

**History:**

ETS Engineering, Inc. was founded in July of 2001, prior to that; the company existed as Electra-Tech Services, LLC since 1996. The principals of ETS combined their expertise to offer solid engineering solutions to complex projects to our clients. Each of the principals has over 20 years experience relating to engineering, building and construction. Together, they offer a broad based knowledge of lighting design, power, technology, mechanical, plumbing and energy management systems.

**Organization:**

ETS Engineering Inc. provides engineering from schematic design through construction administration. The principals assign the work to an engineer who becomes responsible for the details of the project. Each project has a principal in charge in order to facilitate scheduling and budgeting. The same engineering team sees the project through from start to finish. Our client base consists of architects, owners, construction managers, contractors and other consultants.

**Personnel:**

Our current staff includes licensed professional engineers, project engineers, electrical designers. LEED Accredited professional and CAD designers. ETS Engineering, Inc. is licensed in 10 states in addition to our NCEES registration to satisfy the design requirements of our diverse clients. In our desire to constantly improve the quality of our engineering services; our staff attends many professional seminars and presentations relating to our industry.

**Licensure:**

Current State Registration includes the following:  
Michigan, Ohio, Indiana, Virginia, Florida, Pennsylvania, North Carolina, Georgia, Arizona, Minnesota

**Objective:**

We pride ourselves on retaining past clients that appreciate quality work and developing lasting relationships. We share a great working environment with enthusiastic personalities.

**To set us apart:**

ETS Engineering, Inc. is known for their commitment to projects from start to finish. Our dedicated staff works very hard to exceed your expectations and always make themselves available for questions and answers during design as well as construction. We like to create a sense of partnership with our clients and their satisfaction is important to us. ETS Engineering takes pride in our ability to listen, which helps us to understand and respond to unique projects.



### **R. Scott Leo, Principal**

Mr. Leo has been involved in the electrical industry since 1977 starting as an electrician. He obtained an Electrical Journeyman License in 1982 before obtaining a Bachelor of Science in electrical engineering in 1987 from Lawrence Technological University. Mr. Leo started Electra-Tech Services, LLC, and an engineering/consulting business in 1996. During those years, Mr. Leo acquired and maintained a good deal of projects and clients. Looking to expand the business, Mr. Leo initiated a relationship that soon became a partnership with both Mr. Sayles and Mr. Worsley, this company is known today as ETS Engineering, Inc. Over the past years he has been particularly involved with specialty lighting design and engineering of automotive dealerships, churches, restaurants, commercial buildings, medical offices and heavy industrial projects. His responsibilities at ETS also include client relations, project management and educating the firm with updated code compliance issues and utility requirements.

### **Douglas M. Sayles, PE, LEED-AP, Principal**

Mr. Sayles has been working in the design and construction industry since 1987. Past experience includes working for some of the large metro Detroit AE firms as well as a mechanical/electrical consultant. Prior to joining ETS Engineering, Inc., he was a Principal and Director of Electrical Engineering for nine years at a large AE firm specializing in educational, institutional and public facilities. In addition to project management, he was responsible for project review, client relations and technical and specification standards. At ETS Engineering, Mr. Sayles is primarily involved with educational facility projects, libraries, commercial and public facilities as well as alternative energy projects.

### **Donald E. Worsley, PE, Principal**

Mr. Worsley has been working in the design and construction industry since 1964 beginning his career in active duty for the US Navy – Civil Engineer Corps. In addition to joining ETS Engineering, Inc., One of his largest projects was the mechanical and electrical engineering design for General Motors World of Motion Exhibit at Epcot center in Orlando, Florida. His current responsibilities for ETS Engineering include: director of mechanical engineering, mechanical project management and design review.

### **Brian C. Wilt, Project Engineer**

Mr. Wilt has been with ETS Engineering since 1998. He has been exposed to a wide variety of work experiences in addition to Electrical Engineering that include Thermal Sciences, Plumbing, HVAC, and Environmental Engineering. In addition to Mr. Wilt's current position as Project Electrical Engineer, his other duties include: Lighting photometric calculations, arc-flash calculations, specification and code compliance review.

### **Kimberly Robinson, AutoCAD Draftsperson**

Mrs. Robinson joined ETS Engineering in Sept. of 2007. She completed her Bachelor of Science in Architecture in 2007 and has worked on design projects relating to multiple use structures, city halls and research facilities. She has also been involved with the design of LEED buildings. Her current responsibilities include: CAD Draftsperson.

### **Melissa Ferrero, Office Manager**

Mrs. Ferrero joined ETS Engineering in July of 2008. She previously worked as an executive assistant at Webasto Sunroofs Inc. Mrs. Ferrero has also assisted at Royal Oak School District as substitute paraprofessional and an assistant to the administrative offices. Her current responsibilities include: Office management, billing and receivables.



