations that allow continuous influent while processing the flow as if it is a batch, simplifying operation
Accommodate future growth	• Design of three-basin SBR system with thought to expand to four basins in the future • Possibility to expand plant by 1/3 of proposed capacity with efficient design
Selection of aeration system with consideration to maintenance and energy efficiency	• Use of fine bubble diffusers, which provide increased efficiency but require replacement every 6-8 months; OR • Install diffusers on a retrievable mounted bracket to allow for easier maintenance
Selection of ideal decanter	• Use of floating decanter; OR • Use of a mechanically controlled weir that can be controlled with a VFD, allowing the rate to change during high flows
Treatment of total nitrogen	• Since the IEPA requires long detention time for ammonia removal, total nitrogen treatment can be accomplished through addition of an anoxic phase while reducing aeration requirements • Use of controls and mixers rather than an additional process or tankage
Electricity costs	• Use dissolved oxygen control to cycle air on and off as necessary to reduce electric costs • Use of high efficiency blowers to reduce costs • Use of fine bubble aeration to reduce air requirements

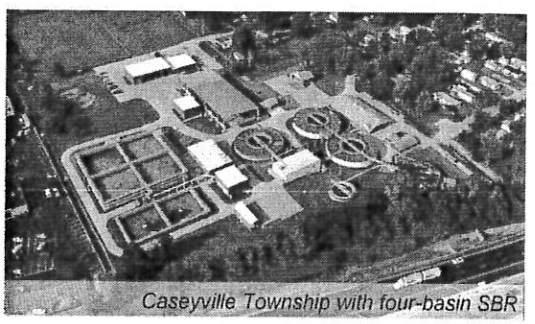
Why TWM?

TWM has designed several different types of SBR systems, including all of the solution options listed above. This has helped us become knowledgeable of each system's advantages, as well as their differences and unique operation and maintenance requirements. All of the projects shown on this page used a different type of aeration system, which was chosen based on evaluation and coordination with the plant operators. We have also worked with plant operators to design SCADA systems to meet their varying levels of detail, control and expense.

For the Lebanon WWTP improvements project, TWM's design approach included a plan to accommodate future growth with provisions to have a fourth basin easily added in the future.



Stookey Township WWTP with four-basin SBR



Caseyville Township with four-basin SBR

Tertiary Filtration and UV Disinfection

It is possible the Village can eliminate the filters, depending on permitting requirements, to save capital costs. However, if the plant grows or is given stricter permit requirements, they may be necessary. If so, the technology for tertiary filtration has improved in recent years. Micro-fiber cloth filters can now not only improve effluent total suspended solids, but they can also aid in phosphorus removal.

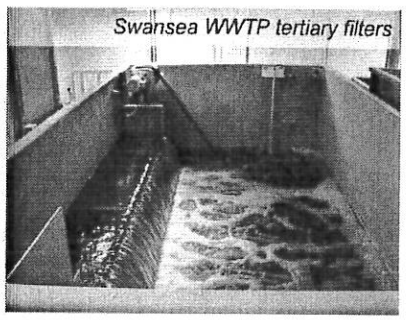
The Village has a disinfection exemption and does not currently plan on the installation of ultraviolet light disinfection as part of this project. However, this exemption could be removed by the IEPA during any future NPDES permit review.

Filtration / UV - **Key Issue**	**TWM Approach**
Filtration requirements	• If the plant does not have a phosphorus limit, the filters may not be necessary • If needed, advanced micro-fiber filtration can improve the removal of total suspended solids and phosphorus
Future disinfection may be required	• Reserve large enough space on the site plan so it may be possible for future UV to be gravity fed

Why TWM?

TWM has designed tertiary filtration at nearly all our wastewater treatment plant expansions in the last 15 years. TWM has experience evaluating and designing cloth media and synthetic compressible media filtrations. We will help the Village evaluate which system works best for this project or decide if leaving room for them in the future is a better solution, as we did for the City of Belleville's West Plant.

When TWM designed the expansion of the Lebanon treatment plant, we did not include ultraviolet light disinfection. As is the case on your project, we designed provisions to ensure it could be included in the future.

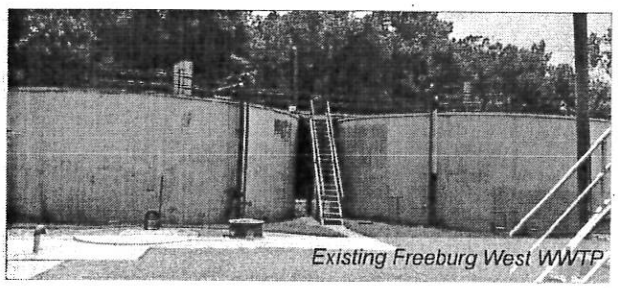


Swansea WWTP tertiary filters

Sludge Treatment

One of the main considerations for sludge treatment is capacity—both capacity to digest the sludge and also storage capacity for dewatered sludge during cold temperatures. Selecting the right type of dewatering equipment is also an important decision.

