MANHATTAN FIRE DISTRICT

COMMUNITY RISK ASSESSMENT

STANDARDS OF COVER

FIRE
FLASHPOINT
Strategies, LLC
DATA DRIVEN
IGNITING FIRE RESCUE PERFORMANCE POTENTIAL

2025

FIRE DEPT
FLASHPOINT Strategies, LLC
IGNITING YOUR FIRE RESCUE PERFORMANCE POTENTIAL

MANHATTAN FIRE DISTRICT

BOARD OF TRUSTEES

President	William Moncrief
Treasurer	Larry Goodwin
Secretary	William Weber
Trustee	Robert Davis
	Mike Shivers
	Brian Hupe
	Nick Kotchou

BOARD OF FIRE COMMISSIONERS

President	Jerry Kinsella
Secretary	Claude Werner
Commissioner	Anton Brncich

PENSION BOARD

President	Dave Kolosh
Secretary	Steve Malone
Treasurer	Mike Shivers
Trustee	Justin Kozar
	Bruce Boyle

UNION E-BOARD

President	Dan Gulli
Vice-President	Jon Christensen
Secretary	Matt Valdarchi
Treasurer	Kyle McKenna

LEADERSHIP TEAM

Fire Chief	Steve Malone
Deputy Chief	David Piper
Battalion Chief	Bruce Boyle

CHAPLAINS

Pat Forsythe
Jim Kelly

DATA ANALYST/CONSULTANT

Flashpoint Strategies LLC
Randy Reeder

"Protecting Lives & Property Since 1892 – United for the Future"

AT A GLANCE

🏛️ Formation

- Manhattan: 1892
- Peotone: 1881
    - Consolidated: 2023

👥 Community Served

- **26,311** Residents
- 9,477 Homes
- Median Age: Manhattan – 38, Peotone – 47
- Coverage Area: **142.4 sq mi**
- EAV: $727.3 Million

🚒 Fire Stations

- 3 Stations

👩‍🚒 Staffing (minimum Daily: 10)

- 25 Full-Time Firefighters/Paramedics
- 26 Part-Time FF/PMs & EMTs
- 6 Admin/Support Staff

🚑 Apparatus

- 3 ALS Engines
- 3 ALS Ambulances
- 3 Chief Vehicles
- 1 Pumper Tender
- 2 Brush Trucks
- 1 Special Rescue
- 1 Reserve Engine
- 1 Reserve Ambulance

📞 Calls for Service

- 2024 Total: **2,705** (Avg. **7.4**/day)
- 2020–2024: 12,377 Total Calls
    - EMS/Rescue: **56%**
    - Fire: **5%**
    - Other: **39%**

🏆 Ratings

- **CLASS 1** ISO Rating

🏛️ Governance & Funding

- 7 Trustees, 3 Fire Commissioners
- Budget: **$7.86 Million** – no transfers
    - Operations, Staffing, Training, Equipment, Maintenance
    - 83% is personnel cost/investment
- Tax Rate: **0.9004**

MANHATTAN FIRE DISTRICT

MISSION STATEMENT

"The primary mission of the Manhattan Fire Protection District is to respond to our customers' needs, providing Fire Suppression, Emergency Medical Services, Fire Prevention & Education, and other specialized services in a safe, effective manner."

VISION

The Manhattan Fire Protection District is committed to providing the highest quality service to our communities using current fire service trends, data analysis, and organizational capability assessments. We will continue to develop and nurture community-based relationships and partnerships to ensure common fire and life safety goals. We will provide an "All Hazards" response model, as well as "Prevention Services," to save lives and reduce the risk to our communities. We will educate the public by advocating for personal health, wellness, and safe behaviors to improve the quality of life in our communities.

VALUES

DUTY

A moral or legal obligation; a responsibility.

TRUST

Assured reliance on the character, ability, strength, or truth of someone or something.

KNOWLEDGE

Facts, information, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject.

COMMUNITY

A feeling of fellowship with others as a result of sharing common attitudes, interests, and goals

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EXECUTIVE SUMMARY

STEVE MALONE
FIRE CHIEF

The Manhattan Fire Protection District (MFPD) is a modern, all-hazards emergency services provider, proudly serving over 26,000 residents across 142.4 square miles in Will County, Illinois. Following the 2023 consolidation with the Peotone Fire Protection District, MFPD has grown into one of the region's largest and most capable fire protection districts. This 2025 Community Risk Assessment and Standards of Cover (CRA/SOC) serves as both a strategic blueprint and operational playbook, integrating local risk data, service demand trends, and best practices in emergency response planning. It reflects MFPD's ongoing commitment to continuous improvement, accreditation excellence, and outcome-driven public safety.

Key focus areas include:

- All-hazard risk identification across residential, industrial, transportation, and environmental domains

- Distribution and concentration analysis of resources, aligned with NFPA 1710 benchmarks

- Detailed deployment strategies for each of the District's three stations, plus plans for the new Station 81 headquarters

- Staffing, apparatus, and ERF modeling based on historical data and projected growth

- Actionable recommendations for facility upgrades, training infrastructure, water supply planning, and interagency coordination. With a Class 1 ISO rating, robust data analytics, and a strong community partnership philosophy, MFPD is well-positioned to lead in delivering risk-informed responses and innovative services.

The 2025 CRA/SOC provides a clear, data-informed roadmap for MFPD's future. It identifies current strengths, highlights areas for improvement, and offers actionable strategies to ensure the District's resources, infrastructure, and personnel are aligned with evolving risk and service expectations.

****Strategic Recommendations Summary****

****1. Infrastructure & Facilities**** - Complete construction of new Station 81 HQ and ensure operational transition plan - Conduct facility assessment of Station 82 for long-term viability or redesign - Initiate feasibility study for a fourth station by 2030 to serve growth areas

****2. Staffing & Deployment**** - Increase minimum daily staffing from 10 to 12 by 2027 to meet ERF demands - Transition Station 82 from jump company to dedicated ALS engine and ambulance model - Use AVL and GIS data to reassign zone boundaries and dynamic staffing during peak hours

****3. Apparatus & Equipment**** - Standardize fleet specifications for interoperability - Replace aging tenders and consider the acquisition of a second squad or rescue engine - Expand foam capability and rural water shuttle training

4. Data, Technology & Analytics - Launch SOC dashboard for internal review and public transparency - Integrate real-time data from CAD, ImageTrend, and GIS - Automate risk scoring and permit-to-hazard tracking using RMS

5. Community Risk Reduction - Target prevention efforts in at-risk populations (older adults, children, special needs) - Expand school and senior outreach programs with fire/life safety education - Translate education and prevention materials into multiple languages as needed

6. Accreditation & Performance - Achieve and maintain CFAI accreditation status with active compliance tracking - Review and update CRA/SOC every three years or after system changes - Host annual SOC and performance review workshops with all leadership levels ---

Conclusion The Manhattan Fire Protection District stands at the forefront of progressive fire and EMS service delivery. With an expanding population, evolving hazards, and increased operational complexity, the District must remain nimble, data-informed, and mission-focused. This 2025 CRA/SOC reflects more than a set of benchmarks- it's a promise to the community. A promise to adapt, lead, and ensure that every response, every plan, and every investment is aligned with what matters most: life safety, property protection, and public trust. MFPD is ready. Not just for today's calls but for tomorrow's challenges.

Thank you!

Steve Malone

Fire Chief

INTRODUCTION

Purpose of the CRA-SOC

The CRA-SOC is a critical tool in identifying, evaluating, and optimizing MFPD's deployment of personnel and apparatus for fire suppression, Emergency Medical Services (EMS), and specialized incidents. The Community Risk Assessment (CRA) involves analyzing all hazards within the district, while the Standards of Cover (SOC) provides a structured framework for evaluating and planning service delivery.

This assessment is essential for:

- Identifying and analyzing **all hazard risks**, including fire, EMS, hazardous materials, and technical rescues.
- Establishing **baseline (current)** and **benchmark (target) emergency response performance**.
- Determining **optimal apparatus deployment** and **staffing models**.
- Planning for **future station locations, potential relocations,** and **resource allocation**.
- Evaluating **unit workload, reliability,** and **operational efficiency**.
- Measuring **service delivery performance** based on industry best practices.
- Supporting **strategic planning and policy development** to enhance resource management.

Comprehensive Risk Assessment Approach

A **detailed profile** of the communities served by MFPD was developed using **historical data, geographic risk factors, and emergency response analytics**. This analysis includes:

- **Overview of the Service Area** – Evaluating demographics, infrastructure, and fire protection boundaries.
- **Programs and Services** – Reviewing fire suppression, EMS, public education, and special operations.
- **All-Hazard Risk Assessment** – Identifying risks across residential, commercial, industrial, and rural areas.
- **Risk and Response Analysis** – Examining response times, resource distribution, and service capacity.
- **Service Deployment and Performance** – Assessing staffing models, apparatus placement, and operational readiness.
- **Plan for Maintaining and Improving Performance** – Developing strategies for optimizing emergency services.
- **Key Findings and Recommendations** – Offering **data-driven solutions** to improve service delivery.

Data-Driven Decision Making

To ensure accuracy and relevance, this assessment incorporates **multiple data sources**, including:

- **Records Management Systems** (*ImageTrend & Continuum*).
- **Computer-Aided Dispatch (CAD) and Geographic Information Services (GIS)** for spatial and response analytics.
- **Local, State, and Federal demographic databases** for community growth forecasting.
- **Infrastructure and risk assessments** from local jurisdictions.

Evaluating Performance and Service Levels

MFPD's performance standards are assessed using **five years of historical data (2020-2024)**, including:

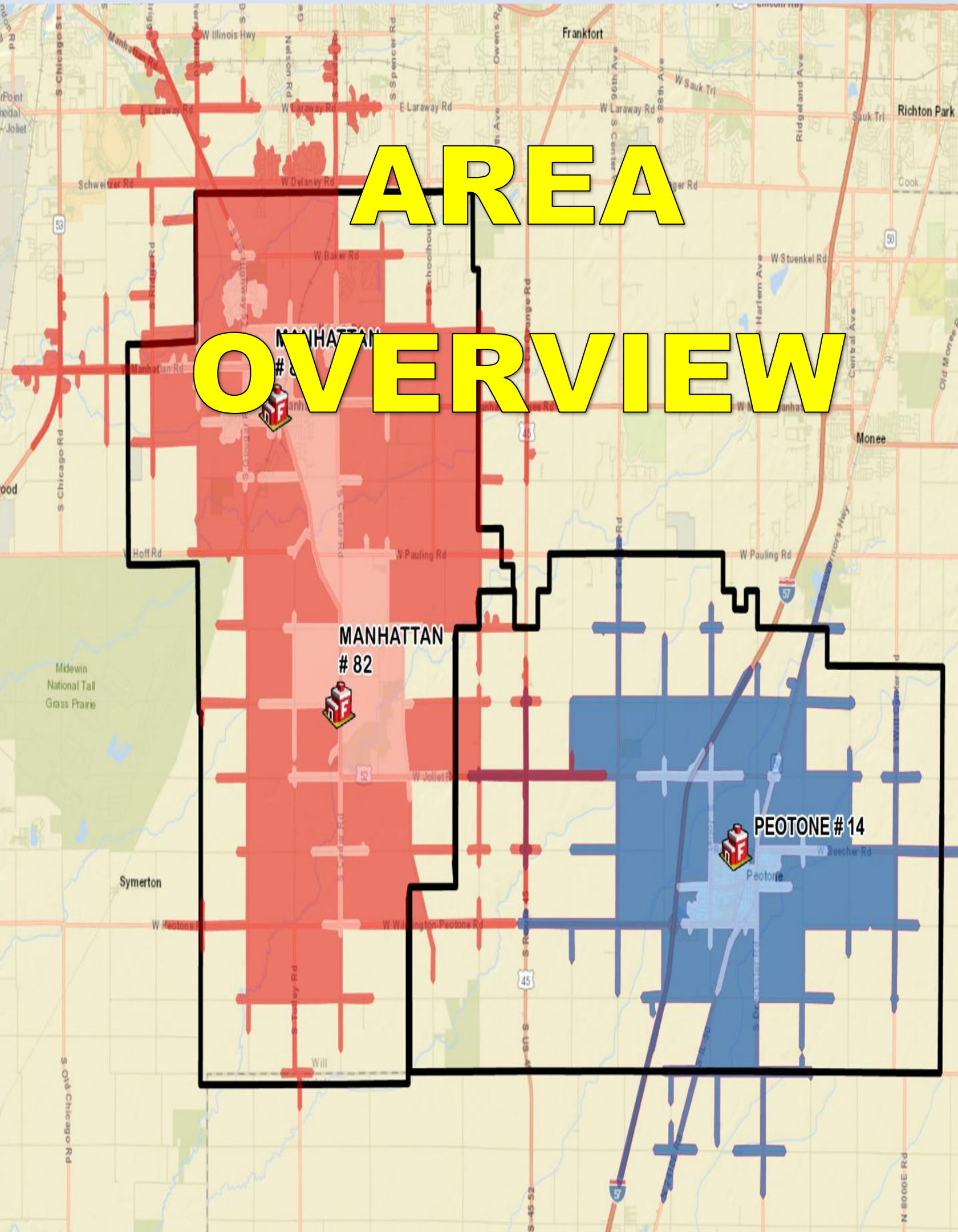
- **Response time analysis** and unit reliability.
- **Call volume trends** and service demand mapping.
- **Fire risk assessments** are related to building construction, occupancy type, and the availability of fire suppression systems.
- **Assessment of large-scale events** (natural disasters, hazardous materials incidents, and major emergencies).

This evaluation supports **data-driven decision-making**, ensuring **community risk assessments align with the industry's best practices**.

Commitment to Community Safety

Through this **comprehensive risk assessment**, MFPD strengthens its ability to **protect life, property, and the environment** by aligning emergency services with evolving community needs. This document establishes a **District-driven continuous improvement process**, ensuring that emergency response capabilities evolve in tandem with **population growth, service demand, and operational challenges**.

The CRA-SOC provides **elected officials, partnering agencies, District members, and community residents** with a **detailed risk assessment, resource allocation strategy, and deployment plan** to enhance public safety and emergency response effectiveness. Continuous improvement initiatives have already been implemented to ensure that **MFPD meets and exceeds community expectations** in fire suppression, EMS, and specialized emergency response.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Richton Park
Symerton
Peotone
Midewin
National Tall
Grass Prairie
W Illinois Hwy
E Laraway Rd
W Laraway Rd
W Delaney Rd
W Baker Rd
W Stuenkel Rd
W Pauling Rd
W Hoff Rd
W Joliet St
W Beecher Rd
S Chicago St
S Cedar Rd
S Harlem Ave
Ridgeland Ave
Central Ave
Will

SECTION 1 - Area Characteristics

Legal Basis and Governance

The Manhattan Fire Protection District (MFPD) was initially established as a Fire Department in 1899 and later incorporated in 1950 as a Special District under the Illinois Compiled Statutes (ILCS) Special Districts – Fire Protection District Act (70 ILCS 705/). As a Special District, MFPD operates as an independent governing body, separate from local municipalities such as villages or cities.

MFPD is governed by a Board of Trustees (BOT), consisting of **seven (7)** appointed officials who oversee the Fire District's business, financial, and operational activities. Trustee appointments are staggered over three-year terms, ensuring continuity of leadership.

Additionally, the BOT appoints a Board of Fire Commissioners (BOFC), responsible for overseeing hiring, promotions, and disciplinary actions within the District. The BOT meets monthly, while the BOFC meets quarterly, adhering to the Illinois Open Meetings Act for transparency and compliance.

Recent Territory Expansion

In 2022, Peotone Fire Protection District voters approved a consolidation with the Manhattan Fire Protection District, which took effect in January 2023. This merger significantly expanded MFPD's jurisdiction, making it one of the largest fire districts in Illinois.

Funding Sources

As a **Special Taxing District**, the MFPD's primary funding source is **property tax revenue** levied on property within its jurisdiction. Unlike municipalities, the District **does not receive sales tax revenue** or other municipal funding.

Primary Revenue Sources:

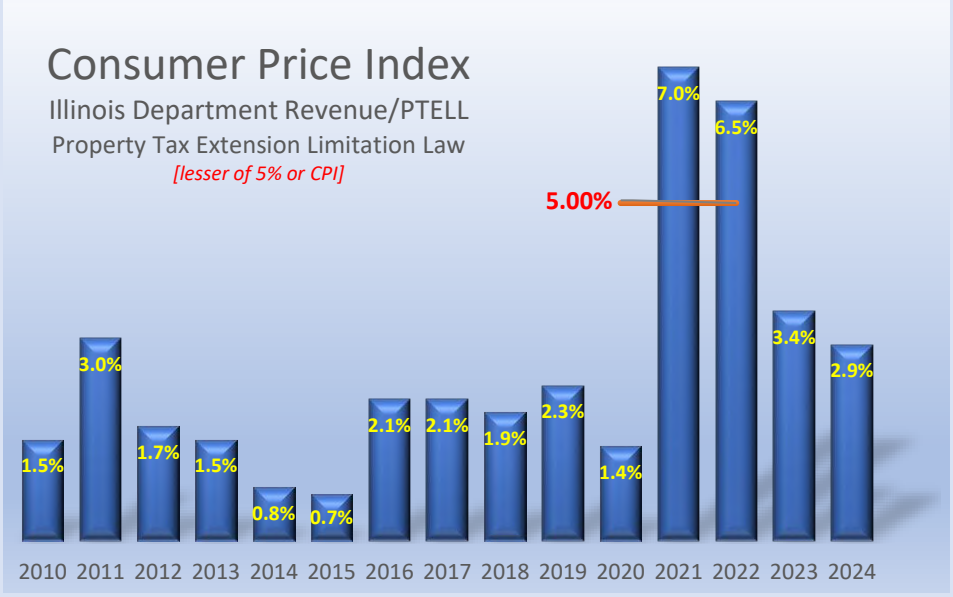
1. **Property Taxes** (Approx. **83% of total funding**):
    - Levied based on **Equalized Assessed Valuation (EAV)** of properties.
    - Subject to the **Property Tax Extension Law Limit (PTELL)**, capping tax levy increases at **5% or the Consumer Price Index (CPI), whichever is lower**.
    - Includes a dedicated **Pension Fund levy** within tax limitations.
2. **EMS and Service Fees:**
    - **Emergency Medical Services (EMS) transport fees**.
    - **False alarm fines** (currently not charging).
    - **Incident cost recovery fees for non-residents**.
    - **Fire prevention fees** for inspections and permits.

3. **Grants & Investment Income:**
    - **State, federal, and private grants** to support equipment, staffing, and operations.
    - **Investment returns** from financial reserves.

MFPD, as a **special district**, has limited revenue sources and **cannot impose additional taxes** beyond those permitted under Illinois law.

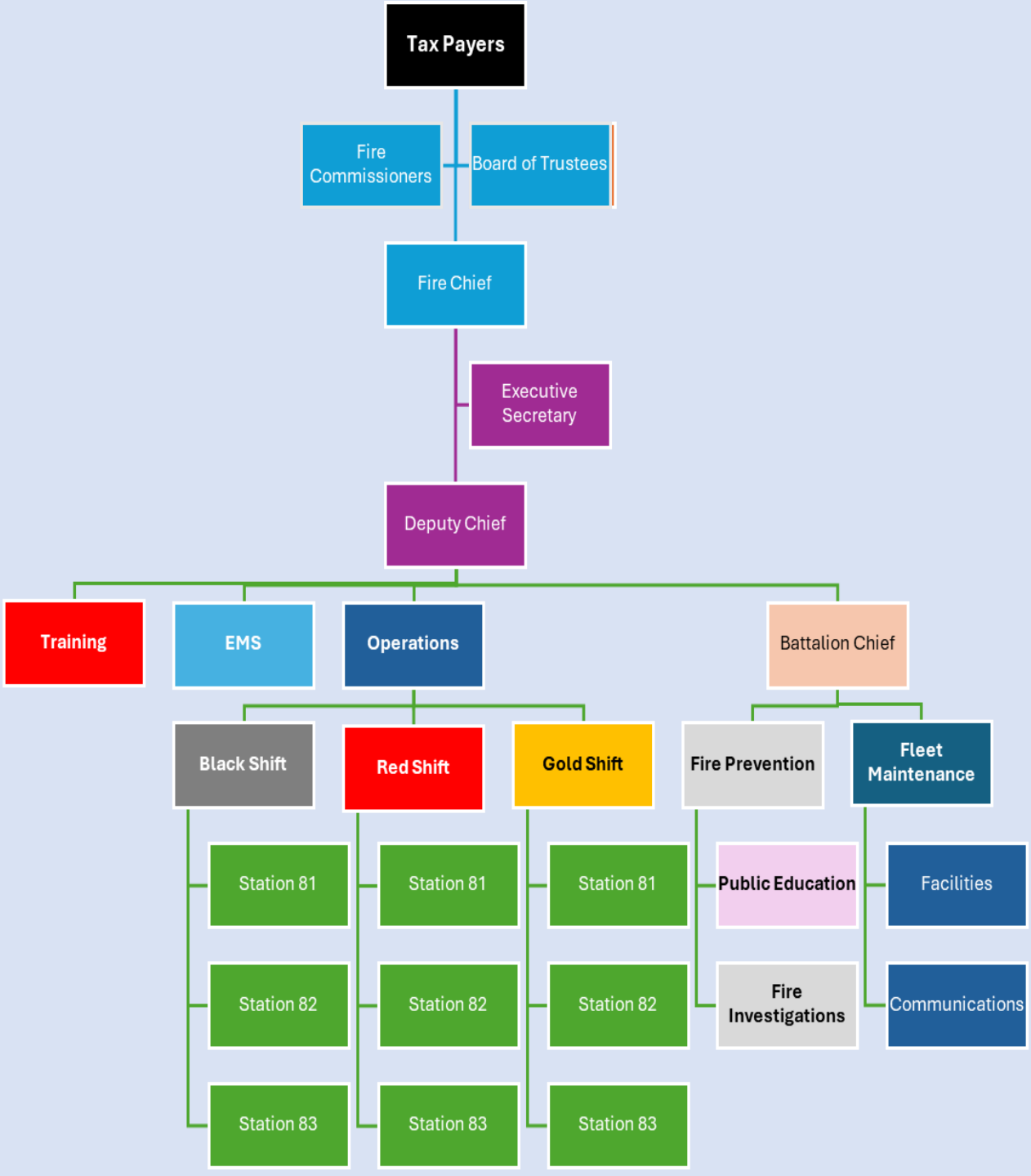
Budget Overview

- **Total Operating Budget**: $7,858,100 million (no internal transfers).
- **Personnel Costs: 83%** of total expenditures
- The budget is designed to **sustain emergency response capabilities**, enhance **firefighter training**, maintain **apparatus and infrastructure**, and **adapt to community growth and risk factors**.



Organization Chart

Manhattan Fire Protection District (MFPD) Organizational Chart



Board of Trustees

- President
- Secretary
- Treasurer
- Trustees (4)

Fire Chief

(Reports directly to Board of Trustees)

Deputy Chief of Operations/Administration

- Suppression/Shift Command
    - Battalion Chiefs (Black, Red, Gold Shifts)
        - Lieutenants (per company)
        - Firefighter/Paramedics
- Special Teams (e.g., TRT, Hazmat, Dive)
  (assigned across shifts/stations)

EMS Coordinator

- EMS System Coordination
- QA/QI Coordinator
- Medical Supply Technician
- Training Liaisons
- Field Paramedics

Training Officer

- Training Division
    - Training Oversight
    - Field Training Instructors

Fire Marshal

Community Risk Reduction (CRR)

Fire Inspector(s)

- Plan Review & Code Compliance
- Community Risk Reduction (CRR)
- Public Education/Outreach Officer

Fire & Life Safety Educator

- Community Outreach
- Public Education

- CPR
- Social Media

Logistics – Fleet & Facilities Manager

- Fleet Maintenance (Apparatus & Equipment)
- Station Maintenance
- Supply Chain/Inventory Control

IT / Communications – Contracted *(Leading IT)*

- Radios/MDCs/AVL
- Alerting System Maintenance
- Website/Social Media Management

Station Assignments

- **Station 81 (HQ)** – Admin & Command Staff, Shift Personnel
  - *(In Process: Station 81 – Future Relocation Site)*
- **Station 82** – Shift Personnel, Strategic Coverage
- **Station 83** – Newly Remodeled, Ready Reserve/Response

Board of Trustees

This table includes the **Board of Trustees** for the **Manhattan Fire Protection District (MFPD)** and the **Peotone Fire Protection District (PFPD)** throughout the years.

Years of Service	Manhattan Trustee	Years of Service	Peotone Trustee
1949 – 1953	Herman Evans		---
1949 – 1959	Harry White		---
1949 – 1960	Herman Christensen		---
1959 – 1969	Wesly Jones		---
1959 – 1971	Ivan Goodwin		---
1963 – 1975	Earl Keniston		---
1966 – 1977	J.R. (Bob) Lee		---
1971 – 1976	Ralph Goodwin		---
1975 – 1983	Bob Quigley	**1978 –1986**	James Nadler
1976 – 1989	Gene Carlos	**1978-1988**	Jack Pierce
1977 – 2009	Donald Borchardt	**1978-1993**	Gerald Borchardt
1983 – 2009	Burton Barr	**1986-1991**	Donald Bate
1989 – 2000	Elza Blackman	**1988-1993**	Allan Harms
2001 – 2005	Craig Patterson	**1991 - unk**	Ivin Honsbruch
2005 – Present	William Moncrief	**1992-1996**	Roger Hupe
2005 – Present	Larry Goodwin	2012 -2015	Steve Cross

2005 – Present	William Weber	2013 – 2018	Steve Hoffner
2009 – Present	Robert Davis	2001 – 2022	Randy Murray
2009 – Present	Nickolas Kotchou	2003 – 2022	Claude Werner
2023- Present	Brian Hupe*	2005 - 2022	Brian Hupe*
2025- Present	Mike Shivers*	2007 - 2022	Mike Shivers*
2021-2024	Bill Osborne*	2021 - 2022	Dave Piper
		2019 - 2021	Bill Osborne*

**= Former Peotone Trustees merged with the new expanded BOT*

BOARD OF TRUSTEES

President
William Moncrief

Treasurer
Larry Goodwin

Secretary
William Weber

Trustee
Robert Davis

Trustee
Nick Kotchou

Trustee
Brian Hupe

Trustee
Mike Shivers

Board of Commissioners

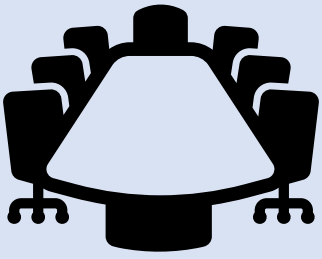
2007-2024	Jim Swyndro
2007-2020	Robert Berg
2007-2024	Robert Herrick
2020-present	Gerald Kinsella
2024-present	Claude Werner
2025-present	Anton Brncich

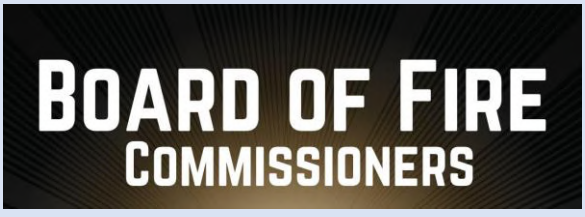
BOARD OF COMMISSIONERS

President Jerry Kinsella

Secretary Claude Werner

Commissioner Anton Brncich





Fire Chiefs

This table lists the **Fire Chiefs** who have served the **Manhattan Fire Protection District (MFPD)** and the **Peotone Fire Protection District (PFPD)** over the years.

Years of Service	Manhattan Fire Chief	Years of Service	Peotone Fire Chief
1901 – 1933	Henry O. Wenzel	**1912 – 1931**	Elmer Kurtz
1933 – 1946	John W. Hertel	**1931 – 1958**	Chet Conrad
1946 – 1967	Ivan Goodwin	**1958 – 1967**	Emil Koennecke
1967 – 1998	Dale VanderBoegh	**1967 – 1977**	Allan Harms
1998 – 2008	Jack Fitzgerald	**1977 – 1983**	Lanson Russell
2008 – 2019	Daniel Forsythe	**1983 – 1987**	Lanson Russell (1st full-time)
2019 – Present	Steve Malone	**1987 – 1995**	Clifford Oliver
		1995 – 2008	John Young
		2008 – 2020	Bill Schreiber
		2020 - 2023	Steve Malone (MFD agreement)

Staffing

Station	Maximum	Minimum	Engines	Tender	Ambulances
81	5	3	1	-	1
82	3	3	1*	< --Pumper/Tender	1*
83	5	4	1	1	1

* = Jump companies (crews switch between engine and ambulance as needed).

- **Station 81**: If staffing drops to the minimum (3), the crew "jumps" between the engine and ambulance.
- **Station 82**: Always operates as a "jump" company. The Engine is a Pumper/Tender
- **Station 83**: Engine/Ambulance
- **Full Staffing**: **13** personnel per shift.
    - **Minimum**: **10** personnel per shift.

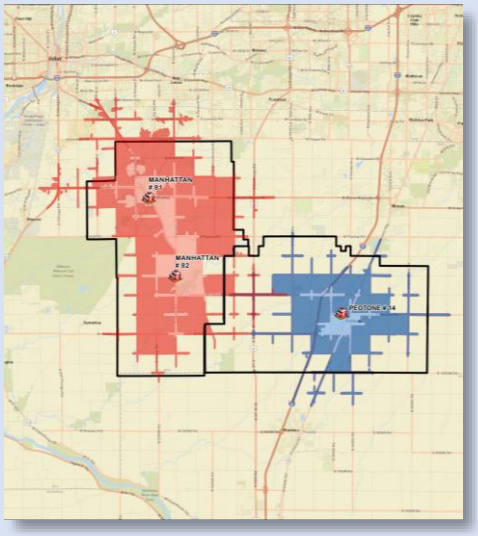
Personnel Breakdown

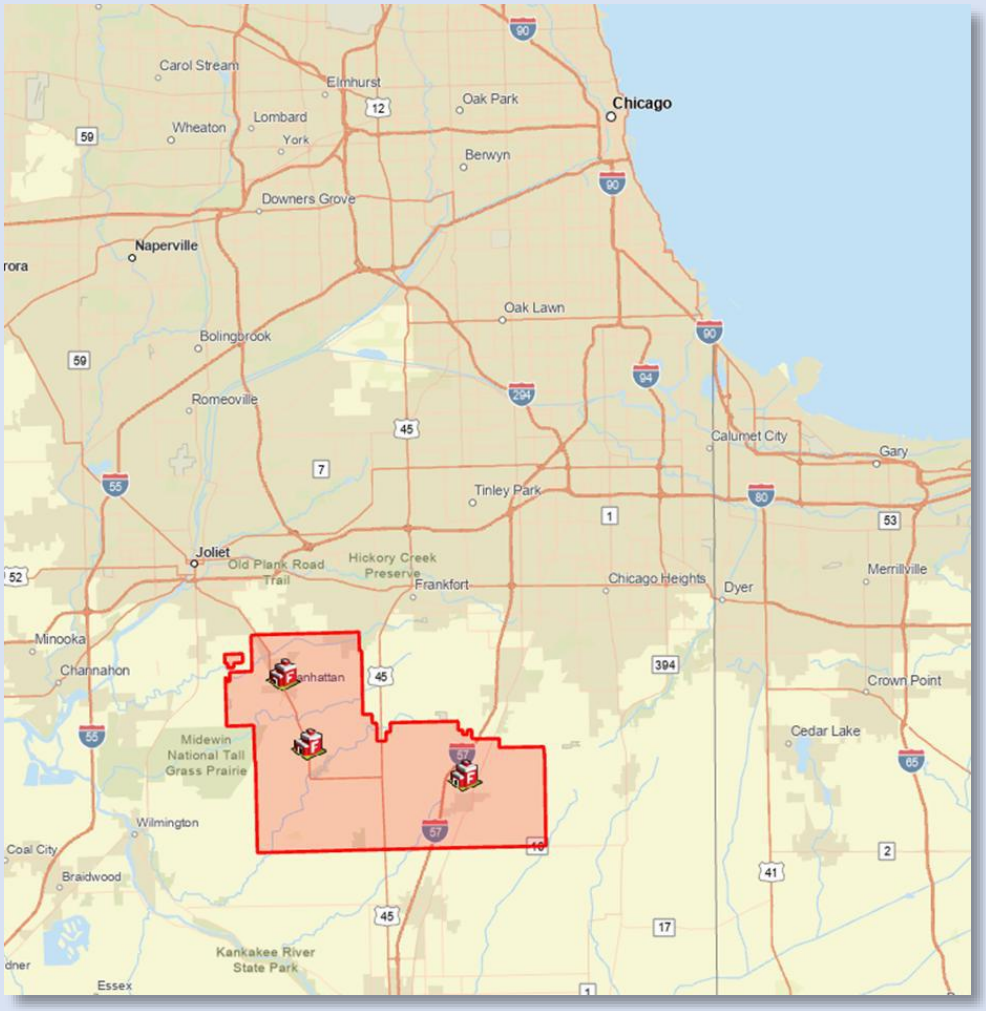
- **25 Full-Time Firefighters/Paramedics** (IAFF LOCAL 4991)
    - **9 Lieutenants**
    - **15 Firefighter/Paramedics**
    - **1 Fire Marshall**
- **26 Part-Time Firefighter/Paramedics & EMTs**
- **5 Administrative & Support Staff**:
    - 1 Fire Chief
    - 1 Deputy Chief
    - 1 Fire & Life Safety Educator
    - 1 Administrative Assistant
    - 1 Battalion Chief (part-time Fire Prevention/Maintenance)

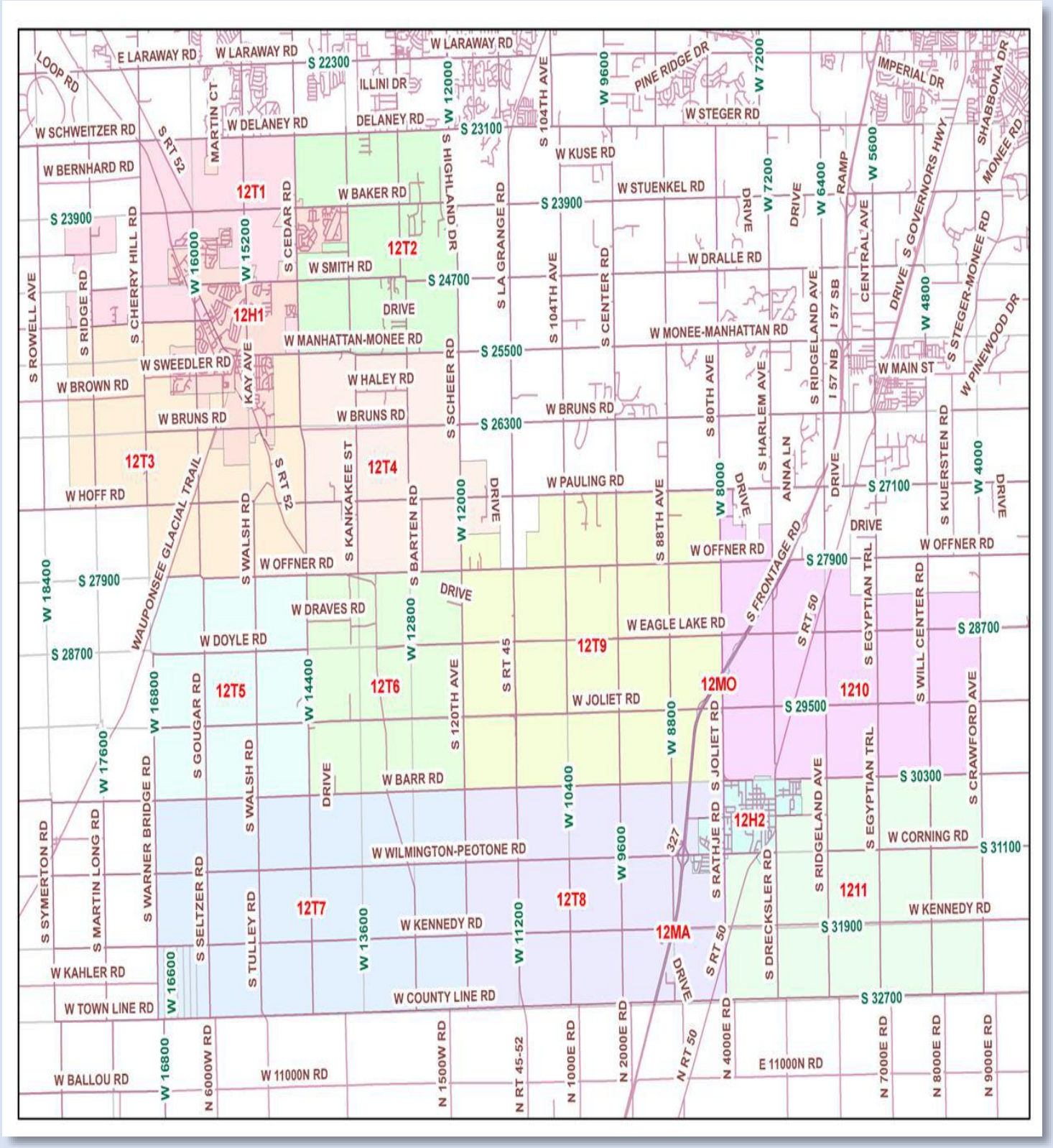
Overview

- **Total Combined Personnel: 51**
- **24/7 Coverage** with rotating shifts

Service Area



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W BAKER RD
W SMITH RD
W MANHATTAN-MONEE RD
W SWEEDLER RD
W BROWN RD
W BRUNS RD
W HALEY RD
W HOFF RD
W OFFNER RD
W DRAVES RD
W DOYLE RD
W BARR RD
W JOLIET RD
W EAGLE LAKE RD
W PAULING RD
W KUSE RD
W STUENKEL RD
W DRALLE RD
W STEGER RD
W MONEE-MANHATTAN RD
W MAIN ST
W KENNEDY RD
W COUNTY LINE RD
W TOWN LINE RD
W KAHLER RD
W BALLOU RD
W WILMINGTON-PEOTONE RD
W CORNING RD
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S CEDAR RD
S HIGHLAND DR
S LA GRANGE RD
S CENTER RD
S RIDGE RD
S CHERRY HILL RD
S ROWELL AVE
KAY AVE
S SCHEER RD
S KANKAKEE ST
S BARTEN RD
S WALSH RD
S GOUGAR RD
S SELTZER RD
S TULLEY RD
S WARNER BRIDGE RD
S MARTIN LONG RD
S SYMERTON RD
S 104TH AVE
S 88TH AVE
S 80TH AVE
S HARLEM AVE
S RIDGELAND AVE
S 120TH AVE
S JOLIET RD
S RATHJE RD
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S WILL CENTER RD
S CRAWFORD AVE
S KUERSTEN RD
S GOVERNORS HWY
S STEGER-MONEE RD
W PINEWOOD DR
SHABBONA DR
MONEE RD
IMPERIAL DR
PINE RIDGE DR
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N 1500W RD
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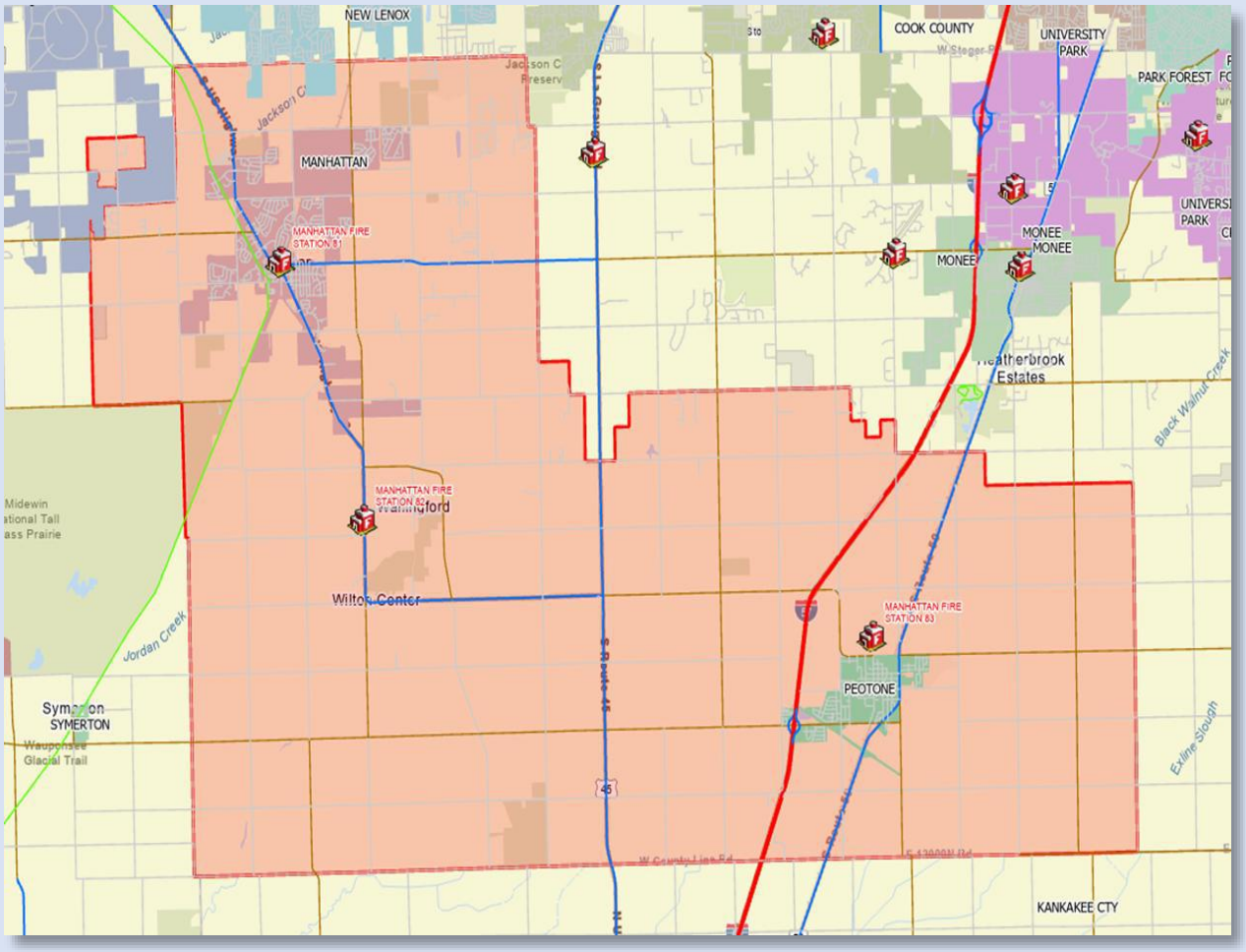
327

Municipalities

The **Manhattan Fire Protection District (MFPD)** serves communities in **Will County, Illinois**, encompassing the Villages of Manhattan and Peotone, as well as the six **Townships of Manhattan, Peotone, Green Garden, Jackson, Will, and Wilton.**

About Will County

- **Location**: Northern Illinois
- **County Seat**: Joliet
- **Founded**: 1836
- **Growth**: One of the **fastest-growing counties** in the United States
- **Infrastructure**: Major hub for **road, rail, and natural gas pipelines**



Economic & Industrial Development

- Will County has evolved into the **Largest Inland Port in North America** due to:
  - **Two large intermodal centers** supporting freight and logistics
  - **Over 100 million square feet** of planned industrial development
- The intermodal centers process **over 3 million international and domestic containers annually**, moving:
  - $65 billion+ in goods
  - 70 million+ bushels of grain

Strategic Fire & Emergency Services Considerations

- The **rapid growth in industrial and population sectors** increases the demand for fire protection, EMS, and technical rescue capabilities.
- **Proximity to major freight corridors**, industrial parks, and intermodal hubs necessitates specialized training and resources for handling hazardous materials, responding to transportation incidents, and mitigating large-scale industrial fires.
- **Rural coverage areas** (Manhattan, Peotone, Green Garden, Jackson, Will, and Wilton Townships) require water tender operations and wildland fire response capabilities due to limited hydrant availability.
- **Federal land – Midewin National Tallgrass Prairie**

Fire Station Overview & Deployment Analysis

The Manhattan Fire Protection District provides all-hazards emergency services from three strategically located fire stations. Each facility supports a tiered, scalable response model aligned with the District's mission to be Better, Faster, Safer, and Smarter. With recent infrastructure improvements and a replacement headquarters for Station 81 underway, MFPD is adapting decisively to changing risk, population growth, and operational complexity.

Station Profiles

Station	Location	Constructed	Remodel	Apparatus	Line Staffing
Station 81 (Current HQ)	100 S. Park Rd, Manhattan	1974	2014-2015	Engine 81, Ambulance 81, Brush 81, Utility 81, Spare Engine/Ambulance	5 per shift
Station 82	28710 S. Cedar Rd, Manhattan	1985	2019, 2024	Engine 82, Ambulance 82, Foam Tender 82, Brush 81	3 per shift
Station 83	7550 W. Joliet Rd, Peotone	1992	2024	Engine 83, Ambulance 83, Tender 83, Brush 83, Utility 83, Squad 81, Decon 19	5 per shift

Deployment & Coverage Strategy

Station 81 – Current HQ / Future HQ Site Approved

- The central hub for operations, administration, and cross-jurisdictional coordination.
- Highest call volume (3.4 calls/day) and concentration of apparatus and personnel.
- The new headquarters is under construction on a 20-acre public safety campus on Eastern Avenue north of Smith Road. The design features scalable bunk capacity, expanded bay space, administrative offices, and integrated training facilities to support live-in programs and regional training initiatives.

Station 82 – Rural & Eastern Zone Coverage

- Covers lower-density residential and agricultural sectors.
- Operates on a jump company model due to 3-person staffing.
- Facility improvements in 2024 included the installation of LED signs, window replacement, exterior repainting, and landscaping updates. The facility still lacks adequate training space and modern infrastructure to support expanded staffing.
- Average call volume: 0.7 calls/day
- Provide backup coverage for Stations 81 & 83.

Station 83 – Recently Remodeled / Eastern Expansion Hub

- Fully integrated following 2024 renovations: modern HVAC, sprinkler systems, gear room, LED signage, vertical ventilation systems, and burn can upgrades.
- Provides critical coverage of the southern and eastern boundaries.
- Strategic hub for mutual aid and MABAS 19 support.
- Training tower improvements have enhanced readiness for technical rescue, VES, and fire behavior evolutions.
- Average call volume: 3.1 calls/day

Strengths & Strategic Gaps

Strengths

- All stations provide ALS engines and ambulance capability.
- Stations 81 and 83 maintain full staffing and support surge response.
- Station 83 improvements closed long-standing ERF gaps and increased technical rescue capacity.
- The new HQ design standard will streamline future facility development.

Challenges

- Station 82 remains under-resourced despite partial improvements.
- Jump staffing limits response reliability during overlapping incidents (which occur 66% of the time).
- Southeast and southwest growth corridors may outpace current ERF capability by 2030.

Strategic Recommendations

1. **Continue - Mapping Coverage & Zone Optimization**
    - Use GIS to validate:
        - 4-minute first-due travel
        - 8-minute ERF assembly
        - Identify response delays in emerging residential/commercial zones
2. **Continue - Performance Analytics & Benchmarking**
    - Analyze:
        - Turnout/travel/total response times by call type and station
        - NFPA 1710/1720 compliance
        - Impact of 2- and 3-call overlaps on availability and safety
3. **Facility Master Planning**
    - Conduct a complete assessment of Station 82 to comply with future space and health/safety needs.
    - Use the new Station 81 layout (minus the admin wing) as a template for future facilities.
    - Re-evaluate long-term growth demands to determine if and when a fourth station beyond the new Station 81 replacement may be warranted.
    - Pursue state/federal grants to fund remodels and reduce reliance on minimum staffing.
    - Station mapping has projected potential future stations depending on growth and demand.

Training & Risk-Specific Capabilities

- Station 83 houses burn cans, ventilation props, and training tower features that support technical rescue, search and rescue evolutions, and fire behavior training.
- Station 82's training assets have been relocated to 83.
- Specialty programs in water rescue, tech rescue, hazmat, and fire investigation are now active across all stations with assigned leads.

Projected Growth & Demand Outlook

Year	Est. Population	Est. Calls for Service	Notable Trends
2025	26,331	2,900	Station 83 continues to contain burn cans, ventilation props, and training tower features for technical rescue, search and rescue, fire behavior training, and MVAs in new development corridors.
2027	28,720	4,000	Pressure in the east/southeast residential sectors
2030	29,220+	4,700+	Overlapping incidents and travel time issues without system expansion

Conclusion

The Manhattan Fire Protection District continues to evolve its station deployment and facility strategy to meet the demands of a growing, diverse community. With a balance of modernization, data-driven response modeling, and interagency coordination, MFPD is shaping a future-ready fire service model.

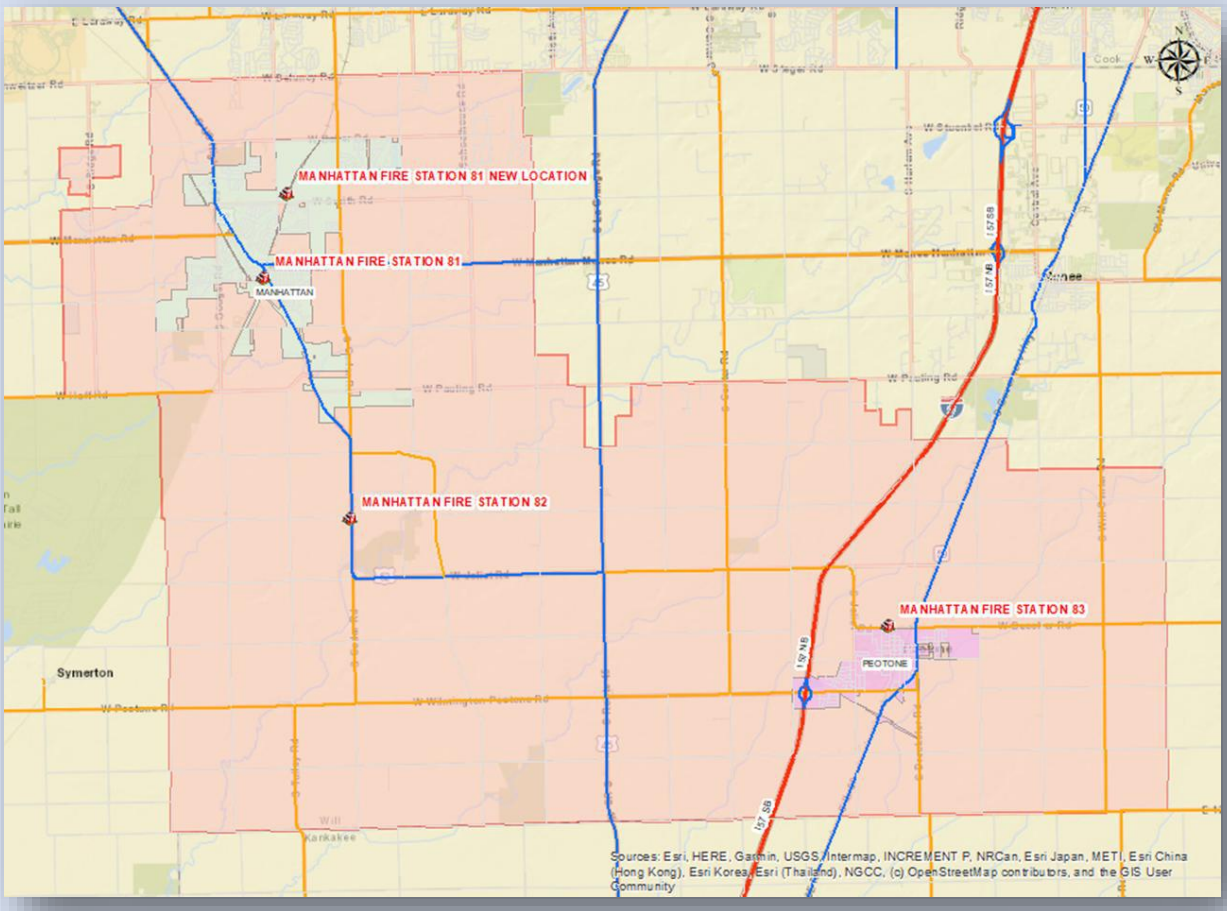
The 2025 CRA/SOC reflects current realities and serves as a blueprint for continued operational excellence. Every station, every investment, every shift—aligned with the mission to serve with purpose, precision, and preparedness.

The Manhattan Fire Protection District provides all-hazards emergency services from three strategically located fire stations. Each facility supports a tiered, scalable response model aligned with the District's mission to be Better, Faster, Safer, and Smarter. With recent infrastructure improvements, a fourth station on the horizon, and a new headquarters underway, MFPD is adapting decisively to changing risk, population growth, and operational complexity.

New Station 81

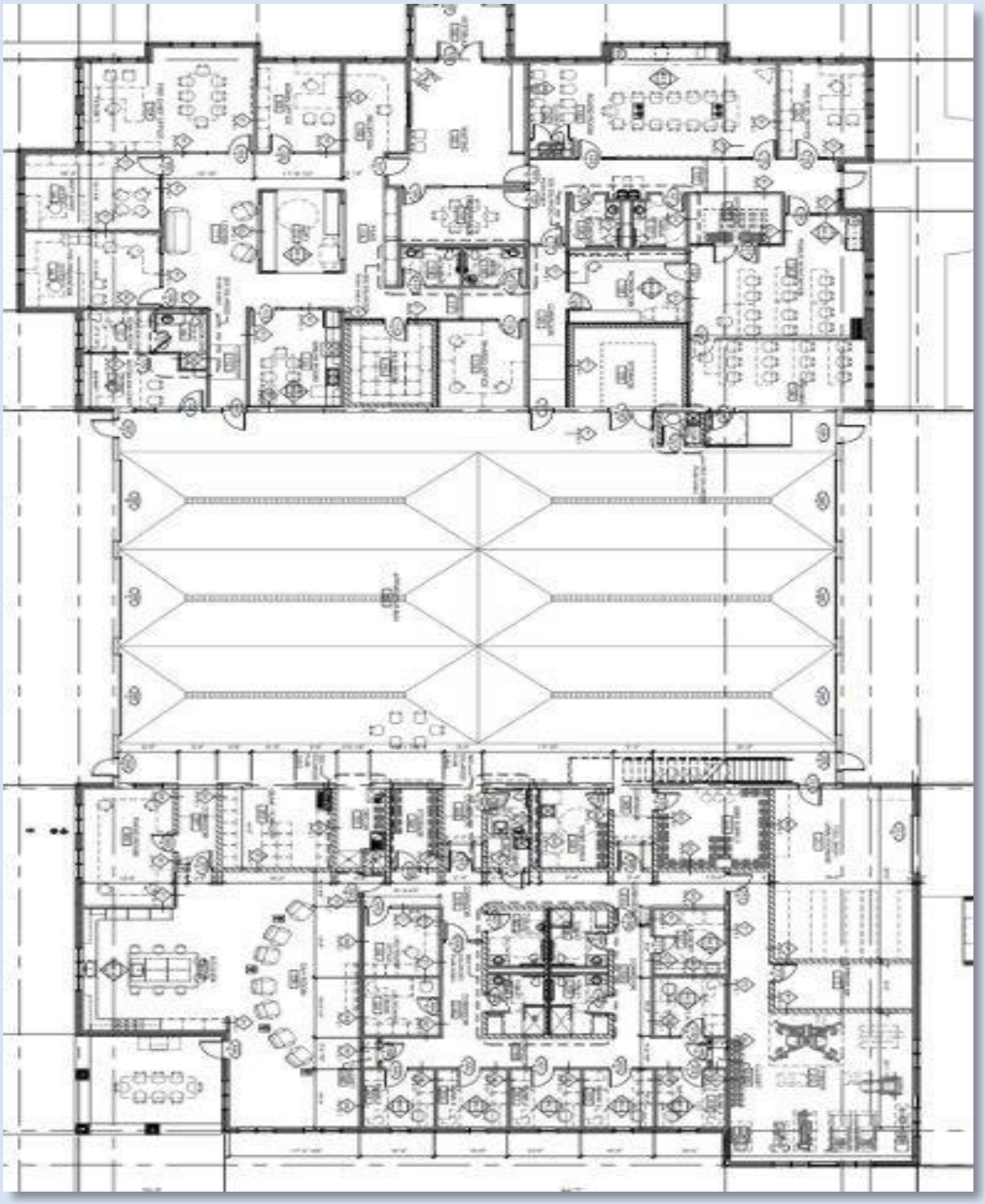
(under development and construction)

Eastern Avenue North of Smith Road

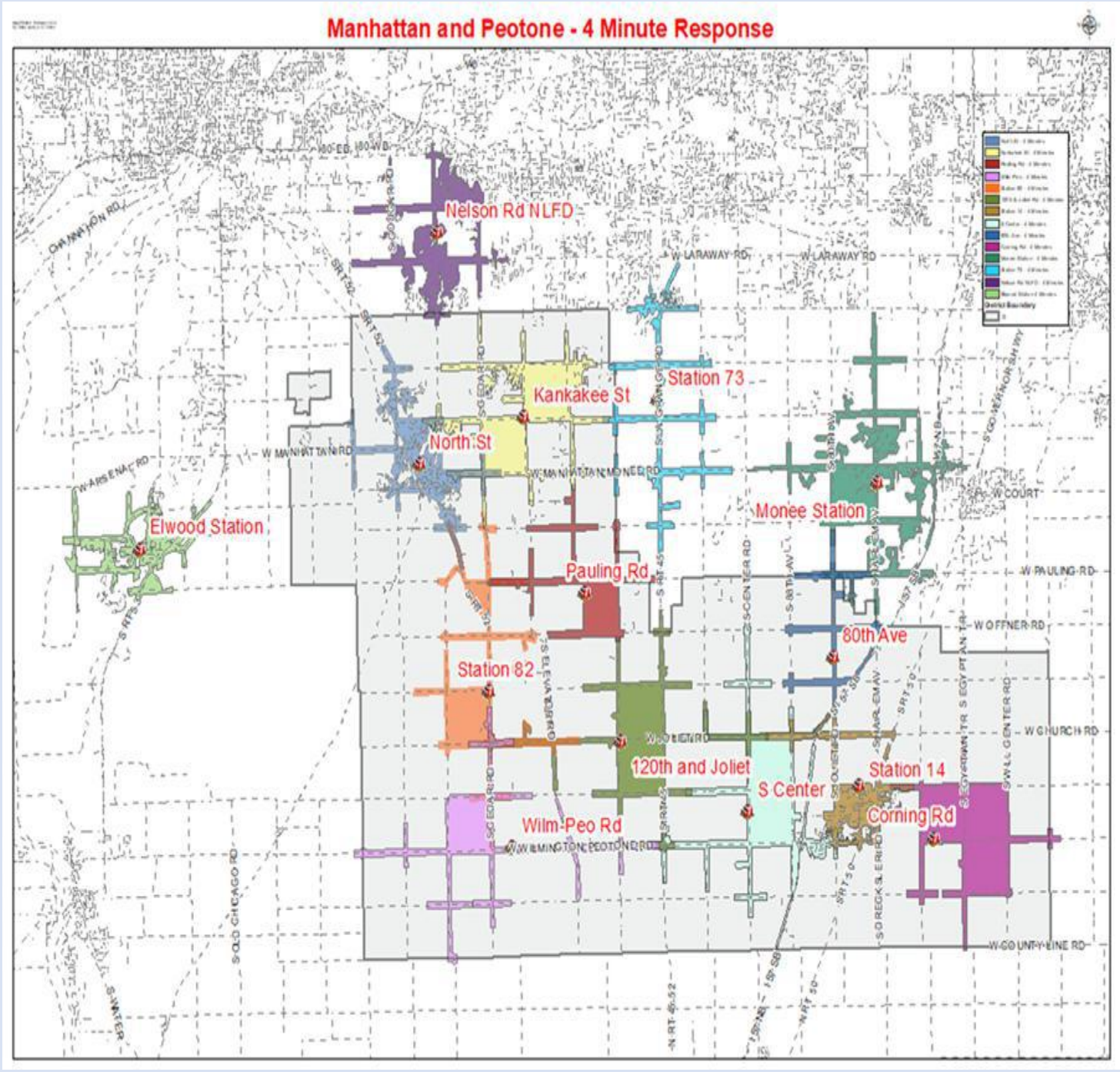


New Station 81 Layout

The layout will be used for future stations to save on design and engineering. (Minus Administration)



Potential Future Station Locations



Apparatus

The following are the primary types of apparatus deployed by the **Manhattan Fire Protection District (MFPD)** for emergency response. Each unit is designated by its **dispatch designator type** and serves a specific operational purpose.

Major Apparatus Classifications

Ambulance (3 in service + 1 spare**)**

- Provides **Advanced Life Support (ALS)** medical treatment and **patient transport** to hospitals.
- Fully equipped for **pre-hospital emergency care** following EMS protocols.

Brush Truck (2) – *to be replaced, delivery in 2026*

- **Specialty off-road unit** designed for wildland and vegetation fires.
- A 4x4 pickup-style unit with a 100–300 gallon tank and pump is typically needed.

Engine (3) + 1 spare Rescue Pumper**)**

- **The primary response unit from each station is used** for fire suppression and all-hazard incidents.
- Equipped with at least a **1,500 GPM pump** and a **750-gallon water tank** (or **2,500 gallons for tenders**).
- Carries a complete set of **NFPA 1901-compliant equipment** for firefighting and rescue operations.

Incident Command/Chief Unit (3)

- Functions as a **mobile incident command post** with **advanced communication equipment**.
- Used by command officers to coordinate **fireground operations** and **multi-agency incidents**.

Squad (Special Rescue) – (1)

- It carries **heavy extrication tools** and equipment for:
    - **Vehicle extrication (hydraulic, stabilization tools)**
    - **Technical rescue (water, rope, trench, confined space, and collapse rescue gear)**
    - **HazMat response**

Tender/Tanker (2)

- **High-capacity water transport unit** (typically **2,600+ gallons**).
- Supports **fire suppression in rural and non-hydranted areas**.

Utility Unit (3)

- **SUV, pickup, or flatbed-style unit** used for:

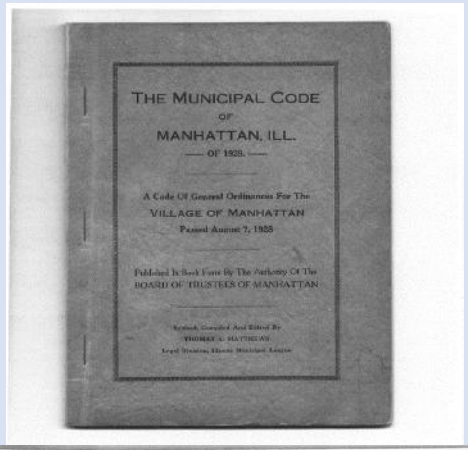
- **Personnel transport**
- **Logistics & equipment movement**
- **Fireground support**

- Some may have **limited firefighting or rescue capabilities**.
- **UTV** – ALS capabilities

Fleet Detail

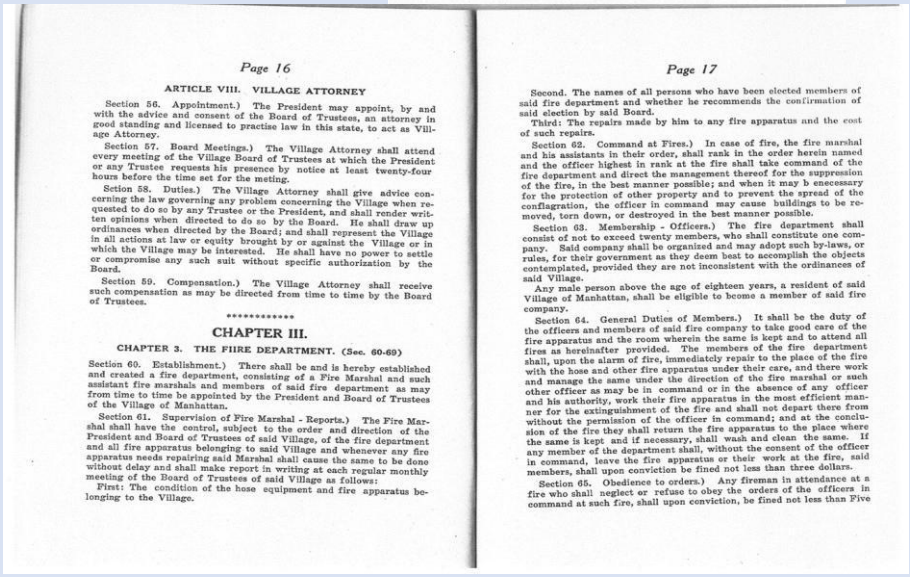
Unit	Radio ID	Station	Year of Vehicle	Make	Model	Type	Tank Size	Pump GPM	Mileage	Hours
Ambulance 81	MHAM81	81	2022	Ford / Horton	F550	Ambulance	--	--	37,605	2,162
Ambulance 82	MHAM82	82	2023	Ford / Horton /Crossroads	F550	Ambulance	--	--	4,942	241
Ambulance 83	MHAM83	83	2019	Ford	F-550	Ambulance	--	--	10,149	5,061
Ambulance 84	MHAM84	83	2015	Ford/AEV	F550	Ambulance	--	--	124,602	7,477
Battalion 81	MHBC81	Staff	2025	Chevy	Tahoe	Chief	--	--	1,562	--
Brush 81	MHBT81	81	2009	Ford	F350	Brush	200	120	10,146	832
Brush 83	MHBT83	83	2011	Ford	F-350	Brush	200	120	9,035	873
Chief 81	MHCH81	Staff	2022	Ford	Expedition	Chief	--	--	30,159	--
Chief 82	MHCH82	Staff	2024	Chevrolet	Tahoe SSV	Chief	--	--	15,003	--
Decon 19	DECON19	83	2006	Navistar	4300SBA 4X2	HazMat	--	--	6,037	631
Fire Marshal 81	MHFI81	Staff	2020	Ford	Explorer	FPB	--	--	48,518	--
MV26		Staff	2020	Chevrolet	Tahoe	Utility	--	--	63,413	--
MV33		83	2022	Ford / Horton (remount)	F550	Ambulance	--	--	27,935	1,324
Reserve Engine 83	MHRES81	81	2009	Sutphen	Shield	Engine RESERVE	1,000	1,500	71,166	5,222
Pub Ed 81	-	Staff	2019	Ford	Escape	CRR	--	--	--	--
Pumper-Tender 82	MHPT82	82	2021	Rosenbauer	Commander	Pumper Tender	2,000	1,500	13,544	1,846
Pumper-Tender 83	MHPT83	83	2016	Smeal-USTanker	S600	Pumper Tender	2,500	1,500	26,042	1,743
Rescue-Engine 81	MHRE81	81	2021	Rosenbauer	Commander Pumper	Engine Rescue	750	1,500	25,855	2,053
Rescue-Engine 83	MHRE83	83	2021	Rosenbauer	Commander Pumper	Engine Rescue	750	1,500	27,654	2,003
Squad 81	MHSQ81	83	2009	Spartan/SVI	Gladiator	Squad	--	--	28,411	2,571
Utility 81	MHUT81	81	2011	Ford	F250	Utility	--	--	80,311	4,068
Utility 82	MHUT82	82	2020	Chevy	Tahoe	Utility	--	--	99,193	3,285
Utility 83	MHUT83	83	2013	Ford	F250	Utility	--	--	42,219	2,173

District History


THE MUNICIPAL CODE
OF
MANHATTAN, ILL.
OF 1928.

A Code Of General Ordinances For The
VILLAGE OF MANHATTAN
Passed August 7, 1928

Published In Book Form By The Authority Of The
BOARD OF TRUSTEES OF MANHATTAN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ARTICLE VIII. VILLAGE ATTORNEY

Section 56. Appointment.) The President may appoint, by and with the advice and consent of the Board of Trustees, an attorney in good standing and licensed to practise law in this state, to act as Village Attorney.

Section 57. Board Meetings.) The Village Attorney shall attend every meeting of the Village Board of Trustees at which the President or any Trustee requests his presence by notice at least twenty-four hours before the time set for the meting.

Section 58. Duties.) The Village Attorney shall give advice concerning the law governing any problem concerning the Village when requested to do so by any Trustee or the President, and shall render written opinions when directed to do so by the Board. He shall draw up ordinances when directed by the Board; and shall represent the Village in all actions at law or equity brought by or against the Village or in which the Village may be interested. He shall have no power to settle or compromise any such suit without specific authorization by the Board.

Section 59. Compensation.) The Village Attorney shall receive such compensation as may be directed from time to time by the Board of Trustees.

****

CHAPTER III.

CHAPTER 3. THE FIIRE DEPARTMENT. (Sec. 60-69)

Section 60. Establishment.) There shall be and is hereby established and created a fire department, consisting of a Fire Marshal and such assistant fire marshals and members of said fire department as may from time to time be appointed by the President and Board of Trustees of the Village of Manhattan.

Section 61. Supervision of Fire Marshal - Reports.) The Fire Marshal shall have the control, subject to the order and direction of the President and Board of Trustees of said Village, of the fire department and all fire apparatus belonging to said Village and whenever any fire apparatus needs repairing said Marshal shall cause the same to be done without delay and shall make report in writing at each regular monthly meeting of the Board of Trustees of said Village as follows:

First: The condition of the hose equipment and fire apparatus belonging to the Village.

Page 17

Second. The names of all persons who have been elected members of said fire department and whether he recommends the confirmation of said election by said Board.

Third: The repairs made by him to any fire apparatus and the cost of such repairs.

Section 62. Command at Fires.) In case of fire, the fire marshal and his assistants in their order, shall rank in the order herein named and the officer highest in rank at the fire shall take command of the fire department and direct the management thereof for the suppression of the fire, in the best manner possible; and when it may b enecessary for the protection of other property and to prevent the spread of the conflagration, the officer in command may cause buildings to be removed, torn down, or destroyed in the best manner possible.

Section 63. Membership - Officers.) The fire department shall consist of not to exceed twenty members, who shall constitute one company. Said company shall be organized and may adopt such by-laws, or rules, for their government as they deem best to accomplish the objects contemplated, provided they are not inconsistent with the ordinances of said Village.

Any male person above the age of eighteen years, a resident of said Village of Manhattan, shall be eligible to become a member of said fire company.

Section 64. General Duties of Members.) It shall be the duty of the officers and members of said fire company to take good care of the fire apparatus and the room wherein the same is kept and to attend all fires as hereinafter provided. The members of the fire department shall, upon the alarm of fire, immediately repair to the place of the fire with the hose and other fire apparatus under their care, and there work and manage the same under the direction of the fire marshal or such other officer as may be in command or in the absence of any officer and his authority, work their fire apparatus in the most efficient manner for the extinguishment of the fire and shall not depart there from without the permission of the officer in command; and at the conclusion of the fire they shall return the fire apparatus to the place where the same is kept and if necessary, shall wash and clean the same. If any member of the department shall, without the consent of the officer in command, leave the fire apparatus or their work at the fire, said members, shall upon conviction be fined not less than three dollars.

Section 65. Obedience to orders.) Any fireman in attendance at a fire who shall neglect or refuse to obey the orders of the officers in command at such fire, shall upon conviction, be fined not less than Five

IET, ILLINOIS, OCTOBER 11, 1944.

Manhattan Farmers Get Fire Protection

A picture of the Manhattan Rural Fire Truck taken at Homecoming. Left to right Arbie Seltzer, George Bovee, Wilbur Francis, Garrett White, Homer White and Harvey Weibel.

A bright, new, swanky red fire truck! As functioning new fire [illegible]

The Daily Journal, Kankakee, Ill., Monday, November 4, 1985 9

Wilton Center station to improve protection

By Patricia Lieb
Journal correspondent

WILTON CENTER — Residents of Wilton Township and other southern parts of the Manhattan Fire Protection District will have better fire protection soon — when the district's second fire station opens near Wilton Center.

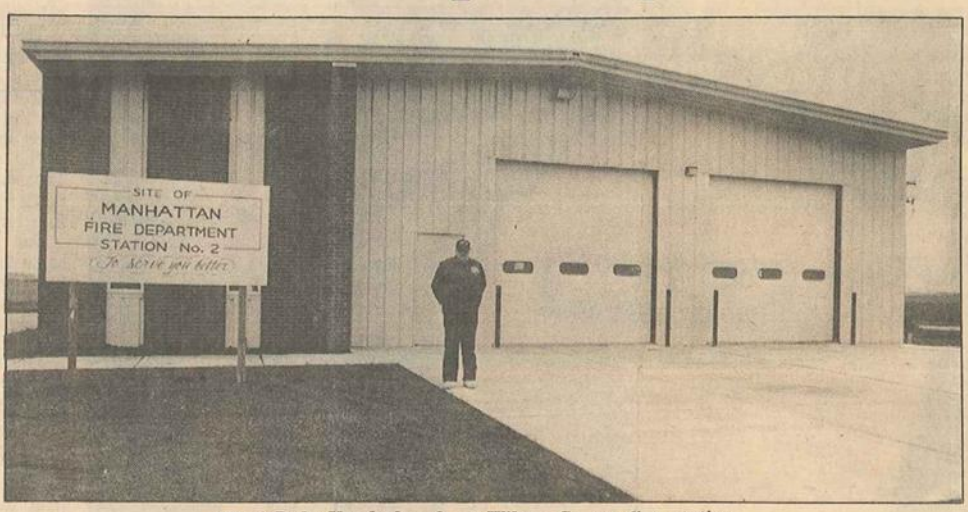
"When they need help, they won't have to wait for someone to come the five miles from Manhattan," said Fire Chief Dale L. Vanderboegh.

The district, which covers 75 square miles, extends from three miles north of Manhattan to the Kankakee County line on the south.

The $150,000 fire house is being built on a 1½ acre site about a mile north of Wilton Center, at U.S. 52 and Doyle Road. The land was donated by Mrs. Leo Nugent of Manteno and her children, who own the surrounding farm land, Vanderboegh said.

"She found out we were looking for property to build a fire station, so she gave the land in memory of her husband," he said.

The station, Manhattan #2, will serve all of Wilton Township, where seven of the district 43 firemen live, as do six paramedics.



Chief Dale Vanderboegh at Wilton Center fire station.

The fire house, which was started last spring, is being built totally by contractors from the area. "When we got the building permit last January, we decided that all the construction would be done by local people, no outsiders. They're paying for it, so they get to spend the money in the area," Vanderbeogh said.

The project will be paid for with money accumlated from taxes for the past ten years. Also, Vanderploegh said, "We passed a tax referendum two years ago which helps. We also, acquired a 15-year mortgage from the bank."

The Wilton Center fire house will be quite independent, with its own water supply. "We have a 30,000 gallon tank underneath that floor over there for water supply for this area. Instead of running all the way back to Manhattan, we can take water from that tank," Vanderboegh said. The tank will be filled by a well that pumps 2,000 gallons of water per hour.

The 75-by-100 foot pole building, with steel exterior, will have two bays and could hold four firetrucks. Two trucks will be moved to it from the Manhattan station. The station also will have the district's first hose tower, which allows hoses to be hanged up to dry.


PEOTONE FIRE DEPT.
EMERGENCY TRUCK
POLICE


PEOTONE
RURAL
FIRE DIST.

Milestones: Manhattan & Peotone Fire Districts

The **Manhattan Fire Protection District (MFPD)** has a rich history of protecting the community and adapting to the evolving needs of fire and emergency services. Below is a **comprehensive timeline** of key milestones incorporating the 2022 merger of the Peotone Fire Protection District.

Early Foundations & Fire Protection Development (1881 – 1929)

- 1881 (Peotone) – The Village of Peotone purchases its first fire hand pumper, with the first organized drill on April 15 under Captain John Fedde.
- 1892 (Manhattan) – Manhattan FD established
- 1895 (Peotone) – A major fire destroyed the south side of Main Street; Peotone installed water mains and hydrants, improving fire suppression.
- 1899 (Manhattan) – Village President Eberhart appoints Henry Wenzel as Chief Fire Marshal, establishing Manhattan's fire service.
- 1900 (Manhattan) – The first 15 civilians are sworn in as Manhattan firefighters.
- 1912 (Peotone) – The Peotone Volunteer Fire Department is officially organized, relocating to a new station near the water tower.
- 1913 (Peotone) – The Great Peotone Fire destroyed multiple downtown businesses.
- 1925 (Manhattan) – Lightning strikes a crude oil tank, causing a fire visible over 50 miles away.

Growth & Modernization (1930 – 1979)

- 1935 (Peotone) – Peotone purchased a 1935 REO Seagrave Pumper, which is still owned today.
- 1939-1942 (Manhattan) – Manhattan purchased its first fire truck and completed its first fire station.
- 1950 (Manhattan) – Wilton Township joins Manhattan FPD, expanding coverage to 72 square miles.
- 1974 (Manhattan) – Station 1 is constructed with eight firefighting rigs, built by firefighters for $75,000.
- 1975 (Peotone) – Peotone launches its first paramedic ambulance, the first in Will County to provide advanced EMS services.
- 1978 (Peotone) – Peotone voters approve merging the Village and Rural Fire Departments, officially forming the Peotone Fire Protection District.

Professionalization & Expansion (1980 – 2009)

- 1983 (Peotone) – Chief Lanson Russell was hired as Peotone's first full-time fire chief.
- 1985 (Peotone) – Peotone implements the 9-1-1 emergency system.
- 1985 (Manhattan) – Station 82 built
- 2006 (Peotone) – Peotone Fire Department celebrates its 125th anniversary.
- 2007 (Manhattan) – New full-time Deputy Chief hired
- 2008 (Peotone) – Bill Schreiber was promoted to full-time fire chief.
- 2010 (Manhattan) – Full-time lieutenants promoted

Modern Fire & EMS Operations (2010 – 2022)

- 2013 (Manhattan) – MFPD is recognized as a Fire-Safe Community in Illinois.
- 2018 (Peotone) – Peotone achieves an ISO Class 4 rating, improving fire insurance for residents.
- 2020 (Manhattan) – MFPD achieves an ISO Class 1 rating, the highest possible rating for fire protection.
- 2021 (Manhattan/Peotone) – The MFPD and PFPD Intergovernmental Agreement (IGA) is amended, strengthening collaboration.
- 2022 (Manhattan) – Voters approve a referendum merging Peotone FPD into Manhattan FPD.

Manhattan Fire Protection District Post-Merger (2023 – Present)

- 2023 (Manhattan) – MFPD fully absorbs Peotone's fire and EMS operations, integrating personnel, stations, and resources.
- 2023 (Manhattan) – Joint training programs expand, and mutual aid agreements are enhanced for regional emergency response.
- 2024 (Manhattan) – Community outreach programs expand, focusing on fire prevention education and CPR training.
- 2024 (Manhattan) – A new firefighter training facility is established to improve emergency response preparedness.
- 2024 (Manhattan) – A digital fire inspection system is implemented, streamlining fire prevention efforts.

With a combined history dating back to 1881, the Manhattan Fire Protection District, now incorporating the Peotone Fire Protection District, has evolved into a modern, professional fire and EMS department. The 2022 merger strengthened its resources, personnel, and training programs, ensuring the highest level of emergency response services for the communities it serves.

"Protecting Lives & Property Since 1899 – United for the Future"

Climate and Geography

Understanding the climate and geography of the Manhattan FPD, Illinois, is essential for emergency response planning, risk assessment, and resource allocation. Climate impacts everything from fire behavior and EMS response efficiency to severe weather preparedness and infrastructure resilience, as well as daily operations.

Weather vs. Climate

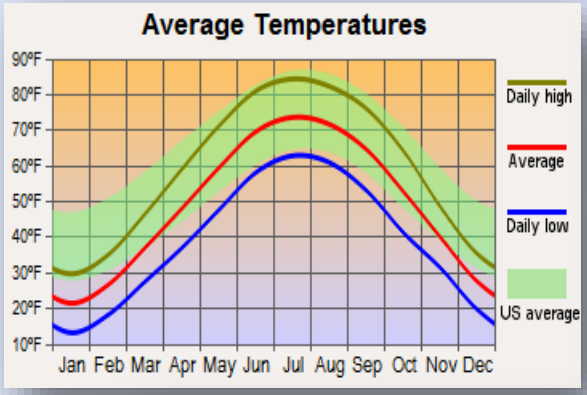
Many people confuse **weather** and **climate**, but they are distinct concepts:

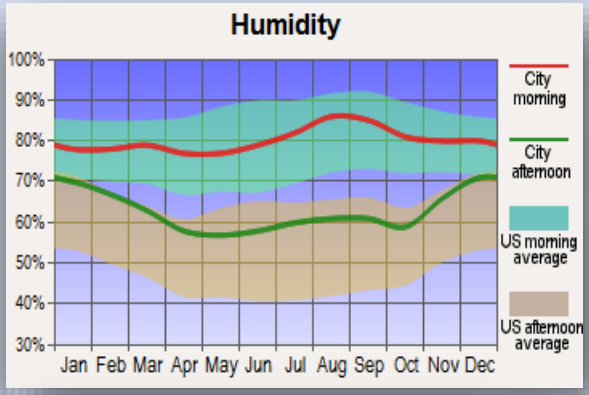
- **Weather** refers to the **short-term** atmospheric conditions at a specific location and time, including temperature, humidity, precipitation, wind speed, and atmospheric pressure. It can change **minute by minute** and has a direct impact on **daily operations**.
- **Climate** refers to the long-term weather patterns that persist over **30 years or more**, defining a region's **average temperature, precipitation, and seasonal variations**.