### **Power Design**

The design of an electrical distribution system is a major part of our projects. Our goal is to determine the proper system that will fit the requirements for each particular building including utility rate structure. This benefits the end user by having an energy efficient building that meets their needs. Our power engineering services include:

- ❑ Utility power coordination
- ❑ Clean power for technology including UPS, TVSS
- ❑ Stand-by emergency power systems
- ❑ 15KV primary power distribution
- ❑ Fault current calculations
- ❑ Power factor correction
- ❑ Alternative energy solutions

### **Lighting Design**

As members of the Illuminating Engineering, we keep up to date with the latest advances in the industry. Lighting is an important part of our design and with our unique designs we create warm and inviting interior atmosphere to support the architectural aesthetics of each project. Special lighting environments include:

- ❑ Educational classroom
- ❑ Library and media centers
- ❑ Church lighting
- ❑ High-end retail
- ❑ Sports lighting
- ❑ Specialty site lighting
- ❑ Lighting design sensitive to proper era for restoration projects
- ❑ Office environments requiring RP-1 standards
- ❑ ASHRAE 90.1 Energy management for lighting systems

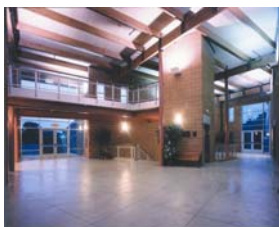


### **LEED Accreditation**

Our engineering staff is experienced in providing a LEED accredited innovated design to fit your needs. Our past experience includes documentation for LEED tax credits as well as the innovative design for lighting controls using daylight sensors, motion detectors and lighting control systems as well as energy saving light fixture specifications and design.

### **Professional Memberships:**

ESD Engineering Society of Detroit  
IESNA Illuminating Engineering Society of North America  
IEEE Institute of Electrical and Electronics Engineers  
NSPE National Society of Professional Engineers  
MSPE Michigan Society of Professional Engineers  
Michigan Professional Business Association  
Royal Oak Chamber of Commerce



### **SCHOOLS**

East Porter Schools – East Porter, IN  
Lowell Middle School – Lowell, IN  
Canton Montessori Academy – Canton, MI  
Thea Bowman Academy – Gary, IN  
Cranbrook Schools – Bloomfield, MI  
Rochester High School Auditorium - Rochester, MI  
Plymouth Christian Academy - Plymouth, MI  
Oakland Christian School - Auburn Hills, MI  
Fitzgerald High School Auditorium - Warren, MI  
Everest Academy - Clarkston, MI  
MTEC University Center – Gaylord, MI  
Pennfield School District – Pennfield, MI  
New Haven School District – New Haven, MI  
Coldwater School District – Coldwater, MI  
Huron Valley School District – Milford, MI  
Allen Academy – Detroit, MI  
Ann Arbor Schools 2004 Bond – Ann Arbor, MI  
Northville Schools 2006 Bond – Northville, MI  
Spring Lake District Schools 2005 Bond – Spring Lake, MI

### **RETAIL**

Paint Creek Crossing – Pittsfield Twp, MI  
Gateway Shopping Center – Macomb Twp., MI  
Lakeshore Shopping Center – St. Clair Shores, MI  
Charlotte Jewelry – Birmingham, MI  
Murray's Discount Auto - Detroit, MI  
Sibley Shoes – Great Lakes Crossing Auburn Hills, MI  
Bell Tire Store – 3 metro locations  
Kroger Store new and renovated – multiple locations  
Anne Fontaine – Somerset Mall Troy, MI  
Effigy Studios – 2005 AIA Honor Award – Ferndale, MI  
Hunters Square Center - Farmington Hills, MI  
Winchester Center - Rochester, MI

### **DEALERSHIPS**

Jim Ellis VW – Atlanta, GA  
Liberty Hyundai – Lyon Twp., MI  
San Francisco Ford/Lincoln Mercury  
Prestige Pre-Owned Sales Bldg. – St. Claire Shores, MI  
Prestige Autohaus Mercedes – St. Clair Shores, MI  
Stu Evans Lincoln Mercury – Clinton Twp., MI  
Jaguar of Novi – Novi, MI  
Wolverine Harley Davidson – Clinton Twp., MI  
Manhattan Auto Group – New York, NY  
Maxey Ford – Detroit, MI  
Sesi Volvo / Lincoln Mercury – Ypsilanti, MI  
Town Square Lincoln Mercury – Lincolnton, NC  
Sandy Springs Lincoln Mercury – Atlanta, GA