Sludge Treatment - **Key Issue**	**TWM Approach**
Need for increased digester capacity and sludge storage	• Operational flexibility with multiple tanks, so tanks can be easily taken out of service for maintenance or cleaning • Rehabilitation and reuse of existing steel tanks can save capital costs and add operational flexibility • Sludge canopy for dewatered sludge could be fitted with solar panels
Selection of the right equipment	• Experience in evaluation of belt press, centrifuge and screw press equipment for sludge dewatering • Assist with pilot testing of possible equipment at the Village's West WWTP • New technology simplifies operation and maintenance and can eliminate the majority of time spent cleaning up after operation



Existing Freeburg West WWTP

Why TWM?

TWM has repurposed existing tanks on several projects to become digester tanks, saving the client significant construction costs. We have also assisted in the pilot testing and equipment selection for sludge dewatering, including a shift in focus from belt presses to screw presses with the advancement of technology.

Additional On-Site Buildings

Additional on-site buildings would need to incorporate an electrical room, blower room—plus the need for a sludge pump room dependent upon the SBR process and operational preference. The Village may also wish to consider the addition of new laboratory space.

On-Site Buildings - **Key Issue**	**TWM Approach**
Reduce electrical construction costs	• Placement of the electrical room close to the SBR basins to reduce conduit and wire length
Efficient sludge pumping	• Submersible pumps may be used in the basins, incorporating flow meters; OR • Positive displacement pumps could be placed in a building room or dry pit, eliminating the need for an extra flow meter
Laboratory needs	• The existing laboratory will be a long distance from the process basins, where the majority of samples are taken • Existing laboratory is outdated and could be replaced with a more efficient and accessible one

Why TWM?

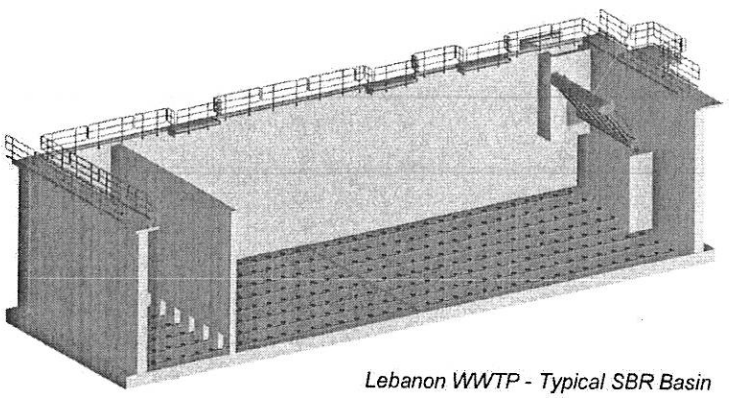
TWM has routinely designed control buildings that house a combination of laboratories, garages, sludge pump rooms, blower rooms and electrical rooms. TWM's experience in sludge pumps/rooms will allow us to provide the Village with immediate options, comparing maintenance requirements and cost.

Millstadt WWTP - Control Building

Structural Design

Outside of the equipment, one of the largest costs of a wastewater treatment plant is the construction of concrete tankage. Also, the process tankage of some SBR system manufacturers have unique in-basin requirements that can result in complex structures with baffle walls, equipment supports and/or effluent chambers.

Structural Design - **Key Issue**	**TWM Approach**
Reduce concrete construction costs	• Design with common wall construction to reduce concrete and project costs • Use experience with multiple manufacturers and knowledge of intricacies required in their basins
Design structures unique to process manufacturers	• Structural engineers constantly coordinate with our civil engineers to understand the differences in each manufacturer's basin and find efficient and economical solutions



Lebanon WWTP - Typical SBR Basin

Why TWM?

TWM's staff of licensed structural engineers has experience with the structural design of SBR systems, which allows us to use square or rectangular tanks with common wall construction when possible to reduce concrete costs. Our knowledge and experience with SBR systems allows us to anticipate and accommodate unique issues during design.

Permitting & IEPA Loan Application

Even in an ideal situation, permitting of treatment plant expansions can create a bottleneck in the process. There are multiple regulatory considerations on this project where we feel our experience will help the Village.

