CITY OF GOSHEN REDEVELOPMENT COMMISSION

New South Fire Station Study | October 12, 2020

EPOCH

A DIVISION OF SHIVEHATTERY

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"The EPOCH approach has been solution-orientated & provided Department members the needed support to get this project moving forward. **I recommend them for future planning projects."**

- Chief Steve Cox
South Bend Fire Department

Dear Goshen Redevelopment Commission,

EPOCH is pleased to present to you our team's response to your request for a qualified consultant for the preparation of a New South Fire Station Study. We are thrilled at the opportunity to serve the Goshen community, particularly regarding the incredible prospect of working with your team to plan for and design a new fire station.

Our team is a full-service design firm, with unparalleled expertise in safety, planning, and design. We recognize the critical role that fire departments play in a community, far beyond "fighting fires". Fire station design has transformed in recent years, with increasing evidence to support that improved design can have an impact on the health, wellbeing, and efficacy of first responders. Our team is at the forefront of this research and innovation and we have been invited to speak on these methodologies at various engagements, including conferences for F.I.E.R.O., Firehouse Magazine, and most recently the Indiana Fire Chiefs Association.

Because knowledge and understanding of these concepts are relatively new to the industry, our team enjoys educating clients on how they can create a new standard for fire station design – maximizing the efficiency of FD operations, minimizing operating, maintenance and energy costs, and creating a facility with striking architecture in which the community can be proud. The pride and enthusiasm of the City of Goshen and the Goshen FD is evident, and we would be honored at the opportunity to amplify this passion.

It is important to note that – in addition to significant and recent experience in fire station design – our team is extensively experienced with key stakeholder and community engagement. We understand the complexities of varying degrees of input and needs, and excel at listening, managing expectations, and facilitating programming and design discussions that allow all stakeholders to feel heard and understood. We employ best-practice methodologies for engaging the community, especially necessary during the pandemic, that builds support as the project moves forward.

This proposal demonstrates our significant experience in fire station design (both new and renovation), particularly in the Northwest Indiana region. While our office has a hyper-local focus on the Michiana community, we have offices and resources across the Midwest that allow us to have an incredibly high level of design and client service. Complementing our community focus, we have included our long-term partner, Troyer Group. Their team has extensive experience with the City of Goshen and Greencroft, adding valuable perspective. We recognize the importance of locating a new fire station, and our experience in site analysis and fire station location is superlative.

Underscored throughout our approach is to develop a strong partnership with the City of Goshen. With the EPOCH team, you will receive the highest level of service and experience – our team will advocate for an efficient, functional, and safe facility that provides an attractive design for your team and community.

Thank you for your time and consideration,

EPOCH

Kyle Copelin, AIA, LEED AP
Principal | KyleC@epoch-design.com

Who We Are

EPOCH, an 11-person architecture and design firm founded in 2013 and based in South Bend, Indiana, became a division of Shive-Hattery in December 2019. Together, we are a 426-person, planning, architecture, engineering, and interiors firm with roots going back to 1895. We are licensed in 42 states, with professionally registered architects and engineers in each state.

Our collaborative approach to programming, planning, and design results in imaginative solutions, based on each client's unique vision and goals. By creating spaces that reinforce their existing culture, process, and brand, we can translate objectives and aspirations into sustainable environments for working, learning, healing, and playing—and are catalysts for desired change.

We believe unparalleled service has given us the opportunity to practice our passion for creative design. We combine our creativity with an absolute commitment to deliver on our promises. We have a reputation for collaboration, availability, and responsiveness with owners, program managers and contractors based on delivering the best value to the owner. We also have a reputation for thorough, well-detailed construction documents, minimizing costly changes.

POINT OF CONTACT

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"EPOCH's engagement in the community is genuine, enthusiastic, and unwavering. The entire team truly engages with non-profit partners, city leaders, and business to build a stronger community"

- Christina McGovern, Youth Service Bureau

101	78	20	25
ARCHITECTS	CIVIL ENGINEERS	ELECTRICAL ENGINEERS	INTERIOR DESIGNERS

YOUR TRUSTED FIRM OF CHOICE

PROFESSIONALS WITHIN SHIVE-HATTERY

9	37	44	14
LANDSCAPE ARCHITECTS	MECHANICAL ENGINEERS	STRUCTURAL ENGINEERS	LAND SURVEYORS

FIRM DISCIPLINES

- Architecture
- Building Envelope Consulting
- Building Repositioning
- Civil Engineering
- Construction Administration
- Construction Observation
- Electrical Engineering
- Environmental Graphics
- Interior Design
- Landscape Architecture
- Land Planning
- Land Surveying
- Material Quality Control
- Mechanical Engineering
- Public Involvement Facilitation
- Project Management
- Roof Design and Management
- Site Development
- Structural Engineering
- Sustainable/LEED Consulting
- Transportation Engineering and Traffic Signal Design
- Water/Wastewater Engineering
- 3D Visualization

Research + Innovation In Fire Station Design

OUR EXPERTISE

Fire station design has changed significantly over the past decade. At EPOCH, we strive to improve standards of fire station design to provide the most efficient and safest environments possible. A well-designed fire station can greatly improve the effectiveness of a fire department and its team.

First responders are exposed to risks to their health and well-being every day on the job. However, they should not have to be at risk of exposure to a plethora of contaminants, carcinogens, and toxins when they return to their station. The fire station should be a reprieve from harsh contaminants and its design should be focused on mitigating the spread within the station of toxins brought back from the field.

EPOCH is devoted to creating fire stations that are not only functional for first responders, but also safe by helping keep carcinogens and toxins out of the living space of the fire station. If a station is designed poorly, a dangerous cycle can occur: first responders answer a call, are exposed to various contaminants, return to the station, and cross-contaminate the station and its living spaces with toxins from their first response. A well-designed station can break the cycle by preventing any of those containments from entering the station's living spaces.

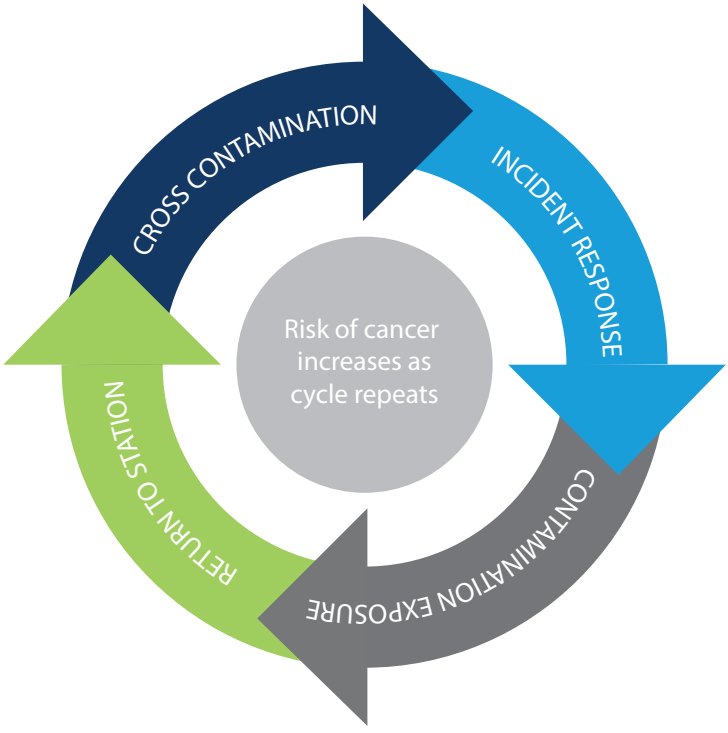
THE RISKS

The Firefighter Cancer Support Network (FCSN) has found that 61% of line-of-duty career-firefighter deaths were caused by cancer from 2002 - 2016 and that in 2016 alone cancer caused 70% of the career-firefighter death toll. Firefighters are also 14% more likely to be diagnosed with cancer and 30% more likely to die from cancer than the general population.