### **RELIGIOUS**

Divine Mercy Catholic Church – Davisburg, MI  
Sisters of Mary phase 3 – Ann Arbor, MI  
St. Paul Tarsus – Macomb Twp., MI  
Brighton Christian Church – Brighton, MI  
Faith United Methodist - Trenton, MI  
St John the Baptist – Ypsilanti, MI  
Commerce United Methodist Church – Commerce, MI  
Intercity Baptist Church – Allen Park, MI  
Stony Creek Church – Utica, MI  
First United Methodist Church – Troy, MI  
Grosse Ile Presbyterian Church – Grosse Ile, MI  
First Congregational Church – Rochester, MI  
Immanuel Lutheran Church – St. Clair, MI  
Orchard Lake Community Church – Orchard Lk, MI  
St. Gertrude's Church – St. Clair Shores, MI

### **COMMERCIAL**

DPS Facilities Building – 2005 AIA Honor Award  
Merrill Lynch, Oakland Tech - Auburn Hills, MI  
Buhl Building renovations - Detroit, MI  
ADI Hanger – Pontiac, MI  
Palmer Moving and Storage – Warren, MI  
Standard Federal Bank Branch Additions  
Comerica Bank Renovations – multiple metro locations  
Ford Senior Center – Taylor, MI  
Comcast Tier One Call Center – Scio Twp., MI  
Comcast Customer Service Center – Royal Oak, MI  
St. Joseph Mercy Medical Office Bldg. – Clinton Twp., MI  
Stephani Office Building – Royal Oak, MI

### **INDUSTRIAL**

Rayconnect – Rochester Hills, MI  
AVL Testing and dynamometer – Plymouth, MI  
Bosco's Pizza – Warren, MI  
Par's Ice Cream – Taylor, MI  
Henkel Surface Technologies – Madison Hts., MI  
AJM Packaging Corp. - Detroit, MI  
National Steel Corp. – River Rouge, MI  
Iron Mountain Facility – Wixom, MI  
DiamlerChrysler Technology Center- Auburn Hills, MI  
Smith Meat Packing Facility – Port Huron, MI  
Farmer Jack / A&P distribution facility – Livonia, MI  
SMT Hydrogen Test Cell Laboratories – Dearborn, MI  
DTE Next Energy Hydrogen fuel station – Southfield and Detroit, MI

### **RECREATIONAL FACILITIES**

Diamond at the Summit Minor League Baseball Stadium – Waterford, MI  
Canton Softball Pavilion – Canton, MI  
Duck Lake Recreation building – Highland, MI  
Chumung Hills Country Club – Howell, MI  
Copper Hills Country Club – Oxford, MI  
Huron Valley Field house / Natatorium – Milford, MI  
Rowlette Bowl-O-Rama – Rowlette, TX

### **HEALTH CARE / NURSING HOMES**

Medilodge of Port Huron-Port Huron, MI  
Medilodge of Montrose-Montrose, MI  
Cherrywood Nursing Home – Sterling Hts., MI  
Boulevard Health Center, Bradford Wing – Rochester, MI  
Marywood Nursing Home – Livonia, MI  
Medilodge of Monroe – Monroe, MI  
Beacon Hill Assisted Living – Hillsdale, MI  
Forest View Assisted Living – Hillsdale, MI  
Lourdes Nursing Home – Waterford, MI  
St. John Surgery Center – Grosse Pointe, MI  
Cottage Hospital – Grosse Pointe, MI  
Straith Hospital – Southfield, MI  
St. John Microbiology Lab – St Clair Shores, MI  
Cooper Rehabilitation Center – Farmington Hills, MI  
Dupuis Dental office – Taylor, MI  
Yaste / Hufanda Dental office – South Carolina  
Beaumont Rehabilitation Center – Royal Oak, MI  
Michigan Eye Care Institute – Southfield, MI  
Cosmetic Surgery – Troy, MI



### **MUNICIPAL/GOVERNMENT BUILDINGS**

TACOM – Bldg 200C Survivability Area Reno -Warren, MI  
TACOM-Bldg. 229 1<sup>st</sup> Floor renovation – Warren, MI  
Martindale Beach House - Kensington Metro Park  
Detroit Public Library Main Branch – Teen Room  
McConnell Air Force Base Flight Simulator – VA  
Harper Woods Public Library – Harper Woods, MI  
Mt. Clemens Public Library – Mt. Clemens, MI  
White Lake Police Station – White Lake, MI  
Grosse Pointe Farms City Hall - Grosse Pointe Farms, MI  
State of Michigan General Office Building – Flint, MI  
State of Michigan Detroit Plaza Building – Detroit, MI  
Newberry Prison – Newberry, MI  
Farmington Public Safety Building – Farmington, MI  
Sanilac Court House – Sanilac County, MI  
Independence Twp. City Hall – Independence Twp., MI  
Independence Twp. Fire Station – Independence Twp., MI  
Camp Brighton Correctional Facility – Pinckney, MI  
Petersburg City Hall – Petersburg, MI  
Harper Woods Library – Harper Woods, MI  
City of Southfield – Field Zone – Southfield, MI  
City of Alma Transportation – Alma, MI  
Shelby Twp. Fire Station – Shelby Twp., MI  
Orion Fire Station – Orion Twp., MI  
City of Tecumseh Police Station – Tecumseh, MI