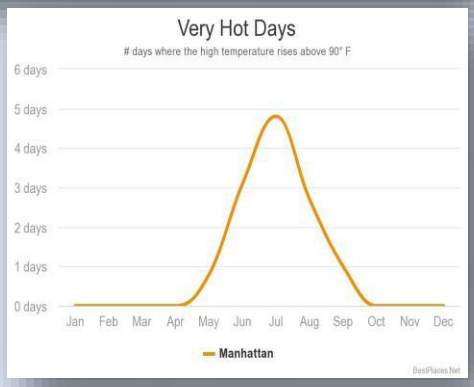
Temperature and Seasons in Manhattan FPD

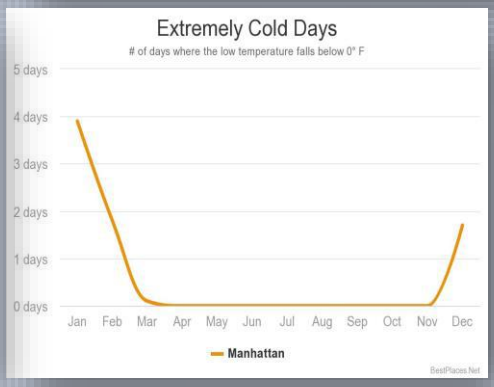
- **Hottest Month: July**, with an average high of **84.0°F**, making it cooler than most places in Illinois.

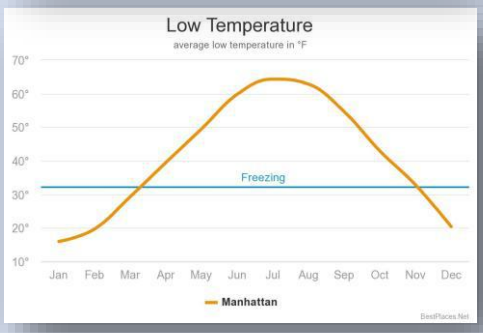
- **The most comfortable months are June, August, and September, when temperatures range between 70°F and 85°F**.
- **Coldest Month: January**, with an average nighttime low of **16.0°F**, typical for Illinois.
- **Extreme Temperatures:**
    - **Days above 90°F: 12.4 per year** (fewer than most places in Illinois).
    - **Days below freezing (32°F): 121.7 per year** (average for Illinois).
    - **Days below 0°F: 7.5 per year** (colder than most places in Illinois).

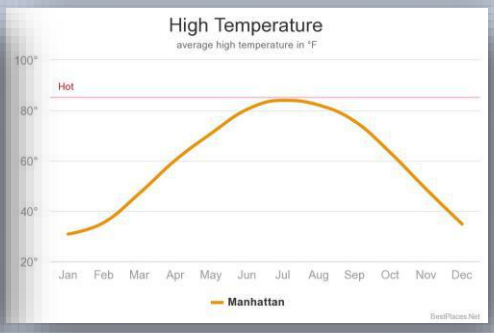






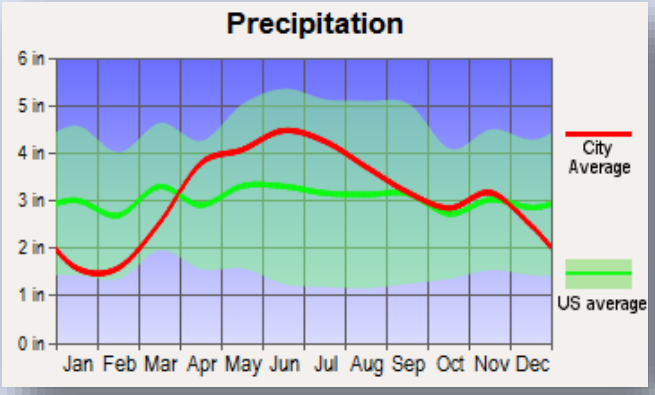


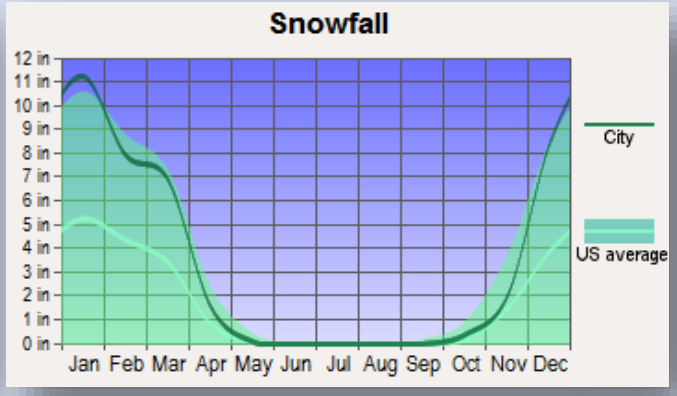


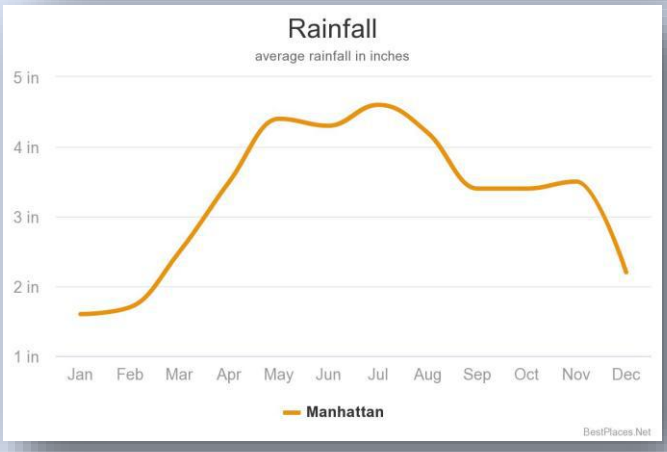


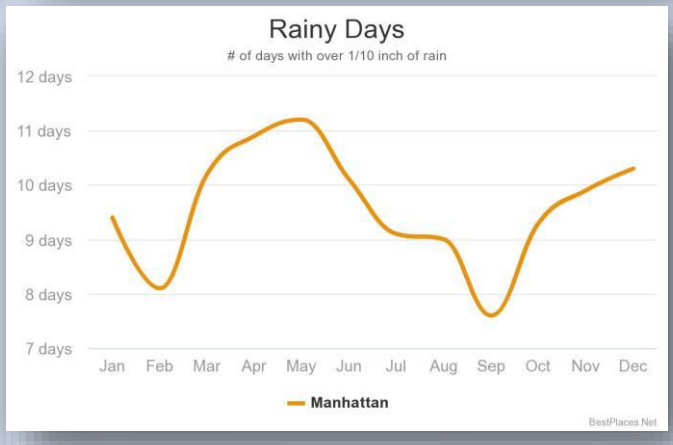
Precipitation and Snowfall

- **Annual Rainfall: 39.2 inches**, similar to other regions in Illinois.
- **Wettest Month: July**, with **4.6 inches of rain**.
- **Driest Month: January**, with **1.6 inches of rain**.
- **Rainiest Season: Autumn**, receiving **33% of yearly precipitation**.
- **Driest Season: Spring**, with **only 14% of yearly precipitation**.
- **Annual Rainy Days: 115.2 days**, making Manhattan rainier than most of Illinois.
    - **Rainiest Month: May**, with **11.2 rainy days**.
    - **Driest Month: September**, with **7.6 rainy days**.
- **Annual Snowfall: 29.0 inches**, making Manhattan **snowier than most Illinois locations**.
    - **Snowiest Month: January**, with **9.0 inches of snow**.
    - **Significant Snowfall: Six months per year**.





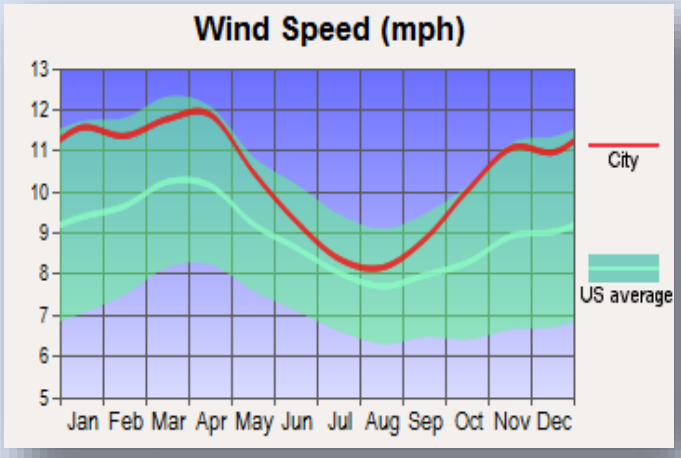


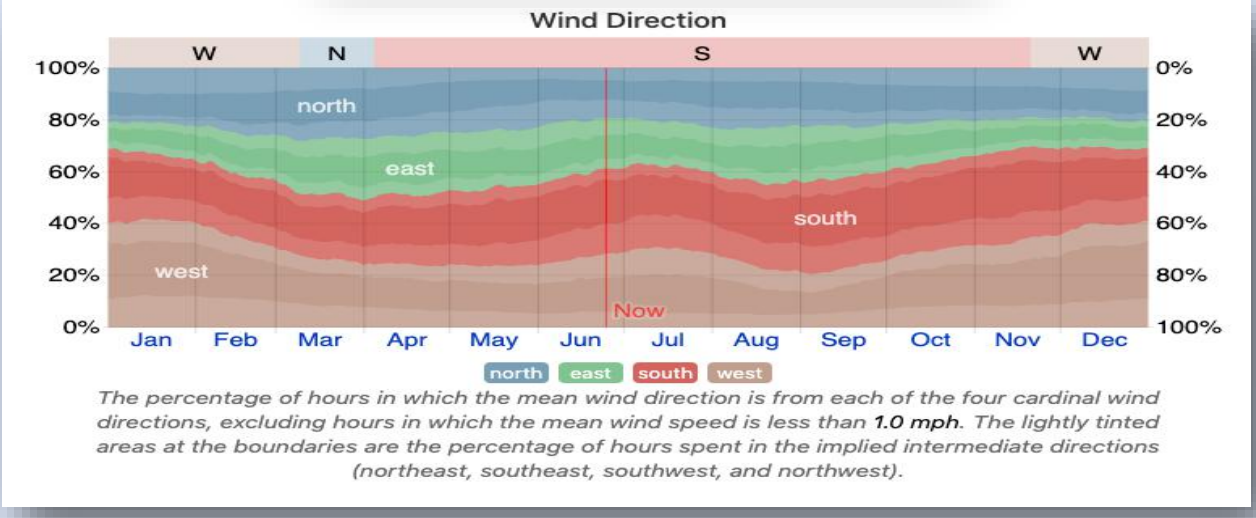


Wind and Airflow Patterns

Wind conditions vary significantly throughout the year, impacting wildfire risk, emergency response efficiency, and overall **weather conditions**.

- **Windiest Period: October 4 – May 27**, with **average wind speeds exceeding 10.0 mph**.
    - **Windiest Day: March 24**, with an average wind speed of **12.5 mph**.
- **Calmest Period: May 27 – October 4**.
    - **Calmest Day: August 3**, with a **7.5 mph average wind speed**.
- **Prevailing Wind Directions:**
    - **North Winds: March 9 – April 4** (peaks at **28%** on March 10).
    - **South Winds: April 4 – November 20** (peaks at **37%** on September 7).
    - **West Winds: November 20 – March 9** (peaks **41%** on January 1).



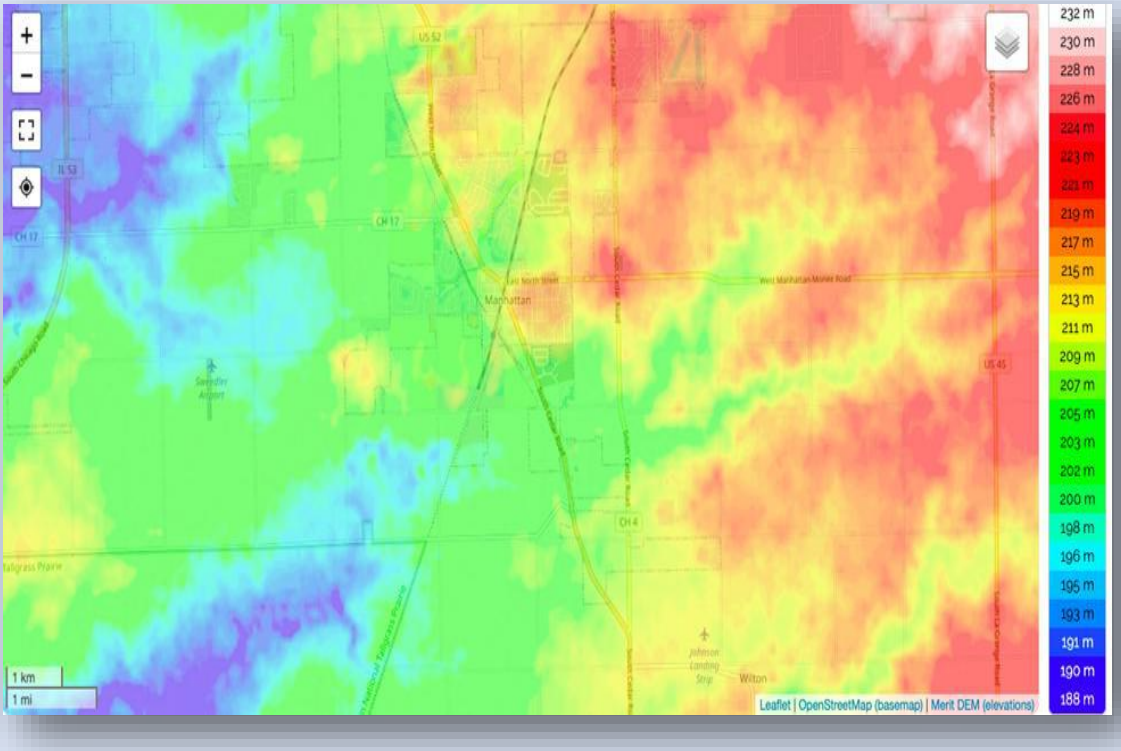


The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 1.0 mph. The lightly tinted areas at the boundaries are the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).

Topography and Geography

The District's **geography is flat**, influencing **flood risks, stormwater management, and emergency response considerations**.

- **Location: Latitude 41.423° N, Longitude -87.986° W**.
- **Elevation: 675 feet above sea level**.
- **Topographic Variations:**
  - **Within 2 miles: Flat terrain**, with a maximum elevation change of **85 feet**.
  - **Within 10 miles: Still essentially flat**, with a **400-foot elevation range**.
  - **Within 50 miles: Modest elevation variations**, up to **692 feet**.
- **Land Cover:**
  - **Within 2 miles: 92% cropland**.
  - **Within 10 miles: 76% cropland, 20% artificial surfaces (urban areas, roads, etc.)**.
  - **Within 50 miles: 62% cropland, 25% artificial surfaces**.



Emergency Response Considerations

1. **Wildfire & Open Field Fires:**
    - **Wind-driven fires** in agricultural areas pose **seasonal threats**, particularly in **spring and autumn**.
2. **Flooding Risks:**
    - While Manhattan is relatively **flat**, **rainfall intensity, stormwater runoff, and frozen ground conditions** can contribute to localized flooding in certain areas.
3. **Winter Storms & Extreme Cold:**
    - Snowfall and **extended freezing conditions** impact **road safety, EMS response times, and structural integrity risks** (e.g., ice buildup, power outages).
4. **Tornado & Severe Storm Threats:**
    - Located in **Tornado Alley**, Manhattan is **vulnerable to severe thunderstorms, high winds, and tornadoes**, requiring advanced preparedness.

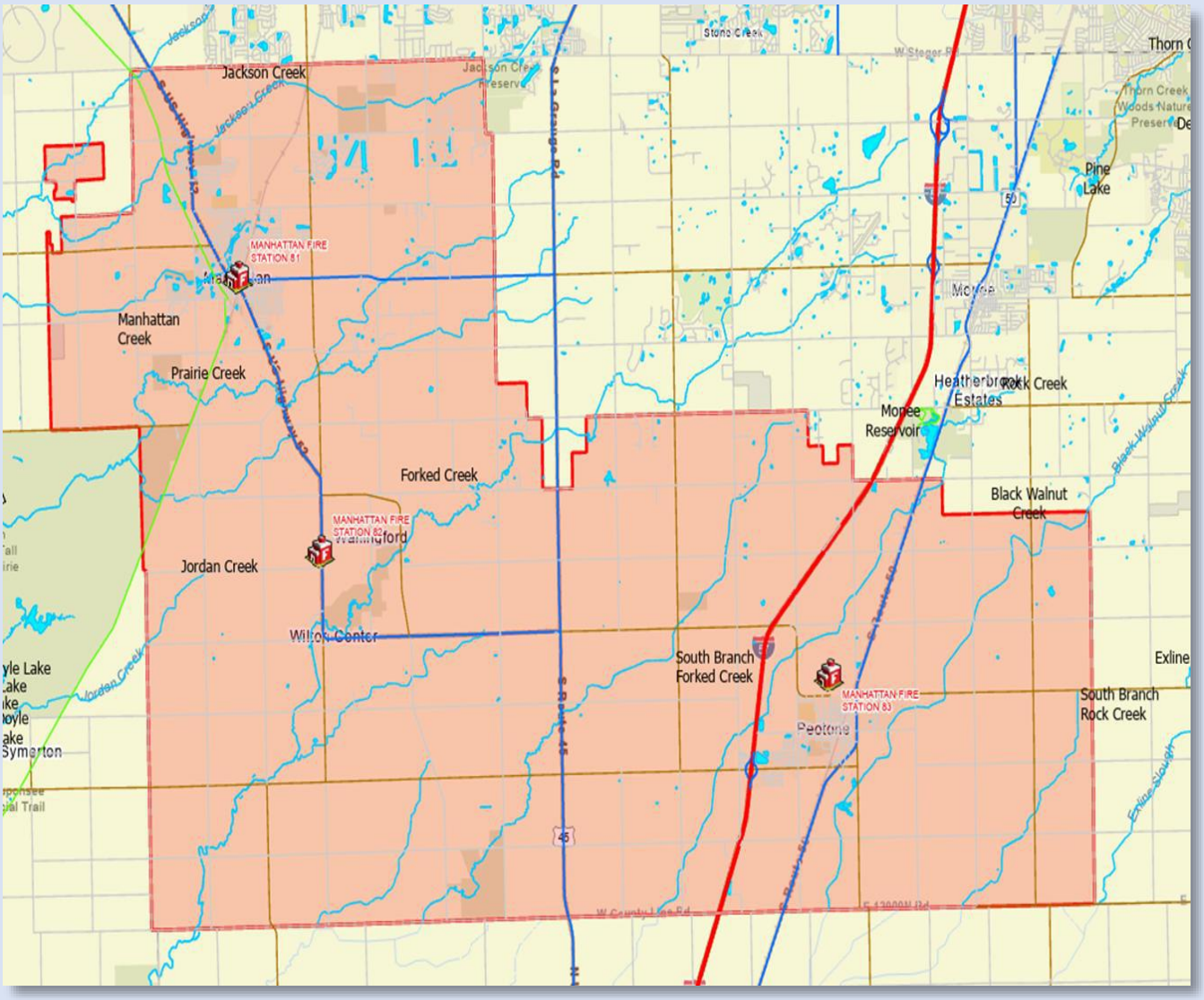
Conclusion

The **climate and geography of the Manhattan FPD** play a crucial role in emergency preparedness, fire behavior modeling, and resource deployment. By understanding **seasonal trends, precipitation patterns, and wind variations**, MFPD can **optimize response planning, mitigate risks, and enhance community resilience**.

Waterways

The Manhattan Fire Protection District (MFPD), particularly after its merger with the Peotone Fire Protection District, now encompasses a broader area of Will County, Illinois, including several key waterways that can impact fire rescue operations, risk assessments, and pre-incident planning.

Primary Waterways in MFPD:



1. **Jackson Creek**

- Runs through the heart of Manhattan, generally flowing west to east.
- Known for minor seasonal flooding, particularly near the downtown and farm-adjacent areas.
- Important for local hydrology, but not navigable—more of a risk for brush fires and flood access.

2. **Forked Creek**

- A tributary of the Kankakee River flows through the district's southeastern part, especially in the former Peotone FPD area.
- Impacts low-lying farmland and rural roads during heavy rain events.

3. **Rock Creek**

- It also flows toward the Kankakee River, cutting through areas near the MFPD's southern boundary.
- Often surrounded by forest preserves or conservation land, this area is particularly relevant for addressing wildland-urban interface risks.

4. **Kankakee River (Peripheral Influence)**

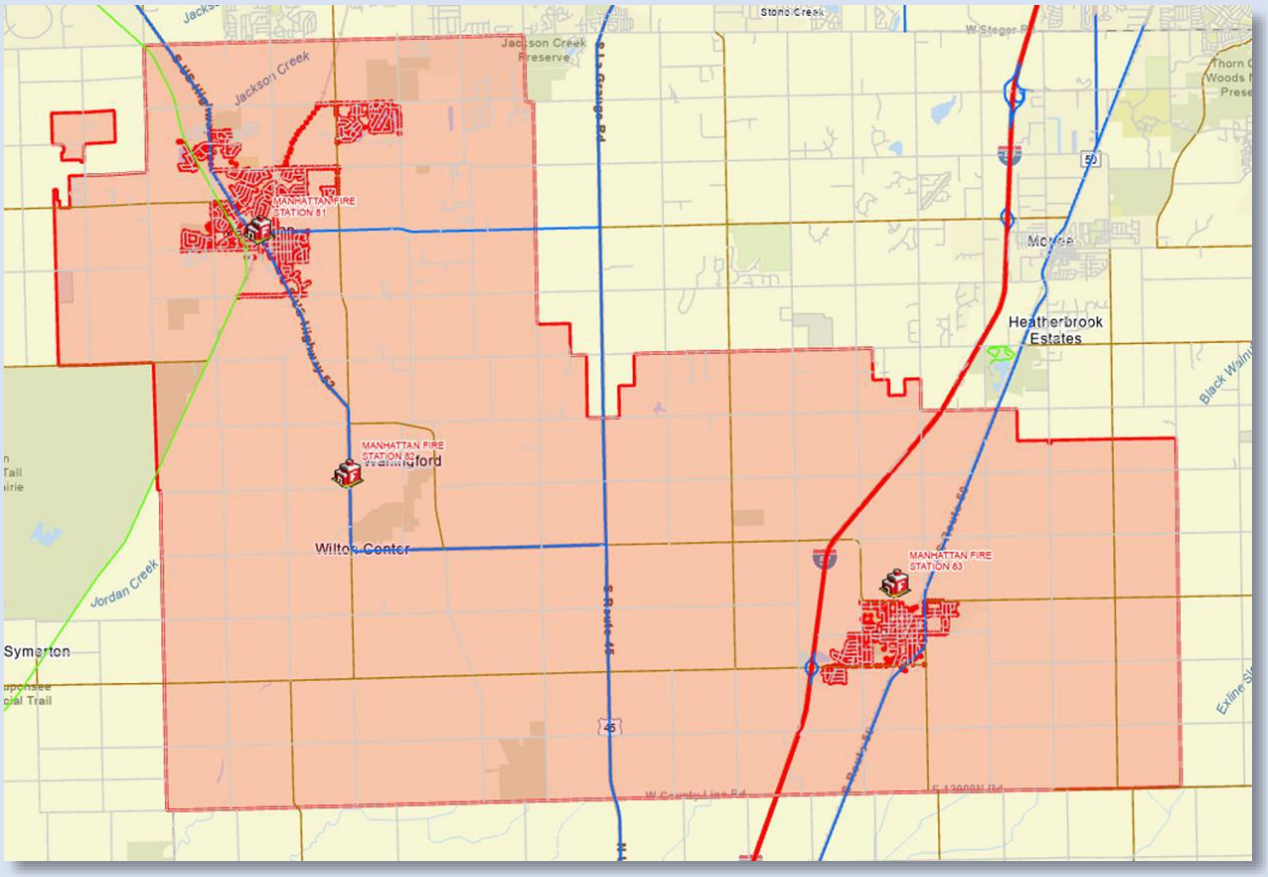
- While not directly within MFPD, it's very close to the southern edges and may play a role in mutual aid, flooding, and environmental response coordination.

Operational Implications:

- **Flooding Risk**: The area is generally flat and rural, so flash flooding around Jackson and Forked Creeks can impact road access and response times.
- **Water Supply**: Most of these creeks are not viable for drafting or firefighting water supply—hydrant infrastructure and tanker support remain essential.
- **Rescue/Recovery**: Occasional need for water rescue or recovery incidents, particularly in rural or recreational zones near Forked Creek and Rock Creek.
- **Environmental Hazards**: Risk of agricultural runoff or hazardous material runoff into waterways during spills or vehicle crashes.
- **Retention Ponds**: Every subdivision that has these has the potential for water or ice rescue.

Water Supply

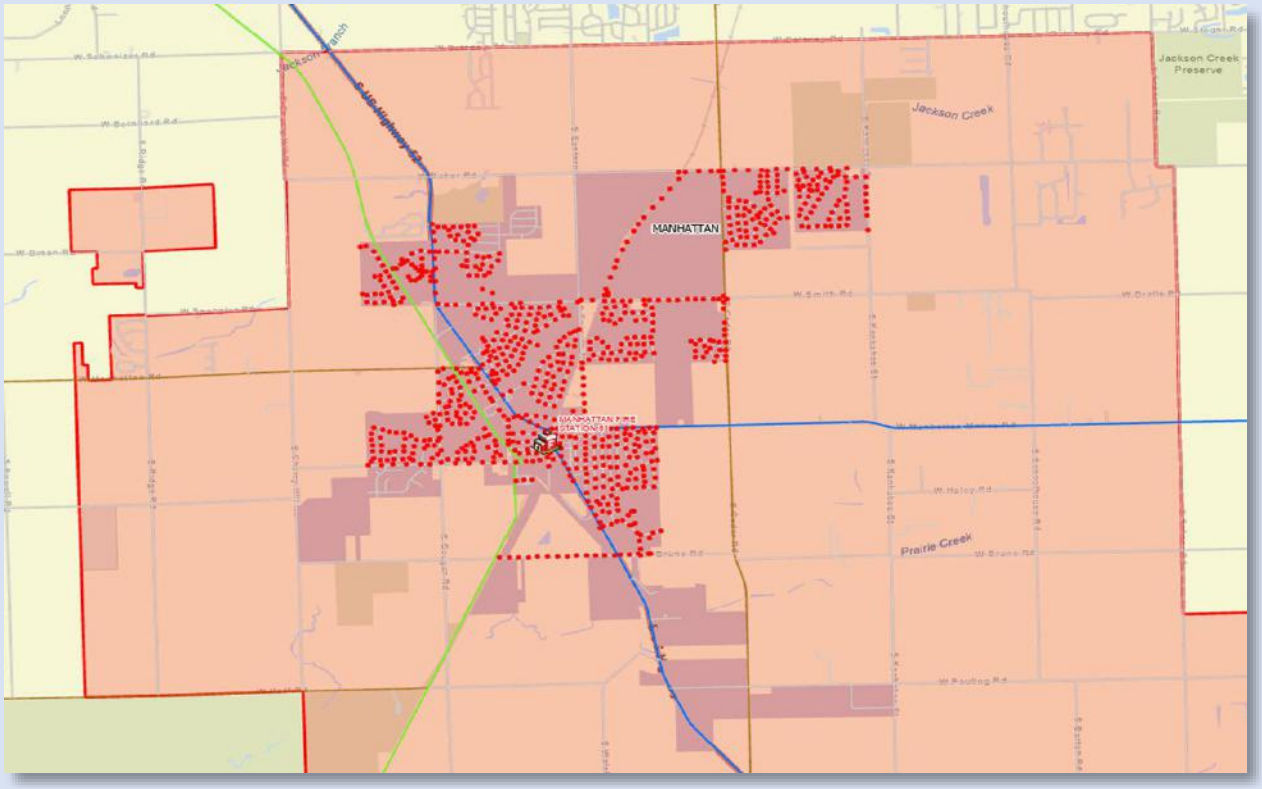
The Manhattan Fire Protection District (MFPD), now expanded to include the recently merged Peotone Fire Protection District, covers a diverse mix of municipal, suburban, rural, and agricultural areas. The District's ability to sustain firefighting operations relies on a hybrid water supply model, incorporating pressurized hydrant systems, rural tender-based operations, and strong mutual aid networks.



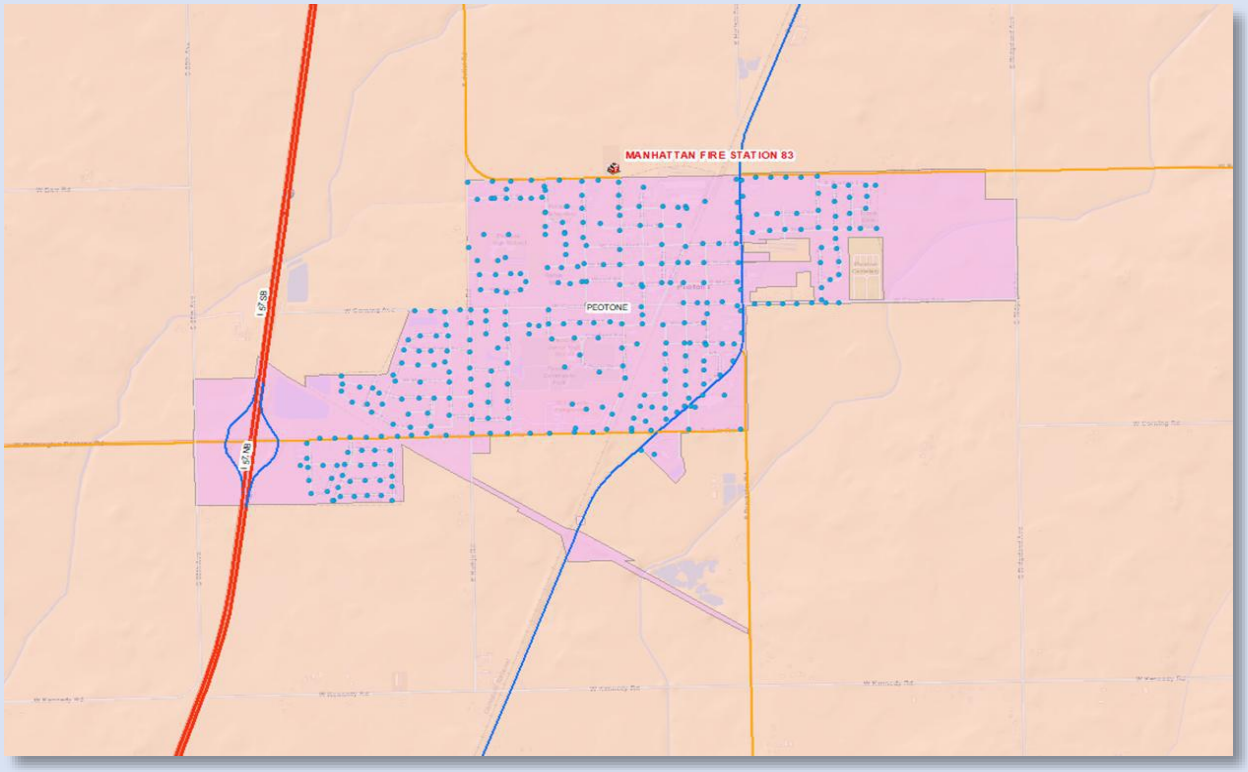
1,145 Total Hydrants

- **744 MANHATTAN**
- **401 PEOTONE**

Village of Manhattan (744 Hydrants)



Village of Peotone (401 Hydrants)



Municipal Water Systems

Village of Manhattan

- Served by a **pressurized municipal system** managed by the Village of Manhattan Public Works.
- Hydrant coverage is consistent with NFPA and ISO guidelines, with **hydrants spaced at intervals of ≤500 fee**t in residential areas and ≤300 feet in commercial zones.
- Recent hydrant flow testing (2023) indicates the following:
    - Residential areas: **1,200–1,500 GPM**
    - Downtown core and commercial zones: **2,000–2,400 GPM**
- The system includes:
    - **Two elevated storage tanks**
    - **One ground-level reservoir**
    - Adequate system redundancy with backup pumps and emergency power

Village of Peotone

- The former Peotone FPD coverage area includes the **Village of Peotone's municipal water system (Aqua Illinois is the provider)**.
- Hydrant flow testing results (2022) show:
    - Residential areas: **950–1,400 GPM**
    - Industrial corridor near Route 50: **1,800–2,200 GPM**
- Managed by Aqua Illinois, this system integrates with MFPD pre-incident planning and flow mapping.

Rural and Non-Hydranted Areas

- Large sections of southern, western, and formerly Peotone-based areas remain **non-hydranted**.
- MFPD deploys a **rural water supply strategy** that includes:
    - **Two water tenders** (including legacy Peotone apparatus)
    - **Portable folding tanks**
    - **Static fill sites** identified in the CRA, including farm ponds, dry hydrants, and large cisterns
- The district maintains pre-incident rural water maps, which are updated quarterly to include access roads, fill site GPS coordinates, and estimated shuttle times.

Mutual Aid and Water Supply Augmentation

- MFPD is an active member of **MABAS Division 19**, with immediate access to regional water tenders, engines, and support personnel.
- Joint water shuttle drills and full-scale tanker task force training occur **annually** with MABAS partners, including:
    - Beecher FPD
    - East Joliet FPD
    - Frankfort FPD
    - Monee FPD
    - Manteno FPD
    - New Lenox FPD
    - Wilmington FPD
- MFPD has **automatic aid agreements** that provide access to neighboring hydrant systems and supplemental tenders during working incidents.
- Standardized Rural Water Procedures

ISO Public Protection Classification

- The most recent ISO review (pre-merger) rated MFPD as a **Class 1**.
- Peotone FPD held a **Class 4** before the merger.
- Efforts are underway to consolidate records and pursue a unified ISO review post-merger, aiming to improve the town's District-wide rating to Class 1 by 2027.
- ISO scoring benefits from the District's hydrant testing program, GIS integration, water supply training, and documented rural water shuttle capability (per ISO's Fire Suppression Rating Schedule).

Challenges and Strategic Goals

- Areas under development at the **District's western and southern borders**, including exurban subdivisions, often lack established water infrastructure.
- MFPD is working with **county and village planners** to:
    - Extend water mains
    - Add dry hydrants and fill sites in new developments
- Strategic Water Supply Projects (2025–2027):
    - Hydrant addition along the Rt. 52 corridor
    - GIS-linked water source dashboard in the dispatch CAD

Conclusion

The Manhattan Fire Protection District has developed a multi-modal water supply strategy to meet the needs of both dense, hydranted zones and sprawling, rural regions. The merger with Peotone FPD has increased capacity assets, but it also presents some geographic challenges. Still, it also presents new opportunities for **improving regional water delivery efficiency, enhancing ISO performance, and making smarter long-term infrastructure investments**.

Water is the lifeblood of fire suppression. MFPD is committed to ensuring it flows from a hydrant, pond, or rolling tender with lights blazing.

1,145 Hydrants

ISO SCORING – WATER SUPPLY

WATER SUPPLY		MANHATTAN	PEOTONE
616 Supply System	30	26.58	21.59
		88.60%	71.97%
621 Hydrants	3	3	2.92
		100.00%	97.33%
630 Inspection and Flow Testing	7	2.4	4.8
		34.29%	68.57%
590 CREDIT for WATER SUPPLY	**40**	**31.98**	**29.31**
		79.95%	73.28%

Demographics & Population

Understanding the demographics within the **Manhattan Fire Protection District (MFPD)**, which now encompasses the Village of Manhattan, Peotone, and surrounding townships, is essential for effective emergency services planning and community risk assessment. Below is an overview of the demographic characteristics within the MFPD boundaries. This data is based entirely on 2023-- 2027 ACS 5-year estimates for the Manhattan and Peotone school district areas (which align closely with the fire district) and their combined profile. As of 2024, the Manhattan Fire Protection District serves an estimated **26,311* residents**, reflecting population counts within the Manhattan and Peotone school districts **plus additional households** in unincorporated areas of Green Garden, Jackson, Wilton, and Will Townships.

This estimate is **13% higher** than the combined census-based school district total (23,240), which omits several populated fringe zones included in MFPD's official service boundaries. The 26,311 figure provides a complete and more realistic basis for deployment modeling, risk analysis, and capital planning within the CRA/SOC.

https://censusreporter.org/profiles/95000US1724270-manhattan-school-district-114-il/

https://censusreporter.org/profiles/97000US1731290-peotone-community-unit-school-district-207u-il/

Demographic Profile

Category	Manhattan	Peotone	Combined
Population	12,100	11,158	**23,335-26,311***
Median Age	32.5	46.8	**39.7**
65 years or older	8%	19%	**15.25%**
Under 5 years old	995	740	**1,235**
Per Capita Income	$51,094	$50,601	**$50,847**
Median Household Income	$134,125	$106,357	**$111,442**
Housing Units	4,160	4,242	**8,688**
Owner Occupied	90%	82%	**88.1%**
Single Unit Occupancy Type	93%	87%	**90%**
Multi-Family Occupancy Type	6%	9%	**8%**
Vacant Units	2%	3%	**3%**
Residents Living in Poverty (2019)	3.4%	5.3%	**4%**
Median Home/Condo Value (2019)	$333,800	$188,100	**$260,950**
Male Population	51%	48%	**50%**
Female Population	49%	52%	**51%**

Married Couples	63%	74%	**69%**
Without Healthcare Coverage	3.2%	4.6%	**3.95%**

Race & Ethnicity Distribution

Race/Ethnicity	Manhattan	Peotone	Combined
White	80.8%	93.9%	87%
Hispanic	9%	3.9%	6%
African American	3.2%	0%	2%
Asian	0.12%	1.2%	1%
Two or More Races	11.36%	1.75%	7%

Educational Attainment (For population 25 years and over)

Education Level	Manhattan	Peotone	Combined
High School or Higher	97.8%	92.8%	95%
Bachelor's Degree or Higher	33.7%	29.2%	31%
Graduate/Professional Degree	8%	9%	9%

Employment & Household Statistics

Category	Manhattan	Peotone	Combined
Unemployment Rate	4.7%		5%
Poverty Rate	3.3%	4.2%	4%
Median Home Value	$333,800	$357,000	345400
Median Household Income	$128,375	$106,357	117366
Average Household Size	3	2.6	2.8
Mobility – moved since the previous year	11.8%	6%	12%

2022 ACS 5-Year Estimates (Published 2023)

Emergency Services Considerations Based on Demographics

✓ **Aging Population in Peotone (Median Age: 46.8, 19% age 65+)**
➡️ Elevated EMS demand for senior care, chronic conditions, fall-related injuries, and increased frequency of medical emergencies.

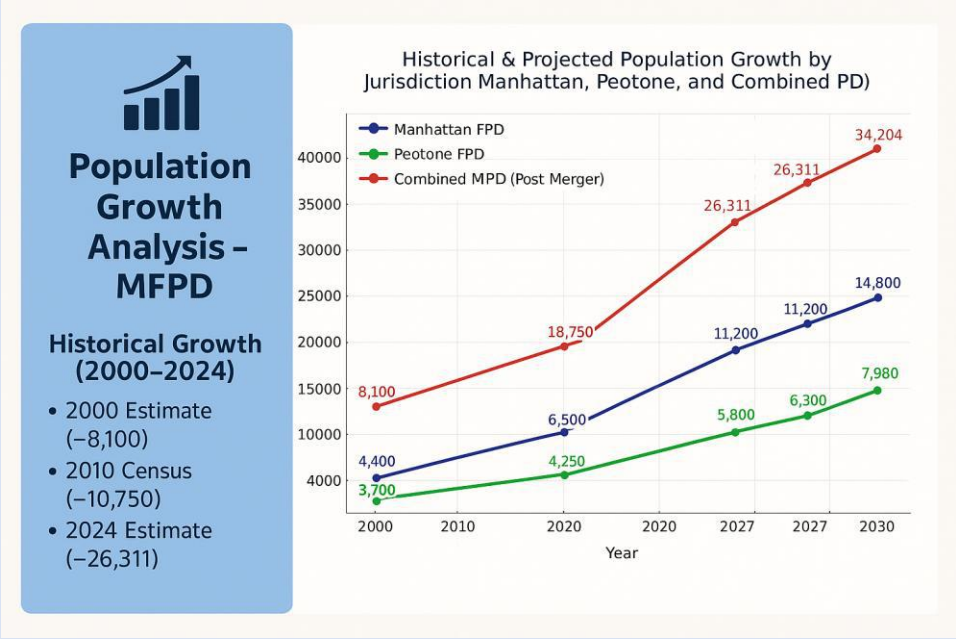
✓ **Higher Income & Home Values (Median HH Income: $134,125 in Manhattan; Median Home Value: $333,800)**
➡️ Suggests larger, higher-value residential structures, impacting fire load, suppression tactics, pre-planning needs, and water supply requirements.

✓ **Higher Educational Attainment in Manhattan** *(assumed from income and age profile)*
➡️ Supports effective delivery of fire safety education, emergency preparedness programs, and CPR/First Aid training with better retention and engagement.

✓ **Younger Families in Manhattan (Median Age: 32.5; 995 under age 5)**
➡️ Increases EMS demand related to pediatric care, maternity-related calls, and trauma incidents involving young children.

✓ **Race & Ethnicity Diversity Across the Combined District**
➡️ Requires culturally competent outreach, translation of life safety messaging, and inclusive public education to address language and trust barriers.

Population Growth



📈 **Population Growth Analysis – MFPD**

The Manhattan Fire Protection District has experienced consistent and substantial population growth over the past two decades, with projections indicating continued expansion through 2030. This growth directly impacts emergency service demand, deployment reliability, and long-term planning for capital infrastructure and workforce needs.

🔢 Historical Growth (2000–2024)

Using U.S. Census data aligned with Manhattan SD 114 and Peotone CUSD 207U — and applying a 10% margin to account for surrounding unincorporated areas — the estimated population trend for the combined MFPD service area is as follows:

Year	Estimated Population
2000	~8,100
2010	~10,750
2020	~16,400
2024	~25,500 *(range: 23,240–26,311)*

215% population increase

2000-2024

This represents a **215% increase** in total population from 2000 to 2024, driven by:

- 🏗️ **Residential expansion** near I-57, Cedar Road, and Wilton Center
- 🌳 **New housing growth** in unincorporated Peotone, Green Garden, and Wilton Townships
- 🚆 **Improved commuter access** via Metra's Manhattan Station, attracting younger families

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📈 Future Projections

2027 Projection: ~28,942

2030 Projection: ~34,204

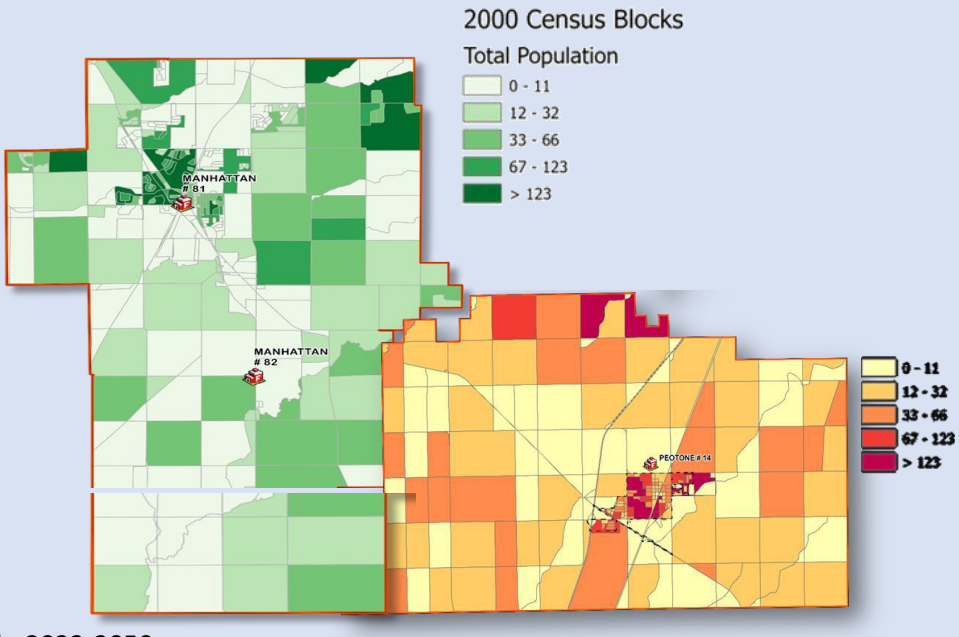
These growth forecasts align with **CMAP** and Will County's **"Our Way Forward 2050"** regional planning framework, which designates **Manhattan, Peotone, and Beecher** as priority corridors for residential development and economic expansion across southern Will County.

🚒 Implications for Fire & EMS Services

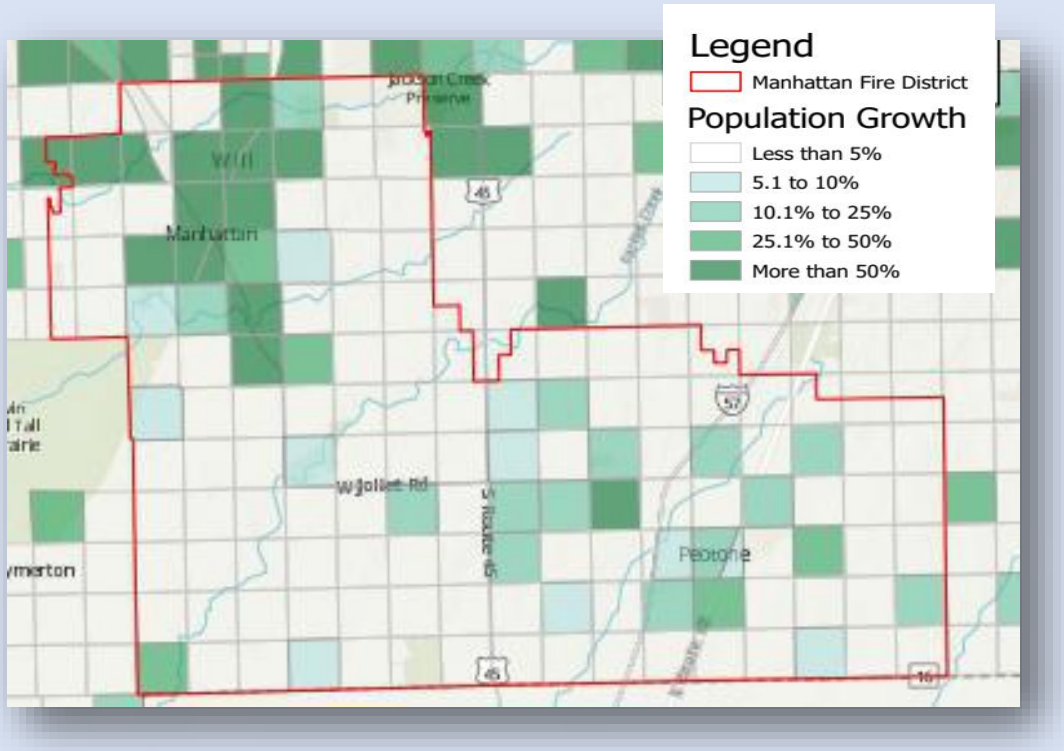
- **Increased Call Volume:** Population growth—especially among aging adults and families with children—will elevate EMS and service demands.
- **Pressure on Deployment Models:** Expansion across mixed-density zones requires adaptive coverage and regular evaluation of turnout and travel time performance.
- **Demand for Infrastructure & Staffing**: Sustained growth will require forward-looking capital investment in fire station locations, apparatus availability, and operational staffing.
- **Planning Zone Evolution:** Growth trends may require reconfiguration of **planning zones, risk classifications**, and **ERF** deployment targets to maintain reliability and resiliency.

Population Density / Shift

2020



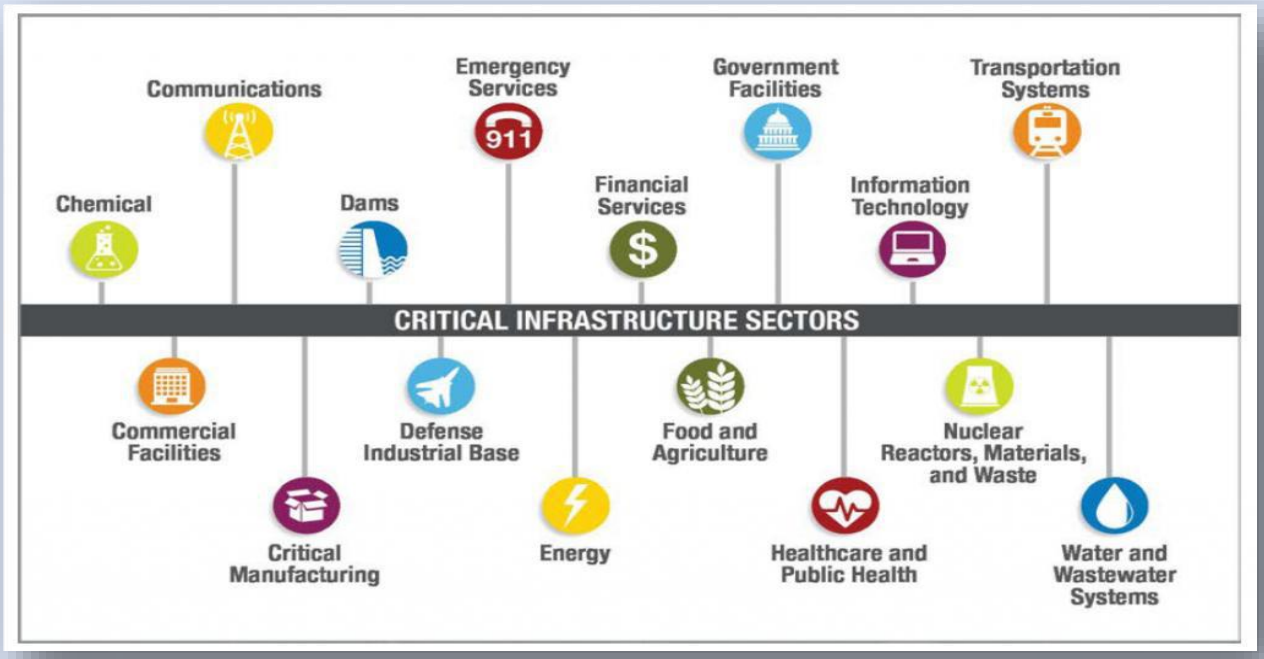
Projected Growth: 2023-2050



Critical Infrastructure

Adapted from the U.S. Department of Homeland Security – Presidential Policy Directive 21 (PPD-21), Updated 2024

Critical infrastructure refers to the foundational assets, systems, and networks so essential to society that their disruption or destruction would have a cascading impact on national security, economic stability, public health, and safety. Presidential Policy Directive 21 (PPD-21), Critical Infrastructure Security and Resilience, establishes the framework for identifying and protecting these key sectors, emphasizing the importance of security, functionality, and resilience.



The 16 Critical Infrastructure Sectors:

1. **Chemical** – Encompasses production, storage, and transport of industrial and consumer-grade chemicals.
2. **Commercial Facilities** – Includes public-facing venues such as shopping centers, sports arenas, entertainment venues, and wedding venues.
3. **Communications** – Covers satellite, wireless, and wireline networks essential for government, public safety, and private sector operations.
4. **Critical Manufacturing** – Involves key production sectors, including metals, machinery, electronics, and transportation equipment.
5. **Dams** – Includes levees, dikes, navigation locks, and water control structures.

6. **Defense Industrial Base** – The global supply chain supporting U.S. military technology and operations.
7. **Emergency Services** – First responders and agencies responsible for public safety and disaster response.
8. **Energy** – Power generation and distribution, including electricity, oil, and natural gas.
9. **Financial Services** – Banking, insurance, and investment systems that support liquidity and economic function.
10. **Food and Agriculture** – From farm to fork, this sector ensures the continuity of the food supply chain.
11. **Government Facilities** – Federal to local facilities, including courthouses, laboratories, and military sites.
12. **Healthcare and Public Health** – Clinical care, public health systems, laboratories, and health-related research.
13. **Information Technology** – Hardware, software, and IT services are crucial to nearly every other sector.
14. **Nuclear Reactors, Materials, and Waste** – Nuclear energy facilities, material storage, and waste management.
15. **Transportation Systems** – Aviation, rail, maritime, mass transit, highways, pipelines, and postal services.
16. **Water and Wastewater Systems** – Essential for drinking water distribution, sanitation, and fire protection.

Sector	Presence
Chemical	◍ Present in part
Commercial Facilities	◍ Present in part
Communications	✗ Not Present
Critical Manufacturing	✗ Not Present
Dams	✗ Not Present
Defense Industrial Base	✗ Not Present
Emergency Services	☑ Present
Energy	☑ Present
Financial Services	☑ Present
Food and Agriculture	◍ Present in part
Government Facilities	☑ Present
Healthcare & Public Health	☑ Present
Information Technology	◍ Present in part
Nuclear Reactors	✗ Not Present
Transportation Systems	☑ Present
Water and Wastewater Systems	☑ Present

Relevance to Emergency Response Planning

The District protects 13 of these critical infrastructure sectors. Understanding and integrating these critical sectors into the Community Risk Assessment ensures comprehensive preparedness. Each sector plays a role in sustaining community function, and its failure could amplify the impact of any major incident. Emergency planning must anticipate threats to these assets and outline mitigation, response, and recovery strategies to ensure adequate protection.

Focus on the Emergency Services Sector (ESS)

The Emergency Services Sector represents the frontline of community resilience. It includes millions of trained professionals, volunteers, and the cyber and physical systems they rely on. ESS encompasses:

- Local police and fire departments
- County sheriffs' offices
- EMS agencies (public and private)
- Public works departments
- Industrial and private-sector emergency response teams
- Federal and military response agencies

These diverse components must coordinate across jurisdictional and organizational lines to ensure a rapid and effective response to incidents affecting other critical infrastructures.

High-Risk Facilities and Target Hazards

The following are considered high-risk or strategically significant facilities within the Manhattan Fire Protection District (including newly merged Peotone areas). These sites are prioritized in pre-incident planning, response training, and mitigation strategies.

Energy, Utilities & Infrastructure

- BP Pipeline
- Enbridge Pipeline
- Buckeye Tank Farm
- ComEd “Wilton Center” Substation
- Earthrise Generating Facility
- Manhattan Public Works Sewer Plant
    - *Marion & Eberhart*
- Manhattan Water Treatment Facilities
    - *W. North St. (at water tower)*
    - *Smith Rd. & Eastern (at water tower)*
- Mercaptan Injection Sites
    - *Bruns & Gougar*
    - *White Feather Ln. & Arrowhead (access east of Jr. High on Smith)*
- Large Solar Electric Grid Storage
    - *Earthrise*

Transportation

- Metra Train Maintenance Facility
- Metra Train Station

Manufacturing

- Aeropress Corporation
- EZ-GRO Plant (marijuana)
- Grain Elevators

Residential & Healthcare Facilities

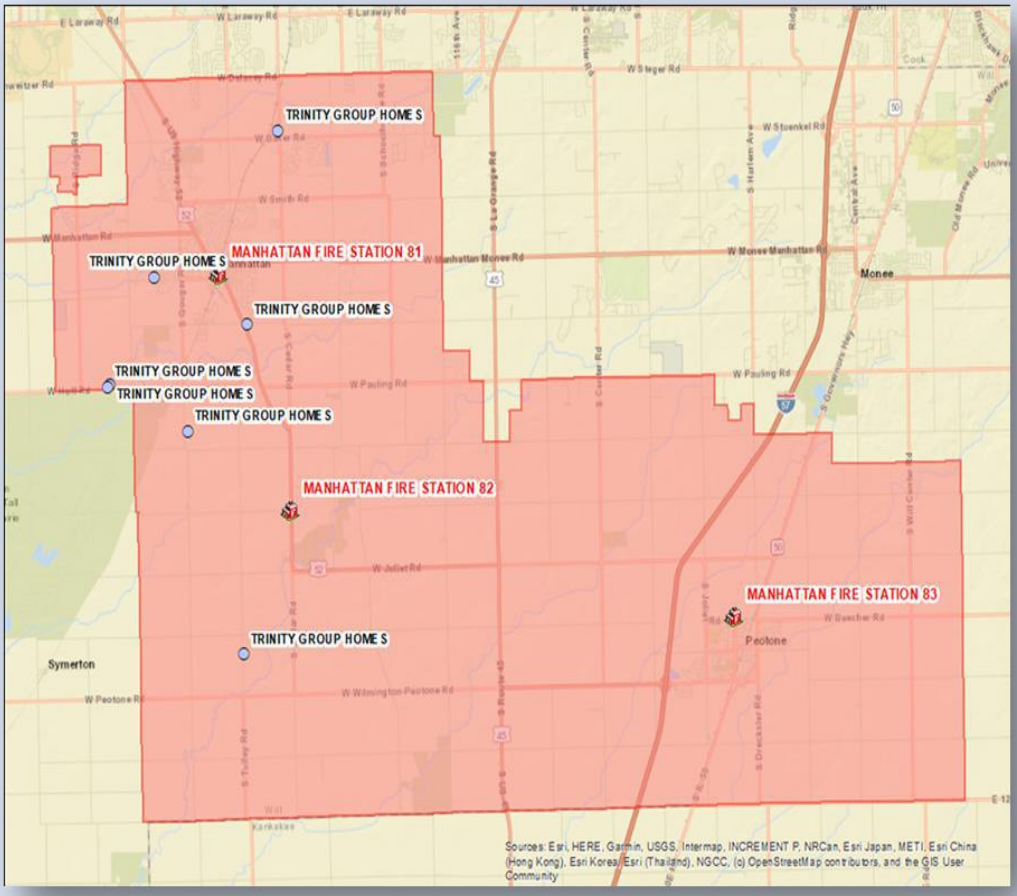
Group Housing

A group home is a residential facility where multiple unrelated individuals live together under the care or supervision of staff, often in a single-family home or small multi-family structure. These facilities typically serve vulnerable populations, including people with disabilities, mental health needs, developmental challenges, or those in transitional housing (e.g., youth, recovering addicts, or formerly incarcerated individuals).

Group homes may be licensed or unlicensed, depending on the jurisdiction. They can house anywhere from three to fifteen or more residents, with varying levels of medical oversight, staffing, and mobility support.

Trinity Group Housing Facilities:

- 30545 S. Walsh Rd.
- 27655 S. Walsh Rd. (*Strides Riding Stables*)
- 14949 W. Bruns Rd.
- 23816 S. Cedar Rd.
- 24409 S. Cedar Rd.
- 16404 W. Sweedler Rd.
- 17454 W. Hoff Rd. (*Day Facility*)
- 17128 W. Hoff Rd.
- 505 W. North St. (*Cornerstone Multi-Family*)



Issues and Considerations for SOC Planning

1. Life Safety Risk

- Group homes often house high-risk occupants: non-ambulatory, cognitively impaired, or behaviorally unpredictable.

- Egress during an emergency can be delayed or complicated, especially at night or when staff-to-resident ratios are low.

2. Occupancy Classification & Building Codes

- Depending on the number of residents and level of care, group homes may fall under R-2, R-3, or I (Institutional) classifications, which impact fire protection systems, building code compliance, and inspection frequency.
- Some are improperly classified as single-family dwellings, creating gaps in fire protection features like sprinklers, alarms, and fire doors.

3. Staffing Patterns

- Many operate with limited overnight staff, which reduces their ability to self-rescue residents during fire or EMS incidents.
- Staff may not be trained in emergency evacuation procedures or fire extinguisher use.

4. EMS Demand

- Residents frequently require routine and emergent medical services, often with high EMS call volume per address.
- Certain group homes may become frequent utilizers of the EMS system, requiring case management or alternative response models.

5. Inspection & Regulatory Challenges

- Licensing oversight may fall under state, county, or private agencies, with limited fire service involvement.
- Unlicensed or poorly managed homes can present significant unknown risks to responders.

6. Dispatch and CAD Labeling

- These properties are often not clearly labeled in CAD systems as group homes, delaying situational awareness for responders.
- Recommendations often include tagging high-risk group homes in the dispatch system with hazard notes or occupancy alerts.

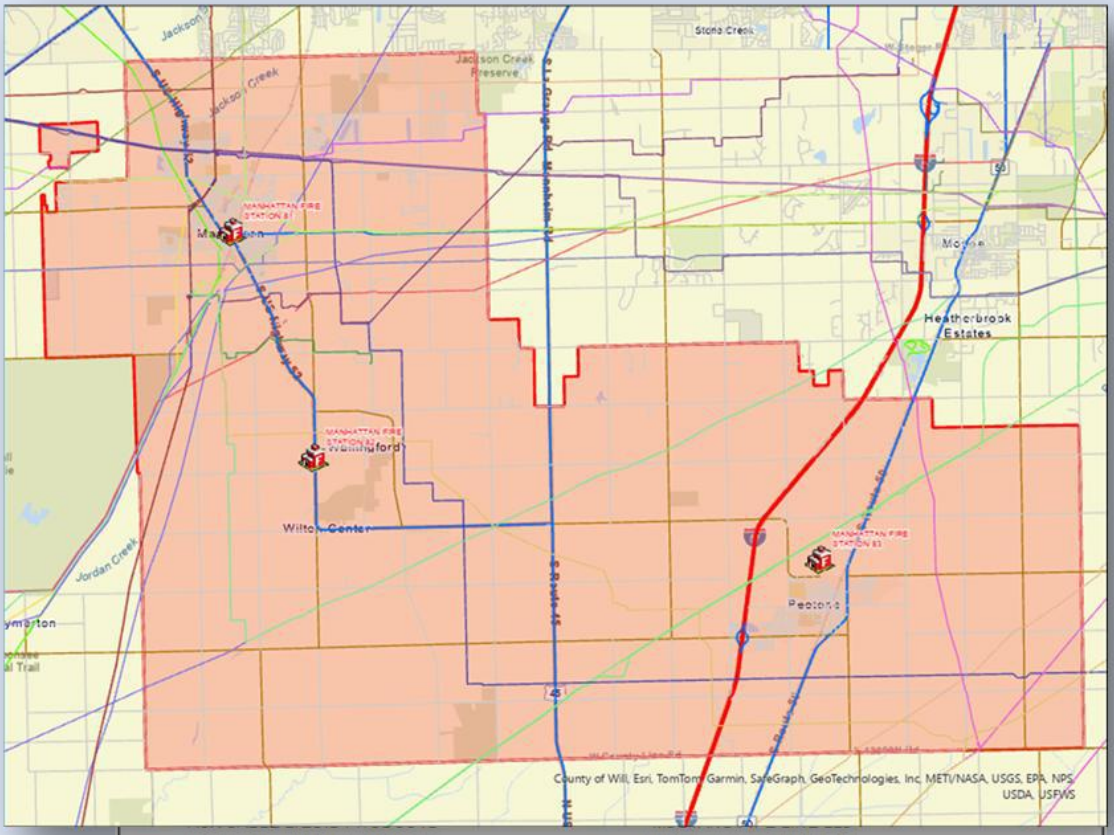
7. Risk Classification for SOC

- Group homes typically fall under “Residential – Special Use” or “High Risk Residential” in risk matrices.
- Consider adding a specific category in the risk assessment model for “Group Living Facilities” with risk scoring tied to:
- Mobility status of residents
- Staff availability
- Building fire protection features
- Historical call volume

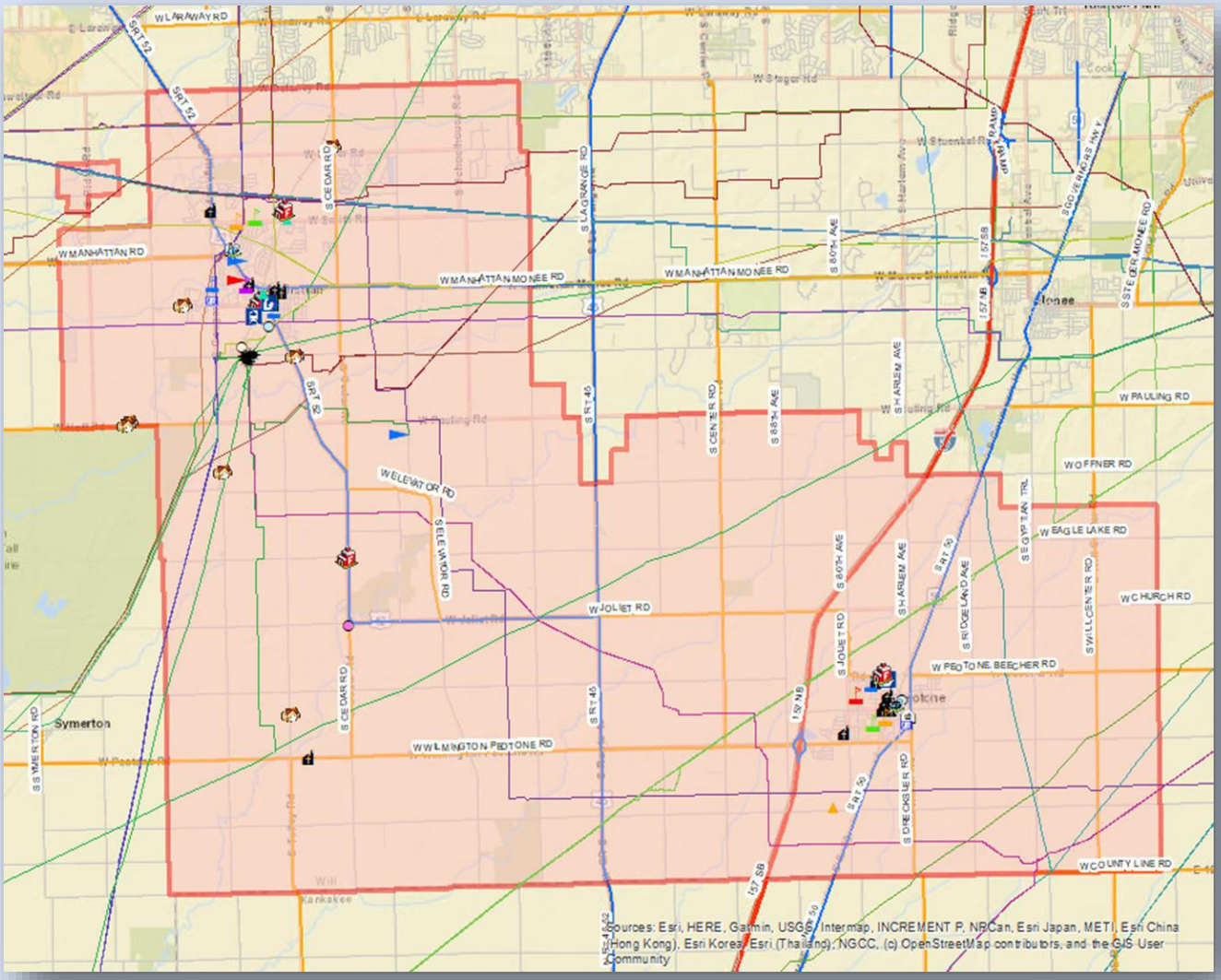
SOC Recommendations

- **Maintain a registry** of licensed and unlicensed group homes in the jurisdiction.
- **Conduct annual preplans** and fire safety inspections where authority permits.
- **Coordinate with social services** and licensing bodies to identify and mitigate life safety issues.
- **Train personnel** on occupancy-specific evacuation and rescue tactics.
- Include in **deployment modeling** (ERF needs may be closer to institutional care levels than residential).

Pipelines



Target Hazards (combined)



- CITY VILLAGE HALL
- DAY CARE
- ELEMENTARY SCHOOL
- FIRE STATION
- GOVERNMENT OFFICE
- GOVERNMENT OTHER
- GROCERY
- GROUP HOUSING
- HIGH SCHOOL
- JUNIOR HIGH SCHOOL
- LIBRARY
- MIDDLE SCHOOL
- OTHER
- OTHER COMMERCIAL
- OTHER OTHER
- PIPELINE
- PLACE OF WORSHIP
- POLICE STATION
- SCHOOL
- SEWAGE TREATMENT
- TRAIN
- UTILITY

Schools

The Manhattan Fire Protection District (MFPD) encompasses several public and private educational institutions, including elementary, middle, and high schools. These facilities serve as both high-occupancy structures and critical community assets. School-related risk assessments are factored into deployment planning and pre-incident preparedness efforts. Coordination with school administration supports ongoing fire prevention initiatives, safety drills, and emergency response planning.

Student Demographics – Newly Combined Fire Districts

The newly combined **Manhattan Fire Protection District (MFPD)**, which now includes the Peotone Fire Protection District (PFPD), serves multiple public school systems and thousands of students across a growing suburban and semi-rural footprint.

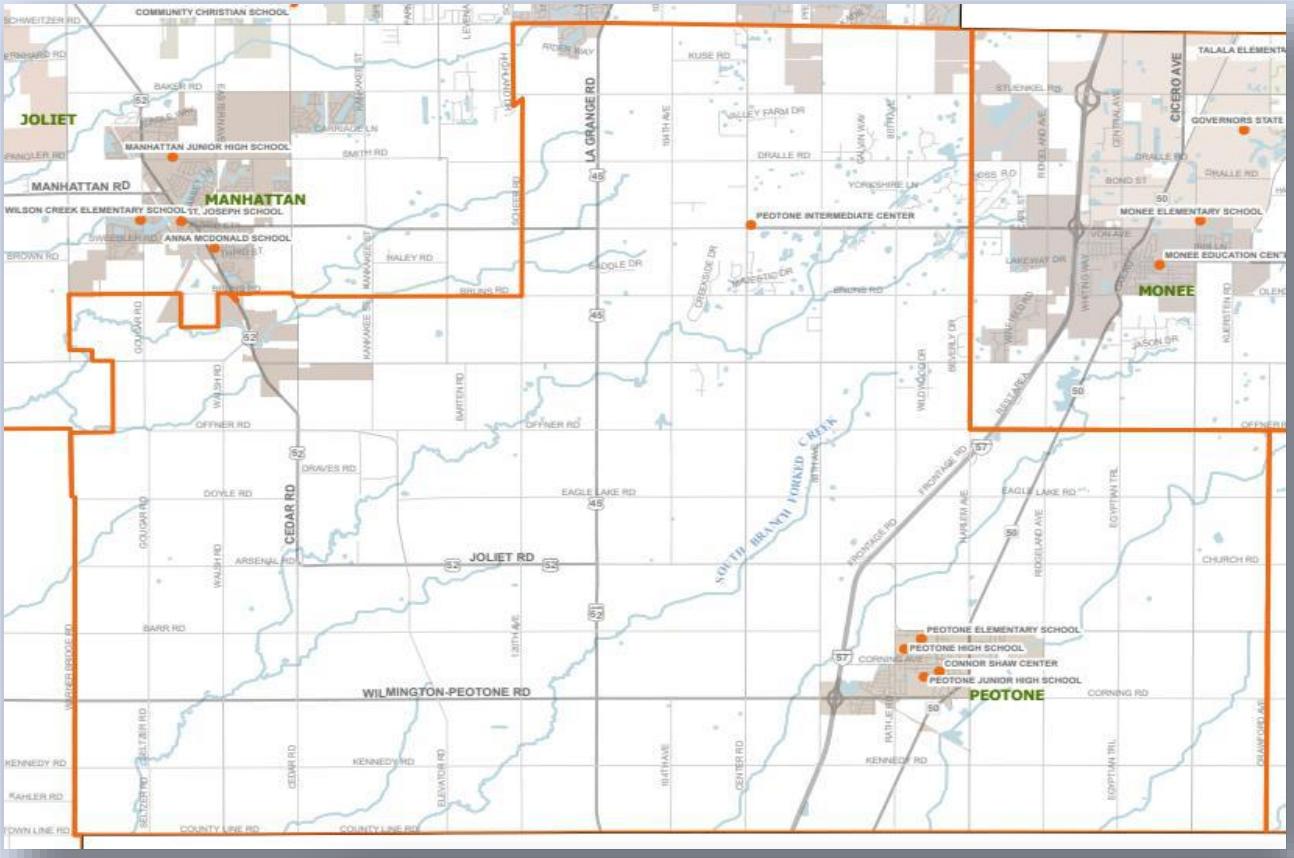
Student Enrollment by School **3,757 Students**

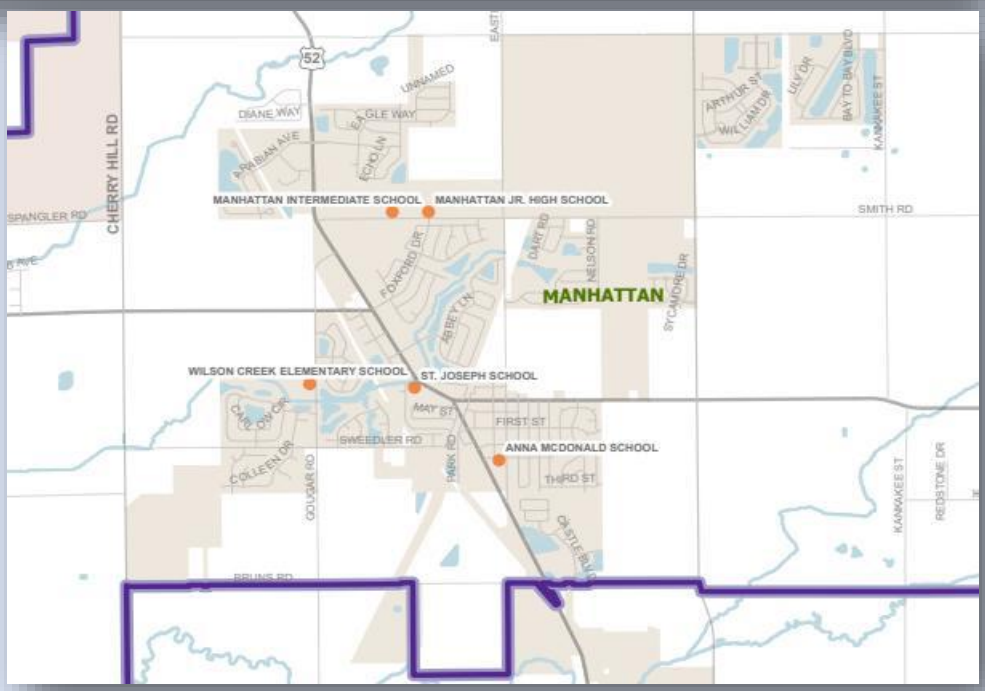
School Name	District	Grade Levels	Enrollment
Wilson Creek Elementary	Manhattan SD 114	Pre-1	550
Anna McDonald Elementary	Manhattan SD 114	2-3	410
Manhattan Intermediate	Manhattan SD 114	4-5	450
Manhattan Junior High	Manhattan SD 114	6-8	610
Peotone Elementary	Peotone CUSD 207U	K-3	337
Peotone Intermediate Center	Peotone CUSD 207U	4-5	150
Peotone Junior High	Peotone CUSD 207U	6-8	276
Peotone High School	Peotone CUSD 207U	9-12	411
St. Joseph Catholic	Private	1-8	180
TOTAL (Approximate)	—	—	**3,374**
Preschools			
Connor Shaw (PEEP)	Peotone CUSD 207U	Pre-K	**78**
First School	Private	Infant - K	**tbd**
Kid Country	Private	Pre-K	**149**
Mrs. Nikki's	Private	Pre-K	**125**
St. Joseph Catholic	Private	Pre-K	**31**
TOTAL (Approximate)			**383**

Demographic Snapshot (Across Both Districts):

- Minority Enrollment: ~20%
- Economically Disadvantaged Students: ~13.5%
- Student-Teacher Ratio: ~16:1

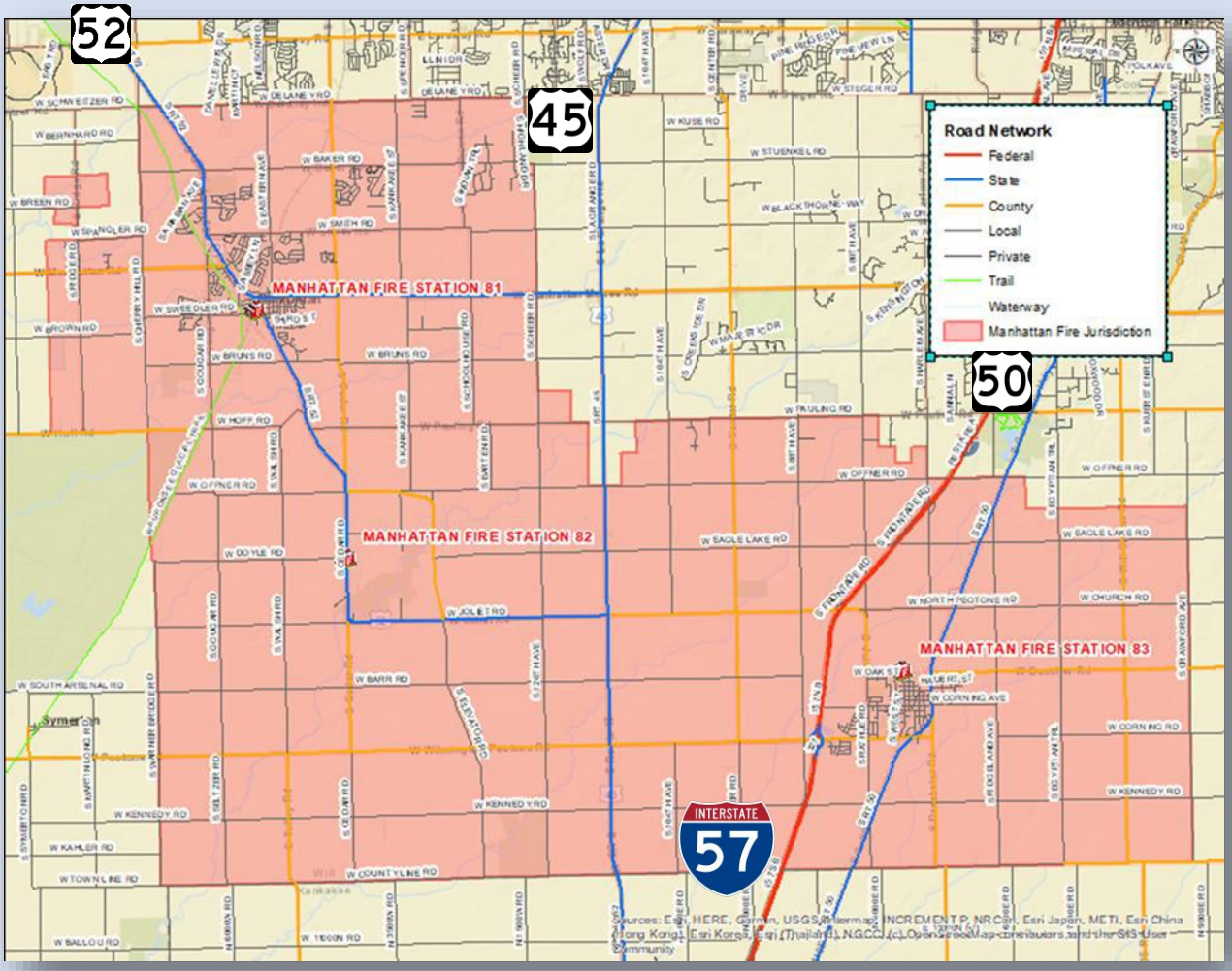
These schools represent high-occupancy, high-priority structures in the community risk profile. MFPD maintains strong partnerships with each district for fire prevention programming, drills, and incident preparedness.