According to The Journal of Occupational and Environmental Medicine:

- Firefighters classified by insurance companies as high hazard
- Demonstrate high incidence of heart attacks, high blood pressure and cancer
- When compared to other workers, firefighters face more risk in developing these cancers:
  - **Colon Cancer 21%**
  - **Skin Cancer 39%**
  - **Stomach Cancer 22%**
  - **Non-Hodgkins Lymphoma 51%**
  - **Prostate Cancer 28%**
  - **Multiple Myeloma 53%**
  - **Brain Cancer 32%**
  - **Testicular Cancer 102%**

Risk and Contamination Cycle

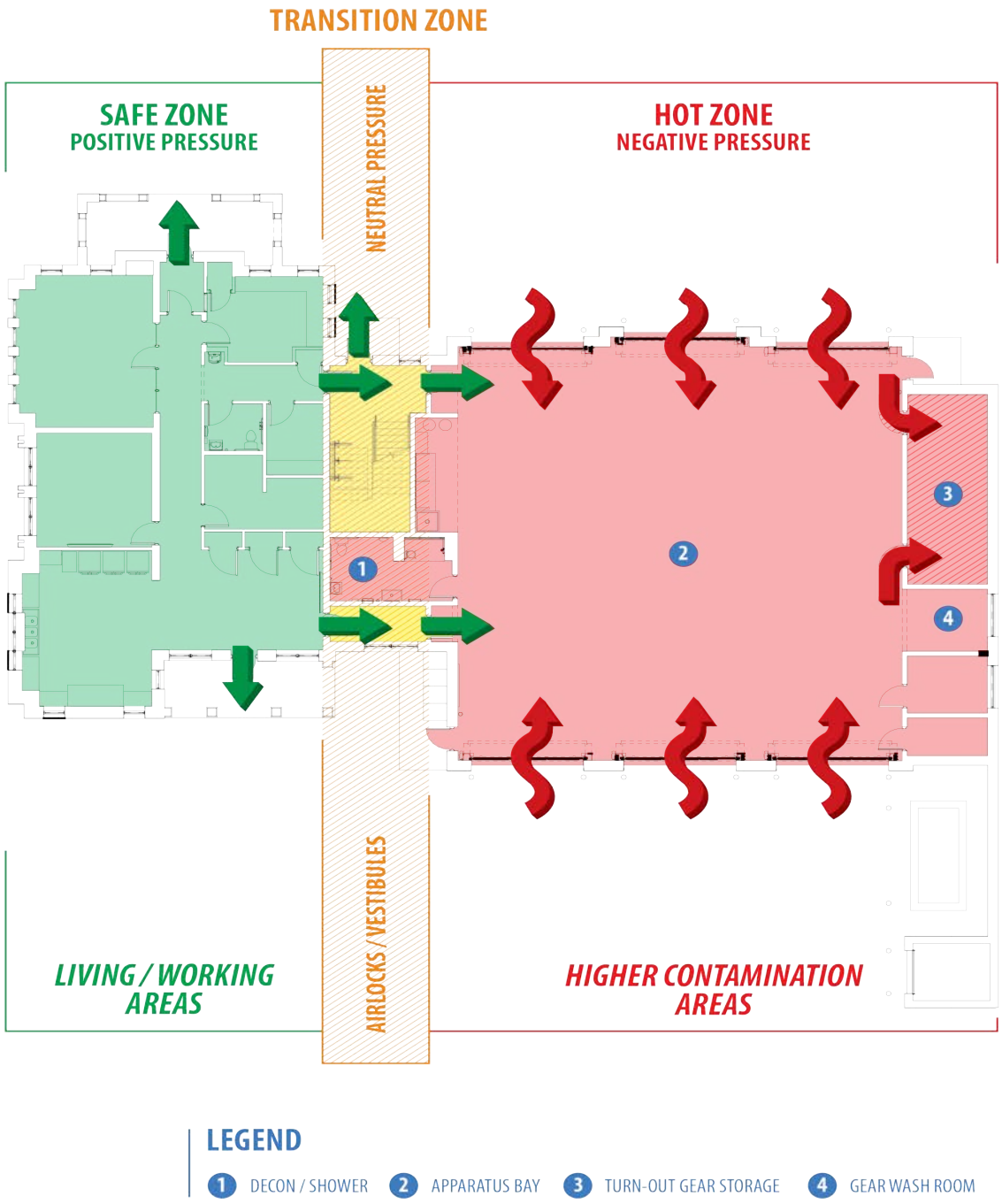


"Who We Are." Firefighter Cancer Support Network, Firefighter Cancer Support Network, firefightercancersupport.org/who-we-are/.

Erickson, Paul R. "F.I.E.R.O."