### **HOSPITALITY / RESTURANTS**

Fort Shelby Doubletree Suites – Detroit, MI  
Tin Fish at Twelve Oaks Mall – Novi, MI  
Grille21 – Westin Book Cadillac  
Kalamata Greek Café – Troy, MI  
The Pub at Partridge Creek – Macomb Twp., MI  
Tin Fish at Partridge Creek – Macomb Twp., MI  
Tom's Oyster Bar – Rochester, MI  
Zoup Restaurant – 3 metro locations  
Tricho Spa – 12-Oaks Mall Novi, MI  
Kreil Day Spa – Dearborn, MI  
Great Lakes Athletic Club Day Spa – Clarkston, MI  
Dunkin Donuts – multiple locations  
Starbucks Coffee – locations, OH and MI



### **HISTORICAL PRESERVATION**

Pick-Fort Shelby Hotel – Detroit, MI  
Heritage Auto Museum – Ypsilanti, MI  
Detroit Children's Museum – Detroit, MI  
Thompson Block – Ypsilanti, M

**Educational**

**Cranbrook Campus IT Infrastructure – Bloomfield Hills, MI – Completion 2008**

Described as the largest I-Patch/Cat. 6 installation in North America in 2008 over 1 million feet of data cable. Our work included pathway design for data cabling in 46 buildings on campus. Also included is the removal of existing raceways, new power, lighting and grounding for new IT closets, routing raceways for new cabling and connecting new raceways and cabling back to IT closets.

Client: SHW Group

**East Porter County Schools – Indiana – Completion 2008**

Kouts, Morgan and Washington school renovations and additions to each school. Additions included new entrances, classrooms, gymnasiums, sound systems and electrical distribution for bus parking block heaters. Renovations were made to the cafeteria, offices and kindergarten rooms.

Client: Fanning Howey Associates

**Lowell Middle School – Lowell, IN – Completion 2008**

195,000 Sq. Ft. new construction middle school. Design included lighting and power throughout whole school and site, as well as, fire alarm and emergency system, sound system and back-up generators.

Client: Fanning Howey Associates

**Canton School House Montessori Academy – Canton, MI – Completion 2008**

15,000 Sq. Ft. single story school building. Electrical work also, consisted of a fire alarm system, lighting controls and emergency system.

Client: Stucky Vitale Architects

**South Central School, Union Mills, IN – Completion 2008**

175,000 Sq. Ft. K-12 building. Design included Classroom addition, Sports field lighting, Concessions Building, and Mechanical and Technology upgrades throughout building.

Client: Fanning Howey Associates

**Thea Bowman Academy – Gary, IN – Completion 2008**

80,000 Sq. Ft. new construction school that included a fire clock, emergency system, power and lighting design for classrooms, labs, kitchen, offices, conference rooms and a gymnasium.

Client: FMK Architects

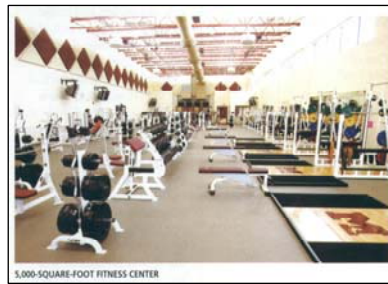
**Huron Valley High School Fieldhouse additions – Completion 2004**

Two 69,000 Sq. Ft. facilities that featured: a competition pool, recreational pool, fitness center, and basketball court, childcare and multi-purpose rooms.

Client: Fanning Howey Associates, Inc.



COMMUNITY POOL



5,000-SQUARE-FOOT FITNESS CENTER

**Educational (Continued)**

**Spring Lake Schools – Spring Lake, MI – Completion 2007**

Interior renovations and additions to three elementary schools (Jeffers, Holmes and Intermediate) and 66,350 Sq. Ft. Aquatic and Fitness Center addition at the High School Building.

Client: Fanning Howey Associates

**Troy High School – Troy, MI - Completion 2002**

Complete replacement of a Theatrical Lighting and Dimming System; re-designed the auditorium theatrical lighting and dimming system to a state of the art electronic dimming system, controls and new energy saving light fixtures.

Client: Constantine George Pappas, AIA

**Everest Academy – Clarkston, MI – Completion 2000**

50,000 Sq. Ft. two story building for preschool children inclusive of classrooms, offices and a multi-purpose room.

Primary electrical system for a four building campus to include a 15KV switchgear, primary conductors and building transformers.

Client: Fanning Howey Associates, Inc.

**East Detroit Public Schools – Eastpointe, MI – Completion 1999**

Renovation of 14 existing buildings consisting of new construction of classrooms throughout the district, 40,000 Sq. Ft. addition to the high school gymnasium and locker room addition and a three million dollar technology network, including a private fiber optic wide area network to connect the districts 14 buildings together.