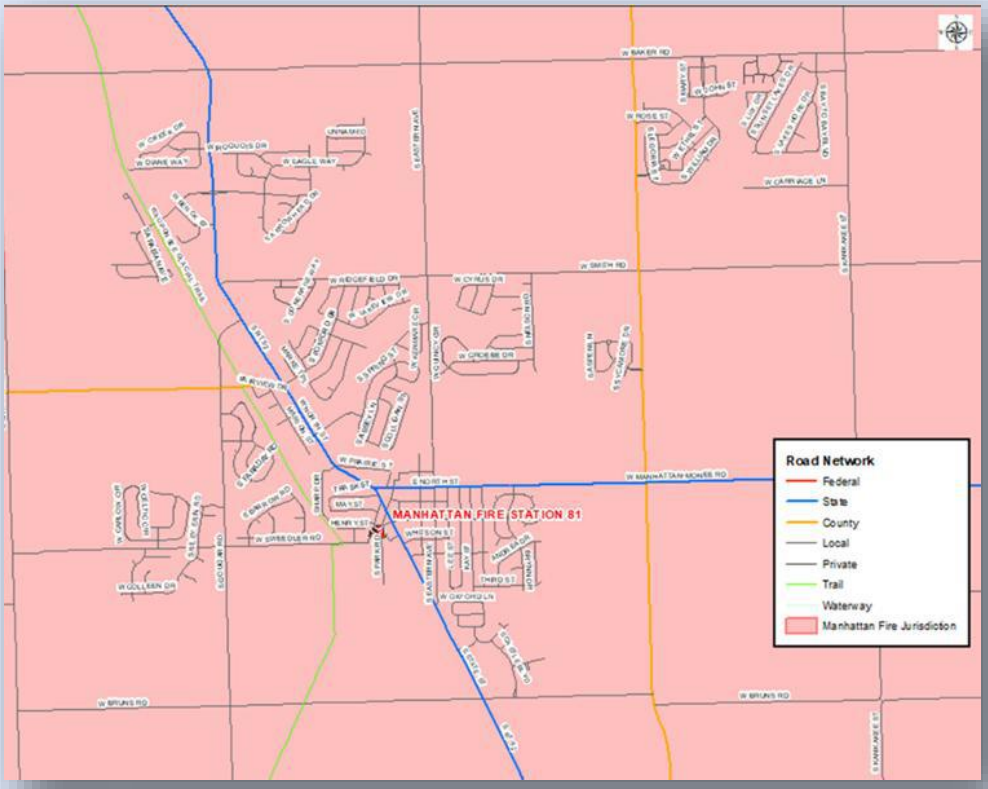


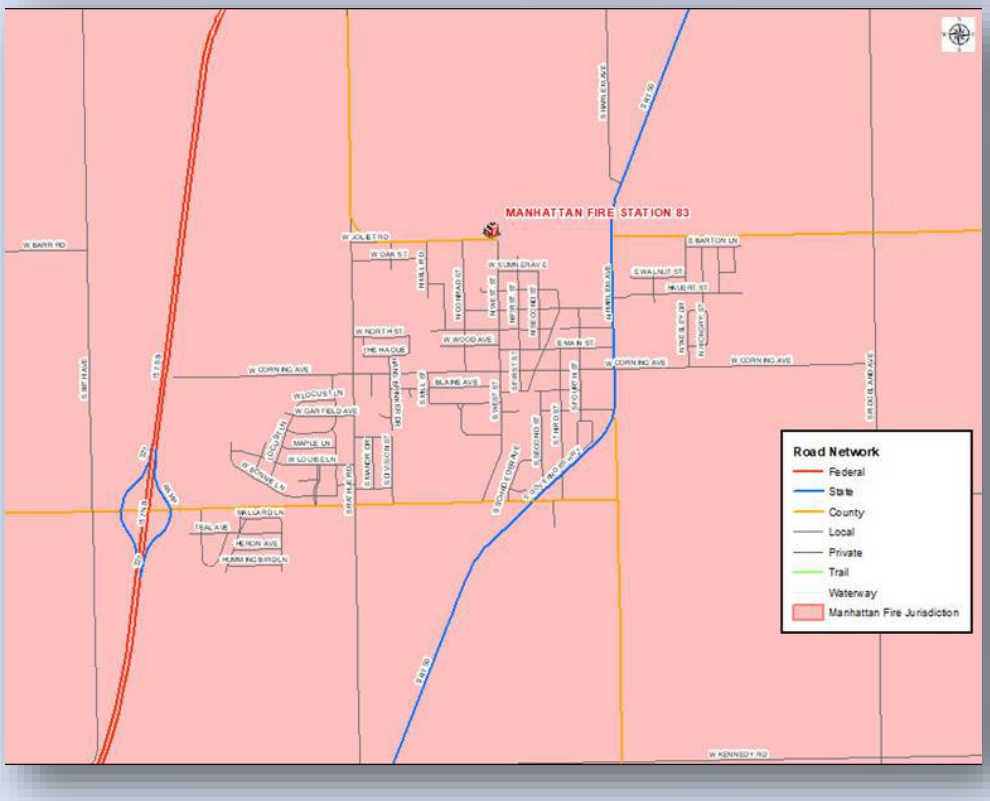


Transportation Network

The **Manhattan Fire Protection District (MFPD)** encompasses approximately **143 square miles** and includes the Village of Manhattan, the Village of Peotone, and surrounding unincorporated areas. This service area is crossed by a complex transportation network of **interstate highways, state and county roads, and rural arterials**, which play a critical role in shaping emergency access, call types, and deployment planning.




MANHATTAN FIRE STATION 81
Road Network
Federal
State
County
Local
Private
Trail
Waterway
Manhattan Fire Jurisdiction


MANHATTAN FIRE STATION 83
Road Network
Federal
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Trail
Waterway
Manhattan Fire Jurisdiction

Traffic & Transportation Infrastructure

Current Roadway Volumes (2023 IDOT AADT)

Several regional arterials and highways serve the Manhattan Fire Protection District. 2023 Illinois Department of Transportation (IDOT) counts show:

Roadway	2023 AADT	Heavy Trucks	% Truck Volume
I-57 (at Manhattan)	32,300	7,900	~24%
US 45 / 96th Ave	6,700	875	~13%
IL Route 50 / Governors Hwy	8,350	1,025	~12%

These routes support both commuter and freight mobility, with I-57 acting as a critical corridor for commercial vehicles and region20al connectivity.

Future Growth & Corridor Forecasts

The **Wilmington-Peotone Planning & Environmental Linkages (PEL) Study** projects significant increases in traffic by 2050 under a no-build scenario:

Corridor Segment	2019 AADT	2050 AADT	Growth Rate
Wilmington-Peotone Rd (W of I-57)	7,189	10,690	1.3%
Wilmington-Peotone Rd (E of I-57)	8,804	12,070	1.0%
Wilmington-Peotone Rd (W of US 45)	6,685	9,740	1.2%
Wilmington-Peotone Rd (E of US 45)	5,344	8,070	1.3%

These volumes reflect anticipated growth due to population increase, freight expansion, and regional development, particularly surrounding intermodal hubs and future projects such as the South Suburban Airport (SSA).

The **Wilmington-Peotone Traffic Projections** document includes Average Daily Traffic (ADT) forecasts for key roadway segments under a **baseline/no-build scenario** for the years **2035** and **2050**, with assumed annual growth rates based on a regional travel demand model (TDM). Below is a summary of some notable projections:

Location Description	2019 ADT	2035 ADT	2050 ADT	Annual Growth Rate (to 2050)
W Peotone Rd (E of Hwy 53)	8,816	12,150	14,220	1.6%
W Wilmington-Peotone Rd (W of I-57)	7,189	9,300	10,690	1.3%
W Wilmington-Peotone Rd (E of I-57)	8,804	10,210	12,070	1.0%

These projections are based on the assumption that no capacity improvements will be made to the corridor, aside from those already included in the region's ON TO 2050 Regional Transportation Plan.

Manhattan-Area Key Roadways – AADT and Truck Volumes

Roadway	2023 AADT	Heavy Commercial	Multi-Unit Trucks	PEL 2050 AADT	PEL Growth Rate
I-57 (Wilmington-Peotone Rd segment)	32,300	7,900	6,800	10,690 (W of I-57) 12,070 (E of I-57)*	1.3–1.0%
Governors Hwy (Rte 50)	8,350	1,025	475	9,120 (Wilmington-Peotone Rd segment)	1.1%
US 45 (96th Ave)	6,700	875	550	9,740 (W of US 45) 8,070 (E of US 45)*	1.2–1.3%

* From Wilmington-Peotone Traffic Projections document – for segments adjacent to US 45 and I-57.

Observations:

- **I-57 remains the heaviest-traveled corridor**, with over **32,000 vehicles/day** and nearly **25% truck traffic**.
- **Governors Hwy (Rte 50)** and **US 45** support moderate daily traffic volumes (~6,700–8,300 AADT), with **truck traffic accounting for 12–15%**.
- Projected **2050 AADT volumes** on Wilmington-Peotone Rd segments rise to ~12,000, showing consistency with current I-57 feeder volumes.

Major Transportation Arteries

Interstate 57 (I-57)

- **7 miles** run through MFPD north to south
- **Average Annual Daily Traffic (AADT):** ~30,600 vehicles
- **Truck Volume:** ~7,075 trucks daily (**21.4%**)
- **Key Hazards:**
    - High-speed traffic → increased MVC severity
    - Freight density → hazmat risk
    - Limited access ramps → response time delays
    - Adjacent rail line and IL-50 increase complexity

Illinois State Routes

Route	AADT	Emergency Planning Notes
IL-50	~9,250	Commercial freight corridor paralleling I-57
IL-45	~6,700	Commuter + rural connector; rail crossings present
IL-53	~9,800	Joliet-region connector: increasing regional traffic

County Roadways

Roadway	AADT	Role & Risk Profile
Manhattan-Monee Road	~5,200	Growth corridor, slated for 4-lane expansion
Peotone-Wilmington Road	~4,900	Key east-west connector; site of fatal crash (2024)
Cedar Road	~3,200	North-south access; narrow shoulders, seasonal delays
Center Road	~2,800	Limited visibility; rural response reliability concerns

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Traffic Trends & Infrastructure Forecasts

- **Will County 2040 & 2050 Plans**:
  - 30–40% traffic growth projected for southern corridors
  - Investment in widening, intersection control, and freight movement
- **Manhattan-Monee Road Expansion (Phase I Engineering)**:
  - 3.5 miles from Center Road to Monee slated for four-lane upgrade
  - Supports regional growth, improved access to I-57
- **Village of Manhattan Comprehensive Plan (In Progress)**:
  - Emphasizes balanced growth, roadway preservation, and emergency access
- **$100,000 Traffic Safety Grant (2024)**:
  - Funding traffic studies, calming projects, and visibility upgrades

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Traffic Incident Trends & Risk Zones

Since the 2023 merger, MFPD has responded to a sharp rise in traffic incidents:

- **9 fatalities** (confirmed MVC deaths)
- **16 critical injuries**
- **59 multi-patient MVCs**
- **174% increase** in total MVC volume since consolidation

Location	Emergency Risk Profile
I-57 & IL-50 Corridor	High-speed MVCs, hazmat risk, access limitations
Peotone-Wilmington & Center Rd	Site of 2 fatal crashes in 2024
IL-45 & Rail Crossings	Train-vehicle collision potential
Cedar & Center Roads	Rural hazards: fog, snow, narrow lanes, slow farm use

Vehicle Crash Analysis: 2019–2023

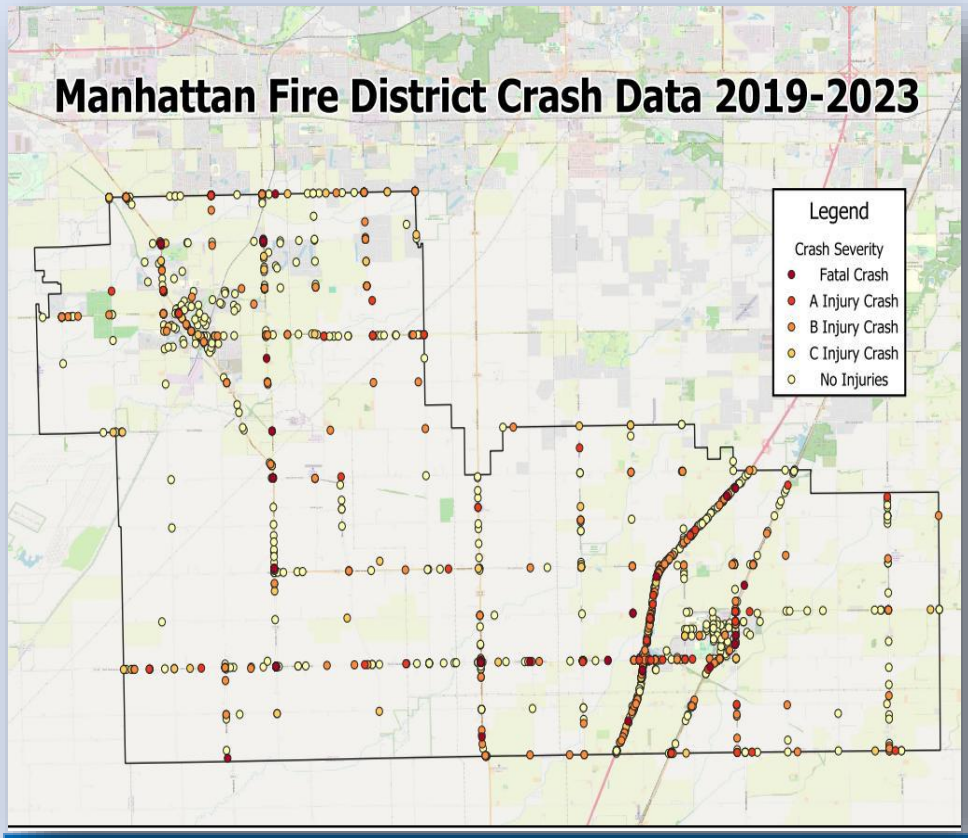
1. Executive Summary

Between 2019 and 2023, the Manhattan Fire Protection District (MFPD) experienced a total of **1,507 reported vehicle crashes**, according to compiled data. The district's most frequent crash outcomes were **property damage-only incidents**, followed by **C- and B-level injuries**, with a smaller but critical number of **fatal** and **A-level injury** crashes. This analysis incorporates geographic, temporal, and severity-level breakdowns, supporting strategic planning, resource deployment, and risk mitigation.

Crash Severity Legend

Injury Code	Definition	Description
Fatal	Death due to crash-related injuries	At the scene or within 30 days post-incident
A – Incapacitating Injury	Severe injury prevents regular activity	E.g., broken limbs, unconsciousness, severe lacerations. EMS transport required.
B – Non-Incapacitating Injury	Visible injury, not disabling	E.g., bruises, moderate burns, minor cuts. Treated on scene or an outpatient basis.
C – Possible Injury	Complaint of injury with no visible signs	E.g., pain, dizziness, nausea. Often, a precautionary EMS check or transport is required.
Property Damage Only (PDO)	No injuries reported	Only vehicles/property affected; no medical response needed.

2. Crash Totals by Year and Severity (2019–2023)



Crash Severity Legend

A – Incapacitating Injury
Severe injury preventing normal activity

B – Non-Incapacitating Injury
Obvious injury, but not disabling

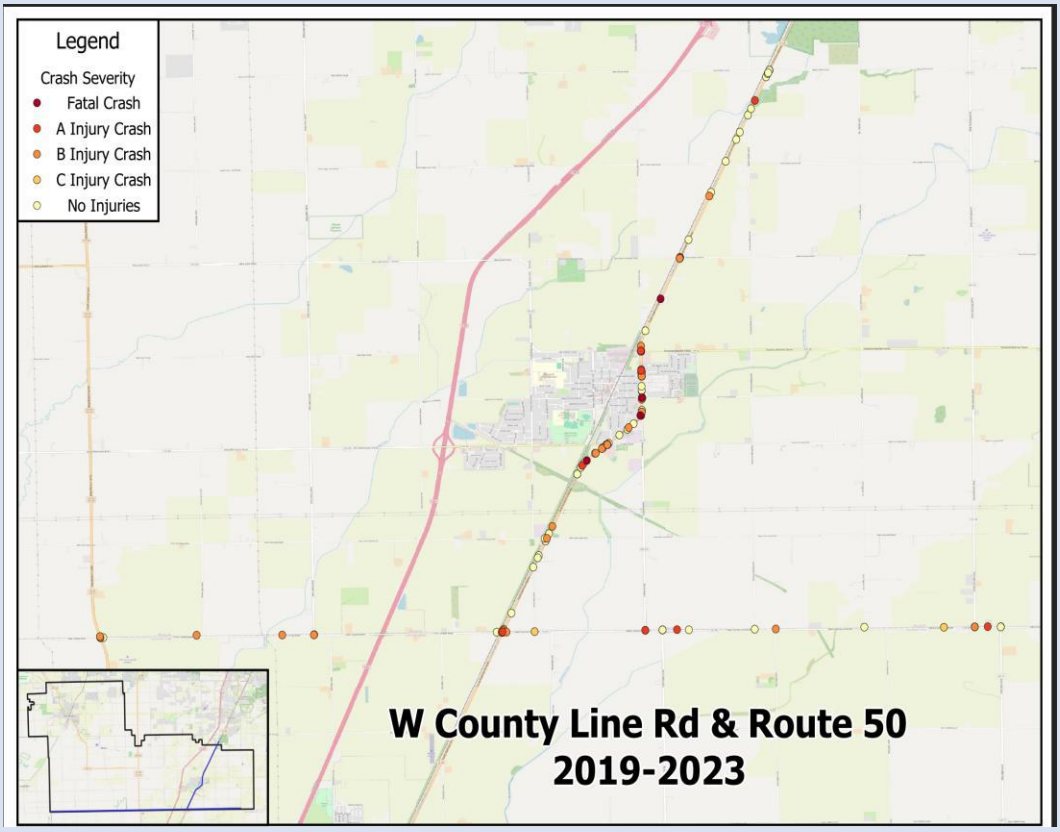
C – Possible Injury
Complaint of injury, no visible sign

Year	Fatal	A Injury	B Injury	C Injury	Property Damage	Total
2019	**6**	13	47	33	239	**338**
2020	**4**	6	38	10	154	**212**
2021	**1**	9	52	24	224	**310**
2022	**4**	9	58	22	238	**331**
2023	**4**	18	46	19	229	**316**
Total	**19**	**55**	**241**	**108**	**1,084**	**1,507**

Key Insight: Over 70% of all incidents were non-injury property damage crashes. However, 127 crashes (8.4%) resulted in A or B level injuries or fatalities.

3. High-Risk Location Spotlight: County Line Road

A focused subset was extracted from the raw data to analyze crashes near **County Line Road and Route 50**—a known high-risk zone.



Year	A Injury	B Injury	C Injury	Property Damage	Total
2019	0	4	2	4	**10**
2020	2	2	0	4	**8**
2021	0	1	2	5	**8**
2022	1	4	0	3	**8**
2023	1	2	1	5	**9**
Total	**4**	**13**	**5**	**21**	**43**

Observation: County Line Road accounts for only ~3% of total crashes but is overrepresented in **A/B injury crashes**, indicating a disproportionate risk.

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4. Crash Severity Distribution

- **Fatal Crashes**: 19 total (1.26%), with scattered geographic distribution.
- **An Injury Crashes**: 55 total (3.65%), typically required a significant EMS/ALS response.
- **B & C Injury Crashes**: 349 total (23.2%), the majority occurred during daytime on arterial roads.
- **Property Damage Only**: 1,084 (71.9%), often clustered near intersections, school zones, or local retail corridors.

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5. Temporal Trends

- **Peak Crash Months**: May, October, and December.
- **Peak Days**: Fridays and Mondays.
- **Peak Time of Day**: 7–9 AM and 3–6 PM (school and work commute windows).

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6. Strategic Implications for Standards of Cover

- **Deployment Consideration**: Time/day clustering supports forward deployment or coverage zone shifts during peak periods.
- **Hotspot Zones**: County Line Rd, Manhattan-Monee Rd, and US Route 52 require targeted risk mitigation.
- **Performance Benchmarks**: A- and B-injury incidents require compliance with NFPA 1710 full ALS response benchmarks.

- **CRR Focus**: Enhanced driver education, speed enforcement, and hazard signage in high-risk corridors.

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7. Integration with Risk Assessment Framework

Crash data informs multiple layers of the Top Ten T's:

- **Type**: Motor Vehicle Collisions (MVCs) with EMS/Rescue
- **Trigger**: Commuting patterns, roadway design, weather
- **Tactics**: Multi-unit EMS/Rescue with traffic control support
- **Target**: High-impact corridors (County Line Rd, Rt 52, Delaney)
- **Threshold**: 3+ injury MVCs per year at any single location triggers targeted prevention

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8. Recommendations

1. Conduct joint risk-reduction campaigns with law enforcement in known hotspots.
2. Apply GIS heatmapping quarterly to monitor evolving crash trends.
3. Prioritize response time monitoring for A/B injury crash locations.
4. Incorporate crash data into the 2026 Strategic Plan and 5-Year Deployment Review.

Emergency Response Concerns

- **Access & Time Delays:**
    - Freeways, rail crossings, and seasonal hazards slow ERF deployment
    - Strategic apparatus staging near ramps and rural connectors is advised
- **Hazmat & Complex MVCs**:
    - Freight corridors demand enhanced hazmat training and preplanning
    - Multi-agency response coordination via MABAS is required
- **Technology-Driven Dispatch**:
    - Closest unit response (ARL/GPS) is critical for highway and rural calls
    - GIS-based routing and incident preplans are recommended

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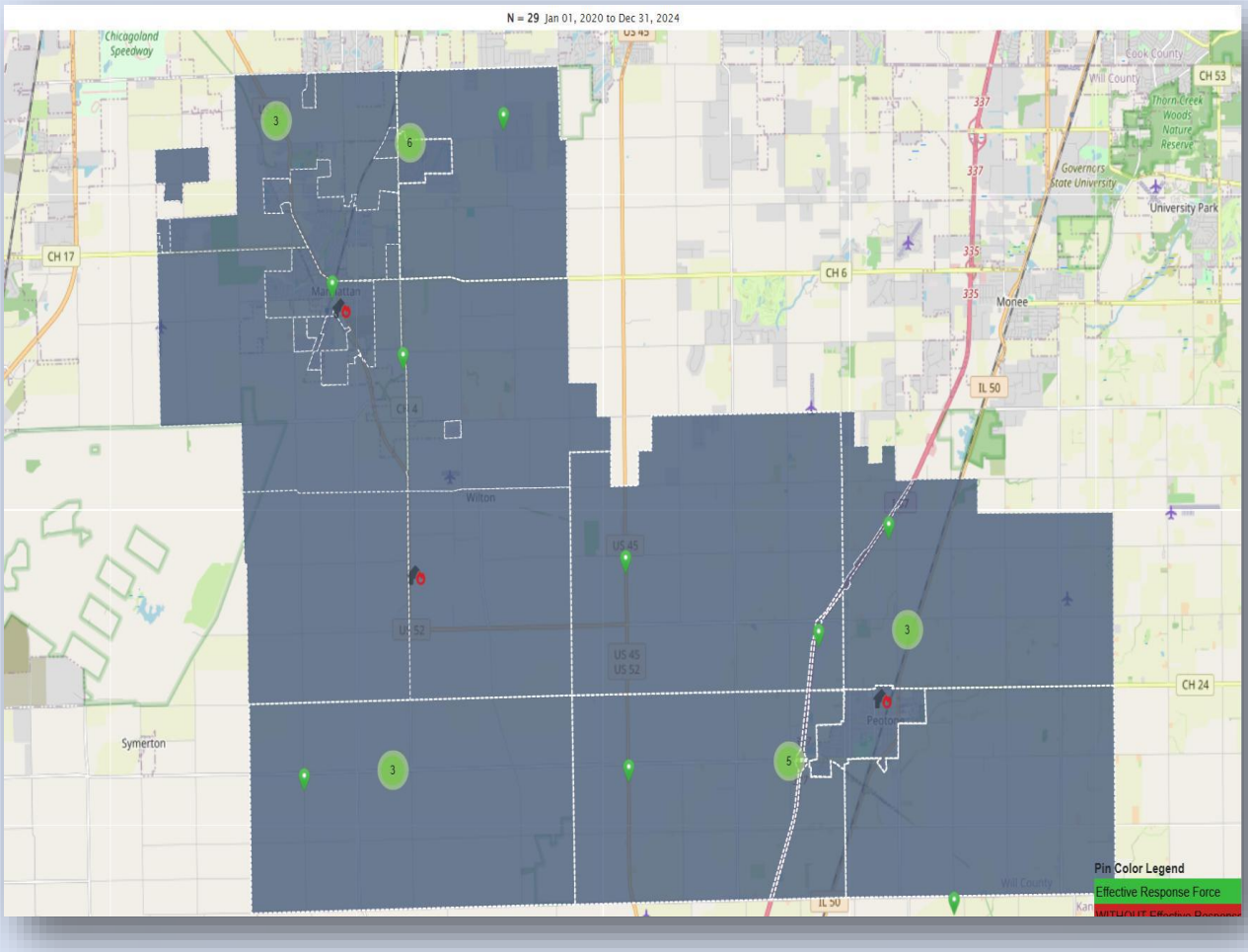
Conclusions & Planning Priorities

The MFPD transportation environment poses dynamic challenges that must be met with data-driven, proactive emergency service planning:

Key Recommendations:

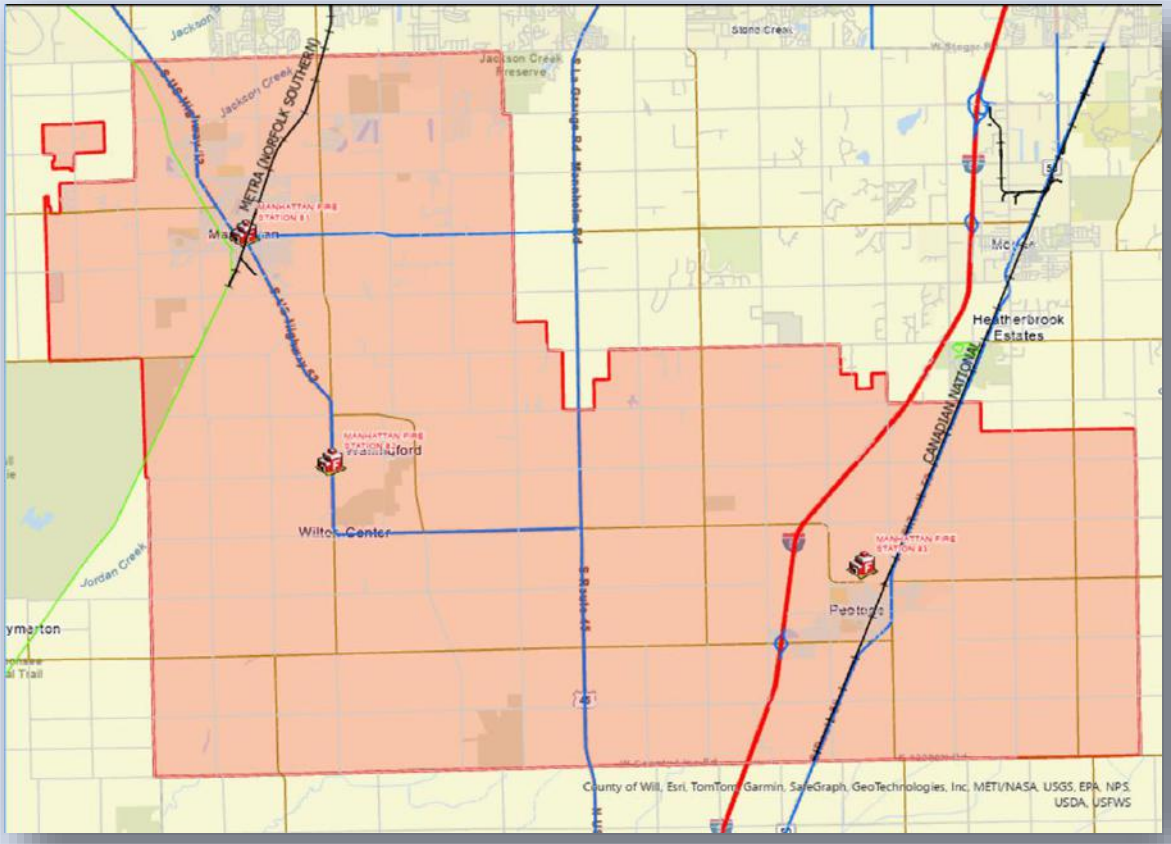
- Expand freeway incident training (I-57, IL-50) and establish quick-access preplans
- Leverage GIS travel time modeling and ARL-based closest unit deployment
- Monitor MVC patterns quarterly to guide staffing and apparatus location
- Integrate all future development proposals into the response access reviews
- Collaborate with regional planners on roadway redesign and infrastructure investments

RESCUE – MVA w/ EXTRICATION



Trains

The Manhattan Fire Protection District (MFPD) is intersected by multiple railway lines, which support both freight and passenger operations. These rail lines present unique emergency response challenges, requiring comprehensive preparedness and response planning.



Freight Rail

The MFPD is served by segments of the **Norfolk Southern Railway (NS) and Canadian National Railway (CN)**, which primarily transport freight, including hazardous materials.

Canadian National (CN) – Chicago Subdivision:

- Extends **123.4 miles** from **Bridgeport Yard (Chicago) to Champaign**
- **Double track from Bridgeport to Stuenkel; single track south of Stuenkel**
- **Maximum speed: 79 mph, controlled via Centralized Traffic Control (CTC)**
- **Trackage Rights:** Amtrak (entire line) & Norfolk Southern (NS) between Fordham and Gilman
- **Freight Volume: 21 daily freight trains, 78,597 freight cars annually,** carrying hazardous materials

- **Key Connections:** Union Pacific (UP) at 31st Street, Belt Railway of Chicago at 95th Street, CN's Gilman Subdivision at Harvey, Matteson Subdivision at Matteson, NS at Fordham, and Kankakee, Beaverville & Southern Railroad at Kankakee

Norfolk Southern (NS) Line – Manhattan & Peotone:

- NS operates a freight line traversing through **Manhattan and Peotone**, serving local industries
- Provides freight service to the **Aeropress Corporation facility** (specializing in high-purity gases)
- Handles **varied hazardous cargo** (product listing available for emergency response planning)

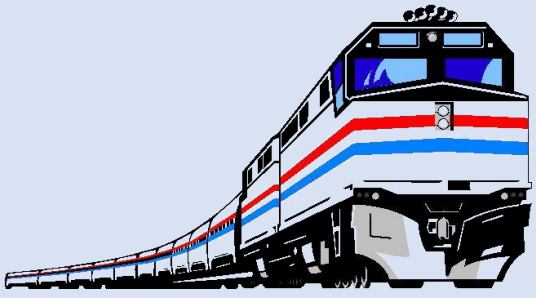
Passenger Rail

MFPD is intersected by freight and passenger lines.

Rail Line	Operator	Hazmat Cargo	Daily Trains	Annual Carloads
CN (Chicago Subdivision)	**CN, Amtrak**	**15+ types**	**21 freight + 2 Amtrak**	**262,000+**
NS Line	**Norfolk Southern**	**8+ types**	**5 freight + 2 Amtrak**	**91,000+**
Metra (Rock Island Line)	**Metra**	**None**	**5 (flag)**	**~467 boardings**

Emergency Implications: 9th-grade crossings

- **Hazmat derailment potential**
- **Mass casualty preparedness for passenger rail**
- **Annual freight car volume (CN only): 78,597**



🚇 Metra Commuter Access

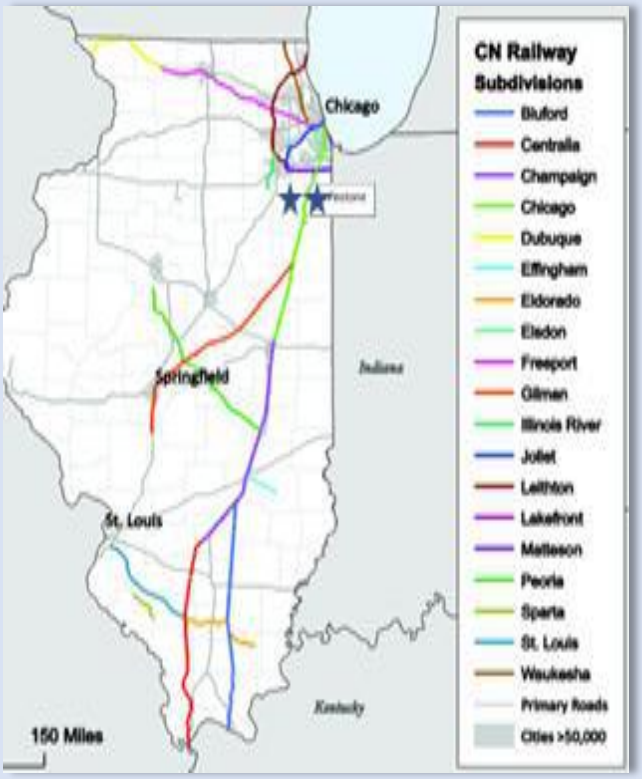
The **Manhattan Station** on Metra's Rock Island Line serves as the southern terminus for Will County commuters. Based on 2024 estimates:

- **1.2 million individual Metra users** system-wide
- **467 individual customers** used the **Manhattan station**

Although current ridership remains modest, this multimodal asset supports commuter access and the potential for transit-oriented development (TOD).

Metra SouthWest Service (SWS):

- Operates between **Chicago Union Station and Manhattan**
- **Laraway Road Station (New Lenox)** – Opened in **2006**, averaging **19 weekday boardings (2018)**
- **Ridership Trends:** 2.66 million trips (2014) → 2.36 million trips (2019) → 574,815 trips (2020, COVID-19 impact)
- **Current Service (2024):**
  - **30 weekday trains (15 in each direction)**
  - **5 trains serve Manhattan** (3 are flag stops)
  - **No Saturday, Sunday, or holiday service**



Amtrak Service (CN Line):

- **Two daily trains** operate on CN's **Chicago Subdivision**
- Carries approximately **718 passengers per day (262,000 annually)**

Peotone Rail Service:

- The Peotone line is **primarily a freight corridor** with Amtrak service utilizing trackage rights
- Similar to Manhattan, it experiences **a mix of freight and passenger rail traffic**

Rail Crossings & Emergency Considerations

There are **nine (9) grade rail crossings** within MFPD. The movement of hazardous materials and passenger traffic necessitates **proactive emergency response planning** to address **derailments, hazardous material spills, and potential mass casualty incidents**.

This **chart** summarizes daily, weekly, and yearly train traffic, including the number of freight cars and passengers per year, as well as the volume of hazardous chemicals transported.

Rail Traffic & Hazardous Cargo Summary Table

Category	CN Line (Chicago Subdivision)	NS Line (Manhattan & Peotone)	Combined Total
Freight Trains (Daily)	21	5	26
Freight Trains (Weekly)	147	35	182
Freight Trains (Yearly)	7,665	1,825	9,490
Freight Cars (Annually)	78,597	TBD	TBD
Passenger Trains (Daily)	7 (Metra: 5, Amtrak: 2)	2 (Amtrak)	9
Passenger Trains (Weekly)	35 (Metra) + 14 (Amtrak) = 49	14 (Amtrak)	63
Passenger Trains (Yearly)	1,715 (Metra) + 730 (Amtrak) = 2,445	730 (Amtrak)	3,175
Passengers per Day	~718 (Amtrak) + ~Metra boardings	~250 (Amtrak estimate)	~1,000+
Passengers per Year	262,000 (Amtrak) + Metra ridership	~91,250 (Amtrak estimate)	350,000+
Hazardous Chemicals Transported	~15+ Different Chemicals (CN)	~8+ Different Chemicals (NS)	~20+ Total

	Storage - Tier II report		Inbound Rail cars				Emergency Response Guide		
DAILY:	**Maximum**	**Average**	**Count**	**Avg/Year**	**Avg/Month**	**Avg/Week**	**ERG Guide #**	**ID#**	**Evacuation Area**
Acetone	106,000	2,080	--	--	--	--	120	1090	1/2 mile evac
Butane - Normal	1,000,000	231,500	263	87.67	7.31	1.74	115	1011/1075	
Difluroethane	3,500,000	252,800	267	89.00	7.42	1.77	115	1030	
Isobutane	1,000,000	292,400	43	14.33	1.19	0.28	115	1075/1969	
Isopentane	210,000	135,400	49	35.00	2.92	0.69	128	1265	1/2 mile evac
Propane	2,000,000	361,100	293	97.67	8.14	1.94	115	1075/1978	
gallons	**7,816,000**	**1,275,280**	**915**	**323.67**	**26.98**	**6.42**			

**Stored in Above Ground tanks, tank wagons, Rail cars, Sieves & Piping*

Planes and Airports

The MFPD's transportation network may undergo significant changes with the proposed **South Suburban Airport (SSA)** near Peotone, Illinois. The SSA aims to serve as **Chicagoland's third regional airport**, with a primary focus on cargo operations. If completed, it could lead to increased air traffic, commercial development, and emergency response challenges for the District.

Current Status

- **Land Acquisition:** As of 2024, Illinois has acquired approximately **89% of the land** needed for the airport.
- **Infrastructure Development:** In **2019**, Illinois allocated **$162 million** for a new **I-57 interchange along the District's northern boundary at Eagle Lake Road**. Construction is expected to begin soon.
- **Economic Impact:** The SSA could generate **6,300 jobs** and contribute over **$1 billion in economic activity**, potentially accelerating growth in the District.
- **State-owned –** creates a reduction in tax revenue

Potential Impacts on MFPD

1. **Increased Air Traffic & Aircraft Incidents**
    - Greater likelihood of aircraft-related emergencies (e.g., crashes, fuel spills, emergency landings).
    - Noise pollution and safety concerns from low-flying planes.
2. **Economic & Population Growth**
    - Expansion of businesses and housing developments, increasing service demands.
    - New commercial structures require fire inspections and code enforcement.
3. **Infrastructure Strain & Traffic Congestion**
    - Higher roadway traffic from cargo logistics and passenger vehicles.
    - Potential delays in emergency response due to increased congestion.
4. **Emergency Preparedness & Mutual Aid**
    - There is a greater need for coordination with neighboring fire departments and airport emergency services.
    - Development of specialized training for aviation-related incidents.

Mitigation Strategies & Recommendations

1. Specialized Training for Aircraft Incidents

- **Aircraft Rescue & Firefighting (ARFF) Training:** Provide MFPD personnel with ARFF courses to handle aviation fuel fires, aircraft extrications, and passenger rescues.
- **Simulation-Based Drills:** Conduct **joint training exercises** with airport authorities, FAA officials, and neighboring fire districts.
- **Hazardous Materials (HAZMAT) Preparedness:** Train teams on fuel spill containment and response to hazardous cargo.

2. Infrastructure & Traffic Management

- **Pre-Designated Emergency Routes:** Identify and maintain **emergency access roads** near high-traffic areas.
- **Traffic Signal Preemption Systems:** Install systems that enable emergency vehicles to override traffic lights for faster response times.
- **Work with DOT & Local Government:** Advocate for additional road expansions or dedicated emergency lanes near the airport.

3. Mutual Aid & Resource Expansion

- **Mutual Aid Agreements:** Establish **formal agreements** with surrounding departments to ensure a **rapid response for large-scale emergencies**.
- **Emergency Operations Center (EOC) Integration:** Collaborate with regional EOCs for coordinated disaster response.
- **Fire Station Expansion Planning:** Assess the need for an additional fire station near the SSA to meet increased service demands.

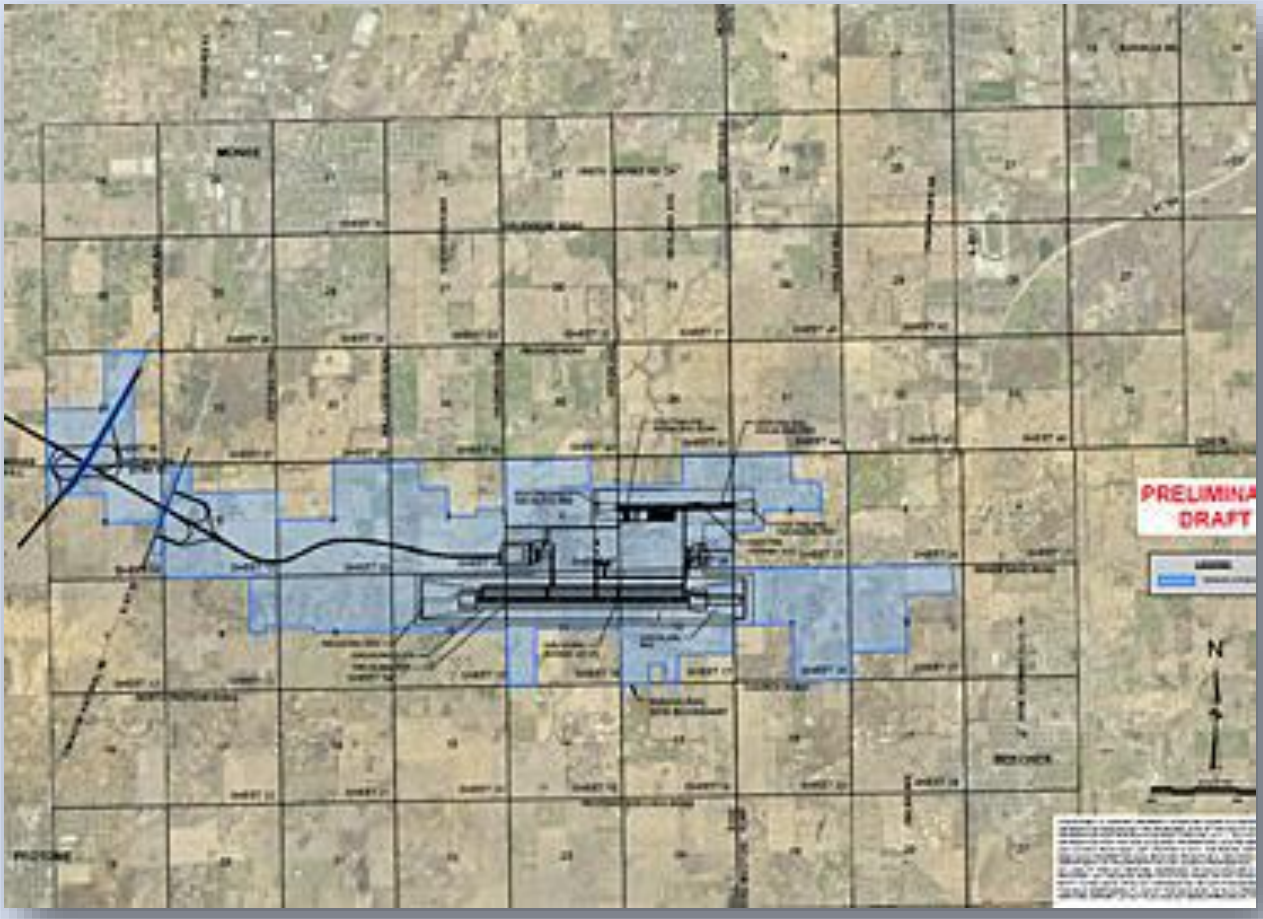
4. Community Engagement & Risk Assessment

- **Public Safety Education:** Conduct awareness programs for residents and businesses regarding potential aviation-related hazards.
- **Community Risk Reduction (CRR):** Integrate SSA-related risks into MFPD's Community Risk Assessment and Standards of Cover.
- **Code Enforcement & Inspection Upgrades:** Develop updated fire safety guidelines for **new airport-related structures and fuel storage facilities**.

Next Steps for MFPD

1. **Monitor SSA Progress** – Stay engaged with state and local authorities to track airport development timelines and ensure timely progress.
2. **Develop an SSA Emergency Response Plan** – Create a specialized plan addressing aircraft incidents, high-rise structures, and large-scale evacuations.
3. **Pursue Funding for Training & Equipment** – Seek **grants or state funding** for ARFF training and specialized response equipment.
4. **Strengthen Regional Partnerships** – Enhance cooperation with neighboring fire districts and emergency management agencies to foster mutual support and collaboration.

As the SSA approaches reality, MFPD must take **proactive steps** to ensure readiness for this significant regional transformation.

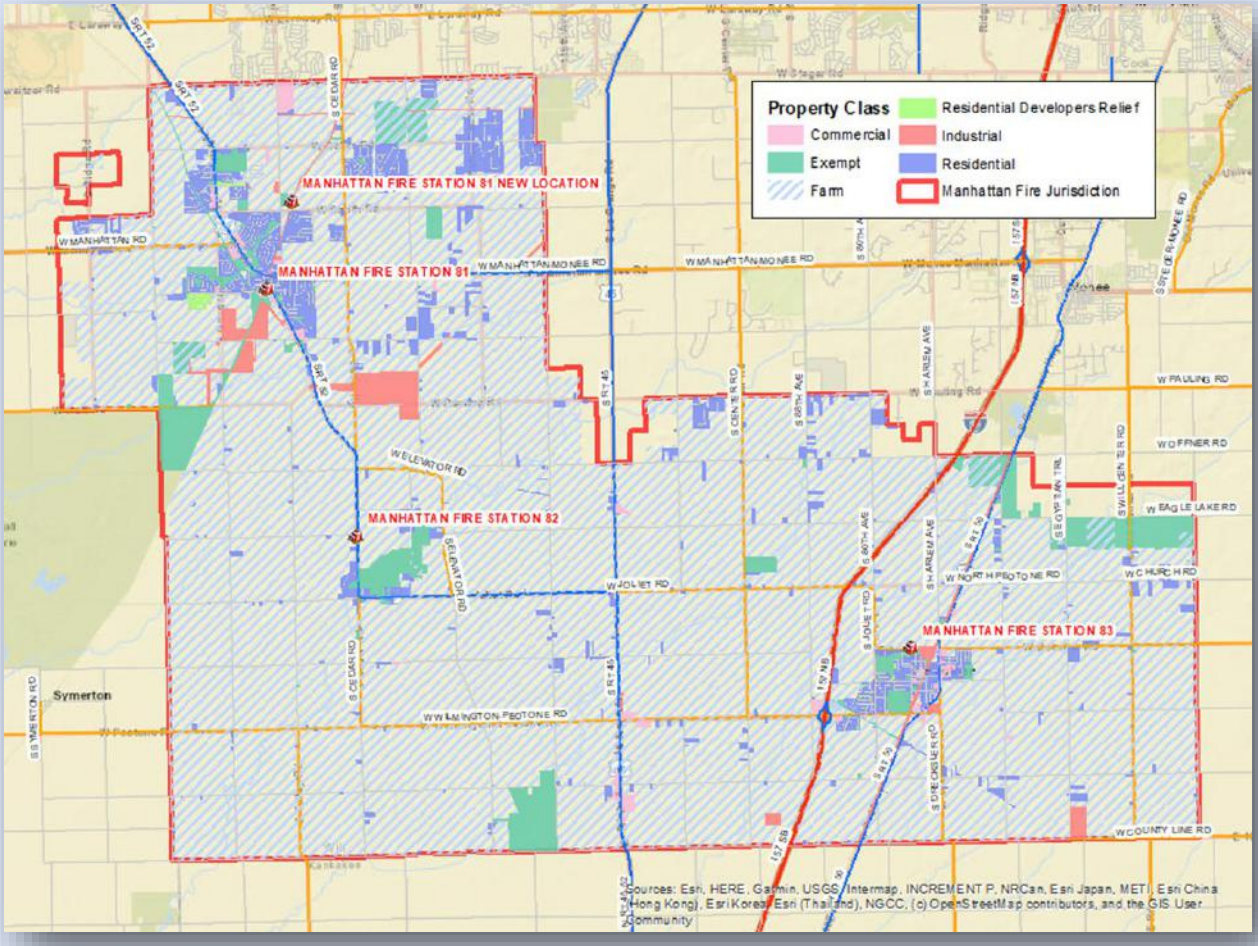


Property Classes

Understanding property classifications informs response planning, risk analysis, and resource allocation across the District

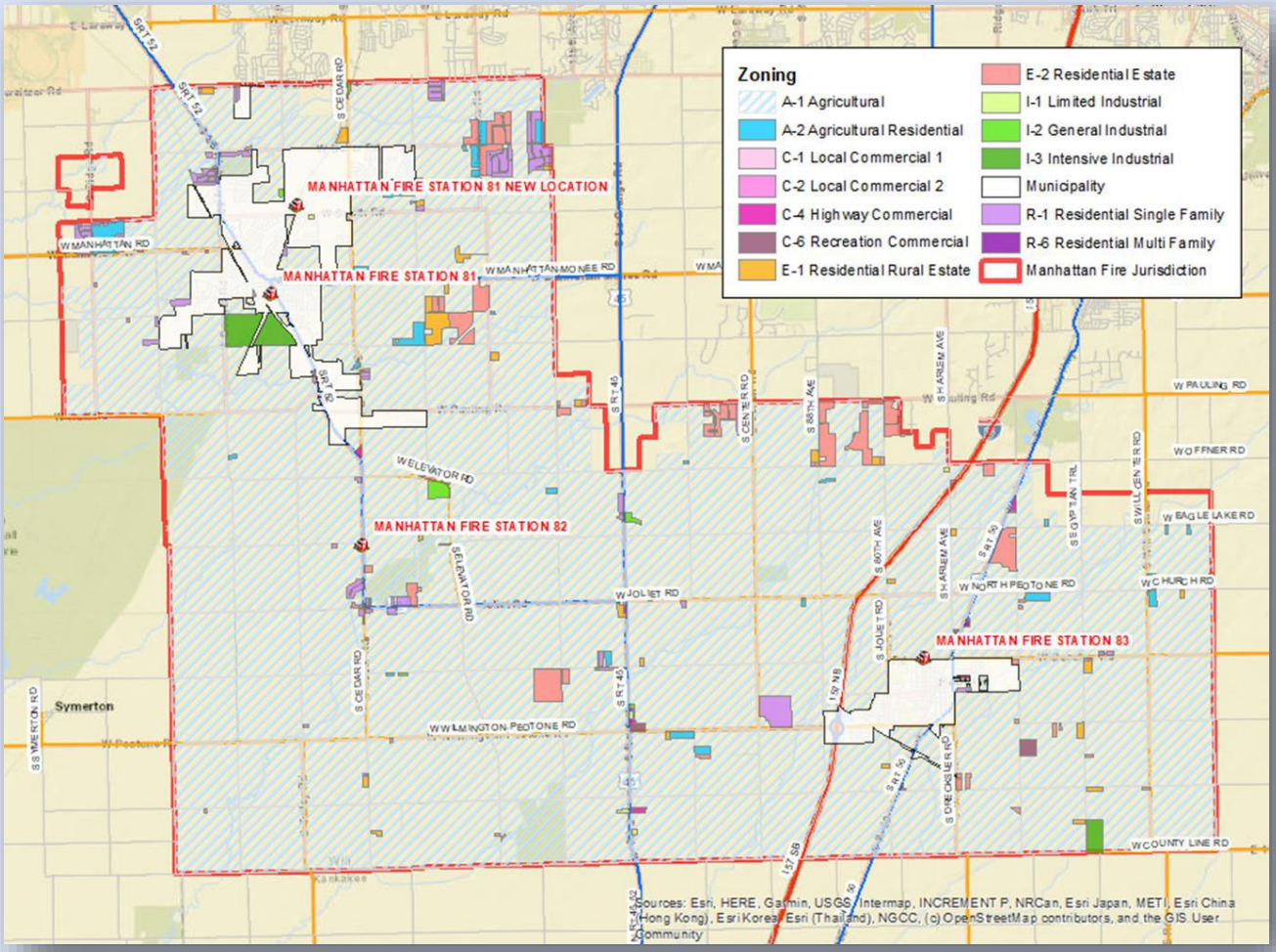
The District contains a diverse mix of property classifications, including:

- Residential (single-family, multi-family)
- Commercial (retail, office, hospitality)
- Industrial (light manufacturing, warehousing, logistics)
- Agricultural (active farmland, agribusiness)
- Public/Institutional (schools, municipal buildings, churches)
- Vacant or undeveloped land

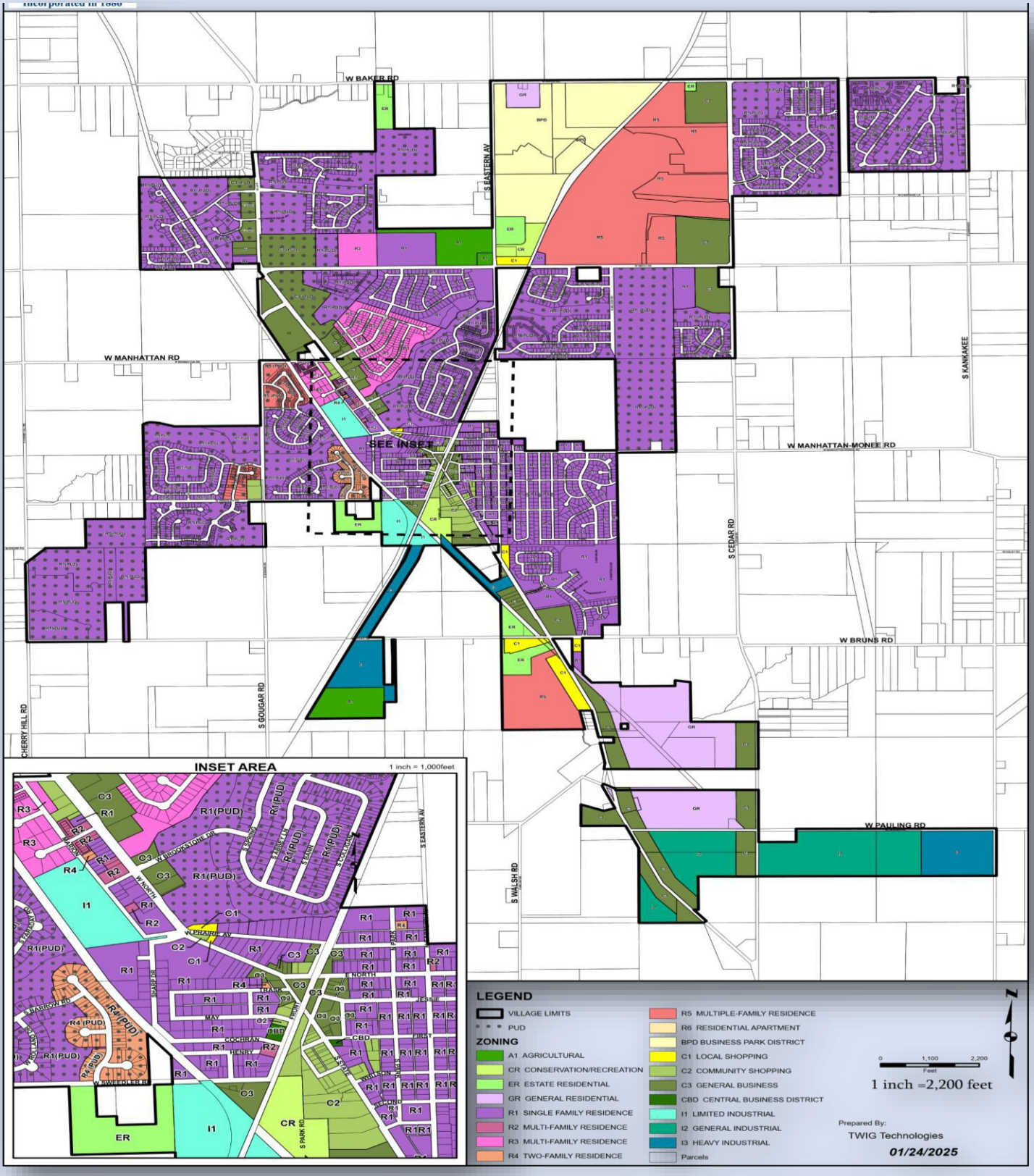


Zoning

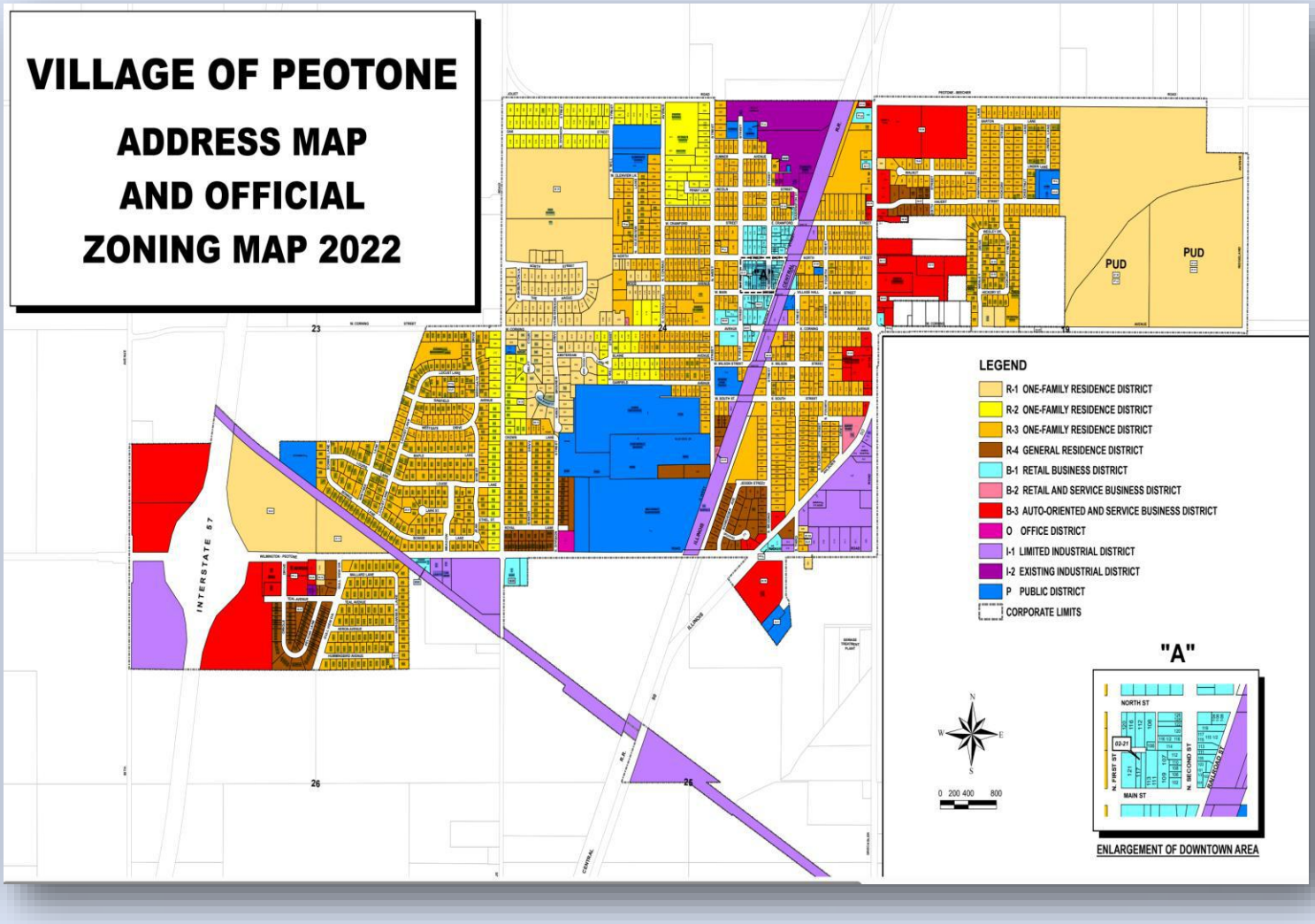
Zoning regulations across the District are governed by the Villages of Manhattan and Peotone, as well as Will County and unincorporated areas within the county. Zoning designations influence land use, density, building codes, and potential hazards. Continued monitoring of zoning changes supports long-range planning and helps anticipate future service demands.



VILLAGE OF MANHATTAN ZONING DETAIL



VILLAGE OF PEOTONE ZONING DETAIL

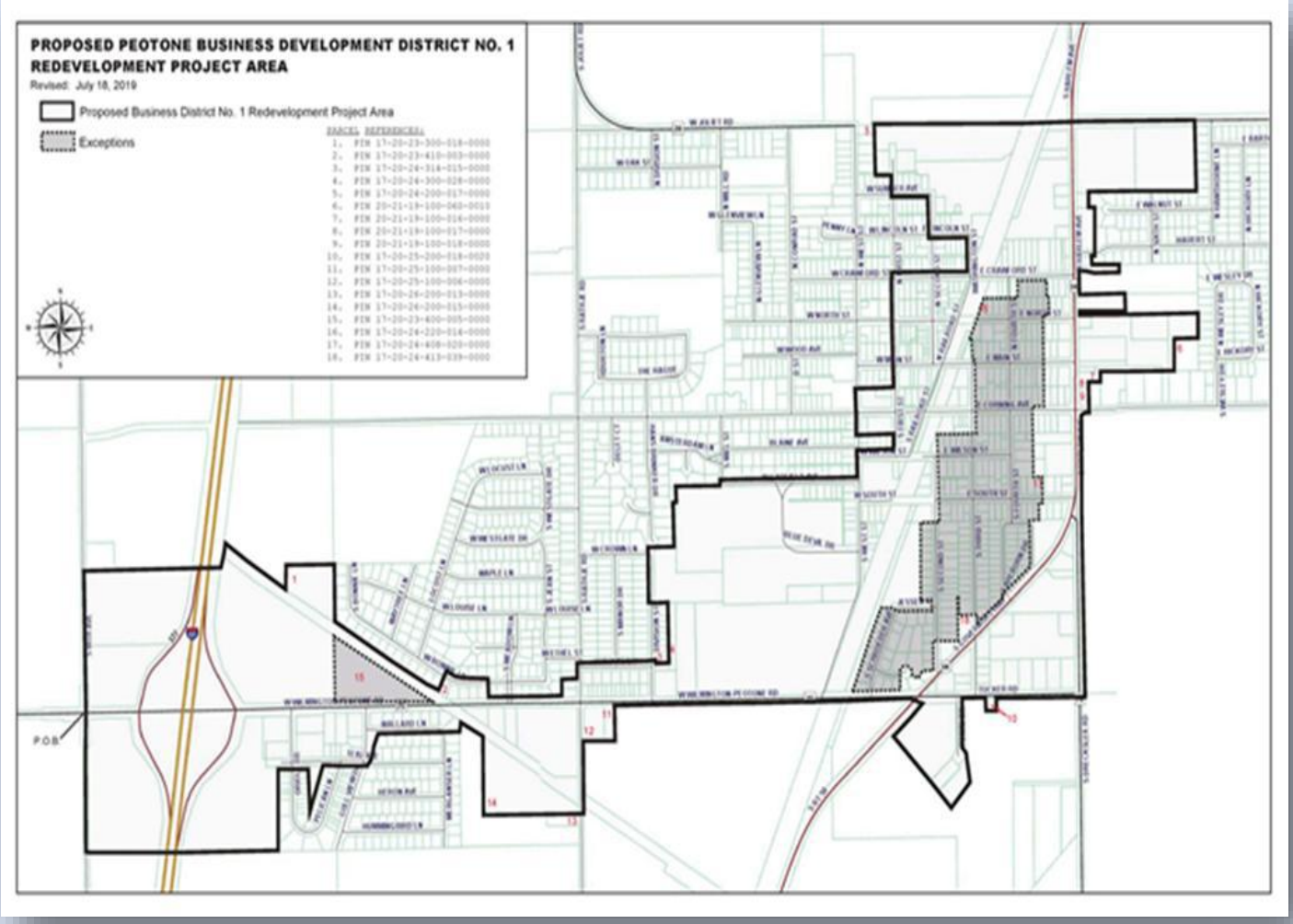



Front Street
Highway 52
McClure Street
Wabash Street
North Street
Whitson Street
First Street
Jessie Street


Aerial Perspective
McClure Street
Route 52
First Street
Whitson Street

BUSINESS REDEVELOPMENT PROJECT AREA - PROPOSED VILLAGE OF PEOTONE

A proposed Business Redevelopment Project Area within the Village of Peotone is under review. This potential economic development initiative may increase commercial density and infrastructure complexity in the southern portion of the District. The District will continue to monitor progress and proactively assess implications for fire protection, EMS response, and staffing needs.



Structure Inventory

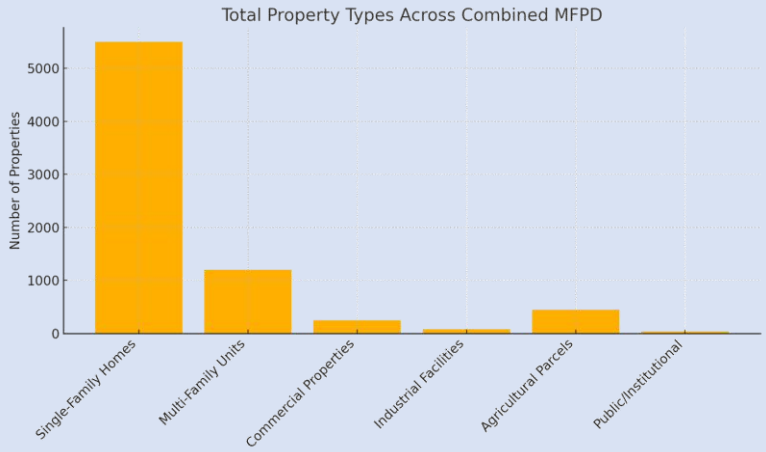
The District includes a broad range of building types, each contributing differently to community risk. These include:

- Wood-frame residential structures
- Multi-unit dwellings
- Tilt-up commercial/retail centers
- Pre-engineered metal buildings
- Agricultural barns and storage facilities
- Schools, churches, and government buildings

A regularly updated structure inventory supports pre-incident planning, target hazard identification, and fire flow analysis. The expanded MFPD encompasses a diverse range of land use and property types, spanning urbanizing neighborhoods and rural farmlands.

Property Type	Manhattan Area	Peotone Area	District Total
Single-Family Homes	3,500	2,000	5,500
Multi-Family Units	800	400	1,200
Commercial Properties	150	100	250
Industrial Facilities	50	30	80
Agricultural Parcels	200	250	450
Public/Institutional	20	15	35
TOTAL	—	—	**7,515**

This structure inventory supports deployment modeling, pre-planning, water supply analysis, and fire flow assessments. These numbers are expected to shift significantly as development intensifies, particularly in northern Manhattan and southern Peotone.



Building Permits

Building permit activity is tracked in partnership with local building departments. Permit trends provide early insight into residential and commercial growth, allowing the District to anticipate emerging risks, adjust staffing and training priorities, and validate capital planning decisions.

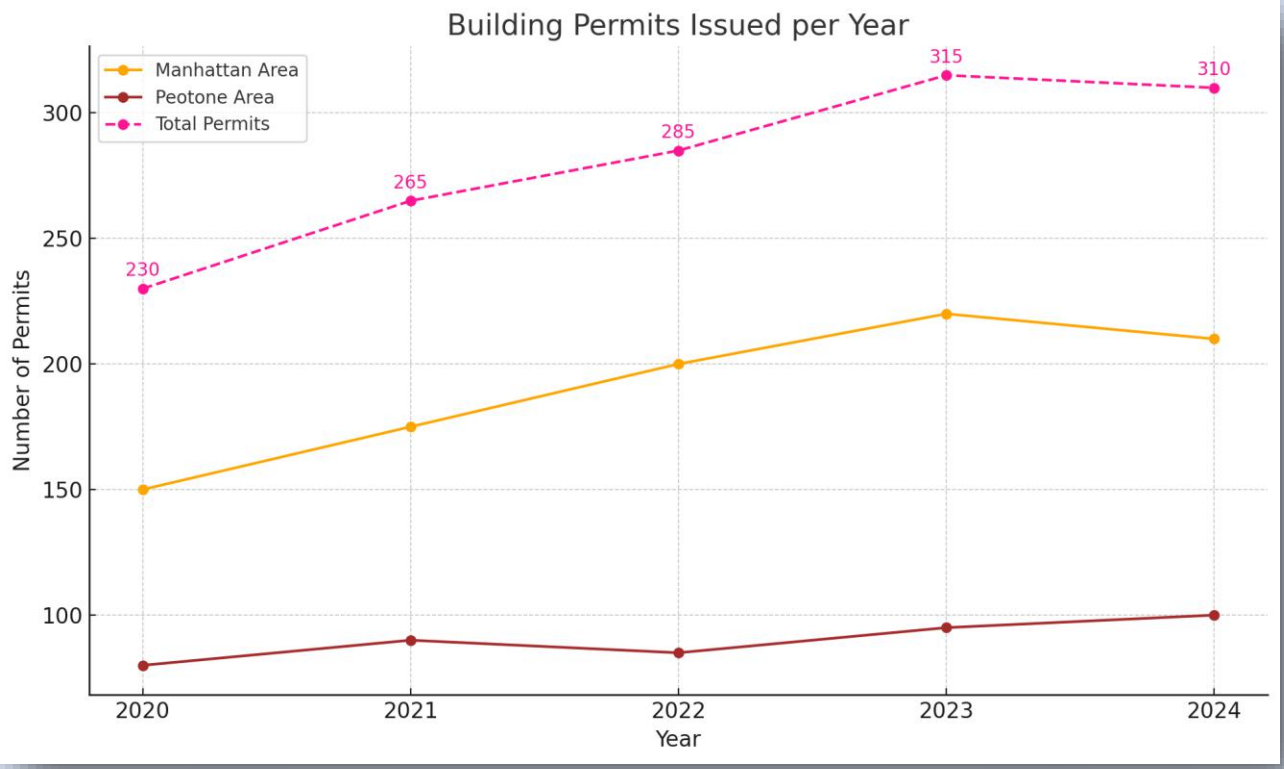
Building Permits – Combined District Development Trends

Development activity across the newly combined MFPD is tracked through the issuance of annual permits for new construction and upgrades. The table below includes both residential and commercial/industrial permits.

Permit categories include:

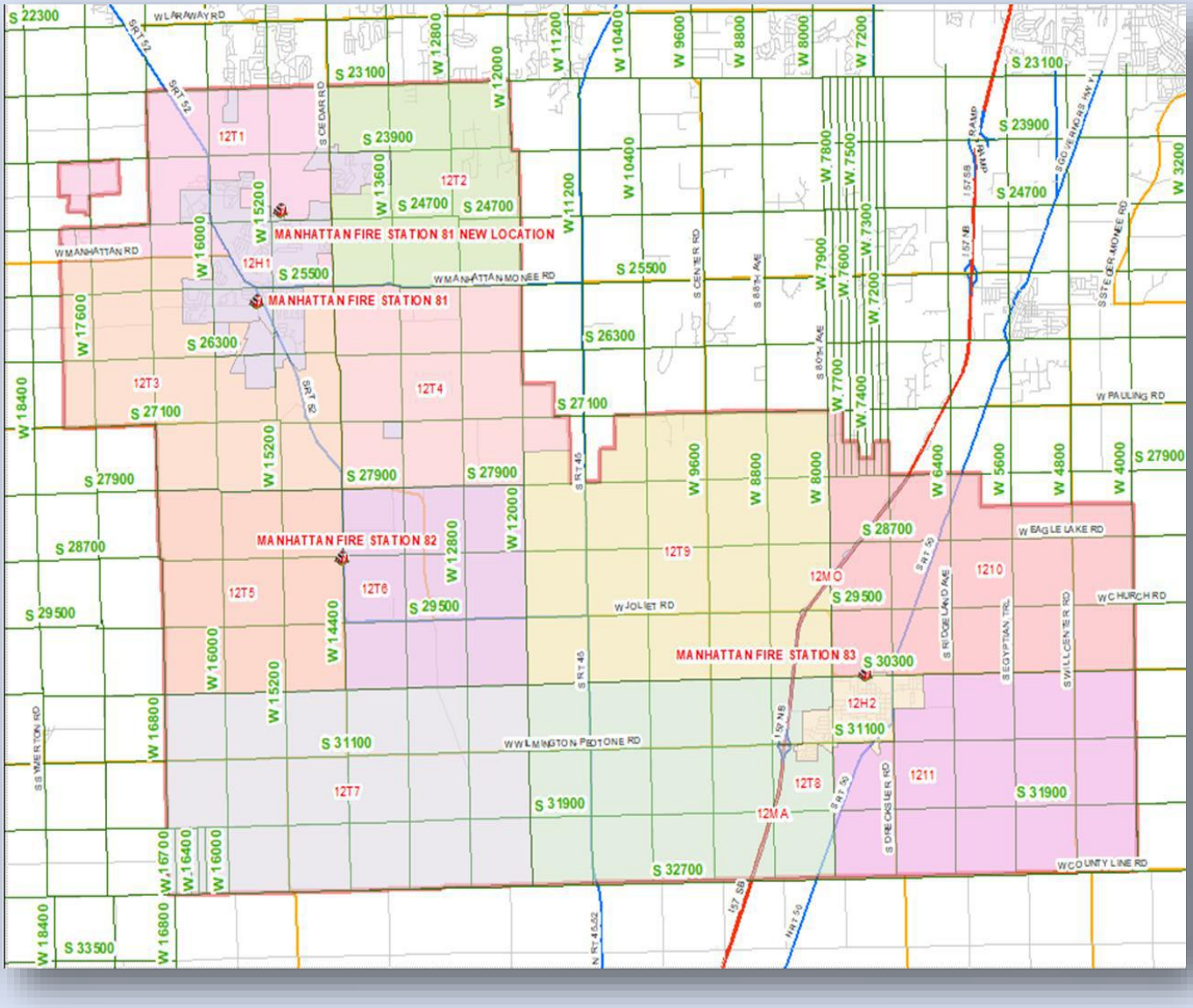
- New single-family homes
- Multi-family residential
- Commercial/industrial buildings
- Accessory structures (garages, pools, solar, etc.)

These trends directly impact fire risk modeling, inspection demands, and future staffing needs.



Planning Zones/Beats

For operational clarity and data analysis, the Manhattan Fire Protection District is divided into seven response "Beats," which align with roadway boundaries and jurisdictional lines. These zones support incident tracking, demand forecasting, and equitable resource distribution.



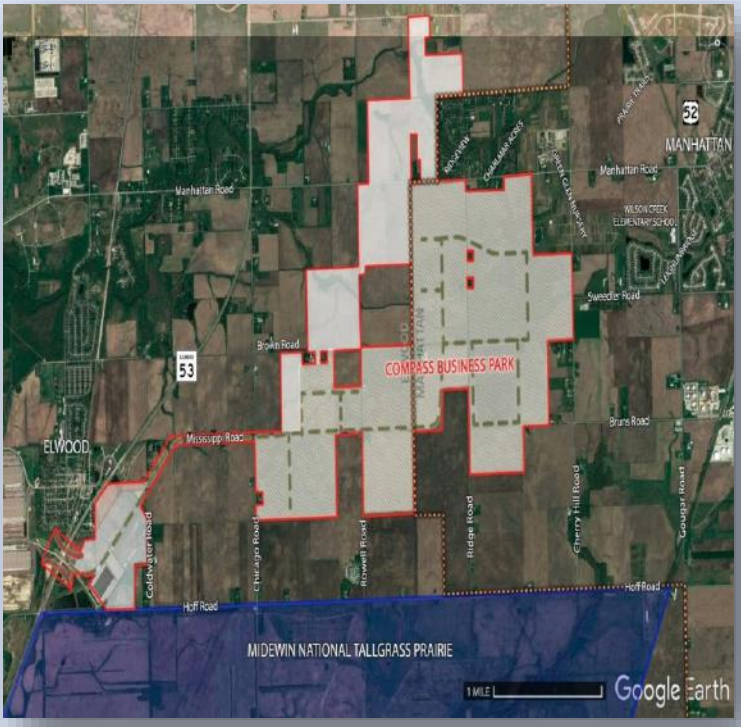
Planned Development

Compass Business Park

Compass Business Park, also known as the Third Coast Intermodal Hub, is a significant industrial warehousing and distribution project proposed by NorthPoint Development. Spanning approximately 3,800 acres (approximately 6 square miles) between the villages of Elwood and Manhattan, Illinois, this development is poised to have a substantial impact on the local economy and infrastructure.

Project Overview

- **Total Area**: ~3,800 acres
- **Location**: Between Elwood and Manhattan, Illinois
- **Developer**: NorthPoint Development



Economic Impact

The project is expected to bring substantial economic benefits, including:

- **Construction Phase**:
  - Up to 1,600 annual construction jobs
  - 2,300 indirect construction-related jobs
- **Operational Phase**:
  - 10,000 full-time permanent positions
  - 17,000 indirect jobs

These developments are expected to strengthen the local tax base, provide new revenue streams for schools and local government agencies, potentially reduce the tax burden on residents, and enhance funding for essential services and programs.

Infrastructure and Transportation

A key feature of Compass Business Park is the proposed "closed-loop" network designed to contain truck traffic within the development, minimizing the impact on local roads. However, once goods are processed and dispatched from the warehouses, there is a likelihood of increased truck traffic on roadways within the Manhattan Fire Protection District (MFPD).

Public Safety Provisions

As part of the development agreement, NorthPoint has committed to contributing land for public safety purposes:

- **City of Joliet**: In 2021, the prior administration entered into an annexation agreement for Compass Business Park, which includes the dedication of up to 20 acres of land for water and wastewater system purposes. In January 2025, the Joliet City Council considered a resolution to accept the donation of 1.317 acres from NorthPoint for constructing a new water storage tank near Route 53 and West Breen Road, essential for delivering water to Joliet's southeastern area.
- **Manhattan Fire Protection District**: Given that a significant portion of the development falls within the MFPD's jurisdiction, similar contributions to public safety infrastructure may be anticipated.

Current Status

As of early 2025, the project has progressed notably:

- **Construction**: NorthPoint Development has initiated construction on the western side of Route 53, south of Millsdale Road, encompassing approximately 400 acres, or about 10% of the entire project.
- **Tenancy**: Major corporations, such as Target Corporation, have committed to occupying space within the development, signaling strong commercial interest.

Legal Considerations

The development has encountered legal challenges:

- **Lawsuits:** In May 2024, NorthPoint filed a federal lawsuit alleging rival developer CenterPoint Properties attempted to monopolize the warehouse market around the Joliet and Elwood intermodal yards. A Will County judge's order in March 2024 blocked NorthPoint from using Millsdale Road to connect over 3 million square feet of warehouse space to the intermodal yards, effectively halting further development.

Considerations for the Manhattan Fire Protection District

The MFPD should proactively engage with NorthPoint Development and local government entities to address the following:

Emergency Response Planning: Develop comprehensive strategies to manage potential increases in service demand resulting from the influx of businesses and increased traffic.

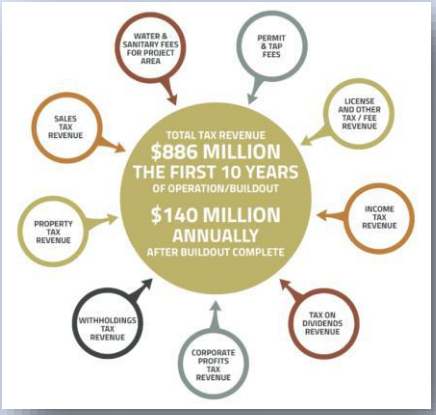
- **Infrastructure Collaboration**: Negotiate for contributions or support in enhancing public safety infrastructure, such as fire stations or training facilities, to serve the expanded community effectively.

- **Traffic Management**: Work with transportation authorities to monitor and mitigate the impact of increased truck traffic on local roadways, ensuring the safety and efficiency of emergency response routes.

The MFPD can ensure that the Compass Business Park project integrates seamlessly with the community's safety and infrastructure needs by actively participating in the planning and development. **On the Joliet FD side - NorthPoint, the developer, would contribute 15 acres of land on the site for a future police and firefighter training facility**.