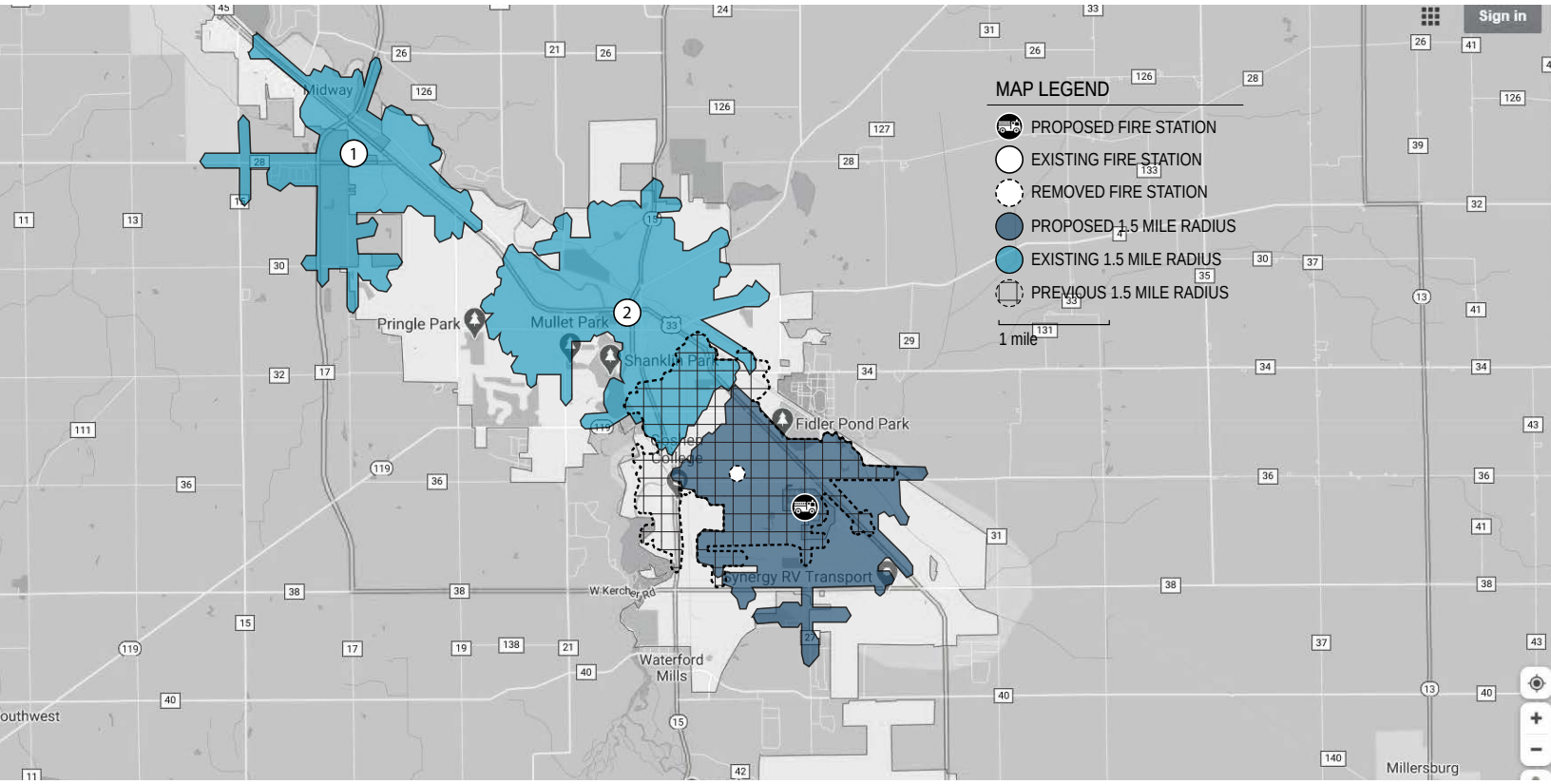
Design By Zones

No matter how you choose to lay out your fire station, we have found it beneficial for the health and safety to design by zones.



The image above shows the ground floor plan of South Bend Fire Department Station 9, completed in May 2019. The implementation and careful separation of the three zones - hot, transition, and safe - promotes a healthy and safe work environment for the firefighters using the station. Anything that could potentially be contaminated is kept in the red zone, such as the apparatus bay, turn-out gear lockers, gear wash room, etc. All the living/working spaces are kept together in the green zone, preventing any cross contamination with services considered part of the red zone. The transition zone acts as a buffer between the two allowing 'neutral' access to both red and green zones.

Project Understanding



Above: GIS map showing 1.5 mile radius from current and proposed fire stations in Goshen.

It is our team's understanding that the City of Goshen Redevelopment Commission is seeking a comprehensive report that will serve as the foundation of understanding for the construction of a new fire station.

Since 1862, the Goshen Fire Department has worked diligently to keep the Goshen community safe. EPOCH recognizes the incredible history and pride the FD has for its staff that honorably serve the City of Goshen. It is our team's goal to amplify this fundamental sense of pride, honor, and integrity.

SITE SELECTION ANALYSIS

The site selection analysis is a critical component of the study, as it will allow the city to have a clearer understanding of the efficiencies and deficiencies of the existing fire station locations. The EPOCH team recognizes the importance to the city to evaluate the suitability of the potentially donated land on Dierdorff Road. This report will provide the City and Fire Department with a thorough understanding of the existing coverage of the Fire Department and will provide recommendations on how the City of Goshen can most effectively improve their Fire Department Coverage.

We understand that providing appropriate coverage can heavily impact the City's Public Protection Classification (PPC) from the Insurance Services Organization (ISO). Based on the 2018 Annual Report, we recognize that the City's current rating (as of 2018) is a 3, with goals of lowering this rating to a 2. It is our goal that the site selection analysis will provide information for the City to have a comprehensive understanding of fire station coverage for the Goshen Fire Department to further develop strategies to attain this goal. This report should be a tool that the City and Fire Department can refer to often.

Our resources include in-house GIS-specialists, traffic planning experts, team members with a thorough understanding of the Goshen community, and fire station design experts. We will utilize GIS data, traffic data and historic dispatch data, as well as possible future annexation areas to have a thorough understanding of city growth to provide optimum fire station coverage.

PROJECT PLANNING & SCHEMATIC DESIGN

We recognize that interviews and effective conversations with the Fire Department staff and key City staff are critical early in the planning process to understand the overall goals and needs for the new fire station. Our team has extensive experience in best-practice stakeholder engagement, that prioritizes social-distancing/safety and is anchored in an empathetic design approach. This translates community needs into a project that makes the community proud.

We also understand the City of Goshen's goal for the schematic design phase to be effective and comprehensive for the City and Fire Department to make an informed decision. Our design team provides varying levels of visualization, dependent upon the needs of the stage of the project. Our ability of storytelling through 3D images and 3D modeling allows the client to have a better understanding of project progress and provide feedback at all stages of the design.

STAKEHOLDER ENGAGEMENT & COMMUNICATION

An essential component of our design process is to visit existing fire stations in the department to understand current conditions and the culture the staff is accustomed to. The level of input from the department varies and is defined by the Chief. **This foundation allows our team to effectively progress on the project in a way that aligns with the goals of the city and fire department.**

In addition to engagement with the immediate stakeholders and users, we understand the importance of effective community and stakeholder engagement. We recognize the City of Goshen would like to present ideas and provide feedback throughout the process. Our team has experience presenting to the public and community, facilitating effective planning discussions, and helping stakeholders feel heard and understood.

