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GROUP

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# CITY OF GOSHEN, IN

Proposal for New South Fire Station Study

OCTOBER 12, 2020

Architecture | Interior Design | Landscape Architecture | Engineering







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ARCHITECTURE INTERIOR DESIGN LANDSCAPE ARCHITECTURE ENGINEERING

October 12, 2020

Becky Hutsell  
City of Goshen Redevelopment Commission  
204 E. Jefferson Street, Suite 6  
Goshen, IN 46528

**RE: Request for Proposals  
New South Fire Station Study**

Dear Ms. Hutsell and members of the Selection Committee:

On behalf of BKV Group, we thank you for considering our proposal to provide professional services to the City of Goshen, Goshen Redevelopment Commission, and the Goshen Fire Department.

Our team has reviewed the Request for Qualifications and visited the site. We understand the scope of services requested and can deliver on the District's long-term needs. From our office in downtown Chicago, BKV Group has spent the past decade designing more than 40 fire station projects across the country, ranging from studies including, small remodels and maintenance projects to headquarters buildings for large suburban departments.

BKV Group was founded in 1978 under the principle that government architects should put the best interests of the citizens above their own. Our core belief is that architecture has a profound responsibility to the community – regardless of the project type, our duty is to always enhance the economic, aesthetic, social, and environmental context of the communities we work in.

More than 40 years later, this vision has not changed. Today, we provide our government clients with superior customer service by adopting the client's goals as our own, enabling transparent decision making, committing to responsible spending of public dollars, and being passionate about the success of the communities for whom we work.

The day-to-day business of the project will be led by Craig Carter, our Project Manager and Firematic Expert. Not only does Craig have the organizational skills and architectural experience to run the project successfully, he also is a National Expert in fire station design. He routinely teaches at conferences and writes on such topics as sleep deprivation, station design response to cancer initiatives, the changing gender issues and others of interest to the fire service. Craig will be heading a BKV Group team that consistently works together on fire station projects, and they can tap into the experience and productivity of the 200+ professionals who work alongside us.

Over three years ago we started working with Chief Greg Martin from Rochester, Minnesota, Fire Department. Greg was the Chief in Rochester and after 36 years, 4 cities and 8 new stations at various locations, he decided to retire. Chief Martin joined the BKV team in 2018. His experience in staffing, operations, budgeting, community engagement and station planning is invaluable. Greg will provide insight from his time as a firefighter, his time as a Fire Chief, and from his current role as an instructor for MNFIRE on the impacts that stations have on long-term firefighter health.

BKV Group offers five differentiators that make our team an excellent choice to work with you:

**Innovation.** BKV Group has completed more than 130 fire station projects across the country, but it is our ongoing discussions with fire chiefs, participation in national fire station design conferences, and research into the future of the fire service that will allow us to help you design a cutting-edge fire station.

**Creativity.** BKV Group has a history of design excellence, winning both regional and national awards for our fire stations and other municipal projects. We think harder, earlier, to make sure we find the best solution for our clients.

**Efficient Study Process.** BKV Group has a wide array of in-house design disciplines, which allows us to approach the study from all important angles while saving our clients time and money. Through countless studies together, our core team has perfected our approach to maximize the amount of information we can gather and analyze with our clients while taking up the least amount of your time.

**Thorough Results.** BKV Group's process is research intensive and workshop based, using hard data to enable informed decision making by our clients. Our team will explore a variety of out-of-the-box ideas to save whatever we can of the existing stations, as well as examine the possibility of the complete replacement of each. We believe that exercising our creativity to explore many diverse options is the only way to recommend, with certainty, which approach is optimal for citizens of Goshen.

**Accurate Project Costing.** Our staff has had phenomenal success estimating both construction costs and total project costs. This is due to our use of Building Information Modeling even in the earliest phases of our projects as well as a familiarity with the marketplace and a rigorous multi-faceted approach. Time and again, our pre-design estimates have turned into successful design projects, and our design projects have bid in the ideal range of 0%-5% below our client's budget.

We believe in a collaborative and engaged approach to our work. We look forward to sharing our passion with the City of Goshen, working towards a common goal of improved functionality, durability, and the appropriate aesthetics for the new South Fire Station.

Selection of firms for studies and projects are about the teams that have the best experience, knowledge and talent – most importantly they are about the people that you want to work with and the firm that provides demonstratable value for the proposed fee. Test us out with an invitation to interview for the project - we will demonstrate to you our team's abilities by providing a short work session with you reviewing our initial site analysis, potential site concepts and our thoughts about a potential images of the building. We know you are going to like what you see in our people, our process, initial thoughts – and our competitive fee for value should seal the deal.

Please contact us if you have any questions. We look forward to joining your team!

Respectfully,  
**BKV Group**



Henry Pittner, AIA  
Partner-in-Charge



Craig Carter, AIA  
Project Manager / Fire Station Planner





# LIST OF REFERENCES AND PROJECTS

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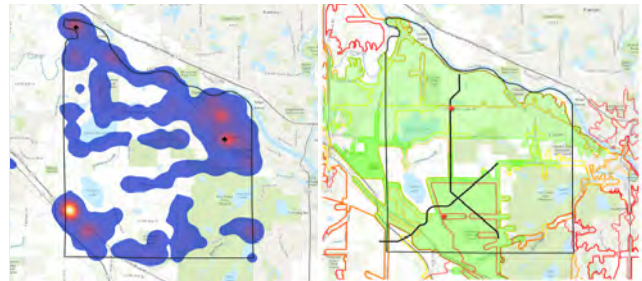


▲ LIST OF REFERENCES AND PROJECTS

**REFERENCES**

**City of Dayton**

Jason Mickelson  
Fire Chief  
City of Dayton Fire Department  
612.751.8158  
[jmickelson@cityofdaytonmn.com](mailto:jmickelson@cityofdaytonmn.com)



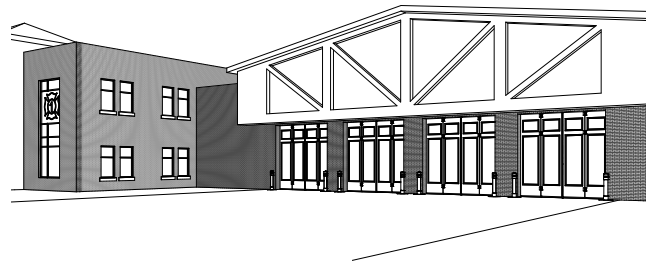
**Lincolnshire-Riverwoods Fire Station #51**

Jason McKenna  
Battalion Chief  
Lincolnshire-Riverwoods Fire Protection District  
847.634.2512  
[jmckenna@lrfpd.org](mailto:jmckenna@lrfpd.org)



**Lake Zurich Fire Rescue Department (LZFD)**

John Malcolm  
Fire Chief  
Lake Zurich Fire Rescue Department  
847.540.5070  
[john.malcolm@lakezurich.org](mailto:john.malcolm@lakezurich.org)



**Village of Streamwood**

Chris Clark  
Fire Chief  
Village of Streamwood  
630.736.3650  
[cclark@streamwood.org](mailto:cclark@streamwood.org)



**Ramsey Fire Station #2**

Matt Kohner  
Fire Chief  
City of Ramsey  
763.427.4452  
[mkohner@ci.ramsey.mn.us](mailto:mkohner@ci.ramsey.mn.us)



**Carrollton Fire Station Study**

Gregg Salmi  
Fire Chief  
City of Carrollton  
972.466.3068



**Custer Volunteer Fire Department**

Joel Behlings  
Fire Chief  
Custer Volunteer Fire Department  
605.673.1218  
[custervfd@goldenwest.net](mailto:custervfd@goldenwest.net)



**Seven Corners Fire Station 28**

Danilo Nunez  
Senior Engineer  
Fairfax County DPWES  
703.324.2148  
[Danilo.NunezJr@fairfaxcounty.gov](mailto:Danilo.NunezJr@fairfaxcounty.gov)



**▲ LIST OF REFERENCES AND PROJECTS**

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**Woodlawn Fire Station**

Maryam Mostamandi

Projects Manager

Fairfax County DPWES

703.324.4472

[Maryam.Mostamandi@fairfaxcounty.gov](mailto:Maryam.Mostamandi@fairfaxcounty.gov)**Penn Daw Fire Station 11**

Lisa Dixon

Senior Engineer

Fairfax County DPWES

703.324.5155

[Lisa.Dixon@fairfaxcounty.gov](mailto:Lisa.Dixon@fairfaxcounty.gov)**Remington Fire Station Study**

Donald Mason

Fire Chief

Remington Volunteer Fire Department

540.272.5897

[donald.mason@rvfrd.com](mailto:donald.mason@rvfrd.com)**Henrico County Firehouse #19**

Chuck Phan

Capital Projects Manager

Henrico County

804.501.4137

[PHA002@henrico.us](mailto:PHA002@henrico.us)



FIRM NAME	PRACTICE AREAS	LOCATIONS	OFFICE	CONTACT
BKV Group	Government Housing	Chicago Dallas	209 S. LaSalle Street, Suite 920	Henry Pittner, AIA, Partner-in-Charge
YEAR ESTABLISHED	Hospitality	Minneapolis	Chicago, IL	224.250.3878
1978	Education Commercial	Washington DC	60604 312.279.0470	<a href="mailto:hpittner@bkvgroup.com">hpittner@bkvgroup.com</a> <a href="http://www.bkvgroup.com">com</a>
FIRM EMPLOYEES				
209				

## BY THE NUMBERS

**42**  
YEARS IN OPERA-  
TION

**200+**  
EMPLOYEES

**18**  
LICENSED ENGINEERS

**40+**  
LEED ACCREDITED

**5**  
FOCUSED MARKETS

**5**  
LOCATIONS

## BKV GROUP – FIRE

The Health and Safety of the Firefighters is the number one driver of decisions in all of our Fire Station projects. Firefighters risk their lives to protect people and property, and we have made it our mission to help design the facilities and equipment that allow those men and women to be safe and functional.

We program and design our stations to be functional, aesthetically responsive

## FIRM INTRODUCTION

BKV Group is a full-service architecture, engineering, interior design, landscape architecture and construction administration firm. Over the last 42 years, BKV Group has grown from a sole proprietorship into a diverse partnership with offices in Chicago, Washington DC, Dallas, and Minneapolis, serving clients locally and nationwide.

Collectively, we represent a practice whose expertise is team-focused and offers a client-centered approach to creating architectural solutions. Through our full-service structure, we offer our clients a single source for all aspects of design and construction administration services.

BKV Group is an established leader in five primary practice areas: government, housing, hospitality, education, and commercial. Each practice area is led by BKV Group partners who are nationally recognized leaders in their respective fields.

As a full-service, multi-disciplinary firm of more than 200 professional staff, BKV Group has architects, landscape architects, interior designers, construction administrators, structural, mechanical/plumbing, and electrical engineers, certified code officials, and specification writers all in-house. We provide facility evaluations and space needs analysis, facility options, and full design services from schematic design through construction and close-out.

## WHAT WE PROVIDE

BKV Group, through rigorous continuing education, provides design solutions at the leading edge of innovative technologies. A commitment to integrated design necessitates constant collaboration among all professional disciplines who share a common vision. Our multi-disciplinary approach allows us to serve the unique and diverse needs of each client through a fully-coordinated, single-source team.