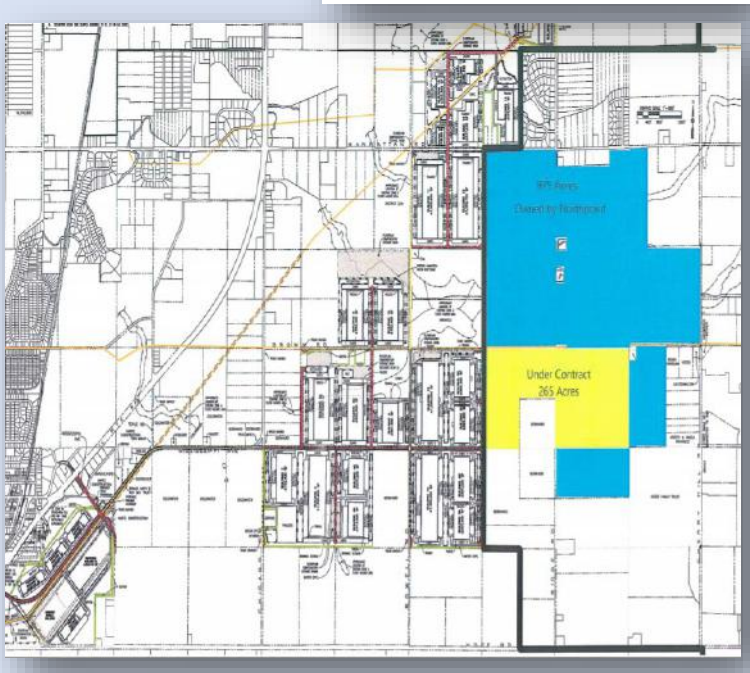
Will County: North America's Largest Inland Port

Over the past 15 years, Will County, Illinois, has emerged as **North America's largest inland port,** driven by **strategic infrastructure developments and a prime geographic location**. The county's logistics and freight capacity continue to **reshape regional traffic patterns and emergency response planning**.



Key Developments and Economic Impact

- **Intermodal & Freight Growth**
    - Two major **intermodal facilities** – **BNSF Logistics Park** and **Union Pacific's Global IV** – collectively handle over **3 million international and domestic containers annually**, transporting **goods valued at $65 billion**.
    - The county has **added over 100 million square feet** of new industrial space to support the growing logistics and warehousing industry.
- **Transportation & Infrastructure**
    - **Five Class I railroads** (BNSF, Union Pacific, Norfolk Southern, CSX, and Canadian National).
    - **Four major interstates** (I-55, I-80, I-57, and I-355).
    - **Three navigable waterways** that support bulk transportation.



- **Projected Growth & Expansion**
    - The county's **freight industry continues to grow**, with further expansion plans west of the **Manhattan Fire Protection District (MFPD)** in nearby **Joliet and Elwood**.
    - Continued industrial development will **increase the demand for emergency services, impact traffic patterns, and require updated response strategies** for MFPD.

Laraway Road Corridor & Infrastructure Upgrades

The **Will County Division of Transportation (WCDOT)** has designated **Laraway Road** as a **major county highway** and a vital component of **Will County's Build Will Transportation Plan**. The corridor extends from **US Route 52 to Harlem Avenue**, with ongoing planning and improvements to **accommodate rising traffic volumes**.

Project Phases & Timeline

- **Phase I:** Completed in **December 2022**, including environmental studies and preliminary engineering.
- **Phase II:** Began in **late 2022**, focusing on **detailed design and right-of-way acquisition**.
- **Phase III:** Construction is **expected to begin in 2026**, pending final funding approvals.

Laraway Road's Impact on MFPD

While Laraway Road is NOT within the Manhattan Fire Protection District (MFPD) boundaries, the roadway expansion will directly impact the District in multiple ways:

- ✓ **Increased Traffic Congestion** – Industrial growth **will push more truck and commuter traffic** onto roadways connecting to MFPD's jurisdiction.
- ✓ **Mutual Aid & Response Delays** – MFPD **emergency response times may be affected** if mutual aid is required for incidents on Laraway Road or if spillover traffic congests key intersections in the district.
- ✓ **Logistical & Transportation Hazards** – Increased truck movement **raises the risk** of hazardous materials (HAZMAT) incidents, vehicle crashes, and emergency medical calls.

Strategic Considerations for MFPD

Emergency Response Planning: MFPD should proactively engage with WCDOT and neighboring jurisdictions to address potential response time delays, mutual aid agreements, and resource allocation.

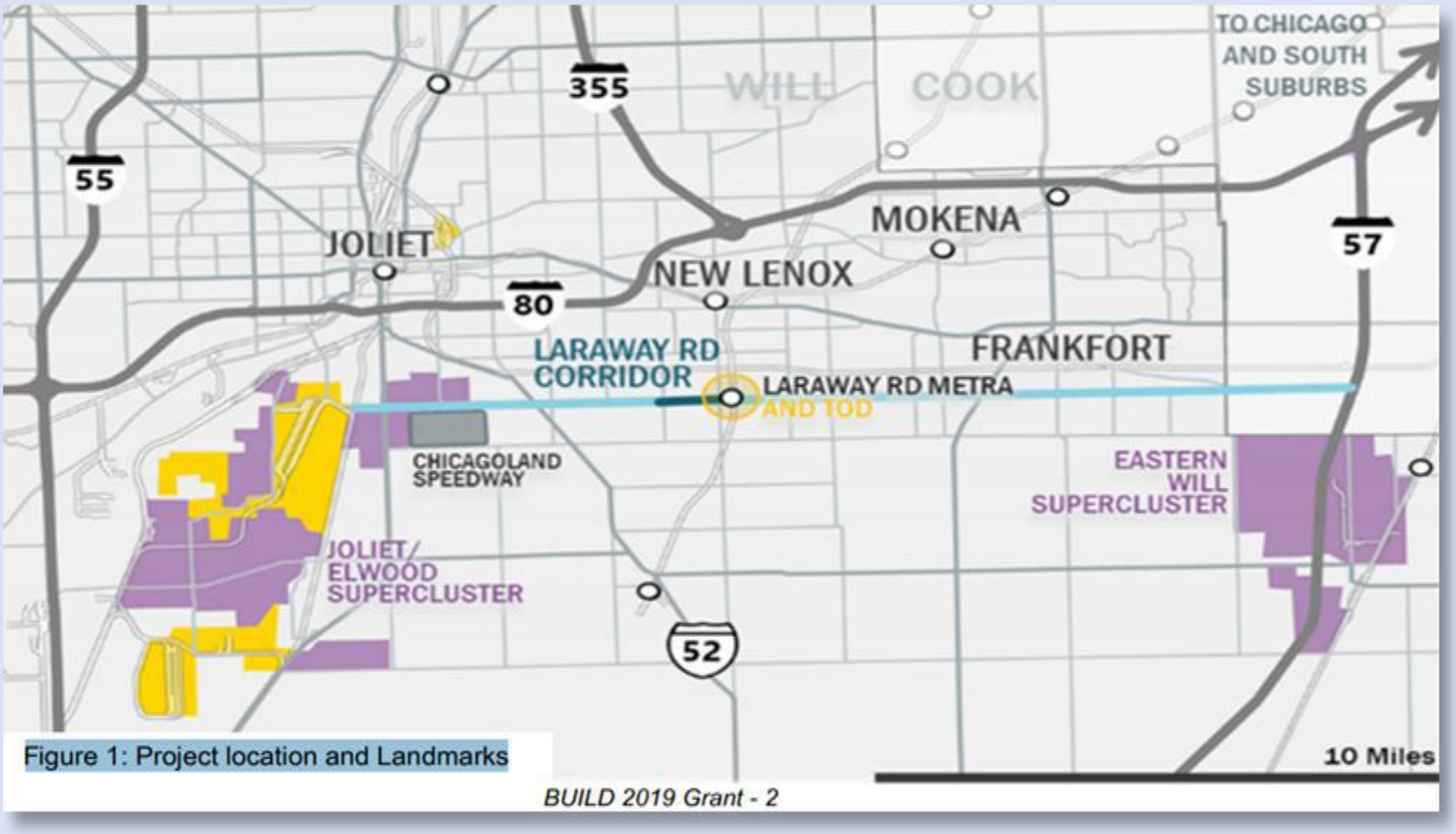


Figure 1: Project location and Landmarks

BUILD 2019 Grant - 2

PROGRAMS & SERVICES

SECTION II

SECTION 2 - Programs & Services

The Manhattan-Peotone Fire Protection District (MFPD) offers a comprehensive range of all-hazards emergency response services through specialized divisions. Each division is aligned to meet operational demands, mitigate community risks, and support long-range planning. The District offers a diverse range of programs and services within the community. Programs and services reflect an all-hazard approach to planning and preparedness methodology, providing a response (reactive) and Community Risk Reduction (CRR) (proactive) framework, including fire, EMS, and natural disaster preparedness.

This document summarizes the core mission, responsibilities, recent performance highlights, and CRA/SOC linkages for each functional division. It reflects current capabilities following the merger of the Manhattan and Peotone Fire Protection Districts, ensuring a comprehensive understanding of how services are delivered across a growing and dynamic coverage area.

Community Risk Reduction (CRR) Division

Fire Prevention

The Village of Manhattan primarily handles Fire Prevention and inspection activities within its limits, as they are the legal Authority Having Jurisdiction (AHJ). Outside the village limits, the Fire District conducts property inspections, overseen by the Fire Marshal and a part-time Battalion Chief.

Public Education

The Life Safety Division plays a crucial role in the fire district's mission. The Division is responsible for developing and implementing programs and policies that prevent or reduce the chance of emergencies, such as loss of property, loss of life, personal injury, or environmental damage. The Division is also responsible for providing public education and coordinating special events.

Core Mission:
To prevent emergencies and increase community resilience through proactive education, outreach, and behavior-based risk reduction.

Capabilities & Responsibilities:

- School and senior facility programs (K–12, “Matter of Balance,” etc.)
- CPR/AED, First Aid, and Stop the Bleed instruction
- Home safety checks, smoke alarm installs, and extinguisher training
- Led by a full-time Life Safety Educator

Community Risk Reduction (CRR) Overview

A successful Community Risk Reduction (CRR) program enables the District to proactively lower all-hazard risks by blending education, enforcement, engineering, economic incentives, and emergency response—the **"5 E's"** of risk reduction. Together, these pillars influence behavior, improve safety outcomes, and promote a resilient, prevention-focused culture throughout our service area.

The 5 E's of Community Risk Reduction

1. Education

Public fire and life safety education remains the cornerstone of our CRR strategy. By increasing community knowledge about common risks, prevention strategies, and emergency actions, we empower individuals to take ownership of their own safety. Education builds awareness, fosters preparedness, and strengthens partnerships between residents and responders.

2. Enforcement

The District supports compliance through inspections, code enforcement, and collaboration with local authorities. When fire codes and life safety regulations are consistently enforced, the entire community benefits from a safer built environment. Enforcement ensures accountability and drives a culture of shared responsibility.

3. Engineering

Modern fire protection relies heavily on engineered solutions—such as sprinkler systems, smoke alarms, and fire-resistant materials—which mitigate risk at its source. Code-compliant design and construction slow fire spread, protect egress paths, and buy time for safe evacuation and fire department intervention.

4. Economic Incentives

Offering financial motivations—such as tax breaks, insurance discounts, or grant-funded alarm installations—helps make fire safety upgrades more accessible and attractive. When businesses and residents are rewarded for reducing risk, they're more likely to invest in proactive safety measures.

5. Emergency Response

Despite best efforts, emergencies will occur. A highly trained, well-equipped, and strategically deployed response system remains essential. An effective emergency response minimizes damage, saves lives, and reassures the public that help will be available when it matters most.

Public Education and Prevention

The District's Public Education and Fire Prevention Bureau (PubEd/FPB) designs and delivers targeted programming that addresses today's most pressing life safety challenges. From school-based fire safety and senior fall prevention to business education and CPR training, these efforts focus on **keeping crises from happening in the first place**.

We provide tailored outreach to:

- **Students** (fire drills, Learn Not to Burn, babysitting safety)
- **Seniors** (fall prevention, home safety)
- **Businesses** (evacuation drills, extinguisher training)
- **Residents** (smoke/CO alarm installs, CPR, Stop the Bleed)

Our goal: **Prevent emergencies, protect lives, and strengthen community resilience.**

2020-2024 Metrics:

CRR CATEGORY	2020 OFFERED	2020 REACH	2021 OFFERED	2021 REACH	2022 OFFERED	2022 REACH	2023 OFFERED	2023 REACH	2024 OFFERED	2024 REACH	Total OFFERED	Avg Yr	Total REACH	Avg Yr
Events / Block Parties / Parades	72	8,420	13	1,450	14	2,315	29	7,232	62	8,130	190	38	27,547	5,509
Older Adults / Falls Prevention / Senior Safety	10	83	12	244	12	295	31	360	46	288	111	22	1270	254
Fire Safety Education: Pre-K, School Age, Adults, Seniors	17	1,185	11	1,337	20	1,703	34	2,635	66	4,445	148	30	11,305	2,261
Fire Drills / Active Shooter Drills	5	1,820	8	2,756	9	3,565	13	4,174	13	4,540	48	10	16,855	3,371
Fire Extinguisher Training	1	39	4	57	1	10	4	52	2	25	12	2	183	37
First Aid / Stop the Bleed	1	180	12	131	11	131	15	648	6	193	45	9	1283	257
Smoke Alarm / CO Alarm Install / Battery Replace	5	5	9	9	15	15	11	21	22	76	62	12	126	25
Babysitting	2	27	6	68	3	16	4	52	2	25	17	3	188	38
CPR	19	217	24	275	20	384	15	437	28	535	106	21	1848	370
Fire Station Tour	1	25	2	231	7	290	5	252	10	277	25	5	1075	215
Rural Address Sign & Residential Knox Box	3	3	3	3	4	4	10	10	18	18	38	8	38	8
Carseat	10	10	9	10	18	58	38	46	37	40	112	22	164	33
TOTAL	146	12,014	113	6,571	134	8,786	209	15,919	312	18,592	914	183	61,882	12,376

Public Education Highlights (2020–2024)

Top 5 Most Frequently Offered Programs

Program	Total Offered	Avg/Year
Community Events/Block Parties/Parades	190	38
Fire Safety Education (All Ages)	148	30
CPR	106	21
Older Adults/Falls Prevention	111	22

Car seat Installations	112	22

Top 5 Highest Reach Programs

Program	Total Reached	Avg/Year
Community Events/Block Parties/Parades	27,547	5,509
Fire Drills/Active Shooter Drills	16,855	3,371
Fire Safety Education (All Ages)	11,305	2,261
CPR	1,848	370
First Aid/Stop the Bleed	1,283	257

Total Outreach Summary

- Programs Offered (2020–2024): **914**
- People Reached (2020–2024): **61,882**
- Average Programs Offered per Year: **183**
- Average People Reached per Year: **12,376**

Notable Trends:

Significant Growth: Program offerings increased from **146 in 2020** to **312 in 2024**, more than doubling the outreach.

Post-COVID Recovery: 2021 shows a dip in both offered programs and attendance (likely due to COVID-related factors), followed by a steady recovery and growth.

Community events and school programs dominate both in volume and reach, suggesting strong community integration and effective school partnerships.

The Manhattan Fire Protection District (MFPD) has demonstrated a strong and growing commitment to proactive community risk reduction through its public education efforts. Between 2020 and 2024, MFPD delivered a total of **914 public education programs**, reaching **over 61,800 community members** across a diverse range of age groups and risk categories.

Despite the operational challenges presented during the COVID-19 pandemic, the District rebounded quickly, nearly **doubling program offerings** from 146 in 2020 to 312 in 2024. This growth reflects strategic investments in outreach coordination, a return to in-person engagement, and an evolving curriculum aligned with both community needs and national fire service best practices.

Program Delivery

MFPD's education strategy is broad and inclusive, with outreach activities falling into three primary categories:

- **Community Engagement Events** – These include block parties, parades, and neighborhood events, which remain the most frequent and highest-impact offerings. Over the course of five years, these events were offered 190 times, reaching 27,547 residents and establishing them as the cornerstone of public engagement.
- **School & Youth Fire Safety Education** – Through pre-K "Learn Not to Burn" programs, school visits, fire drills, and active shooter training, the District reached more than **27,000 students and educators** from 2020 to 2024. Fire drills and active shooter training alone accounted for **16,855 individuals reached**, the second-highest outreach category.
- **Specialized Risk Education** – The District also emphasizes risk-targeted education with programs tailored to vulnerable populations, including:
    - Older Adult Safety/Falls Prevention (111 programs offered)
    - CPR and First Aid Training (151 combined programs)
    - Car seat Safety Checks (112 programs)
    - Smoke/CO Alarm Installations and Battery Replacements
    - These offerings not only reduce risk but also directly support life-saving interventions in cardiac arrest, fire prevention, and child passenger safety.

Impact and Reach

MFPD averaged **183 programs per year**, reaching **over 12,000 individuals annually**. Notably, the five-year total shows:

- **148 fire safety education programs** delivered to school-age children, adults, and seniors.
- **106 CPR training sessions** and **45 First Aid/Stop the Bleed programs**, reinforcing a community-wide culture of readiness.
- There was a consistent increase in **home safety services**, including **Smoke/CO alarm programs** and **Residential Knox Box installations**.

Strategic Alignment

These outreach activities support the District's mission to reduce risk before emergencies occur. They are also aligned with accreditation and ISO objectives, including:

- Community Risk Reduction (CRR) documentation
- Risk-specific education targeting vulnerable populations
- Integration of NFPA 1300 and 1730 guidelines for public education

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CRA/SOC Considerations:

- Match program delivery to high-risk populations
- Evaluate public education ROI through CPR survival and smoke alarm data
- Target underserved areas using incident overlays

Communications & Dispatch

Core Mission:

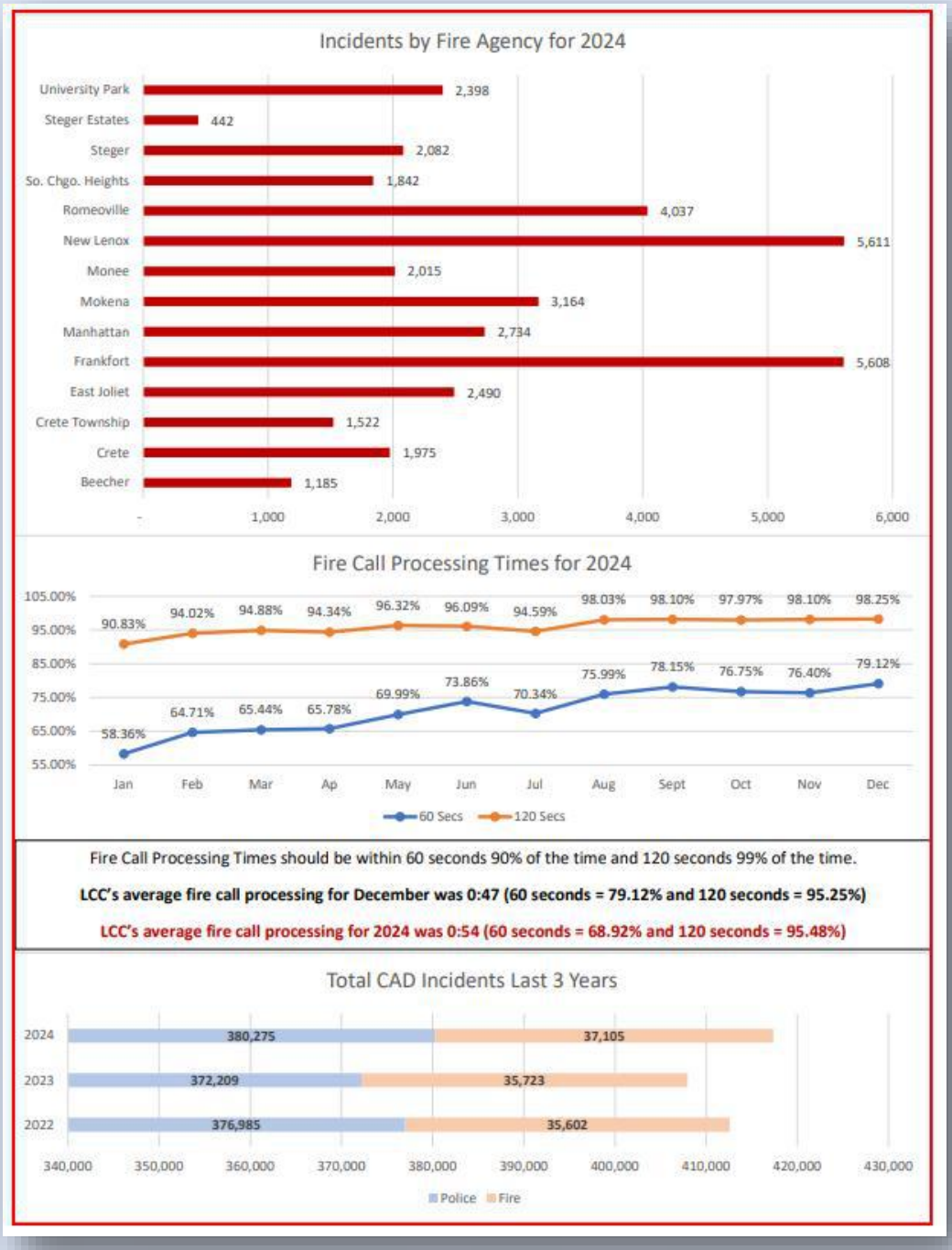
To ensure accurate, rapid, and reliable dispatching of fire and EMS units through centralized communications technology and interagency coordination.

Capabilities & Responsibilities:

- Laraway Communications Center (LCC) handles 911 call processing and CAD dispatch.
- Consolidated with **31** agencies for seamless interoperability
- The Peotone merger added rural complexity and coverage needs
- Standardized protocols, GIS call mapping, and unit tracking

2024	9-1-1 Calls	15 Secs	20 Secs	% of Calls
LCC	104,156	96.73%	98.19%	37.46%
Wescom	97,347	99.51%	99.57%	35.02%
Joliet	76,508	99.00%	99.43%	27.52%

2024	Admin Calls	15 Secs	20 Secs	% of Calls
LCC	196,221	97.07%	98.67%	39.66%
Wescom	188,905	99.45%	99.71%	38.18%
Joliet	109,615	99.17%	99.51%	22.16%



CRA/SOC Considerations:

- Track call processing and dispatch times vs NFPA 1221
- Analyze trends in peak volume, unit availability, and cross-staffing
- Use incident mapping to inform station alerting and SOC coverage models (including AVL closest available dispatching protocols)

Training & Professional Development Division

The District is tasked with executing a wide range of **emergency and non-emergency operations**, requiring personnel to be highly skilled, adaptable, and mission-ready. To meet this demand, **continuous training is not optional—it's essential.**

Training and learning in the fire service is a career-long commitment. From recruit-level orientation to advanced officer development, our members must train consistently to stay safe, proficient, and prepared for evolving hazards.

Training Division Mission

The **Training Division** drives both individual and organizational success by developing and delivering programs that support:

- Operational Readiness
- Employee Development
- Departmental Enrichment
- Compliance with Regulatory Standards

Training is conducted at the **local, regional, and state level**, leveraging internal expertise, MABAS partnerships, and certified instructional resources.

Regulatory Oversight & Industry Standards

The District's training framework aligns with standards and requirements established by leading regulatory and accrediting bodies:

These agencies define minimum competencies and ensure consistency in training delivery across the fire service. To meet these expectations, **departmental training must remain dynamic, adaptive, and forward-looking**.

Core Mission:
To maintain operational excellence through structured, scenario-based, and performance-driven training aligned with modern hazards.

Capabilities & Responsibilities:

- Shift-based drills, quarterly benchmarks, and annual certs
- Use of Station 83 Burn Tower for live fire evolution

- Training partnership with MABAS, IDOL, and regional fire academies
- RMS tracking of hours, performance, and compliance
- Update certifications across all required disciplines

2024 Metrics:

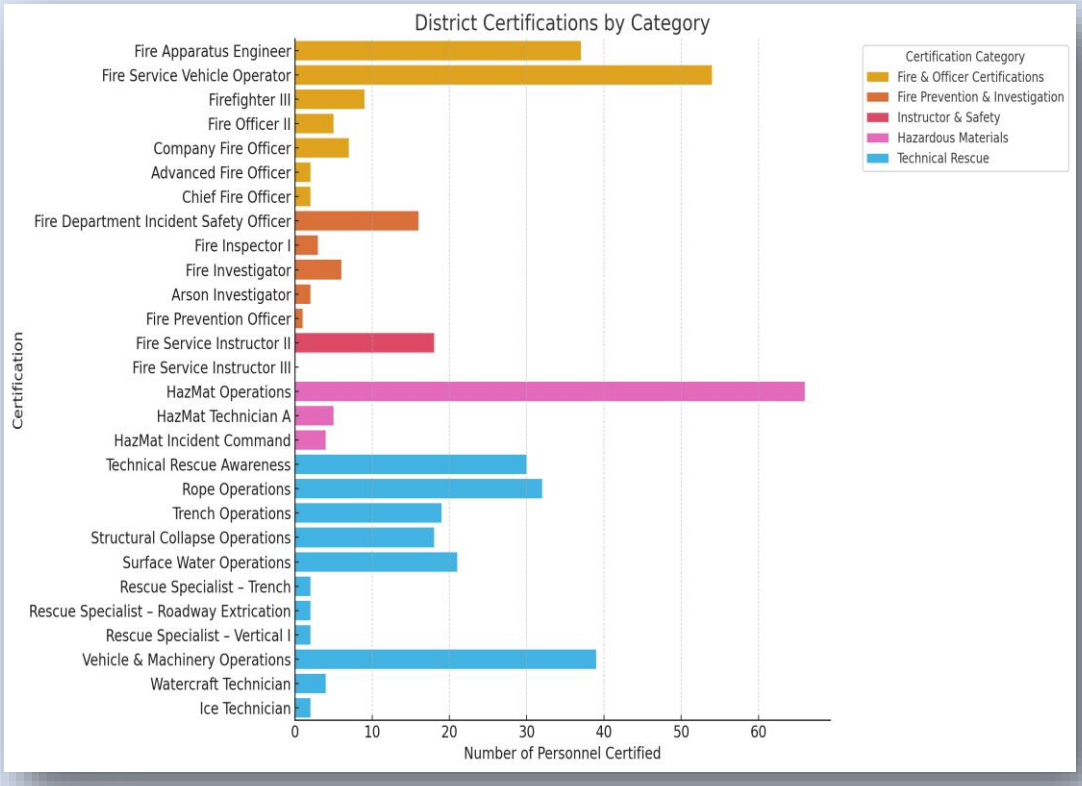
- 27,952 training completions
- 22,571 hours logged
- 437 hours average per member
- 78 certifications across 20 disciplines

69,341 Hours of Training

2020-2024

Year	Completions	Total Training Hours	Active Members	Average Completions	Average Hours
2020	7,988	5,802	40	***200***	145
2021	12,930	10,002	52	***249***	192
2022	13,758	10,538	56	***246***	188
2023	25,093	20,428	66	***380***	310
2024	27,952	22,571	64	***437***	353
Total	**87,721**	**69,341**			
Average	***17,544***	***13,868***	***55.6***	***302***	***238***

The District currently maintains a highly trained workforce with specialized certifications in fire suppression, rescue, hazardous materials, and technical operations. This multi-disciplinary training model enhances operational capability, supports regional mutual aid roles, and aligns with NFPA 1710 and ISO grading criteria.



CRA/SOC

Considerations:

- Align training to real-world calls and regional risks
- Evaluate competency gaps and performance under pressure
- Support ISO scoring and officer development & CPSE credentialing benchmarks

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# Personnel Certified	Certification	# Personnel Certified	Certification 3
2	Advanced Fire Officer	66	Hazardous Materials Operations
30	Advanced Technician Firefighter	6	Hazardous Materials Technician
2	Arson Investigator	5	Hazardous Materials Technician A
63	Basic Operations Firefighter	5	Hazardous Materials Technician B
2	Chief Fire Officer	2	Ice Technician
1	Common Passenger Vehicle Rescue	4	Rescue Spec-Confined Space/Trench Rescue Awareness
7	Company Fire Officer	2	Rescue Specialist - Trench
10	Confined Space Operations	10	Rescue Specialist-Confined Space
37	Fire Apparatus Engineer	2	Rescue Specialist-Roadway Extrication
12	Fire Department Health and Safety Officer	1	Rescue Specialist-Structural Collapse Awareness
16	Fire Department Incident Safety Officer	2	Rescue Specialist-Vertical I/Ropes and Rigging
12	Fire Department Safety Officer	5	Rescue Specialist-Vertical II/High Angle
3	Fire Inspector I	32	Rope Operations
3	Fire Inspector II	6	Rope Technician
6	Fire Investigator	18	Structural Collapse Operations
14	Fire Officer I	5	Structural Collapse Technician
5	Fire Officer II	21	Surface Water Operations
1	Fire Officer III	5	Swiftwater Technician
1	Fire Prevention Officer	30	Technical Rescue Awareness
29	Fire Service Instructor I	2	Training Program Manager
18	Fire Service Instructor II	19	Trench Operations
1	Fire Service Instructor III	9	Trench Technician
54	Fire Service Vehicle Operator	39	Vehicle and Machinery Operations
22	Firefighter II	10	Vehicle and Machinery Technician
9	Firefighter III	4	Watercraft Technician
18	Hazardous Materials Awareness	1	Youth Firesetter Intervention Specialist
4	Hazardous Materials Incident Command		

Emergency Medical Services (EMS) Division

Emergency Medical Services (EMS) represent a core component of MFPD's all-hazard response system and consistently account for the largest percentage of total incidents, historically ranging from 68% to 74% of all calls for service. These include medical emergencies, traumatic injuries, overdoses, cardiac arrests, respiratory distress, and vehicle accidents. EMS also provides critical support in mass-casualty events and public health crises.

⚠️ Fact Check: Survival rates for sudden cardiac arrest drop by 10% for every minute without CPR or defibrillation. Community response and EMS speed are critical.

55% of all Incidents are EMS

2020-2024

Average

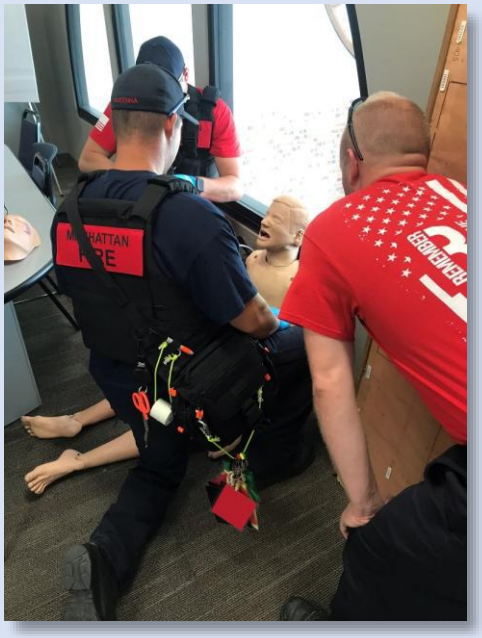
5,001 *incidents per year*

13.7 *incidents per day*

Core Mission:
To provide advanced, time-critical medical interventions and compassionate patient care, serving as the first link in the continuum of emergency medicine.

Capabilities & Responsibilities:

- ALS-level care from all front-line engines and ambulances
- 37 Paramedics and 14 EMTs, all cross-trained as Firefighters/Medics
- Medical direction from Silver Cross Hospital
- Equipment includes ZOLL One Monitors, AutoPulse, and advanced airway/trauma kits.
- CPR, AED, Stop the Bleed, and First Aid training district-wide



Overview

2024 Metrics:

- EMS call volume: 5,221 incidents (2020-2024) – 1,306 in 2024
- Cardiac Arrest Save Rate (V-Fib): 33% - 2024 (national avg: 10.2%)
- Pre-arrival CPR Provided: 26% of arrests

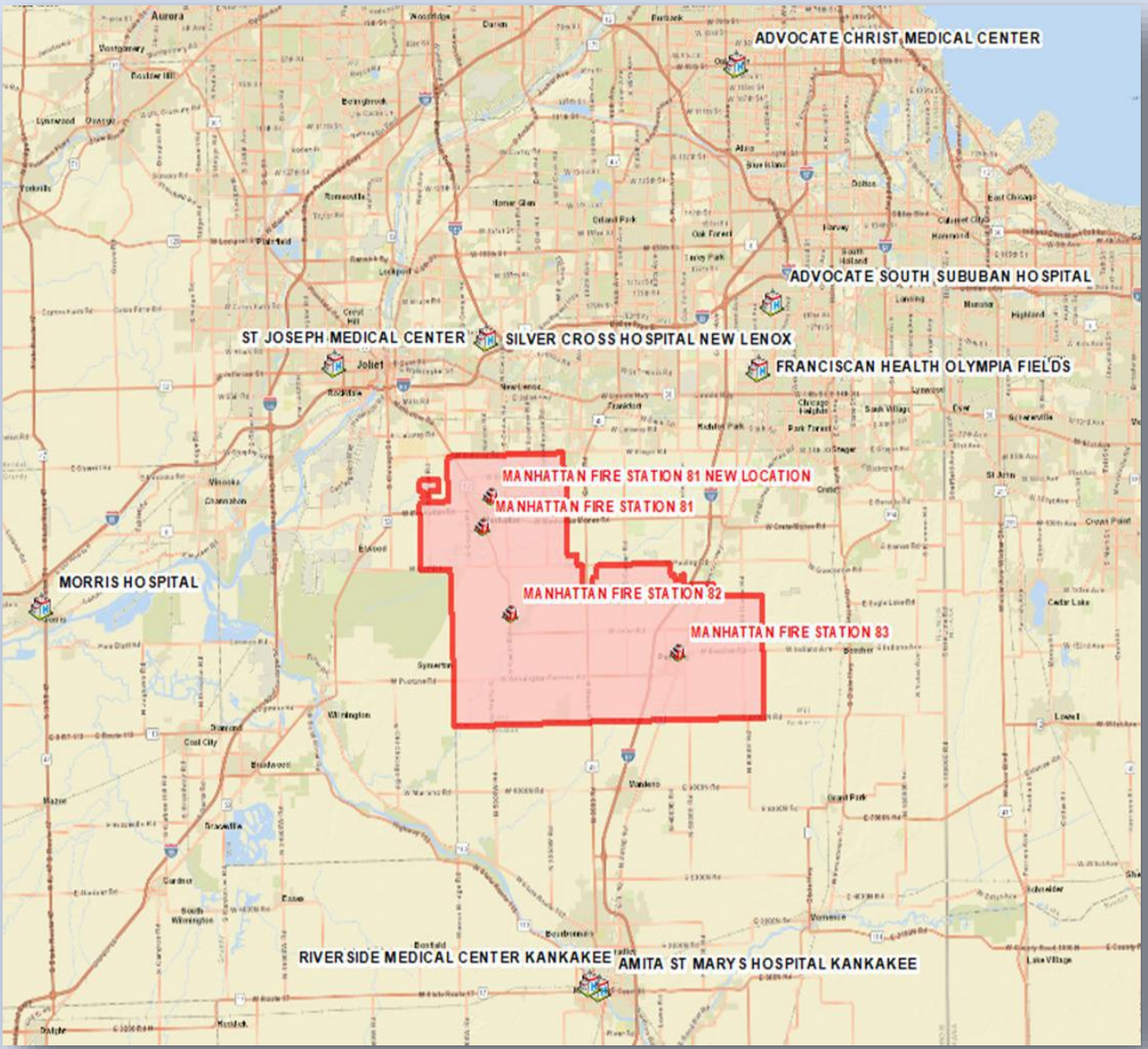
CRA/SOC Considerations:

- Monitor EMS via heatmaps, transport time dashboards, and call surges
- Target high-utilization areas with public health outreach
- Measure the impact of CPR training and match deployment to patient density
- Optimize coverage based on community growth and risk
- Monitor Stroke, Trauma, and other EMS trends through NEMSQA.

Hospitals

The District is part of the Illinois Department of Public Health (IDPH) - Region 7 EMS System and transports patients to:

- **Silver Cross** – New Lenox (Resource Hospital)
- **Prime St Joseph** - Joliet
- **Franciscan Health -**Olympia Fields
- **Riverside Medical Center** - Kankakee
- **Prime St Mary** - Kankakee



Fire Suppression Division

Core Mission:

To protect life, property, and the environment through effective fireground operations that mitigate structural, vehicular, and wildland fires across urban, suburban, and rural environments.

Capabilities & Responsibilities:

- Deploy multi-role fire companies from three strategically located stations (81, 82, 83)
- Perform both hydrant-based and tanker shuttle operations, supporting rural water supply
- Execute tactical operations: size-up, fire attack, search and rescue, ventilation, exposure control, salvage/overhaul
- Utilize pre-incident plans for target hazards and high-risk occupancies
- Engage in timed suppression drills, including lead-outs, pump operations, and live burns
- Maintain response-ready staffing with a minimum of 10- 13 Firefighters/Medics per shift

2024 Highlights:

- Avg. “Water on Fire” time: 8:00 (hydrant) / 8:09 (draft)
- Search drills: Victim located in 2:50, removed in 4:34
- Full-scale evolutions were conducted using Station 83’s burn tower

CRA/SOC Considerations:

- Evaluate response time compliance vs. NFPA 1710 (urban) & 1720 (rural)
- Use GIS-based fire incident heatmaps to model apparatus placement and station coverage
- Integrate fire loss data and incident types into CRR efforts and inspection targeting
- Classify buildings using Fire Risk Assessment models to prioritize resources
- Monitor and evaluate the ability to maintain structure fires to the object or room of origin.

Hazardous Materials Division

Overview:

Hazardous Materials (HazMat) risks in the District stem from commercial and agricultural operations, transportation routes (including rail and highways), utilities, and natural gas infrastructure. MFPD is primarily responsible for initial hazard recognition, scene isolation, and support to regional hazardous materials (HazMat) teams.

Preparedness is key. Most HazMat calls are low frequency, but a single failure can be catastrophic.

Core Mission:
To identify, contain, and mitigate hazardous material releases through rapid scene control, environmental protection, and multi-agency coordination.

Capabilities & Responsibilities:

- Response to spills, vapor releases, CO/gas calls, and unknown substance investigations
- MABAS Division 19 HazMat support (post-Southwest HazMat transition)
- All members are Operations-level trained, and six are Technician-level trained
- Mapping of Tier II facilities and transport corridors

CRA/SOC Considerations:

- Map and model HazMat exposure risk across the district
- Maintain technician availability and quick-response capability
- Conduct annual drills for chemical, biological, and industrial scenarios

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Technical Rescue Division

The Technical Rescue Program within the District can respond to all types of technical rescue incidents, including ice, swift water, trench, confined space, building collapse, rope, elevator, and vehicle extrication. The response level for technical rescue incidents is at the operations level, with technicians available for each rescue discipline at the regional team level. All District members receive training at the awareness/operations levels for technical rescue responses, as outlined in NFPA 1670. The District is part of a regional team, known as C.A.R.T. (Combined Area Response Team – BLACK TEAM).

Core Mission:
To provide advanced rescue capabilities for low-frequency, high-risk emergencies involving entrapments, structural instability, collapse, water, or hazardous environments.

Capabilities & Responsibilities:

- Rope rescue, confined space, trench rescue, and structural collapse operations
- Specialized tools and a mobile rescue cache at Station 83
- Regional CART (Combined Area Rescue Team) deployments
- NFPA 1670 standards-based training
- Two trained members per discipline on every shift

2024 Highlights:

- Major incidents: Grain Elevator Rescue, Ranch Oaks Tornado, Pipeline Leak
- Tech Rescue can be relocated to Station 83 for enhanced realism

CRA/SOC Considerations:

- Forecast rescue types based on call history
- Ensure district-wide coverage with shift-qualified personnel
- Benchmark rescue arrival times and regional deployment efficiency

Fire Investigation Division

Core Mission:
To determine the fire origin and cause, identify contributing risk factors, and reduce recurrence through proactive community engagement and feedback.

Capabilities & Responsibilities:

- NFPA 921-based investigations
- Law enforcement collaboration for incendiary cases
- Use of ImageTrend RMS for analysis and reporting
- Five trained investigators led by Lt. Kolosh

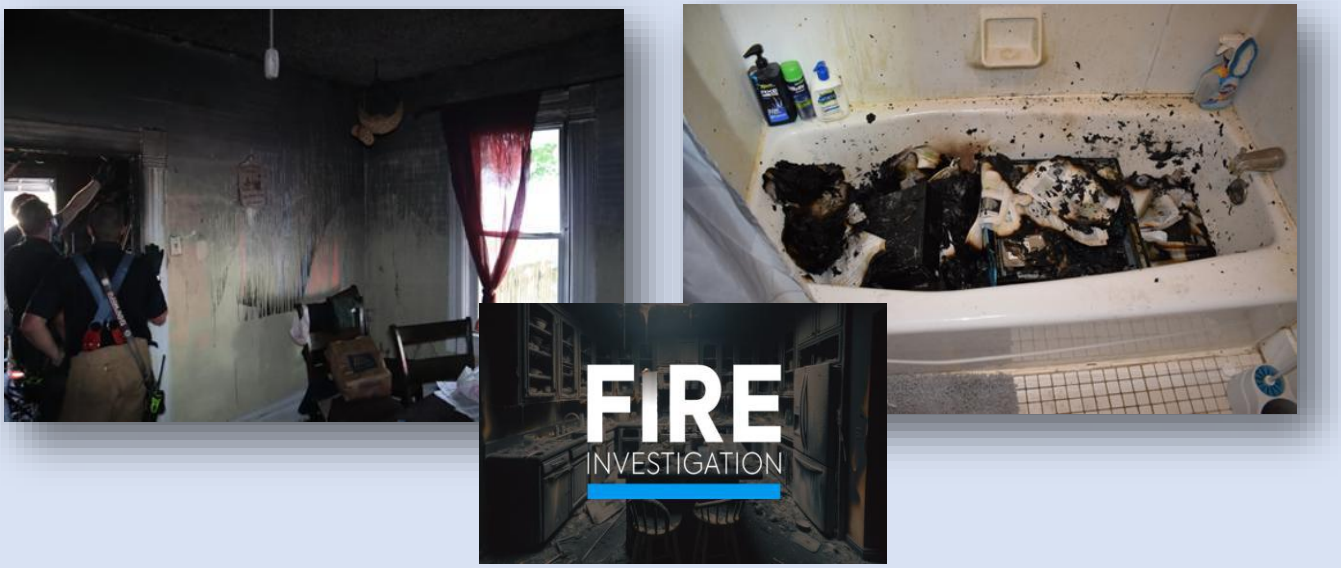
2024 Highlights:

- 10 local investigations completed: 4 MABAS deployments
- Investigative equipment is standardized across all stations

CRA/SOC Considerations:

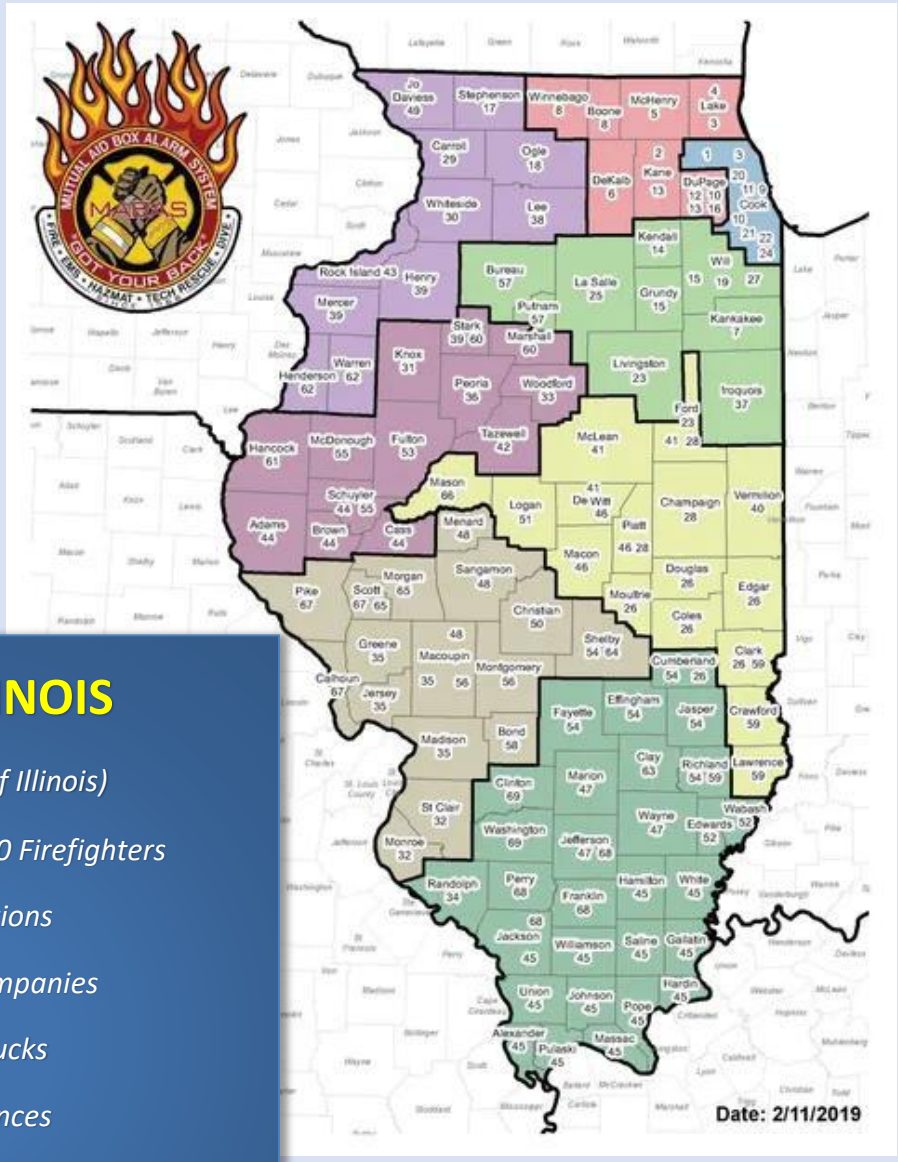
- Analyze ignition trends to guide prevention outreach
- Focus inspection efforts based on investigation data
- Track seasonal patterns for fire cause and human factors

Fire Investigations	2020	2021	2022	2023	2024	Total	*Average*	
	10	8	10	13	14	55	*11*	



Mutual Aid Box Alarm System (MABAS)

The Mutual Aid Box Alarm System (MABAS) is a comprehensive, statewide mutual aid network coordinating rapid emergency response and sustained operations for fire, EMS, and specialized incident teams across Illinois and neighboring states. Established in 1968, MABAS has evolved into a critical component of emergency management, ensuring standardized procedures and interoperability among member agencies.



MABAS ILLINOIS

102 *counties (all of Illinois)*

38.000 *of Illinois 40,000 Firefighters*

1.600 *Fire Stations*

2,735 *Engines Companies*

500 *Ladder Trucks*

1,300 *Ambulances*

250 *Heavy Rescue Squads*

1,000 *Water Tenders*

1.000+ *Additional Backup Emergency Vehicles*

40 *Hazmat Teams*

Mission and Purpose

MABAS-Illinois serves local fire agencies, MABAS Divisions, and state departments by providing a structured resource allocation and distribution system. Its mission encompasses cooperation, standardization, reliability, and continuous communication to meet customer expectations. When local resources are overwhelmed by human-made, technological, or environmental threats, MABAS mobilizes and deploys specialized teams to prevent further loss of life and property damage. MABAS divisions extend geographically from Lake Michigan to the Iowa border and southward toward

Kentucky, with collaborations extending into Wisconsin, Indiana, Michigan, Iowa, and Missouri. Major cities, such as Chicago, St. Louis, and Milwaukee, are members of MABAS.

Specialized Teams

MABAS offers specialized operations teams for hazardous materials response, underwater rescue and recovery, technical rescue, and urban search and rescue. These teams are equipped and trained to handle complex, large-scale incidents that require specialized skills and equipment.

Interoperability and Standards

A unique aspect of MABAS is its uniformity: all participating agencies adhere to the same agreement, ensuring seamless interoperability in communications, operations, and command structures. Member agencies agree to shared standards for incident command, staffing, terminology, and safety, operating on a standardized radio frequency (IFERN) and responding according to pre-determined "run cards" tailored to each jurisdiction's risk profile.

Deployment and Activation

MABAS facilitates both routine mutual aid responses and large-scale disaster deployments. MABAS division dispatch centers locally manage daily mutual aid responses. MABAS resources can be mobilized in declared disaster events by the Illinois Emergency Management Agency (IEMA) as official state assets, per a formal agreement between MABAS and IEMA. This structure ensures a scalable response and strategic deployment of specialty equipment throughout Illinois.

MABAS Division 19

The Manhattan Fire Protection District is an active member of MABAS Division 19, which includes the following agencies:

- East Joliet
- Frankfort
- Homer Township
- Lemont
- Lockport Township
- Manhattan
- Mokena
- New Lenox
- Orland
- Palos
- Palos Heights

Through this network, the District both provides and receives mutual aid support. Assistance can include station coverage during extended operations or direct response with personnel and apparatus. These pre-arranged agreements ensure resources are available when needed most, enhancing the overall safety and resilience of the communities served.

MISSION STATEMENT

MABAS 19 is a regionally based fire service organization that enhances life safety and reduces property loss by fostering interagency cooperation and implementing a unified, data-driven strategy that promotes fiscal responsibility.

VISION STATEMENT

"To foster a collaborative effort that enhances emergency services through the standardization and sharing of services, equipment, and operations, ensuring the highest level of support for each participating organization."

CORE VALUES

Collaboration
We foster strong partnerships between departments, agencies, and personnel. By working together, we ensure seamless interoperability, enhance operational effectiveness, and uphold the spirit of mutual aid.

Sharing
We are committed to the open exchange of knowledge, resources, and support. This culture of generosity strengthens our collective readiness and reinforces the regional fire service as a unified force.

Fiscal Responsibility
We steward public funds with integrity and efficiency. Through careful planning and accountability, we maximize the value of every dollar to support preparedness, training, and response.

Leadership
We lead by example, setting high standards for professionalism, decision-making, and service. Every member has a responsibility to uphold the mission and inspire others through action.

Proactivity
We stay ahead of emerging threats by anticipating needs, preparing for challenges, and implementing forward-thinking strategies. Readiness is not reactive—it's intentional.

Expertise
We continually train, educate, and refine our skills to ensure operational excellence. Our shared knowledge and specialized capabilities are the backbone of our mission success.

Capabilities & Responsibilities:

- Part of MABAS Division 19 (11 agencies)
- Strike teams, task forces, HazMat, USAR, and Dive rescue participation
- Shared resources, unified command, and training collaboration
- Monthly meetings, training, and education

CRA/SOC Considerations:

- Track mutual aid trends to identify staffing or apparatus gaps
- Use MABAS deployment data for scenario planning and drills
- Align with neighboring districts to optimize regional coverage

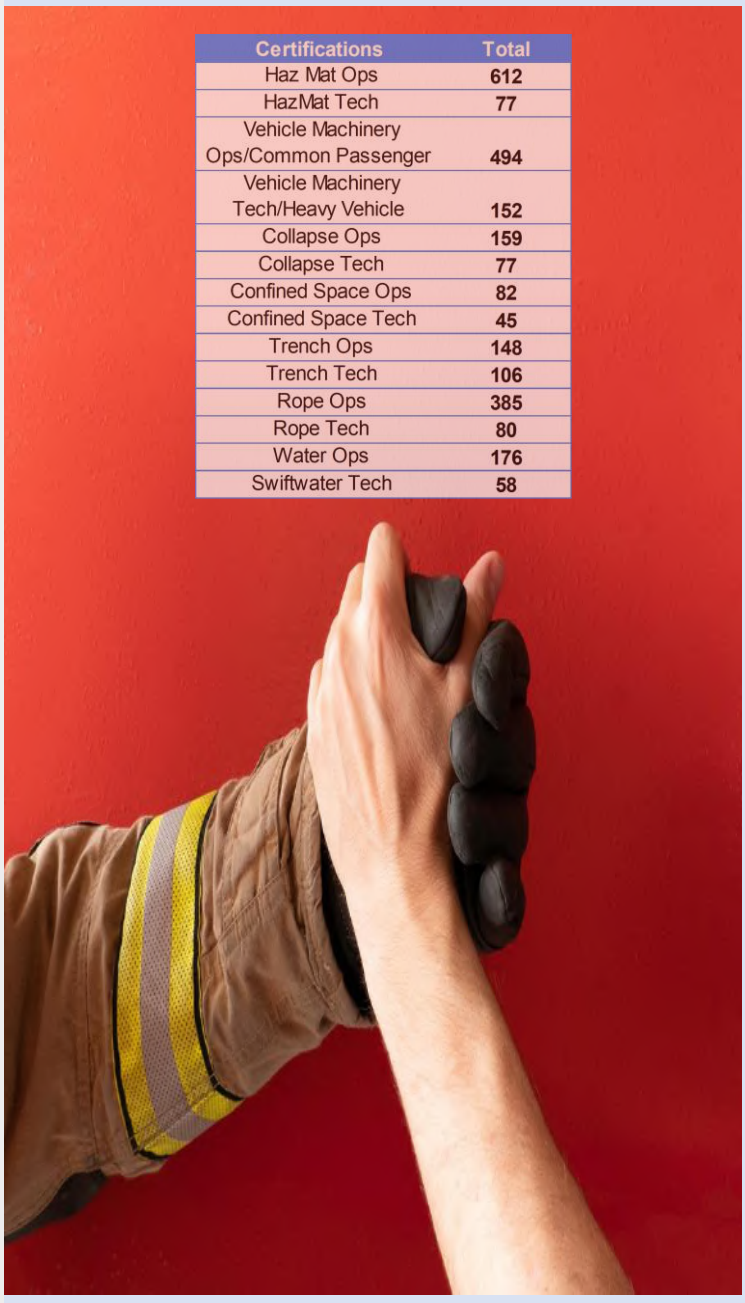
MABAS 19	TOTAL	East Joliet	Frankfort	Homer Township	Lemont	Lockport Township	Manhattan	Mokena	New Lenox	Orland	Palos	Palos Heights
Total Square Miles	401.4	18	42	21	26.4	45	149	12.5	34.5	33	15	5
Total Population	414,050	18,000	45,000	16,550	32,000	87,000	26,000	21,000	60,000	72,000	25,000	11,500
EAV	$15,653,790,233	$250,765,173	$2,010,353,827	$929,610,490	$1,725,360,239	$2,589,743,692	$790,671,586	$859,006,111	$1,928,291,212	$3,318,075,027	$776,920,003	$474,992,873
Total Budget	$181,688,729	$2,700,000	$18,832,529	$12,377,538	$16,375,732	$35,374,084	$7,858,100	$12,134,700	$13,000,000	$49,786,046	$8,250,000	$5,000,000
Tax Rate	0.952	1.1187	0.7519	1.026	0.777	1.0753	0.993	0.9659	0.5861	1.108	1.025	1.05
Fire Stations	41	3	5	3	4	6	3	3	4	6	2	2
Incidents Annually	55,484	2,490	5,600	2,125	4,200	11,450	2,734	3,000	5,611	12,374	3,300	2,600
Sworn Personnel	588	14	67	38	54	110	25	32	60	131	35	22
Non-Sworn Personnel	82	23	5	1	9	3	3	3	4	28	2	1
Paramedics (Full-Time)	560	11	67	37	35	110	25	32	56	131	35	21
Paramedics (Part-time)	24	12	0	0	0	0	12	0	0	0	0	0
Min. Daily Staffing	155	5	18	10	14	26	10	9	18	30	9	6
Max. Daily Staffing	191	9	20	12	17	34	13	10	19	39	11	7
Ambulances	39	2	4	3	4	6	3	3	4	5	3	2
Engines	33	2	4	3	3	5	3	3	3	4	1	2
Squads	10	0	2	1	0	3	0	0	0	4	0	0
Trucks	8	0	1	0	1	1	0	1	1	2	1	0
Tenders	5	1	1	1	1	0	1	0	0	0	0	0
Battalion Chiefs	21	0	3	3	3	3	0	0*	3	3	3	0
Chiefs	27	2	2	2	3	6	3	2	3	1	2	1

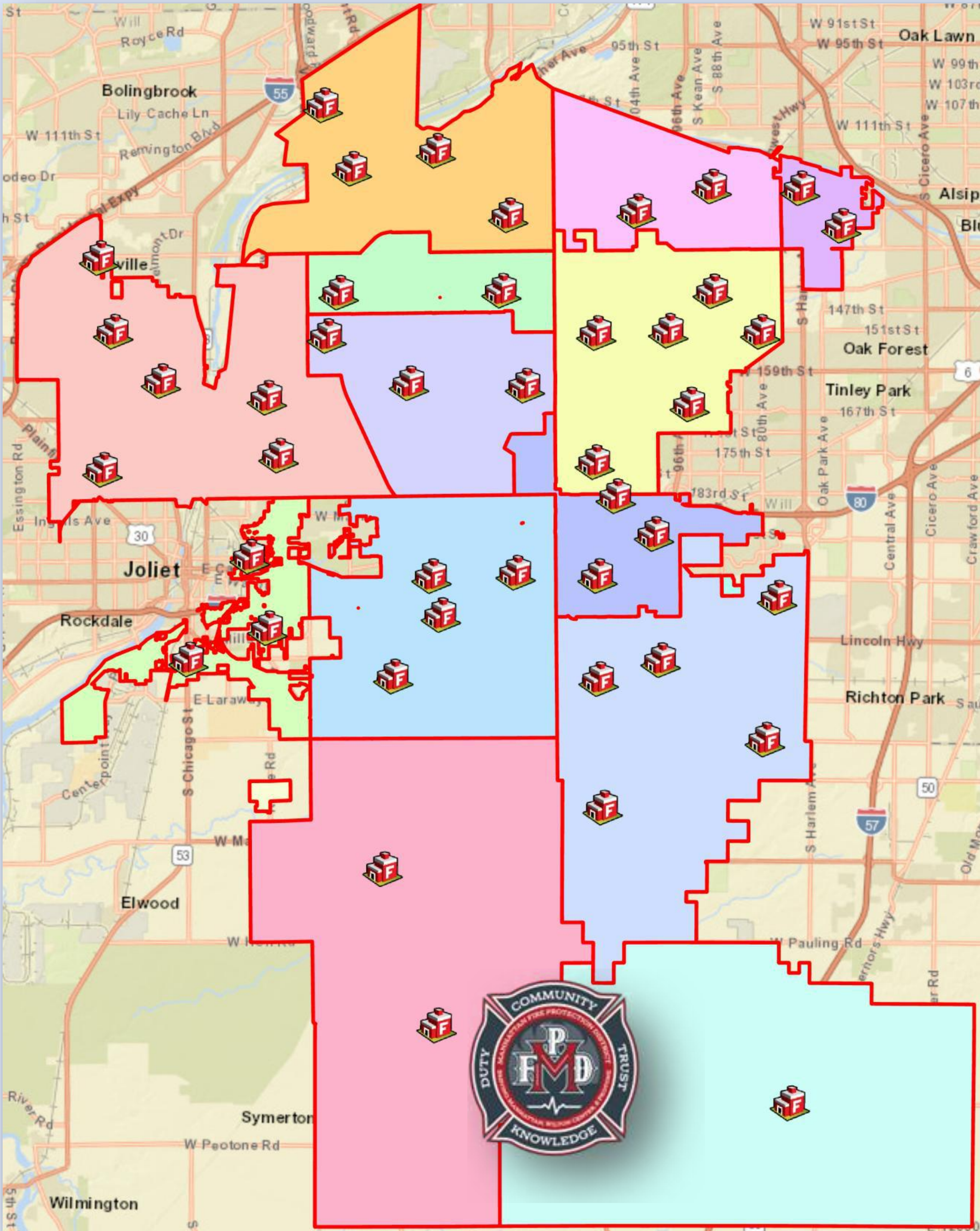
MABAS 19

PROTECTING

401	Sq. Miles
414,050	Population
$15.6 b	EAV
$ 181.7m	Budget
41	Fire Stations
55,484	Incidents (Annually)
588	Sworn Personnel
82	Non-Sworn Personnel
584	Paramedics
560	*Full-time*
24	*Part-time*
155	Daily Staffing (Min)
191	Daily Staffing (Max)
39	Ambulances
33	Engines
10	Squads
8	Trucks
5	Tenders
27	Chiefs
21	Battalion Chiefs

Certifications	Total
Haz Mat Ops	612
HazMat Tech	77
Vehicle Machinery Ops/Common Passenger	494
Vehicle Machinery Tech/Heavy Vehicle	152
Collapse Ops	159
Collapse Tech	77
Confined Space Ops	82
Confined Space Tech	45
Trench Ops	148
Trench Tech	106
Rope Ops	385
Rope Tech	80
Water Ops	176
Swiftwater Tech	58




Bolingbrook
Lily Cache Ln
W 111th St
Remington Blvd
Royce Rd
95th St
W 91st St
W 95th St
Oak Lawn
W 99th
W 103rd
W 107th
W 111th St
Alsip
147th St
151st St
Oak Forest
W 159th St
Tinley Park
167th St
175th St
183rd St
Oak Park Ave
Central Ave
Cicero Ave
Crawford Ave
Essington Rd
Ingalls Ave
Joliet
Rockdale
Lincoln Hwy
Richton Park
S Chicago St
S Harlem Ave
Elwood
W Pauling Rd
Symerton
W Peotone Rd
Wilmington
River Rd
COMMUNITY
DUTY
TRUST
KNOWLEDGE
MANHATTAN FIRE PROTECTION DISTRICT

ISO – Insurance Services Office PPC

Insurance Service Office (ISO) provides a broad range of insurance, statistical, actuarial, and claims information. ISO utilizes a Public Protection Classification (PPC) tool to rate communities based on their fire loss records. In addition, ISO evaluates data in fire suppression, emergency communication, water supply, and risk reduction activities. The process yields a ranking system that reflects District performance on a scale of 1-10, with 1 being the best.

Determining the PPC for a Community

ISO evaluates Dispatch, the Fire Suppression capabilities of the District, and the water system infrastructure during grading. Strengths and weaknesses relative to the criteria in each category are utilized in determining the PPC. This system enables communities with varying strengths and weaknesses to receive the same PPC.

Major items considered in grading are:

- Telephone Service
- Telecommunication Operators
- Dispatch Center alerting systems
- Engine Companies
- Reserve Engines
- Pump Capacity
- Ladder Companies
- Reserve Ladders
- Distribution of companies
- Number of personnel responding
- Training frequency and areas
- Water Supply Systems
- Hydrant Type and Size
- Hydrant Maintenance and Testing

The Effect of PPC on Insurance Premiums

ISO provides insurance companies with PPC information and associated details, including fire station locations, response area boundaries, hydrant locations, and other water supply details. However, because insurance companies, not ISO, establish the premiums they charge to policyholders, it is difficult to generalize how an improvement (or deterioration) in PPC shall affect individual policies, if at all.

ISO's studies have consistently shown that, on average, communities with superior fire protection have lower fire losses than those with less comprehensive fire protection services. Consequently, PPC plays a role

in the underwriting process for many insurance companies, and as such, can help keep insurance premiums low. In addition, improving Class ratings is an outcome and benchmark measure within the District's reach**. For example, the District in 2020 achieved the pinnacle "Class 1" rating for hydranted areas in the District and a Class 4 for the rural areas. The District plans to achieve a higher rating at the following review for the rural areas.**

Core Mission:

To maintain elite fire protection ratings that reflect district capabilities in suppression, risk reduction, and emergency communications.

Manhattan Rating Overview (before merger):

- ISO **Class 1** achieved (2020)
- **97.3** / 100 total score
    - Emergency Comms: **9.97**/10
    - Fire Ops: **47.8**/50
    - Water Supply: **36.6**/40
    - CRR: **-0.82**/5.5

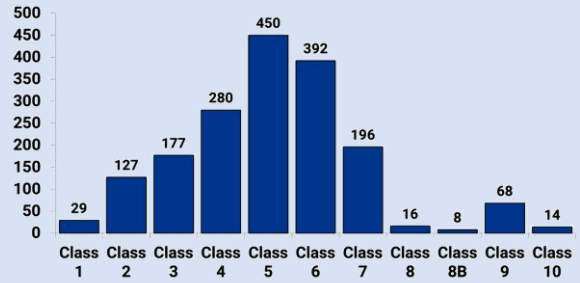
Peotone Rating Overview (before merger):

- ISO **Class 4** achieved (2017)
- **65.81** / 100 total score
    - Emergency Comms: **9.38**/10
    - Fire Ops: **27.78**/50
    - Water Supply: **29.31**/40
    - CRR: **2.88**/5.5

CRA/SOC Considerations:

- Validate ISO scoring with response benchmarks and staffing models
- Document CRR efforts, inspection totals, and fire prevention programs.

MANHATTAN Fire Protection District is one of 26 departments with a class one out of over 2000 departments across the state



Having assessed the of overview and makeup of the District with the programs offered by the MFPD, we now turn to how assess the many threats facing the District in Section 3: All Hazard Risk Assessment

ALL HAZARD RISK ASSESSMENT

SECTION III

SECTION 3 – All-Hazard Risk Assessment

The Manhattan Fire Protection District (MFPD) delivers a full-spectrum, All-Hazards response system, addressing emergencies across natural, technological, and human-caused domains. This mission encompasses **prevention, preparedness, response, and recovery**—whether the incident is a kitchen fire, train derailment, mass casualty, or pandemic.

Risk is not static—it evolves. Understanding how threats interact with vulnerabilities and consequences is key to anticipating danger and deploying resources before disaster strikes.

CORE RISK CONCEPTS

Term	Definition
Risk	Potential for a negative outcome due to an incident
Threat	Natural or human-caused sources of harm
Hazard	The actual agent that can cause damage
Vulnerability	Weakness or susceptibility to damage
Consequence	Human, economic, and environmental impact
Probability	The likelihood of an event occurring

Basic Risk Calculations:

Risk = Threat x Vulnerability x Consequence

Consequence = Human + Economic + Environmental + Societal Impact

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NFPA RISK ASSESSMENT FRAMEWORK

MFPD aligns with NFPA 1300/1600 risk evaluation standards through a 5-step dynamic cycle:

- **Hazard Identification** – What could go wrong?
- **Risk Evaluation** – How likely, how bad?
- **Exposure & Vulnerability Analysis** – Who or what is at risk?
- **Impact Analysis** – What are the effects?
- **Resource Alignment** – Are our people, tools, and locations matched to the risk?

COMMUNITY-SPECIFIC RISK ANALYSIS

- We assess risk using both incident data and community conditions. MFPD integrates quantitative and qualitative inputs, including:
- Historical Incident Patterns
- At-risk populations (age, health, mobility)
- Building Use & Construction Type
- Critical Infrastructure (e.g., water, power, schools)

- Environmental & Weather Hazards
- Transportation Corridors (rail, highway, local streets)
- Station Distribution & Coverage Capacity

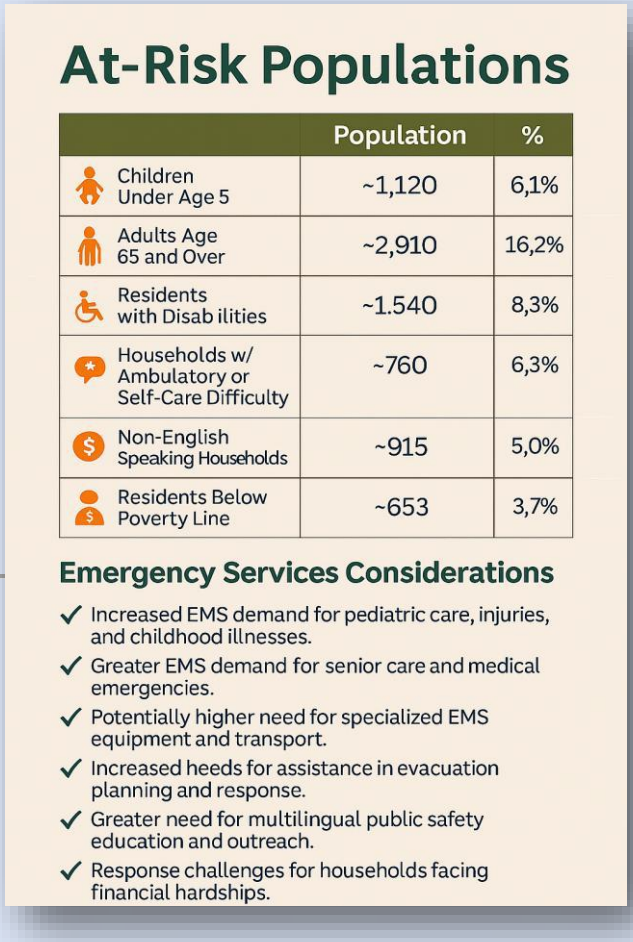
RISK MATRIX FRAMEWORK (TWO AXIS)

	Low Consequence	High Consequence
Low Probability	Routine events (e.g., dumpster fire)	Rare but devastating (e.g., active shooter)
High Probability	High frequency (e.g., EMS calls)	High-risk/high frequency (e.g., structure fires)

This matrix supports resource prioritization and operational planning.

AT-RISK POPULATIONS

The **Manhattan Fire Protection District (MFPD)** serves a diverse and growing population of approximately **26,311 residents**, including areas formerly covered by the Peotone Fire Protection District. Several key demographic groups within the District are considered *at-risk* due to factors such as age, disability, language, and socioeconomic status. Identifying and addressing these populations enhances service equity and operational readiness. Groups with elevated vulnerability are listed.



Public Safety Implications

Children Under 5:

- Require pediatric EMS protocols and targeted fire prevention messaging.
- Increased vulnerability during home fires due to limited mobility and awareness.

Seniors 65+:

- Higher EMS utilization (falls, medical alarms, chronic conditions).
- Slower evacuation during emergencies; everyday use of oxygen tanks and home medical equipment.

♿ **Individuals with Disabilities:**

- Present evacuation and access challenges.
- Need backup planning for power-dependent equipment (e.g., ventilators, lifts).

💬 **Language Barriers:**

- ~5% of households speak a language other than English at home.
- Reinforces the importance of **multilingual emergency alerts**, translated outreach, and culturally relevant education campaigns.

💸 **Financial Hardship:**

- Lower-income residents may occupy older or higher-risk structures.
- Many homes often lack smoke detectors, CO alarms, or fire suppression systems.

🔁 **SOC Planning Considerations/Continuations**

- **Deployment Strategy**: Zones with higher at-risk population density may require tailored resource deployment and staffing models.
- **Community Risk Reduction (CRR)**: Prioritize in-home safety checks, smoke alarm installations, and CPR education for vulnerable households.
- **Public Education**: Develop age-appropriate, disability-inclusive, and multilingual fire prevention programs in collaboration with local schools, churches, and civic groups.

PUBLIC HEALTH & PANDEMIC PLANNING

COVID-19 exposed several operational pain points:

- PPE shortages
- EMS system overload
- Extended hospital turnaround times
- Workforce infection and quarantine rates
- Hospital closings/service level changes

Response Evolution: Updated protocols include medical surge planning, supply chain redundancy, and agency interoperability.

TECHNOLOGICAL & HUMAN-CAUSED RISKS

Scoring Methodology (THIRA-Inspired)

Component	Description
Probability (P)	How likely is it to occur?
Vulnerability (V)	What's at stake?
Impact (I)	What's the damage potential?
Preparedness (Prep)	How ready are we to act and recover?

Comparative Hazard Radar & Scoring Matrix

Hazard Type	Probability	Vulnerability	Impact	Preparedness	Total Score
HazMat Incident	2	3	4	3	**12**
Mass Violence	2	3	4	3	**12**
WMD	1	4	5	2	**12**
Cyberattack	2	4	3	3	**12**
Power Grid Failure	2	4	4	3	**13**
Public Health Incident	3	4	4	3	**14**

LARGE-SCALE INCIDENTS

Community risks exceed traditional fire and EMS, including significant-scale events. In most cases, these events would be low-frequency/severe consequence events on a community basis. Department of Homeland Security (DHS) methodology was utilized to conduct risk assessments on the most anticipated events. Programs to reduce risk and increase preparedness capabilities can be performed in the large-scale event risk assessment process. Numerical scores were assigned during the assessment process, enabling the prioritization of risk reduction efforts.

The following assessment characteristics were utilized:

- Probability
- Vulnerability
- Onset speed
- Impact
- Preparedness
- Geographic size
- Potential for associated MCI
- Warning time
- Length of event
- Consequences

Hazardous Materials Incident (HM - Low)

- Lower-level HazMat responses are usually handled by local Fire Departments, with Higher-level responses by regional teams. NFPA defines a Level 3 HazMat incident as one that is beyond regional or state capabilities. Level 3 incidents may require federal resources during response or cleanup. These incidents pose an immediate, severe, and long-term risk to the community due to the release of substantial amounts of hazardous materials. This threat event would likely result from a railroad car release due to the large number and types of Hazardous Materials transported through the community.

Weapons of Mass Destruction Event (WMD - Low)

- WMD events are defined as involving chemical, biological, radiological, or nuclear release and exposure. Chemical event symptoms begin immediately after the exposure. Radiological and some biological event symptoms may start up to 12 hours after exposure, while others may occur immediately.

Mass Violence Incident (MVI - Low)

- A Mass Violence Incident (MVI) generally has ten (10) or more patients triaged as Yellow or Red. MVI differs from Mass Casualty Incidents (MCI) in that MVI is intentionally caused by human action. MCI can result from non-intentional events such as a vehicle accident. MVI requires tight integration with law enforcement to stabilize the incident and care for victims. Areas and occupancies with large groups of people are soft targets for an MVI. The District has potential targets with MVI probability. Examples of these events are Active Shooter Hostile Events (ASHE), an explosive device, or as simple as a car vs. a crowd.

Significant Scale Power Failure (PGF - Low)

- Heavy reliance on electrical power has created the potential risk of power grid failure. The power grid is owned, operated, and managed by a private entity. Isolated power failures occur during storms several times a year and are short-lasting. A large-scale grid failure would have a significant effect on service demands and associated consequences

Public Health Incident (PH - Low)

- An increase in public health incidents, such as pandemics and viruses, has been noted in the last few years, and a historic one began in 2020 (COVID-19). A pandemic's effects increase service demands and may lower personnel availability due to exposure and resulting illness, longer hospital turnaround time, isolations, and supply issues, to name just a few.

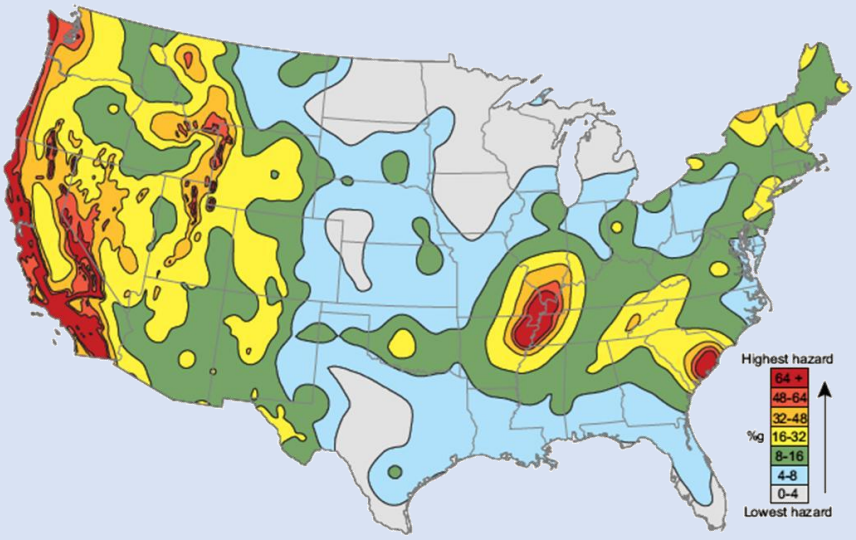
Cyber Attack (CA – Low)

- Targeted attacks on IT systems have been increasing worldwide. These attacks can include Denial of Service (DOS) and ransomware. Most fire service agencies have a high reliance on IT systems for communication and records systems.

GEOLOGICAL

Earthquake

According to the latest report by the United States Geological Survey, the potential earthquake risk in Illinois has increased. Significant fault lines are present in the area, with earthquakes occurring in areas of limited or no development. Due to the estimated risk of earthquakes, FEMA and IEMA (Illinois Emergency Management District) have developed plans and conducted exercises in preparation.



ENVIRONMENTAL HAZARDS

Key Concerns

- **Severe Weather:** Tornadoes, blizzards, extreme heat/cold
- **Earthquake:** Proximity to the New Madrid Seismic Zone
- **Flooding/Ice:** Disrupts power, travel, and emergency access

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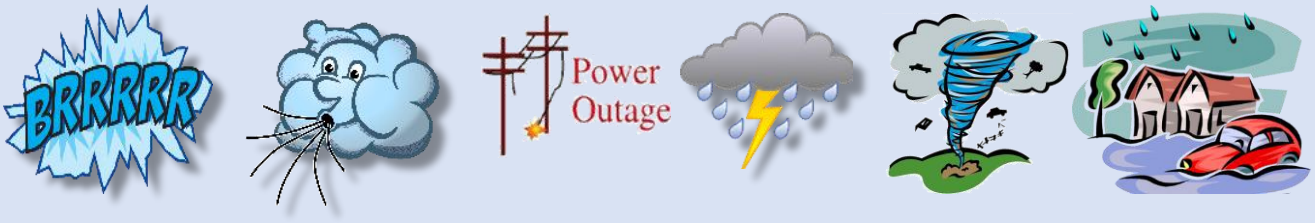
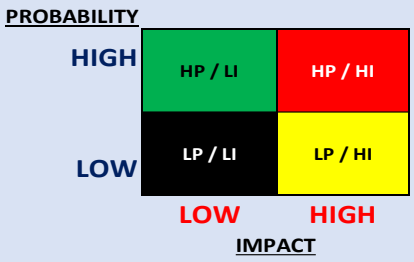
Weather can have a dramatic effect on the District's population, housing, and infrastructure. Events include extreme thunderstorms (which may produce tornadoes, high winds, or flooding), blizzards and ice storms, temperature extremes (such as high heat and below-zero conditions), and more.



Natural Event / Weather Risk Scoring

An additional scoring model utilized by the District to evaluate the risk of naturally occurring events was completed as follows: the risks associated with natural events are primarily low to moderate.

NATURAL EVENT TYPE	PROBABILITY *Likelihood this will occur* *0 = N/A* *1 = Low* *2 = Moderate* *3 = High* *4 = Extreme*	IMPACT / CONSEQUENCES HUMAN *Possibility of death or injury* *0 = N/A* *1 = Low* *2 = Moderate* *3 = High* *4 = Extreme*	PROPERTY *Physical losses and damages* *0 = N/A* *1 = Low* *2 = Moderate* *3 = High* *4 = Extreme*	BUSINESS *Interruption of services* *0 = N/A* *1 = Low* *2 = Moderate* *3 = High* *4 = Extreme*	TOTAL IMPACT Human, Property, Business	AVERAGE IMPACT SCORE	PROBABILITY + IMPACT Probability + Impact (average)
Severe Thunderstorm	4	2	2	3	7	2.3	6.3
Extreme Winter/Ice Storm	4	2	2	3	7	2.3	6.3
Tornado	3	3	4	1	8	2.7	5.7
Temperature Extremes	3	2	1	3	6	2.0	5.0
Flood	3	2	3	3	8	2.7	5.7
Earthquake	1	3	4	1	8	2.7	3.7
Drought	2	2	1	1	4	1.3	3.3
Epidemic	1	4	1	4	9	3.0	4.0
Totals	21	20	18	19	57	19	5.0



Risk Assessment
1-2 Low Threat
3-4 Moderate Threat
5-6 High Threat
7-8 Extreme Threat

The District is prepared for "All-Hazard" responses and has plans to remain reliable and sustainable regardless of the environmental or large-scale incident. There are redundancies in place to ensure operations are always ready.

Risk assessment findings indicate a **higher probability and consequence from naturally caused events.**

Tornado

	Future Frequency	Impact	Area Affected
Floods	Likely	Serious	Large
Severe Summer Storms	Likely-Frequent	Moderate	Community
Severe Winter Storms	Likely-Frequent	Moderate	Large
Tornado	Likely	Serious - Catastrophic	Community
Extreme Heat	Likely	Moderate	Large
Drought	Seldom	Moderate	Large
Earthquake	Seldom	Low-moderate	Community
Power Outage	Likely	Moderate-Serious	Community

There is a **significantly higher risk of tornadic activity, with a tornado recently touching down in the District, as well as an EF-3 tornado that touched down just to the north, damaging** hundreds of homes near the District and surrounding towns. There were no fatalities.

RISK ASSESSMENT FOR SERVICE LEVEL CLASSIFICATIONS

Risk assessments were also conducted for the following primary service types:

- **FIRE**
- **EMS**
- **HAZMAT**
- **RESCUE**

FIRE RISK

Overview

Fire risk is a critical concern for the Manhattan Fire Protection District (MFPD), directly influencing the allocation of personnel, apparatus, and the execution of suppression operations. MFPD's fire suppression services encompass a broad spectrum, addressing incidents in single and multi-family residences, commercial and industrial establishments, educational institutions, houses of worship, healthcare facilities, mobile properties, and farmland areas.

In the US, every year, FIRE KILLS more than all natural disasters combined.