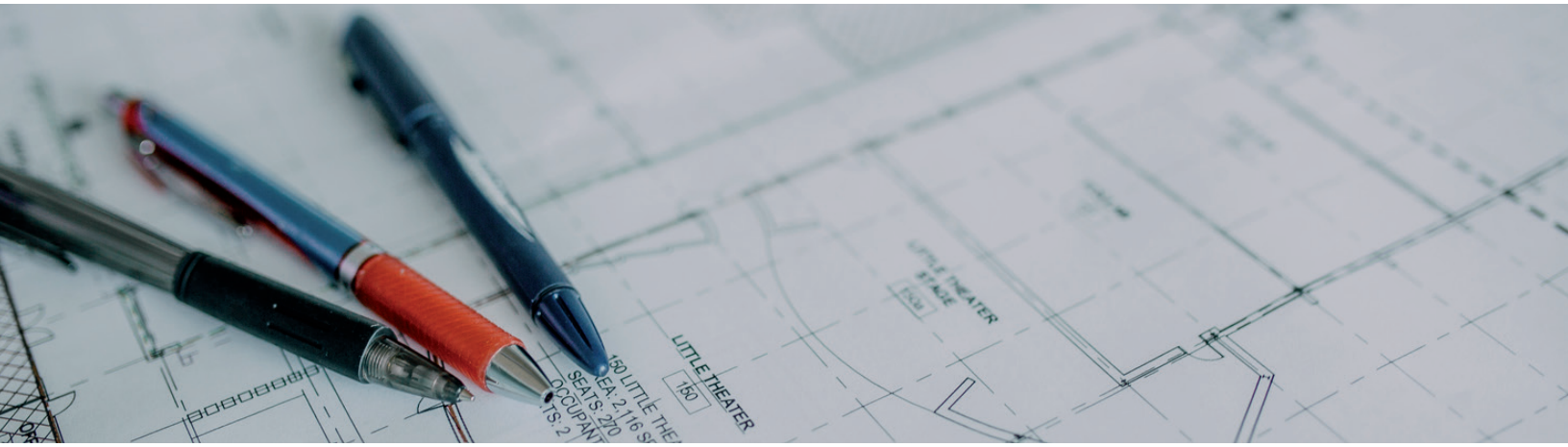
It is important to note that our team has developed tools and strategies for effectively engaging with stakeholders and the community in any setting – including virtual meetings. **With the ever-changing dynamic of the design process given the current state of increased caution to protect the health and safety of our community, we have experience utilizing collaborative virtual programs that allow for productive meetings and workshops.** If online meetings are desired at any stage of the process, our team is ready to facilitate these discussions.

APPROPRIATE COST & EFFICIENT DESIGN

The EPOCH team has a diverse team that provides innovative ideas for sustainable and cost-effective designs. Our team strives to use our expertise in energy reduction, efficient use of water and resources, and advanced building systems to guide our designs, ultimately leading to less costly operational costs and overall improved health.

Our team works to help find the right fit for design and certification by incorporating the best-fit sustainability features into your project, **maximizing the sustainable impact your project has for its occupants and the surrounding community.**

Project Approach



Fire departments must make delivering fire, rescue, and emergency medical services one of their primary responsibilities. Fire departments must also provide effective services and respond in a minimum amount of time after the incident has been reported and respond with sufficient resources to initiate fire, rescue, and/or emergency medical services. Through the approach outlined below we can assist the City of Goshen Fire Department with analyzing and evaluating current and future efficiencies and deficiencies for the department as a whole, and to assist with the site selection, programming, and cost estimating of the new/relocated Station #3 currently located at 1203 College Avenue.

Task 1: Site Location Analysis (4 weeks)

Analyze location's suitability: Initial site investigation may include (if not already completed) a Phase 1 assessment and ALTA survey. While soil boring testing would often occur during this stage, we feel postponing this until the final location has been selected is warranted. We will also investigate buildable area at the preferred location after setbacks and easements have been determined. Sufficient ingress/egress areas into and out of the new station on the site will be explored. We would strongly suggest working with Greencroft to determine what, if any, site information exists for the preferred location in order not to duplicate these efforts unnecessarily.

Utilize GIS to analyze current and future coverage areas and response times: To determine and evaluate the efficiencies and deficiencies of the Goshen fire stations and their sector boundaries, the NFPA handbook recommends a plan that is specific, directed at clearly defined goals, and operational over a relatively brief period of time. When evaluating the delivery of fire and rescue services for the city, past and present conditions and services must be scrutinized and future forecast should be considered. Data analysis of run records (2019/20) collected for the regional dispatch center are to be reviewed and evaluated. GIS is a general term used to describe software applications that incorporate various layers of data onto maps to be reviewed as they relate to geography, bringing together many pieces of information and layering them to give a multifaceted view of the area being examined. Specifically, GIS will help bring together all the collected information and determine the furthest response distances and the percentage of areas within each sector as dictated by current NFPA 1710 standards. GIS will also provide a view of each sector's dominant land use to help predict where high hazard areas, like schools, hospitals, nursing homes, and explosive industries may be located. GIS will produce maps that help examine the current conditions of fire and rescue services in Goshen. In addition, areas of future possible annexation into the City of Goshen corporate limits will also be included for evaluation.

Prepare recommendations: Utilizing this multi-layered information, a plan to maintain efficiencies and improve deficiencies within each of the current sectors will be developed and recommendations for implementation suggested. Possible recommendations could include a realignment of existing sector boundaries, reassignment of existing apparatus or the addition of new apparatus, and the remodeling or rebuilding of existing Central Station #1 or Station #4 to comply with contemporary station design standards.

As Required: Provide a written report to evaluate up to 3 additional locations if preferred location is unacceptable. Similar processes described above would be utilized when evaluating any alternate site locations if the preferred site is deemed unacceptable. We would utilize the same GIS mapping capabilities when evaluating any other potential site.

Top: Initial 3D model, built in Revit **Middle:** Final rendering
Bottom: Built City of South Bend Fire House No. 9

Task 2: Program of Requirements (4 weeks, concurrent with Task 1)

Conduct interviews with Fire Department staff to identify current and future needs of the existing stations: Working with you to develop and deliver an efficient and safe environment for your first responders is our highest goal. The process will begin by working with fire department representatives to develop a comprehensive building and site program that defines your current and future needs. We would expect to meet several times to develop this program with representatives from the Goshen Fire Department, the City of Goshen, as well as the Goshen Redevelopment Commission. Utilizing a programming matrix developed on past fire station projects, we will be able to accurately and efficiently determine existing and future needs in order to assign a square footage value to be used in later cost estimating exercises based on current fire station construction standards.

Our team will prepare a written Program of Requirements for the new station, including interior and exterior space requirements, site requirements, and possible future expansion possibilities incorporating current NFPA standards.

Task 3: Schematic Building and Site Design (8 weeks)

Several options for building and site design at the preferred site location will be prepared to determine options for accommodating current and projected future needs.

Once preliminary building and site design are approved, an initial design will be prepared, including scaled floor plans, site plan, and basic 3D model indicating initial exterior finishes and perspectives.

Once a final design is approved, final computer-generated exterior building renderings will be prepared.

Top: Cross-section of West elevation for the City of South Bend Fire House No. 9

Task 4: Opinion of Cost (2 weeks)

Prepare a "Preliminary Opinion of Probable Construction Cost" of final approved design based on current industry standard square foot costs for site development and new construction: Once a clear and concise space program has been completed we will work with our consultants to develop a preliminary cost estimate based off square footage estimates that can be used to help you determine a possible budget for moving the project forward.

Prepare an Opinion of Probable Project Cost, including construction costs, fees, and other project specific non-recurring costs.

Task 5: Final New South Fire Station Report (2 weeks)

Prepare final report containing all deliverables prepared during the development of the study.

Present the final report to the Goshen Redevelopment Commission and the Goshen Common Council to discuss the study, development process, and final conclusions.