### PROJECT MANAGEMENT

- Goals and Objectives
- Communication Protocols
- Project Budget Management
- Project Schedule Management
- Quality Assurance

### PLANNING AND FEASIBILITY

- Existing Condition Assessment
- Functional Workflow Assessment
- Health and Safety Assessment
- Capital Improvement Planning
- Phased Property Planning
- Space Needs Analysis
- Space Standard Diagrams
- GIS Drive-time Analysis
- Land Use and Zoning Analysis
- Site Selection Study
- Site Feasibility and Planning
- Building Planning and Stacking
- Project Master Planning
- Total Project Cost Estimating
- Total Cost of Ownership Analysis

### ARCHITECTURE

- Visioning and Conceptual Design
- Construction Documentation
- CSI-format Specifications
- Building Science/ Forensics
- Cost Estimating and Value Engineering
- Critical Path Scheduling
- Building Information Modeling
- Computer Rendering
- Immersive 3D Visioning

### INTERIOR DESIGN

- Space Planning
- Interior Concept Renderings
- Material Finish Selection

- Durability Analysis
- Infection Control Analysis
- Furniture and Equipment Selection
- Art & Accessories Staging
- FF&E Budgeting and Procurement
- Installation Monitoring

### MECHANICAL ENGINEERING

- Energy Use/Conservation Analysis
- HVAC System Lifecycle Analysis
- Building Commissioning
- System Operations and Training
- Building Automation Controls Sequencing
- Fire Protection Systems
- Plumbing & Piping System Design

### ELECTRICAL ENGINEERING

- Photometric Lighting Design
- Power Distribution Design
- Generator Load Analysis
- Photovoltaic Integration
- Data and A/V System Design
- Security Hardware and Cameras
- Fire Alarm System Specification
- Alert Notification Design
- Power and Systems Commissioning

### STRUCTURAL ENGINEERING

- Structural Analysis and Design
- Structural System Comparisons
- Existing Structure Evaluations
- Dynamic Vibration Analysis

### LANDSCAPE ARCHITECTURE

- Land-Use and Zoning Analysis
- Planting and Hardscape Design

- Boundary/Screening Yard Design
- Rainwater Collection and Irrigation
- Tree Inventory and Analysis
- Streetscape Design

### SUSTAINABLE DESIGN

- Owners Project Requirements
- Simple Box Analysis
- Comprehensive Energy Modeling
- Basic Commissioning
- Daylight Modeling and Calculations
- Custom Systems Analysis
- Typical Meteorological Year Analysis
- ASHRAE Calculations
- LEED Project Tracking and Submissions
- LEED Construction Phase Oversight
- Green Communities Submissions
- National Green Building Standard

### CONSTRUCTION ADMINISTRATION

- Contractor Selection Assistance
- Cost Control and Evaluation
- Scheduling Oversight
- Construction Observation
- Quality Control Management
- Move-in Coordination
- Photography Coordination
- Grand Opening Coordination
- Eleven-Month Warranty Walk-Through

### HISTORIC PRESERVATION

- Historic Structures Report
- Adaptive Reuse Options
- Measuring and Documentation

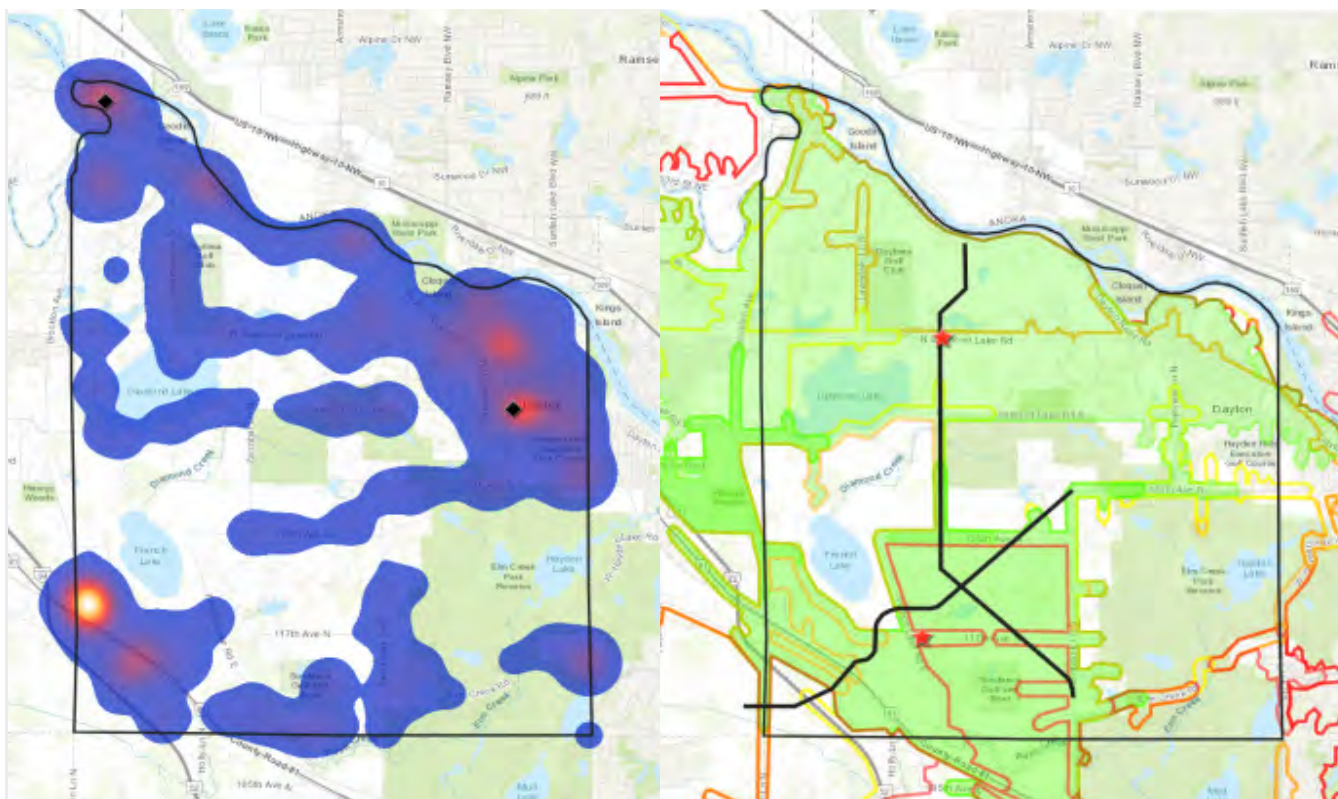
Fire Stations are a unique building type that are very specialized in nature. At BKV Group we specialize in Fire Station and Public Safety design, providing you with an experienced team to ensure your project is customized to fit your needs. Below is a sampling of our fire station and public safety projects.

OVER **130** FIRE STATIONS



**Andover Fire Station**, Needs Assessment Study, Andover, MN • **Bedford Municipal Complex**, Needs Assessment, New Fire Station and Municipal Campus, Bedford, OH • **Belle Plaine Fire Station**, New Facility, Belle Plaine, MN • **Bloomington Fire Station**, Needs Assessment, Addition to Station #3 and New Main Station #1, Bloomington, MN • **Carrollton Fire Station Study**, Carrollton, TX • **Centennial Lakes Fire Station**, Needs Assessment and New Facility, Circle Pines, MN • **Champlin Fire Station**, Needs Assessment Study, Addition and Remodeling, Champlin, MN • **Chanhassen Fire Station**, New Facility, Chanhassen, MN • **Coon Rapids Fire Administration**, Needs Assessment Study, Coon Rapids, MN • **Coppell Fire Station Study**, Coppell, TX • **Eagan Fire Administration**, Needs Assessment and New Facility, Eagan, MN • **Eden Prairie Fire Station**, Needs Assessment and New Facility, Eden Prairie, MN • **Fridley Fire Station**, Needs Assessment and Remodeling, Fridley, MN • **Fridley Civic Complex**, Fire, Police, City Hall, Public Works, Fridley, MN • **Golden Valley Public Safety**, Needs Assessment, Expansion and Remodeling, Golden Valley, MN • **Grand Island Fire Station**, Needs Assessment and Site Selection, Grand Island, NE • **Henrico County Fire House #19**, New Facility, Henrico, VA • **Hermantown Public Safety**, Needs Assessment and New Facility, Hermantown, MN • **Key Largo Fire Department**, space needs assessment and Expansion Planning, Fire Station 1, Key Largo FL • **Lake Johanna Fire Station**, Needs Assessment and New Facility, North Oaks, MN • **Little Canada Fire Station**, Needs Assessment and New Facility, Little Canada, MN • **Long Lake Fire Department**, Needs Assessment and New Facility, Long Lake, MN • **Mahtomedi Fire Department & City Hall**, Needs Assessment, Mahtomedi, MN • **Maple Grove Fire Station**, Needs Assessment and New Fire Station No 5, Maple Grove, MN • **Maple Grove Fire Station**, Needs Assessment and Renovation Fire Station No 1, Maple Grove, MN • **Minneapolis Fire Station #27**, Needs Assessment and New Facility, Minneapolis, MN • **Minneapolis Fire Station #28**, Needs Assessment and New Facility, Minneapolis, MN • **Minnetonka Fire Stations**, #1, #3, #4, #5 Prototype Design, Minnetonka, MN • **Navarre Fire Station**, New Facility, Orono, MN • **New Prague Fire Station**, Main Station Remodeling, New Prague, MN • **New Ulm Fire Station**, Addition and Remodeling, New Ulm, MN • **Penn Daw Fire Station 11**, Renovation and Expansion, Fairfax County, VA • **Pennington County Search and Rescue**, Facility Space Needs Assessment and Master Planning, Rapid City, SD • **Pennington County Fire Administration**, Facility Space Needs Assessment and Master Planning, Rapid City SD • **Plymouth Fire Station**, Needs Assessment and New Facility Main Station, Plymouth, MN • **Prior Lake Fire Station**, Needs Assessment and New Main Fire Station, Prior Lake, MN • **Ramsey Fire Department**, Study, New Facility No. 2, Ramsey, MN • **Red Wing Fire Department**, Space Needs Assessment and Facility Planning, Fire Station 2, Red Wing, MN • **Rochester Fire Station No. 2**, Rochester, MN • **Richfield Fire Department**, Needs Assessment and Master Plan, Richfield, MN • **Rosemount Fire Department**, Needs Assessment, Rosemount, MN • **Russell Township Fire Station**, Feasibility Study, Needs Assessment and New Facility, Novelty, OH • **Savage Fire Department**, Needs Assessment, Savage, MN • **Scott County Association For Leadership and Efficiency**, County Wide Fire and Police Training Academy, Needs Assessment and New Facility, Shakopee, MN • **Shakopee Fire Station**, Needs Assessment and New Facility, Shakopee, MN • **St. Louis Park Fire Administration**, Needs Assessment, St. Louis Park, MN • **White Bear Lake Fire Station**, Needs Assessment, White Bear Lake, MN • **Woodbury Fire Station**, Needs Assessment, Woodbury, MN • **Woodbury Fox Run**, New Facility, Woodbury, MN • **Woodbury Afton**, New Facility, Woodbury, MN • **Woodlawn Fire Station #24**, Alexandria, VA • **Wyoming Public Safety/Fire Facility**, Wyoming, MN





**CLIENT**

City of Dayton

**SIZE**

Headquarters: 18,594 SF

Satellite: 11,457 SF

**COMPLETED**

Kickoff: September 30, 2019

**SERVICES**

Existing Conditions,  
Needs Assessment,  
Programming, Planning  
Engagement

**REFERENCE:**

Chief Jason Mickelson

612.751.8158

[jmickelson@cityofdaytonmn.com](mailto:jmickelson@cityofdaytonmn.com)

**DAYTON FIRE STATION STUDY**

DAYTON, MINNESOTA

BKV Group was selected by the City of Dayton to conduct a conditions and functionality assessment of Stations 1 and 2 as well as an apparatus assessment, staffing assessment, and a station location study. Our work with The City of Dayton during this engagement also included programming and master planning.

**GOALS AND OBJECTIVES**

- Analyze and document limitations of existing Stations
- Analyze and document how much space is necessary to work effectively
- Plan for enhanced training capabilities
- Analyze the condition of current stations and estimate costs for remodel and expansion provide new conceptual station and global cost estimate
- Analyze current station locations. Plot out alternative locations
- Analyze Fire Department staffing models and suggest alternatives for current and future call volumes
- Review the fleet and make recommendations
- Basic review of operations and make recommendations.