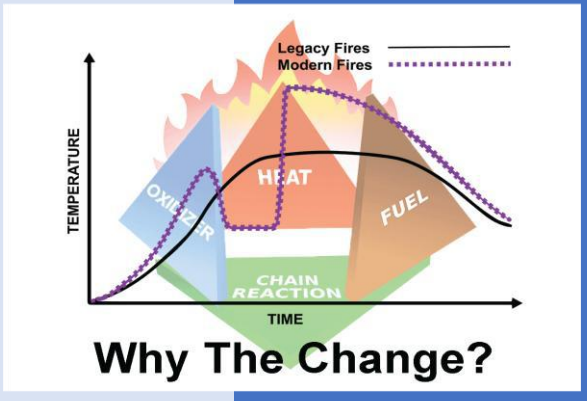
(National Safety Council 2022)

Modern Fire Behavior: A New Era of Risk

Recent research from the National Institute of Standards and Technology (NIST) and Underwriters Laboratories' Fire Safety Research Institute (UL FSRI) has revealed that modern residential fires develop more rapidly than those in the past. Factors such as the increased use of synthetic materials in furnishings and construction, open floor plans, and energy-efficient building designs contribute to faster fire propagation and reduced time to flashover, which can sometimes occur in under five minutes.

Modern vs. Legacy Fire Development Curves

- **Legacy Fires (Natural/fuel-limited)**
  Grow gradually, reaching flashover over a more extended period—often **8+ minutes** post-flashover initiation.
- **Modern Fires (Synthetic/ventilation-limited)**
  Ignite rapidly, and upon ventilation (such as a door opening), flashover can occur in just a few **minutes**—much faster than legacy fires. The curve shows steep early growth, a dip if ventilation is restricted, followed by a sharp spike when oxygen enters.



FIRE FACT CHECK

According to the National Fire Protection Association (NFPA) and U.S. Fire Administration (USFA) data:

In 2023, U.S. fire departments responded to an estimated **470,000** structure fires, which resulted in approximately **3,070 civilian deaths** and **11,790 injuries.**
— NFPA, 2024

Most structure fires occur in **residential properties (about 75-80%)**, specifically in **one- and two-family homes,** followed by **apartments or other multi-family dwellings**.

Why the Shift?

- Buildings now contain **synthetic furnishings** (plastics, foams, polymers) that release heat and flammable gases quickly.
    - UL and FSRI tests show **flashover occurs in ~3–5 minutes** in modern, synthetic-rich rooms versus **~30+ minutes** in natural furnishing rooms researchgate.netnist.gov+4fsri.org+4youtube.com+4.
- Fires are now more often **ventilation-limited**—they slow down due to lack of oxygen, then **rapidly intensify upon ventilation**, as depicted in NIST's chart nist.gov+2nist.gov+2slideplayer.com+2.

🧭 Reading the Chart

1. **Ignition** – gradual early growth.
2. **Ventilation-limited dip** – if windows/doors are closed, growth slows.
3. **Ventilation event** – opening a door introduces air, leading to:
4. **Rapid spike/flashover** – temperature surges to the fully developed phase.
5. **Decay** occurs when fuel burns out, causing the fire to lose intensity.

✅ Summary

Modern fires transition to flashover **dramatically faster** due to synthetic fuels and ventilation control. NIST and UL research confirm:

- Flashover occurs in **~2 minutes** after ventilation in modern fires.
    - Versus **>8-20 minutes** in older, legacy environments nist.gov+2nist.gov+2slideplayer.com+2nist.govlearn.weatherstem.com+8technicalpanels.fsri.org+8nist.gov+8.

This revised curve—with labelled phases and clear contrast—reflects *current science* and explains the rapid deterioration of fire conditions in today's buildings.

This evolution necessitates adjustments in the following:

- **Staffing models**
- **Fire flow requirements**
- **Time-to-task objectives**
- **Response time benchmarks**
- **Risk classification methodology**

Fire Spread: The Critical Importance of Time

Prompt containment of fires is paramount to safeguarding both occupants and firefighters. The goal is to limit fire spread to the object or room of origin, thereby minimizing damage and enhancing safety. According to the National Fire Protection Association (NFPA), from 2016 to 2020, 74% of reported home structure fires remained confined to the room of origin.

Key factors influencing fire spread include:

- **Fuel Load**
- **Compartmentalization**
- **Notification Systems**
- **Time to Water Application**

While MFPD may not directly control the first three, rapid and effective suppression begins with the timely arrival of adequately staffed and well-trained personnel.

Time is of the essence. Swift intervention is crucial.

Fire Containment Categories (NFIRS):

- Limited to the **object of origin**
- Limited to the **room of origin**
- Limited to the **floor of origin**
- Limited to the **building of origin**
- Extended beyond the **structure of origin**

MFPD Performance: During the study period, MFPD successfully contained fires to the object or room of origin in **26.1%** of incidents.

Fire Incident Response Summary

NFIRS classifies fire incidents into:

- **Structure Fires**
- **Vehicle Fires**
- **Brush/Wildland Fires**
- **Other Fires** (e.g., dumpster, exterior, unknowns)

Historical data provides insight into:

- Civilian & firefighter injuries/fatalities
- Dollar loss and property saved

- Temporal and geographic trends

includes out of District)	2020	2021	2022	2023	2024	TOTAL	Average	% Fire Incidents
Structures (fires in)	6	14	17	47	67	**151**	30	*44.4%*
Vehicles	2	8	10	17	13	**50**	10	*14.7%*
Vegetation/Grass	11	12	17	18	32	**90**	18	*26.5%*
Outside/Other	6	8	11	10	14	**49**	10	*14.4%*
	25	**42**	**55**	**92**	**126**	**340**	68	
Change over the previous year		17	13	37	34			
		68.00%	*30.95%*	*67.27%*	*36.96%*			

Working Structure Fire Summary (2022–2024)

This section provides a comprehensive SOC-aligned breakdown of all working structure fires within the Manhattan Fire Protection District from January 2022 through December 2024. It includes categorical analysis of origin, spread, response benchmarks, property use, detection systems, losses, patient impact, and response deployment patterns.

Total Incident Volume: 23 Working Structure Fires

FIRE SPREAD

- Object of Origin: 2 (8.7%)
- Room of Origin: 4 (17.4%)
- Floor of Origin: 4 (17.4%)
- Building of Origin: 13 (56.5%)
- Beyond Building of Origin: 0 (0.0%)

PROPERTY USE

- 1- or 2-Family Dwellings (NFIRS 419): 18
- Industrial/Utility: 2
- Vehicle Storage/Garage: 3

AREA OF FIRE ORIGIN

- Vehicle Storage Area / Garage / Carport: 5
- Wall Assemblies / Concealed Spaces: 3
- Kitchen/Cooking Area: 2
- Bedroom/Bathroom: 2
- Unknown/Undetermined: 6

DETECTOR PRESENCE & OPERATION

- Present: 10 (43%)
- Operated: 5 (22%)
- Absent or Failed: 13 (57%)

RESPONSE BENCHMARK PERFORMANCE (90th Percentile)

- Call Processing Time: 1 min, 02 sec (Target: ≤ 60 seconds)
- Turnout Time: 2 min, 13 sec (Target: ≤ 80 seconds)
- First Due Travel Time: 6 min, 21 sec (Target: ≤ 240 seconds)
- Dispatch to Arrival (Total Response): 7 min, 43 sec (Target: ≤ 320 seconds)

PRIMARY STATION RESPONSE BREAKDOWN

- Station 81 (HQ): 13 incidents (56.5%)
- Station 82: 6 incidents (26.1%)
- Station 83: 4 incidents (17.4%)

SHIFT DISTRIBUTION

- Red Shift: 7 incidents (30.4%)
- Black Shift: 9 incidents (39.1%)
- Gold Shift: 7 incidents (30.4%)

FIRE LOSS & VALUE

- Estimated Fire Loss Reported: $3,806,500
- Total Pre-Fire Property Value: $7,122,306
- Estimated Value Saved: **$3,315,806**
- *Currently under research using parcel-level address data; final valuation will be updated upon verification.*

Note: Fire addresses from the incident dataset are being processed to retrieve official pre-fire valuation from county assessor records.

PATIENT/VICTIM IMPACT

- Known Patients or Fatalities: **1**
- Civilian or Firefighter Injuries: 0

Fire Risk Classification Model

MFPD uses a tiered risk classification approach to align response strategies with the nature and severity of fire threats. These classifications guide staffing, apparatus deployment, and operational tactics.

Risk classifications include:

- *Low*
- *Moderate*
- *High*

Most structures within the District, particularly single-family dwellings, are categorized as **Moderate Risk**.

This analysis highlights key operational and outcome patterns.
Fires were most commonly confined to the building or room of origin, with substantial mitigation demonstrated when smoke detection and timely response aligned. Most properties were residential, and no major civilian impacts were reported. Station 81 handled over half of the incidents, and distribution was balanced across shifts.

FIRES (includes out of District)	2020	2021	2022	2023	2024	TOTAL	Average	% Fire Incidents
Structures (fires in)	6	14	17	47	67	**151**	30	*44.4%*
Vehicles	2	8	10	17	13	**50**	10	*14.7%*
Vegetation/Grass	11	12	17	18	32	**90**	18	*26.5%*
Outside/Other	6	8	11	10	14	**49**	10	*14.4%*
	25	**42**	**55**	**92**	**126**	**340**	68	
Change over the previous year		17	13	37	34			
		68.00%	*30.95%*	*67.27%*	*36.96%*			

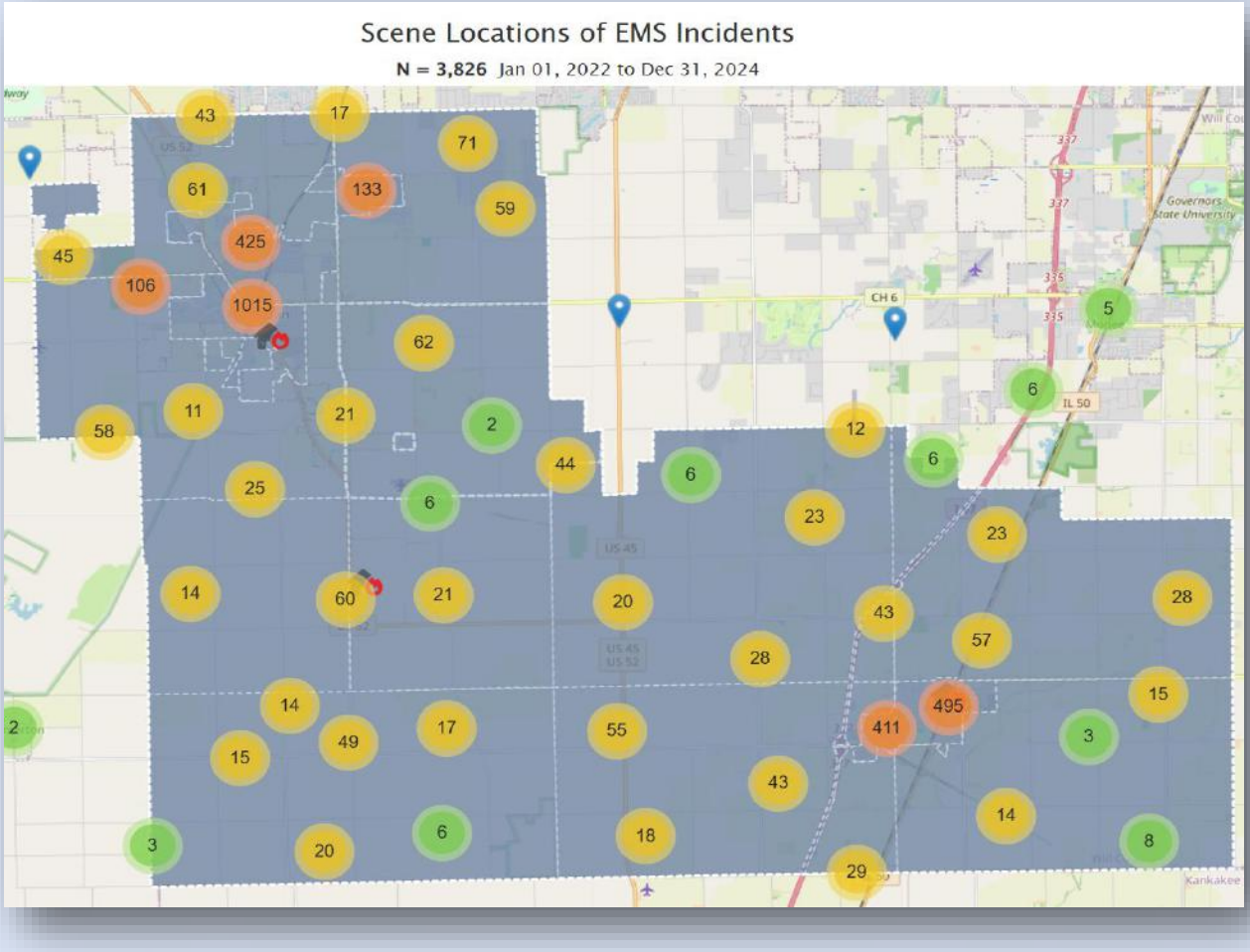
NFIRS Historical Response

Code	Description	2020	2021	2022	2023	2024	Total	% of Total	*Aver/Yr*
100	Fire, other	1	1	2	1	1	**6**	0.1%	*1*
111	Building fire	2	8	10	43	57	**120**	1.1%	*24*
113	Cooking fire, confined to container	0	3	3	1	6	**13**	0.1%	*3*
114	Chimney or flue fire, confined to chimney or flue	1	0	0	0	0	**1**	0.0%	*0*
116	Fuel burner/boiler malfunction, fire confined	1	1	0	0	0	**2**	0.0%	*0*
117	Commercial Compactor fire, confined to rubbish	0	0	0	0	1	**1**	0.0%	*0*
118	Trash or rubbish fire, contained	1	1	2	2	2	**8**	0.1%	*2*
120	Fire in mobile prop. used as a fixed struc., other	0	0	0	0	1	**1**	0.0%	*0*
122	Fire in motor home, camper, recreational vehicle	1	0	0	0	0	**1**	0.0%	*0*
130	Mobile property (vehicle) fire, other	0	1	1	0	0	**2**	0.0%	*0*
131	Passenger vehicle fire	1	7	8	11	9	**36**	0.3%	*7*
132	Road freight or transport vehicle fire	0	0	1	3	2	**6**	0.1%	*1*
138	Off-road vehicle or heavy equipment fire	0	0	0	3	1	**4**	0.0%	*1*
140	Natural vegetation fire, other	3	0	0	2	0	**5**	0.0%	*1*
142	Brush or brush-and-grass mixture fire	7	12	15	14	30	**78**	0.7%	*16*
143	Grass fire	1	0	1	1	1	**4**	0.0%	*1*
170	Cultivated vegetation, crop fire, other	0	0	0	1	0	**1**	0.0%	*0*
171	Cultivated grain or crop fire	0	0	1	0	1	**2**	0.0%	*0*
150	Outside rubbish fire, other	0	3	6	6	4	**19**	0.2%	*4*
151	Outside rubbish, trash or waste fire	3	3	2	3	9	**20**	0.2%	*4*
154	Dumpster or other outside trash receptacle fire	2	2	1	0	0	**5**	0.0%	*1*
160	Special outside fire, other	0	0	1	0	0	**1**	0.0%	*0*
161	Outside storage fire	0	0	0	1	0	**1**	0.0%	*0*
162	Outside equipment fire	1	0	1	0	1	**3**	0.0%	*1*
	TOTAL: 100 - FIRE	**25**	**42**	**55**	**92**	**126**	**340**	**3.0%**	*68*

EMS

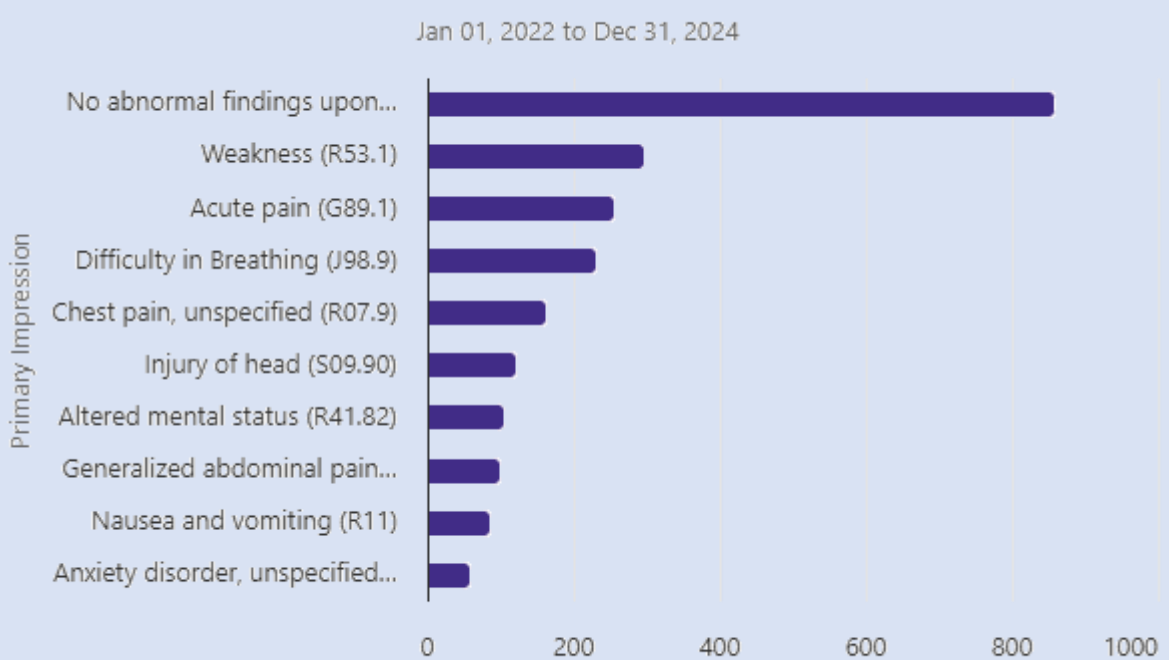
MFPD classifies EMS risk using its proprietary **"Top Ten T's" methodology**, which prioritizes consequence, severity, and system impact—not simply response mode. The EMS risk profile is shaped by **threat level**, **time sensitivity**, **task complexity**, and the level of **resource commitment**.

- **High Frequency:** Over **56%** of incidents
- **Time-Critical Nature:** Cardiac arrest survivability drops sharply beyond 6 minutes without intervention
- **Risk Elevators:**
  - Aging population (higher frequency of medical calls and falls)
  - Extended transport times to distant hospitals
  - Challenging travel time access (e.g., large rural district, multi-story residential, senior housing)

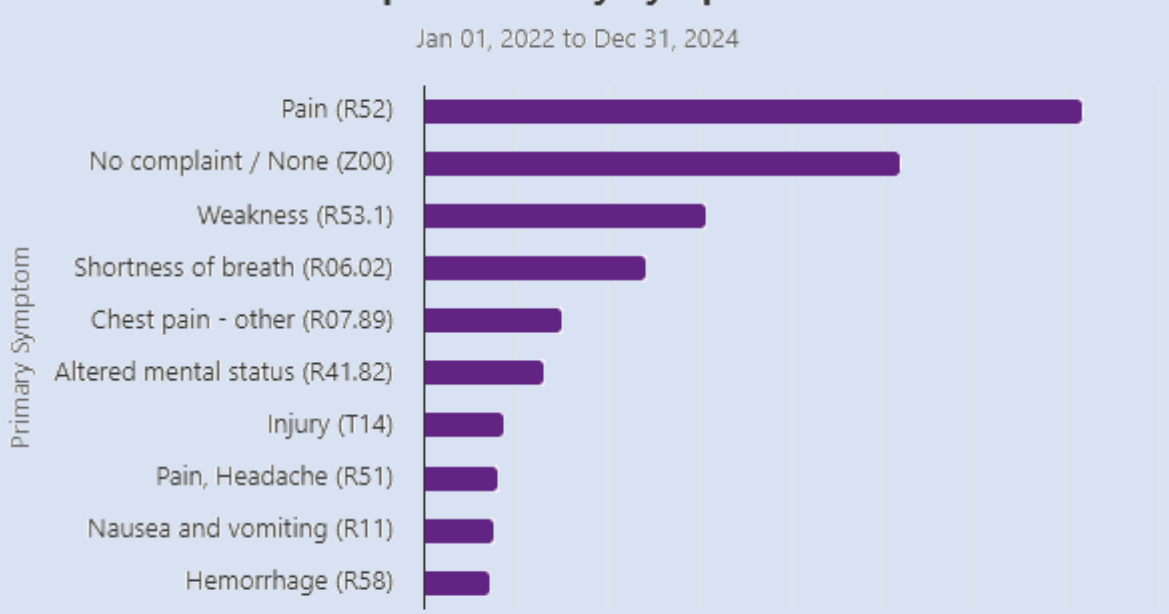


🗺️ **Interactive EMS Incident Location Map**
🔗 View Map

Top 10 EMS Primary Impressions

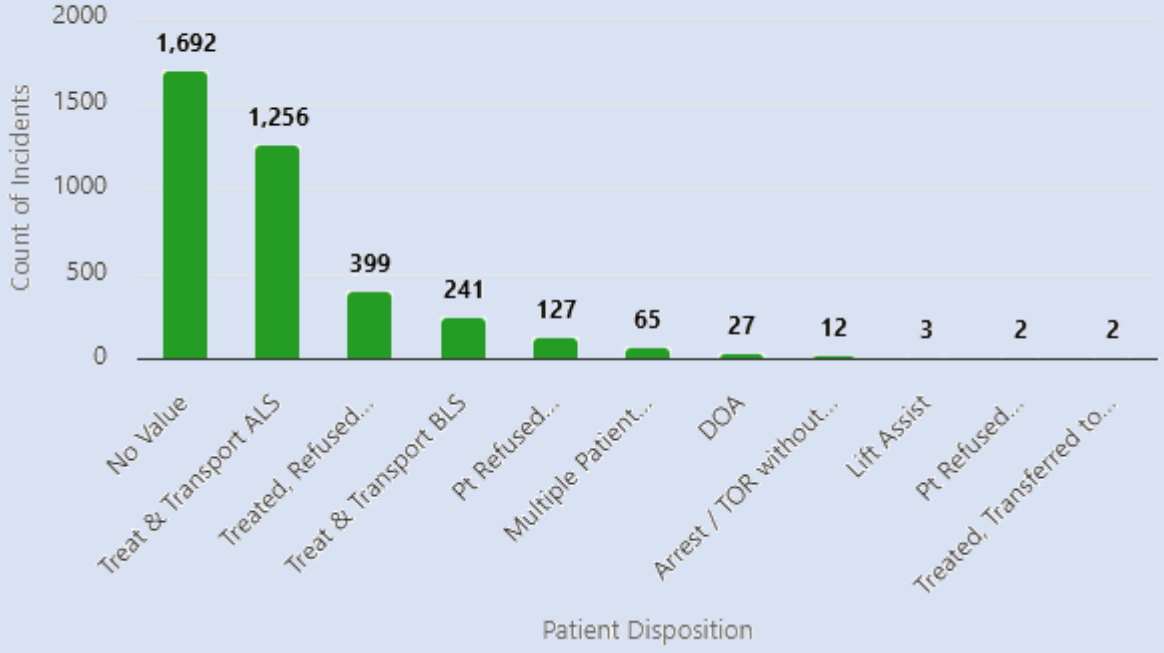


Top 10 Primary Symptoms



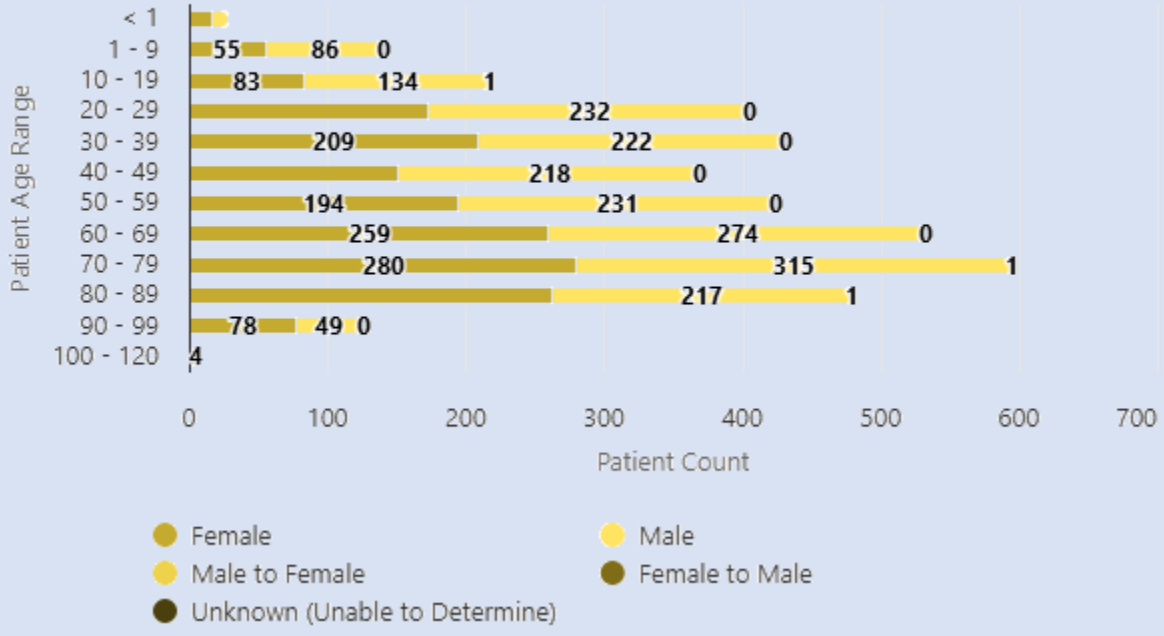
Incidents by Patient Disposition

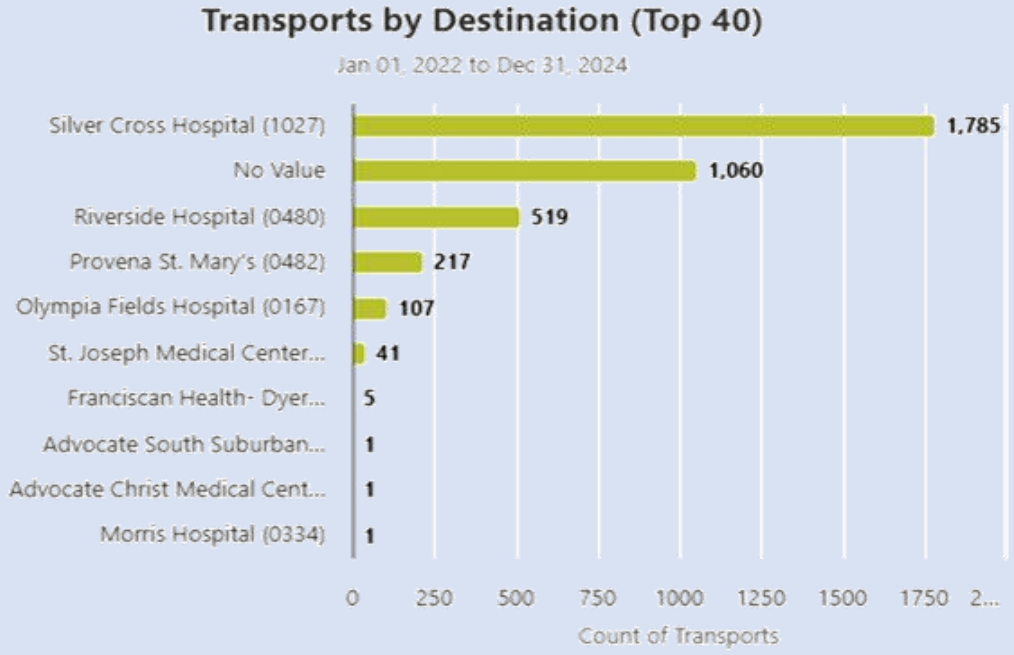
Jan 01, 2022 to Dec 31, 2024



Patient Gender And Age Range

Jan 01, 2022 to Dec 31, 2024





Transports by Destination Summary – 2022-2024

Hospital	Transports		Transport Time		Patient Arrival to Transfer of Care		Patient Arrival to Unit Back in Service	
Name	Total	% of Total	Median	90th Percentile	Median	90th Percentile	Median	90th Percentile
Silver Cross	1,779	66.63%	16:57	24:57	03:44	09:22	32:46	56:58
Riverside	519	19.44%	21:22	26:25	02:35	06:27	33:15	59:51
Provena St. Mary's	217	8.13%	20:44	25:21	02:27	06:31	36:50	65:14
Olympia Fields	107	4.01%	18:44	23:06	03:12	10:27	34:00	58:10
St. Joseph Medical Center	41	1.54%	19:55	25:21	05:11	09:51	35:37	60:32
Franciscan Health- Dyer	5	0.19%	18:35	27:08	01:50	20:38	30:13	58:34
Advocate South Suburban	1	0.04%	29:17	29:17	02:01	02:01	48:01	48:01
Morris	1	0.04%	16:04	16:04	04:29	04:29	59:29	59:29
Overall	**2,670**	**100.00%**	**18:30**	**25:22**	**03:18**	**08:53**	**33:20**	**58:17**

NFIRS Historical Response

Code	Description	2020	2021	2022	2023	2024	Total	% of Total	*Aver/Yr*
311	Medical assist, assist EMS crew	0	0	2	1	0	**3**	0.0%	*1*
320	Emergency medical service, other	1	1	1	1	2	**6**	0.1%	*1*
321	EMS call, excluding vehicle accident with injury	**1022**	**966**	**1158**	**1232**	**1306**	**5221**	46.8%	*1137*

RESCUE

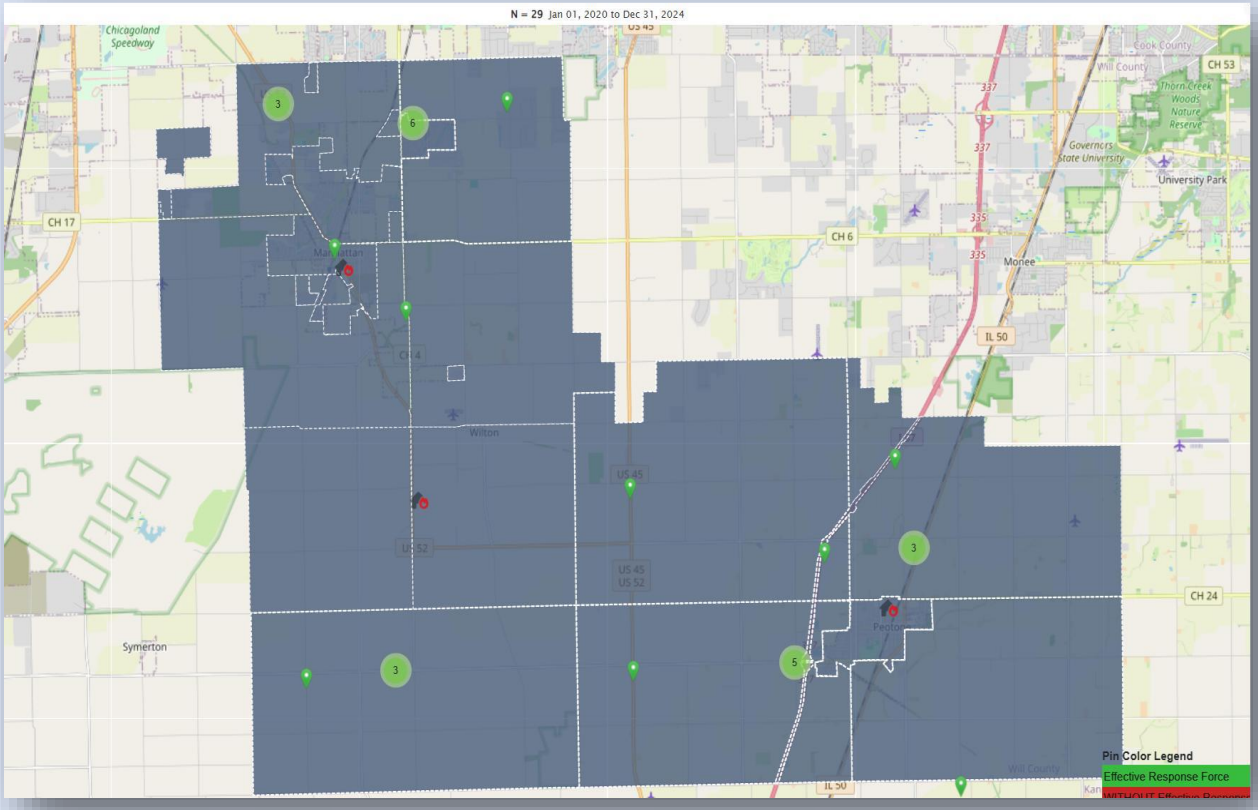
Overview

Rescue risks vary from elevator removal to pin-in vehicle accidents to Special Operations. Technical Rescue encompasses a wide range of incidents, including confined space rescue, trench collapse, low-angle and high-angle rescue, water/ice rescue, and structural collapse. Hazard levels are established for technical rescue risk within the Special Operations disciplines of Rope, Confined Space, Trench, and Water/Ice Rescue. The District has begun to locate and assess critical characteristics of technical rescue hazards. Below-grade and confined space hazards exist. These "Special Operations" type incidents are rare. However, when they do occur, they most definitely fit the "low frequency, high risk" category and must be trained diligently. There are corresponding Critical Tasks associated with the **High-Risk type Group strictly at the Technician Level** team deployments supported by the initial Operations level response.

Reminder: When it happens, it's big. High-risk rescues demand high-level readiness.

- **Low Frequency**
- **High Consequence**
    - Rope, trench, water/ice, and confined space require specialized deployment

RESCUE – MVA w/ EXTRICATION Incident Locations



Multi-Patient / Multi-Victim Incident Analysis (2021–2025)

As part of the department's ongoing risk classification and deployment evaluation, all multi-patient and critical injury MVCs and related trauma incidents from January 2021 through mid-2025 were reviewed. A total of **35 incidents** met the threshold for inclusion due to the presence of fatalities, critical injuries, or multiple patients requiring transport.

Key Findings (2021–2025 YTD)

Measure	Total
Total Incidents Reviewed	35
Total Fatalities	20
Total Critical Injuries	26
Total Patients Transported	116

Incident Severity Breakdown

- **High-Severity Events**:
    - 7 Incidents involved fatalities only
    - 6 Incidents involved both fatalities and critical injuries
    - 6 Incidents had 3 or more patients
    - 2 Incidents occurred on I-57 with ≥3 critical injuries or fatalities
    - 1 Plane Crash resulted in a critical injury (Eagle Lake, 2022)
- **Most Severe Incidents**:
    - **5/30/2021 – I-57 MM 326**: 3 fatalities, 3 patients
    - **5/21/2022 – Rt 52 & Baker**: 3 fatalities, 6 patients
    - **9/30/2021 – I-57 MP 328**: 3 critical, 1 fatality, 6 patients
    - **5/20/2024 – County Line & Egyptian Trail**: 2 fatalities, 1 critical, 4 patients
    - **3/21/2024 – P/W & Cedar**: 1 fatality, 2 critical, 4 patients

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Geographic Concentration

- **Most Frequent Locations**:
    - **Rt 52 Corridor**: 6 incidents (Baker, Ivanhoe, Schwietzer)

- **P/W & Center**: 3 incidents, including 2 with fatalities
- **Rt 50 Corridor**: 4 incidents (Offner, North Peotone Rd, Ridgeland)
- **I-57 Segment**: 4 incidents, including 2 with multiple fatalities or critical patients (MP 326, 328, 329, and I-57 @ P/W)

Temporal Patterns

Year	Incidents	Fatalities	Critical Injuries	Patients
2021	12	**7**	7	40
2022	4	**4**	2	10
2023	4	**4**	5	21
2024	12	**5**	10	41
2025	3	**3**	2	4
Total	**35**	**23**	**26**	**105**

- **Highest impact years**: 2021 and 2024 accounted for **69% of all patient transports** and **60% of all fatalities**.

SOC Implications

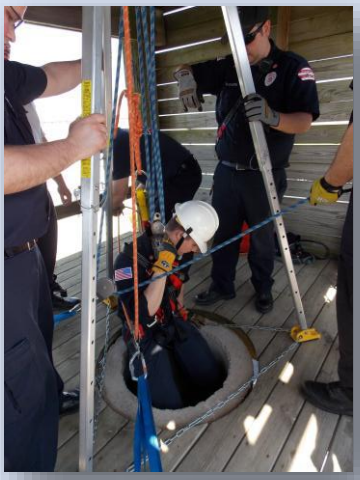
- **ERF Deployment Planning**:
  - MVA incidents with **≥4 patients** and/or **multiple critical/fatalities** require scalable EMS and suppression support.
  - Locations such as I-57 and Rt 52 corridors should be considered **high-risk travel arteries** in distribution planning.
  - **P/W & Center**, Rt 52/Baker, and I-57 crossings have repeated high-acuity incidents and warrant pre-designated ERF strike teams.
- **Reliability & Resiliency**:
  - Multiple incidents required **4–6 patient transports**, highlighting a **need for surge EMS capacity**, especially during peak times or along remote corridors.
  - **Mutual aid EMS response modeling** should consider station coverage and distance for rural roadways (County Line, Schoolhouse, Eagle Lake).

Training Focus:

- Given the presence of **26 critical injuries** across 35 events, mass-casualty triage, trauma care, and extrication procedures must remain a recurring training priority.
- Consider integrating these real-world incident summaries into **simulation-based command and EMS training**.

NFIRS Historical Response

Code	Description	2020	2021	2022	2023	2024	Total	% of Total	Aver/Yr
322	Motor vehicle accident with injuries	38	96	163	123	158	**578**	5.2%	*116*
323	Motor vehicle/pedestrian accident (MV Ped)	0	2	2	4	0	**8**	0.1%	*2*
324	Motor vehicle accident with no injuries.	18	26	46	58	43	**191**	1.7%	*38*
342	Search for person in water	0	0	0	0	1	**1**	0.0%	*0*
352	Extrication of victim(s) from vehicle	1	2	0	2	0	**5**	0.0%	*1*
356	High-angle rescue	0	0	0	0	1	**1**	0.0%	*0*
357	Extrication of victim(s) from machinery	1	0	0	1	0	**2**	0.0%	*0*
360	Water & ice-related rescue, other	0	1	0	0	0	**1**	0.0%	*0*
361	Swimming/recreational water areas rescue	0	0	0	1	0	**1**	0.0%	*0*
363	Swift water rescue	0	0	0	0	1	**1**	0.0%	*0*
381	Rescue or EMS standby	0	1	0	1	0	**2**	0.0%	*0*
	TOTAL: 300 - RESCUE	**58**	**128**	**211**	**190**	**204**	**791**	**7.1%**	*158*



HAZARDOUS

Hazardous materials are prevalent in the MFPD area, particularly in commercial, industrial, and transportation applications. Flammable/combustible products are found throughout the District. MABAS Division 19 Haz Mat team has evaluated the findings to ensure adequate capability in case of a leak or other release. The two main fixed HazMat risks in the District are the indoor Ice Arena and a methane processing plant, and there have been no incidents thus far.

Most HazMat/Hazardous Condition incidents were caused by natural gas and carbon monoxide leaks that resulted in shorted electrical equipment. Most potential exposure to high-risk incidents in the District includes transportation, roadway, rail, electrical, and pipeline systems, and requires a regional response at the Technician Level.

- **Transport-Driven Risk:** Rail and highway carry the highest potential
- Most large-scale response requires **regional Tech-level** mutual aid

NFIRS Historical Response

Code	Description	2020	2021	2022	2023	2024	Total	% of Total	Aver/Yr
411	Gasoline or other flammable liquid spill	0	1	2	1	3	**7**	0.1%	*1*
412	Gas leak (natural gas or LPG)	20	32	28	32	44	**156**	1.4%	*31*
413	Oil or other combustible liquid spill	0	0	1	1	0	**2**	0.0%	*0*
422	Chemical spill or leak	0	0	0	3	1	**4**	0.0%	*1*
424	Carbon monoxide incident	7	5	10	8	7	**37**	0.3%	*7*
440	Electrical wiring/equipment problem, other	2	2	0	2	0	**6**	0.1%	*1*
441	Heat from short circuit (wiring), defective/worn	1	1	0	0	0	**2**	0.0%	*0*
442	Overheated motor	2	1	1	0	0	**4**	0.0%	*1*
443	Breakdown of light ballast	0	0	0	0	1	**1**	0.0%	*0*
444	Power line down	15	14	22	14	19	**84**	0.8%	*17*
445	Arcing, shorted electrical equipment	0	3	1	7	2	**13**	0.1%	*3*
460	Accident, potential accident, other	0	1	0	0	0	**1**	0.0%	*0*
461	Building or structure weakened or collapsed	0	0	0	1	0	**1**	0.0%	*0*
	TOTAL: 400 - HAZARDOUS CONDITIONS	**73**	**74**	**65**	**69**	**77**	**318**	**2.9%**	*72*

SERVICE CALLS

- Typically, non-emergent but labor-intensive: lockouts, welfare checks, alarms
- While not benchmarked, they **pull units offline** and impact readiness

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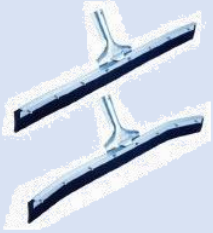
Non-emergency “Service” incidents make up a substantial percentage of responses in the District. These incidents are not measured in benchmark standards for response time. The top incident type descriptions for these incidents include invalid assist, lock-out, water leak, false alarm – unintentional or malfunction, smoke scare, canceled en route, and more, listed in detail in the following Historical response charts.



NFIRS Historical Response

Code	Description	2020	2021	2022	2023	2024	Total	% of Total	Aver/Yr
510	Person in distress, other	0	0	0	1	0	**1**	0.0%	*0*
511	Lock-out	0	1	3	2	2	**8**	0.1%	*2*
522	Water or steam leak	0	0	1	0	0	**1**	0.0%	*0*
531	Smoke or odor removal	2	4	3	4	3	**16**	0.1%	*3*
541	Animal problem	0	1	1	0	0	**2**	0.0%	*0*
542	Animal rescue	0	1	0	1	2	**4**	0.0%	*1*
550	Public service assistance, other	4	2	5	4	2	**17**	0.2%	*3*
551	Assist police or other governmental agency	2	3	6	8	4	**23**	0.2%	*5*
552	Police matter	0	5	1	2	3	**11**	0.1%	*2*
553	Public service	23	37	28	43	54	**185**	1.7%	*37*
554	Assist invalid	41	61	73	90	135	**400**	3.6%	*80*
561	Unauthorized burning	0	1	2	0	1	**4**	0.0%	*1*
571	Cover assignment, standby, moveup	230	455	499	124	173	**1481**	13.3%	*296*
	TOTAL: 500 - SERVICE CALL	**415**	**624**	**572**	**279**	**379**	**2153**	**19.3%**	*454*
600	Good intent call, other	3	0	2	7	2	**14**	0.1%	*3*
611	Dispatched and cancelled en route	183	251	329	203	296	**1262**	11.3%	*252*
621	Wrong location	1	0	0	1	0	**2**	0.0%	*0*
622	No incident found on arrival at dispatch address	10	28	26	31	60	**155**	1.4%	*31*
631	Authorized controlled burning	2	8	7	4	9	**30**	0.3%	*6*
650	Steam, other gas mistaken for smoke, other	0	0	4	1	0	**5**	0.0%	*1*
651	Smoke scare, odor of smoke	6	7	8	5	8	**34**	0.3%	*7*
652	Steam, vapor, fog or dust thought to be smoke	1	0	1	0	0	**2**	0.0%	*0*
653	Smoke from barbecue, tar kettle	0	1	0	0	1	**2**	0.0%	*0*
671	HazMat release investigation w/no HazMat	0	1	1	0	0	**2**	0.0%	*0*
	TOTAL: 600 - GOOD INTENT	**320**	**355**	**316**	**252**	**376**	**1508**	**13.5%**	*324*
700	False alarm or false call, other	12	1	9	10	7	**39**	0.3%	*8*
7101	Medical Alarm Activation, no patient	2	1	11	12	20	**46**	0.4%	*9*
711	Municipal alarm system, malicious false alarm	0	0	1	0	1	**2**	0.0%	*0*
712	Direct tie to FD, malicious false alarm	2	0	2	0	0	**4**	0.0%	*1*
714	Central station, malicious false alarm	1	1	1	0	0	**3**	0.0%	*1*
715	Local alarm system, malicious false alarm	0	0	1	0	0	**1**	0.0%	*0*
730	System malfunction, other	1	0	1	1	0	**3**	0.0%	*1*
731	Sprinkler activation due to malfunction	0	1	1	2	2	**6**	0.1%	*1*
733	Smoke detector activation due to malfunction	8	14	20	25	27	**94**	0.8%	*19*
734	Heat detector activation due to malfunction	0	1	0	4	1	**6**	0.1%	*1*
735	Alarm system sounded due to malfunction	32	36	62	59	68	**257**	2.3%	*51*
736	CO detector activation due to malfunction	2	5	8	10	12	**37**	0.3%	*7*
740	Unintentional transmission of alarm, other	0	1	3	0	1	**5**	0.0%	*1*
741	Sprinkler activation, no fire - unintentional	0	0	1	0	1	**2**	0.0%	*0*
742	Extinguishing system activation	1	0	0	0	1	**2**	0.0%	*0*
743	Smoke detector activation, no fire - unintentional	15	12	15	15	29	**86**	0.8%	*17*
744	Detector activation, no fire - unintentional	1	2	5	3	3	**14**	0.1%	*3*
745	Alarm system activation, no fire - unintentional	12	17	41	27	36	**133**	1.2%	*27*
746	Carbon monoxide detector activation, no CO	2	14	13	12	24	**65**	0.6%	*13*
	TOTAL: 700 - FALSE ALARM	**122**	**127**	**174**	**180**	**233**	**805**	**7.2%**	*167*
814	Lightning strike (no fire)	0	0	0	0	1	**1**	0.0%	*0*
	TOTAL: 800 - WEATHER	**0**	**0**	**0**	**0**	**1**	**1**	**0.0%**	*0*
900	Special type of incident, other	0	1	0	1	0	**2**	0.0%	*0*
911	Citizen complaint	0	0	0	0	1	**1**	0.0%	*0*
	TOTAL: 900 - SPECIAL INCIDENT	**0**	**1**	**0**	**1**	**1**	**3**	**0.0%**	*1*

SUMMARY SNAPSHOT

- **Zoned Risk Deployment:** Risk maps guide station strategies
- **THIRA-Informed Scoring:** Drives hazard ranking & resource alignment
- **High EMS Demand:** Driven by aging and medically fragile populations
- **Containment Metrics:** Fires confined to an object/room in 45.8% of cases
- **Top Threats:** Public health incidents top the current risk index

CONCLUSION

MFPD's All-Hazard Risk Assessment is more than a report—it's a living roadmap. In an era of compounding threats and growing community expectations, MFPD's model blends data science with boots-on-the-ground knowledge to drive smarter decisions and stronger outcomes. The District is postured to react and lead, from cardiac calls to car accidents to caustic chemicals.

With a clear understanding of the types and intensity of risk across MFPD, it is essential to examine how those risks inform and shape the District's response model. ***Section 4 – Risk & Response*** *– connects community threats to deployment strategy, ensuring that personnel, apparatus, and operational objectives are proportionate to the hazards they are designed to mitigate.*

RISK and RESPONSE

SECTION IV

SECTION 4 – RISK & RESPONSE

"Top Ten T's" – Risk Assessment & Response Cycle

Purpose: Match risk with the right response—fast, smart, and safe.

Risk drives response. Response must outweigh risk.

Your plan better come with proof.

Delivering top-tier protection across the District starts with a simple truth: if you don't understand your risks, you can't manage your response. That's why everything begins with a data-driven, all-hazard Risk Assessment. You need to know **what** the risk is, **where** it is located, and how severe it can become.

From there, it's all about matching that risk with a response force that's strong enough, fast enough, and smart enough to neutralize it, on time, every time. The strength of the entire Department rests on the quality of its Risk Assessment. If your response doesn't outweigh the risk, you're just hoping for a good outcome—and **hope isn't a strategy**.

This isn't just about showing up. It's about showing up with the right crew, the right gear, and the right plan—and proving you can do it consistently. That's where the **Top Ten T's** come in:

THREAT ➔ TYPE ➔ TASKS ➔ TOTAL ➔ TEAMS ➔ TOOLS ➔ TRUCKS ➔ TIMES ➔ TRACK ➔ TRAIN

Each "T" represents a strategic **factor** or checkpoint in the Risk–Response cycle, driving critical decisions regarding deployment, staffing, equipment, and performance. Miss one, and the whole system can break down.

Bottom line: **risk sets the bar, and the response has to clear it**—with confidence, consistency, and proof.

T Factors: What It Means – Aligning Risk and Response

T Factors are the **critical major operational variables** (the Top Ten T's) that directly **influence deployment**, **strategy**, and **outcomes** during emergency response. They are the ten crucial operational variables that connect community risk directly to the fire district's deployment strategy and standards of cover. Each "T" represents a decision point that influences response efficiency, crew safety, and incident outcomes.

The T Factors — Threat, Type, Tasks, Total, Teams, Tools, Trucks, Times, Track, Train — **are the building blocks of a dynamic, risk-based response system with factors** that must be actively analyzed, measured, and managed to ensure the fire district's response matches the community's risk in real-time.

Simply put, every "T" is a decision point that can tilt the outcome toward success or failure.

Why T Factors Matter

They:

- **Link risk to action:** Ensuring resources match the real risk in real-time.
- **Drive the SOC & SOP process:** Translating risk assessments into operational decisions.

- **Create measurable benchmarks:** Allowing the District to track performance, improve outcomes, and demonstrate accountability.
- **Build the risk-to-response bridge:** You're not just responding to calls—you're responding to *measured risk* with a *matched plan.*
- **Link risk to action:** ensuring resources align with the real risk in real time.
- **Make the SOC dynamic:** Risk isn't static. Neither can your Standards of Cover be. T Factors adjust response based on evolving threats, types, resources, and time.
- **Create a system of accountability:** Track them right, and you can prove—**with receipts**—whether the deployment model is working or needs to be fixed.

T Factors Quick Reference Guide

T Factor	Core Question	Example
THREAT	What could happen?	Fire in a typical residential home
TYPE	How bad could it be?	Target Hazard (Moderate Risk)
TASKS	What must be done?	Rescue occupants, control fire spread
TOTAL	How many personnel are needed?	15-18 firefighters/medics (ERF)
TEAMS	Who needs to go?	Trained personnel for the specific incident type
TOOLS	What equipment is needed?	Hose lines, TICs, ventilation fans, ladders, ALS kits
TRUCKS	What apparatus responds?	3 Engines, 1 Truck, 1 Ambulance, 1 Battalion Chief
TIMES	How fast must we get there?	Within 6 minutes 20 seconds (NFPA 1710 goal)
TRACK	How do we measure success?	Outcomes & 90% compliance with response benchmarks
TRAIN	How do we stay ready?	Targeted, scenario-based training focused on risk types

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Bottom Line

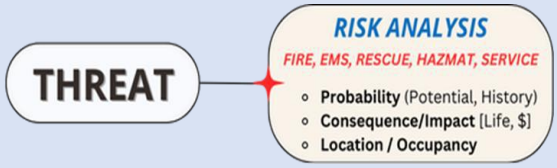
T Factors are the DNA of strategic fire and EMS deployment.

Mastering the T Factors ensures:

- Smarter resource allocation
- Faster, safer emergency response
- Data-driven decisions and continuous improvement

1. THREAT – Risk Assessment & Analysis

What kind of risk are we dealing with?

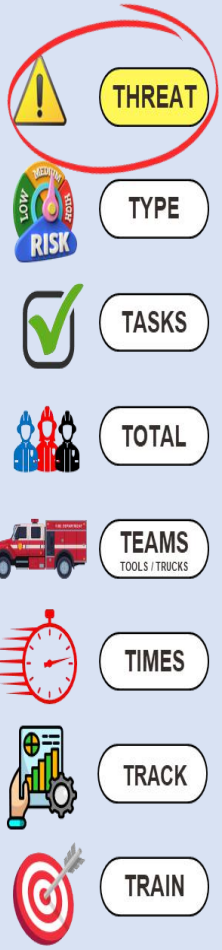


THREAT defines the broad risk categories the District faces: Fire, EMS, Hazardous Materials, Technical Rescue, Wildland/Urban Interface, and more.

We evaluate each using structured criteria:

- **Probability** – How often does this threat occur now, and what about the future?
- **Consequence/Impact** – What's the potential impact on life, property, and community?
- **Location/Occupancy** – Risk varies by building type, density, and use.

Tools like **SHOPS** (Size, Height, Occupancy, Problem, Special) and **OVAP** (Occupancy Vulnerability Assessment Profile) help quantify and score threats.



2. TYPE – Risk Classification

How serious is the threat?

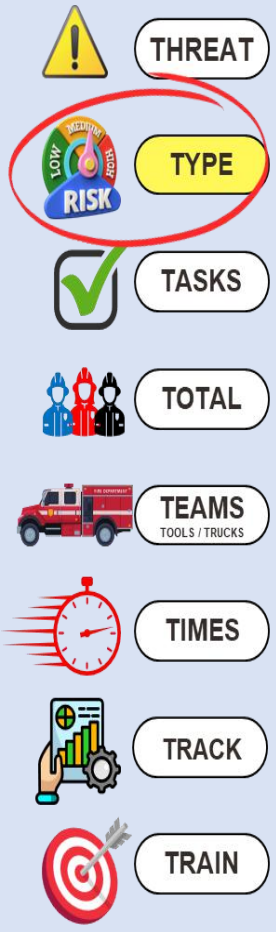
TYPE

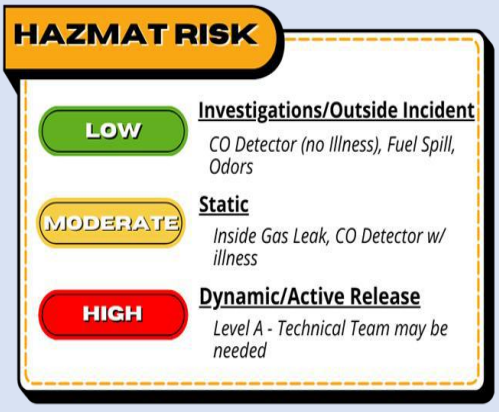
TYPE drives everything — from crew size and apparatus assignments to response time benchmarks and mutual aid planning.

TYPE classifies incidents based on a combination of:

- Threat category (Fire, EMS, Rescue, Hazmat)
- Frequency of occurrence
- Consequences if left unchecked
- Occupancy type and hazard severity

Risk Classifications by TYPE:





Risk Assessment Methodology and SHOPS Risk Scoring

To **quantify TYPE**, the District applies a **structured tactical evaluation** using the **SHOPS** model, adapted from the proven Blue Card Command "size-up" process.

SHOPS stands for:

- **Size**: Overall footprint or area of the structure
- **Height**: Number of stories and vertical complexity
- **Occupancy**: Type and density of life hazard
- **Problem**: Incident nature, or known/anticipated construction hazards, access issues, contents
- **Special**: Target Hazard status or specialized risk factors (adds/subtracts to the score)

This model is directly tied to critical task analysis ("Task Math") and ensures that staffing and apparatus decisions are data-driven rather than arbitrary.

STRUCTURE RISK ASSESSMENT				
SIZE				
PRECONNECT REACH	Small	Medium	Large	Mega
	1	2	3	4
HEIGHT				
STORIES	One	Two	Three	Four+
	1	2	3	4
OCCUPANCY				
TYPE	Residential	Multifamily	Commercial	Target
	1	2	3	4
PROBLEM				
NATURE	EMS	FIRE	SPEC OP	SERVICE
	1	2	3	0
RISK SCORE				
LOW= < 3	MODERATE = 4-9			HIGH = > 10

Example: SHOPS Structural Risk Scoring Matrix

Structure Type	Size	Height	Occupancy	Problem	Special	Total Score	Risk Classification
Single-Family Dwelling	1	1	1	2	0	**5**	Moderate
Multi-Family (Garden Style)	2	2	2	2	+2	**10**	High
Strip Mall (Ordinary)	3	1	3	2	+1	**10**	High
Nursing Home (Non-Sprinklered)	3	3	4	2	+2	**14**	High/Target
Large Warehouse (Protected)	4	2	3	2	-2	**9**	Moderate
High-Rise Apartment (Sprinklered)	4	4	2	2	-1	**11**	Target Hazard
School (K-8, Daytime)	3	2	4	2	+1	**12**	High

Scoring Key:

- **Low Risk** = 0–3 points
- **Moderate Risk** = 4–9 points
- **High Risk** = 10+ points

How TYPE and SHOPS Connect

✅ **TYPE** defines the risk **category**.
✅ **SHOPS** defines risk **severity** within that category.
✅ Together, they drive:

- Crew size
- Apparatus dispatching
- Effective Response Force (ERF) targets
- Time benchmarks (turnout, travel, full alarm)

Practical Example in Action:

- A **small single-family fire** scores 5 points → **Moderate Risk TYPE** → Full First-Due Assignment (per NFPA 1710).
- A **nursing home fire (non-sprinklered)** scores 14 points → **High/Special Risk TYPE** → Regional mutual aid, increased ERF, technical teams.
- A **high-rise apartment fire** scores 11 points → **Target Hazard TYPE** → Requires special aerial operations, mass casualty readiness, and extended command structure.

Why This Approach Works

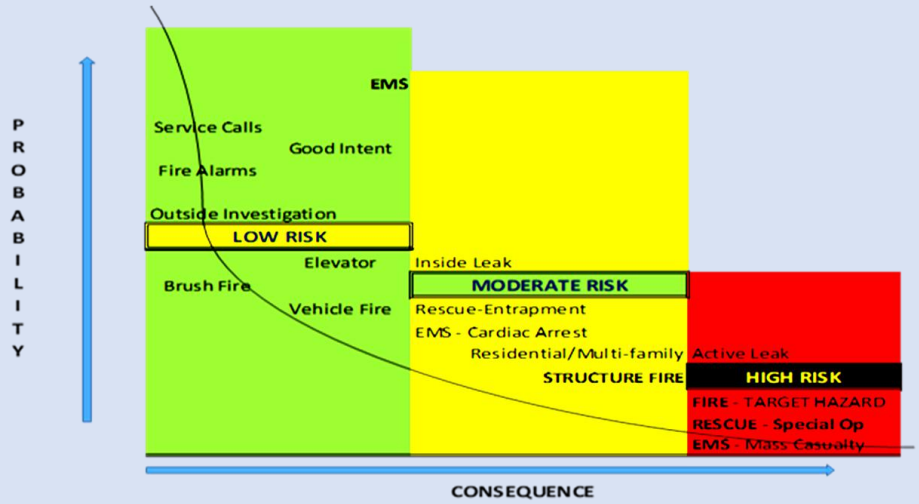
✅ It's **objective**, not subjective.
✅ It's **repeatable**, department-wide.
✅ It's **defensible** in accreditation reviews, audits, and budget justifications.
✅ It's **scalable** — as community risk evolves, so does the scoring.

Bottom Line:
TYPE and SHOPS ensure the District makes smarter, faster, and safer decisions.
Not by gut feeling — but by calculated risk, tactical math, and community expectation.

Structure Stock per Planning Zone

Building Type	Station 81	Station 82	Station 83	Grand Total	Risk Level
Commercial	124	36	18	178	L-M
Industrial	42	18	10	70	H
Light Industrial	88	22	12	122	L-M
Multi-Family Residential	196	34	48	278	M-H
Open Space / Park	54	48	60	162	L
Single Family Residential	1,425	1,232	1,016	3,673	M
Grand Total	**1,929**	**1,390**	**1,164**	**4,483**	

Probability and Consequence Model



FIRES	PROBABILITY	CONSEQUENCE	RISK
Structure			
Residential s-m	Low	Moderate	Moderate
Multi-Family s-m	Low	Moderate	Moderate
Commercial s-m	Low	Moderate	Moderate
Target (+Large L-XL	Low	High	High
Non-Structure			
Oustide	Moderate	Low	Low
Vehicle	Moderate	Low	Low
EMS			
Medical	High	Low	Low
Cardiac Arrest	Low	High	Moderate
Mass Casualty	Low	High	High
RESCUE			
Elevator/Lock-out	Moderate	Low	Low
Entrapment	Low	Moderate	Moderate
Special Ops	Low	High	High
HAZMAT			
Outside Invest	Low	Low	Low
Inside Leak	Moderate	Moderate	Moderate
Active Leak	Low	High	High

NFPA Occupancy Hazard Classifications

For **"Structure Fires,"** NFPA classifies Low-Hazard Occupancies slightly differently.

The NFPA Fire Protection Handbook defines hazard levels of occupancies by type. Each hazard level carries inherent risks.

- **Low-Hazard Occupancies** — Two- or three-family dwellings and scattered small business and industrial occupancies.

  The District classifies these as MODERATE-RISK TYPE responses.

- **Medium-Hazard Occupancies** — Apartments, offices, mercantile, and industrial occupancies do not typically require extensive rescue by firefighting forces.

  The District classifies these as HIGH-RISK TYPE responses.

- **High-Hazard Occupancies**: Schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high-life-hazard or large fire potential occupancies.

  The District classifies these as TARGET HAZARDS responses.

FIRE RISK

Low-Risk Fire

- **Examples:** Trash fires, small brush fires, vehicle fires with no exposures
- **T Factors:** Low threat, short time-to-control, low resource draw
- **Impact:** Single-unit response, low fire flow needed, rarely escalates

Moderate-Risk Fire

- **Examples:** Single-family structure fires, small commercial units
- **T Factors:** Moderate threat, moderate complexity, higher consequence
- **Impact:** Full assignment (engine/truck), coordinated suppression/search

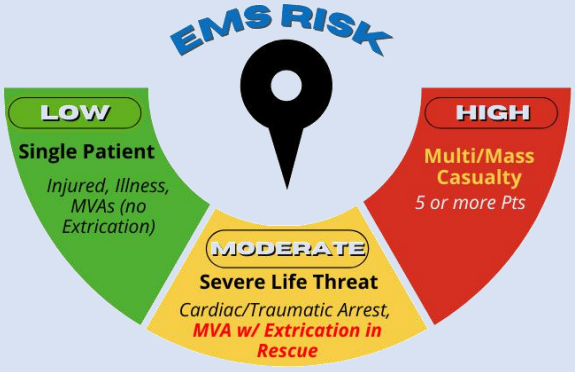
High-Risk Fire

- **Examples:** Target hazards (schools, high-occupancy residential, WUI)
- **T Factors:** High threat, longer-duration ops, high fire load & life risk
- **Impact:** Multi-alarm potential, operational disruption may involve aerial or mutual aid

Special/Maximum-Risk Fire (optional)

- **Examples:** Industrial sites, critical infrastructure, hazardous occupancies
- **T Factors:** Complex tactics, regional coordination, technical hazards
- **Impact:** Unified command, pre-plans required, possible evacuation zones

EMS RISK



Low-Risk EMS – Single Patient, Low Acuity

- **Typical Incident:** Minor illness, low-energy fall, no distress
- **T Factors:** Low Threat, Low Task complexity, Low Time Sensitivity
- **Impact:** Minimal operational burden; no transport or BLS transport
- **56% of Calls are EMS-related**

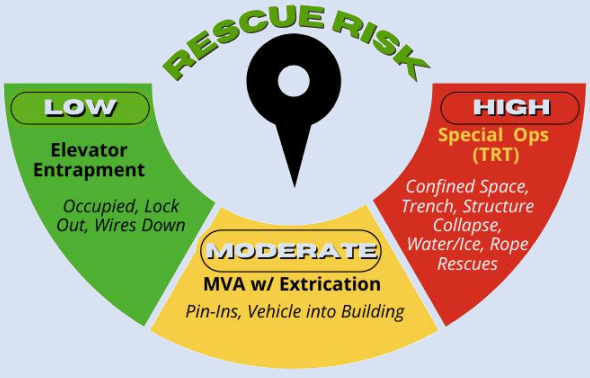
Moderate-Risk EMS – Severe Life Threat, Time-Critical

- **Typical Incident:** Cardiac Arrest, Chest pain, CVA/stroke symptoms, moderate trauma
- **T Factors:** Moderate to High Threat, High Time Sensitivity
- **Impact:** Requires ALS-level intervention, resource commitment
- < 1% of EMS Calls: highest single life threat

High-Risk EMS – Multi-Patient or Mass Casualty

- **Typical Incident:** MCI with 5+ patients
- **T Factors:** High Threat, High Complexity, High Coordination Demand
- **Impact:** Major operational disruption; often triggers ICS or MCI protocols
- **< 1% of EMS Calls:** (but highest impact category)

RESCUE RISK



Low-Risk Rescue

- **Examples:** Elevator resets, simple lock-ins, public service
- **T Factors:** Low threat to life, short scene time
- **Impact:** Single-unit resolution with minimal disruption

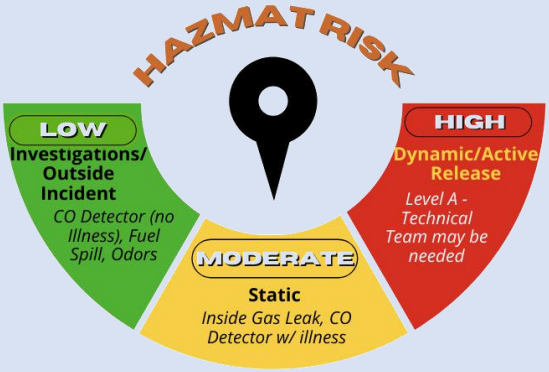
Moderate-Risk Rescue

- **Examples:** Vehicle extrication, minor water rescue, trench near-miss
- **T Factors:** Time-sensitive, technical tools or tactics needed
- **Impact:** Multi-company assignment, scene stabilization critical

High-Risk Rescue

- **Examples:** Confined space, trench collapse, structural collapse
- **T Factors:** Imminent life hazard, complex rescue environment
- **Impact**: Technician-level teams, regional support, command staff activation

HAZMAT RISK



🔻 Low-Risk HazMat

- **Examples:** Minor fuel leak, CO alarm with no symptoms, outside gas leak
- **T Factors:** Low exposure, easily contained, no evacuation required
- **Impact:** Engine Company investigation, possibly meters/ventilation

🟧 Moderate-Risk HazMat

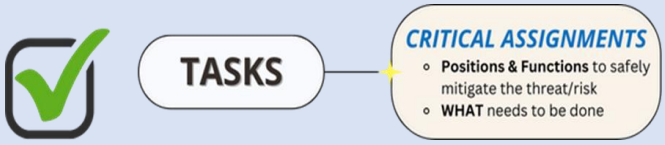
- **Examples:** Indoor natural gas leaks, chemical odor with minor symptoms
- **T Factors:** Escalation potential, public exposure risk
- **Impact:** Scene control, monitoring, HazMat team notification

🔺 High-Risk HazMat

- **Examples:** Tanker rollover, railcar breach, hazmat plume
- **T Factors:** High threat, technical mitigation, multi-jurisdictional
- **Impact:** Evacuations, Unified Command, long-duration operations

3. TASKS – Critical Operations

What needs to be done to fix the problem?



Each **TYPE** drives a unique set of tactical **TASKS**—the boots-on-the-ground actions needed to stabilize the incident and protect life, property, and the environment. These tasks vary significantly based on the nature of the threat. For example:

Structure Fire Tasks:

- Fire attack/suppression
- Search & Rescue
- Ventilation
- Water supply/pump ops
- RIC setup
- Exposure protection
- Incident Command

Hazmat Tasks:

- Scene isolation / hot zone control
- Material identification
- Decontamination setup
- Spill/leak control
- Air monitoring
- Entry team operations
- Unified command

EMS Tasks:

- Scene size-up / triage
- Patient assessment
- Airway management
- Medication administration
- Cardiac monitoring / defib
- Trauma care /Spinal Motion Restriction
- Patient packaging & movement

Rescue Tasks:

- Scene stabilization
- Hazard control (power, traffic, etc.)
- Patient access and packaging
- Rope rigging / mechanical advantage systems
- Extrication (cutting/spreading/lifting)
- Victim removal
- Technical team coordination

These tasks will determine the **TOTAL** number of personnel, the **TEAMS** required, and the specific **TOO LS** and **TRUCKS** needed.

Command/Safety	1
Fire Attack - 1st line	2
Fire Attack - 2nd line (Backup)	2
Search/Rescue	2
Pump Operations/Aerial	2
Water Supply	1
Ventilation/Ladders	2
OnDeck - Rapid Intervention Crew (IRIC)	2
Support/Force Entry/Utilities	1
EMS - Medical/Rehab	2
TOTAL ERF	**17**

4. TOTAL – Effective Response Force (ERF)

How many people are needed to complete the job safely and efficiently?

TOTAL

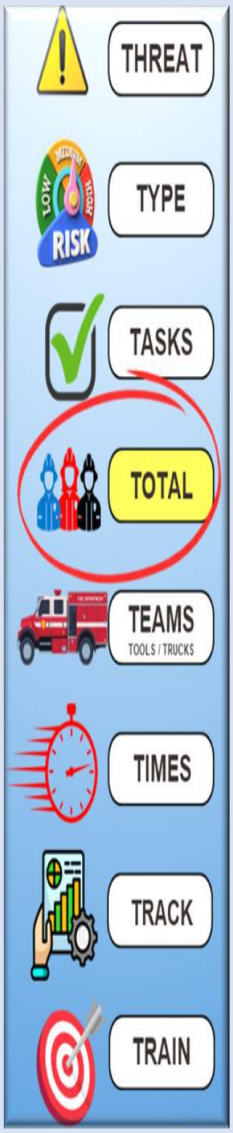
EFFECTIVE RESPONSE FORCE (ERF)

- **HOW MANY** personnel required to complete the Tasks quickly & efficiently

This is where **the math** kicks in:

TASKS + TIME = # of PERSONNEL

The **TOTAL** is the **Effective Response Force (ERF)**—the minimum number of responders needed simultaneously to execute all critical tasks. ERF varies by incident type but is non-negotiable when it comes to life safety. This **ERF TOTAL** is required on the scene to safely and efficiently mitigate the incident, and it varies drastically by threat type. It is critical to both strategy and outcomes.



EMS - TASKS/ERF	
LOW	
Command/Safety/Family Liaison	1
Patient Assessment/Treatment	1
Paramedic in Charge/ Documentation	1
Patient Movement/Transport	2
TOTAL ERF	**2-5**
MODERATE	
Command/Safety/Family Liaison	1
Patient Assessment/Treatment	1
Paramedic in Charge/ Documentation	1
Patient Movement/Transport	2
Resuscitation/Stabilization/Extrication	1
TOTAL ERF	**6**
HIGH	
Command	3
Scene Safety	1
Medical	1
Triage	2
Treatment	5
Transportation	10
Staging	1
TOTAL ERF	**23**

FIRE - TASKS/ERF	
LOW	
Command/Safety	1
Fire Attack/Investigation	1
Pump Operations	1
	3
ALARM - VEHICLE - BRUSH*	**5-8***
TOTAL ERF	**5-8***
MODERATE	
Command/Safety	1
Pump Operations/Water Supply	1
Fire Attack + 2nd line (Backup)	4
Pump Operations/Aerial	1
Search/Rescue	2
OnDeck - Rapid Intervention (RIT)	2
Ventilation/Ladders	2
Support/Utilities	2
EMS - Medical/Rehab	2
TOTAL ERF	**17**
HIGH	
Command/Safety	4
Fire Attack - 1st & 2nd (Backup)	4
Pump Operations/Aerial	2
Forcible Entry	2
Search/Rescue & EMS	3
OnDeck - Rapid Intervention	4
Water Supply	1
Ventilation	3
Utilities	2
EMS - Medical/Rehab	4
TOTAL ERF	**29**

HAZMAT - TASKS/ERF

TASKS	# FF
LOW	
Command/Safety	1
Investigation	1
Mitigation	1
TOTAL ERF	3
MODERATE	
Command/Safety	1
Hazmat Sector Officer	1
Investigation/Entry	2
Backup	2
Science/Research	1
EMS/Treatment	2
TOTAL ERF	9
HIGH	
Command	1
Safety	1
Hazmat Sector Officer	1
Entry	2
Backup	2
Science/Research	2
Decon	3
EMS/Treatment	2
TOTAL ERF	14

RESCUE- TASKS/ERF

TASKS	# FF
LOW	
Command/Safety	1
Extrication	2
TOTAL ERF	3
MODERATE	
Command/Safety	1
Rescue Sector Officer	1
Medical	2
EMS/Treatment/Pt Movement	2
	6
Stabilization	2
Extrication	4
EMS/Treatment/Pt Movement	2
Medivac Helicopter (on request)	
TOTAL ERF	14
HIGH	
SPEC OP'S TEAM NEEDS	**MIN.**
Rope (High Angle)	14
Water (Ice/Dive)	18
Structural Collapse	18
Confined Space	19
Trench	24
TOTAL ERF	14-24

RESCUE - HIGH RISK (TASKS/ERF)

WATER	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Rope Tenders	4
TOTAL ERF	13

ROPE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Rigging / Haul Team	5
TOTAL ERF	14

COLLAPSE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Squad Officers	2
Rescue Specialists	8
Cut Station	2
Equipment Log	1
TOTAL ERF	18

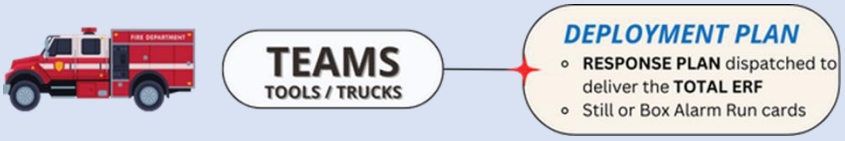
CONFINED SPACE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Ventilation	1
Monitoring	1
Rigging / Haul Team	5
Scribe	1
Attendant	1
Air supply	1
TOTAL ERF	19

TRENCH	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Ventilation	1
Monitoring	1
Rigging / Haul Team	5
Shoring Team	8
TOTAL ERF	24

5-7. TEAMS/TOOLS/TRUCKS

TEAMS – Trained Responders

Who's doing the work—and do they know how to do it?



TEAMS must be ready, capable, and certified. That means cross-trained, scalable crews with the right qualifications and experience for each response type.

The right people, in the right place, at the right time—that's operational readiness.

TOOLS – Equipment & Gear

Do we have the tools to succeed?

Every threat requires specialized tools to match the task. This includes more:

- **Fire** – Hose lines, TICs, ladders, fans
- **EMS** – ALS kits, airway tools, interventions, extrication gear
- **Hazmat** – Detection meters, containment equipment
- **Rescue** – Extrication, ropes, airbags, dive gear, stabilization tools

The job can't get done if the gear doesn't show up—or isn't functional.

TRUCKS – Apparatus Deployment

What units are bringing the tools and teams?

Apparatus must align with task requirements and operational priorities. That includes:

- Engines, ladders, squads, ambulances, tankers, brush units
  CAD programming and run cards ensure the right **TRUCKS** are sent based on **THREAT** and **TYPE**, with escalation built in.

EMS

TYPE OF RISK	TYPICAL NATURE	TASKS	TOTAL ERF	TEAMS (TOOLS/TRUCKS)				
RISK LEVEL	TYPICAL Incident Nature	FUNCTIONS AND ACTIONS	#FF	ENG	TRK	SQD	AMB	CHF	# FF
LOW	**SINGLE PATIENT** *Injured/Illness* *L1 (1 unit response)* *L2 (2+ unit response)*	Command/Safety/Family Liaison	1						
		Patient Assessment/Treatment	1						
		Paramedic in Charge/ Documentation	1	L1			1		2
		Patient Movement/Transport	2	L2	1 - Fire Company		1		5
		TOTAL ERF	2-5						
MODERATE	**SEVERE LIFE THREAT** *Cardiac / Traumatic Arrest* **VEHICLE ACCIDENT** Pin-In/Extrication+(in RESCUE*)	Command/Safety/Family Liaison	1	1 - Fire Company			2	1	
		Patient Assessment/Treatment	1						
		Paramedic in Charge/ Documentation	1						
		Patient Movement/Transport	2						
		Resuscitation/Stabilization/Extrication	1						
		TOTAL ERF	6						8
HIGH	**MASS CASUALTY** *5 or more Pts*	Command	3	3			5	4	
		Scene Safety	1						
		Medical	1						
		Triage	2						
		Treatment	5						
		Transportation	10						
		Staging	1						
		TOTAL ERF	23						23

FIRE

TYPE OF RISK	TYPICAL NATURE	TASKS	TOTAL ERF	TEAMS (TOOLS/TRUCKS)				
RISK LEVEL TYPE	TYPICAL Nature	FUNCTIONS AND ACTIONS	#FF	ENG	TRK	SQD	AMB	CHF	# FF
LOW	**INVESTIGATIONS, OUTSIDE FIRES** -Grass/Refuse	Command/Safety	1	**1 -** Fire Company					
		Fire Attack/Investigation	1						
		Pump Operations	1						
			3						3
	VEHICLE/ BRUSH - Alarm Investigation	**ALARM - VEHICLE - BRUSH***	5-8				1		
		TOTAL ERF	5-8						5-8
MODERATE	**WORKING STRUCTURES** **Small to Medium:** Residential, Multifamily, Commercial	Command/Safety	1	4	1		1	3	
		Pump Operations/Water Supply	1						
		Fire Attack + 2nd line (Backup)	4						
		Pump Operations/Aerial	1						
		Search/Rescue	2						
		OnDeck - Rapid Intervention (RIT)	2						
		Ventilation/Ladders	2						
		Support/Utilities	2						
		EMS - Medical/Rehab	2						
		TOTAL ERF	17						20
HIGH	**TARGET HAZARDS & Large to Mega: Residential, Multifamily, Commercial**	Command/Safety	4	6	2		2	6	
		Fire Attack - 1st & 2nd (Backup)	4						
		Pump Operations/Aerial	2						
		Forcible Entry	2						
		Search/Rescue & EMS	3						
		OnDeck - Rapid Intervention	4						
		Water Supply	1						
		Ventilation	3						
		Utilities	2						
		EMS - Medical/Rehab	4						
		TOTAL ERF	29						34

TYPE OF RISK	RISK LEVEL TYPE	TYPICAL NATURE	TASKS	#FF	TOTAL ERF	TEAMS (TOOLS/TRUCKS) ENG	TRK	SQD	AMB	CHF	# FF	TIMES FIRST DUE	ERF
HAZARDOUS	LOW	**OUTSIDE / Investigation** *CO (no illness), Fuel Spill, Odor Wires down, Flooding*	Command/Safety	1									
			Investigation	2									
			Mitigation	2		**1** - Fire Company			1*			6:20	10:20
			TOTAL ERF	3-5							3-5		
	MODERATE	**INSIDE / Static Release** *Inside Spill/Gas leak, CO (with illness)*	Command/Safety	1									
			Hazmat Sector Officer	1									
			Investigation/Entry	2									
			Backup	2		1		1		1		6:20	10:20
			Science/Research	1									
			EMS/Treatment	2									
			TOTAL ERF	9							9		
	HIGH	**Dynamic/Active release** ***REQUIRES REGIONAL TEAM** **Level A Team Response needed*	Command	1									
			Safety	1									
			Hazmat Sector Officer	1									
			Entry	2									
			Backup	2		3		3		3		6:20	15:00
			Science/Research	2									
			Decon	3									
			EMS/Treatment	2									
			TOTAL ERF	14							27		

TYPE OF RISK	RISK LEVEL TYPE	TYPICAL NATURE	TASKS	#FF	TOTAL ERF	TEAMS (TOOLS/TRUCKS) ENG	TRK	SQD	AMB	CHF	# FF
RESCUE	LOW	**Elevator entrapment** *Lock In/Out, Flooding, Damage Assessment*	Command/Safety	1							
			Extrication	2		**1** - Fire Company					
			TOTAL ERF	3							3
	MODERATE	**MVA**	Command/Safety	1							
			Rescue Sector Officer	1							
			Medical	2		**1** - Fire Company			1	1	
			EMS/Treatment/Pt Movement	2							
				6							6
		MVA w/ Extrication (PIN-IN) *Escalated Alarm* - L2+ UG Vehicle into building (minimal)	Stabilization	2		L2 - Upgrade					
			Extrication	4		+1			2	1	
			EMS/Treatment/Pt Movement	2							
			Medivac Helicopter (on request)								
			TOTAL ERF	14		2			3	2	14
	HIGH	**SPECIAL OPERATIONS - TRT** ***REQUIRES REGIONAL TEAM** *Confined Space, Trench, Structure Collapse, Water/Ice Low/High Angle Rope Rescues*	**SPEC OP'S TEAM NEEDS**	**ERF**							
			Water (Ice/Dive)	13							
			Rope (High Angle)	14							
			Structural Collapse	18		3	1	3	3	4	
			Confined Space	19							
			Trench	24							
			TOTAL ERF	14-24							

RESCUE - RISK TYPE

WATER	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Rope Tenders	4
TOTAL ERF	13

ROPE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Rigging / Haul Team	5
TOTAL ERF	14

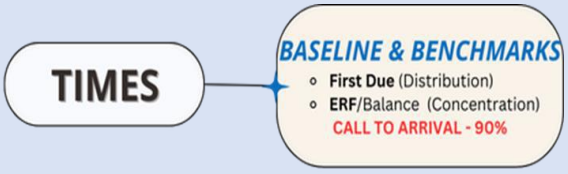
COLLAPSE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Squad Officers	2
Rescue Specialists	8
Cut Station	2
Equipment Log	1
TOTAL ERF	18

CONFINED SPACE	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Ventilation	1
Monitoring	1
Rigging / Haul Team	5
Scribe	1
Attendant	1
Air supply	1
TOTAL ERF	19

TRENCH	
Incident Command	1
Rescue Officer	1
Safety	1
EMS / Treatment	2
Rescue Team & Back-up	4
Ventilation	1
Monitoring	1
Rigging / Haul Team	5
Shoring Team	8
TOTAL ERF	24

8. TIMES – Response Time Objectives

Are we getting there fast enough?