FIRST

Define all spaces to be included in the floor plan

Establish zones:
- **Hot Zone**
  Spaces exposed to carcinogens
- **Transition Zone**
  Allows for a safe transition between hot and safe zones
- **Safe Zone**
  Living/working spaces intended for extended occupancy

SECOND

Establish site requirements and amenities

- Number of Bays
- Size of Site
- Apparatus Turn-around
- Community Room(s)
- Multi-Department

THIRD

Produce a program summary with estimated total square footage

- Site
- Apparatus Bay
- Living Quarters
- Support Programming
- Training

FOURTH

Provide and estimate project costs

- Site Acquisition
- Construction
  - Site
  - Building
  - FF&E
  - Alerting System
- Bonding
- Insurance
- General Conditions
- Contractor Fees
- Design Fees
- Survey/Technical Reports
- Permitting Fees

Relevant Projects

The projects represented in this section are only a small selection of our team's Public Safety Portfolio. We have highlighted projects that are relevant to your needs; however, it should be noted that our expertise with public safety and city-led projects is far-reaching.

Elkhart Fire Department *(In progress)*

Three new stations: Station #5 (replacement), Station #6 (replacement), and the new Station #8 (new station to serve an entirely new fire sector). Project scope also includes the renovation of Central Station headquarters. Station programming is complete; cost estimation is in progress.

Fire Sector Study and Plan: Determine and evaluate efficiencies and deficiencies of their seven, current fire station locations and existing fire sector boundaries with regard to both current conditions and future population growth inside and adjacent to the City of Elkhart's corporate limits. Involves review of current fire department run records provided by the regional dispatch center, GIS mapping tools to spatially depict data and link it to other information, organize, and analyze a variety of different data layers and combinations, as well as an evaluation of current apparatus and emergency medical service equipment and locations.

Fire Station Assessments: Room by room evaluation of all current stations to evaluate space allocation and uses, existing conditions of structural, mechanical, and electrical services, site conditions, and expansion potentials to help identify deficiencies and needs.

Warren Township Fire *(In progress)*

Two new stations: Station #18 (replacement) and Station #19 (replacement). Initial programming and cost estimating complete. Site evaluation and selection is currently ongoing, with preliminary site planning commencing. Design and construction documents is anticipated through early Spring 2021, with an anticipated construction commencement in Summer 2021.

New Carlisle Fire Department *(In progress)*

Remodel of Central Station headquarters. Project began with an initial physical assessment of the current station followed by programming meetings with the department Chief, town and township officials and preliminary cost estimation exercises. Final approval to proceed with full design and construction documents is anticipated November 2020, with an anticipated Spring 2021 ground-breaking.

Clay Fire Territory *(2018)*

EPOCH was contracted by the Clay Fire Department to conduct a facilities assessment of the five (5) existing stations of the Clay Fire Territory. EPOCH visited each of the stations which included a guided tour of each facility and property with Fire Department officers to evaluate the existing Clay Fire Territory stations relative to current architectural design standards for comparable facilities. The review of each individual stations included the overall site, building envelope, rooms and spaces, placing emphasis on existing conditions that were observed to negatively impact fire station operations and crew member health and safety.

CITY OF SOUTH BEND

South Bend Fire House No. 9 | South Bend, IN

The replacement of Station 9 had been under consideration since 2001 but had repeatedly been shelved for various reasons. Understanding the tremendous need for the new station, the City of South Bend and South Bend Fire Department worked tirelessly with the design team to gain community support, secure a centrally located site, and serve the daily needs of the first responders living in the new facility.

The new fire station replaced the former Station #9 located at 2520 Mishawaka Avenue, originally built in 1926, which housed just a single fire engine. The new Fire Station #9 is much larger, designed to house Engine 9, Medic 9, and Boat 1. The station's new location, while still in the same neighborhood, cut down on response times for both first response and river rescue operations. Fire Station #9 is the second City-owned building in South Bend designed and constructed to achieve LEED certification, certified LEED Silver in 2020, the first being Fire Station #4, (also designed by EPOCH) which achieved LEED Gold Certification in 2019.

Early programming of the station involved one-on-one sessions with each of the 3 crews, crew captains, and chiefs to gather end-user input and to discuss both deficiencies in their current station as well as areas to improve efficiencies in the new station. In addition, this process needed to include buy-in of the local community to truly be a successful addition to the neighborhood. A series of community town halls were organized where we could share 3D Revit models and renderings to help the neighborhood visualize the concepts being proposed, further reinforcing the design by community approach.

Once a conceptual design was formalized, regular meetings were held with both City and fire department representatives to further refine and revise the design, continuing into the construction period itself. Once the project was complete and the crews settled in, our involvement did not end there; site visits to the station by EPOCH 6 months and 12 months later were organized to gather additional information and thoughts that are only revealed after extended periods of time. It is these lessons learned that we hope to carry into any future projects.

The new station's innovative design decreases the building's total annual energy cost savings by 30 percent compared to standard fire stations, and solar panels offset the building's total energy costs further by an average of 8 percent per year. In addition, landscaping around the fire station will use plant species native to the region to eliminate the need for irrigation and sprinkler systems, thus decreasing total water consumption by almost 46 percent. Fire Station #9 was also constructed with a high percentage of recycled content, and innovative construction strategies diverted waste produced during construction away from landfills and prevented unnecessary loss of soil.

Station #9's innovations are also expressed in the floor plans where a careful consideration of the "Design by Zones" concept has been implemented. This concept, at its essence, is to separate spaces within the station based on their exposure to contaminants, and to mitigate the chances of cross-contamination through design. A well-designed station breaks the cycle of cross-contamination, promoting optimal health and wellness for these first responders.

COST

$3,681,703

COMPLETION

January 2019

AREA

9,788 sf

SERVICES

Architectural Design

RELEVANCE TO YOUR PROJECT

- Regular community involvement & presentations
- GIS drive-time & distance simulations
- Programming & analysis

CITY OF SOUTH BEND

South Bend Fire Station 4 | South Bend, IN

South Bend Fire Station #4 was completed in 2018 and is a high performing building that has earned the LEED Gold certification from the U.S. Green Building Council for its exemplary sustainability work.

The new station #4 was constructed to replace the existing Fire Station #4 at 220 N Olive Street. This station, originally built in 1974, housed various apparatus and crews over the years, but operated with Engine 4, Medic 4, and Medic 5 in recent years. The site allowed the continued operation of the former station until the new station was completed, with its demolition following the station opening. Despite the challenges of working in and around a fully-functioning station, the continuous communication and coordination between EPOCH, the City of South Bend, and the SBFD ensured a safe and successful transition.

Fire Station #4 is the first City-owned building in South Bend designed with green standards registered to achieve LEED certification. The new station's innovative design will decrease the building's energy consumption by about 40 percent compared to similar buildings, and solar panels will decrease the building's energy consumption further by an average of 7 percent per year. In addition, landscaping around the fire station will use plant species native to the region to eliminate the need for irrigation and sprinkler systems, thus decreasing water consumption. Fire Station #4 was also constructed with a high percentage of recycled content, and innovative construction strategies diverted waste produced during construction away from landfills and prevented unnecessary loss of soil.