**CLIENT**  
Lincolnshire-Riverwoods Fire  
Protection District

**SIZE**  
31,325 SF  
4 double-deep drive-thru  
5 double-deep small vehicle  
10 bunk rooms

**COMPLETED**  
Kickoff: March 2018  
Final Report: August 2018

**SERVICES**  
Existing Conditions, Needs  
Assessment, Programming,  
Planning, Site Feasibility

**REFERENCE**  
Battalion Chief Jason  
McKenna  
847.634.2512  
[jmckenna@lfpd.org](mailto:jmckenna@lfpd.org)

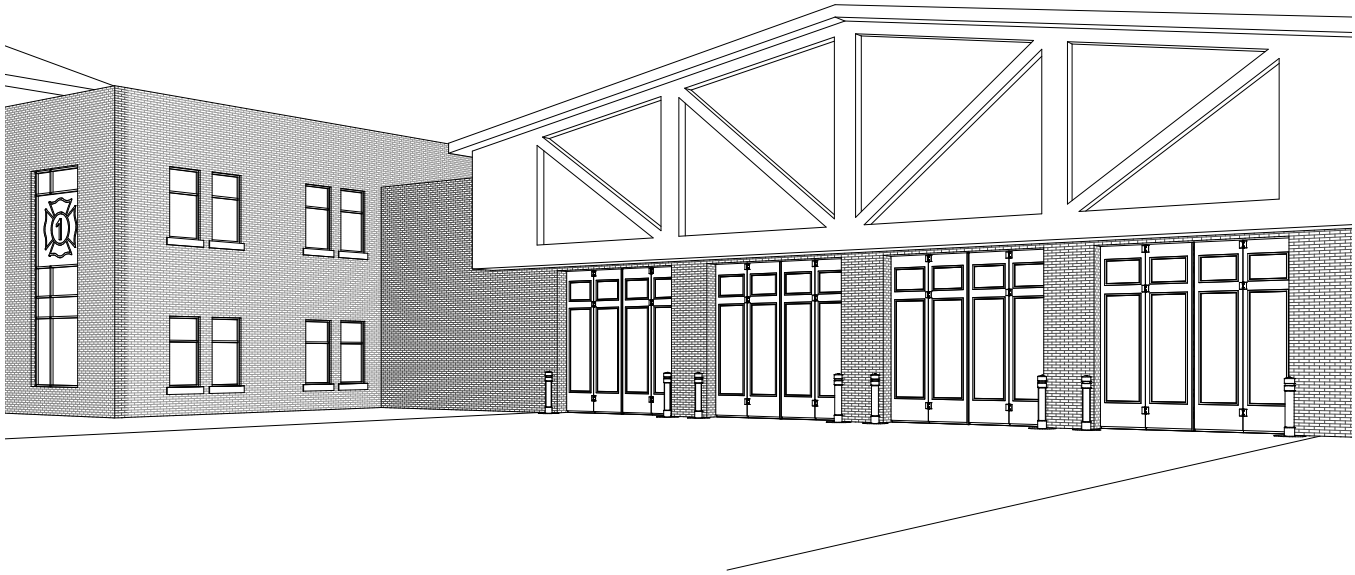
## LINCOLNSHIRE-RIVERWOODS STATION #51 STUDY

LINCOLNSHIRE, ILLINOIS

Lincolnshire-Riverwoods Station #51 is only 24 years old, but has already started to show some serious issues. Constructed as a new headquarters station as the district expanded, it is located on a narrow industrial parcel and was built as inexpensively as possible. The cost savings taken at construction have placed a large burden on today's firefighters.

BKV Group conducted a physical and functional assessment of the existing station, identifying some significant concerns. For example, the through-wall flashing has failed, there is no insulation at the exterior walls, and sealant is missing between coping stones. Turnout gear is stored alongside the apparatus in the bays due to lack of any other space to put it, and the decontamination areas are limited. There is no women's toilet room, dormitory nooks provide very little privacy and no sound isolation, and the kitchen is too tight to function appropriately.

After identifying the concerns about the current building and estimating the costs to remedy them, BKV Group worked with the department to determine their space needs for the future, discussing how the station would react to changes in cancer prevention and sleep deprivation best practices, accommodate ever-growing apparatus, and address gender separation and personal privacy, among other issues. The team is waiting for a GIS analysis and vehicle deployment study back from another consultant before finalizing the report and making a recommendation about renovation/expansion, replacement on site, or replacement on a different site.



**CLIENT**

Lake Zurich Fire Rescue  
Department (LZFD)

**SIZE**

25,300 SF  
4 double-deep drive-through bays  
8 bunks

**COMPLETED**

Kickoff: October 2019  
Final Report: January 2020

**SERVICES**

Existing Conditions, Needs  
Assessment, Programming, Site  
Feasibility, Master Planning,  
Concept Sketch

**REFERENCE**

Chief John Malcolm  
847.540.5070  
[john.malcolm@lakezurich.org](mailto:john.malcolm@lakezurich.org)

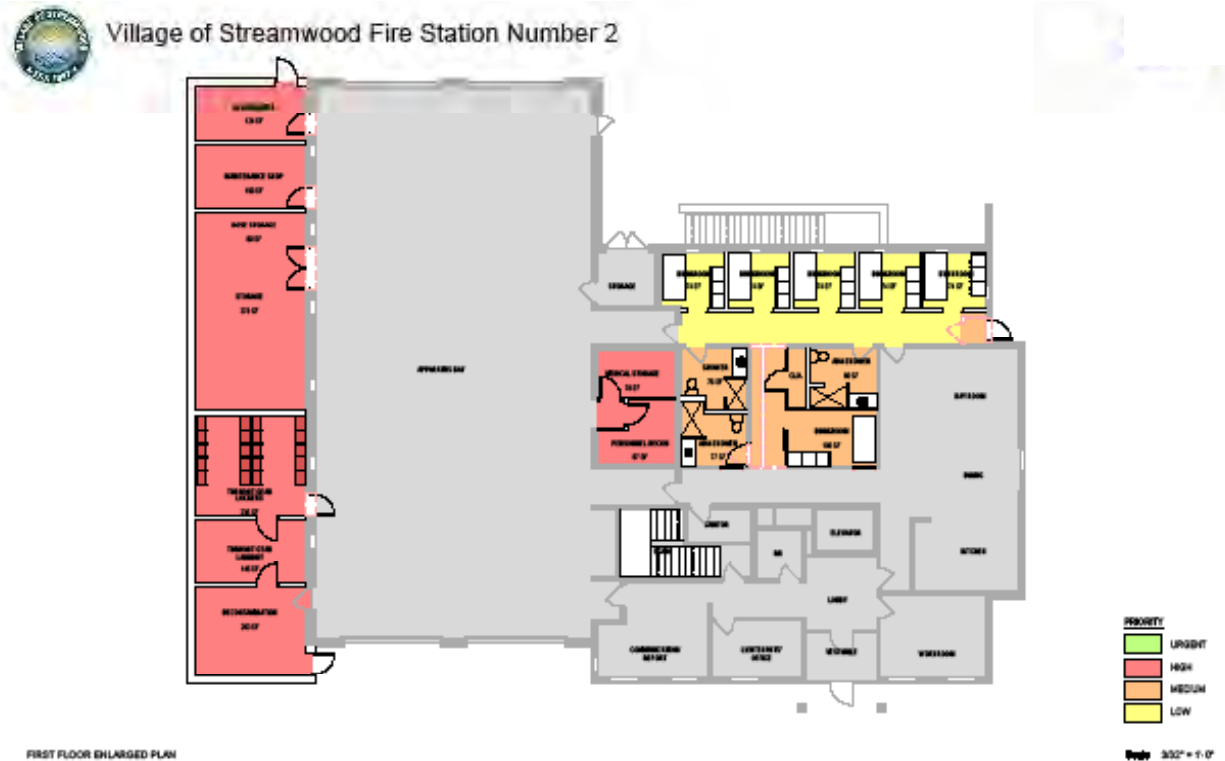
**LAKE ZURICH FIRE RESCUE DEPARTMENT STUDY**

LAKE ZURICH, ILLINOIS

BKV Group is conducting a thorough study of four fire stations and three Parks buildings for the City of Lake Zurich. The four existing stations are being reviewed for Response Time Considerations, Functional Issues, NFPA Compliance concerns, Building Code Compliance concerns, Accessibility Code Compliance concerns, and Sustainability Issues. In addition, Maintenance and Repair Issues were documented for all building systems, including site paving, landscaping, grade-mounted equipment, fencing, exterior walls, windows, doors, structural systems, ceilings, floors, lighting systems, electrical and communications systems, mechanical systems, plumbing systems, fire suppression and notification systems, appliances and equipment, finishes, casework, etc. Costs to rectify the concerns were developed so the City can understand the severity of the issues and the projected expense.

Along with LZFRD and City leadership, BKV Group developed optimal space programs for each station and compared them to existing square footage, indicating missing areas and suggesting opportunities for remodeling. For the headquarters station, BKV Group is studying the site constraints to explain the difficulties with adding onto the existing building and the challenges of tearing down and building new.





**CLIENT**

Village of Streamwood

**SIZE**

11,6695 SF

**COMPLETED**

Final Report: 2017

**SERVICES**

Existing Conditions, Programming, Planning, Site Feasibility, Site Selection

**REFERENCE**

Fire Chief Chris Clark  
630.736.3650  
[cclark@streamwood.org](mailto:cclark@streamwood.org)

**STREAMWOOD SPACE STUDY**

STREAMWOOD, ILLINOIS

BKV Group performed a space needs analysis and space utilization master plan for the Village of Streamwood. Several departments have outgrown their physical space, others feel their space is awkwardly organized, and one department was recently created and given space in several buildings. BKV Group evaluated the layout, efficiency, code compliance, security, etc. of the Village Hall, Police Station, three Fire Stations, the Community Development Garage, and the Public Works facility. BKV Group then worked with the Fire, Police, Public Works, Community Development, Finance, IT, and Administration departments to discuss their workflows and overall space needs, now and in the future.

BKV Group was asked to continue the project into the design phases. These started with careful documentation of existing elements, including mechanical and electrical systems. In addition, the Village requested some asbestos testing and some work on the exterior of the building. Detailed 3D models were created to walk the Village Board members through the customer service experience at the finance counter and at the community development counter, and BKV Group utilized a virtual reality system to allow staff to look around and understand where cash drawers, monitors, card readers, forms, etc. would be located.



**CLIENT**

City of Ramsey

**SIZE**

12,000 SF

**COMPLETED**

Kickoff: June 2015  
Final Report: March 2016

**SERVICES**

Space Needs Study, Conceptual Design Services, Cost Estimation

**REFERENCE**

Fire Chief Matt Kohner  
763.427.4452  
[mkohner@ci.ramsey.mn.us](mailto:mkohner@ci.ramsey.mn.us)

**RAMSEY FIRE STATION NO. 2 ASSESSMENT STUDY**

RAMSEY, MINNESOTA

BKV Group was hired by the City of Ramsey Fire Department to evaluate a proposed new site for a replacement station for their current Station #2. BKV Group was asked to assess whether a replacement Fire Station #2 would fit on a nearby City owned property of unusual shape. Apparatus turning clearances were met only when the apparatus bays were located on a specific place on the site, but the remaining program areas fit easily around that constraint.

Another part of the study was a re-analysis of the spaces desired in the new Station, which were expected to be different than those in the existing facility. Based on the services and training the Department planned to deliver out of the building and incorporating the latest best-practices in fire station design, a program was developed that totaled approximately 12,000 S.F.

The new design is laid out to improve the existing station's facilities by providing enhanced carbon monoxide containment, facilities to accommodate a multi-gender workforce, improved physical and classroom training facilities, and a flexible day room and kitchen facility to be utilized as a shared training space. The design also includes more functional gear and equipment storage and maintenance areas than the existing station, and integrates a hose tower. Finally, the new design also includes a small bunk room to provide sleeping quarters outside of the day room and training room for when overnight staffing is required by their paid-on-call staff.



**CLIENT**

City of Ramsey

**SIZE**

11,850 SF  
3 drive-through bays  
Volunteer

**COMPLETED**

March 2016

**SERVICES**

Programming, Site Feasibility, Planning, Design, Documentation, Architecture, Interior Design, Mechanical, Electrical, and Structural Engineering, Construction Administration

**COST**

\$3,236,1700

**REFERENCE**

Fire Chief Matt Kohner  
763.427.4452  
[mkohner@ci.ramsey.mn.us](mailto:mkohner@ci.ramsey.mn.us)

**RAMSEY FIRE STATION NO. 2**

RAMSEY, MINNESOTA

BKV Group was hired by the City of Ramsey Fire Department to evaluate a proposed new site for a replacement station for their current Station #2. The city was approached by two separate developers interested in acquiring the land currently occupied by their current Station #2, and BKV Group was hired to assess whether a nearby city-owned site was adequate to house a new replacement station.

The site planning process began by first analyzing the site to make sure all apparatus turning clearances could be met, and by assessing a proposed program for the replacement station. It was determined the program for the new station would require 12,000 SF, and the program analysis included options for either a single or two story building options. BKV Group also provided a preliminary cost estimate for the city to evaluate the feasibility of construction financing.

After the original assessment in 2012, the fire department retained BKV Group to continue design development. This stage began with review of the program completed as part of the study, and program and area specifications, as the city finalized their financing strategy for the station. BKV developed the floor plan, as well as completed the exterior design and massing of the building using Revit and Building Information Modeling.





**CLIENT**

Carrollton Fire Rescue Fire

**SIZE**

Station #3, ~4,500 SF, two single-deep back-in

Station #4 ~4,500 SF, two single-deep back-in

Station #5, ~5,800 SF, two double-deep back-in

Station #6, ~4,650 SF, two double-deep back-in

**COMPLETED**

Kickoff: December 2017

Final Report: March 2018

**SERVICES**

Existing Conditions, Site Feasibility, Site Selection

**REFERENCE**

Chief Gregg Salmi

972.466.3068

## CARROLLTON FIRE STATION STUDY

CARROLLTON, TEXAS

Working as a consultant underneath Emergency Services Consulting, International, BKV Group performed Facility Assessments for Carrollton Fire Stations #3, #4, #5, and #6, the oldest four stations in town.