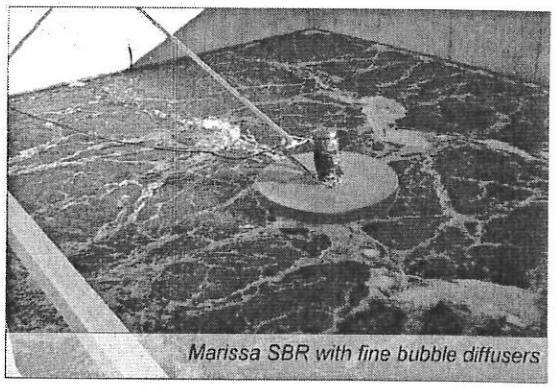
Permitting / Loan - **Key Issue**	**TWM Approach**
The IEPA has no specific regulations for SBR systems, instead using a combination of extended air design requirements (35 IAC 370.920) and SBR requirements from 10 States Standards for Wastewater Facilities	• TWM will provide a design requirement reference checklist as part of the permit application to help show compliance with regulations
The existing plant is located on the Kinney Branch; any construction in the flood plain would require DNR/ACOE permits	• Expansion will require access to the other side of the Kinney Branch • Construction of the plant improvements may require coordinating early with DNR/ACOE, if the improvements are in the flood plain
The project is most desirable to the public if impacts on the user charge are minimized	• TWM evaluated and compared user charge systems for both 20- and 30-year loans during the Facility Plan phase • IEPA loan regulations have also recently changed, which would enable the Village to be awarded up to 15% principal forgiveness

Why TWM?

TWM's experience with permitting new technologies, as well as SBR systems with the IEPA, will help reduce the review time. We designed and permitted the following systems—all being the first in the state of Illinois:

- Ultraviolet light disinfection system in Swansea
- SBR system in Marissa
- Synthetic compressible media filtration system in Belleville
- Non-contact ultraviolet light disinfection system in Belleville

TWM also has experience in providing flood plain mitigation when necessary, which will help accelerate the DNR / ACOE review process. Recent examples include Belleville and Lebanon.



Marissa SBR with fine bubble diffusers

We recently assisted the City of Lebanon in receiving an IEPA loan that included 15% principal forgiveness, ***saving them approximately $1.8 million***. We have an excellent relationship with IEPA staff and are notified when loan rule changes are proposed and enacted.

Under the current IEPA State Revolving Fund Loan Rules that just went into effect on July 20, ***the Village of Freeburg would also be eligible for approximately 15% principal forgiveness***. These rules could possibly change every year, so moving the project into construction and acquiring an IEPA loan quickly could potentially save the Village a large sum of money.

Collection System

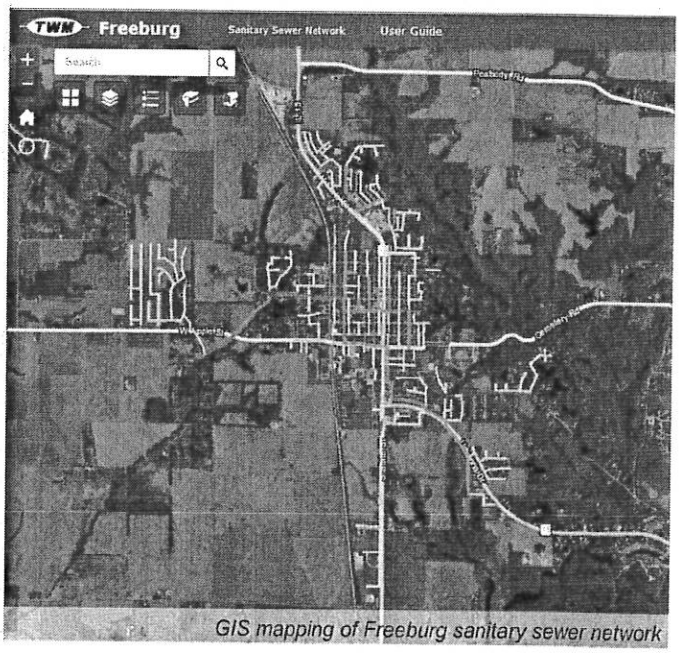
While the treatment plant is central to the improvements, the collection system is vital to the overall operation of the wastewater system. Identifying projects to replace sewer mains, to line sewer mains, and to improve lift stations and force mains can also help the Village battle infiltration / inflow and peak flow problems. We have addressed similar issues and solutions for other municipalities.