Given the nature of the fire service, great care was taken to ensure the safety of the firefighters by creating a distinct separation between living and working space. Sleeping arrangements are designed to address the changing gender demographics of the modern firefighting labor force by providing individual sleeping rooms in lieu of traditional single dormitory-style arrangements. This focus on gender-neutral design at Station 4 includes eight bedrooms with three bunks and individual lockers within each, with Jack-and-Jill-style bathrooms connecting adjoining pairs of bedrooms. The flexibility created with this approach prepares Station 4 to adapt and change as the makeup of staff inevitably changes.

The design of the station is meant to compliment the historic nature of its immediate surroundings such as the former Bendix Corporation, once headquartered several blocks away. With character and safety in mind, a combination of traditional masonry and insulated metal panels with a modern edge were incorporated into the project.

COST

$3,351,062

COMPLETION

January 2018

AREA

10,219 sf

SERVICES

Architectural Design

RELEVANCE TO YOUR PROJECT

- Programming & analysis
- Regular community involvement & presentations
- Sustainability and efficiency of design

PENN TOWNSHIP FIRE STATION #13

Mishawaka, IN

Township fire departments are often left with degrading stations and an unsafe working environment. Townships like Penn Township in Indiana are taking the next steps towards improving their fire service by replacing the current Fire Station 13 with a new state-of-the-art facility. The township and fire department expectations for the new station are to better serve the growing community within the fire territory while providing a safe and healthier environment for their first responders.

Existing Station 13 sits on the Western fringe of the fire territory, while new communities flourish on the Central and Eastern portions. The township collaborated with the local school corporation to purchase land from the school, thus locating the station further East to allow quicker response times to the growing communities and surrounding schools. The new station 13 is currently in the process of bidding, and construction is anticipated to break ground in Fall 2020.

Being mindful of the township's resources, our team worked with the fire department in developing a station with an efficient footprint by mitigating areas of wasteful space. Additionally, the design allows for expansion to the sleeping quarters for future growth. The new Fire Station 13 will house squads for an engine, a tanker, two ambulances, and a Swiftwater rescue boat.

First responders are exposed to risks to their health and well-being every day on the job; however, they should not have to be at risk of exposure to a plethora of contaminants, carcinogens, and toxins upon their return to the station. Fire station design should be focused on mitigating any toxins and carcinogens being brought back from the field. The new Station #13 is designed to break the cycle of cross-contamination in the station utilizing the concept of "design by zones" Green (safe zone), yellow (transitional zone), and red (hot zone) to prevent cross contamination. This approach seeks to reduce and/or prevent contaminants brought back from calls from entering the station's living spaces through careful consideration of turn-out gear storage locations, decontamination areas, and a balanced mechanical system that allows for the constant movement of air from Green zones to Red zones when these areas are opened up to each other.

The design team was tasked early-on to help evaluate potential sites for the new station, and to help the Township on the final site selection. The existing station 13 site did not allow for a new station to be built, nor was it ideally located within the existing fire territory. Various sites that were considered either could not accommodate the area necessary for safe ingress/egress from the site as a pull-through station, existing water main lines, or the additional area necessary for possible future growth. The new location has closer proximity to Penn High School and is better sited to capture the growing population developing to the east.

While the design of the new station #13 did not include LEED certification in its scope, the design team was challenged nonetheless with providing an energy efficient, sustainable, and cost-effective station that will continue to serve this community for years to come. Examples of these efforts include use of durable materials throughout the living and working areas, water-saving technologies, and high-performing HVAC systems.

COST

$4,100,00

COMPLETION

March 2020 (Design)
Est. Spring 2021

AREA

11,617 sf

SERVICES

Architectural Design

RELEVANCE TO YOUR PROJECT

- Site evaluation & selection
- Programming & analysis
- Effective client/ stakeholder/design-team communication

Our Team

Stakeholders

Stakeholders

Brian Kane
Project Architect/
Project Manager

Kyle Copelin
Principal in Charge

Rebecca Palmer
Architectural
Designer

Mike Vollbrecht
Structural Engineer

Matt Gordon
Electrical Engineer

Jeremy Huisman
Mechanical Engineer

Jake Wilson
GIS Specialist

Jonathon Geels
Landscape Architect
+ Planner

KYLE COPELIN, AiA, LEED AP

Principal in Charge

Kyle's leadership coupled with his significant design-build, fire safety expertise and renovation portfolio offer a perspective required when committing to delivering you a solution that meets all of your needs, now and for decades to come.

Kyle understands that good decision making requires a framework: "Think, Solve, Create" is the mindset behind that framework. The result? Better decision making earlier in the process which translates to higher quality design, fewer mistakes, increased efficiency, and lower costs.

EDUCATION

Bachelor of Architecture, Bachelor of Science, Environmental Design Ball State University, 2001

PROFESSIONAL DESIGNATIONS

Registered Architect: IN, MI, IL, MN, TN, FL

LEED Accredited Professional

NCARB Certified

MEMBERSHIPS/ORGANIZATIONS

American Institute of Architects

Youth Service Bureau Board Member

St. Joseph County Parks Foundation Board Member

South Bend Plan Commission Member

PROJECT EXPERIENCE

Elkhart Fire Department - Elkhart, IN

Warren Township Fire Department 2 Station Replacements

New Carlisle Fire Department Central Station Remodel - New Carlisle, IN

Penn Township Fire Department New Station #13 - Mishawaka, IN

South Bend Fire Department
- Station #4
- Station #9
- Station #12

BRIAN KANE, AIA

Project Architect

Brian brings with him over 20 years of architectural experience, with a special focus on public safety facilities, in particular the fire service, over the last five years at EPOCH. Brian's commitment and engagement in the growing field of first responder health and safety, and how design can be incorporated to help mitigate the risks inherent in this line of duty, sees him well suited to help communities adapt to the latest science available.

His working knowledge and familiarity with the fire service lends him a unique perspective when challenged. His enthusiasm, dedication, and service to our community is always Brian's top priority when creating meaningful projects for people.

EDUCATION

Bachelor of Architecture, University of Notre Dame, 1997

PROFESSIONAL DESIGNATIONS

Registered Architect: IN

NCARB Certified

PROFESSIONAL MEMBERSHIPS

American Institute of Architects

CIVIC ORGANIZATIONS

Good Shepherd Montessori School Board President

PROJECT EXPERIENCE

Elkhart Fire Department - Elkhart, IN
- New/Relocated Station #5
- New/Relocated Station #6
- New Station #8
- Central Station Remodel

South Bend Fire Department - South Bend, IN
- New/Relocated Station #4
- New/Relocated Station #9

Warren Township - Indiana
- New/Relocated Station #18
- New/Relocated Station #19

Clay Township - Indiana
- Five Station Physical Assessment

New Carlisle Fire Department - New Carlisle, IN
- Central Station Remodel

JONATHON GEELS, PLA, ASLA

Landscape Architect + Planner | Principal

As principal at Troyer Group, a multidisciplinary landscape architecture and engineering firm, Jonathon has established a purpose driven approach to every project with a distinctive commitment to people and experiences. His emphasis on adaptive and hyper local practice provides leadership across disciplines to each of the firm's regional offices. His design ethic and process seek to solve emergent problems by connecting people to new ideas through research and activism.