BKV Group reviewed the condition of each system or element in each station and made note of maintenance concerns, code and ADA compliance concerns, security concerns, energy concerns, etc. Simultaneously, the team also reviewed the functionality of the stations and noted any issues identified including missing spaces, response time concerns, or lack of compliance with NFPA Standards. These issues were documented with text and photographs and estimated costs to rectify the issues were provided.

Specific recommendations for the disposition of each station were provided to tie into station relocation recommendations identified by ESCI.



**CLIENT**

Custer Volunteer Fire  
Department

**SIZE**

33,930 SF  
4 double-deep drive-thru  
8 double-deep small vehicle  
8 bunks

**COMPLETED**

March 2018

**SERVICES**

Existing Conditions, Programming,  
Planning, Site Feasibility, Site  
Selection

**CONSTRUCTION COST**

\$10,000,000 (est.)

**REFERENCE**

Chief Joel Behlings  
605.673.1218  
[custervfd@goldenwest.net](mailto:custervfd@goldenwest.net)

## CUSTER FIRE STATION

CUSTER, SOUTH DAKOTA

Working as a consultant underneath Emergency Services Consulting, International, BKV Group performed Facility Assessments on Custer’s Fire Station, as well as the buildings on either side, to determine if an expansion into those structures would create a functional fire station. To determine if the Department could physically fit into the buildings, BKV Group sat with the department administration to program a facility that would serve the Department for 50+ years. To be conscious of budget, three programs were created – Good, Better, and Best – showing a range of facility sizes that would satisfy Department goals of varying importance. A vacant property across the street was assessed for a station as well, and it was found to accommodate the full program and all required parking with a two-story office/ living wing.

To determine if the Department could physically fit into the buildings, BKV Group sat with the department administration to program a facility that would serve the Department for 50+ years. To be conscious of budget, three programs were created – Good, Better, and Best – showing a range of facility sizes that would satisfy Department goals of varying importance. The potential inclusion of the Ambulance Department and the US Forestry Service Fire Station were examined to take advantage of shared spaces and other income sources



**CLIENT**

Fairfax County Department of Public Works and Environmental Services

**SIZE**

14,000 SF

**COMPLETED**

Est October 15, 2019

**SERVICES**

Planning, Design, Documentation, Architecture, Interior Design, Mechanical, Electrical, and Structural Engineering, Construction Administration

**REFERENCE**

Danilo Nunez, Project Engineer  
703.324.2148  
[Danilo.NunezJr@fairfaxcounty.gov](mailto:Danilo.NunezJr@fairfaxcounty.gov)

## SEVEN CORNERS FIRE STATION 28

FAIRFAX COUNTY, VIRGINIA

BKV Group was commissioned by Fairfax County Department of Public Works and Environmental Services to perform PHASE 1 design services for the Seven Corners Fire Station 28 facility replacement project.

BKV Group and our partner Pacheco Ross Architects, division of H2M, explored multiple master plan options for replacing and modernizing the existing facility to meet current codes and programmatic requirements identified within the FRD Fire Station Design Guidelines. Our process identified potential site and building concepts to achieve the functional, operational, schedule and budget goals for the proposed scope of work. Each of the three concepts developed addressed the full range of site organization, circulation, functional and operational requirements typical of Fairfax County Fire Station facilities.

The master plan development paralleled our program validation process. Through our process we identified development risks and appropriate design approaches to mitigate risks to achieve the project goals. The selected concept for phase 2 services included a two-story replacement facility. Operations will be moved to a temporary facility once vacated located one mile from the current site.





**CLIENT**

Fairfax County Department of Public Works and Environmental Services

**SIZE**

15,149 SF  
4 double-deep drive-through Bays  
17 bunks

**COMPLETED**

In Progress  
Grand Opening: September 2021 (est.)

**SERVICES**

Programming, Planning, Design, Documentation, Construction Administration

**COST**

\$5,500,000 (est.)

**REFERENCE**

Maryam Mostamandi, Projects Manager  
703.324.4472  
[Maryam.Mostamandi@fairfaxcounty.gov](mailto:Maryam.Mostamandi@fairfaxcounty.gov)

**WOODLAWN FIRE STATION**

ALEXANDRIA, VIRGINIA

BKV Group was commissioned by Fairfax County Department of General Services to provide design and construction administration services for the modernization of Woodlawn Fire Station 24. After careful investigations of the costs, long term operational concerns, and short-term operational complications associated with phased-occupied renovations, the County elected to construct a two-story facility adjacent to the existing fire station, which will then remain operational during construction.

The station will contain four drive-through apparatus bays to house two Medics, an Aerial, an Engine, and an EMS Supervisor. Modern decontamination and turnout gear facilities will protect the long-term health of the firefighters. Bunk rooms and separate locker/shower facilities for men and women are located on the second floor, with two stairwells positioned for easy access into the bays and a fire pole providing direct access to the apparatus floor. Office spaces and living spaces join apparatus support on the first floor.

The building will employ low-maintenance materials and superior insulation to minimize long-term operating costs. The project has a goal of LEED Silver certification. The project team used cutting edge software to select the best long-term approach for mechanical, exterior enclosure, and lighting systems.



**CLIENT**

Fairfax County Department of Public Works and Environmental Services

**SIZE**

16,960 SF existing  
4 double-deep drive-thru  
1 small vehicle  
18 bunks

**COMPLETED**

N/A

**SERVICES**

Programming, Planning, Design, Documentation

**COST**

\$6,100,000

**REFERENCE:**

Lisa Dixon, Project Engineer  
703.324.5155  
[Lisa.Dixon@fairfaxcounty.gov](mailto:Lisa.Dixon@fairfaxcounty.gov)

## PENN DAW FIRE STATION 11

ALEXANDRIA, VIRGINIA

BKV Group was commissioned by Fairfax County Department of General Services to provide design and construction administration services for the modernization of Penn Daw Fire Station 11. The existing Penn Daw Fire Station was constructed for a volunteer fire company but has grown to a full time staff of 18. The living spaces added over time no longer meet County standards, and the apparatus bays are too small. The return apron is at a 12% slope and the parking lot cannot accommodate enough vehicles to manage a shift change.

Fairfax County retained BKV Group and Pacheco Ross Architects to develop a plan to renovate the facility on a tight budget. The new facility will have four and a half bays, 18 bunks, and appropriately sized office, kitchen, dining room, dayroom, and locker room facilities. BKV Group and PRA developed several options to accommodate the enlarged program, ranging from a new facility off-site, to replacing the apparatus bays and apparatus support spaces, to replacing only the apparatus bays and renovating the other existing spaces. Each option came with conceptual exterior renderings, although the styles applied to each can be applied to any of the massing solutions.



**CLIENT**

Fauquier County  
Remington Volunteer Fire

**SIZE**

25,184 SF

**COMPLETED**

Kickoff: March 2019  
Final Report: September 2019

**SERVICES**

Facility Study, Space Analysis,  
Concept Planning

**REFERENCE**

Chief Donald Mason  
540.272.5897  
[donald.mason@rvfrd.com](mailto:donald.mason@rvfrd.com)

**REMINGTON FIRE STATION STUDY**

REMINGTON, VIRGINIA

The Remington Volunteer Fire & Rescue Department was organized in 1942 by the citizens of Remington, Virginia. In 2007, the RVFRD broke ground on an addition and renovation to its current building. The renovated facility, while a huge improvement, has serious operational concerns for their fire & rescue mission and frequent maintenance issues with respect to the HVAC system. BKV Group was hired by the city to provide an assessment of the existing conditions and recommendations for operational improvements as well as a firematic analysis to determine how to better support the health and safety of the firefighters.





**CLIENT**

Henrico County

**SIZE**

12,680 SF  
3 drive-through bays  
12 bunk rooms

**COMPLETED**

March 2018

**SERVICES**

Programming, Planning, Design,  
Documentation, Architecture,  
Interior Design, Mechanical,  
Electrical and Structural  
Engineering, Construction  
Administration

**COST**

\$5,003,131

**REFERENCE**

Chuck P. Phan, Capital Project  
Manager  
804.501.4137  
[PHA002@henrico.us](mailto:PHA002@henrico.us)

## HENRICO COUNTY FIRE HOUSE #19

HENRICO, VIRGINIA

Henrico County selected BKV Group to design a fire station in a neighborhood northwest of Richmond. The County had been using a prototype station for several years, but recently reached the point where it no longer met their needs. In addition, the aesthetics of the prototype were unlikely to satisfy the well-to-do neighbors. BKV Group's national expertise and innovative fire station planning were major deciding factors during the selection process.

The fire station houses full-time staff, with 12 dorm rooms and three apparatus bays. It is LEED Gold certified with a particular sustainable focus on the quality of the interior environment for the firefighters and long-term energy efficiency (33% cost savings over a baseline building). A separate workshop behind the return apron houses the County's Drone Workshop, where they store and maintain remote controlled equipment and practice using drones in search and rescue operations.

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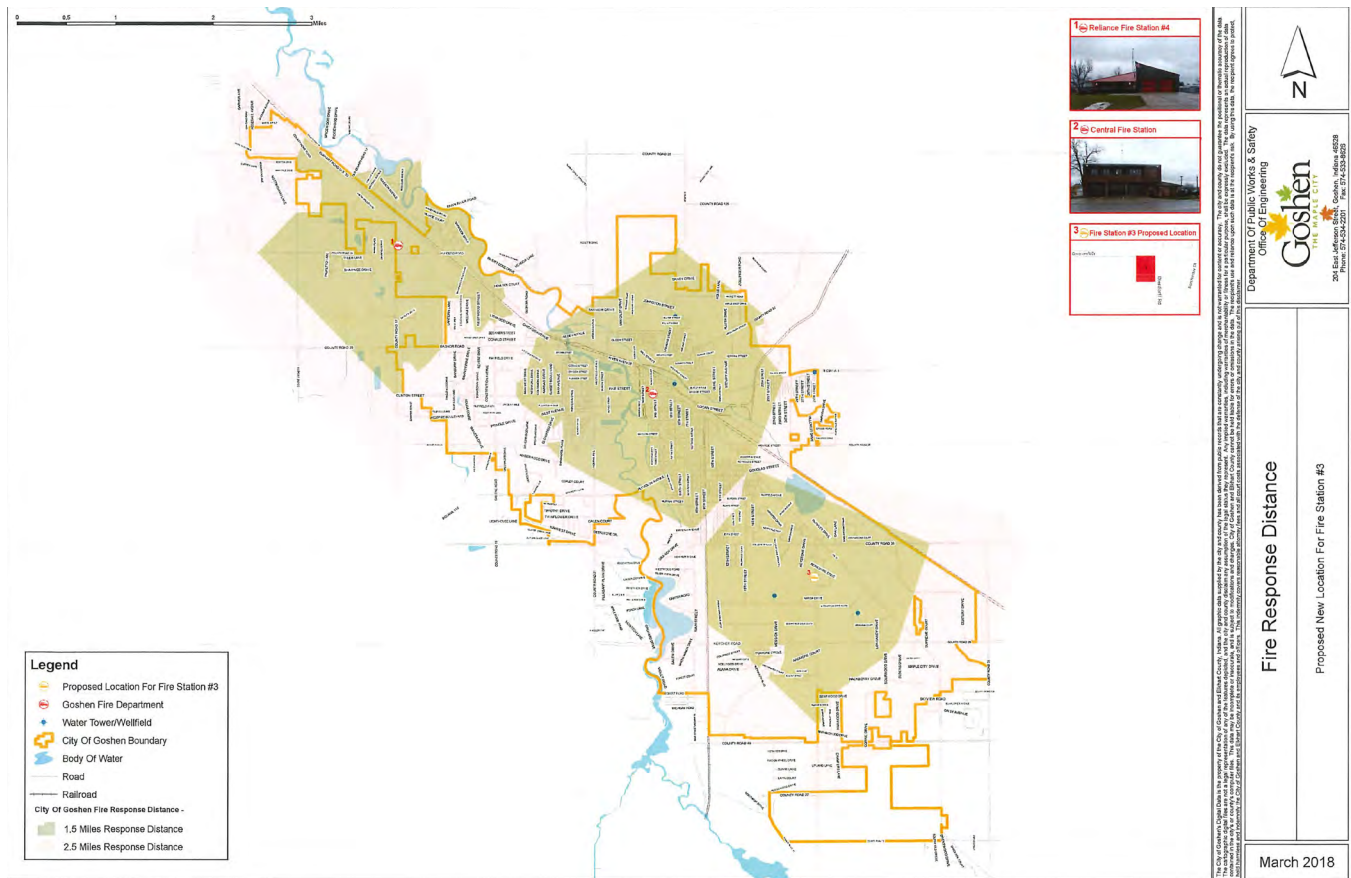


# PROJECT UNDERSTANDING





PROJECT UNDERSTANDING



PROJECT UNDERSTANDING

We have visited the proposed site, the three current fire stations, and the training center and have a solid understanding of the project requirements, the service area, and your community. Our understanding of the project follows.