Architect: Wakely Associates, Inc.

**Clintondale Community Schools – Clinton Township, MI – Completion 1999**

Technology Designer for a 1.7 million dollar technology network, including; a private fiber optic WAN (wide area network) to connect the districts five buildings together.

Architect: Wakely Associates, Inc.

**Mtec – University Center – Gaylord, MI Completion 1999**

55,000 Sq. Ft. trades and technology center consisting of classrooms, offices and machine labs

Client: Straub, Pettitt, Yaste Architects

**Automotive**

**Volkswagen Corporate new image showroom lighting 2009**

Lighting design for a new corporate image for the renovation of all showrooms across the United States. Our goal was to provide assistance in selections and layout for a new image for all the new and renovated showrooms to match the corporate requirements from Germany and utilize U.S. lighting manufactures.

**Jim Ellis Volkswagen – Atlanta, GA – 2009**

32,000 Sq. Ft. renovation and addition including showroom, offices and full service maintenance garage.

Client: Cityscape Architects, Inc.

**Prestige Mercedes – St. Clair Shores, MI Completion 2006**

30,000 Sq. Ft. warehouse facility converted into an automotive dealership for Mercedes Benz including a showroom, corporate offices and service areas. Also completed 10,000 Sq. Ft. renovation for a pre-owned sales building.

Client: Cityscape Architects

**Sesi Volvo / Lincoln Mercury – Ypsilanti, MI Completion 2004**

35,000 Sq. Ft. recreational building converted into an automotive dealership including a showroom, full service garage and parts department.

Construction estimate: \$3,000,000.00

Client: Cityscape Architects

**Manhattan Auto Group – New York, NY - Completion 2003**

Renovations of three floors in a multi-story building totaling 43,000 Sq. Ft. Renovation created a shopping center type setting featuring a variety of different car manufacturers such as Ford, Lincoln Mercury, Aston Martin, Land Rover, Mazda, and Jaguar.

Client: Cityscape Architects



### **Automotive (Continued)**

#### **Maxey Lincoln Mercury – Detroit, MI Completion 2003**

Renovation of a 60 year old 30,000 Sq. Ft. dealership including a showroom and full service garage and parts department.

Client: Cityscape Architects

#### **Wolverine Harley Davidson – Clinton Twp., MI Completion 2002**

New 42,000 Sq. Ft. two-story construction dealership including showroom, full service garage private offices, parts department and motorcycle storage facility.

Client: Cityscape Architects

#### **Jaguar of Novi – Novi, MI Completion 2001**

New 30,000 Sq. Ft. dealership including a showroom, offices, full service garage and parts department.

Construction estimate: \$5,000,000.00

Client: Cityscape Architects

### **Retail Centers**

#### **Shops at Woodward – Highland Park, MI Completion 2008**

New 53,000 Sq. Ft. retail center and one 5,300 Sq. Ft. outbuilding for retail.

#### **Paint Creek Shopping Center – Pittsfield Twp., MI Completion 2001**

New 200,000 Sq. Ft. retail center consisting of; three single story buildings.

Client: Boggio Associates

#### **Winchester Center – Rochester Hills, MI Completion 1996**

Renovations of an existing shopping center including a new primary electrical system, site lighting and coordination for the conversion of a small retail to large retail electrical services.

Client: Sherr Development

#### **Hunters Square Center – Farmington Hills, MI Completion 1996**

Renovations of an existing shopping centers including a new primary electrical system, site lighting and coordination with new tenant conversion from small retail to large retail electrical services.

Client: Sherr Development.

### **Health Care / Nursing Homes**

#### **Medilodge of Port Huron – Port Huron, MI - Currently under design**

40,000 Sq. Ft. renovation and 42,000 Sq. Ft. addition to an existing nursing home facility.

Client: JW Design Studio

#### **Medilodge of Montrose – Montrose, MI Completion 2009**

New 64,000 Sq. Ft. nursing home including full kitchen and dining area, physical therapy and bariatric rooms.

Client: JW Design Studio

**Health Care / Nursing Homes (Continued)**

**Marywood Nursing Home – Livonia, MI Completion 2009**

Renovation on an 80,000 Sq. Ft. nursing home

Client: Fusco, Schaffer Pappas

**Beacon Hill Nursing Home – Hillsdale, MI – Completion 2008**

Renovation of existing 120 unit 9 story senior building, 78 unit townhomes and community building.

Client: Fusco, Schaffer Pappas

**Medilodge of Monroe – Monroe, MI – Completion 2008**

Renovation of 2,000 Sq. Ft. and new construction of 5,250 Sq. Ft. to a 3 phase nursing home and site. The designed phases included the dining area, lobby addition and PT/OT addition, along with the site design of lighting and power.