Jonathon's professional background encompasses multiscale design, strategic planning, and development projects, as well as efficiency analysis and cost reduction. As an experienced landscape architect and project manager, his diverse project work includes large sites for healthcare and public facilities, including an emphasis on fire stations. His work within the City of South Bend's Municipal Energy Office allowed for deep collaboration with the City's Fire Department. Jonathon has won several community and national awards, being recognized for his outstanding service and leadership.

EDUCATION

Bachelor of Landscape Architecture, Ball State University, 2005

PROFESSIONAL DESIGNATIONS

Professional Landscape Architect: IN

PROFESSIONAL MEMBERSHIPS

American Society of Landscape Architects

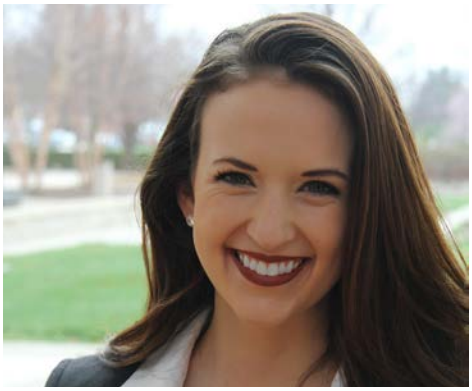
PROJECT EXPERIENCE

Related Site Design Projects
Fire Station #9 - South Bend, IN
Penn Fire #13 - Mishawaka, IN
Fire Training Center - South Bend, IN
Central Fire Station - Lakeville, IN

Related Fire Station Study Projects
Fire Station Feasibility Study - Argos, IN
Fire Station Feasibility Study - Lakeville, IN
Municipal Facilities Study - Milford, IN
Fire Dept. System Energy Audit - South Bend, IN *
Fire Dept. Station 3 / 6 Energy Improvements - South Bend, IN *

Selected Community Projects
Greencroft Entrance Redesign - Goshen, IN
Park System Master Plan - Goshen, IN
Goldenrod Campus Master Plan - Goshen, IN

* Work performed at the South Bend Municipal Energy Office



REBECCA PALMER

Architectural Designer

Rebecca, an architectural designer, joined our team in May 2020. Placing high importance on user-experience, her designs thoughtfully support the people that inhabit the building. She is experienced in working on projects where the stakeholders have differing priorities and working with the team on solutions that create stakeholder consensus. Rebecca is all about empowering the client to make well informed decisions whether that is through visualization, providing meaningful data, or explaining design concepts.

Recently, Rebecca has worked on the Elkhart fire station study team utilizing her experience with GIS and historical data analysis. She helped the City of Elkhart and Elkhart Fire Department have a comprehensive understanding of the efficiencies and deficiencies of their current fire stations.

EDUCATION

Bachelor of Science, Architectural Studies, University of Illinois, 2017

Master of Architecture, University of Illinois, 2020

PROFESSIONAL MEMBERSHIPS

American Institute of Architects

CIVIC ORGANIZATIONS

Big Brothers Big Sisters

PROJECT EXPERIENCE

Elkhart Fire Department - Elkhart, IN

New Carlisle Public Safety Facility - New Carlisle, IN

South Bend Clinic Various Projects - South Bend, IN

JAKE WILSON, PWS

GIS Specialist | Environmental Scientist

Jake Wilson is an Environmental Scientist with five years of experience in environmental focused work. Jake frequently works with state and federal agencies, including the United States Army Corps of Engineers, to design and permit projects. He has vast experience and capacity to perform wetland delineations and habitat assessments. Jake also has training in Landscape Architecture, which lends to successful design of mitigation plans.

EDUCATION

Bachelor of Landscape Architecture, Iowa State University, 2013

PROFESSIONAL DESIGNATIONS

Professional Wetland Scientist

PROFESSIONAL MEMBERSHIPS

Society of Wetland Scientists

PROJECT EXPERIENCE

ISU Research Park Tedesco Environmental Learning Corridor - Ames, IA

City of Bondurant Certified Site Study - Bondurant, IA

Upper Iowa River WMA Engineering Services - Winneshiek County, IA

Linn County Conservation Morgan Creek Trail - Cedar Rapids, IA

Project Bluejay Site Development - IA

UnityPoint Health Ankeny Stream Study - Ankeny, IA

MIKE VOLLBRECHT, PE, SE, LEED AP

Structural Engineer

Mike joined Shive-Hattery in 2007 and leads the structural group for the South Shore Corridor offices. He has structural experience in a range of different project sectors, including industrial, healthcare, commercial, government, and education. Project types includes new facilities, building modifications, machine foundations, crane support relocation and design, as well as material handling inspection and structural building evaluations. Experienced with large and small building renovations from complete structural overhaul additions to checking loads and making minor adjustments when required. Additionally experienced in the structural design of storm shelters to FEMA 361 and ICC 500, and blast design for ATFP (Anti-Terrorism Force Protection) for new or existing government buildings.

EDUCATION

Bachelor of Science in Civil Engineering, Valparaiso University

Master of Science, Structural Engineering, Purdue University

PROFESSIONAL DESIGNATIONS

Professional Engineer: IA, IN, MI, CO, RI

Registered Structural Engineer: IL, NV

LEED AP

NCEES

PROFESSIONAL MEMBERSHIPS

Valparaiso Chamber

ASCE

PROJECT EXPERIENCE

Atlas Financial Headquarters - Schaumburg, IL

Andigo Credit Union - Carol Stream and Streamwood, IL

BMO Harris - Nationwide

CSI Regional Offices and Data Center - Valparaiso, IN

City of Valparaiso Central Park Expansion - Valparaiso, IN

ComEd Channahon - Channahon, IL

Gordon Van Tines Loft Renovation - Davenport, IA

Grubhub - Chicago, IL & New York, NY

RSM - Nationwide

MATT GORDON, PE

Electrical Engineer

Matt brings 15 years of electrical engineering experience to the team. He has a background in design and review of electrical, telecommunication, and alarm systems, and also coordination of feasibility studies and research/site investigation. Matt is experienced in schematic design, detailed design and specifications development. Based on experience, he's familiar with electrical codes including the National Electrical Code, Life Safety Code, IESNA Lighting Handbook, ANSI/ASHRAE 90.1, and the International Building Code. He regularly uses AGi32 lighting software, CAD, and REVIT.

EDUCATION

Bachelor of Science, Electrical Engineering, Iowa State University, 2003

PROFESSIONAL DESIGNATIONS

Professional Engineer: AZ,CT, IA, IN, KY, MI, MN, ND, OH, SC, TN, RI, WI

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronics Engineers (IEEE)

PROJECT EXPERIENCE

Alliant Energy Mason City Operations Center - Mason City, IA

Alliant Energy Ottumwa New Operations Center - Ottumwa, IA

Anamosa Community School District Strawberry Hill Elementary Mechanical Upgrades

Linn County Conservation Board Red Cedar Lodge - Cedar Rapids, IA

North Liberty SE Growth Area Water and Sanitary Sewer Extensions - North Liberty, IA

JEREMY HUISMAN, PE

Mechanical Engineer

As lead mechanical engineer, Jeremy will bring more than 18 years of experience leading new construction, renovations, and upgrades projects. He has been involved in all stages of project delivery, from planning and design, through construction administration. He strives to be knowledgeable on the latest codes and standards, as well as sustainable approaches, to provide the most appropriate solution for your needs.