The purpose of the study is to evaluate new locations for the existing south station including benefits to the services provided based upon selected location, identification of the desired elements to be incorporated and site design for the preferred site, including development of a site plan, building design and associated cost estimates. It is expected that all tasks will be compiled into one (1) comprehensive document that can be utilized to move this project forward to final design and construction.

The project has multiple tasks and goals.

1. Determine if the Greencroft site is a suitable location based on criteria outlined by the City

We will use GIS drive-time simulations to analyze the service area, analyze historic dispatch data to calibrate the coverage model based on actual response time, analyze current coverage area and response time of existing station locations, and determine predictive coverage areas and response times for the proposed site.

We understand that if this site is not suitable, three additional sites will be evaluated as an additional service.

Once a site is selected, we will assist the City in developing a press release to the community to provide initial notice about the future fire station relocation project.

2. Develop the Program of Requirements (POR) for a new fire station

We will develop interior and exterior space requirements, site requirements, and possible expansion options all based on best practices and current NFPA standards related to fire station design.

3. Develop Schematic Design Site and Building Design

Using the approved site and POR, we will develop multiple site and building blocking and stacking concept diagrams for that accurately define the site layout and overall area requirements to allow the City to make an informed decision regarding the selection of a preferred option.

With a preferred option selected and approved by the City, we will develop the schematic design documents including a site plan, detailed floor plans and exterior elevations, narrative descriptions for engineering systems, and three 3D exterior views showing the basic design concepts.

Once the exterior design has been approved, we will develop high quality photo-realistic renderings of the new facility that are suitable for public presentation and fundraising efforts.

4. Develop Overall Project Budget

With the approved Schematic Design, we will develop an opinion of probable construction cost using current industry standard square foot cost for site development and new construction for typical fire stations being built in the general Goshen area. We will also work with the City to develop project soft costs including the eight recognized categories associated with soft costs: 1) Professional Services, 2) Fixtures, Furniture & Equipment (FF+E), 3) Special Fees, 4) Financing Costs, 5) Insurance, 6) In-House Staff Cost, 7) Surveys, and 8) Land Costs.

Check out "Station Construction: Budgeting for Soft Costs" in the October 2020 issue of Firehouse Magazine.

Link: <https://www.firehouse.com/stations/article/21150704/station-design-station-construction-budgeting-for-soft-costs>

5. Final Report & Presentation

We will develop a final bound report in 8-1/2 by 11 format that will include all required deliverables prepared in the study. We will develop a power point presentation of the final report findings and present the information during one evening to the Goshen Redevelopment Commission and the Goshen Common Council in a public forum that will discuss the study goals and objectives, development process, and final conclusions including the site and building plans, exterior views, and probably estimated cost of the project.

ADMINISTRATIVELY WE UNDERSTAND THE FOLLOWING:

1. Throughout the process of the study, we will work with a designated Fire Station Study Committee comprised of Goshen Fire Department personnel and other City staff to assist in decision making for the project.
2. The City's Common Council and Redevelopment Commission wish to remain informed and updated throughout the entirety of this project.
3. We may be requested to present to the City's Common Council and/or Redevelopment Commission after the completion of Task 2, 3, 4, 5 or intermittently throughout the process of the study. Presentations may include the sharing of deliverables, reports, findings, determinations, and recommendations and may be conducted in a public forum.
4. The timeline for the study is approximately 16-weeks.





# PROJECT APPROACH







## PROJECT APPROACH

### DESIGN AND APPROACH PHILOSOPHIES

BKV Group's approach to our projects is, at its core, defined by research. Our team has completed more than 130 fire department projects across the country, ranging from rural volunteer stations through headquarter buildings for large urban departments. Through this experience, our team has developed a deep knowledge of national standards (NFPA) and best practices, as well as an appreciation for the different skill sets and unique attributes that make each department a unique joy to work with. We understand that the same approach does not work for every client, but we also understand that we are hired due to our expertise in this building type. To avoid overburdening our clients with questions and meetings, we conduct a significant amount of research before we put pen to paper and gather information that will streamline the process for everyone involved.

### RESEARCH INTO YOUR ORGANIZATION

To provide a project tailored to Goshen Fire Protection District, BKV Group will research your organization to understand your policies, procedures, and goals. We will tour your existing stations and discuss what works and what aspects are challenging. Our vast experience with fire station design allows us to quickly confirm national standards with you and move on to the specifics of how your department operates. What apparatus do you have now and what do you anticipate? Will this station do technical rescue? Because we know the fire service inside and out, the answers to these kinds of operational questions can feed directly into our space planning and we can advise you of square footage needs, recommend equipment manufacturers, and suggest spatial relationships that reinforce your goals. With your consent, we will conduct a survey of your firefighters to solicit information about what elements to repeat from your current stations, what elements to avoid, and any features of other stations they have seen and liked.

### RESEARCH INTO THE SITE

A critical part of any project is truly understanding the context that the building will occupy. Traffic conditions, soil conditions, property lines, utility availability, zoning restrictions, etc. are explored as early as possible. Documentation of the built environment in the nearby vicinity will provide important clues to the massing and style of the building to come. We will also explore the local environment – wildlife, sun paths, prevailing winds, water drainage patterns, etc. Our goal is to incorporate every appropriate sustainable strategy into our fire station designs, yielding a building that takes full advantage of the natural amenities offered by the site.



RESEARCH INTO THE FIRE SERVICE

The other aspect of our initial research is an ongoing analysis of national trends affecting the fire service and how those are impacting fire station design. We attend and speak at the national fire station design conferences, FIERO Fire Station Symposium and FIREHOUSE Station Design Conference, to stay current on the strategies and innovations used by our expert peers around the country. We talk to fire chiefs about their worst fears and how a building might be able to mitigate risks. By applying all this information to your project, we can design a cutting-edge facility that will still seem forward-thinking for years to come.

**CRITICAL THEMES IN FIRE STATION DESIGN**



**Firefighter Health and Safety**

- Multi-strategy Exhaust Removal
- Cancer Prevention Measures
- Transition Spaces
- Appropriate Equipment and Personnel Decontamination Facilities
- Segregated Turnout Gear Storage
- Infection Control Measures
- Advanced Alerting Systems
- Supporting Healthy Sleep
- Classroom and Hands-on Skills Training
- Strength/Endurance/Agility Training



**Community Resiliency**

- Station Security
- Tornado-safe Rooms
- Crime Prevention Through Environmental Design
- Emergency Materials Storage
- Backup Emergency Operations Center
- Law-Enforcement Office
- Evolving Apparatus (size, weight, shore lines, turning radius, etc.)
- Community Paramedicine



**Supporting Staff Diversity**

- Gender-neutral Facilities
- Private-but-boring Sleeping Areas
- Attractive-and-fun Communal Spaces to Build Camaraderie
- Simple and Legal ADA Solutions



**Sustainability**

- Reduced Energy and Water Use
- Healthy Interior Environment
- Integration into the Local Ecosystem
- Vegetable Garden
- Daylighting
- On-site Power Generation

DISCOVERY

Successful programming and master planning efforts must begin with an understanding of the Department and a base knowledge of the existing facilities. We will request the following, if available, for review prior to the first workshop:

- Construction drawings or plans of the existing facilities so we can compare future space needs with current space allocation, as well as make comparisons between stations.
- List of current staff and apparatus so we have a point of departure for discussions of future expectations.
- Demographics of your community and expected trends so we can benchmark expectations against national standards.
- Mission statement so we can suggest ways the building can support your organizational priorities.
- City comprehensive plan.
- Zoning Information so we can research permitted uses, setbacks, etc.
- Aerial photo of the community so we can communicate the impacts the facility may have on existing conditions.

## ▲ PROJECT APPROACH

### KICKOFF

The first step in any successful project is establishing an effective team. We do this during the project kickoff meeting by facilitating the creation of shared goals, objectives, expectations, and vision. The goals and objectives always include “on-time” and “on-budget,” but also include things like “study finished by late June,” “plan for LEED Gold Certification,” or “enthusiastic buy-in from the staff.” The discussion of expectations allows each stakeholder around the table to talk about how they typically work, their management style, and any pet peeves that consultants sometimes fall into. Each member of the BKV Group team will consciously adopt and internalize these goals, objectives, expectations, and visions so that every decision we make aligns with our client’s best interests. An effective kickoff is the first step to a professionally managed project.

### STATION LOCATION ASSESSMENT

BKV Group will utilize GIS mapping technology as well as historical call data to examine response times, call volume and coverage for the community.

### SPACE NEEDS ANALYSIS

Leaning heavily on the results of our research — both on national trends and standards and on Hanover Park specific operational procedures and goals — we will create a preliminary matrix of programmatic spaces. This matrix will compare the size of the space proposed for the new South Fire Station to that found at the current stations so everyone can understand the relative size. Using this initial matrix as a starting point for discussion, our team will work with the Department to identify and closely define all the spaces required for the new South Fire Station to function efficiently, in compliance with law and national standards, for the next 20+ years. We will compare those needs to the space you currently have in your stations, and we will discuss in depth the future of the fire service and how trends may impact your space needs in the future. We will discuss the pros and cons of including a training tower, community room, fueling stations, and/or police substation in the facility.



BKV Group realizes that your most important asset is your firefighters. The high nationwide incidence of cancer, heart disease, sleep deprivation, depression, and other serious health concerns can be directly affected, positively or negatively, by the physical space of the fire station. We are committed to reversing the trend of illness, disease, and death. To that end, we will specifically discuss how space design impacts firefighter health.

The Programming Matrix will be carefully iterated at project workshops until all parties are satisfied that they capture the current needs of the Fire Department and can accommodate the expected changes indicated by the industry trends. Our deliverable will be a spreadsheet listing the required spaces, the number of each needed, an area for each type of space, total areas or programmed spaces, and total overall square footage.

**ROOM CRITERIA SHEETS.** BKV Group will complete a conceptual design of each room identified in the Space Needs Analysis to give the Department complete information about the nature of the space. This will document the general layout of the space, adjacency requirements, architectural requirements (acoustics, natural light, hardware, casework, etc.), finishes, necessary systems and equipment, furniture, and owner-supplied items. Our deliverable will be a series of 11x17 sheets showing 2D and 3D views and lists of detailed space requirements.

**FACILITY COMPARISONS.** BKV Group will work with you to develop a list of communities similar to the City of Goshen in terms of area, population, demographics, geography, etc. and research the size of any recently constructed fire stations that we don’t already have in our databases. This allows a comparison between the projected Space

Needs and what other communities have done, helping to assure the community that the proposed program is neither too large nor too small.

*SCHEMATIC DESIGN.* BKV Group will use the information compiled in the previous phases to explore several options to lay out a station on the approved site. Separating apparatus circulation from the general population is a priority to avoid accidents that delay response times and to avoid damage to expensive apparatus. This requires an obvious entry/exit point for civilian cars, so they don't park on the aprons and a self-evident building entry near any community-use spaces to assist in wayfinding. The topography of the site and various storm water management options need to be analyzed to make sure the solution is cost-effective. A plan for building expansion — both for apparatus bays and for living/office space — will be accommodated. Finally, the locations of utility access points will be reviewed and an estimate of costs to extend them to the building will be provided for the project budget.

For fire station projects especially, the interior and exterior layouts influence each other substantially. Therefore, we will also be creating quick conceptual building fit plans. Sometimes called a block diagram or an adjacency plan, the fit plan shows all the programmatic spaces and adds walls and corridors to establish a conceptual plan that can be analyzed for internal response times, acoustic separations concerns, ease of distribution for MEP systems, optimal solar orientation, etc. This will not typically result in a final floor plan, but it will prevent the project from proceeding too far on an actually unworkable site.