Collection System - **Key Issue**	**TWM Approach**
Smoke testing and video inspection	• Smoke testing can find major sources of inflow, such as connected catch basins and untrapped downspouts • Smoke testing may be available from Rural Development for a low price • TWM conducts sewer video inspections, which can identify locations of infiltration through broken or cracked sewer mains and manholes
Conduct infiltration & inflow flow study	• It can be difficult to identify which areas of the system are in the most need of replacement or lining • Video inspection of the entire system before conducting a flow study will likely be expensive and unnecessary • Flow monitoring and testing can aid in identifying areas with the highest infiltration and inflow, which can then be video inspected to determine the cause of the problem and find a solution
Sewer main lining or replacement	• Sewer lining can be a simple and cost effective solution for areas with infiltration caused by root intrusion and cracked pipes • In some cases the main is completely broken and must be partially or entirely replaced • Through a flow study, the existing mains may also be found to be too small, replacing the existing main with a larger pipe can help remove bottlenecks in the system
Lift station replacements	• The capacity of a lift station can be increased if the sources of infiltration and inflow cannot be eliminated in a cost-effective manner • A lift station may also need to be replaced if it has aged and is no longer operating at its design capacity

Why TWM?

TWM has completed work in all of these key areas. We recently performed an infiltration and inflow analysis for the City of O'Fallon, IL (North Oak Street Area). The results show a tremendous amount of infiltration and inflow problems in this old original portion of town. We are now working with the City to develop a phased approach to eliminate the problem areas by replacing the original piping in this area.

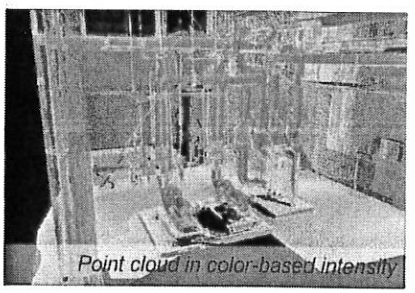
TWM also has extensive knowledge of the Village of Freeburg's collection system through the cloud hosting of the GIS Mapping of the Sanitary Sewer Network.



GIS mapping of Freeburg sanitary sewer network

Geospatial Services

In addition to GIS mapping, another geospatial benefit TWM can offer the Village of Freeburg in the design of the West Wastewater Treatment Plant is the use of 3D laser scanning. This technology can help obtain precise data for the existing wastewater treatment plant site, structures and buildings.

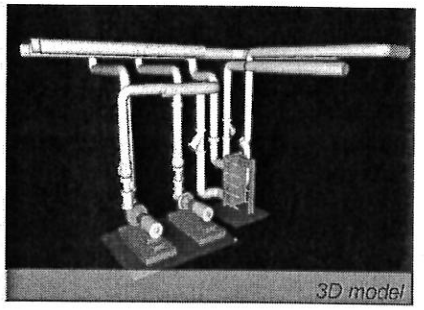

Point cloud in color-based intensity

Why TWM?

For wastewater treatment plants, we have used this advanced technology to gather more accurate data on existing buildings, tanks and tunnels that were rehabilitated as part of a project.

This is an extremely accurate method to collect the existing conditions of the site. It also can save the time and expense of sending survey personnel to the site to obtain additional information.

3D laser scanning digitizes objects by accurately collecting millions of data points in an effort to provide a useful deliverable, such as high-definition photos and videos. In a matter of hours, the C10 scanner can provide a high-definition survey, which is used to model and dimension critical components. The C10 has a relative accuracy of up to 1/8 - 1/16", providing you precise measurements and calculations for design, planning or analysis.


3D model

Why TWM? - Summary

- We will design the influent screening, washing and pumping systems that work best for your installation. Factors such as depth, flow and pumping capacity make each system unique.
- TWM has experience designing SBR systems from several different manufacturers and will work to find the best system for the Village of Freeburg.
- Our staff has the knowledge to help select which approach is right for you in terms of tertiary filtration and UV disinfection.
- We will design efficient and economical sludge storage and treatment systems using existing tankage to minimize construction costs.
- Control and process buildings will be laid out to maximize their functionality and reduce the cost of electrical wiring and other piping.
- TWM's structural engineers have experience with the structural design of SBR basins, bar screen and lift station structures and concrete masonry unit (CMU) buildings.
- Our team has the knowledge of complicated IEPA loan regulations that can help save the Village a substantial amount of money.
- We have a vast amount of collection system work experience, including flow studies, infiltration / inflow reports, sanitary sewer lining, sewer replacement and lift station rehabilitation or replacement.
- TWM's advanced 3D laser scanning technology saves time and money due to its high level of accuracy and fast turnaround time.