EDUCATION

Bachelor of Science, Mechanical Engineering, Iowa State University, 2000

PROFESSIONAL DESIGNATIONS

Professional Engineer: AR, IA, IL, IN, MN, MT, ND

NCEES Record

Healthcare Facility Design Professional

PROFESSIONAL MEMBERSHIPS

American Society of Heating Refrigeration Air Conditioning Engineers (ASHRAE)

PROJECT EXPERIENCE

Public Safety Building/Fire Station - Brooklyn, IA

University of Illinois Health: Outpatient Surgery Center & Specialty Clinics - Chicago, IL

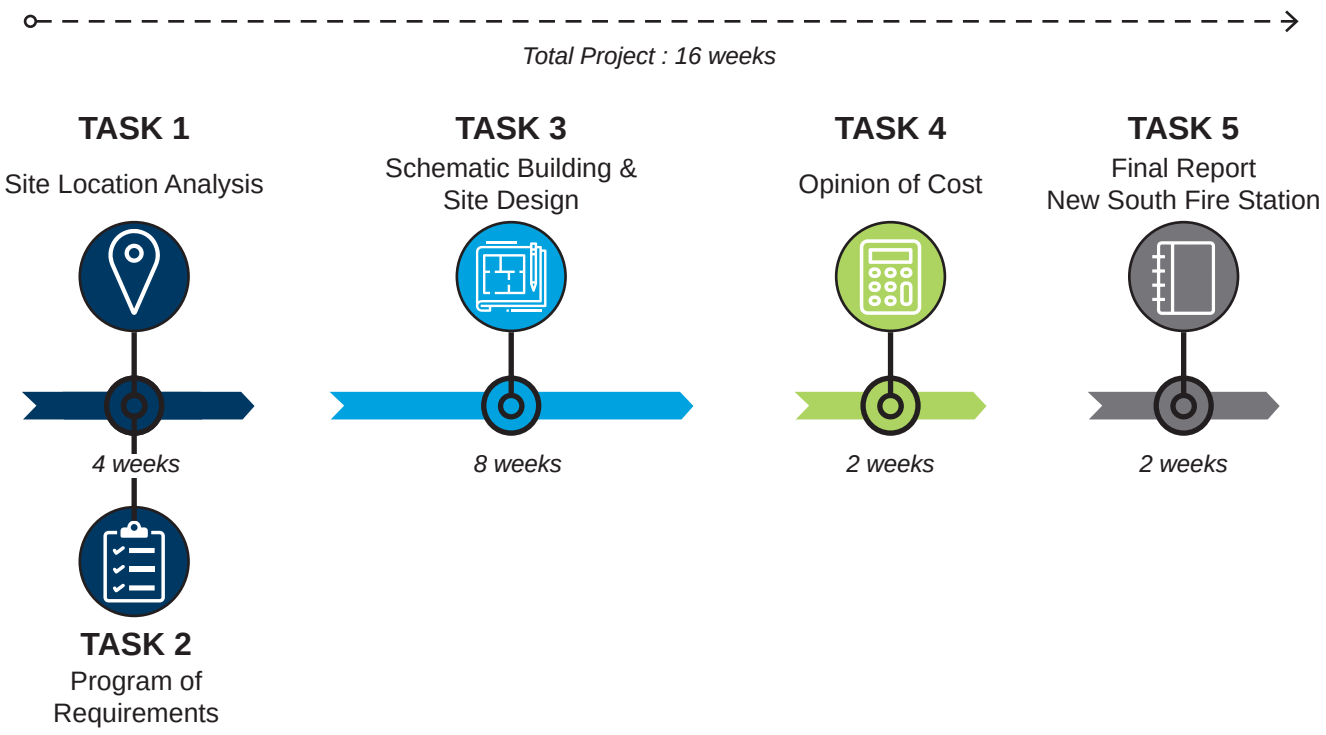
Genesis Health Systems East Peds: Oncology - Davenport, IA

Genesis Health Systems Pharmacy Upgrades - Davenport, IA

University of Iowa Hospitals and Clinics (UIHC) :Installation of Microbiology Automation Equipment - Iowa City, IA

Proposed Timeline

The following diagram represents a estimate of the project timeline for Tasks 1 through 5. Over the course of the allotted 16-weeks, Tasks 1 and 2 occur concurrently, with Tasks 3 through 5 following in the remaining 12 weeks.



Itemized Budget

Below is a detailed investment proposal for the scope identified in Tasks One through Five.*

**Reimbursable expenses are included in the expense line items below*

Task 1: Site Location Analysis *(4 weeks)*

Architecture & Project Management....$8,200
Civil Engineering.....$1,100
Estimated Expenses.....$200
Total, Task 1.....$9,500**
***Analysis of additional sites: $1,100 / each, maximum three (3) additional sites*

Task 2: Program of Requirements *(4 weeks, concurrent w/ Task 1)*

Architecture & Project Management....$6,900
Civil Engineering.....$550
PME Engineering.....$600
Estimated Expenses.....$200
Total, Task 2..... .....$8,250

Task 3: Schematic Building & Site Design *(8 weeks)*

Architecture & Project Management....$12,050
Civil Engineering.....$7,700
Structural Engineering.....$2,400
PME Engineering.....$4,200
Estimated Expenses.....$2,350
Total, Task 3.....$28,700

Task 4: Opinion of Cost *(2 weeks)*

Architecture & Project Management....$2,050
Civil Engineering.....$550
Structural Engineering.....$150
PME Engineering.....$300
Estimated Expenses.....$2,550
Total, Task 4.....$5,600

Task 5: Final New South Fire Station Report *(2 weeks)*

Architecture & Project Management....$4,350
Civil Engineering.....$1,100
Structural Engineering.....$300
PME Engineering.....$600
Estimated Expenses.....$200
Total, Task 5.....$6,550

Total Proposed Investment: $58,600

Hourly Rate Range by Title **	
Licensed Professional Engineer	$190.00-$210.00
Engineer	$90.00-$163.00
Registered Architect	$90.00-$210.00
Architect	$90.00-$163.00
Interior Designer	$90.00-$195.00
Technicians	$63.00-$137.00
Administrative Support Staff	$62.00

** Effective January 1, 2020 to December 31, 2020

References

Penn Township Fire Chief VanBruaene
Phone: 574.255.5075
Email: jvanbruaene@pennfire.org
Penn Township Fire Station 13

City of South Bend Assistant Fire Chief Todd Skwarcan
Phone: 574.235.9257
Email: tskwarca@southbendin.gov
South Bend Fire Stations 4, 9, and 12

Steve Cox, Executive Director of the Indiana
Department of Homeland Security
Phone: 574.274.1785
Email: pio@dhs.in.gov
South Bend Fire Stations 4, 9, and 12


SOUTH BEND
FIRE DEPT.

EPOCH

A DIVISION OF SHIVEHATTERY