BKV Group will present multiple planning options to the City, pointing out the strengths and weaknesses of each with regards to aesthetics, due diligence issues, functionality, constructability, sustainability, and financial feasibility, and will iterate those plans until a feasible option is reached for each site.

Total Project Costs for the selected option for each site will be estimated. For each master planning option, we will use diagrams, floor plans, site plans, etc. to communicate the implications of the option to the City, and will work with you to develop a list of pros and cons regarding operational impacts, firefighter health and safety, first costs, sustainability, workflow efficiency, response times, safety and security, and long-term serviceability to the citizens.



*EXTERIOR IMAGE.* BKV Group does not have a consistent design style – we believe that this fire station belongs to the citizens and we will work with your team to find the right exterior expression for the site and the community. To do this, we will schedule a project vision charrette workshop. The charrette is focused on exploring a range of potential visual solutions to meet the programmatic requirements, budget restraints, site and building security standards, and sustainability goals. This interactive workshop uses photographs of existing fire stations from across the country to generate discussion about conceptual design options, civic image, public perception, wayfinding, and other design strategies. This meeting facilitates collaboration between all team members with a focus on establishing group consensus about subjective issues early in the design phase. Using outcomes from the project vision charrette, we will develop exterior concept options and work with the City to select and refine those concepts. We will use virtual reality to let the project team experience the building in three dimensions.

**TOTAL COST OF OWNERSHIP**

BKV Group will use the conceptual project schedule for each of the master planning options and use those timelines to project the estimated costs out to the dates of the work. Our deep experience working with developers



## ▲ PROJECT APPROACH

in the housing and commercial markets has allowed us to develop a robust methodology to combine first costs, long-term costs, and implementation schedules into a Total Cost of Ownership analysis, which will allow a decision based upon long-term value. We will utilize these calculations to work with the City's financial advisors to estimate bond costs and the yearly tax impact to properties of different value. We find this final step to be critical to communicating the true, often minor impact of a multi-million dollar project to the individual homeowner.

Our deliverable will be graphic schedules, project cost estimates, and Total Cost of Ownership spreadsheets for each master planning option.

### FINAL REPORT

Through the research-intensive process detailed above, BKV Group will have guided the City through a wide variety of creative ideas and options, providing clear information to allow the client team to make informed decisions throughout the process. All of the study deliverables will be combined into a final document that presents the options being considered and discusses their pros and cons with regards to aesthetics, firefighter health and safety, compliance with mission statement, short and long-term cost impacts, schedule, impacts to neighborhoods, sustainability, functionality, etc. The entire process will be documented, which will serve as evidence of the comprehensive and transparent process with data supporting every decision made.

To aid the Village in moving forward with any projects that come out of the report, the last chapter will recommend action items.

### PRESENTATIONS

The process and the final report are designed to stand up to scrutiny, so BKV Group will be happy to present to City's Common Council and/or Redevelopment Commission in a public forum to outline the process, explain how the original project goals were addressed, describe each master planning option and review its major pros and cons, and to recommend next steps.



### DELIVERABLES

We will provide the deliverables per the RFP requirements as noted by each task.

#### TASK 1 – SITE LOCATION ANALYSIS

- Written report detailing selection methodology, analysis and recommendations.
- A prioritized outline of recommendations for fire station location(s).
- Run time scenario maps for the identified site and others that may be considered.

#### TASK 2 – PROGRAM OF REQUIREMENTS

- Written Program of Requirements

#### TASK 3 – SCHEMATIC BUILDING AND SITE DESIGN

##### Initial Building and Site Study

- Building Floor Plans to scale – basic diagrams to define the basic plan size and layout
- Preliminary Site Plans to scale – basic diagrams to define site layout and overall area requirements. Site plan shall be based on City provided information or available GIS data.

Final Schematic Design

- Building Floor Plans to scale
- Primary Building Elevations to scale
- Preliminary Site Plans to scale – based on owner provided information or available GIS data
- Basic systems descriptions for mechanical, electrical and plumbing based on typical fire station requirements. No detailed MEP design is included in Task 3.
- 2-3 3D exterior views showing basic design concepts

Final Building Renderings

- Final Exterior Building Renderings – these renderings will be taken from the 3D model used to develop the Schematic Design

TASK 4 – OPINION OF COST

- Opinion of Probable Construction Cost
- Opinion of Probable Project Cost

TASK 5 – FINAL NEW SOUTH FIRE STATION REPORT

- Five (5) copies of a bound final report and one (1) electronic copy
- Comprehensive presentation to the City of Goshen Common Council in a public forum







# PROJECT TEAM

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**PROJECT TEAM**

**PROJECT TEAM**

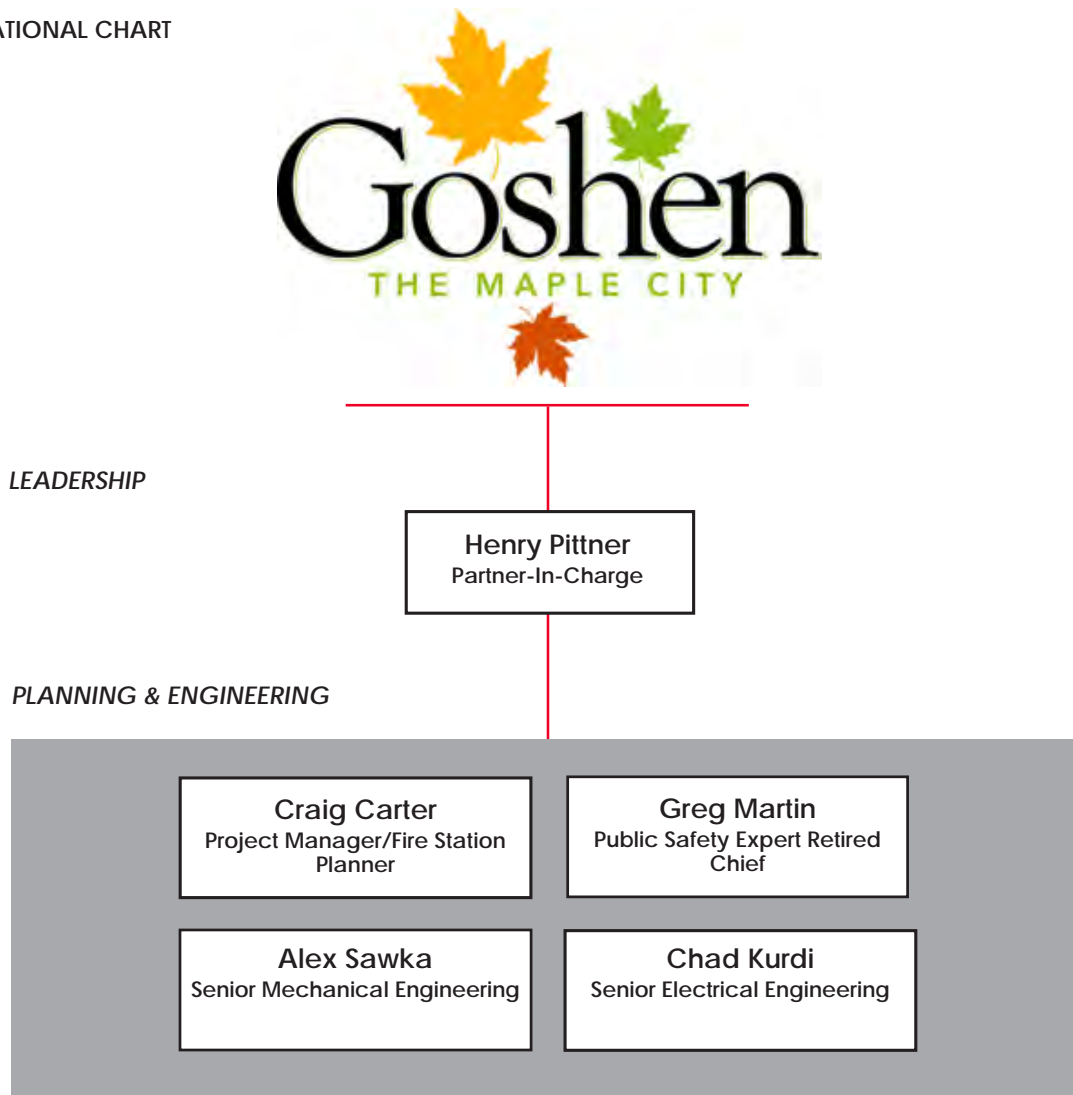
The team that we have compiled to support the City’s vision are regional and national experts in the planning and design of fire stations. The experience, collaboration and commitment of this team will provide the City of Goshen with exceptional professional services.

**SPECIALIZED FIRE STATION DESIGN EXPERTISE**

Craig Carter, Associate Partner with BKV Group, has been dedicated to working on public sector projects throughout his career, with a particular specialty in fire stations. He leads all fire station design projects at BKV Group’s offices nationwide. He has completed over 70 fire station projects, won numerous design awards, and published articles and spoken on a variety of relevant topics.

Craig holds a Masters of Architecture degree and is a LEED Accredited Professional with a specialty in Building Design and Construction. He has a strong working knowledge of NFPA, FEMA, OSHA and other national standards, a deep understanding of the history of fire station design, and remains up-to-date on the latest national research and trends. Craig is passionate about fire station design and providing excellent buildings that support firefighters in their service to the public.

**ORGANIZATIONAL CHART**





# HENRY PITTNER, AIA

*PARTNER-IN-CHARGE*

Henry Pittner, AIA, leads Chicago's government practice with an active role in projects managing client relationships, providing programming, planning and design services, and leading business development. With more than 35-years experience, Henry has extensive project experience with municipal fire stations, police stations, and village halls. Henry authored "Station Construction: Budgeting for Soft Costs" in the October 2020 issue of Firehouse Magazine. The article explains

how to thoroughly break down hard costs, owner contingencies, and soft costs to prepare clients and trade partners to answer the difficult question from those who control a project's budget. Link: <https://www.firehouse.com/stations/article/21150704/station-design-station-construction-budgeting-for-soft-costs>

**EDUCATION** // Master of Architecture, University of Illinois, Champaign/Urbana, IL; Bachelor of Science Architectural Studies, University of Illinois, Champaign/Urbana, IL

**REGISTRATIONS** // Licensed Architect: IL #001.011985

**YEARS OF EXPERIENCE** // 35

**AWARDS** // More than 50 local, regional, and national awards on over 20 projects including Kane County Adult Justice Center and Sheriff's Office + Kane County Juvenile Justice Center, St. Charles, IL; Governor George Deukmejian Courthouse, Long Beach, CA; Maricopa Downtown South Court Tower, Phoenix, AZ; Clark County Regional Center, Las Vegas, NV; C.W.Avery Family YMCA, Plainfield, IL; Quarry Beach Aquatic Park, Batavia, IL; Hoosier Park Community Center, Streamwood, IL; Rakow Center Fitness & Recreation Center, Carpentersville, IL

## ▲ RELEVANT EXPERIENCE

**Lincolnshire Riverwoods Fire Protection District Station #51 Study, Lincolnshire, IL** – Programming, existing conditions assessment, site feasibility for 31,320 sf headquarters fire station (seven bays, ten bunks)

**Lake Zurich Fire Station #1 Study, Lake Zurich, IL** – programming, existing conditions assessment, site feasibility for 25,300 sf replacement headquarters fire station (four bays, eight bunks)

**Streamwood Space & Program Study, Streamwood, IL** – Functional analysis, programming and master planning of the Village's facilities including Police Department, Fire Stations, Village Hall, and Public Works Department

**Streamwood Village Hall & Public Works, Streamwood IL** – phased, occupied remodeling of 18,000 square foot Village Hall and 600 square foot Public Works lobby and restrooms

**Carrollton, Texas Fire Station Study, Carrollton, TX** – existing conditions assessment and architectural review of four stations

**Custer South Dakota Fire Station Study, Custer, SD** – existing conditions assessment and architectural review of three stations Lockport Facilities Condition Assessment, Lockport, IL – Facility condition assessment and ADA study of City Hall, Police Department and Public Works Administration Facility

**Mahnomen Joint Public Safety Facility Feasibility Study, Mahnomen, MN** – new jail, fire station, and sheriff's office as a joint project between Mahnomen County, the City of Mahnomen, and the White Earth Indian Reservation

**Paulus Park Barn Renovation + Addition, Lake Zurich, IL** – Developing As-Built and Concept Design for submission of PARC grant

**Facility Condition Assessment & Conceptual Design, Lake Zurich, IL** – Facility Condition assessment of Fire Station No. 1, Paulus Park Barn, Paulus Park Chalet Building and Buffalo Creek Building A & B

**Grand Junction Public Safety Complex, Grand Junction, CO\*** – new Police Department Building with 9-1-1-Dispatch Center, renovations of the existing fire station on site for safety, security, living and sleeping quarters. New Fire Department Administration Building.