There is a direct and significant correlation between response times and survivability. From modern fire behavior, traumatic hemorrhage, cardiac/respiratory arrest, brain death….

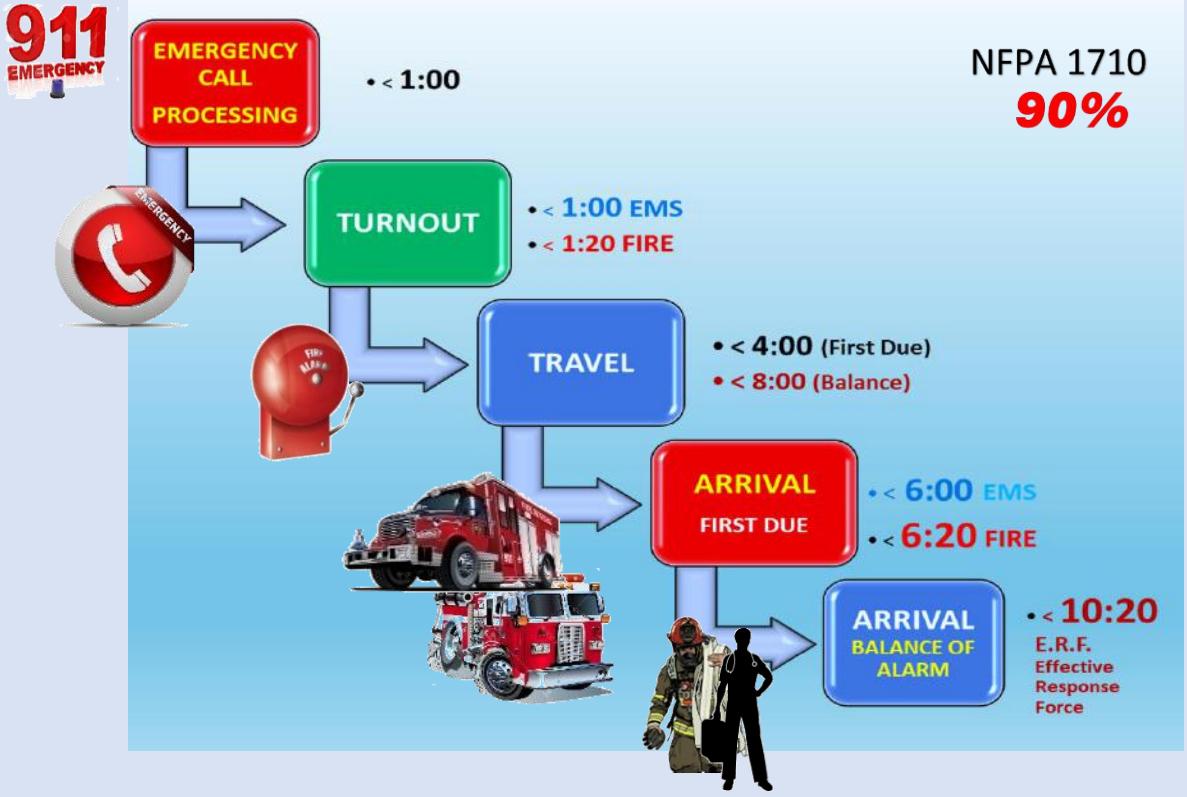
TIMES matter. A lot.

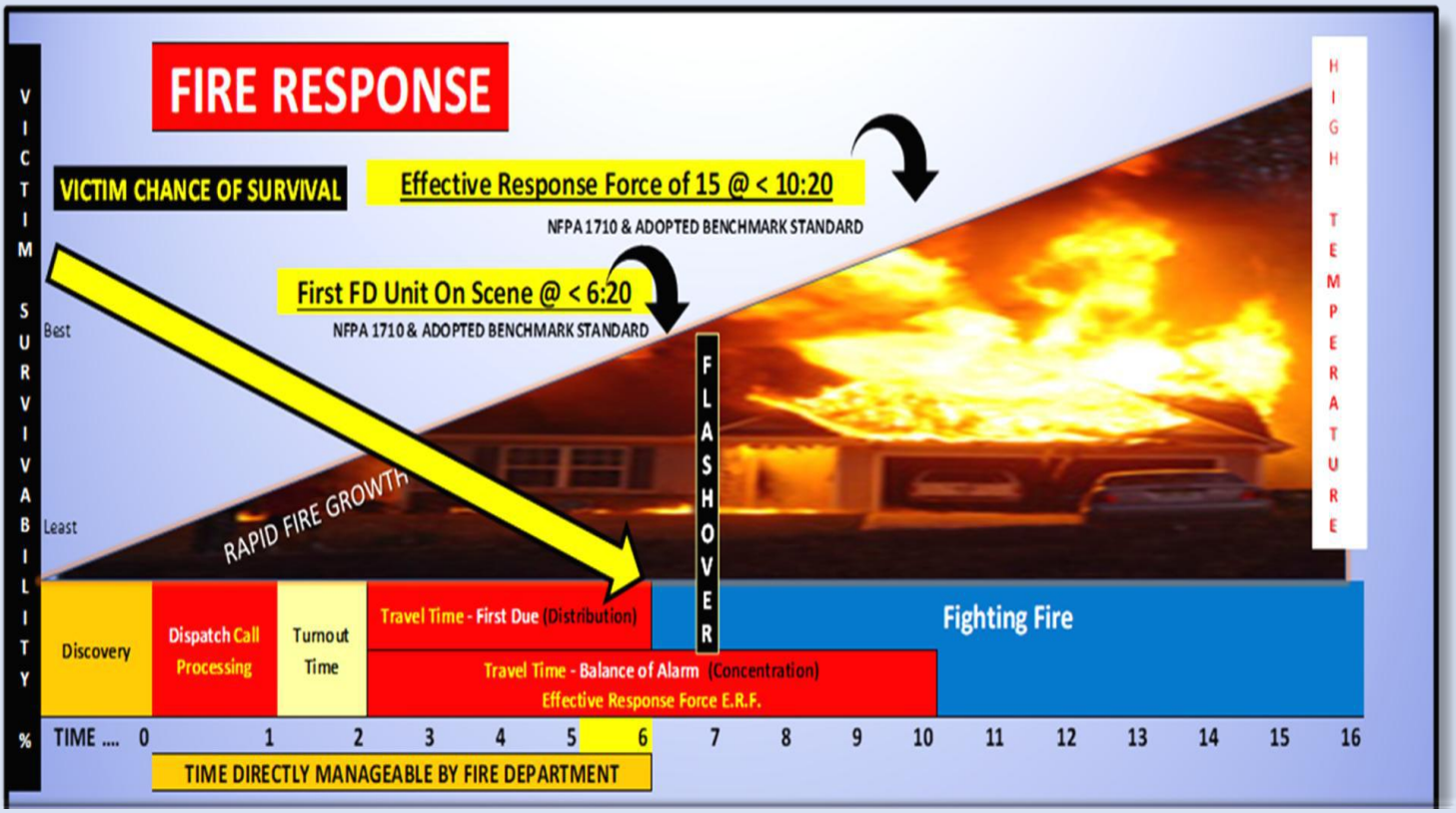
The Department/District targets compliance with **NFPA 1710** response time standards:

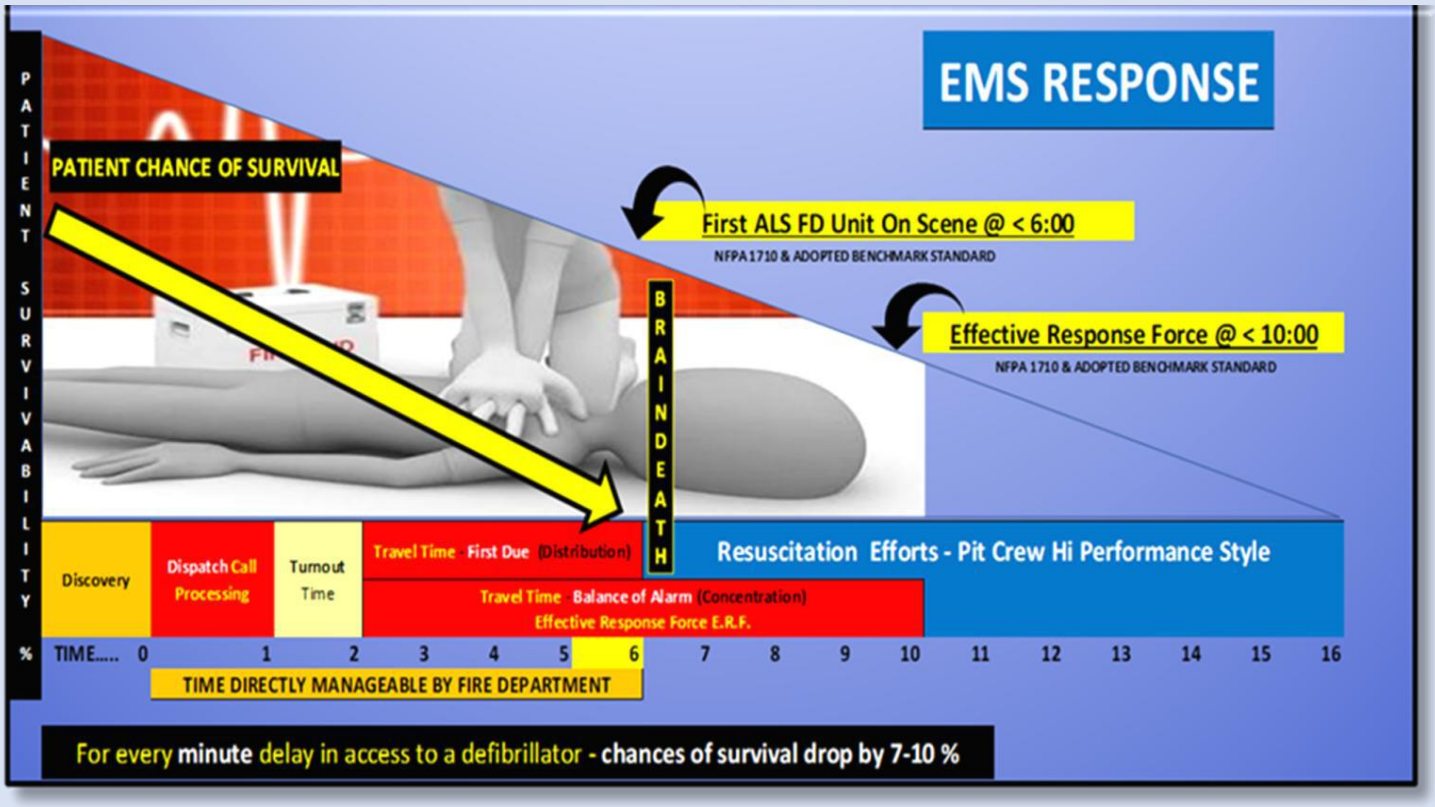
- Arrival within **6–7 minutes, 90% of the time**
- Measured from 911 call to on-scene arrival
- Includes **call processing time, turnout time, and travel time**

Key concepts:

- **Distribution** – Are first-due units close enough to get there in time?
- **Concentration** – Can the full ERF arrive quickly enough to matter?
- **Total Response Time – "Hello to Hello time" – 911 pickup to Firefighter/Paramedic arrival**




FIRE RESPONSE
VICTIM CHANCE OF SURVIVAL
Effective Response Force of 15 @ < 10:20
NFPA 1710 & ADOPTED BENCHMARK STANDARD
First FD Unit On Scene @ < 6:20
NFPA 1710 & ADOPTED BENCHMARK STANDARD
Best
Least
RAPID FIRE GROWTh
FLASHOVER
HIGH TEMPERATURE
VICTIM SURVIVABILITY %
Discovery
Dispatch Call Processing
Turnout Time
Travel Time - First Due (Distribution)
Travel Time - Balance of Alarm (Concentration)
Effective Response Force E.R.F.
Fighting Fire
TIME 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
TIME DIRECTLY MANAGEABLE BY FIRE DEPARTMENT

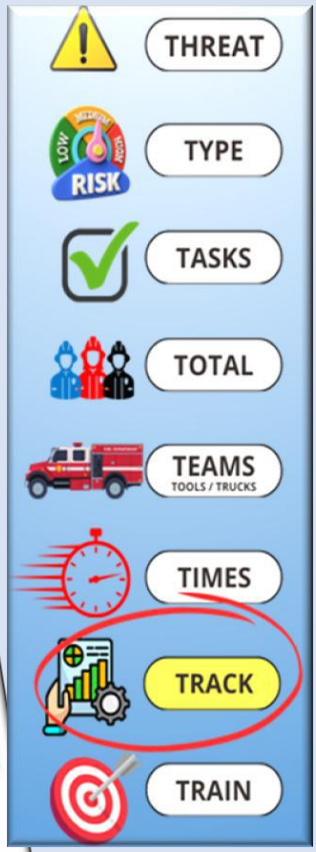

EMS RESPONSE
PATIENT SURVIVABILITY %
PATIENT CHANCE OF SURVIVAL
First ALS FD Unit On Scene @ < 6:00
NFPA 1710 & ADOPTED BENCHMARK STANDARD
Effective Response Force @ < 10:00
NFPA 1710 & ADOPTED BENCHMARK STANDARD
BRAIN DEATH
Discovery
Dispatch Call Processing
Turnout Time
Travel Time - First Due (Distribution)
Travel Time - Balance of Alarm (Concentration)
Effective Response Force E.R.F.
Resuscitation Efforts - Pit Crew Hi Performance Style
TIME..... 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
TIME DIRECTLY MANAGEABLE BY FIRE DEPARTMENT
For every minute delay in access to a defibrillator - chances of survival drop by 7-10 %

9. TRACK – Performance Measurement

Are we doing what we said we would do?

TRACK means monitoring everything:

- Turnout and travel times
- ERF compliance
- Resource availability
- Task completion
- Benchmark comparisons vs. Baselines

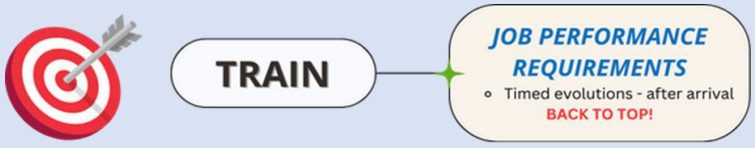


This is CQI in action—Continuous Quality Improvement—because if you can't measure it, you can't manage it.

10. TRAIN – Readiness and Proficiency

Are we ready when it counts?

You don't rise to the occasion—you fall to your level of training.



TRAIN ensures every crew member is ready through:

- JPRs
- Timed evolutions
- Live simulations
- Risk-based, scenario-specific drills

Training reinforces readiness, sharpens skills, and closes the gap between theory and action.

TOTAL DEPLOYMENT PLAN

Risk and Response are two sides of the same coin.

The Top Ten T's transform community risk into operational reality. By applying this framework, the Manhattan FPD ensures:

- Smart, scalable, and safe responses
- Strategic use of personnel and apparatus
- Measurable outcomes aligned with risk levels
- A system that works under pressure, not just on paper

"Your response plan better have proof *(receipts in hand)*."

That phrase isn't just attitude—it's accountability.
If you say your department is ready, prove it. With:

- **Data** (response times, staffing levels, risk scores)
- **Documentation** (deployment models, ERF metrics, coverage maps)
- **Drills & JPRs** that mirror real conditions
- **Outcomes** that match the risks your community actually faces

---

*Bottom line: **Don't just talk performance. Show it.***
*Because in this profession, **hope isn't a strategy.***
But documented, risk-based readiness is.

Risk and Response – Total Deployment Plan

Top Ten T's℠ RISK & RESPONSE PLAN

TYPE OF RISK	RISK LEVEL	TYPICAL NATURE	TASKS	TOTAL ERF #FF	TEAMS (TOOLS/TRUCKS) ENG	TRK	SQD	AMB	CHF	# FF	TIMES FIRST DUE	ERF	TRACK & TRAIN	ALARM	CAD
EMS	LOW	**SINGLE PATIENT** *Injured/Illness* *L1 (1 unit response)* *L2 (2+ unit response)*	Command/Safety/Family Liaison	1							6:00	10:00	TRACK (PERFORMANCE) TRAIN	STILL	AM-ABDO,ALLE,BATT,BITE,BACK,BLED,BURN,COLD,EYE,FALL,FRAC,HEAD,HEAT,INTOX,SEX,SICK,TRAUMA,LIFT,COQ
			Patient Assessment/Treatment	1											
			Paramedic in Charge/ Documentation	1	L1			1		2					
			Patient Movement/Transport	2	L2 1 - Fire Company			1		5					
			TOTAL ERF	**2-5**											
	MODERATE	**SEVERE LIFE THREAT** *Cardiac / Traumatic Arrest* **VEHICLE ACCIDENT** Pin-In/Extrication+(**in RESCUE***)	Command/Safety/Family Liaison	1							6:00	10:00		STILL	AM-BIRTH,CPR,DOA,EDF,DRWN,SHOT,STAB
			Patient Assessment/Treatment	1											
			Paramedic in Charge/ Documentation	1	1 - Fire Company			2	1						
			Patient Movement/Transport	2											
			Resuscitation/Stabilization/Extrication	1											
			TOTAL ERF	**6**						8					
	HIGH	**MASS CASUALTY** *5 or more Pts*	Command	3							6:00	15:00		FULL STILL	
			Scene Safety	1											
			Medical	1											
			Triage	2											
			Treatment	5	3			5	4						
			Transportation	10											
			Staging	1											
			TOTAL ERF	**23**						23					

BOX ALARM - ADDITIONAL +

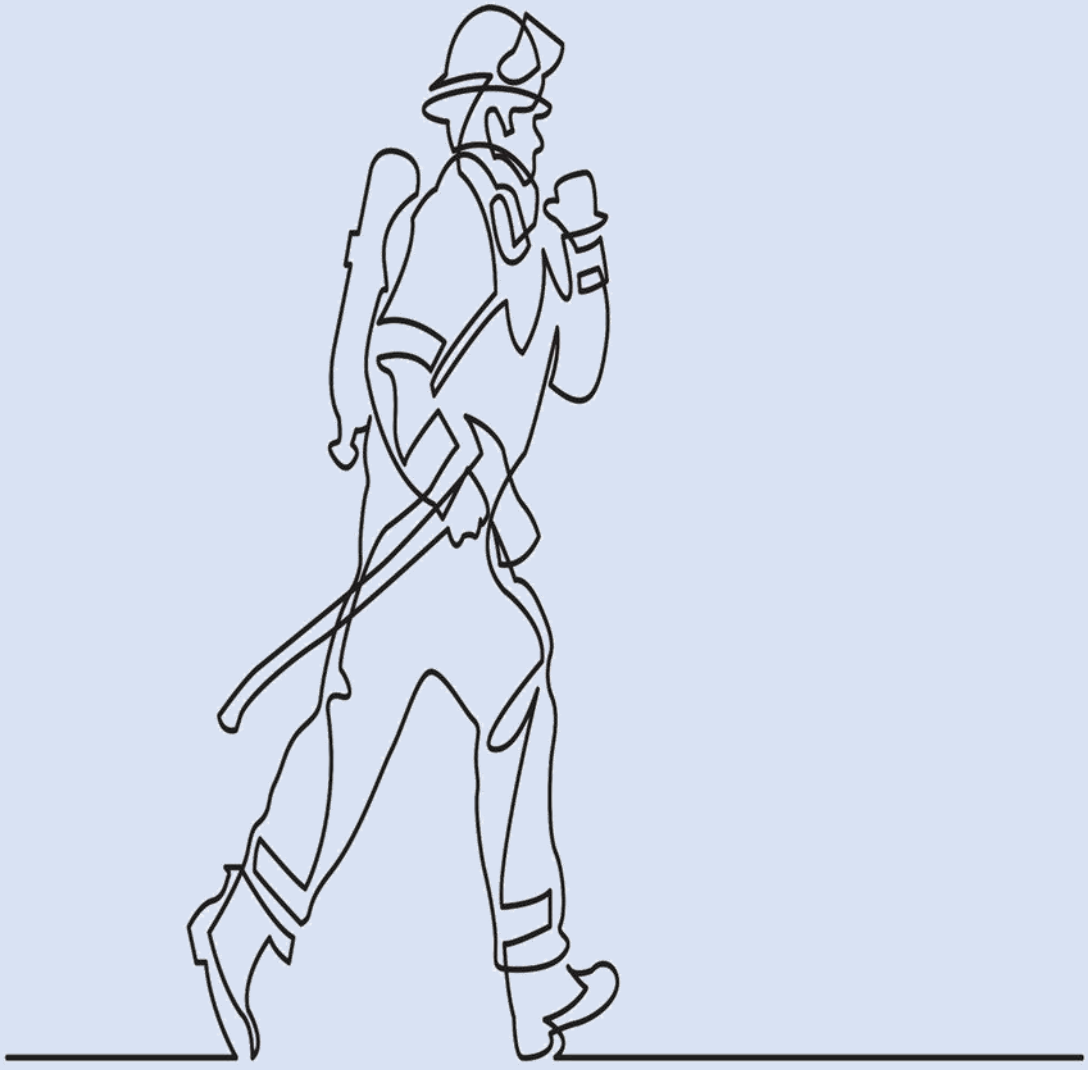
TYPE OF RISK	RISK LEVEL TYPE	TYPICAL Nature	TASKS	TOTAL ERF #FF	TEAMS (TOOLS/TRUCKS) ENG	TRK	SQD	AMB	CHF	# FF	TIMES FIRST DUE	ERF	TRACK & TRAIN	ALARM	CAD
FIRE	LOW	**INVESTIGATIONS, OUTSIDE FIRES** -Grass/Refuse	Command/Safety	1							6:20	10:20	TRACK (PERFORMANCE) TRAIN	STILL	BOMBF, ALRMTF,BURNF, OTHERF,SMOKEF
			Fire Attack/Investigation	1	1 - Fire Company										
			Pump Operations	1											
				3						3					
		VEHICLE/ BRUSH - Alarm Investigation	ALARM - VEHICLE - BRUSH*	5-8				1							ALARMF, CARFF, DUMPF, TRUCKF
			TOTAL ERF	**5-8**						5-8					
	MODERATE	**WORKING STRUCTURES** **Small to Medium:** Residential, Multifamily, Commercial	Command/Safety	1							6:20	10:20		STILL	STRUCTF
			Pump Operations/Water Supply	1											
			Fire Attack + 2nd line (Backup)	4											
			Pump Operations/Aerial	1											
			Search/Rescue	2											
			OnDeck - Rapid Intervention (RIT)	2	4	1		1	3						
			Ventilation/Ladders	2											
			Support/Utilities	2											
			EMS - Medical/Rehab	2											
			TOTAL ERF	**17**						20					
	HIGH	**TARGET HAZARDS & Large to Mega: Residential, Multifamily, Commercial**	Command/Safety	4							6:20	15:00		FULL STILL	STRUCTF, TRUCKF, ARFF
			Fire Attack - 1st & 2nd (Backup)	4											
			Pump Operations/Aerial	2											
			Forcible Entry	2											
			Search/Rescue & EMS	3											
			OnDeck - Rapid Intervention	4	6	2		2	6						
			Water Supply	1											
			Ventilation	3											
			Utilities	2											
			EMS - Medical/Rehab	4											
			TOTAL ERF	**29**						34					

Top Ten T's SM — RISK & RESPONSE PLAN

TYPE OF RISK	RISK LEVEL TYPE	TYPICAL NATURE	TASKS: FUNCTIONS AND ACTIONS	#FF	TOTAL ERF	TEAMS (TOOLS/TRUCKS): ENG	TRK	SQD	AMB	CHF	# FF	TIMES: FIRST DUE	ERF	TRACK & TRAIN	ALARM
HAZARDOUS	LOW	**OUTSIDE / Investigation** *CO (no illness), Fuel Spill, Odor* *Wires down, Flooding*	Command/Safety	1										TRACK (PERFORMANCE) TRAIN	STILL
			Investigation	2											
			Mitigation	2		1 - Fire Company			1*			6:20	10:20		
			TOTAL ERF	3-5							3-5				
	MODERATE	**INSIDE / Static Release** *Inside Spill/Gas leak, CO (with illness)*	Command/Safety	1											STILL
			Hazmat Sector Officer	1											
			Investigation/Entry	2											
			Backup	2		1		1	1	1		6:20	10:20		
			Science/Research	1											
			EMS/Treatment	2											
			TOTAL ERF	9							9				
	HIGH	**Dynamic/Active release** ***REQUIRES REGIONAL TEAM** **Level A Team Response needed*	Command	1											FULL STILL
			Safety	1											
			Hazmat Sector Officer	1											
			Entry	2											
			Backup	2		3		3	3	3		6:20	15:00		
			Science/Research	2											
			Decon	3											
			EMS/Treatment	2											
			TOTAL ERF	14							27				

BOX ALARM - ADDITIONAL +

TYPE OF RISK	RISK LEVEL TYPE	TYPICAL NATURE	TASKS: FUNCTIONS AND ACTIONS	#FF	TOTAL ERF	TEAMS (TOOLS/TRUCKS): ENG	TRK	SQD	AMB	CHF	# FF	TIMES: FIRST DUE	ERF	TRACK & TRAIN	ALARM
RESCUE	LOW	**Elevator entrapment** *Lock In/Out, Flooding, Damage Assessment*	Command/Safety	1										TRACK (PERFORMANCE) TRAIN	STILL
			Extrication	2		1 - Fire Company						6:20	10:20		
			TOTAL ERF	3							3				
	MODERATE	**MVA**	Command/Safety	1											STILL
			Rescue Sector Officer	1											
			Medical	2		1 - Fire Company			1	1		6:20	10:20		
			EMS/Treatment/Pt Movement	2											
				6							6				
		MVA w/ Extrication (PIN-IN) *Escalated Alarm* - L2+ UG Vehicle into building (minimal)	Stabilization	2		L2 - Upgrade									PIN-IN
			Extrication	4		+1			2	1					
			EMS/Treatment/Pt Movement	2											
			Medivac Helicopter (on request)												
			TOTAL ERF	14		2			3	2	14				
	HIGH	**SPECIAL OPERATIONS - TRT** ***REQUIRES REGIONAL TEAM** *Confined Space, Trench, Structure Collapse, Water/Ice Low/High Angle Rope Rescues*	**SPEC OP'S TEAM NEEDS**		**ERF**										FULL STILL
			Water (Ice/Dive)		13										
			Rope (High Angle)		14										
			Structural Collapse		18	3	1	3	3	4		6:20	15:00		
			Confined Space		19										
			Trench		24										
			TOTAL ERF		14-24										



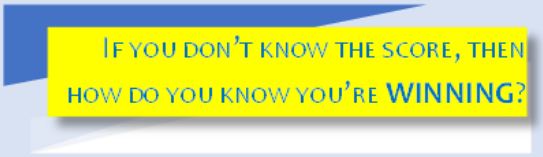
SERVICE DEMAND & PERFORMANCE

SECTION V

SECTION 5 – Service Demand and Performance

Why Measure Performance?

In *Reinventing Government*, the authors lay it out plainly:



- If you do not measure the results of your plan, you can't tell success from failure.
- If you cannot see success, you cannot reward it.
- If you cannot reward success, you are probably rewarding failure.
- If you cannot see success, you cannot learn from it.
- If you cannot recognize failure, you cannot correct it.
- **If you can demonstrate results, you can win public support.**

For today's fire service, success isn't just aspirational—it's quantifiable. Survival rates, fires confined to the room of origin, benchmark compliance, and community satisfaction are measurable outcomes. Without data, we're only guessing—and guessing doesn't save lives.

Every minute matters. For cardiac arrest patients, for fires extending beyond their point of origin, for any life-threatening hazard, seconds mark the line between survival and tragedy. Measuring those seconds is not academic—it is life-critical.

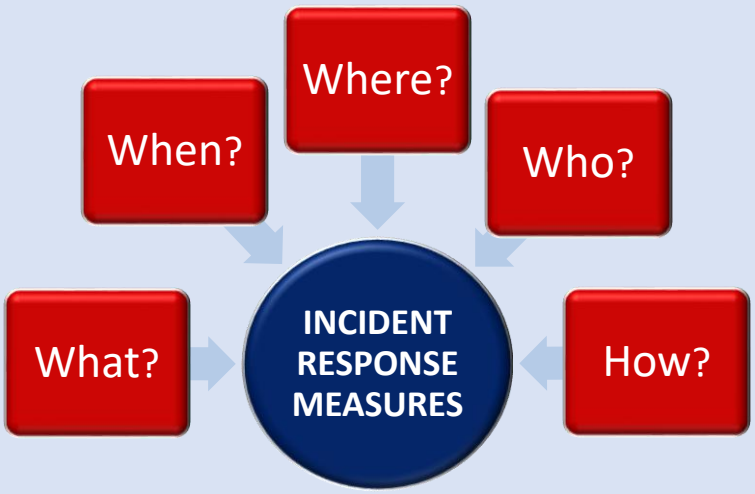
Too often, performance measurement stops when the wheels come to a halt at the curb. But the actual moment of truth is at the patient's side, where intervention occurs. That interval—turnout, travel, and patient contact—must be tracked with the same rigor if survival rates and fire outcomes are to improve.

The bottom line: we measure what matters because what matters most is timely, effective action.

Incident Response Metrics – Understanding Service Demand

To evaluate the system's performance, we begin by asking fundamental questions. Service demand analysis identifies **who needs help**, **when they need it**, **what they need**, and **how effectively we respond to their needs**. Each data point feeds a more innovative deployment model and helps refine our response strategies.

Incident Response Metrics / Service Demand



To evaluate performance, we must first understand demand. Service demand analysis answers the fundamentals:

- **What** happened?
- **When** did it occur?
- **Where** did it happen?
- **Who** responded?
- **How** did the system perform?

Each data point sharpens the deployment model and guides decisions about staffing, station placement, and apparatus allocation.

WHAT – What type of incident occurred?

Calls for service are categorized using the National Fire Incident Reporting System (NFIRS), which provides a standardized method for classifying incident types. These include:

- Fires
- Emergency Medical Services (EMS)
- Rescue incidents
- Hazardous conditions
- Service calls
- Good intent calls
- False alarms
- Severe weather/natural disasters
- Special incident types

Importantly, incidents are coded based on conditions found upon **arrival**, not just by dispatch code—providing a clearer picture of actual risk and workload.

WHEN – When did it happen?

Emergency demand isn't random; it follows recognizable rhythms:

- **Yearly Trends** – Long-term growth or decline in service demand
- **Monthly Patterns** – Seasonal variations (e.g., flu season, summer fire risk)
- **Day of the Week** – Identifying heavier call days
- **Hour of the Day** – Pinpointing peak demand periods

Simultaneous Incidents – Stress Testing the System

Concurrent calls are a critical performance measure:

- 16.2% of all calls overlapped with another incident
- 13.2% involved **2 or more simultaneous calls**
- 3.0% involved **3 or more calls at once**

These stacked incidents stress unit availability, increase reliance on mutual aid, and highlight the need for redundancy.

WHERE – Where did it occur?

Using **GIS mapping**, every incident is plotted to visualize:

- High-demand zones
- Coverage gaps
- Deployment and Travel-time misalignments

Layering **occupancy risk profiles** (schools, senior housing, commercial corridors, and high-density residential areas) adds critical context—because where incidents occur shapes both risk and strategy.

Incidents are further categorized by **property/occupancy type**, which helps assess risk by location. Commercial zones, schools, senior living facilities, and high-density residential developments all carry unique risk profiles and demand different response strategies.

WHO – Responding Resources?

Every incident record tracks:

- **Station and apparatus assignments**
- **Unit identifiers**
- **On-duty shift**
- **Crew performance metrics**

This enables workload balancing, unit reliability analysis, and accountability across the system.

HOW – System Performance?

This is the core question: *Did we meet the benchmark?*

- Were turnout and travel times within adopted standards?
- Did interventions occur quickly enough to influence outcomes?
- Was the incident mitigated effectively?
- If not, what lessons can be learned and corrected?

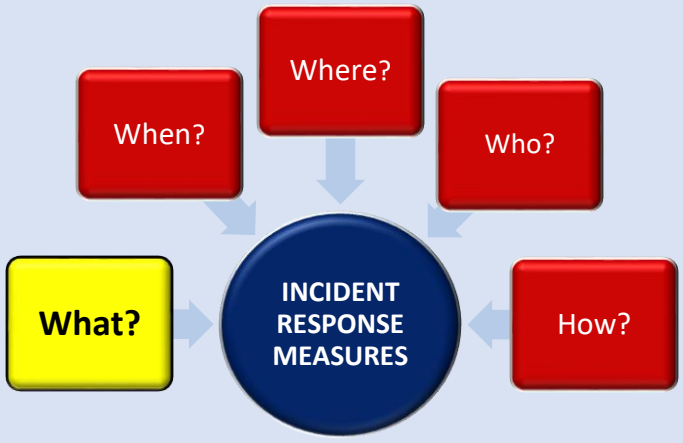
Outliers aren't failures—they're data points for continuous improvement.

The Bottom Line

Performance measurement isn't paperwork—it's a **compass**. It ensures strategy is evidence-based, resources are aligned with risk, and crews are supported to deliver at their highest potential.

If we want to be **better, faster, safer, smarter**, it begins by **measuring what matters most.**

WHAT – Types of Incidents

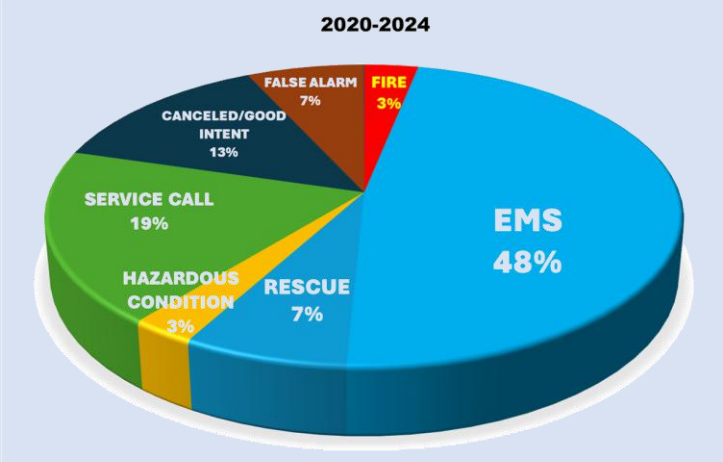


Calls for service are categorized using the **National Fire Incident Reporting System (NFIRS)**, which classifies incidents based on conditions found upon arrival, rather than dispatch coding. This provides a more accurate picture of workload and risk.

Incidents by NFIRS Types (Frequency)

INCIDENT TYPE	2020	2021	2022	2023	2024	2020-2024	Average	% of Inc
300 - EMS	1022	1209	1161	1234	1308	**5,934**	1,187	47.6%
500 - SERVICE CALL	415	626	622	279	379	**2,321**	464	18.6%
600 - CANCELED/GOOD INTENT	320	360	378	252	376	**1,686**	337	13.5%
300 - RESCUE	126	180	211	190	204	**911**	182	7.3%
700 - FALSE ALARM	122	127	195	180	233	**857**	171	6.9%
100 - FIRE	60	62	55	92	126	**395**	79	3.2%
400 - HAZARDOUS CONDITION	73	74	65	69	77	**358**	72	2.9%
	2,141	**2,639**	**2,688**	**2,297**	**2,705**	12,470	2,494	
Change over previous		498	49	-391	408			
		23%	2%	-15%	18%			

👉 Insight: Nearly 7 of every 10 calls are EMS/Rescue, but *all-hazard incidents* (fire, hazmat, false alarm, severe weather) create diverse workload demands that require staffing, training, and apparatus beyond EMS.



Incidents: Count - Year by Incident Type	2020	2021	2022	2023	2024	Totals
Totals	*2,141*	*2,639*	*2,688*	*2,297*	*2,705*	*12,470*
100 Fire, other	6	6	2	1	1	**16**
111 Building fire	6	3	3	8	9	**29**
1111 Building Fire - Single Family		4	5	27	29	**65**
1112 Building Fire - MultiFamily	1		1	1	7	**10**
1113 Building Fire - Commercial.				3	4	**7**
1114 Building Fire - Out Building		1	1	3	7	**12**
1115 Building Fire - Target Hazard				1	1	**2**
112 Fires in structures other than in a building	1					**1**
113 Cooking fire, confined to a container	2	3	3	1	6	**15**
114 Chimney or flue fire, confined to chimney or flue	2					**2**
116 Fuel burner/boiler malfunction, fire confined	1	1				**2**
117 Commercial Compactor fire, confined to rubbish					1	**1**
118 Trash or rubbish fire, contained	1	2	2	2	2	**9**
120 Fire in mobile prop. used as a fixed structure., other					1	**1**
122 Fire in motor home, camper, recreational vehicle	1					**1**
130 Mobile property (vehicle) fire, other		1	1			**2**
131 Passenger vehicle fire	7	8	8	11	9	**43**
132 Road freight or transport vehicle fire	2	1	1	3	2	**9**
138 Off-road vehicle or heavy equipment fire				3	1	**4**
140 Natural vegetation fire, other	3			2		**5**
142 Brush, or brush and grass mixture fire	15	19	13	14	27	**88**
1421 Mulch Fire	2	4	2		3	**11**
143 Grass fire	1		1	1	1	**4**
150 Outside rubbish fire, other		3	6	6	4	**19**
151 Outside rubbish, trash or waste fire	1	2	1	3	7	**14**
1511 Unauthorized Burning/ Nuisance Fire	3	1	1		2	**7**
154 Dumpster or other outside trash receptacle fire	2	2	1			**5**
160 Special outside fire, other			1			**1**
161 Outside storage fire	1			1		**2**
162 Outside equipment fire	1	1	1		1	**4**
170 Cultivated vegetation, crop fire, other				1		**1**
171 Cultivated grain or crop fire	1		1		1	**3**
NFIRS TYPE 100 - FIRES	**60**	**62**	**55**	**92**	**126**	**395**
Change over the previous.		**2**	**-7**	**37**	**34**	**269**
251 Excessive heat, scorch burns with no ignition			1			**1**
NFIRS TYPE 200 - OVERHEAT/PRESSURE	**0**	**0**	**1**	**0**	**0**	**1**
Change over the previous		**0**	**1**	**-1**	**0**	**1**
311 Medical assist, assist EMS crew	5	5	2	1		**13**
320 Emergency medical service, other (conversion only)	4	1	1	1	2	**9**
321 EMS call, excluding vehicle accident with injury	1,013	1,203	1,143	1,219	1297	**5875**
3211 EMS call, Cardiac Arrest			15	13	9	**37**

NFIRS TYPE 300 - EMS	1022	1209	1161	1234	1308	5934
Change over the previous		187	-48	73	74	4626
322 Vehicle accident with injuries	94	140	152	117	143	**646**
3221 Motor Vehicle Accident with injuries and Extrication		4	11	6	15	**36**
323 Motor vehicle/pedestrian accident (MV Ped)		2	2	4		**8**
324 Motor vehicle accident no injuries	28	30	46	58	43	**205**
342 - Search for a person in water					1	**1**
350 Extrication, rescue, other	1					**1**
352 Extrication of victim(s) from vehicle	1	2		2		**5**
356 High-angle rescue	1				1	**2**
357 Extrication of victim(s) from machinery	1			1		**2**
360 Water & ice-related rescue, other		1				**1**
361 Swimming/recreational water areas rescue				1		**1**
363 - Swift water rescue					1	**1**
381 Rescue or EMS standby		1		1		**2**
NFIRS TYPE 300 - RESCUE	**126**	**180**	**211**	**190**	**204**	**911**
Change over the previous		54	31	-21	14	707
400 Hazardous condition, other	1					**1**
411 Gasoline or other flammable liquid spill		1	2	1	3	**7**
412 Gas leak (natural gas or LPG)	34	34	28	32	44	**172**
413 Oil or other combustible liquid spill			1	1		**2**
422 Chemical spill or leak				3	1	**4**
424 Carbon monoxide incident	9	6	10	8	7	**40**
440 Electrical wiring/equipment problem, other	2	2		2		**6**
441 Heat from short circuit (wiring), defective/worn	2	2				**4**
442 Overheated motor	2	2	1			**5**
443 - Breakdown of light ballast					1	**1**
444 Power line down	22	23	22	14	19	**100**
445 Arcing, shorted electrical equipment		2	1	7	2	**12**
460 Accident, potential accident, other		1				**1**
461 Building or structure weakened or collapsed		1		1		**2**
462 Aircraft standby	1					**1**
NFIRS TYPE 400 - HAZARDOUS	**73**	**74**	**65**	**69**	**77**	**358**
Change over the previous		1	-9	4	8	281
510 Person in distress, other				1		**1**
511 Lock-out		1	3	2	2	**8**
522 Water or steam leak	1		1			**2**
531 Smoke or odor removal	3	4	3	4	3	**17**
541 Animal problem		1	1			**2**
542 Animal rescue		1		1	2	**4**
550 Public service assistance, other	4	5	5	4	2	**20**
551 Assist police or other governmental agency	4	4	6	8	4	**26**
552 Police matter	4	7	1	2	3	**17**

553 Public service	29	44	28	43	54	**198**
554 Assist invalid	23	26	7	3	6	**65**
5541 Lift Assist Non-Fall	28	30	46	73	102	**279**
5542 Lift Assist Fall	8	16	20	14	27	**85**
561 Unauthorized burning		3	2		1	**6**
571 Cover assignment, standby, move up	311	476	492	118	168	**1565**
5711 Investigators Box		8	7	6	4	**25**
5712 - CART Response					1	**1**
NFIRS TYPE 500 - SERVICE CALL	**415**	**626**	**622**	**279**	**379**	**2,321**
Change over the previous		**211**	**-4**	**-343**	**100**	**1942**
600 Good intent call, other	3		2	7	2	**14**
611 Dispatched & canceled en route	274	295	292	140	227	**1228**
6111 Toning Error		5	37	63	69	**174**
621 Wrong location	2			1		**3**
622 No incident found on arrival of incident address	22	39	26	31	60	**178**
631 Authorized controlled burning	3	8	7	4	9	**31**
650 Steam, other gas mistaken for smoke, other			4	1		**5**
651 Smoke scare, odor of smoke	11	11	8	5	8	**43**
652 Steam, vapor, fog or dust thought to be smoke	3		1			**4**
653 Barbecue, tar kettle		1			1	**2**
671 Hazmat release investigation w/ no hazmat	2	1	1			**4**
NFIRS TYPE 600 - GOOD INTENT	**320**	**360**	**378**	**252**	**376**	**1,686**
Change over the previous		**40**	**18**	**-126**	**124**	**1310**
700 False alarm or false call, other	13	2	9	10	7	**41**
7101 Medical Alarm Activation, no patient		1	11	12	20	**44**
711 Municipal alarm system, malicious false alarm			1		1	**2**
712 Direct tie to FD, malicious/false alarm	2		2			**4**
714 Central Station, malicious false alarm	2	1	1			**4**
715 Local alarm system, malicious false alarm			1			**1**
730 System malfunction, other	2		1	1		**4**
731 Sprinkler activation due to a malfunction	1	1	1	2	2	**7**
733 Smoke detector activation due to a malfunction	9	16	20	25	27	**97**
734 Heat detector activation due to a malfunction		1		4	1	**6**
735 Alarm system sounded due to a malfunction	19	11	18	20	17	**85**
7351 Trouble Alarm	19	25	44	39	51	**178**
736 CO detector activation due to a malfunction	3	5	8	10	12	**38**
740 Unintentional transmission of alarm, other	1	3	3		1	**8**
741 Sprinkler activation, no fire - unintentional	2	1	1		1	**5**
742 Extinguishing system activation	1				1	**2**
743 Smoke detector activation, no fire - unintentional	15	8	5	8	10	**46**
7431 Smoke detector activation due to cooking	6	9	10	7	19	**51**
744 Detector activation, no fire - unintentional	4	3	5	3	3	**18**
745 Alarm system sounded, no fire - unintentional	20	23	41	27	36	**147**

746 Carbon monoxide detector activation, no CO	3	17	13	12	24	**69**
NFIRS TYPE 700 - FALSE ALARM	**122**	**127**	**195**	**180**	**233**	**857**
Change over the previous		**5**	**68**	**-15**	**53**	**624**
814 - Lightning strike (no fire)					1	**1**
NFIRS TYPE 800 - WEATHER	**0**	**0**	**0**	**0**	**1**	**1**
Change over the previous		**0**	**0**	**0**	**1**	**0**
900 Special type of incident, other	3	1		1		**5**
911 Citizen complaint					1	**1**
NFIRS TYPE 900 - SPECIAL	**3**	**1**	**0**	**1**	**1**	**6**
Change over the previous		**-2**	**-1**	**1**	**0**	**5**
Totals	**2,141**	**2,639**	**2,688**	**2,297**	**2,705**	**12,470**
Change over the previous		**498**	**49**	**-391**	**408**	**9765**

WHEN - Service Demand Over Time

Call volume isn't just a statistic—it drives whether the first-due company is actually available when the tones drop. In a perfectly tuned system, smart station placement and balanced staffing spread workload evenly. Reality disagrees. Certain areas and units carry a heavier load, stressing reliability and stretching travel times.

This section maps **where the work really lands**—from the big picture to the street corner—so we can realign resources, boost reliability, and cut minutes where they matter most.

We break demand down **from macro to micro:**

Yearly – long-term trends and growth.

Monthly – seasonal swings and surge months.

Day of Week – weekday vs. weekend patterns.

Hour of Day – the "power hours" that strain coverage.

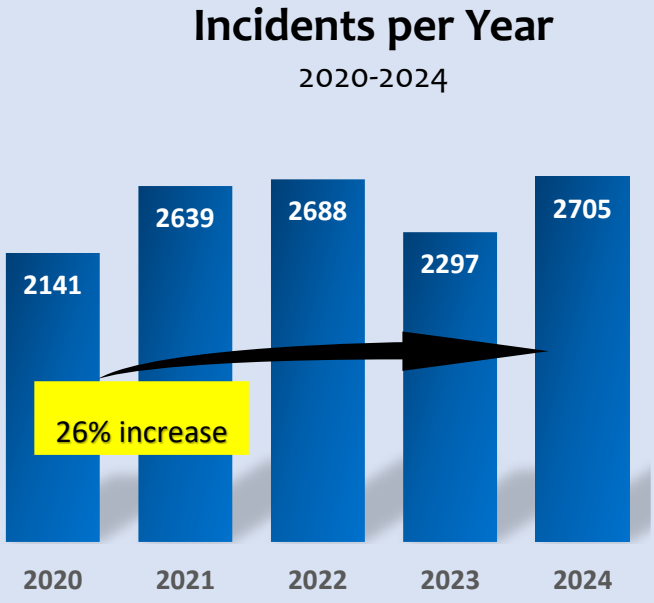
Read it like a deployment playbook: identify the peaks, address the gaps, and place the right unit in the right place at the right time.

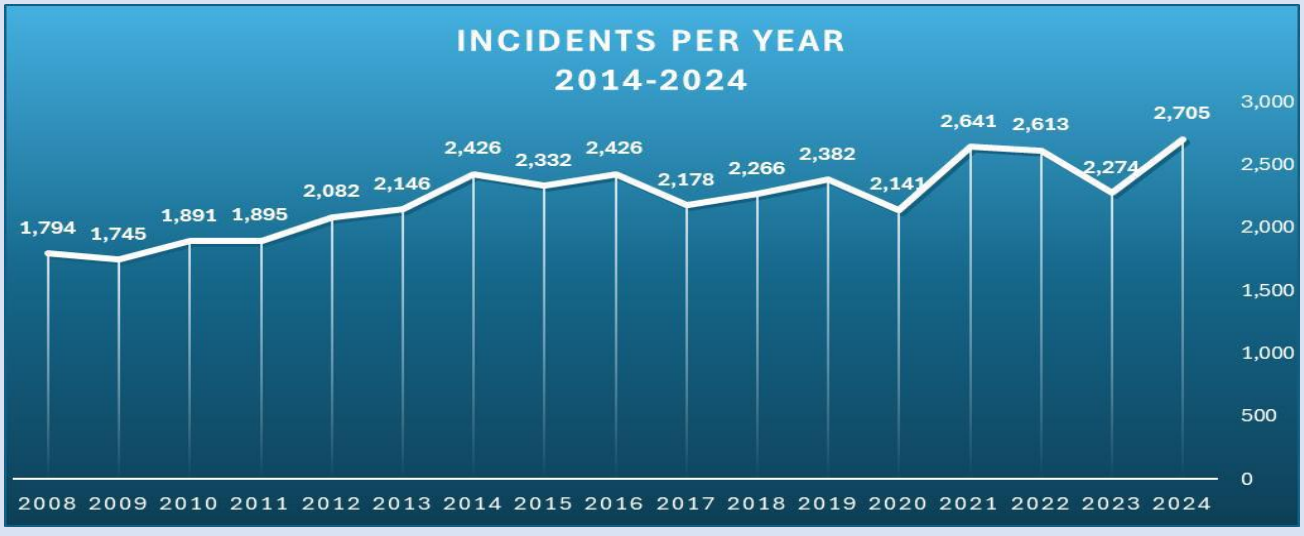
Yearly

Annually, the total call volume serves as a **comprehensive indicator of the District's overall health**. Are we climbing, declining, or plateauing? Year-over-year changes tell a story—sometimes about population growth and new development, other times about aging demographics, shifting risk profiles, or even successful prevention and outreach programs.

For example, a sustained rise in EMS incidents often signals an **aging population** or gaps in local healthcare access. At the same time, a spike in fire calls may reflect new construction, housing density, or seasonal hazards. Conversely, a dip—such as in 2020 during the height of the COVID-19 pandemic—can highlight how external forces can reshape community demand almost overnight.

👉 **Takeaway:** Tracking annual volume isn't just about counting calls. It's about reading the community's vital signs and adjusting resources, deployment, and planning to stay ahead of the curve.





Yearly Demand – Big Picture

Annually, the total call volume serves as a pulse check for the District. The last five years show both disruption and growth:

- 2020: 2,141 calls – a noticeable dip, mainly reflecting the COVID effect as activity slowed and people stayed home.
- 2021: 2,639 calls – a 23% rebound, as restrictions lifted and service demand surged back.
- 2022: 2,688 calls – essentially stable, signaling a new baseline.
- 2023: 2,297 calls – a 15% drop, an outlier that may be linked to reporting changes or temporary demographic/economic shifts.
- 2024: 2,705 calls – the highest on record, representing an 18% jump from 2023 and a 26% increase over 2020.

👉 Trendline: Over the past five years, Manhattan FPD has averaged ~2,500 incidents per year, but the real story is the upward trajectory, culminating in 2024's record-breaking demand.

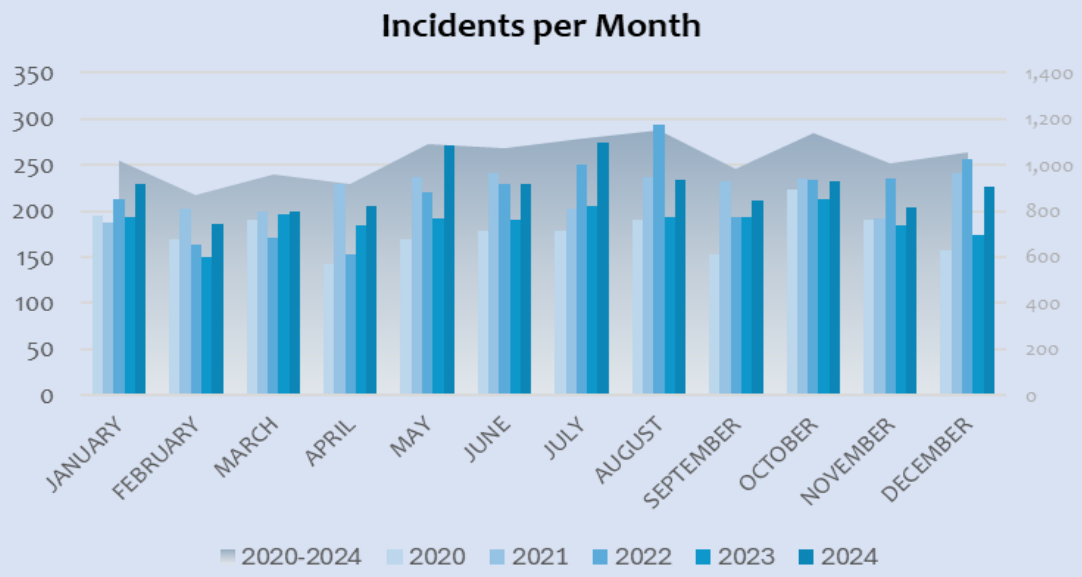
Interpretation

- The COVID trough in 2020 and the rebound in 2021 demonstrate the system's elasticity.
- EMS continues to dominate the workload, consistent with an aging population and healthcare gaps in the region.
- The 2023 dip warrants a closer look—possible influences include data collection/reporting adjustments, temporary population shifts, or external factors like weather patterns.
- 2024's peak (2,705 calls) raises the bar for future planning, showing that call volume growth is not only back, it's accelerating.

👉 Takeaway: The District must plan for a 2,700+ annual incident pace going forward. Staffing, deployment, and station location (particularly the new Station 81) need to be aligned with this reality to maintain reliability.

Monthly Trends – The Seasonal Cycle

Monthly trends reveal the rhythm of emergency demand—when the system surges, and when it relaxes.



Summer Surge: June, July, and August consistently push the system hardest, averaging 220–230+ calls per month. August 2022 reached a peak of 294 incidents, marking the busiest single month in five years. Trauma, outdoor activity, and weather-driven fires all play a role.

Winter Uptick in EMS: While the overall volume dips slightly in February (the shortest month, with call volumes ranging from 150 to 186), winter brings its own set of challenges—medical calls, heating system incidents, and storm-driven responses.

December Shift: December 2024 saw 227 incidents, rivaling the summer months, suggesting that holiday season risks and weather volatility are reshaping the "slow season."

COVID Dip in 2020: Monthly volume across the board was lower in 2020, tracking with the pandemic's suppression of activity.

👉 **Takeaway:** Seasonal demand isn't just academic—it's operational. The District should anticipate summer **surges and late-year spikes**, adjusting staffing, training cycles, and resource readiness ahead of predictable high-demand months.

Strategic Uses for CRA/SOC:

- **Demand-Based Deployment**
  Anticipate the rhythm of the calendar. Summer months (June–August) and late-year spikes (December 2024) justify targeted staffing increases, predictive scheduling, and readiness drills.
- **Resiliency Planning**
  Plan for volatility. Outliers like **August 2022 (294 calls)** or **December 2024 (227 calls)** demonstrate

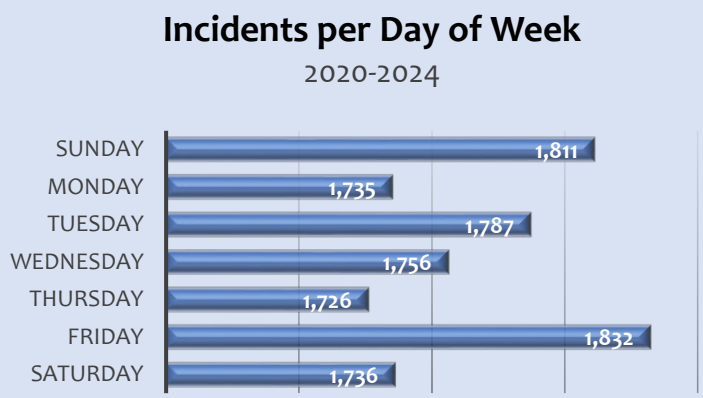
that sudden surges are not theoretical—they actually occur. Surge staffing, cross-staffing, and auto-aid agreements must be ready to flex when the system is tested.

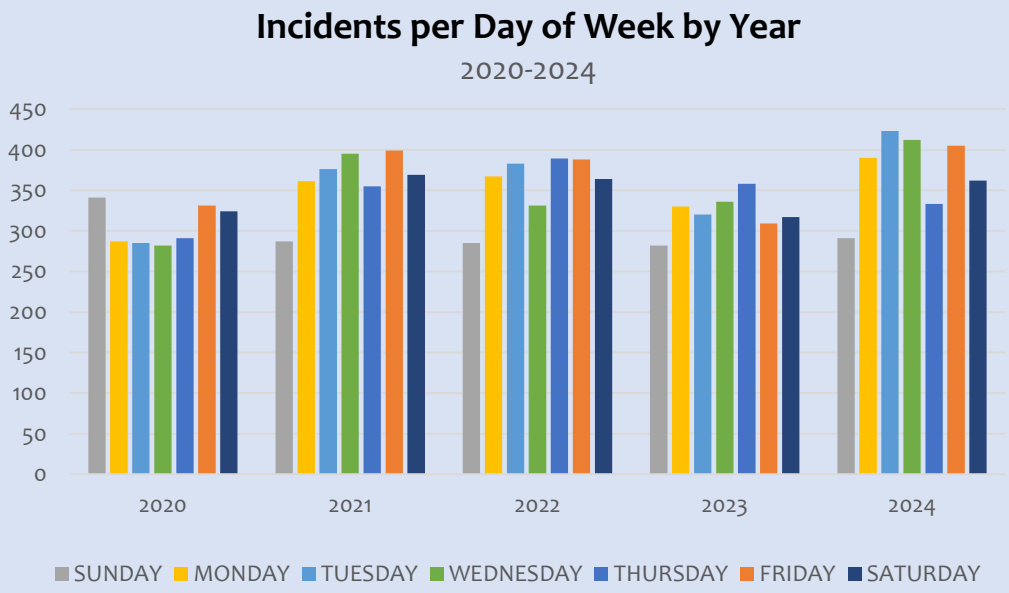
- **Seasonal Risk Profiling**
  Demand is not just about quantity; it's about *type*.
  - Summer = more trauma, outdoor fires, and recreation-related injuries.
  - Winter = more EMS, heating-related calls, and storm-driven hazards.
    Linking seasonal spikes to incident types strengthens deployment logic, training priorities, and public education campaigns.

👉 **Bottom Line:** Seasonal demand patterns aren't noise—they're signals. The CRA/SOC must turn those signals into **staffing models, surge strategies, and targeted risk-reduction efforts**.

Day-of-Week Patterns – When the Work Hits

Weekdays follow the rhythm **of work, school, and commuter traffic**, often busier during business hours. Weekends shift the risk mix — fewer school-related false alarms, more recreation-related trauma. These patterns matter: aligning staffing to them improves reliability and reduces burnout.





📊 Day-of-Week Call Volume Analysis (2020–2024)

The total incident volume by weekday over five years reveals consistent, actionable trends.

✅ Key Insights

🔹 2024 – Peak Activity

- Highest overall incident volume across every weekday.
- Tuesday (~430 calls) was the busiest single day in the five-year set.
- Wednesday and Thursday also ran high, suggesting mid-week strain.

🔹 Shifting "Busiest Day"

- 2021: Wednesday & Friday topped ~400 calls.
- 2022: Tuesday & Friday tied, Thursday close behind.
- 2023: Balanced volume, Thursday slightly busiest.
- 2020: Sunday unusually high (COVID anomaly).

🔹 Sunday – The "Light Day"

- Consistently at or near the bottom in 2021–2024.
- Lower demand = candidate for leaner baseline staffing, with surge capacity on tap.

🔹 COVID Disruption (2020)

- Flatter weekday curve, with atypically high Sundays and low Mondays/Tuesdays.

📈 How to Use This

- **Dynamic Staffing Models** → Reinforce peak days (Tue/Wed/Fri); trim back on Sundays where volume is lowest.
- **Predictive Analytics** → Overlay call types (trauma vs. cardiac/psych) for sharper deployment.
- **Strategic Planning** → Tuesday's 2024 spike deserves a closer look. Was it a dispatch change, a population shift, or a new service pattern? Matching deployment to demand ensures first-due reliability.

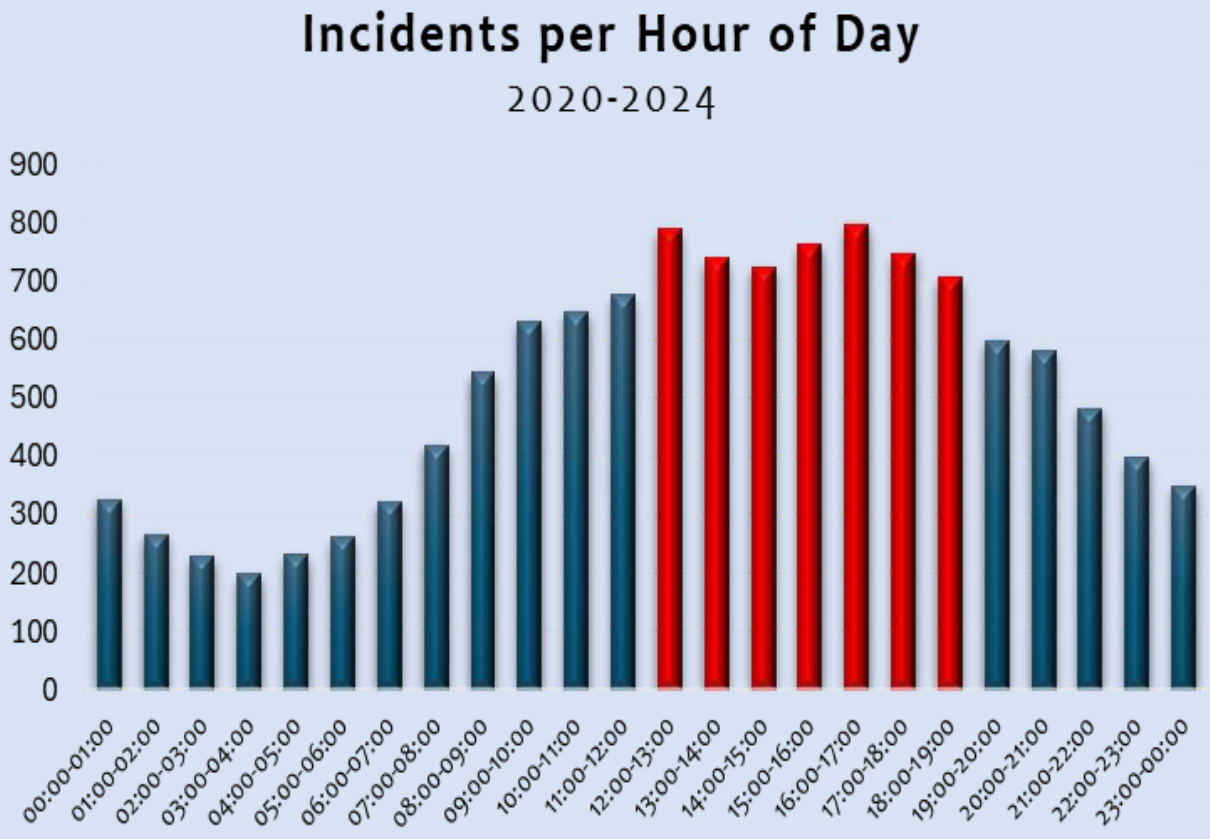
Hourly Demand – Power Hours and Pressure Points

Hourly analysis takes us from the wide-angle lens to the microscope. Demand doesn't spread evenly across the clock—it **surges at predictable times.**

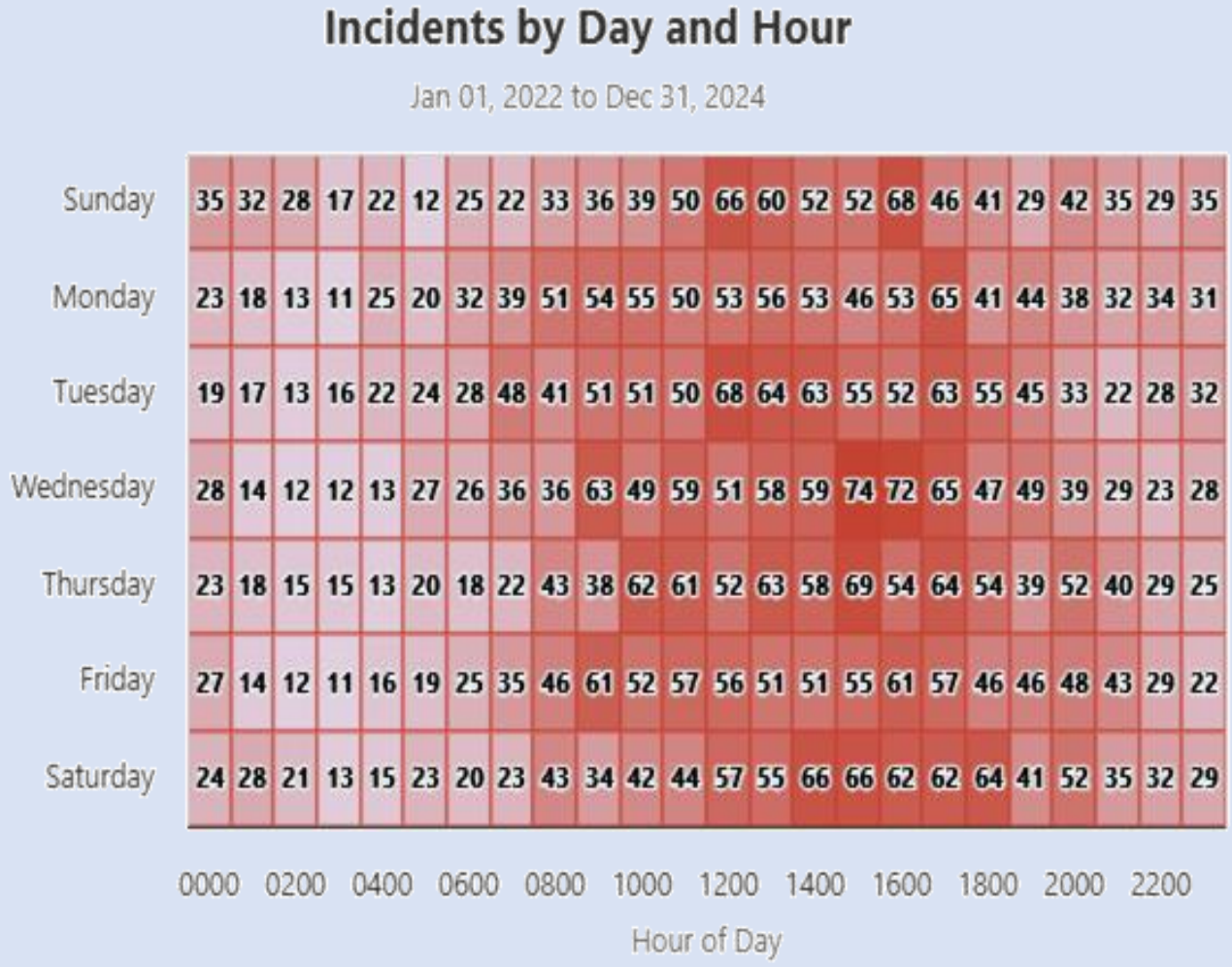
- **Quiet Hours**: Between **03:00 and 05:00**, incident volume bottoms out.
- **Morning Ramp-Up**: Calls rise quickly after **07:00**, reflecting commuters, schools, and daytime activity.
- **Power Hours**: The true strain hits between **12:00 and 18:00**, when incidents peak and overlap risk climbs. The single busiest window is **12:00–13:00** (788 calls over five years).
- **Evening Taper**: After 20:00, demand declines but never disappears, holding steady into the late night.

👉 **Takeaway**: The District's system is busiest **when most people are awake and moving**—typically from lunchtime through early evening. These hours stress reliability, pull units out of first-due areas, and generate the bulk of simultaneous incidents.

Deployment Implication: Staffing, training schedules, and unit positioning should be designed around these "power hours." If coverage is held here, it holds everywhere.



Hour of Day of Week and Hour of Day



Simultaneous Incidents

Simultaneous incidents occur when other incidents are underway, and a new incident begins. The list below shows the proportion of simultaneous incident occurrences by the number of incidents open.

Overlapping Calls and Hours

Jan 01, 2022 12:00 AM to Aug 31, 2025 11:59 PM

Overlapping Calls	Occurrences	% of Occurrences	Hours	% of Hours
No Overlapping Calls	11,083	81.99%	22,497	96.14%
Overlapping Calls	2,434	18.01%	902	3.86%
Totals	**13,517**	**100.00%**	**23,399**	**100.00%**

16% of the Time there is at least one additional Overlapping Call

Expanded Overlapping Calls and Hours

Jan 01, 2022 12:00 AM to Aug 31, 2025 11:59 PM

Overlapping Calls	Occurrences	% of Occurrences	Hours	% of Hours
0 Overlapping Calls	11,083	81.99%	22,497	96.14%
1 Overlapping Call	1,939	14.34%	785	3.35%
2 Overlapping Calls	394	2.91%	103	0.44%
3 Overlapping Calls	70	0.52%	12	0.05%
4 Overlapping Calls	15	0.11%	1	0.00%
5 Overlapping Calls	8	0.06%	1	0.00%
6 Overlapping Calls	6	0.04%	0	0.00%
7 Overlapping Calls	2	0.01%	0	0.00%
Totals	**13,517**	**100.00%**	**23,399**	**100.00%**

What it tells you:

Approximately 84% of incidents occur solo in the District, with no other call competing.
Roughly **16%** of the time, you've got **two or more incidents happening at once**.

83.8% for **0** simultaneous incidents (11,084 occurrences)

16.2% there is at least 1 additional Call occurrence

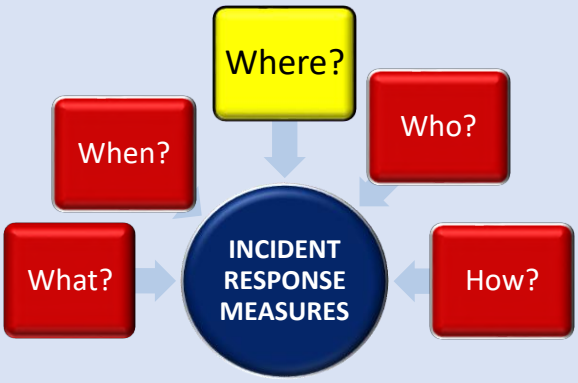
13.2% for **1** simultaneous incident (1,740 occurrences)

2.4% for **2** simultaneous incidents (322 occurrences)

0.6% for **3 OR MORE** simultaneous incidents (75 occurrences)

👉 **Impact:** About **1 in 6 calls (16%)** happened when another incident was already in progress. These overlaps are the true stress test for reliability — forcing units out of first-due areas, triggering mutual aid, and lengthening response times.

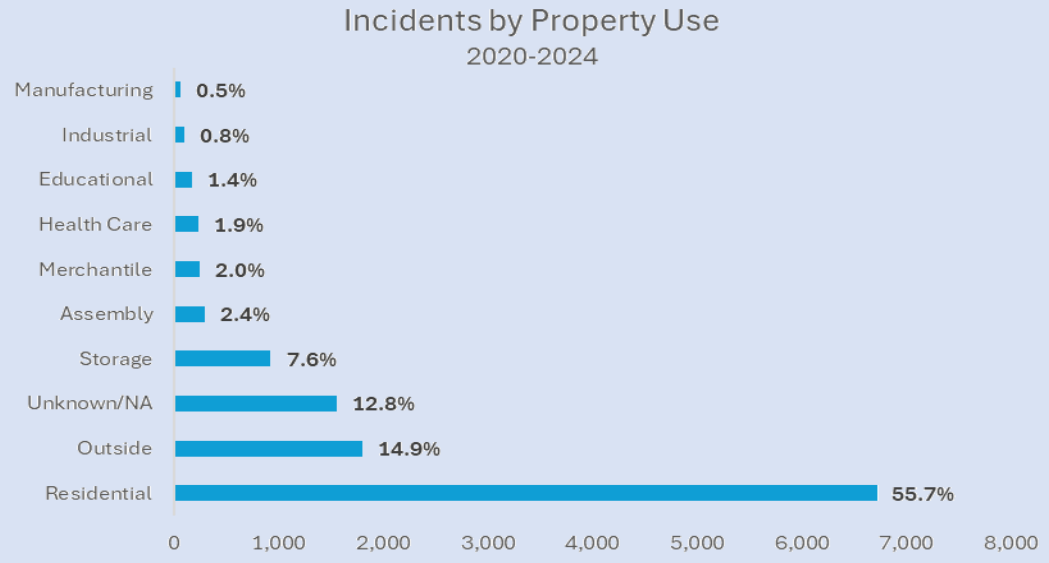
WHERE - Incident Location



Property Type/Use

Every incident happens *somewhere*, and that "where" matters. By categorizing incidents by property/occupancy type, we can see not just what's happening, but where the risks concentrate. This analysis, combined with GIS mapping, provides a critical layer for deployment planning, community risk reduction, and prevention strategies.

INCIDENTS BY PROPERTY USE



PROPERTY USE	2020	2021	2022	2023	2024	2020-2024	Average	% of Inc
Residential	1166	1395	1266	1344	1547	6,718	1,344	55.7%
Outside	285	406	406	323	383	1,803	361	14.9%
Unknown/NA	339	480	501	227	1	1,548	310	12.8%
Storage	174	166	211	166	205	922	184	7.6%
Assembly	46	44	69	53	82	294	59	2.4%
Merchantile	35	49	48	49	56	237	47	2.0%
Medical	45	42	49	45	52	233	47	1.9%
Educational	15	37	28	40	44	164	33	1.4%
Industrial	26	15	15	19	17	92	18	0.8%
Manufacturing	10	7	22	8	13	60	12	0.5%
	2,141	2,641	2,615	2,274	2,400	12,071	2,414	

Incidents by Property Use (2020–2024)

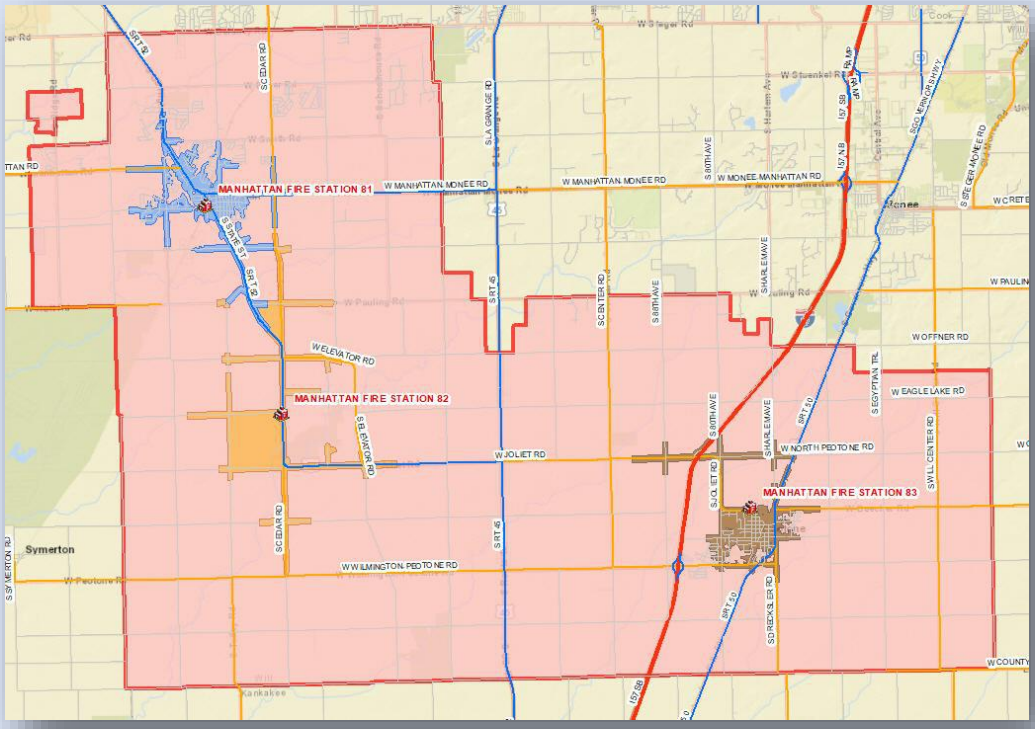
- **Residential → 6,718 incidents (54.3%)**
    - By far the largest share, reflecting the district's suburban and semi-rural makeup. EMS and fire demand are heavily weighted toward single- and multi-family housing.
- **Outside/Open Areas** → 1,803 incidents (15.0%)
    - Includes roadways, fields, and outdoor environments. Ties directly to motor vehicle crashes, brush fires, and severe weather events.
- **Unknown/Not Classified** → 1,853 incidents (15.0%)
    - A significant portion of reports lack precise occupancy classification—an opportunity to improve RMS coding and data quality for sharper risk assessment.
- **Storage/Warehouse/Agricultural** → 922 incidents (7.4%)
    - Reflects Manhattan's mixed industrial-agricultural profile. These incidents often present higher fire load and access challenges.
- **Assembly** (294, 2.4%)
    - Schools, gyms, places of worship. While the volume is relatively low, the risk to life safety is high due to the occupant loads.
- **Medical Facilities** (233, 1.9%)
    - Long-term care and assisted living facilities add high-frequency EMS demand and evacuation challenges during fire or hazard events.
- **Educationa**l (164, 1.3%)
    - Schools generate a mix of false alarms, medical calls, and occasional fire incidents. Require coordinated planning with school administrators.
- **Mercantile** (237, 1.9%) / Industrial (92, 0.7%) / Manufacturing (60, 0.5%)
    - Smaller in incident count, but higher-consequence risks—chemicals, machinery, worker density, and after-hours detection issues.

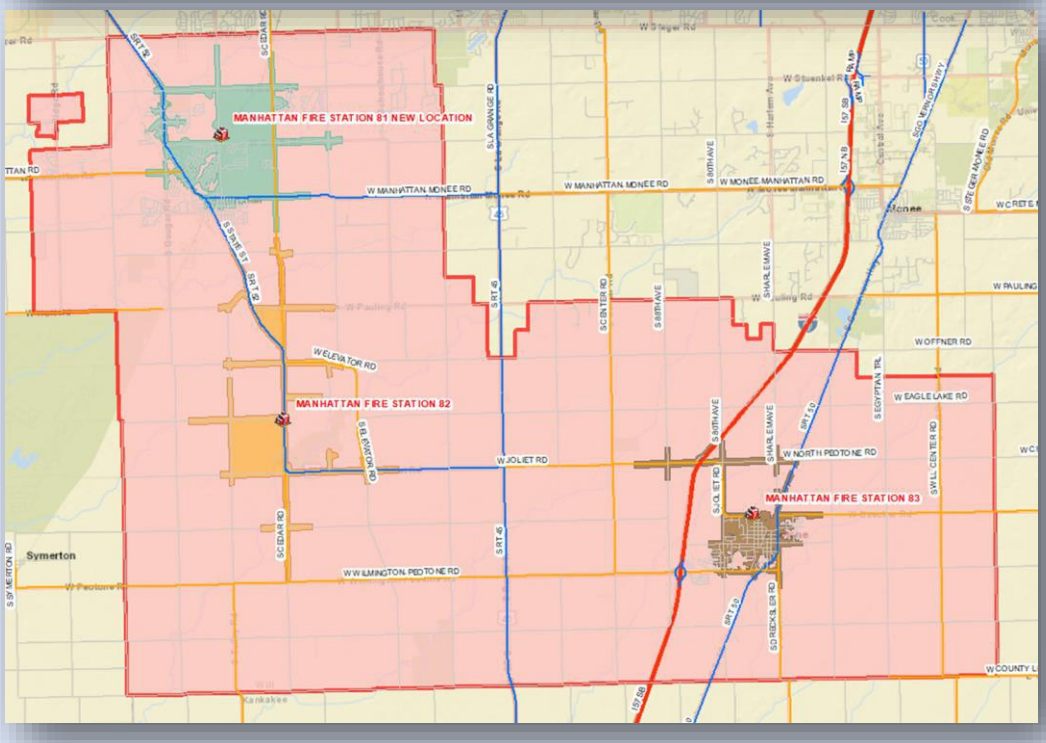
Strategic Implications

- **Residential dominance** confirms EMS as the backbone of demand, and underscores the importance of residential fire prevention (smoke alarms, sprinklers, CRR campaigns).
- **Outside/open area incidents** drive deployment along major roads and rural areas—requiring balanced coverage between town core and rural edges.
- **Data quality** (high "Unknown/NA" use codes) must improve for more precise risk mapping and accreditation defense.
- **High-risk occupancies** (assembly, medical, storage, industrial) may not generate volume, but they create *consequences*. They justify targeted pre-incident planning, inspections, and ERF readiness.