Client: JW Design

**Boulevard Health Center – Bradford Wing renovations – Rochester Hills, MI - 2008**

Renovation of a 21,000 Sq. Ft. nursing home wing.

Client: Fusco, Schaffer Pappas

**Cherrywood Nursing Home – Grand Traverse Wing – Sterling Heights, MI - 2008**

Renovation of a 24,000 Sq. Ft. nursing home wing.

Client: Fusco, Schaffer Pappas

**Forest View Nursing Home – Brownstown Twp., MI - 2007**

Renovation of a 48,000 Sq. Ft. nursing home including nurse call, P.A. and fire alarm system.

Client: Fusco, Schaffer Pappas

**Family Dentistry – Novi, MI - 2007**

New 3,500 Sq. Ft. dental office including x-ray equipment and 4 exam rooms.

Client: Cityscape Architects, Inc.

**Industrial**

**RayConnect – Auburn Hills, MI Completion 2008**

New 60,000 square foot office and manufacturing facility for plastic injection molding in Auburn Hills, MI.

Complete electrical engineering services including LEED design and calculations for lighting. Submission for LEED Gold certification.

Client: Kirco Construction

**AVL Testing Laboratory – Plymouth, MI Construction 2007**

Interior build out for a new headquarters building including testing and two dynamometers including a load bank system using a new 1600 amp electrical service distribution.

Client: Biddison Architecture and Design

**Next Energy – Detroit, MI Construction 2006**

Power distribution system is designed to receive power from an existing on-site "micro-grid" interface with the utility company as well as send generated power back to the "micro-grid". Test bays are engineered with multiple electrical services for outside vendors to test their alternative fuel platforms.

Client: DMA Technical Services, Inc.

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**Industrial (Continued)**

**DTE – Southfield, MI Construction 2005**

New hydrogen production, storage, and vehicle refueling station for a multi-fuel alternative fuel technology testing and development facility.

Client: DMA Technical Services, Inc.

**Sustainable Mobile Technologies (SMT) Hydrogen fuel cell test laboratory – Dearborn, MI Construction 2005**

50,000 Sq. Ft. interior renovation of a warehouse into a laboratory used for testing hydrogen fueled automobile engines consisting of 15 test bays.

Client: REIT Management and Research

**Henkel Surface Technologies – Madison Hts., MI Completion 2005**

Renovation of a 50,000 Sq. Ft. warehouse into a testing laboratory complete with robotic machines, bake ovens and sensitive measuring equipment.

Construction Budget: \$750,000.00 Electrical

Client: Constantine George Pappas, AIA

**Think One – Dearborn, MI Completion 2003**

Renovated of a 20,000 Sq. Ft. warehouse into a hydrogen fuel cell automotive testing lab in a Class I Div. II environment.

Client: REIT Management and Research

**Ecostar – Dearborn, MI Completion 2002**

Renovated of a 40,000 Sq. Ft. warehouse into a hydrogen fuel cell automotive testing lab with DC rectifiers converting the output of the fuel cells to utility power, putting power back on the utility grid.

Client: Hallwood Real Estate

**DaimlerChrysler Technology Center – Auburn Hills, MI 1997 – 1999**

Responsibilities included electrical design and project coordination with the user and building management to create electrical drawings for over 150 different projects for skilled trades to install new equipment within the facility. Projects included installations of industrial equipment, laser machines, and gas emissions detection system and office renovations.

Construction estimate: Varied with projects

Client: Barton Malow Design

**Norquick Distributing Center – Canton, MI Completion 1999**

80,000 Sq. Ft. addition to an existing cold storage facility. This project included coordination with the refrigeration and controls vendor for the design of a new electrical service. Scope also included new lighting and general power for the addition.

Client: Biddison Architecture and Design Studio

**Municipal / Government Buildings**

**Detroit Public Library Main Branch South Wing – Completion 2009**

Renovation of an existing 35,000 square foot area on the 1<sup>st</sup> and 2<sup>nd</sup> floor South wing consisting of new lighting and power throughout for study area and circulation.

Client: FGM Architects

**Detroit Arsenal Building 200C 1<sup>st</sup> floor renovation – Warren, MI – Completion 2009**

Renovation for survivability area offices and HVAC upgrade located on 1<sup>st</sup> floor.

Client: Boggio Associates, Inc. Bingham Farms, MI

**Martindale Beach House – Kensington Metro Park – Competition 2009**

2-4,500 Sq. Ft. new buildings: 1 for a bath house and on for lifeguard office facilities and concessions.

Client: Angellini Architects

**Shelby Township Fire Station No. 1 – Completion 2008**

Renovation of a 12,500 Sq. Ft. building with an added 12,500 Sq. Ft. addition. This project also includes the relocation of a building stand-by generator.