\*Experience prior to BKV Group



▲ PROJECT TEAM



# CRAIG CARTER, AIA, LEED AP BD+C

PROJECT MANAGER / FIRE STATION PLANNER

Craig has 16 years of experience in architectural design, documentation, and construction administration with a focus on public safety projects. Craig has worked on more than 70 fire station projects and has won several design awards celebrating the functionality and beauty of the projects. He is an expert in the detailed requirements that enable these buildings to be effective tools for their users. By virtue of his experience and his ongoing research, he combines a deep

knowledge of the history of public-sector design with an up-to-date knowledge of the latest national trends. With a family background in public service, Craig understands the culture of local government and strives to create an excellent working relationship with his clients through his fun, upbeat and friendly manner. Craig's design philosophy centers on using data-driven decision making to create beautiful projects that are functional for their users, economical to construct, and sustainable far into the future.

**EDUCATION** // University of Illinois at Urbana-Champaign, Bachelor of Science in Architectural Studies & Master of Architecture

**REGISTRATIONS** // Licensed Architect: IL #001.022303

**YEARS OF EXPERIENCE** // 16

**AWARDS** // **Fridley Civic Campus**: 2019 Firehouse Station Design Awards - Mixed Use Bronze Award; **Henrico County Fire House #19**: 2018 FIREHOUSE Station Design Awards – Gold Award; **Rochester Fire Station #2**: 2015 FIREHOUSE Station Design Awards – Gold Award; 2015 F.I.E.R.O. Design Awards – Honor Award; ENR Midwest Best of 2015 – Public/Government Projects

▲ RELEVANT EXPERIENCE

**Dayton Fire Station, Dayton, MN**

conditions and functionality assessment of Stations 1 and 2, apparatus assessment, staffing assessment, station location study, programming, master planning

**Lincolnshire Riverwoods Fire Protection District Station #51 Study, Lincolnshire, IL**

– Programming, existing conditions assessment, site feasibility for 31,320 sf headquarters fire station (seven bays, ten bunks)

**Lake Zurich Fire Station #1 Study, Lake Zurich, IL**

– programming, existing conditions assessment, site feasibility for 25,300 sf replacement headquarters fire station (four bays, eight bunks)

**Streamwood Space & Program Study, Streamwood, IL**

– functional analysis, programming and master planning of the Village's facilities including Police Department, Fire Stations, Village Hall, and Public Works Department

**Ramsey Fire Station No. 2, Ramsey, MN**

– study & new construction, 11,540 SF fire station (3 bays, volunteer), \$3.5M Elk River Public Safety,

**Carrollton, Texas Fire Station Study, Carrollton, TX**

– existing conditions assessment and architectural review of four stations

**Custer South Dakota Fire Station Study, Custer, SD**

– existing conditions assessment and architectural review of three stations

**Woodlawn Fire Station, Fairfax County, VA**

– fire station, renovation, 14,000 SF, \$5.5M

**Fairfax County (Penn Daw) Study & Fire Station #11, Alexandria, VA**

– programming, planning, and site feasibility for fire station addition & renovation, 2-story, 15,500 SF existing

**Remington Fire Station Study (Fauquier County), Remington, VA**

– Programming, existing conditions assessment, planning for 27,000 sf remodel of a volunteer fire/EMS station (10 bays, 7 bunks)

**Henrico County Fire Station #19 (Short Pump), Short Pump, VA**

– programming, planning, design, documentation, and CA for new 12,680 sf fire station (three bays, twelve bunks); Firehouse Station Design Awards 2018 Gold Award; LEED Gold Certified

**Elk River Fire Station #3, Elk River, MN, Elk River, MN**

– Programming, planning, design, documentation, construction administration for new 17,500 sf fire station (three bays, volunteer)

**Springfield Four Fire Stations, Springfield, MO** – Programming, planning, design, documentation, and CA for four new 7,000 sf fire stations (two bay, eight bunk)

**Rochester Fire Department Station #2, Rochester, MN** – Programming, planning, design, documentation, and CA for new 31,220 sf fire station (four bays, six bunks), EOC and dispatch facility, Firehouse Station Design Awards 2015 Gold Award, 2015 FIERO Design Awards Honor Award

**Staples Mill Firehouse #20, Henrico County, VA** – programming, planning, design, documentation, and CA for new 12,800 sf fire station (four bays, thirteen bunks); LEED Silver planned

**Spotsylvania Company 6 Fire Station, Spotsylvania, VA** – master planning, programming, design, construction documents and construction administration for 4,000 sf addition and renovations to existing facility

**Springfield Fire Department Study, Springfield, OH** – Existing conditions assessment and programming for seven stations

**Lockport Facilities Condition Assessment, Lockport, IL** – Facility condition assessment and ADA study of City Hall, Police Department and Public Works Administration Facility

**Park Ridge Fire Stations #51 and #52, Park Ridge, IL** – Existing Condition Assessment, Programming, Plannings

**Little Canada Fire Station, Little Canada, MN** – new construction, \$1.1M

**Little Canada Study for Fire Station Remodeling, Little Canada, MN** – programming, planning, and design for 17,200 SF addition/renovation (4 bays, volunteer)

**Fulda Fire Station Study, Fulda MN** – Facility assessment, programming, and master planning for a 12,000 SF fire station (4 bays, volunteer)

**Coppell Texas Fire Station Study, Coppell, TX** – existing conditions assessment and master planning for three stations

**Grafton Fire Department Study for Fire Station, Grafton, ND** – programming, existing conditions assessment, and planning for new 18,300 SF fire station (8 bays, volunteer)

**Hampstead Volunteer Fire Department Fire Station, Hampstead, MD** – programming, planning, and conceptual design for new 35,000 SF fire station (8 bays, volunteer)

**Kindred Fire Station Study, Kindred, ND** – programming, planning, and conceptual design for new 25,000 SF fire station (5 bays, volunteer)

**Lake Elmo Municipal Space Needs Assessment, Lake Elmo, MN** – existing conditions, site assessment, and master planning for 23,000 SF combination fire station (6 bays, 6 bunks), city hall, library, and public works

**Lakewood Municipal Complex Master Plan, Lakewood, IL** – site feasibility for new village hall, police station, fire station, and park

**Albert Lea City-Wide Facilities Assessment & Master Plan, Albert Lea, MN** – programming, existing conditions assessment, and site feasibility for new 28,100 SF fire station (6 bays, 5 bunks), 22,300 SF police station (33 sworn, 2 civilian), 88,300 SF public works, 19,300 SF library, 23,500 SF city hall, airport, PSAP, pool house, community center, ice arena, and park shelter

**Cloquet Facilities Assessment and Master Plan, Cloquet, MN** – programming, existing conditions assessment, and site feasibility for new 28,600 SF fire station (14 bays, 9 bunks), 24,200 SF police station (27 sworn, 4 civilian), 47,500 SF public works, 19,000 SF library, and 11,400 SF city hall

**Forest Lake Public Works and Municipal Facilities Master Plan, Forest Lake, MN** – programming, existing conditions assessment, and site feasibility for new 23,800 SF fire station (6 bays, volunteer), 37,400 SF police station (39 sworn, 6 civilian), 23,800 SF fire station (6 bays, volunteer), 46,300 SF public works, and 18,500 SF city hall

**Mahtomedi City Hall and Fire Department Needs Assessment, Mahtomedi, MN** – programming, existing conditions assessment, site feasibility, planning, and conceptual design for new 16,000 SF fire station (3 bays, volunteer) and city hall

**Montgomery Public Safety Building, DGS Term Contract, Montgomery, MN** – programming, planning, design, documentation, and CA for new 23,070 sf fire/ems station (six bays, three bunks, volunteer) and police station, \$7.8M estimated

**Green Valley Fire District Station #151, Green Valley, AZ\*** – programming, planning, design, documentation, and CA for new 15,600 sf fire station (four bays, eleven bunks); LEED Silver certified, Station Style 2010 Notable Design

**Green Valley Fire District Station #155, Sahuarita, AZ\*** – programming, planning, design, documentation, and CA for new 13,000 sf fire station (three bays, seven bunks); LEED Silver certified, Station Style 2010 Notable Design

**Harlem-Roscoe Fire Protection District Study for Addition, Roscoe, IL\*** – planning for 2,500 sf addition/renovation

**Mountain Vista Fire District Administration Campus, Catalina Foothills, AZ\*** – programming, planning, design, documentation, and CA for new 5,600 sf administration campus

**Mountain Vista Fire District Station #610, Catalina Foothills, AZ\*** – programming, planning, design, documentation, and CA for new 14,300 sf fire station (five bays, thirteen bunks)

**Mountain Vista Fire District Station #620, Catalina Foothills, AZ\*** – programming, planning, design, documentation, and CA for new 8,500 sf fire station (three bays, eleven bunks) dorms; Station Style 2011 Notable Design

*\*Experience prior to BKV Group*



# GREG MARTIN, EFO, CFOD

*PUBLIC SAFETY EXPERT RETIRED CHIEF*

With more than 36 years of experience, Greg has been well exposed to all aspects of the fire service. He started his career in 1982 as a firefighter/EMT at the Vancouver, WA Fire Department. Since then he has been with five fire departments across the country. Prior to joining BKV Group, Greg spent 22 years as a Fire Chief. These include ten years as the Fire Chief of the Rochester, MN Fire Department, two years as Fire Chief of the Sioux City, IA Fire Department and ten years as the Fire Chief / Emergency Management Director for the Lansing, MI Fire Department.

Greg graduated in 1988 from the National Fire Academy's Executive Fire Officer program, holds the Chief Fire Officer designation (CFOD) from the Commission on Fire Accreditation International and is a graduate of the Rocky Mountain Leadership program. Throughout his years in the fire service, he completed various courses in fire suppression tactics, investigation, budgeting, incident command and fire ground management. Greg is an instructor for the new MN Fire initiative which is dedicated to reducing cardiac and cancer issues as well as Post Traumatic Stress Disorder (PTSD) among firefighters. As a result, he has a keen understanding of health and safety issues facing firefighters.

Greg's role on this project will be to serve as a reservoir of fire service knowledge within BKV Group, to provide firematic review of the documents throughout the process, and to serve as a second line of communication between the design team and fire team (interpreting jargon along the way).

**EDUCATION** // Elementary Education, Bachelor of Arts, University of Montana, Missoula, MT ; School Psychology, Master of Science, Lewis and Clark College, Portland, OR; Executive Fire Officer Graduate, National Fire Academy, Emmitsburg, MD

**REGISTRATIONS** // Chief Fire Officer Designation (CFOD) from Commission on Fire Accreditation International; Certified HazMat Technician – Environmental Protection Agency; Minnesota Instructor IV; Minnesota Vocational Technical teaching certificate; State of Washington NFPA Level II instructor endorsement; High-rise Life Safety and Command Portland Community College; Washington State Emergency Medical Technician

**YEARS OF EXPERIENCE** // 36

## ▲ RELEVANT EXPERIENCE

**Dayton Fire Department Study, Dayton, MN** – Staffing analysis, apparatus assessment, existing conditions assessment, station location study, programming, and planning for two fire station

**Elk River Public Safety, Elk River, MN** – Programming, planning, design, documentation, construction administration for 16,000 sf addition and 4,000 sf renovation of headquarters fire station (three bays, volunteer) and police station (25 sworn)

**Elk River Fire Station #3, Elk River, MN, Elk River, MN** – Programming, planning, design, documentation, construction administration for new 17,500 sf fire station (three bays, volunteer)

**Springfield Four Fire Stations, Springfield, MO** – Programming, planning, design, documentation, and CA for four new 7,000 sf fire stations (two bay, eight bunk)r

**Montgomery Public Safety Facility, Montgomery, MN** – new 22,370 SF shared facility for the Fire, Police, and EMS Departments; shared spaces include the training room, break room, and locker room/shower area, apparatus bay and office space; police-only squad garage and secure office area, \$7.8M estimated

**Rochester Fire Department Station #2, Rochester, MN\*** – Programming, planning, design, documentation, and CA for new 31,220 sf fire station (four bays, six bunks), EOC and dispatch facility, Firehouse Station Design Awards 2015 Gold Award, 2015 FIERO Design Awards Honor Award

\*Experience prior to BKV Group





# ALEX SAWKA, PE

## SENIOR MECHANICAL ENGINEERING

Throughout his 16 years experience as a Mechanical Engineer, Alex has focused on working on government facilities such as fire stations, police stations, city halls, and courts. He is skilled in offering innovative mechanical design solutions to projects and is highly motivated and resourceful individual who interacts productively with people from diverse backgrounds. Alex is a conscientious team player with excellent problem solving and troubleshooting skills. He is able to design innovative solutions that promote maximum efficiency while requiring minimal maintenance. He has experience with projects in many different markets, but his recent notable projects include the Fridley Civic Campus with 24,770 SF fire station and the award-winning, newly constructed Henrico County Short Pump Firehouse 19.