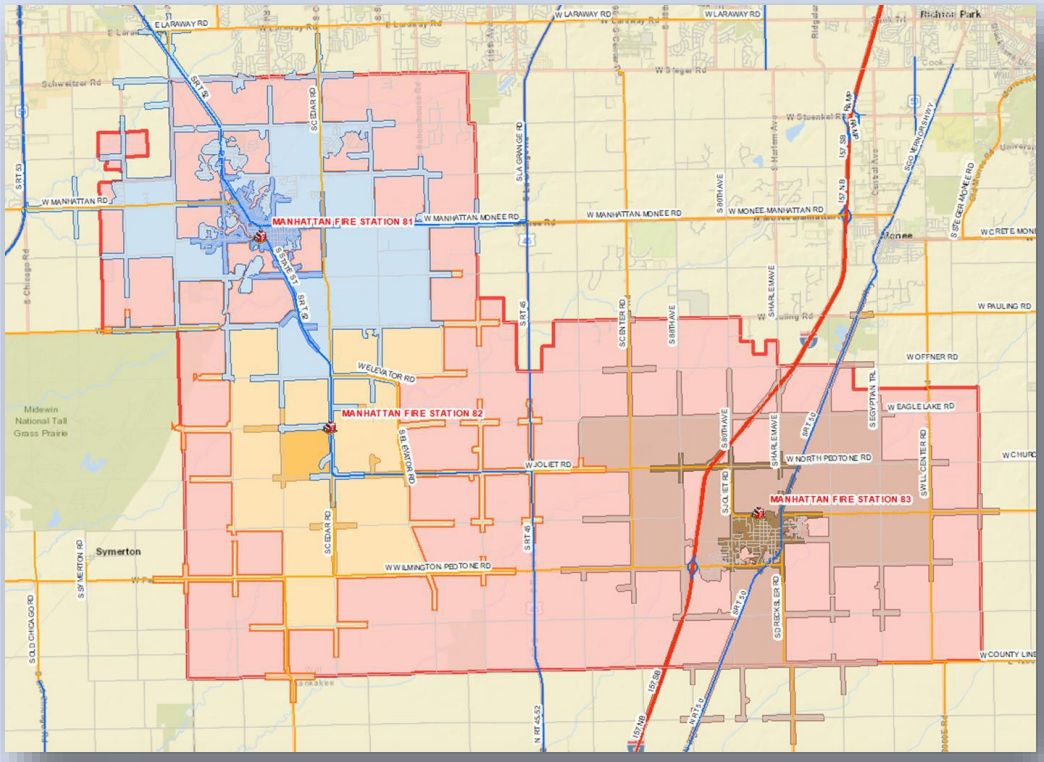
4/8-min Travel Time Coverage

4-minute travel time response coverage (with the **CURRENT** Station 81)

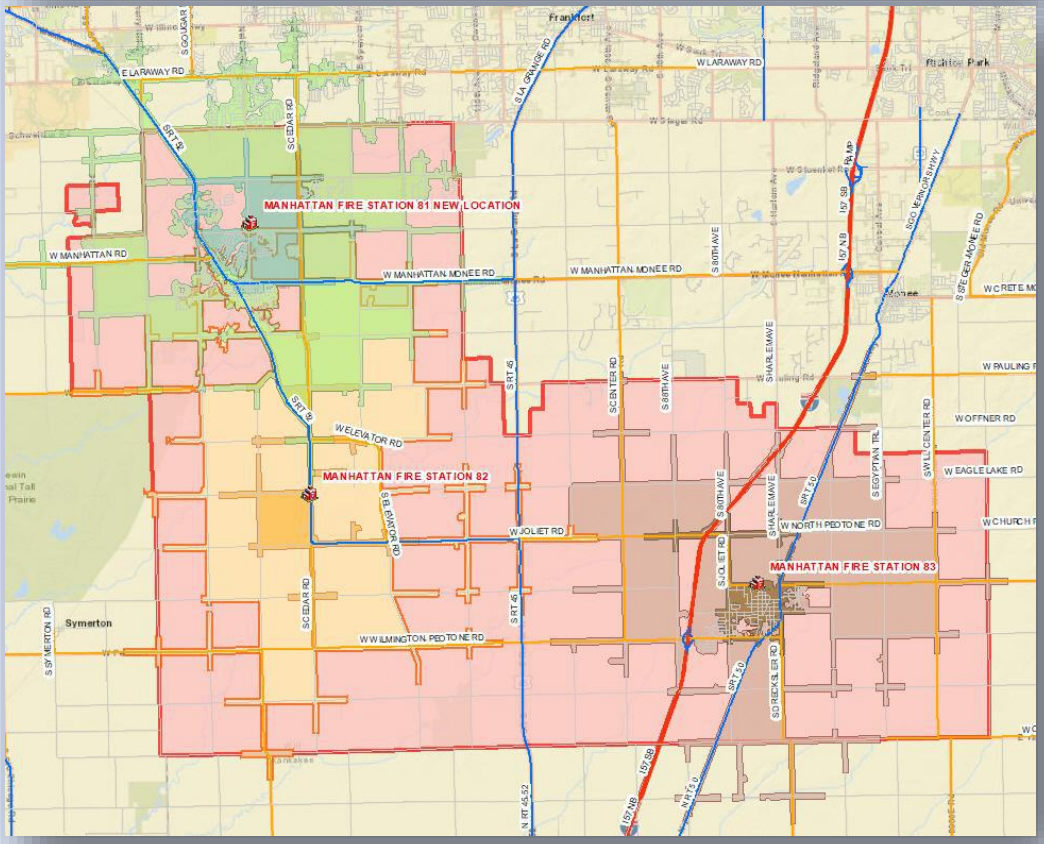




4-minute travel time response coverage (with the NEW Station 81)

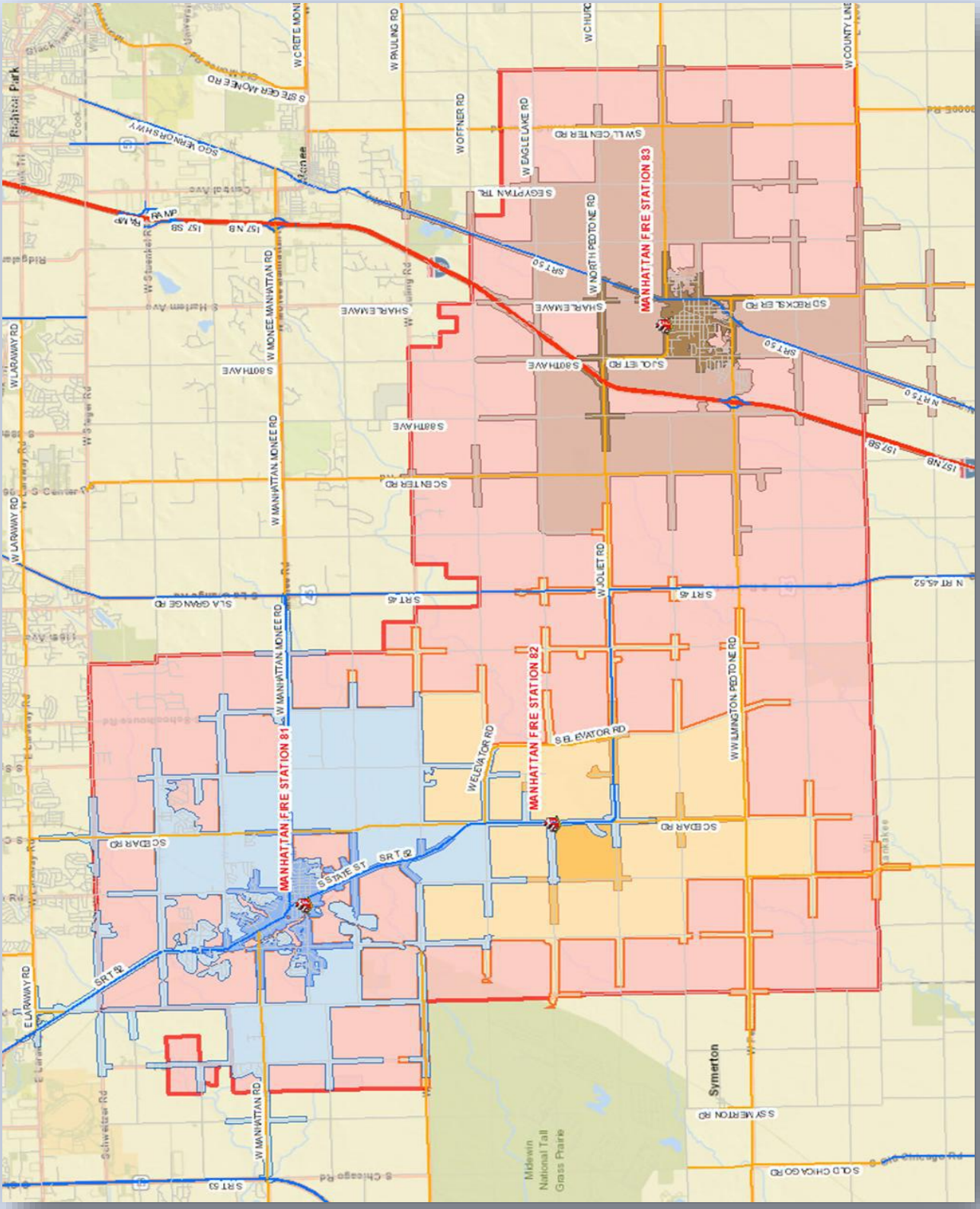


4 & 8-minute travel time response coverage (with the **CURRENT** Station 81)

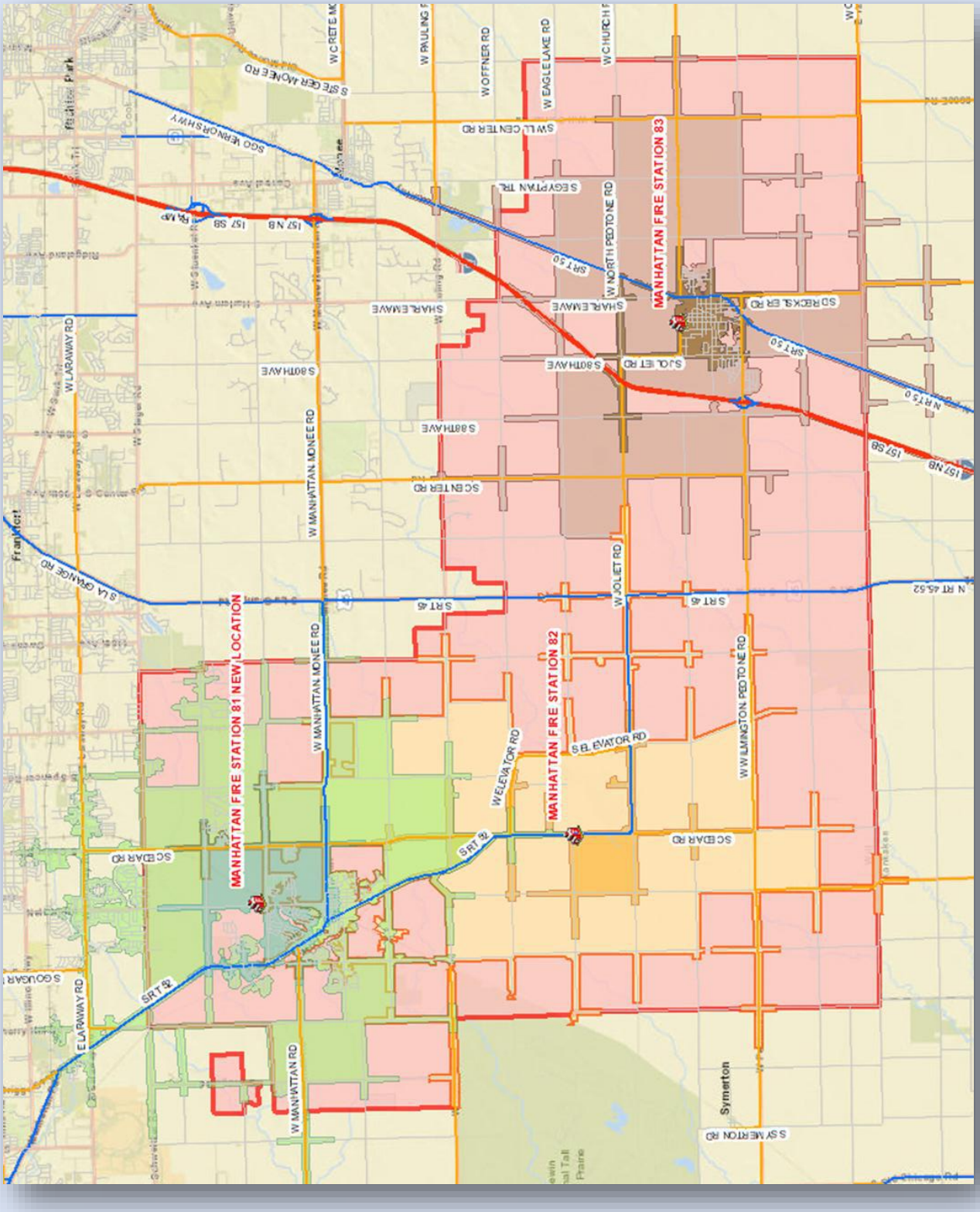


4 & 8-minute travel time response coverage (with the **NEW** Station 81)

4 & 8-minute travel time response coverage (with **CURRENT** Station 81)



4 & 8-minute travel time response coverage (with the **NEW** Station 81)



FireCares.org Map

A second source from www.FireCares.org verifies this GIS (Geographical Information System) data and mapping. Once the staff corrects and updates the information and data on this site, this source validates this study's efforts. It is available online for future reference as a valuable resource.

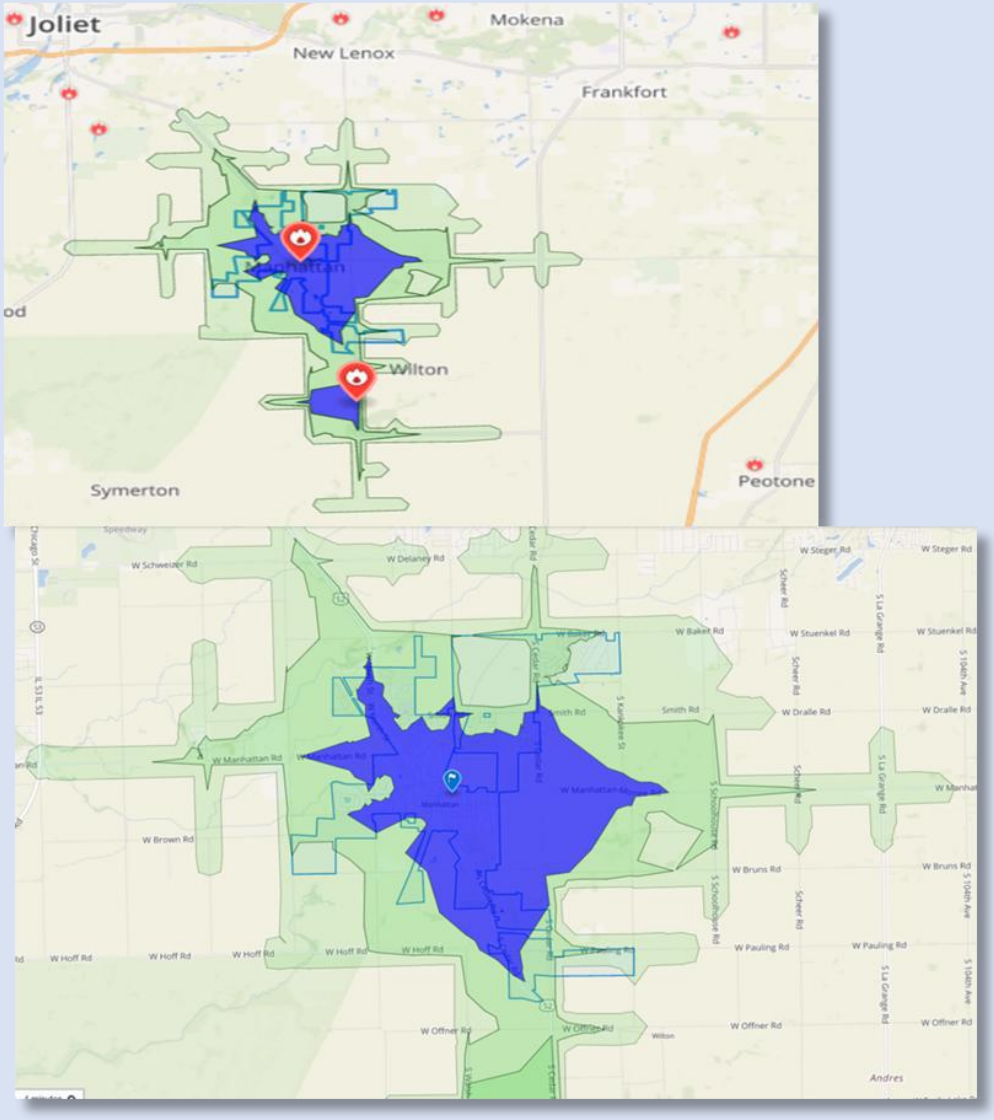
"Travel" Service area from the Fire Stations [< 4 – 6 – 8 minutes]

0-4 minutes – Blue

4-6 minutes – Dark Green

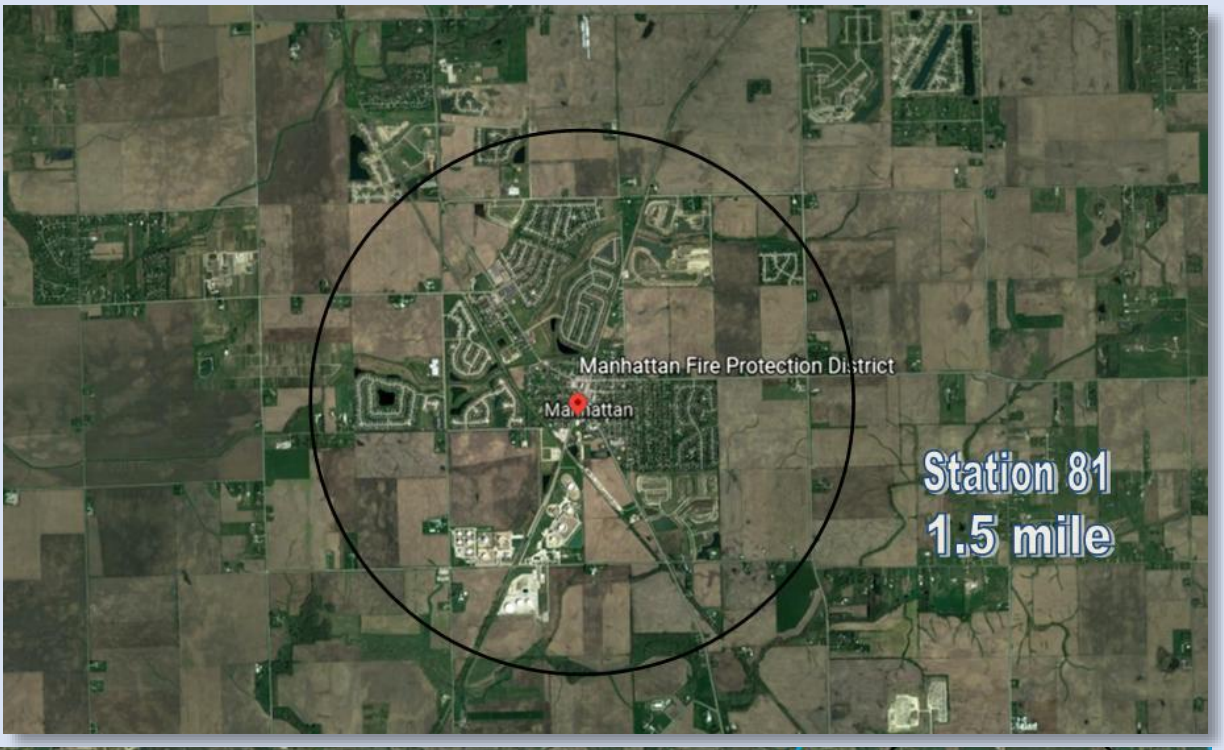
6-8 minutes – Light Green

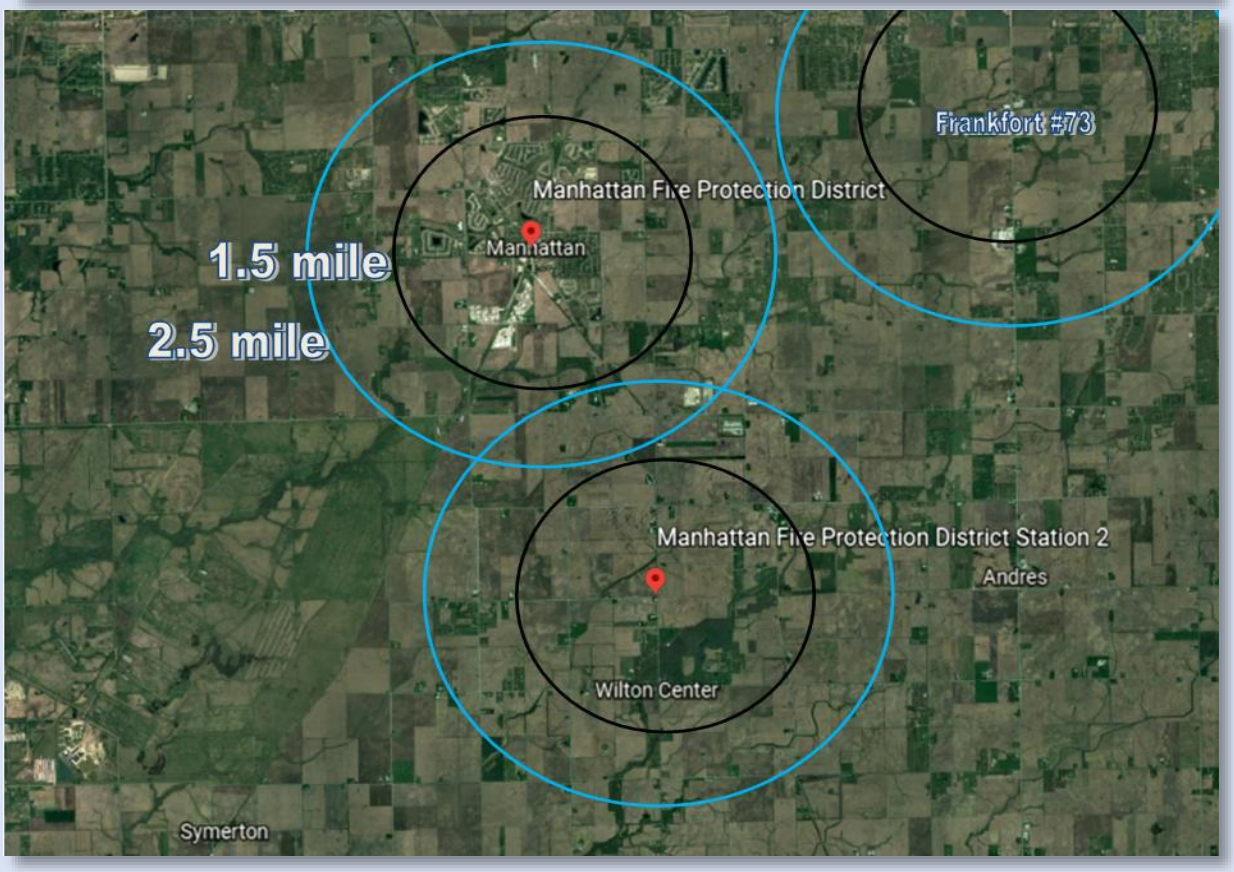
Station **81/82**



< Station **83**

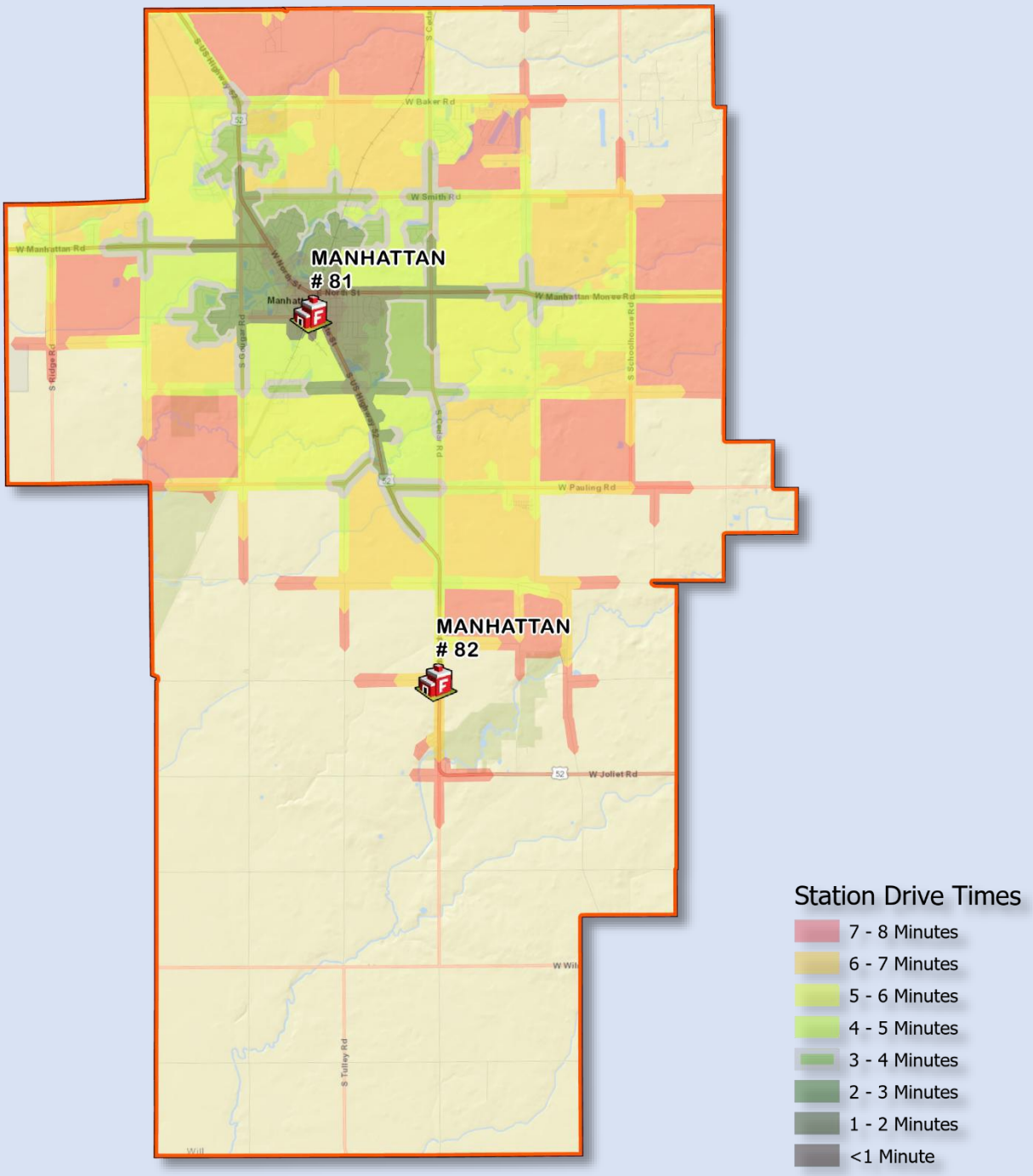
Aerial Radius Maps



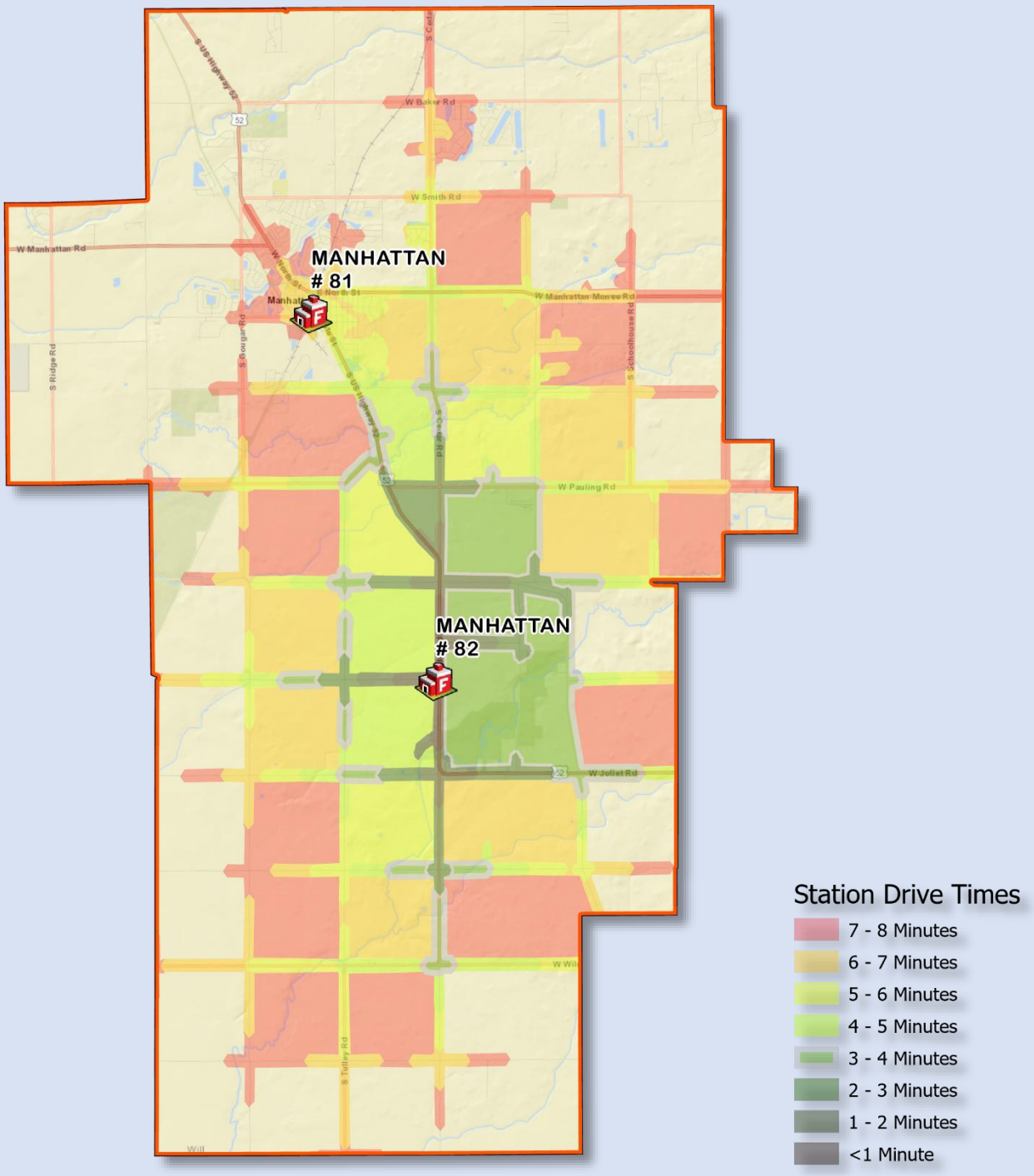


Drive Time by Minute

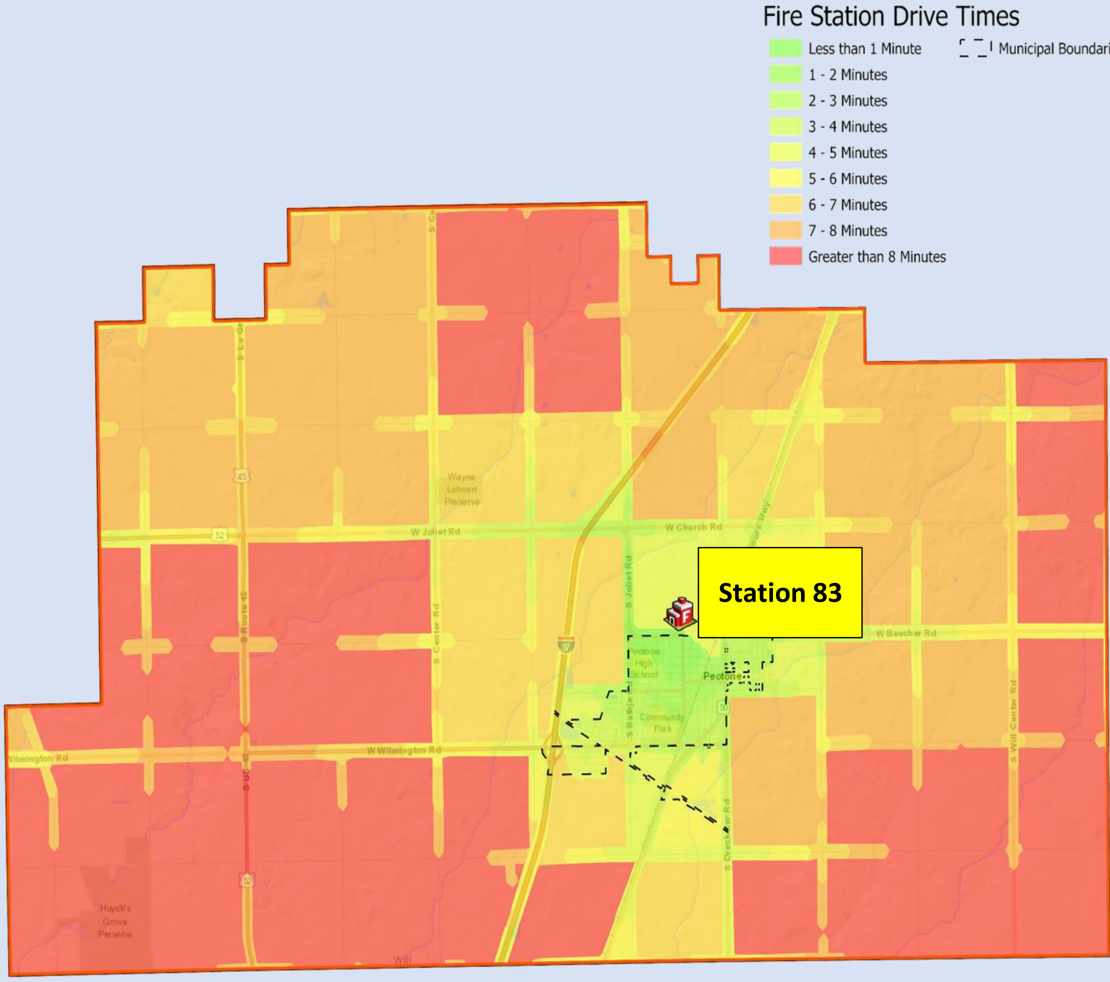
Station **81**



Station **82**

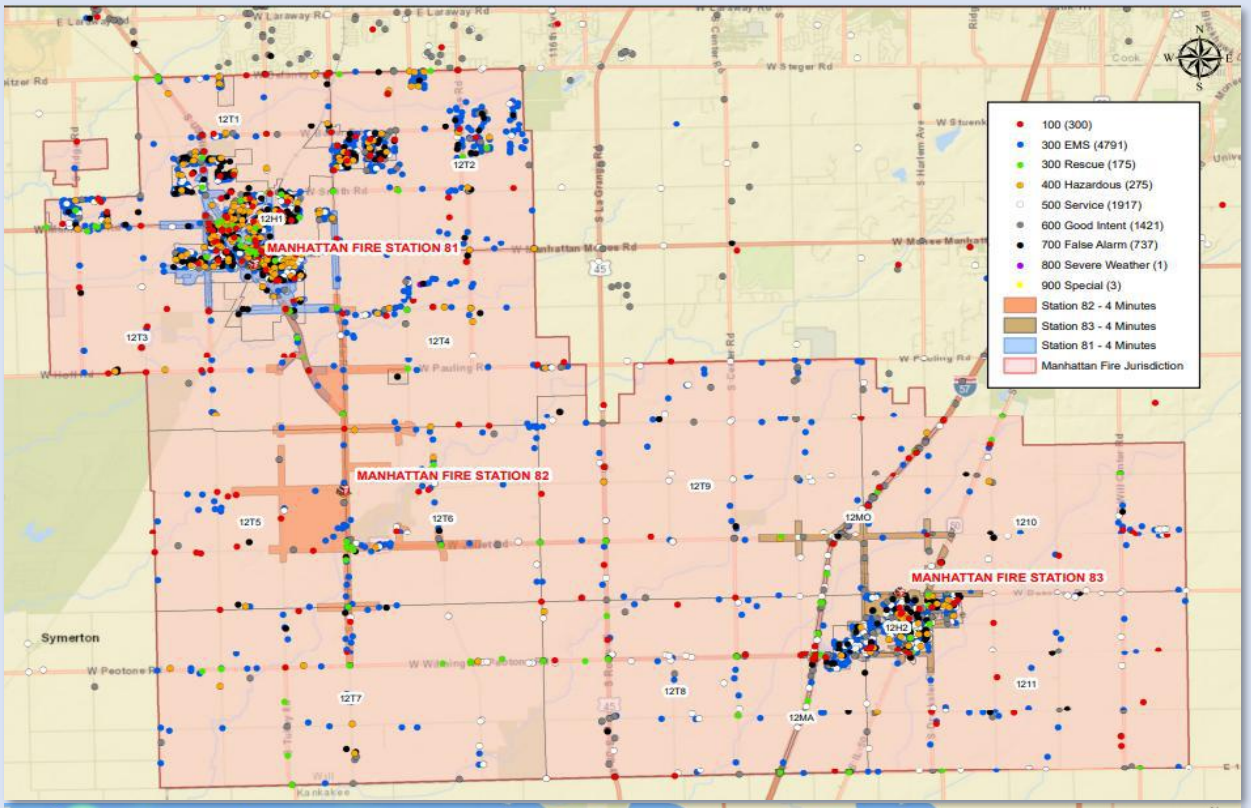

MANHATTAN
81
MANHATTAN
82
W Baker Rd
W Smith Rd
W Manhattan Rd
W Manhattan Monee Rd
W Pauling Rd
W Joliet Rd
S Ridge Rd
S Schoolhouse Rd
S Center Rd
S Tolley Rd
Station Drive Times
7 - 8 Minutes
6 - 7 Minutes
5 - 6 Minutes
4 - 5 Minutes
3 - 4 Minutes
2 - 3 Minutes
1 - 2 Minutes
<1 Minute

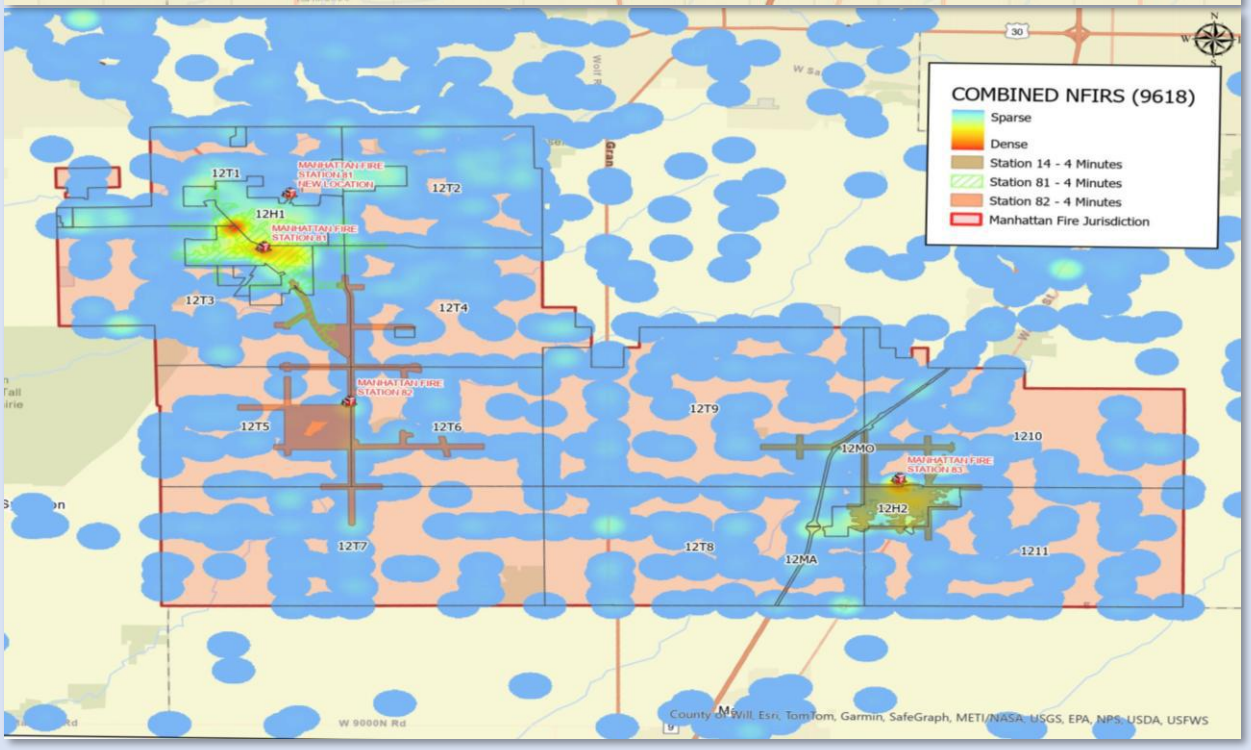
Station **83**


Fire Station Drive Times
Less than 1 Minute
1 - 2 Minutes
2 - 3 Minutes
3 - 4 Minutes
4 - 5 Minutes
5 - 6 Minutes
6 - 7 Minutes
7 - 8 Minutes
Greater than 8 Minutes
Municipal Boundaries
Station 83
W Joliet Rd
W Church Rd
W Beecher Rd
W Wilmington Rd
Wilmington Rd
Peotone

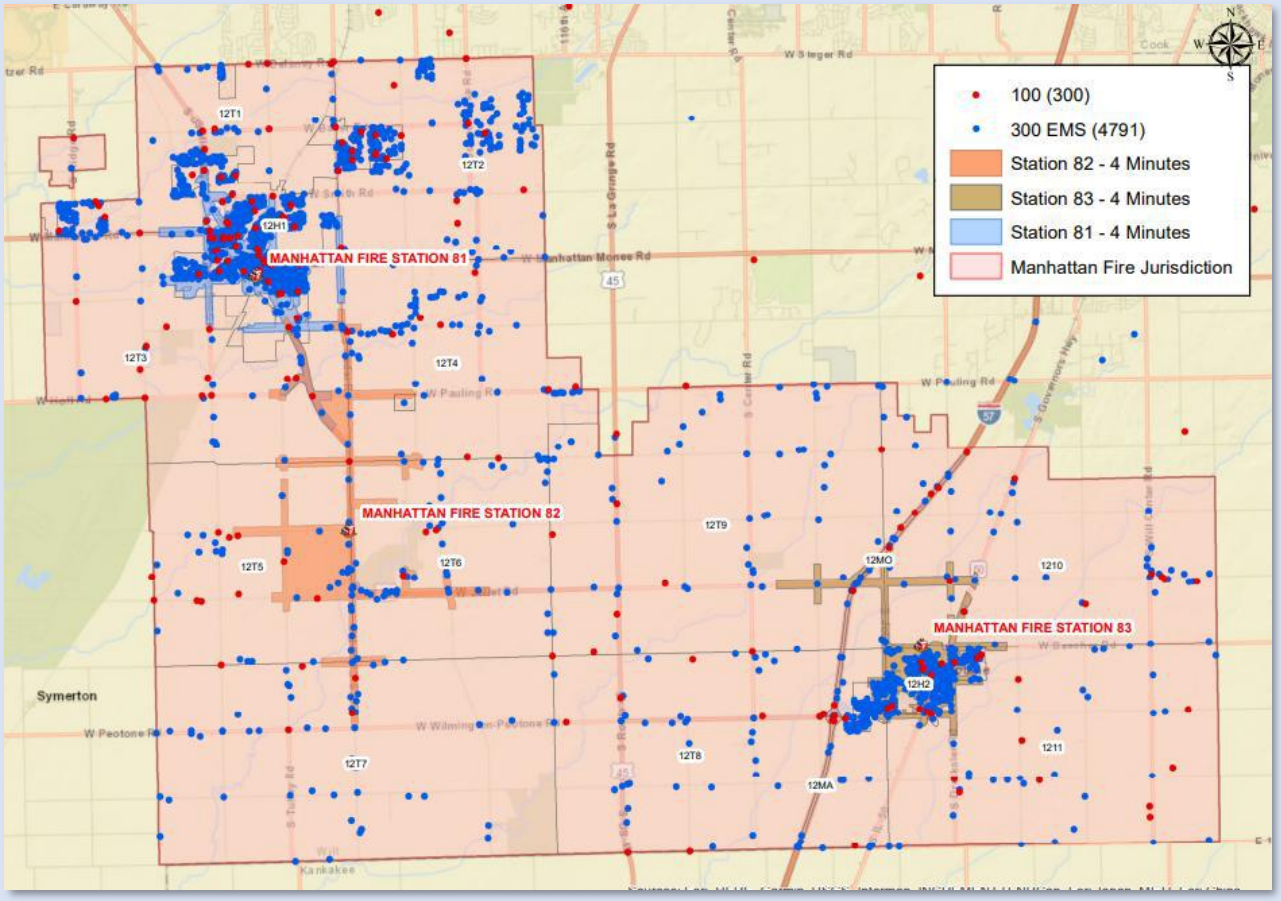
NFIRS Type Coded [100-900] Incident Maps