Client: Straub, Pettitt, Yaste Architects

**KC-153 Flight Simulator McConnell Air Force Base Wichita, KS – Completion 2007**

Renovation of a 10,000 Sq. Ft building for a new flight simulator.

Client: FMK Architects – Detroit, MI

**Detroit Arsenal Building 229 1<sup>st</sup> floor renovation – Warren, MI – Completion 2007**

Renovation of a 14,000 Sq. Ft. area for offices located on 1<sup>st</sup> floor.

Client: FMK Architects – Detroit, MI

**Detroit Public Library Main Branch Teen Room – Completion 2007**

Renovation of an existing 5,000 square foot area on the main level converted into a teen room consisting of new lighting and power throughout for study area, game area and large screen monitors.

Client: FGM Architects

**Harper Woods Public Library – Completion 2006**

Complete renovation of power and lighting systems for a 12,000 Sq. Ft. library originally constructed in 1964. The lighting criteria focused on an updated design that met the certification requirements of LEED Silver.

Client: David Milling Associates, Inc.

**Mt. Clemens Public Library – Completion 2006**

Complete renovation of 9,000 Sq. Ft. of public area of a 1960's era library. The new lighting design creates a new and updated look as well as providing accent lighting to parts of the original architecture.

Client: David Milling Associates, Inc.

**Grosse Pointe Farms Township Hall – Grosse Pointe Farms, MI Completion 2003**

Electrical renovations associated with mechanical systems upgrades for a 14,000 Sq. Ft. township hall including city offices and fire station.

Owner: Grosse Pointe Farms

**White Lake Police Station – White Lake, MI Completion 2001**

3,000 square foot renovation and 4,500 Sq. Ft. addition for the expansion of the current police station.

Services included a new automatic transfer switch electric generator, new lighting, electrical service upgrades, and communication and security renovations.

Client: Straub Pettitt Yaste Architects, Inc.

**Municipal Buildings (Continued)**

**Newberry Prison – Newberry, MI Completion 1997**

13,000 Sq. Ft. addition to an existing prison facility. Services included verification of the electrical design-build project, creating electrical documents associated with the addition which were submitted to the State of Michigan for approval.

Client: Barton Malow Design

**City of Tecumseh Police Station – Tecumseh, MI Completion 1997**

5,000 Sq. Ft. addition to the existing city hall for the expansion of the current police station. Services included a new automatic transfer electric generator, new lighting for offices and cells, camera and security locations for the new addition.

Architect: Siler Associates

**Religious**

**Mother of the Eucharist Phase 3 – Ann Arbor, MI - 2009**

New 30,000 Sq. Ft. addition to an existing convent and chapel for a new gymnasium, resident quarters and lecture hall.

Client: Constantine George Pappas, AIA

**St. Paul Tarsus – Macomb Twp, MI 2008**

Renovation of an existing sanctuary, complete demolition and new alter, cry room, organ pipes, re-arrangement of seating and complete lighting upgrade.

Client: Constantine George Pappas, AIA

**First Congregational Church Rochester – 2007**

Renovation and a 20,000 Sq. Ft. addition to an existing church for a new sanctuary on the main level and a preparation area for food box assembly on the lower level.

Client: Constantine George Pappas, AIA



**Orchard Lake Community Church – 2007**

15,000 Sq. Ft. addition to an existing church for new upper and lower level classrooms around the existing sanctuary including a new electrical service and relocation of the existing electrical service.

**First Presbyterian Church Birmingham – 2007**

Renovation of an existing sanctuary, complete demolition and new alter, cry room, organ pipes, re-arrangement of seating and complete lighting upgrade.

Client: Constantine George Pappas, AIA

**St. Gertrude - St. Clair Shores – 2006**

Renovation of an existing sanctuary, complete demolition and new alter, cry room, organ pipes, re-arrangement of seating and complete lighting upgrade.

Client: Constantine George Pappas, AIA

**Brighton Christian Church – Genoa Twp., MI - 3/05 (Construction has not begun)**

New 50,000 Sq. Ft. new construction consisting of an 800 seat sanctuary, chapel, classrooms and offices with a master plan of a future 1200 seat sanctuary, additional classrooms and multi-purpose room.

Client: Constantine George Pappas, AIA

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**Religious (Continued)**

**Grosse Ile Presbyterian Church –Grosse Ile, MI - 2004**

10,000 Sq. Ft. addition to an existing church consisting of a multi-purpose room, full kitchen and storage. Renovation of the existing interior classrooms for lighting and new power requirements.  
Client: Constantine George Pappas, AIA

**First Presbyterian Church Troy – 2003**

30,000 Sq. Ft. addition to an existing church for a new multi-purpose room, classrooms, full kitchen and offices.  
Client: Constantine George Pappas, AIA

**Stoney Creek Church – Utica, MI - 2002**

Renovation of an existing 30,000 Sq. Ft. building from a restaurant to a fully functional church with classrooms and sanctuary.  
Client: Barton Malow Co.