**EDUCATION** // Bachelor of Science, Mechanical Engineering, University of Minnesota

**REGISTRATIONS** // Professional Engineer: IL #062.069495

**YEARS OF EXPERIENCE** // 16

**PROFESSIONAL AFFILIATIONS** // (ASHRAE) - American Society of Heating and Air-Conditioning Engineers

## ▲ RELEVANT EXPERIENCE

**Penn Daw Study Fire Station #11, Fairfax County, VA** – Programming, planning, and site feasibility for fire station addition & renovation, 2-story, 15,500 SF existing

**Woodlawn Fire Station #24, Fairfax County, VA** – Programming, planning, design, documentation, and CA for fire station addition/ renovation; LEED Silver planned

**Elk River Public Safety, Elk River, MN** – Programming, planning, design, documentation, construction administration for 16,000 sf addition and 4,000 sf renovation of headquarters fire station (three bays, volunteer) and police station (25 sworn)

**Elk River Fire Station #3, Elk River, MN, Elk River, MN** – Programming, planning, design, documentation, construction administration for new 17,500 sf fire station (three bays, volunteer)

**Short Pump Firehouse #19 Henrico County, VA** – programming, planning, design, documentation, and CA for new 12,680 SF fire station (three bays, twelve bunks); Firehouse Station Design Awards 2018 Gold Award; LEED Gold Certified

**Fridley Civic Campus, Fridley, MN** – Programming, planning, design, documentation, and CA for new 24,770 SF fire station (6 bays, 8 bunks, volunteer), police station (1 sworn, 1 civilian), city hall, and public works facility, 184,300 GSF, \$48.8M

**Staples Mill Firehouse #20, Henrico County, VA** – programming, planning, design, documentation, and CA for new 12,800 sf fire station (four bays, thirteen bunks); LEED Silver planned

**Streamwood Village Hall & Public Works, Streamwood IL** – phased, occupied remodeling of 18,000 square foot Village Hall and 600 square foot Public Works lobby and restrooms

**Albert Lea City-Wide Facilities Assessment & Master Plan, Albert Lea, MN** – programming, existing conditions assessment, and site feasibility for new 28,100 SF fire station (6 bays, 5 bunks), 22,300 SF police station (33 sworn, 2 civilian), 88,300 SF public works, 19,300 SF library, 23,500 SF city hall, airport, PSAP, pool house, community center, ice arena, and park shelter

**Montgomery Public Safety Facility, Montgomery, MN** – new 22,370 SF shared facility for the Fire, Police, and EMS Departments; shared spaces include the training room, break room, and locker room/shower area, apparatus bay and office space; police-only squad garage and secure office area, \$7.8M estimated



# CHAD KURDI, PE

## SENIOR ELECTRICAL ENGINEERING

Chad has 27 years of experience in the electrical industry, and he brings in-depth understanding of electrical to each of his projects. Over the years, he has worked as an electrical engineer, electrician, electrical trainer, and manager. His electrical engineering experience includes drafting, designing, and specifying and analyzing electrical engineering projects for municipal projects including fire stations, police stations, village halls and libraries. He is also an expert in NEC Code, drafting, designing, analyzing, estimating & managing engineering/construction projects

**EDUCATION** // Bachelor of Electrical Engineering, Birzeit University • Master of Education, University of Minnesota

**REGISTRATIONS** // Professional Engineer: IIN #PE11600104

**YEARS OF EXPERIENCE** // 27

## RELEVANT EXPERIENCE

**Streamwood Village Hall & Public Works, Streamwood IL** – phased, occupied remodeling of 18,000 square foot Village Hall and 600 square foot Public Works lobby and restroom

**Ramsey Fire Station No. 2, Ramsey, MN** – study & new construction, 11,540 SF fire station (3 bays, volunteer), \$3.5M

**Seven Corners Fire Station #28, Fairfax County, VA** – master planning, concept development for 2-story replacement fire station, 14,000 SF

**Woodlawn Fire Station #24, Fairfax County, VA** – Programming, planning, design, documentation, and CA for fire station addition/ renovation; LEED Silver planned

**Lincolnshire Riverwoods Fire Protection District Station #51 Study, Lincolnshire, IL** – Programming, existing conditions assessment, site feasibility for 31,320 sf headquarters fire station (seven bays, ten bunks)

**Elk River Public Safety, Elk River, MN** – Programming, planning, design, documentation, construction administration for 16,000 sf addition and 4,000 sf renovation of headquarters fire station (three bays, volunteer) and police station (25 sworn)

**Elk River Fire Station #3, Elk River, MN, Elk River, MN** – Programming, planning, design, documentation, construction administration for new 17,500 sf fire station (three bays, volunteer)

**Short Pump Firehouse #19 Henrico County, VA** – programming, planning, design, documentation, and CA for new 12,680 SF fire station (three bays, twelve bunks); Firehouse Station Design Awards 2018 Gold Award; LEED Gold Certified

**Fridley Civic Campus, Fridley, MN** – Programming, planning, design, documentation, and CA for new 24,770 SF fire station (6 bays, 8 bunks, volunteer), police station (1 sworn, 1 civilian), city hall, and public works facility, 184,300 GSF, \$48.8M

**Penn Daw Study Fire Station #11, Fairfax County, VA** – Programming, planning, and site feasibility for fire station addition & renovation, 2-story, 15,500 SF existing

**Albert Lea City-Wide Facilities Assessment & Master Plan, Albert Lea, MN** – programming, existing conditions assessment, and site feasibility for new 28,100 SF fire station (6 bays, 5 bunks), 22,300 SF police station (33 sworn, 2 civilian), 88,300 SF public works, 19,300 SF library, 23,500 SF city hall, airport, PSAP, pool house, community center, ice arena, and park shelter

**Cloquet Facilities Assessment and Master Plan, Cloquet, MN** – programming, existing conditions assessment, and site feasibility for new 28,600 SF fire station (14 bays, 9 bunks), 24,200 SF police station (27 sworn, 4 civilian), 47,500 SF public works, 19,000 SF library, and 11,400 SF city hall

**Lake Elmo Municipal Space Needs Assessment, Lake Elmo, MN** – existing conditions, site assessment, and master planning for 23,000 SF combination fire station (6 bays, 6 bunks), city hall, library, and public works

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# ITEMIZED BUDGET



**ITEMIZED BUDGET**

**ITEMIZED BUDGET**

The BKV Group team’s compensation goals are to establish fees that fairly compensate us for the required services to achieve our client’s project goals while ensuring that our client receives value for every dollar spent.

Producing a study that properly addresses the items specified in your RFP requires experience in this type of work. We take pride in the thoroughness and accuracy of the work we produce. Our experienced team approach defines how we will work with the City and the department to achieve a thorough and appropriate study.

**PROFESSIONAL SERVICES FEE**

The fee we are proposing is based on the involvement and time we currently anticipate for each task. However, I would like to state that unless there is a substantial change requested in the scope of work, our team will complete the work needed regardless of the time required. Our firm philosophy is to provide comprehensive services to achieve our client’s goals and expectations. To that extent we consider ourselves a partner in these efforts and your success is our success.

The total fee based on the rates and estimated time is \$24,000, however, a competitive fee in the marketplace would be approximately \$15,000. At BKV when doing studies, our process is to cover our direct cost without markups. That direct cost is 60% of the total fee, therefor, **our proposed our fee is \$9,000.**

Our proposed fee for the study is divided into five tasks listed in the RFP as follows:

<b>PROFESSIONAL SERVICES FEE</b>	<b>FEE (\$)</b>
Task 1 - Site Location Analysis	\$2,000
Task 2 - Program of Requirements	\$2,000
Task 3 - Schematic Building and Site Design	\$3,000
Task 4 - Opinion of Cost	\$1,000
Task 5 - Final New South Fire Station Report	\$1,000
<b>TOTAL</b>	<b>\$9,000</b>

*Price is what you pay, value is what you get.*

WARREN BUFFET

**REIMBURSABLE EXPENSES**

Our proposal for reimbursable expenses is estimated at a **not-to-exceed cost of \$1500** and includes the following out-of-pocket expenses:

1. Travel to Goshen for official business – car rental/gas or mileage, parking, meals – please note that travel time of staff is not a reimbursable cost. Reimbursable travel will not exceed IRS mileage rates and any policy limits the County has formally set on travel.
  - a. 8 total single day trips
2. Printing Milestone Documents
  - a. Tasks 1- 4 deliverables will be sent electronically for review and comments and will be presented digitally.
  - b. Task 5 – We will deliver five (5) copies of the Final New South Fire Station Report – including all previous deliverables in tasks 1-4 consolidated in a bound 8 ½ X 11 format.

There will be no mark-up on reimbursable expenses. We will provide all required back-up information on each expense.



**LABOR RATE SCHEDULE**

For any additional services, we will use our 2020 hourly rates for employees / disciplines. We typically review these rates annually, however, we will lock these rates for the term of the contract.

MANAGEMENT

Partner .....	\$225 - \$285
Project Manager/Fire Station Planner .....	\$150 - \$185
Public Safety Specialist .....	\$150 - \$185
Senior Architectural Designer .....	\$140 - \$200
Architectural Designer II .....	\$90 - \$100
Architectural Designer I .....	\$80 - \$90
Partner / Senior Mechanical Engineer .....	\$215 - \$220
Partner / Senior Electrical Engineer .....	\$215 - \$220

**ADDITIONAL SERVICE – SITE LOCATION ANALYSIS OF THREE SITES**

We propose as an additional service to provide site location analysis of three additional sites providing the same scope of services as outlined in Task 1 of the RFP in the amount of **two thousand dollars (\$2,000) total**.







# PROPOSED TIMELINE







▲ PROPOSED TIMELINE

## PROPOSED TIMELINE

The following is our proposed timeline for the services required organized by tasks. Please note that we can complete the work faster if you desire.

TOPIC	Weeks																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>Task 1 - Site Location Analysis</b>																	
Data Collection	•																
Analysis of Information	•																
Kick-Off Meeting		•															
Develop predicted coverage areas and response times																	
Review of analysis, changes if required			•														
Finalize & Deliver Report				•													
If site not acceptable, develop new scenarios of 3 sites																	
Review of analysis, select most suitable site					•												
Finalize & Deliver Report						•											
<b>Task 2 - Program of Requirements</b>																	
Kick-off Meeting		•															
Interviews and on-site observations at 3 stations / Training		•															
Develop POR / NFPA requirements																	
Review Meeting				•													
Finalize POR space list							•										
Assist City / Prepare Narrative for Press Release							•										
<b>Task 3 - Schematic Building and Site Design</b>																	
<b>A) Initial Building and Site Study</b>																	
Develop site and building blocking and stacking options																	
Review Options						•											
Select preferred option							•										
Finalize preferred option										•							
<b>B) Final Schematic Design</b>																	
Workshop - Exterior Image Visioning Session							•										
Develop detailed site and floor plans																	
Develop exterior elevations																	
Develop basis of design narratives M/E/P/Structural																	
Review Meeting											•						
Changes as Required																	
Finalize Design site, floor plans, exterior, basis of design																	
Prepare 2-3 3D exterior views from Revit model																	
<b>C) Final Building Renderings</b>																	
Select 3D Views to be developed																	
Prepare Photo-Realistic 3D renderings of exterior image & rendered site plan																	
<b>Task 4 - Opinion of Cost</b>																	
Develop list of local projects including site and building costs			•														
Establish square foot budget for construction				•													
Develop list of 'soft costs' to establish project cost																	
Finalize Project Cost and Construction Cost										•							
<b>Task 5 - Final New South Fire Station Report</b>																	
Develop final report																	
Review final report														•			
Finalize and Deliver Report															•		
Develop presentation of report for public use																	
Review final presentation																•	
Finalize and Present final presentation of Final Report to Goshen Redevelopment Commission and Goshen Common Council																•	







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**CONTACT:**

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*PARTNER-IN-CHARGE*  
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HPITTNER@BKVGROUP.COM

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**ENRICHING LIVES  
AND  
STRENGTHENING  
COMMUNITIES**

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