**St. Johns Church – Peck MI - 2000**

8,000 Sq. Ft. new construction consisting of classrooms, chapel, multi-purpose room and designed for future expansion to add a sanctuary. The faculty also included an emergency back-up generator system.  
Client: Lincoln Poley, AIA

**St. John the Baptist Church – Ypsilanti, MI - 1999**

4,000 Sq. Ft. addition to a 1927 structure connecting an existing school to the church building consisting of complete upgrade for the electrical systems, Gathering area, multi-purpose room, brides room and storage.  
Client: Lincoln Poley, AIA

**Residential**

**Faulhaber Residence – Treasure Island, FL**

Full engineering services for a 3,400 Sq. Ft. new construction three story residence. Project was designed using solar panels for off-grid electrical service and LED lighting throughout.  
Client: Jon Sarkiesian Architect

**Van Eeghen Residence – Washington Township, MI**

Full engineering services for a 4,400 Sq. Ft. new construction three story residence.  
Client: Preview Architects, PC.

**Residence – North Oakland County, MI**

22,000 Sq. Ft. new construction which includes three kitchens, fitness room, theatre, indoor pool, and a conservatory. Project also includes a full site stand-by power design for residence, two barns, one garage and an 8,000 square foot studio. Designed a 4,000 Sq. Ft. addition for a studio to include a two lane bowling alley and golf simulator.  
Client: Straub Pettitt Yaste Architects, Inc.

**Grant Park Condominiums – Royal Oak, MI**

Electrical engineering services for two buildings of eight two story town homes  
Client: Stucky Vitale Architects, Inc.

**The Fifth - Royal Oak, MI**

Electrical engineering services for an eighteen story high-rise residential including six levels of indoor parking and one level of retail including stand-by generator.  
Client: Advantage Electric Co.

**Residential Continued**

**Metro Lofts – Royal Oak, MI**

Electrical engineering services for a three story loft project consisting of 20 residential units.  
Client: Lakeside Electric Co.

**Milltown Townhouse complex – Rochester, MI**

Electrical engineering services including site amenities and street lighting photometric for a residential cluster of town homes within a subdivision.  
Client: Preview Architects, PC.

**Museums**

**Heritage Auto Museum – Ypsilanti, MI Completion 1997**

Electrical design for a 20,000 Sq. Ft. connector building for historical automobiles. Our services also included the renovation of an existing museum with new lighting for the purpose of accenting the automobiles.  
Architect: Siler Associates

**Detroit Children's Museum – Detroit, MI Completion 2000**

Electrical Design for a 25,000 Sq. Ft. warehouse in Detroit which was converted into a museum/education center for viewing and classroom applications. Our services included working with existing site conditions and retrofitting an old style building into today's applications and requirements.  
Client: Vantine Guthrie Studio of Architecture

**Hospitality / Restaurants**

**Tin Fish Restaurant – Novi, MI – Completion 2009**

Provided electrical engineering services for a 9,500 Sq. Ft. new construction restaurant with a 2,500 Sq. Ft. kitchen and a 7,000 Sq. Ft. dining area and a dining mezzanine with bar.  
Client: Ronald and Roman Architects

**Fort Shelby Doubletree Suites Hotel - 2008**

Complete renovation for the 73 million dollar Pick-Fort Shelby restoration project consisting of 243,000 square feet Doubletree suites hotel and 80,400 square feet of residential units.  
Client: Motor City Electric

**Grille24 / Spa19– Book Cadillac Bldg. Detroit, MI 2008**

8,000 Sq. Ft. build-out within the 1<sup>st</sup> floor of the newly restored Book Cadillac Building.  
Client: Ron and Roman Architects, LLC

**Kalamata Greek Café – Troy, MI – Completion 2008**

1,800 Sq. Ft. interior fit-out of an existing building shell to accommodate electrical design throughout the kitchen and dining area.  
Client: Ron and Roman Architects

**Tin Fish Restaurant – Clinton Twp., MI – 4/08**

7,500 Sq. Ft. new construction restaurant with a 2,500 Sq. Ft. kitchen and a 5,000 Sq. Ft. dining area and a dining mezzanine with bar.  
Client: Ron and Roman Architects

**Tom's Oyster Bar – Rochester Hills, MI – 3/07**

7,000 Sq. Ft. new construction with 2<sup>nd</sup> floor mezzanine and banquet facility included electrical design in kitchen, dining room, hallways and restrooms.  
Client: Ron and Roman Architects

## **Stadiums**

### **Diamond at the Summit – Waterford, MI- Completion 2008**

Provided full engineering services for a new construction Minor League Baseball Stadium that included offices, skyboxes, club house, breeze ways, restrooms, locker rooms and baseball field.

Client: Diamond Heroes of Oakland County and FX Architecture

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