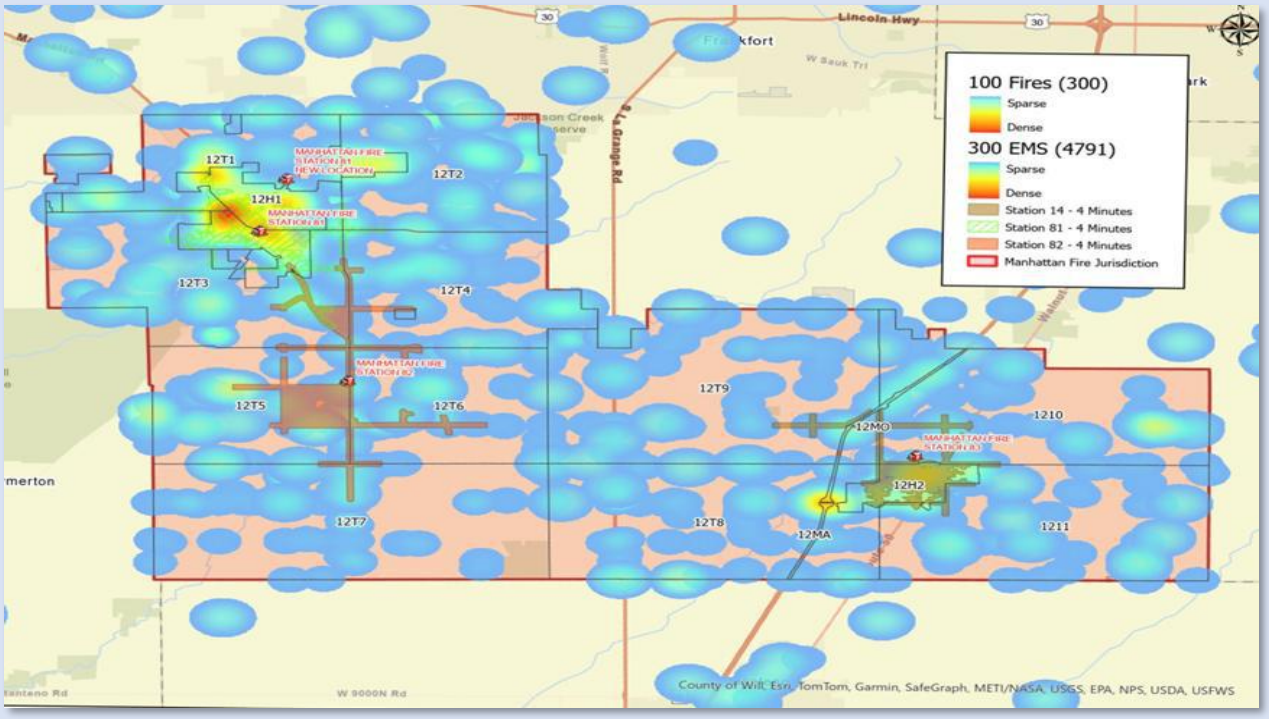
ALL NFIRS INCIDENT TYPES



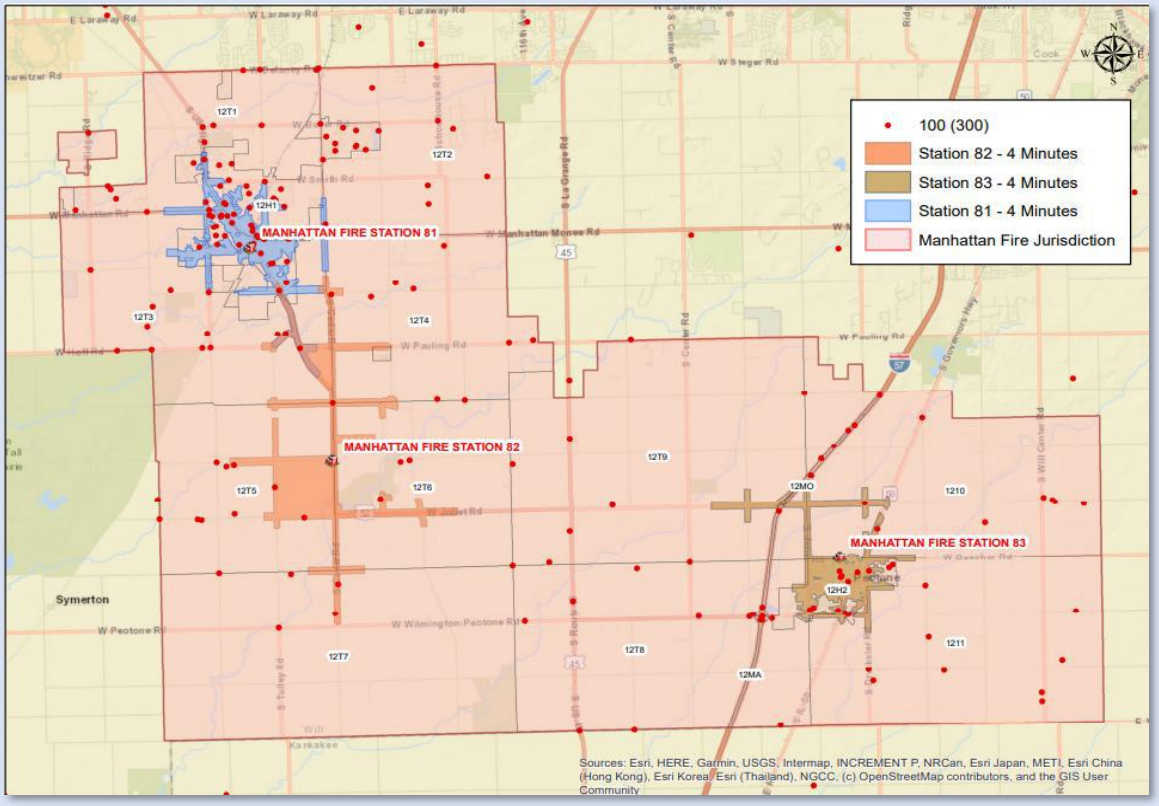


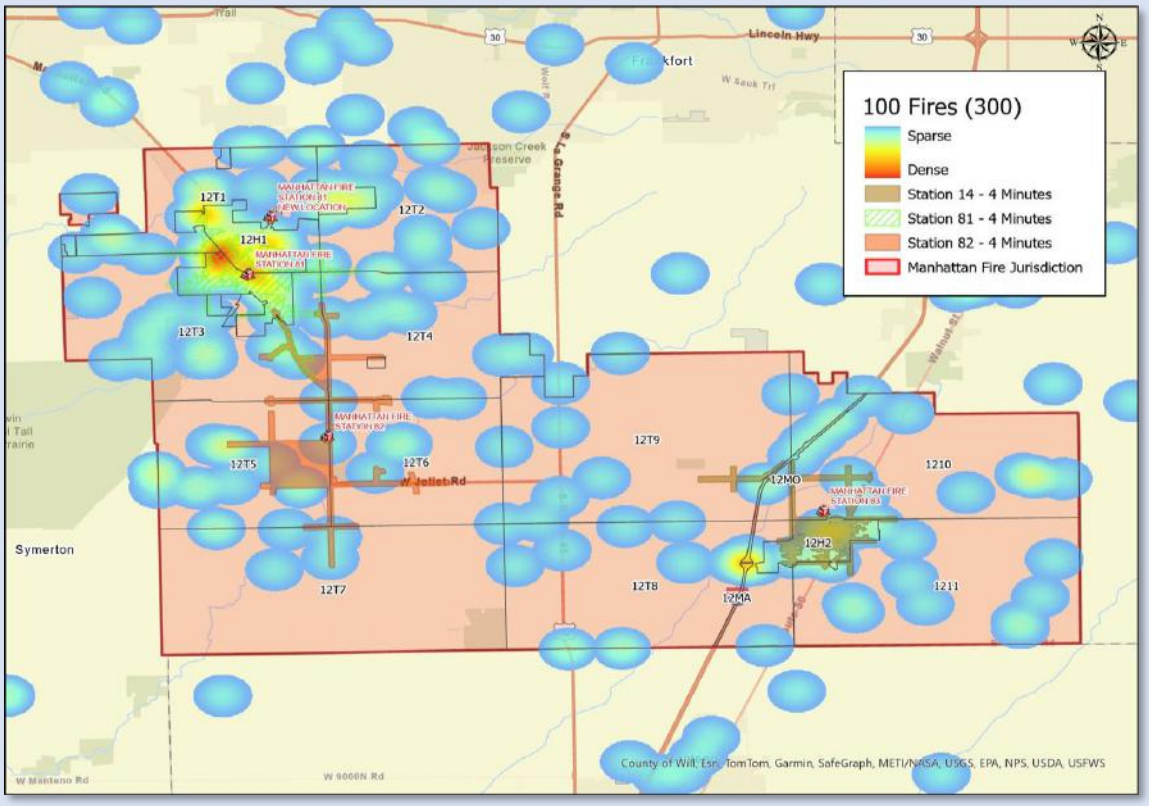
NFIRS 100 & 300 – FIRES & EMS COMBINED



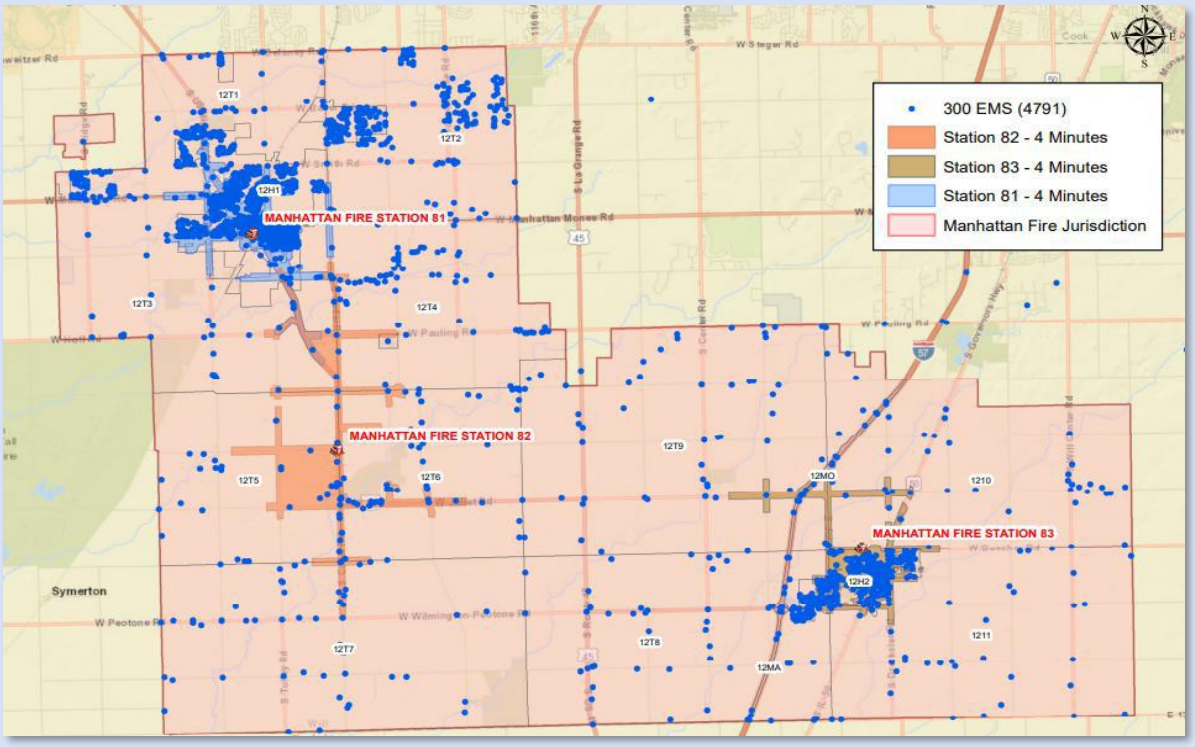


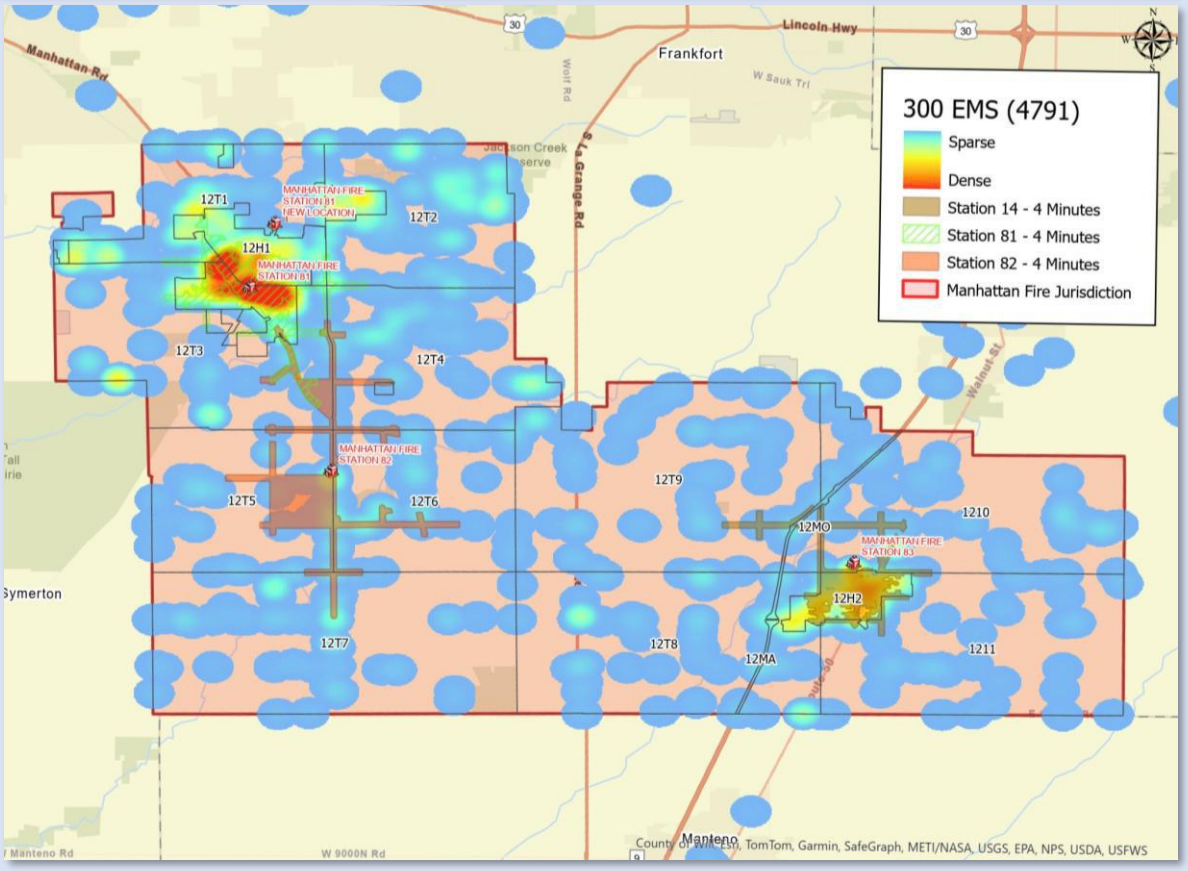
NFIRS 100 – FIRES



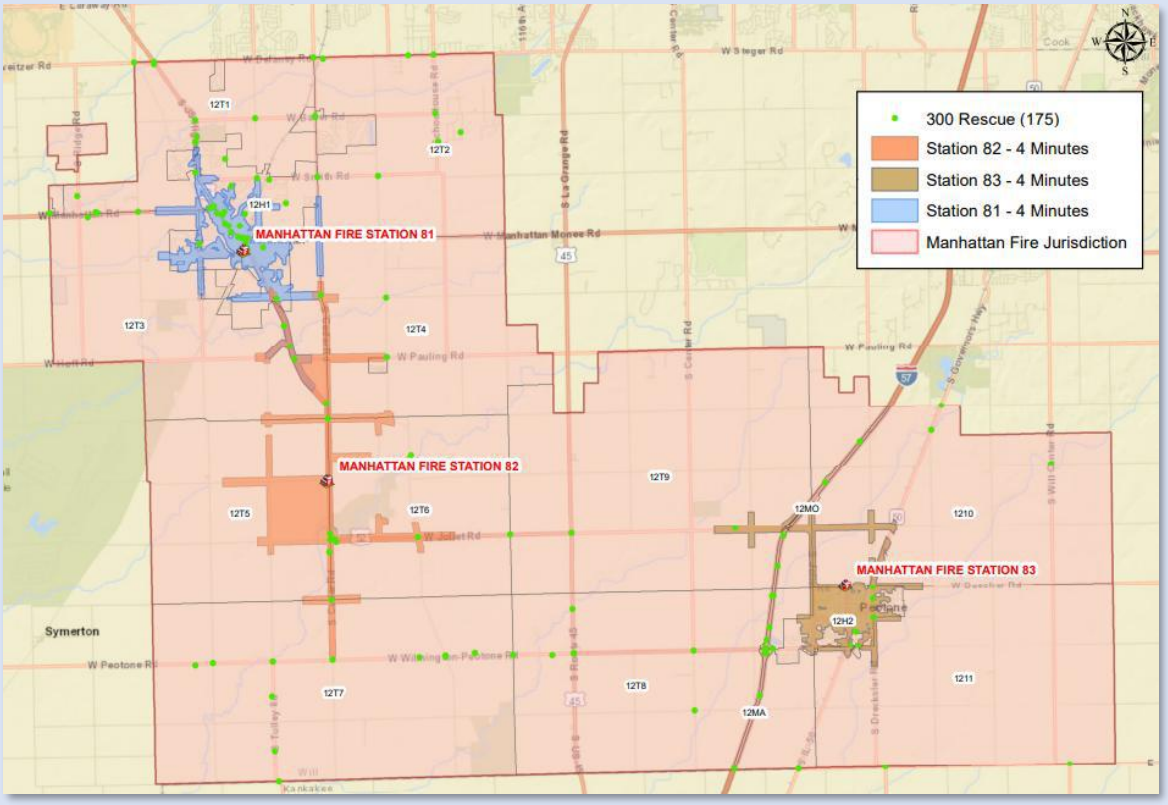


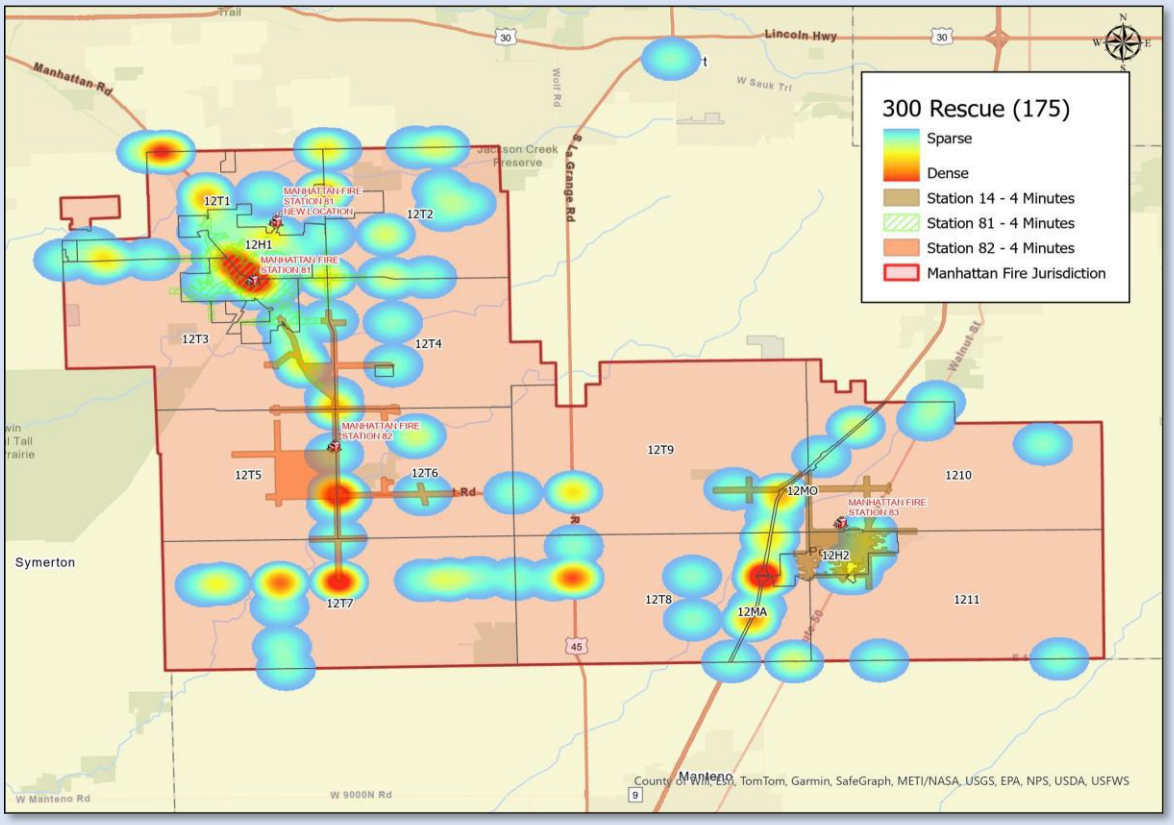
NFIRS 300 – EMS



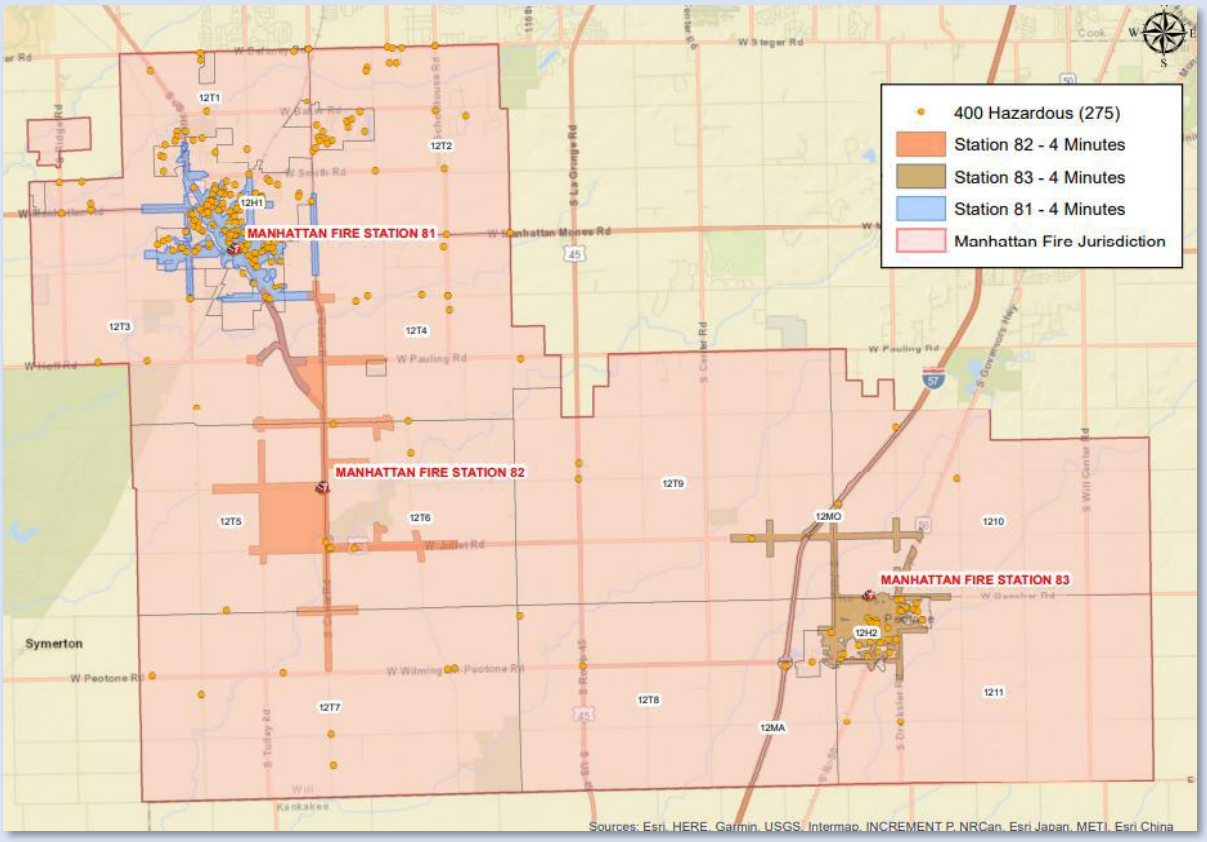


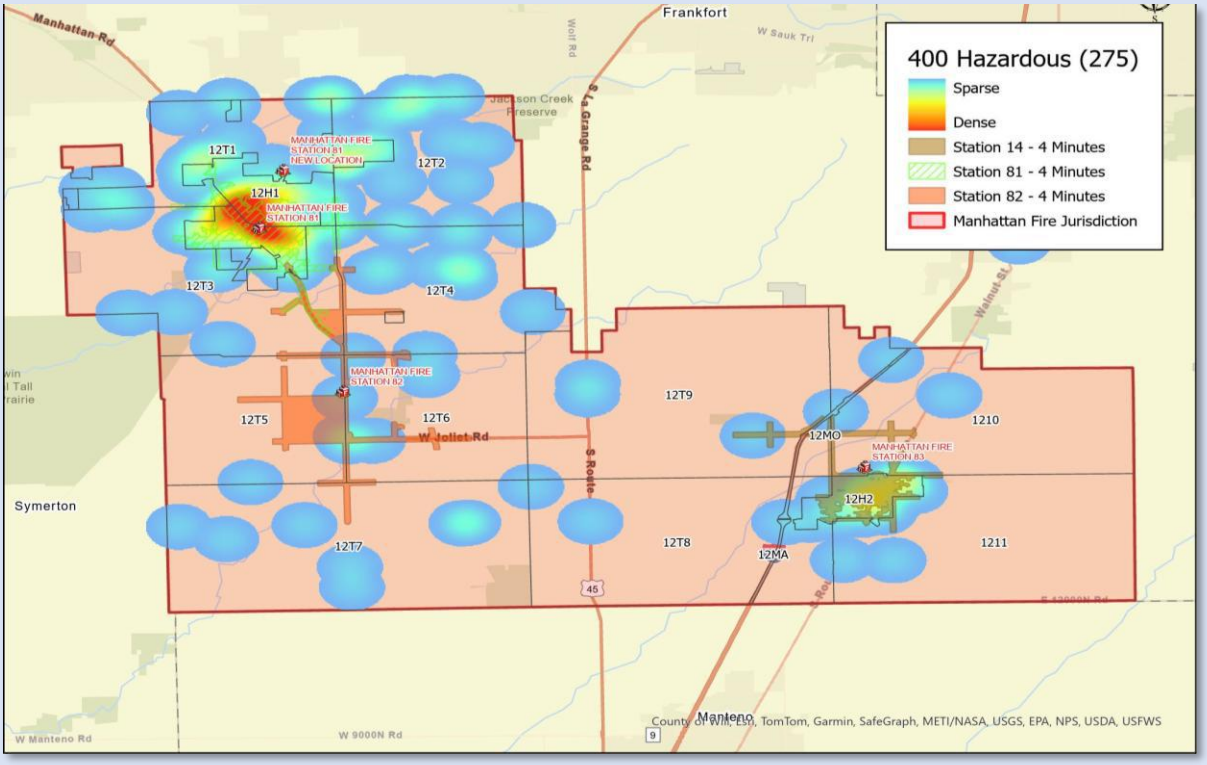
NFIRS 300 – RESCUE



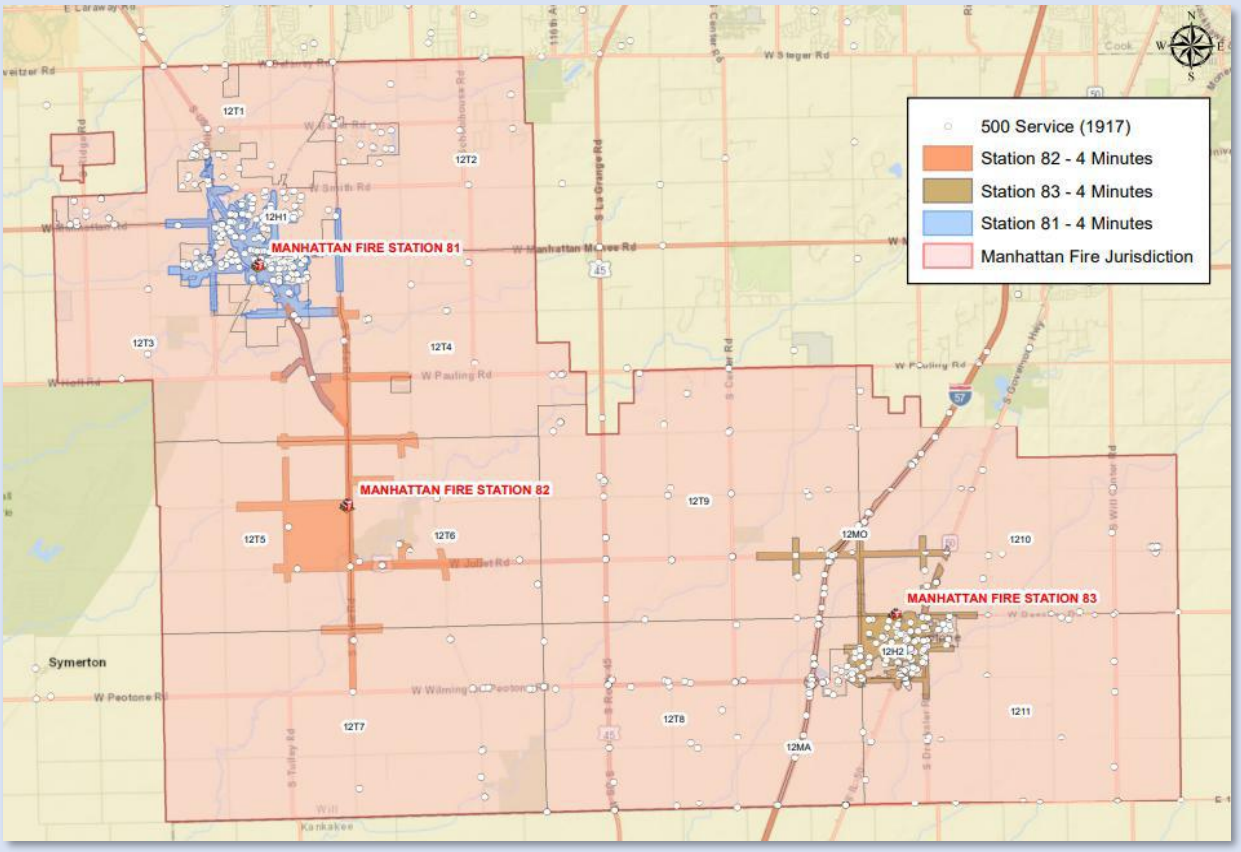


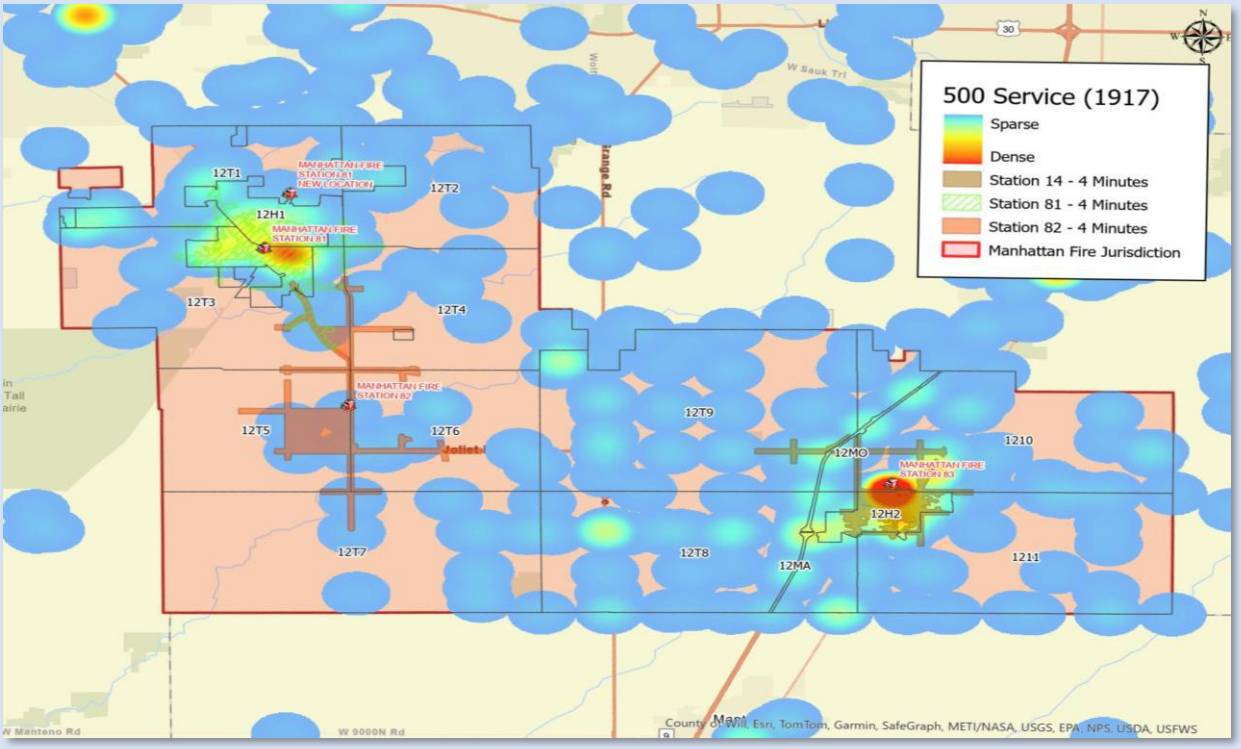
NFIRS 400 – HAZARDOUS CONDITION



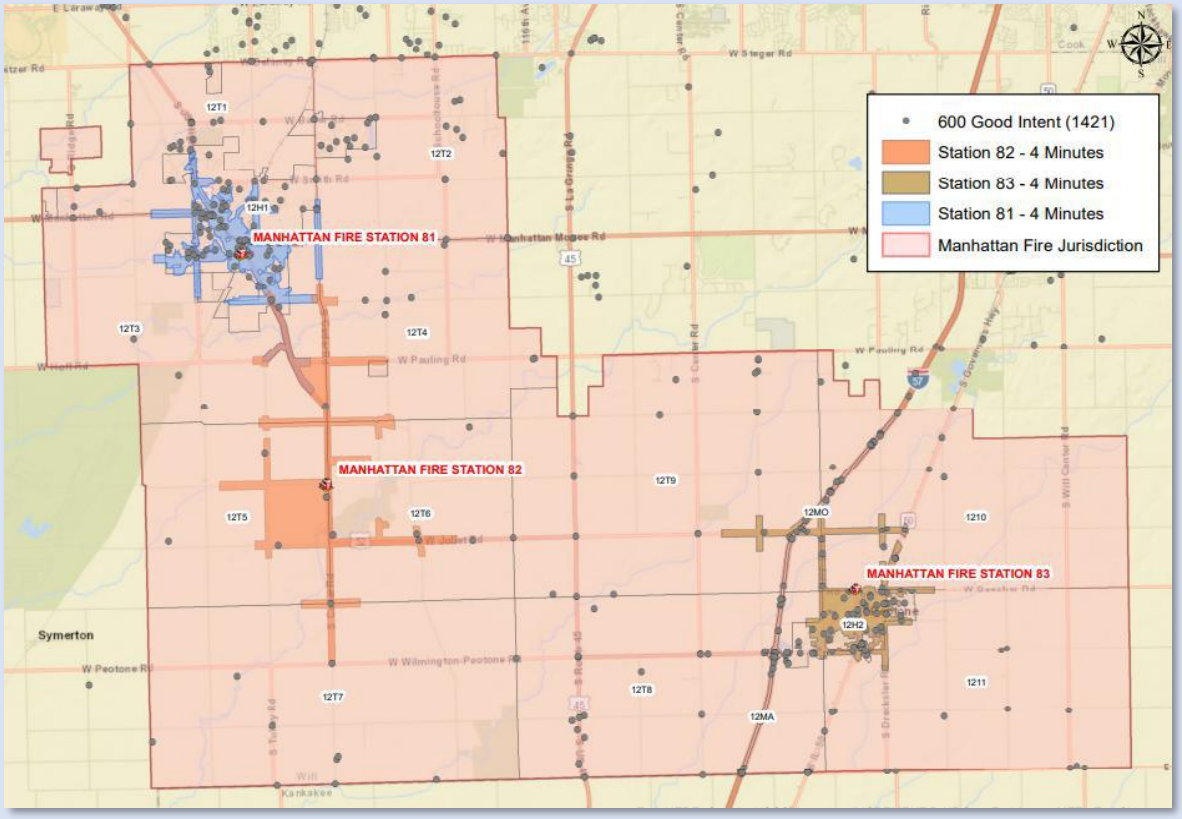


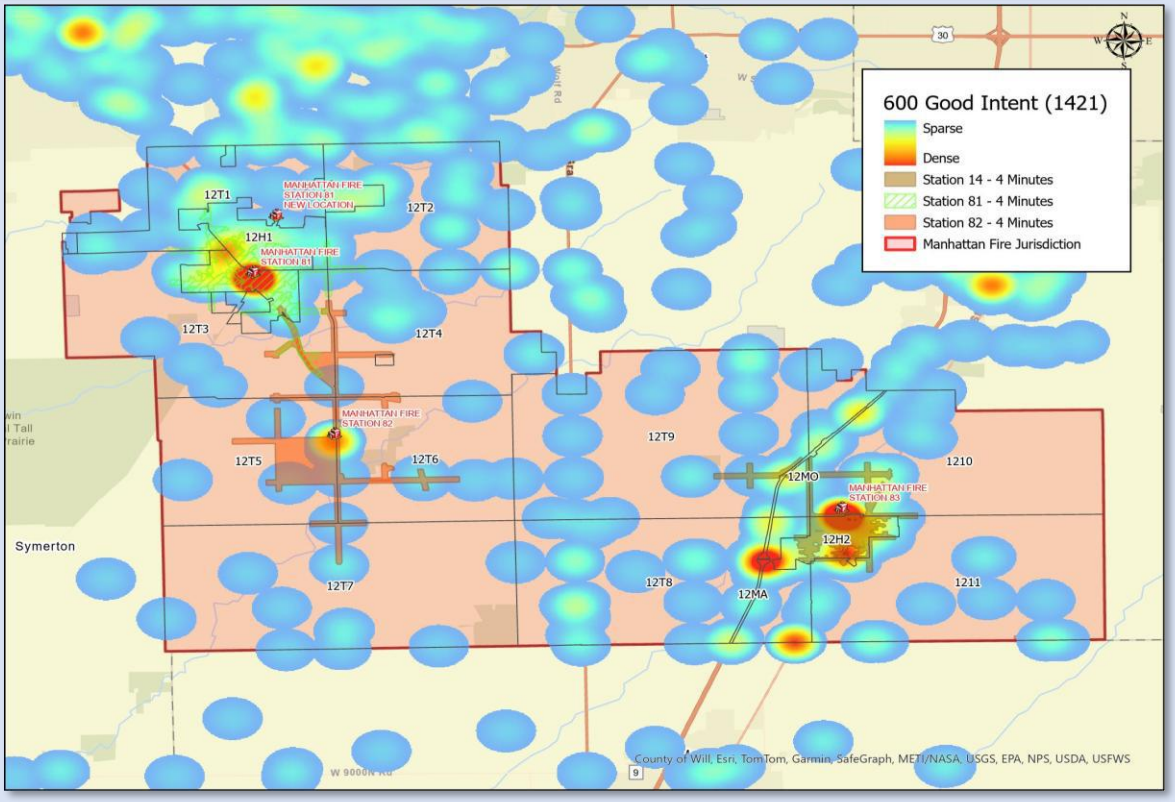
NFIRS 500 – SERVICE CALLS



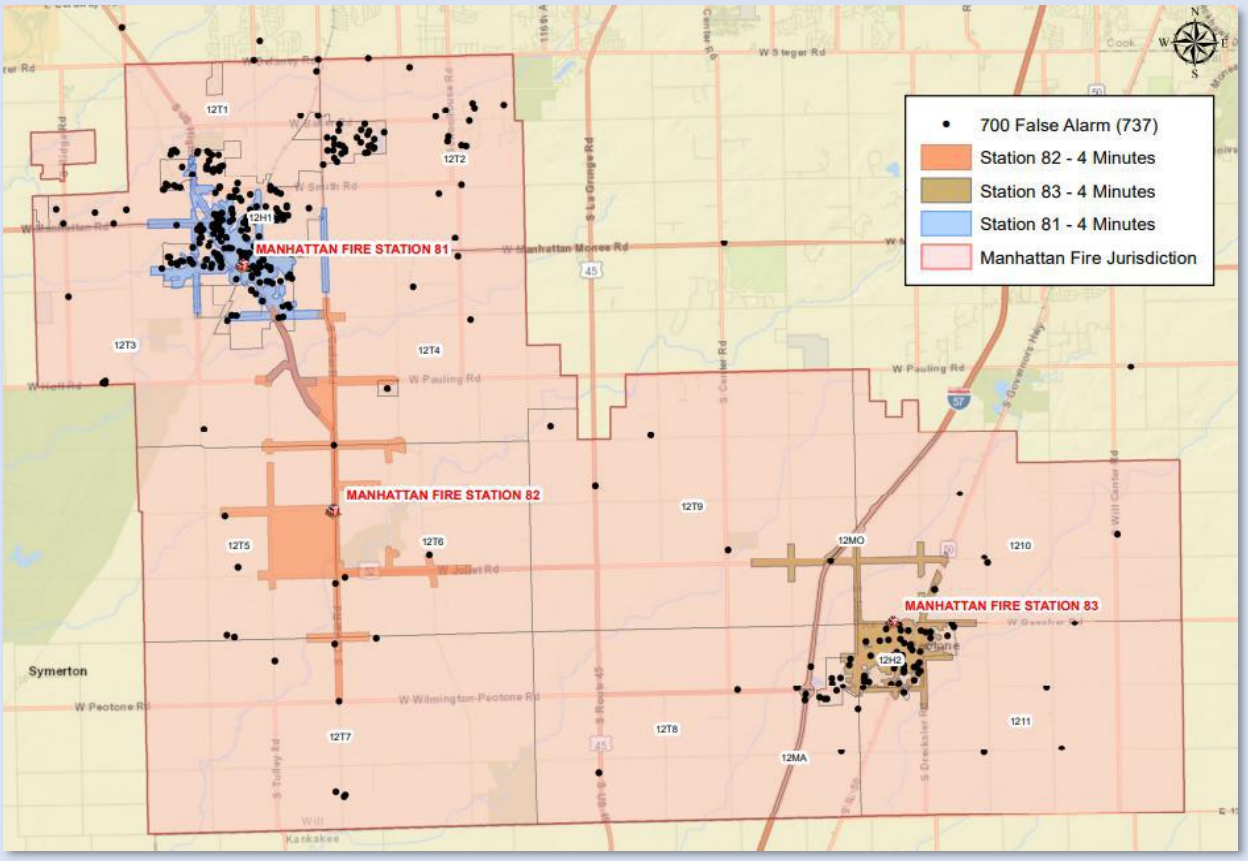


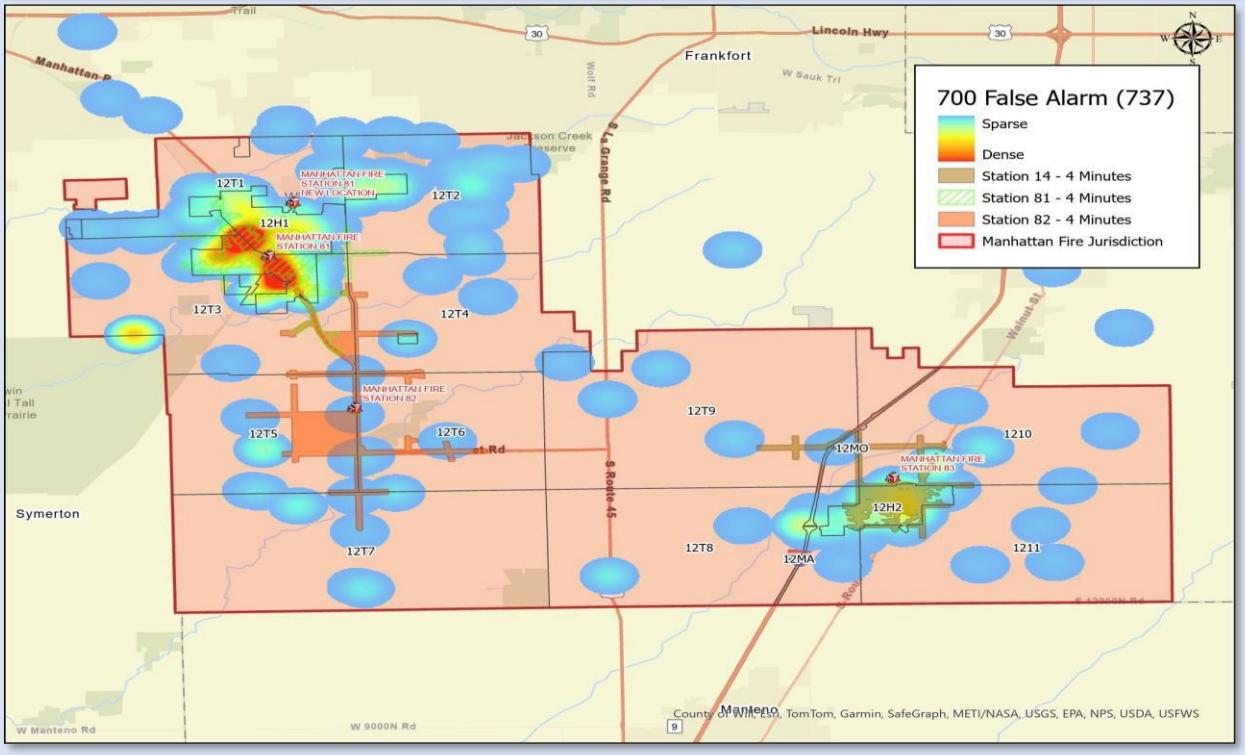
NFIRS 600 – CANCELED/GOOD INTENT



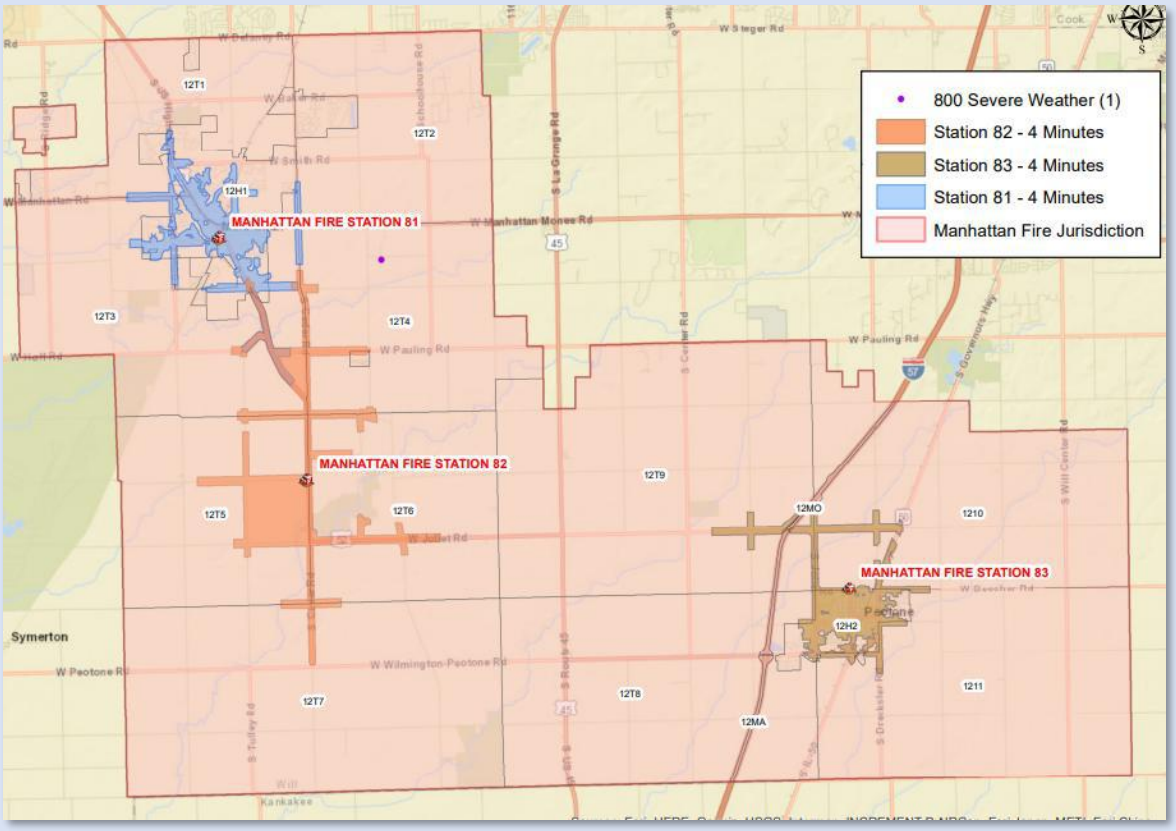


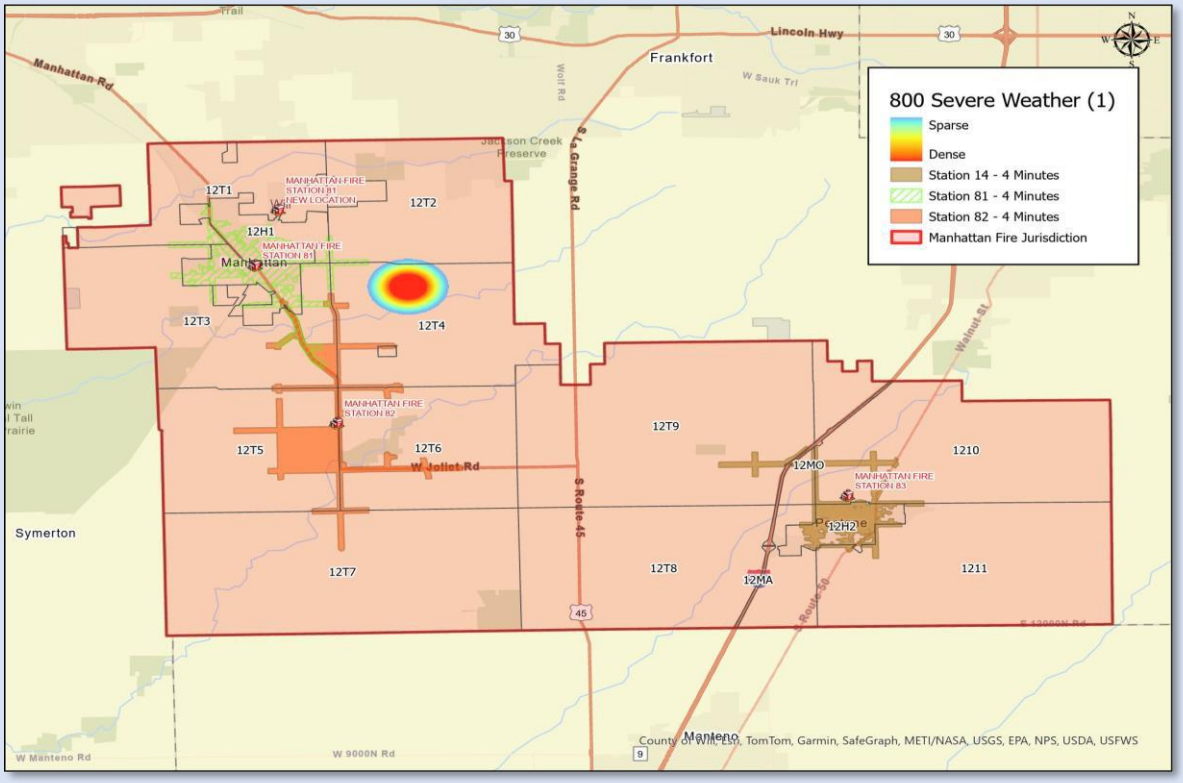
NFIRS 700 – FALSE ALARM



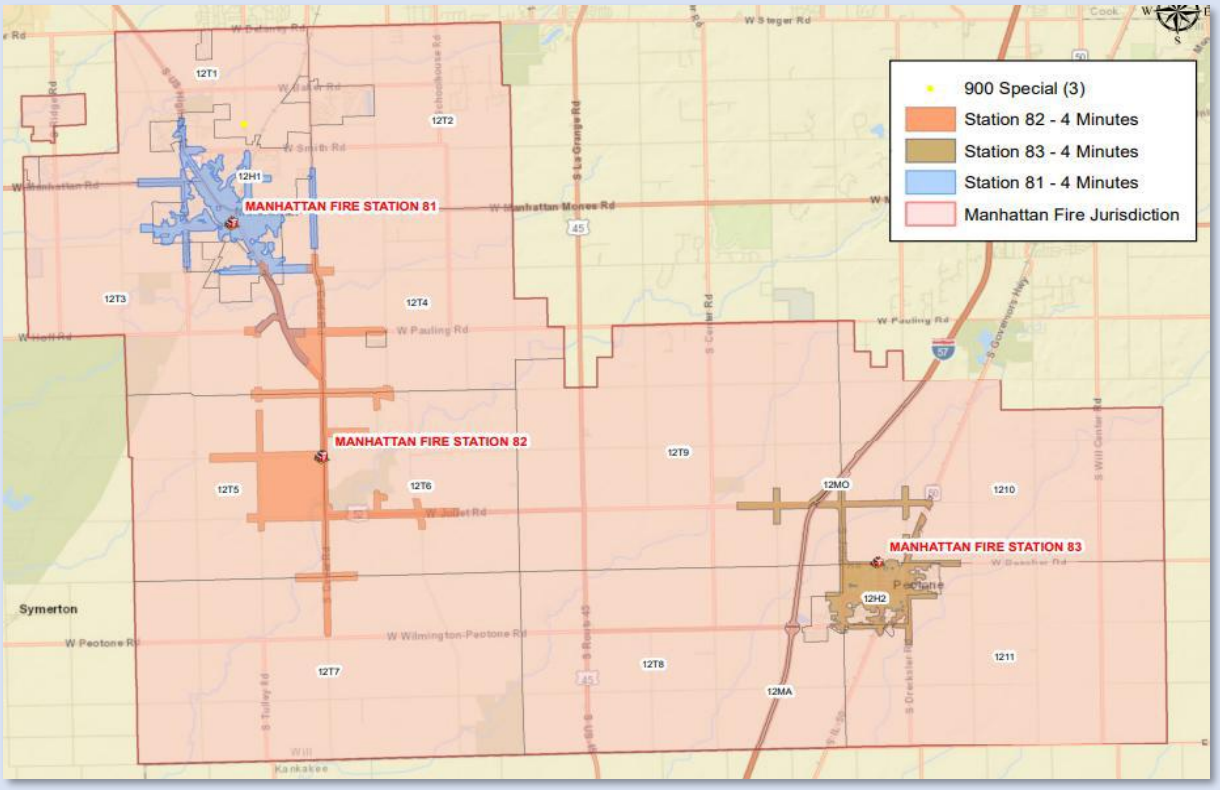


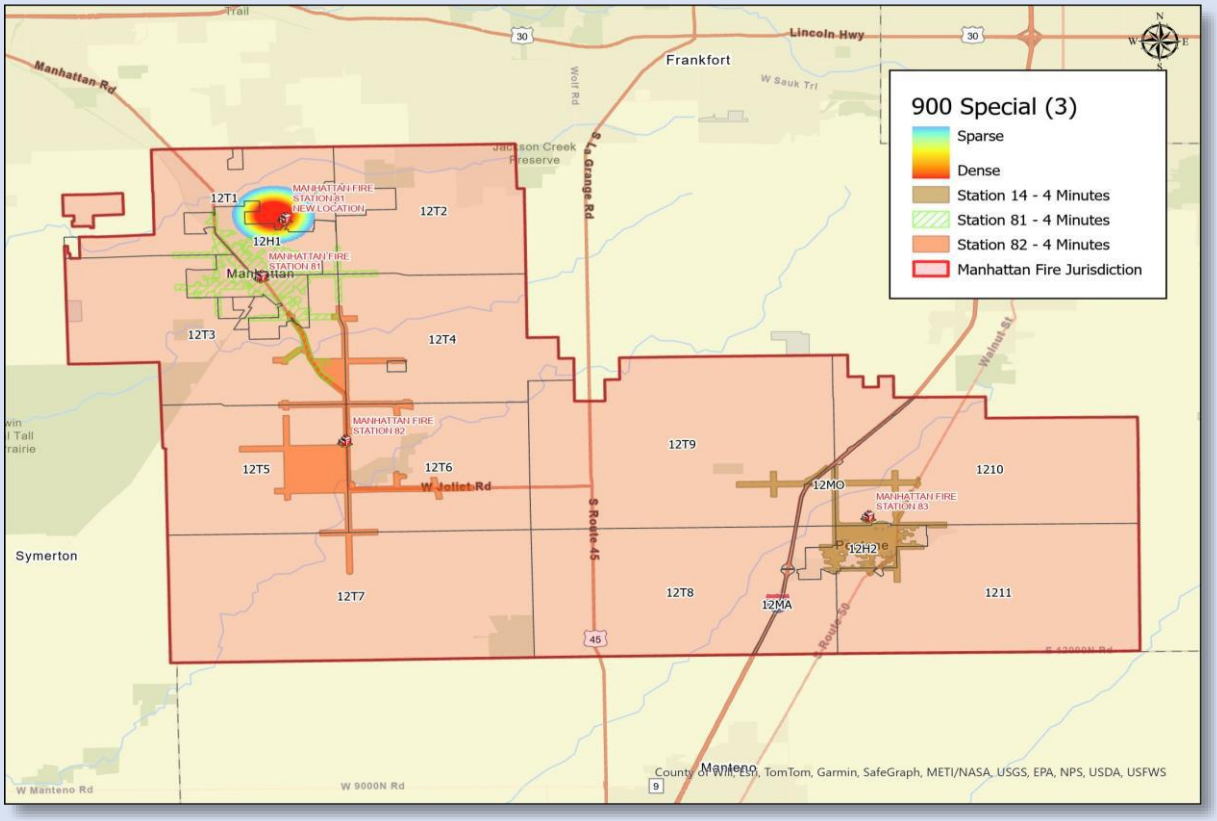
NFIRS 800 – SEVERE WEATHER





NFIRS 900 – SPECIAL/CITIZEN COMPLAINT





WHERE - Jurisdictions (Aid Agreements)

Aid

Mutual Aid and Automatic Aid – System Flex or System Strain?

Mutual and automatic aid are cornerstones of modern fire service delivery. They provide surge capacity when multiple incidents occur and add depth for high-risk or large-scale emergencies. But there's an important distinction:

- **Flex:** Mutual aid supplements the system during extraordinary demand.
- **Strain:** Mutual aid replaces the system when core resources are unavailable.

Excessive reliance on aid is a warning sign that the system is not functioning correctly. It often points to:

- **Understaffing** – companies are too often committed elsewhere.
- **Resource misalignment** – deployment does not match demand geography.
- **Coverage inefficiency** – station locations leave predictable gaps.
- **Dependency on neighbors** – shifting risk and workload away from the home district.

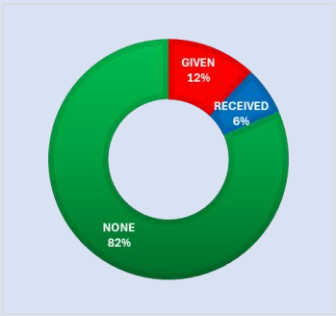
For Manhattan FPD, aid agreements are both an asset and a vulnerability. The District is a **net exporter of aid**, providing more resources to neighbors than it receives in return. This imbalance suggests resiliency at the regional level, but also **stress at the local level** — as Manhattan units are frequently committed beyond their borders.

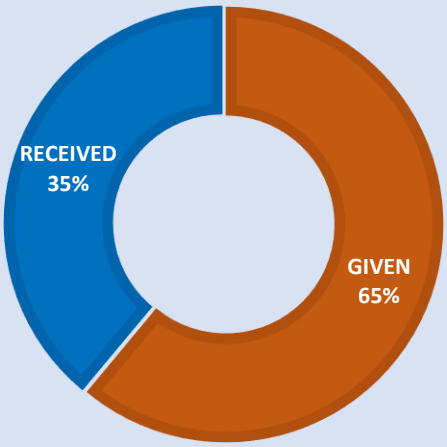
Strategic Implications

- **System Sustainability:** Aid should never become the "daily business model." Overuse weakens readiness for first-due incidents.
- **Regional Cooperation:** Documenting the aid imbalance is essential for negotiations around cost-sharing, staffing support, and boundary realignment.
- **Continuous Monitoring:** Tracking the ratio of aid given vs. aid received reveals whether the District is overcommitted (exporter) or under-resourced (importer).
- **Deployment Planning:** Aid patterns should be incorporated into station placement, staffing models, and capital planning.

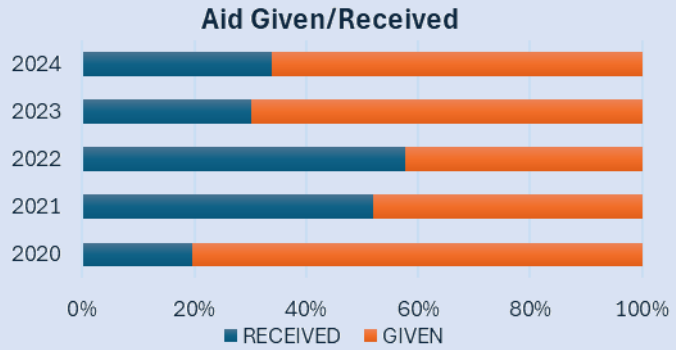
📊 **Bottom Line:** Mutual and automatic aid remain a necessary safety net. But when the net becomes a crutch, the system itself is at risk. The District must treat aid as an extraordinary measure — not the backbone of daily operations — while pursuing deployment strategies that reduce chronic overreliance on it.

MUTUAL/AUTO AID	2020	2021	2022	2023	2024	2020-2024	Average	% of Inc
RECEIVED	133	163	178	137	182	**793**	**159**	*6.4%*
GIVEN	541	151	130	318	355	**1,495**	**299**	*12.1%*
NONE	1465	2325	2300	1819	2168	**10,077**	**2,015**	*81.5%*
TOTALS	**2,139**	**2,639**	**2,608**	**2,274**	**2,705**	**12,365**	**2,473**	





AID GIVEN VS RECEIVED



Aid Balance – System Flex or System Strain?

Mutual aid and automatic aid remain essential backstops in the modern fire service; however, the numbers for January 2023 – September **2025** show a clear imbalance. Manhattan is **a net exporter of aid**, providing more support to its neighbors than it receives in return. While that underscores operational capacity and regional reliability, it also highlights **internal strain** and increased exposure to risk if multiple incidents co-occur.

Key Findings (2023–2025 Data)

- **Overall Aid Totals**
  - **Automatic Aid Given:** 81
  - **Automatic Aid Received:** 168
  - **Mutual Aid Given:** 756
  - **Mutual Aid Received:** 596
  - ➡️ **Net balance:** Manhattan provides ~20% more aid than it receives.
- **Top Partners (Mutual Aid Given)**
  - **Monee FPD (19%), Elwood FPD (11%), Wilmington FPD (12%), Manteno FPD (8%), New Lenox FPD (6%).**
    Together, these five account for **~56% of all aid Manhattan provides**.

- **Top Partners (Mutual Aid Received)**
    - **New Lenox (17%), Monee (16%), Frankfort (13%), Manteno (11%), East Joliet (7%).**
      These five provide **~64% of all aid Manhattan receives**.
- **Incident Type Distribution**
    - **Aid Given:** 40% Service Calls, 35% Good Intent, 12% Fires, 11% EMS.
    - **Aid Received:** 58% EMS/Rescue, 19% Fire, 11% Good Intent.
    - ➡️ Manhattan tends to **export lower-acuity calls** (service, good intent) while **importing high-acuity EMS/Fire support**.
- **Trend Watch**
    - Mutual aid given dropped **42% from 2022 to 2023**—likely due to post-COVID stabilization or rebalanced run cards.
    - Mutual aid received, however, **rose ~30% over the same period**, driven mainly by EMS demand.

Strategic Implications

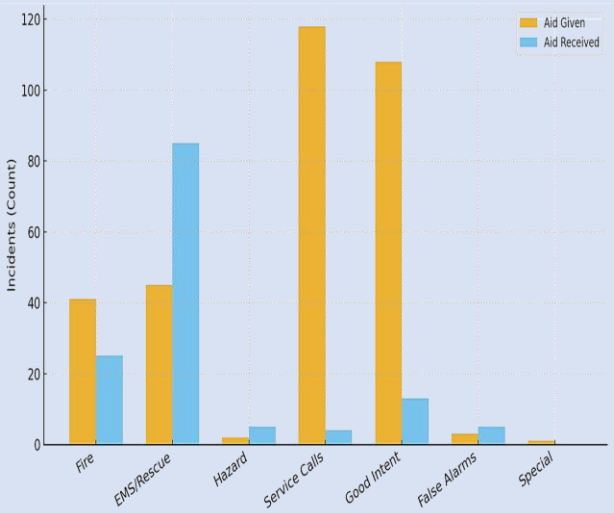
1. **System Stress Indicator** – Frequent aid export suggests Manhattan may be over-committed during peak demand, risking delayed coverage at home.
2. **Regional Dependency** – Growing reliance on mutual aid for EMS hints at coverage gaps, especially with long hospital turnaround times.
3. **Partner Leverage** – With New Lenox, Monee, and Frankfort as primary inbound providers, targeted MOUs or cost-sharing agreements could stabilize the balance.
4. **Policy Flag** – Automatic aid received > given is unusual for a district of Manhattan's size; this may point to dispatch policy asymmetries worth revisiting with MABAS leadership.

Fire Department	Mutual Aid Given	Mutual Aid Received
New Lenox	142	98
Wilmington	89	18
Ford Heights	83	27
Elwood	67	41
Beecher	60	50
Matteson	59	67
Northwest Homer	44	99
Grant Park	41	87
Troy	26	1
Sauk Village	10	0
East Joliet FPD	10	1
Monee	9	0
Homer Township	9	9
Palos	9	13
Braidwood	7	0
Channahon	7	4
Momence	7	20
Mokena	6	0
Lemont	6	2
Bourbonnais	6	4
University Park	6	22
Peotone	4	0
Richton Park	4	0
Steger FD	4	0
Chicago Heights	4	0
Bradley	3	0
Pembroke	3	2
Rockdale	3	6
Manhattan	3	9
Palos Heights	2	0
Alsip	2	0
Coal City	2	0
Park Forest	2	1
Lockport	2	1
Crete Township	2	1
Tinley Park	2	2
Joliet	2	3
Kankakee	1	0
Salina Township	1	0
Steger Estates	1	0
Frankfort	1	0
Minooka	1	1
Crete	1	5
Orland	0	1
Manteno	0	1
	753	**596**

Aid by Incident Type – What We Give vs. What We Receive

Not all aid is created equal. Breaking down mutual and automatic aid by incident type reveals where the District is leaning on its neighbors and where it is carrying more than its share.

Aid Given



- **Service Calls & Good Intent (66%)** still represent the bulk of aid provided, though both categories are trending down (Service Calls fell 63%, Good Intent down 40%).
- **Fire (16%) and EMS/Rescue (17%)** aid surged, with fire jumping from 1 (2022) to 41 (2023) and EMS more than doubling.
- **Other categories (Hazard/False Alarm/Special)** remain negligible (<3%).

📌 **Takeaway:** Our exports are shifting away from "soft" categories (service, good intent) toward **high-acuity fire and EMS incidents**, showing that surrounding agencies increasingly count on us for frontline emergencies.

Aid Received

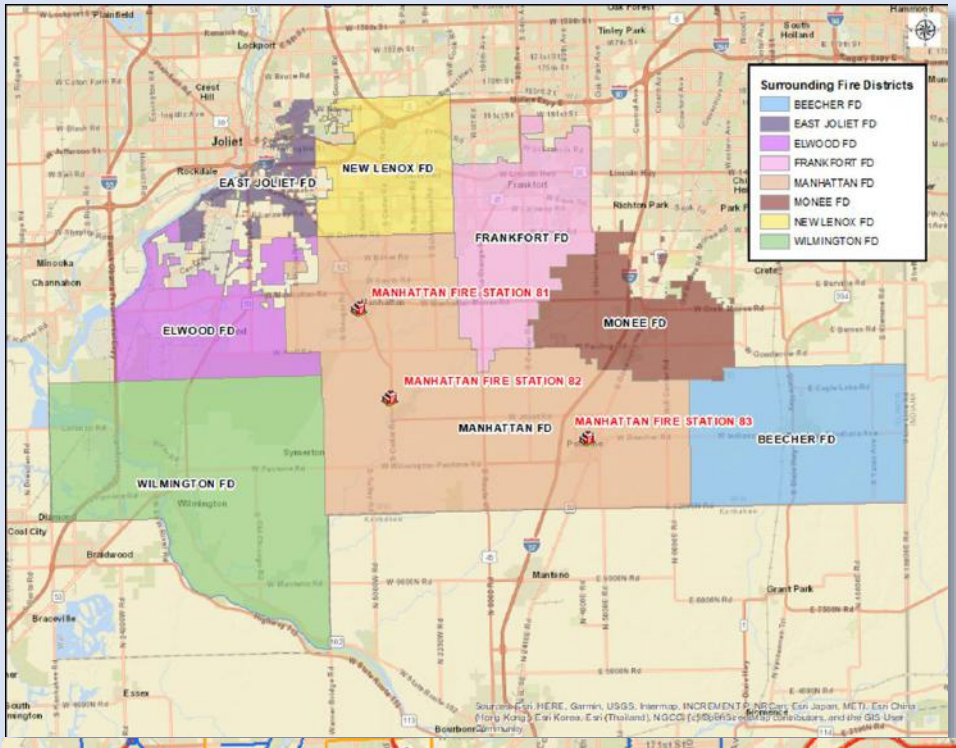
- **EMS/Rescue (≈70%)** dominates, primarily through **automatic aid**, confirming it is our Achilles heel when multiple medical calls overlap.
- **Fire (22%)** is the next largest category, modestly increasing.
- **Good Intent, False Alarms, and Hazards** remain smaller but operationally relevant (≈8% combined).

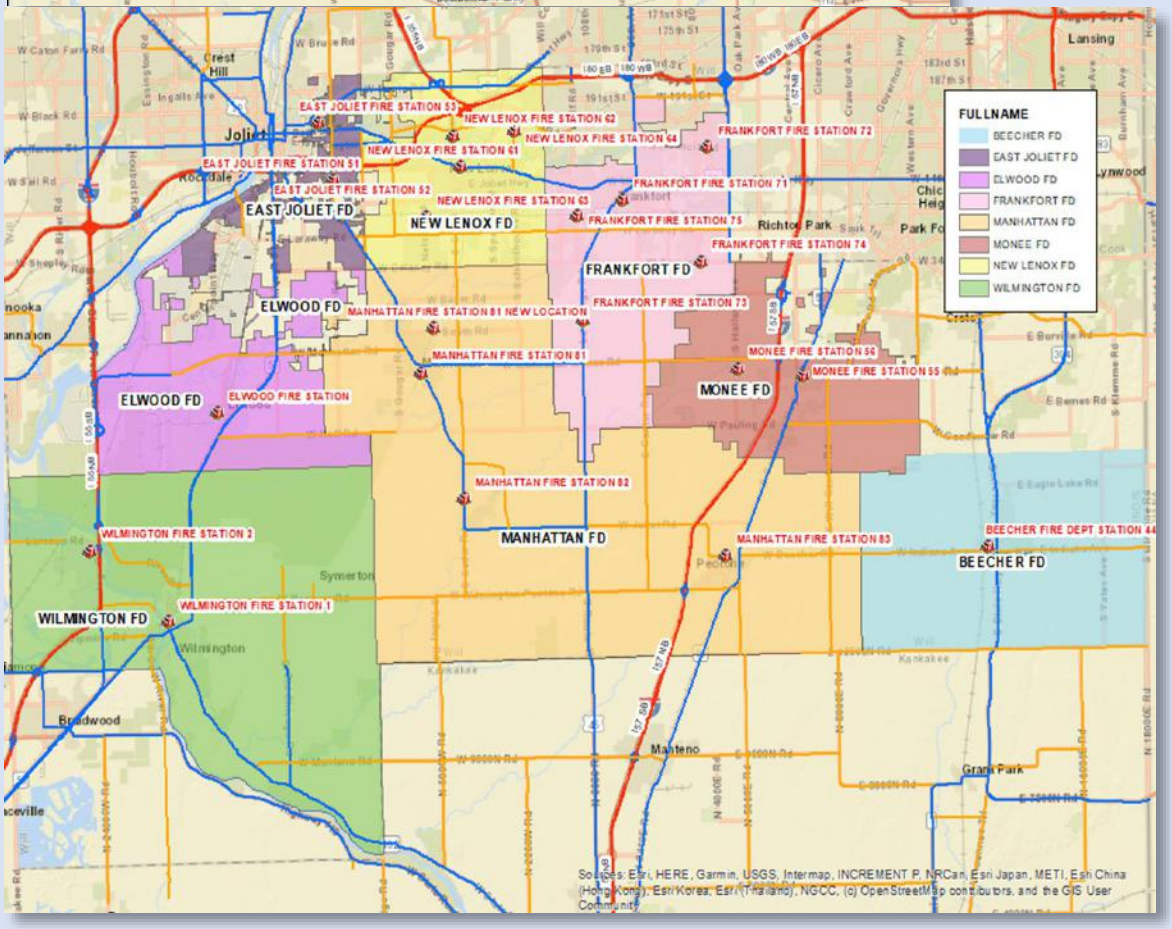
📌 **Takeaway:** When we need help, it's almost always for **EMS surge capacity** or **significant fire events** — the exact scenarios that strain our system the most.

Strategic Implication

- **Balance:** The District is a **net exporter of suppression resources (fire & service calls)** but a **net importer of EMS capacity**.
- **Risk:** Sustained reliance on outside agencies for EMS surges is a vulnerability.
- **Opportunity:** Exporting suppression aid demonstrates operational strength — but also signals potential overextension if call volume continues rising.
- **Action:** Consider peak-hour EMS staffing adjustments, reinforce auto-aid agreements for fire, and track aid balance annually to prevent silent system strain.

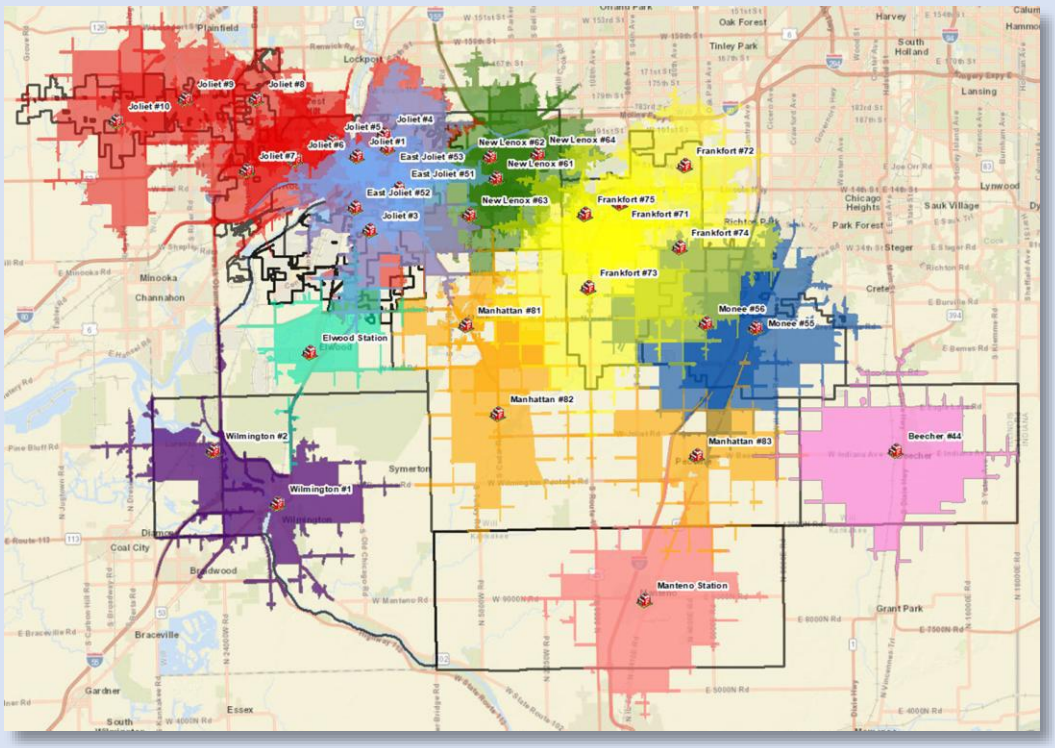
Surrounding Fire Districts



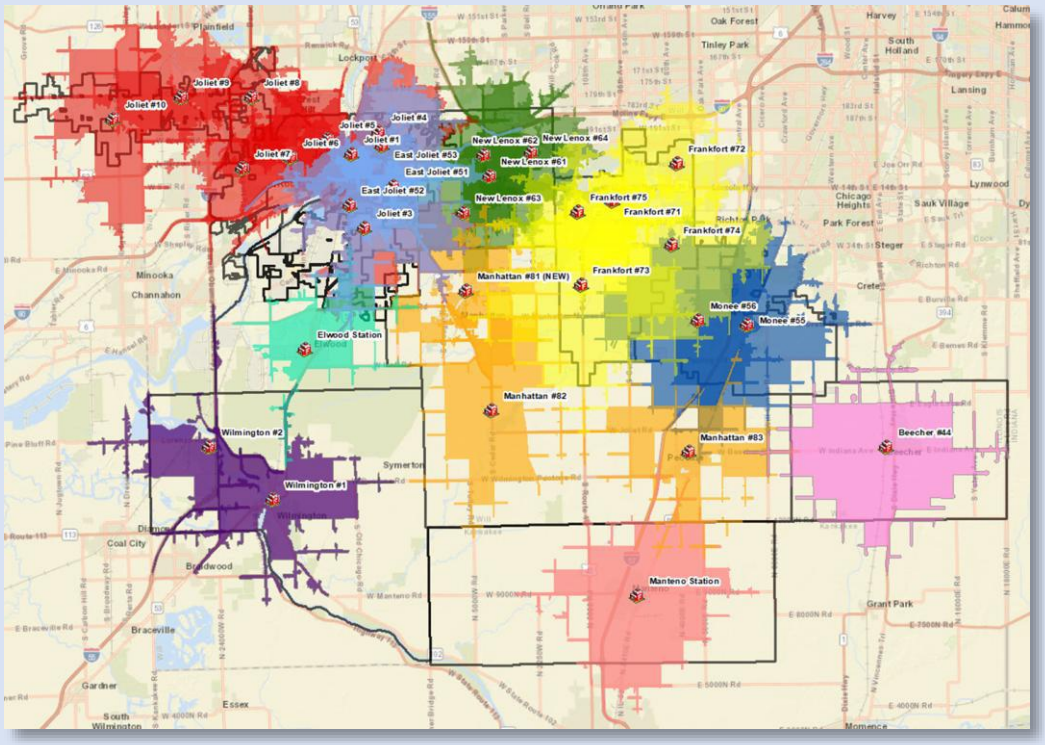


Surrounding Town 8-minute Travel Times

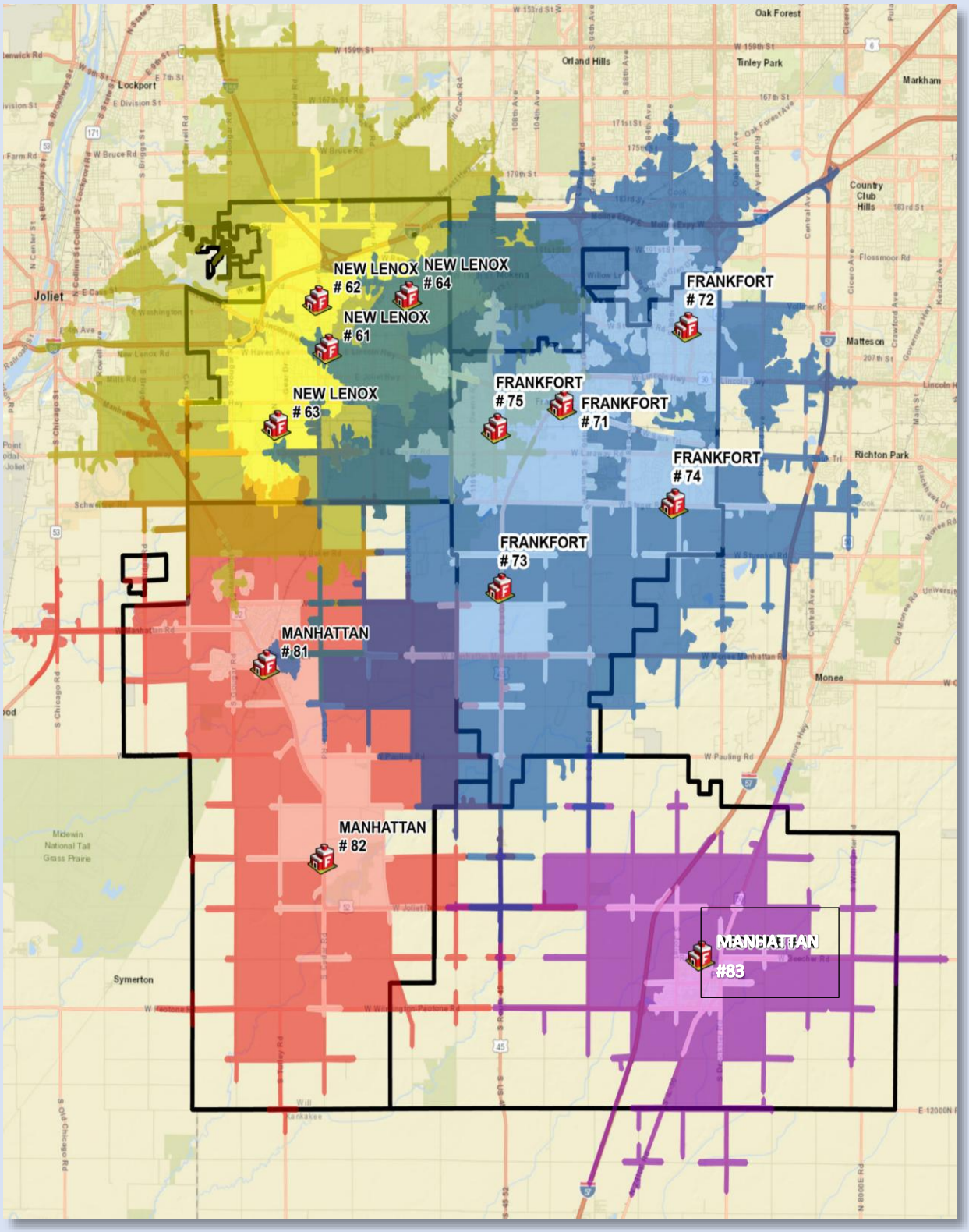
8-minute travel time with **CURRENT** Station 81



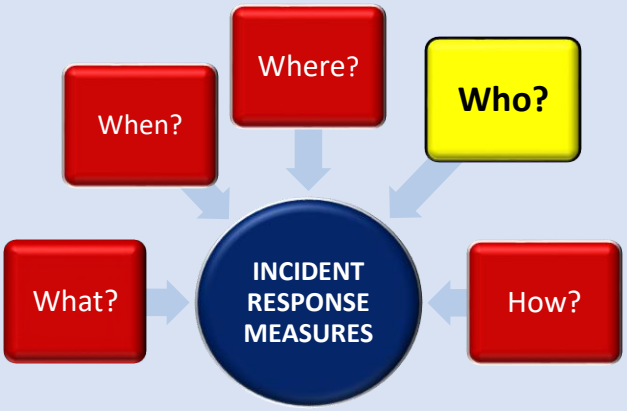
8-minute travel time with **NEW** Station 81



Manhattan / Frankfort / New Lenox Consortium



WHO – Unit Workload and Response Distribution



Unit workload is one of the clearest indicators of system health. It answers a consequential but straightforward question: *are our units stretched thin, or are they operating within sustainable margins?*

Every response comes with an opportunity cost. The busier a unit is, the more likely it is to be **unavailable for its next emergency**. This creates cascading effects: backup units must cover longer distances, response times increase, and the system's reliability erodes.

Two Core Metrics of Workload

- **Response Volume per Unit** – The number of incidents handled by each unit.
- **Time Committed to Calls (Unit Hour Utilization / UHU)** – The cumulative hours a unit is out-of-service on incidents.

Together, these factors illustrate both **the frequency of unit dispatches and the duration of their unavailability** to their district.

Why Units Respond Outside Their First-Due Area

Units leaving their home turf isn't always a failure — sometimes it's a necessity. But when it becomes a **pattern**, it signals strain. The three main drivers:

1. **Simultaneous Calls** – The first-due unit is already busy.
2. **Multi-Unit Responses** – High-acuity calls (fires, extrications, cardiac arrests) demand depth.
3. **Specialty Deployment** – ALS ambulances, technical rescue, or hazmat units are pulled where needed, even across district lines.

Station & Unit-Level Performance Profiles

Each station carries a different burden:

- **High-volume stations** often handle dense residential/EMS-driven workloads.
- **Perimeter stations** may cover fewer calls but with longer travel times.
- **Backup-heavy stations** can be deceptively busy, with workload dominated by out-of-district responses.

Metrics to Analyze:

- Total responses by station/unit

- Average time committed per incident
- Breakdown by call type (EMS, Fire, Rescue, Service)
- First-due vs. out-of-district coverage

Cross-Zone Dependency – When First-Due Isn't First-In

When backup units respond 25% of the time or more outside their zone, it means the system is underutilized. The impact:

- Longer **travel times** → slower intervention.
- Higher **wear-and-tear** on the apparatus.
- More **crew fatigue** due to sustained workload.

Key measures to evaluate:

- % of incidents outside the first-due area
- Most common inter-zone dependencies (e.g., Station 82 covering Station 81)
- Top three units providing backup
- Travel time deltas between first-due vs. backup coverage

Why This Matters

This analysis transforms deployment from a static map into a **living reliability index**. It allows leaders to:

- Identify overloaded stations or shifts
- Justify peak-load units, station relocations, or additional apparatus
- Optimize run cards to balance workload
- Reduce cascading delays during simultaneous incidents

Ultimately, **workload ≠ productivity**. A unit doing "more" isn't always good news — it often means the system is running at the edge of its safety margin.

Incidents by:

Station

Station Performance Profiles – Who's Carrying the Load?

Each station contributes differently to the District's risk coverage strategy:

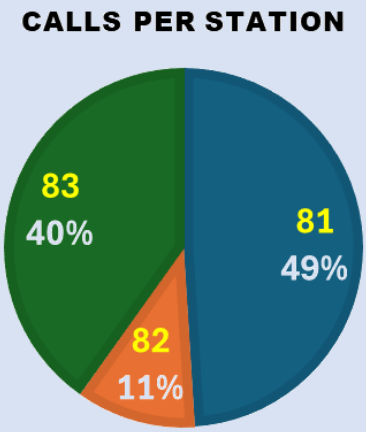
- **High-density zones** → Frequent EMS and service calls (shorter runs, higher frequency).
- **Rural/low-density zones** → Fewer calls, but longer travel times and incident durations.
- **Specialized areas** → Commercial/industrial clusters that skew toward high-risk fires or hazmat.

Key Evaluation Metrics

For each station, we examine:

- **Total Responses** – Volume handled annually.
- **Average Time per Incident** – Commitment burden per run.
- **Incident Mix** – EMS vs. Fire vs. Rescue vs. Service.
- **First-Due vs. Out-of-District** – Reliability of station coverage.

📊 **Station-Level Indicators**



- **Station 81 (HQ / Core Urban Coverage)**
  - Highest overall incident count, particularly EMS.
  - Strongly impacts system reliability when committed — other zones see delayed coverage.
  - Frequent exporter of mutual aid.
- **Station 82 (Residential + Mixed Commercial)**
  - Mid-range call volume but longer average travel times.

- Regularly pulled to cover Station 81 zone during simultaneous calls.

- **Station 83 (Expanded Coverage / Rural-Edge Zone)**
  - Lower incident count but high travel times.
  - Provides disproportionate backup coverage for both 81 and 82.
  - Risk exposure increases during concurrent calls due to distance.

Cross-Zone Dependency – When First-Due Isn't First In

This analysis highlights where response reliability breaks down:

- **% of Calls Out-of-District:** Shows how often each station/unit leaves its first due to cover.
- **Top Cross-Zone Flows:** e.g., *Station 82 → 81 coverage* during simultaneous EMS calls.
- **Backup Load:** Identify top 3 units providing secondary coverage — quantifies strain and justifies need for additional staffing/units.

📌 **Red Flag Threshold:** If a unit covers out-of-district ≥25% of the time, system resiliency is compromised — one more call tips reliability.

Station Summary Report

Jan 01, 2023 to Sept 31, 2025

Station	EMS Incidents	Fire Incidents	Other Incidents	Total Incidents	% of Total Incidents	Station Reliability	90th Percentile Response Time (PSAP to Arrival)
Manhattan Station 81	1,808	122	1,211	**3,141**	46%	68%	0:11
Manhattan Station 82	357	56	280	**693**	10%	69%	0:19
Manhattan Station 83	1,755	137	1,030	**2,922**	43%	74%	0:12
Overall	**3,920**	**315**	**2,521**	**6,756**	**100%**	**71%**	**0:12**

📊 **Station Performance Summary (2023–2025)**

Each Manhattan station plays a distinct role in the District's service delivery model, and the data tells a clear story of how workload and reliability differ by geography. From January 2023 to September 2025, the District responded to 6,756 incidents across its three stations, with an overall system reliability of 71% and a 90th percentile response time of 12 minutes (from **PSAP to arrival)**.

- **Station 81** – The busiest house, handling **46% of all incidents (3,141)**. Its balance of EMS (1,808) and non-EMS calls highlights its role as the District's primary all-hazards hub. However, reliability is **below the system average (68%)**, showing the impact of heavy workload on availability.

- **Station 82** – The smallest share of incidents (**10% total, 693 calls**), but notable for its **slower 90th percentile response time (0:19)** compared to the system average. This suggests longer travel distances and a lower call density typical of a rural coverage zone.
- **Station 83** – Nearly as busy as 81, carrying **43% of all incidents (2,922)**, including the highest fire workload (137). With a **74% reliability rate**, it is the strongest performer in the system, despite handling a heavy volume, reflecting efficient coverage and deployment.

📌 **Takeaway:** Stations 81 and 83 are the District's workhorses, together covering almost 90% of calls. Their reliability challenges underscore the need for surge planning and resource balancing. Station 82, while lighter in volume, requires strategic attention due to longer response times and its role in filling rural and overlapping coverage gaps.

🏢 **Station Performance Profiles (2023–2025)**

Station 81 – The Heavy Lifter

- **Workload:** 3,141 incidents (46% of all calls).
- **Profile:** Largest EMS load (1,808 calls), serving the District's highest-density area.
- **Reliability:** 68% — lowest of the three stations, showing frequent unavailability.
- **Connection to UHU/Overlaps:** High UHU levels and overlapping call frequency are most concentrated here. When Station 81 is committed, other stations — especially 83 — are forced to backfill, driving cross-zone dependency and slowing first-due coverage.

Station 82 – The Rural Reach

- **Workload:** 693 incidents (10% of calls).
- **Profile:** Lowest call volume but covers a vast, rural geography with longer travel distances. Fire incidents (56) are proportionally higher here.
- **Reliability:** 69% — slightly above Station 81 but still below the system average.
- **Connection to UHU/Overlaps:** Though lighter in raw call volume, Station 82's longer travel times (0:19 PSAP to arrival) mean units remain tied up longer once committed. This contributes to periods of thin coverage where even one or two calls can exhaust local availability.

Station 83 – The Balanced Workhorse

- **Workload:** 2,922 incidents (43% of calls).
- **Profile:** Nearly as busy as Station 81, with a strong EMS (1,755) and fire (137) workload.
- **Reliability:** 74% — highest of all stations, showing stronger coverage despite heavy call demand.
- **Connection to UHU/Overlaps:** Station 83 absorbs significant backfill when Station 81 is unavailable. Despite this added strain, it maintains the best reliability; however, the high UHU suggests its sustainability margin is thin.

📌 **System View – UHU + Overlaps + Station Reliability**

- **Overlapping Calls:** 18% of all runs involve two or more incidents happening at once. This forces cross-station coverage and mutual aid, particularly straining Stations 81 and 83.
- **UHU (Unit Hour Utilization):** Ambulances (AM81, AM83) show high UHU rates, reflecting long EMS transport and turnaround times. Engines double-tasked for EMS further compound the workload.
- **Impact:** Stations 81 and 83 are near capacity — they carry almost 90% of calls and are heavily involved in overlapping incidents. Station 82, while lighter in volume, contributes to system strain due to extended commitment times per incident.

✅ **Strategic Implication:**

The system's greatest vulnerability is its reliance on two stations (81 & 83) operating near maximum workload, with frequent overlapping calls and UHU stress. Relief strategies — such as peak-load ambulance deployment, staffing redistribution, or run card adjustments — are needed to protect reliability and reduce dependency on cross-zone and mutual aid responses.

Unit – Workload and Performance Distribution

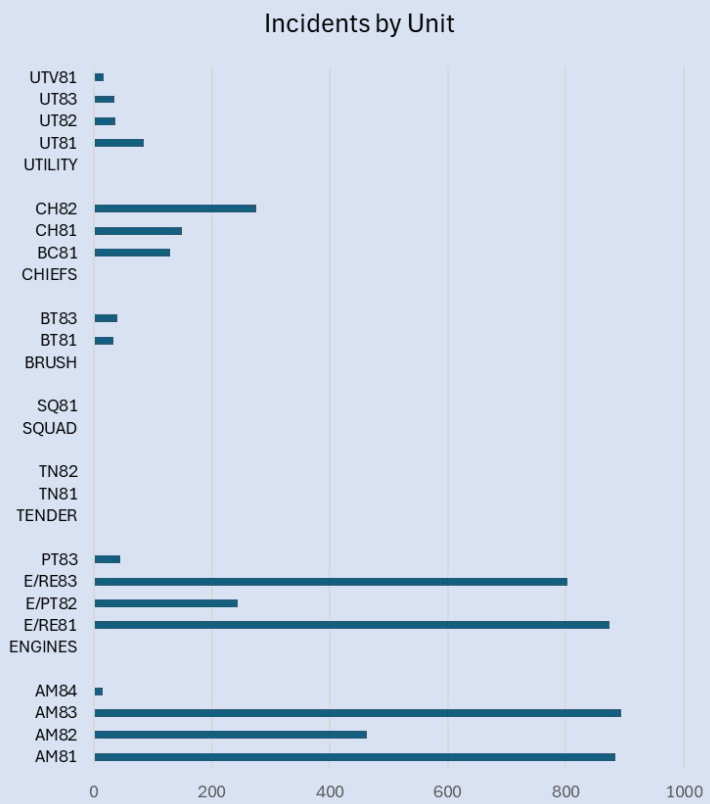
Not all apparatus carry the same load. Some units spend most of their time available in quarters. In contrast, others are nearly constantly in motion — answering back-to-back calls, covering overlapping incidents, and traveling outside their first-due area. Understanding **which units are busiest, how long they stay committed, and how reliably they cover their zones** is one of the clearest indicators of system stress.

Two critical questions drive this analysis:

1. **Who is doing the work?** – Call counts per unit reveal the heavy lifters of the system.
2. **How long are they tied up?** – Performance time data (turnout, travel, scene, total task time) shows the depth of commitment.

Ambulances carry the highest volume, often leaving suppression units to backfill EMS responses when demand surges. Engines are not only suppression companies — they double as first-in EMS responders, adding to their workload. Chiefs and utility units, while not primary response assets, still log hundreds of runs, often tied to long-duration events.

📌 **Why this matters:**
When a small handful of frontline units (e.g., AM81, AM83, and E/RE81) carry a disproportionate share of incidents, system resiliency depends on their constant availability. Any downtime — for maintenance, training, or overlapping calls — ripples across the district, increasing reliance on cross-zone coverage and mutual aid.



UNIT RESPONSES	2020	2021	2022	2023	2024	2020-2024	Average	% of Inc
AMBULANCES								
AM81	705	797	803	818	885	**4,008**	802	1735.1%
AM82	313	485	428	467	463	**2,156**	431	933.3%
AM83	565	671	772	777	894	**3,679**	736	1592.6%
AM84	207	141	219	28	15	**610**	122	264.1%
ENGINES								
E/RE81	596	637	642	723	875	**3,473**	695	1503.5%
E/PT82	232	301	156	309	244	**1,242**	248	537.7%
E/RE83	146	424	772	645	804	**2,791**	558	1208.2%
PT83		2	3	49	44	**98**	25	42.4%
TENDER								
TN81	51	39	7		2	**99**	25	42.9%
TN82	2		6			**8**	4	3.5%
SQUAD								
SQ81	475	74	25	4	2	**580**	116	251.1%
BRUSH								
BT81		14	34	31	33	**112**	28	48.5%
BT83	9	11	22	21	39	**102**	20	44.2%
CHIEFS								
BC81	119	116	133	94	130	**592**	118	256.3%
CH81	150	155	100	123	149	**677**	135	293.1%
CH82	46	224	230	233	276	**1,009**	202	436.8%
UTILITY								
UT81	36	114	103	102	85	**440**	88	190.5%
UT82	1	45	25	42	36	**149**	30	64.5%
UT83	71	104	71	21	35	**302**	60	130.7%
UTV81					17	**17**	17	7.4%
TOTAL APPARATUS RESPONSES	**3,724**	**4,354**	**4,551**	**4,487**	**5,028**	**22,144**	4,429	100.0%
Change over previous		630	197	-64	541			

90th Percentile Performance Summary by Unit

Jan 01, 2022 to Dec 31, 2024

Unit	Count	Turnout	Travel	Total Response	Scene	Total Time to Clear	Total Time on Task
MHAM81	2,504	0:02:16	0:09:16	0:10:40	1:46:37	1:51:56	1:46:16
MHAM82	1,358	0:02:36	0:14:06	0:15:21	1:55:56	1:59:30	1:50:50
MHAM83	639	0:02:05	0:09:40	0:11:02	1:56:25	2:00:02	1:57:36
MHAM84	24	0:02:00	0:10:19	0:10:50	1:46:49	1:47:12	1:03:55
MHBC81	357	0:02:59	0:13:20	0:15:09	1:41:15	1:29:02	1:54:24
MHBT81	98	0:04:56	0:12:10	0:16:01	1:15:55	1:23:11	1:41:43
MHBT83	60	0:04:26	0:13:45	0:15:57	1:26:09	1:35:55	1:43:13
MHCH81	372	0:03:19	0:10:31	0:11:43	1:03:03	1:00:39	1:36:53
MHCH82	739	0:02:43	0:14:16	0:14:28	1:12:17	1:15:16	2:00:45
MHIN81	10	0:00:15	1:25:56	0:58:43	2:56:00	3:24:09	5:58:17
MHIN82	5	0:00:13	0:42:48	0:42:58	3:03:32	2:08:14	(blank)
MHIN83	9	0:00:13	0:43:04	0:42:55	3:27:46	3:20:54	(blank)
MHPT82	708	0:02:24	0:16:19	0:16:20	1:33:30	1:25:35	2:01:04
MHPT83	93	0:02:46	0:17:58	0:20:49	1:51:07	2:10:51	3:02:40
MHRE81	2,057	0:02:18	0:09:00	0:10:29	0:42:08	0:48:54	1:41:12
MHRE83	1,442	0:02:10	0:09:05	0:11:16	0:45:33	0:55:33	1:51:23
MHSQ81	31	0:03:18	0:17:29	0:19:00	1:46:23	1:54:34	0:42:15
MHUT81	290	0:02:05	0:07:32	0:08:51	0:39:30	0:45:49	1:41:07
MHUT82	103	0:02:18	0:09:23	0:10:44	0:56:18	1:05:41	1:39:44
MHUT83	56	0:08:04	0:10:30	0:13:16	1:32:12	1:46:54	2:05:50
MHUTV81	17	0:00:45	0:06:36	0:05:15	0:41:18	0:38:14	1:26:16

1. Unit Responses (2020–2024)

- **Ambulances dominate** workload with **10,453 responses** (≈47% of all runs).
  - **AM81 (4,008)** and **AM83 (3,679)** carry the heaviest burden.
  - **AM82 (2,156)** is a steady contributor, while **AM84 (610)** is now largely inactive.
- **Engines** accounted for **7,506 runs** (≈34%).
  - **E/RE81 (3,473)** and **E/RE83 (2,791)** show the greatest demand.
  - **E/PT82 (1,242)** provides the least coverage.
- **Other Units:**
  - **Chiefs (1,009 runs)** and **Utilities (440 runs)** illustrate significant administrative/secondary workload.
  - **Specialty units** (Tender, Squad, Brush) remain <5% of overall calls.

📌 **Takeaway:** Ambulances are the backbone of response, while Engines remain essential for suppression and multipurpose coverage. Chiefs and Utility units show that "non-response" apparatuses are still heavily integrated into operations.

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2. 90th Percentile Performance (2022–2024)

- **Ambulances (AM81/82/83)**:
  - Typical **turnout 2–3 minutes**.
  - **Travel 9–14 minutes**.
  - **Total response ~10–15 minutes**.
  - Scene times average **1 hr 30–2 hrs**, reflecting EMS transport and documentation.
- **Engines (E/RE81/82/83):**
  - Similar turnout but slightly shorter scene times (~1 hr 10–1 hr 30).
- **Specialty Units:**
  - **Brush/Utility** has the longest task times (3–5 hrs+), reflecting extended mitigation or support work.
- **Chiefs (CH82 in particular)** show high workload counts (276) with scene times averaging **>2 hours**, reflecting command roles at complex incidents.

📌 **Takeaway:** The **time-on-task gap** between ambulances and engines explains why EMS surges strain the availability of resources. Chiefs and specialty units often get tied up in longer-duration incidents.

3. Unit Response Distribution (2024)

(From your horizontal bar chart)

- **AM81 & AM83**: Both exceed **850 runs each**, the busiest in the system.
- **E/RE81** also exceeds **800 runs**, showing that suppression companies double as EMS first responders.
- **CH82** (≈270 runs) and **Utility 81** (≈100 runs) contribute consistently to the overall workload.
- **Low-volume units** (AM84, Tender, Squad) illustrate redundancy but limited deployment.

📌 **Takeaway:** Workload is **concentrated on a few key frontline units (AM81, AM83, E/RE81)**. Secondary/support units handle a fraction of calls but remain essential for resiliency.

🔑 **Strategic Implications for CRA/SOC**

- **EMS Surge Vulnerability:** Ambulances, especially AM81 and AM83, are running hot — UHU and overlapping call data confirm stress.
- **Suppression Depth:** Engines are consistently busy; E/RE81 is at near-capacity workload.
- **Command Strain:** Chiefs, especially CH82, demonstrate high engagement in long-duration incidents.
- **Redundancy Risk:** Reliance on a small number of heavy-use units suggests fragility if even one frontline apparatus is down.

Unit Hour Utilization / UHU

Unit Hour Utilization (UHU) – Measuring Workload Intensity

What UHU Tells Us
Total call volume indicates the frequency at which a unit is required. UHU shows *how long* it is tied up. It's the percentage of time a unit is committed to incidents versus its total available hours:

UHU = (Hours on Calls ÷ Total Available Hours)

For example, if an engine staffed 24/7 (8,760 hours/year) spends 876 hours on calls, its UHU = **10%**.

Benchmarks of Workload Intensity

- **< 10%:** Sustainable for all-hazards readiness
- **10–20%:** Busy, but generally manageable
- **20%+:** High workload; may affect training, readiness, and reliability
- **> 35%:** Overcommitted; sustained stress on personnel and coverage

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Why UHU Matters

- **Operational Readiness:** High UHU means units are unavailable when new calls drop, forcing longer responses by backup units.
- **Training & Prevention Impact:** Busy companies struggle to complete non-emergency work—inspections, hydrant testing, or training get pushed aside.
- **System Fatigue:** Sustained high UHU risks burnout, equipment wear, and reliance on mutual aid.

EMS vs. Suppression Dynamics

- **EMS units (ambulances):** Higher UHU due to transports, hospital delays, and 20–40 minutes of digital report writing required by IDPH. Transporting hospitals outside the District further extends the turnaround time.
- **Suppression units (engines/trucks):** Typically lower UHU per run but face bursts of intensive activity (fires, rescues).

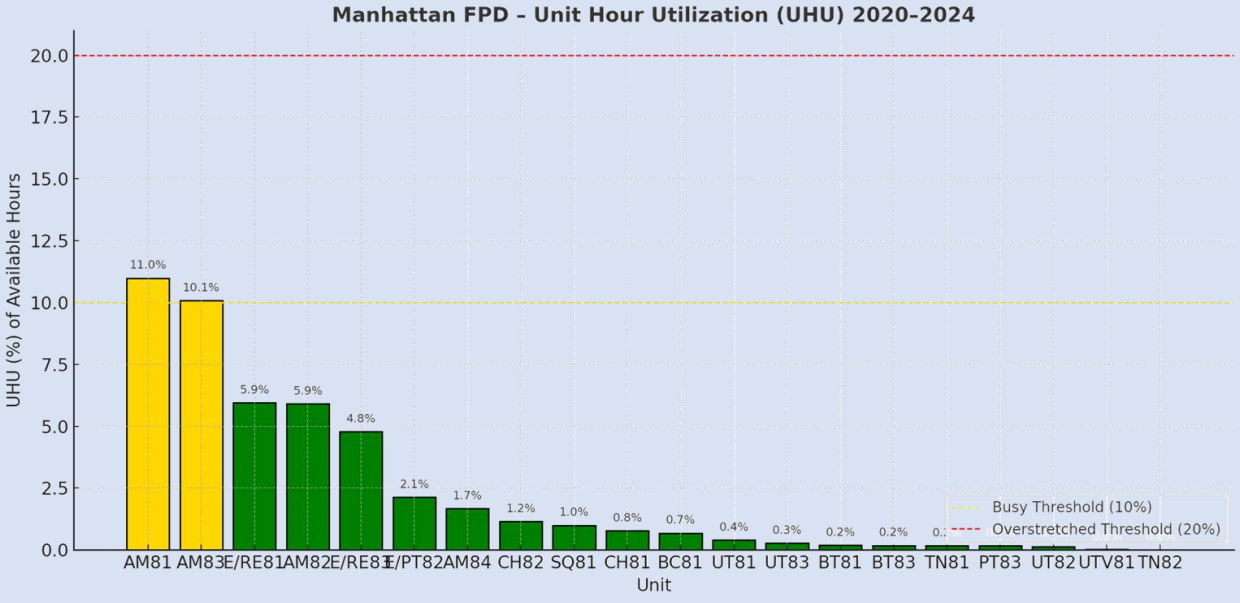
Hidden Workload (Non-Emergency UHU)
Incident hours are just part of the picture. Crews also commit **4–6 hours per shift** to readiness activities:

- Vehicle checks & maintenance
- Training & fitness
- Fire prevention inspections
- Reports & administrative work
- Meals/shopping
- Returning from incidents

When factored in, the *actual daily workload intensity* becomes clearer—and in some cases, more burdensome than the raw UHU number suggests.

Sample - DAILY ACTIVITY	Average Time
Roll Call	
Operations Review	0.25
DQD - Daily Quick Drill	
EMS & Fire Topics	0.5
Apparatus & Small Tools	
Operations/Functions/Review	1
Meal Shopping	0.5
Department Directed Training	
Daily Scheduled Drill	1
[1,2,4, or 8 hrs - class dependent]	
LUNCH	1
Preplan/Building Familiarization	1
Physical Fitness	1
Public Education/Relations	0.5
Company Directed Training	
Per Company Officer	varies
Average Daily Hours	**6.75**

👉 **Bottom Line:** UHU is more than a math problem. It's a **system stress indicator**—a way to measure how thinly stretched resources are, and whether they can still meet NFPA 1710 performance expectations.



Key findings:

- AM81 (11%) and AM83 (10%) are the busiest units — both crossing into the "busy" (10%+) range, which strains EMS availability.
- E/RE81 (6%) and AM82 (6%) show steady workloads, pushing toward the busy category.
- Other suppression units, chiefs, and utilities trend much lower, reflecting either specialty or secondary response roles.

👉 This confirms what your crews already know: ambulances are carrying the heaviest load, with UHU edging into the zone where training, readiness, and overlapping call coverage become concerns.

Response Reliability – Are We There When They Call?

Reliability measures the percentage of times a unit is available to respond to an incident in its own first-due area. When reliability drops below **90%**, it means backup units (often located farther away) are filling the gap, adding travel time and increasing risk.

📊 **Station-Level Reliability Snapshot (2023–2024)**

- **Station 81:** ~71% (drops to 66% in 2024)
    - Heavy load from EMS and fire runs, often requiring outside coverage.
- **Station 82:** ~80% (down to 72% in 2024)
    - Lowest call volume, but long travel times + small staff footprint drag reliability.
- **Station 83:** ~77% (down to 74% in 2024)
    - Large EMS/Rescue workload and frequent cross-coverage for Station 81.

✅ **What This Tells Us**

- **System-wide reliability averages 70–75%**, meaning about **1 in 4 calls** are not covered by the first-due company.
- This is directly tied to **simultaneous incidents (16%)** and **ambulance UHU creeping over 10%**.
- Engines and ambulances are frequently forced out of their zones, creating **coverage cascades** where one busy unit drags down the whole system.

🎯 **Strategic Use in CRA/SOC**

- Justify **new Station 81** → will improve core area coverage and stabilize first-due reliability.
- Support **peak-load ambulance planning** → MFPD is already busy enough that "one more ambulance" is a reliability fix, not a luxury.
- Show need for **regional mutual aid balance** → currently a net exporter of aid (61% given vs. 39% received).

Mutual Aid and Automatic Aid – System Flex or System Strain?

Mutual aid and automatic aid are essential components of modern fire service delivery, particularly for large-scale incidents or when resources are committed. However, they should be the backup plan, not the daily business model.

Excessive mutual aid use can signal:

- Understaffing

- Resource misalignment
- Inefficient coverage zones
- Overreliance on neighboring departments

Tracking **the aid given versus the aid received helps assess the system's** balance. Are we a net exporter of aid (overstretched)? Or a net importer (under-resourced)? The answer informs discussions on regional cooperation, cost-sharing, and long-term planning.

Next Steps – Turning Data Into Deployment Strategy

Here's where insight becomes action:

- Identify units with high UHU or low reliability
- Pinpoint times of day when resources are stretched
- Map overlapping incidents and response gaps
- Assess mutual aid frequency and distance traveled
- Simulate new station locations or redeployment options

This data doesn't just live in spreadsheets—it fuels **better decisions**, **more innovative staffing**, and **faster, more reliable service** to the community.

The Strategic Lens –

Turning Profiles into Priorities

These station and unit profiles offer more than a retrospective. They inform planning at every level:

Do we need to adjust response districts based on actual activity and travel times?

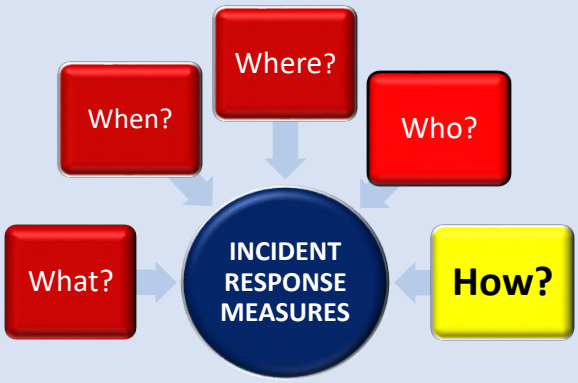
Are certain shifts disproportionately carrying high-risk or high-volume workloads?

Is there a need for redeploying or adding second-due units to preserve coverage integrity?

Which stations are best positioned for future growth, and which are already beyond safe workload thresholds?

By combining these insights with geospatial analysis, risk classification, and response time benchmarking, we begin to form a fully integrated picture of how demand, geography, and deployment intersect—and where to act next.

HOW – Measuring What Matters



Performance measurement isn't a checkbox—it's the District's proof of value. It's how we demonstrate to our community that resources translate into results, that outcomes are measurable, and that improvement is continuous. A fire district that only tracks activity (i.e., the number of calls and hours) risks missing the bigger picture. What matters most is whether lives were saved, property was protected, and risks were reduced.

From Activity to Outcome: The Performance Chain

The District tracks performance on three distinct but interconnected levels:

- Activities – What we do. Training, inspections, responses.
- Outputs – How much we did. Training hours completed, turnout times measured, fires within benchmarks.
- Outcomes – Why it matters. Lives saved, fires confined to the room of origin, and insurance costs reduced.

This shift to outcomes ensures that our metrics align directly with community priorities and the NFPA 1710 standard of care.

What Makes a Good Performance Measure?

For metrics to be meaningful, they must be:

- **Relevant** – tied to community risk and expectations
- **Understandable** – clear to both crews and the public
- **Controllable** – influenced by District actions
- **Reliable** – based on valid, accurate data
- **Comparative** – benchmarked to NFPA 1710 or peer agencies
- **Sustainable** – feasible to track without overburdening operations
- **Strategic** – aligned with the District's long-term priorities

Deployment Performance: The Three Pillars

Performance is organized around three interdependent concepts:

- Distribution – Where resources are located (first-due coverage).

- Concentration – How many resources arrive for an Effective Response Force (ERF).
- Reliability – Whether the system consistently meets expectations.
- NFPA 1710 Service Benchmarks
- Fire: ≤6:20 first-due (3 FF); ≤10:20 ERF (15–17); ≤15:00 high-risk (29).
- EMS: ≤6:00 first-due (2 ALS); ≤10:00 ERF (4–7); ≤15:00 high-risk (29).
- Rescue/Special Ops: ≤6:20 first-due; ≤10:20 ERF (7–14); ≤15:00 high-risk (13–24).
- HazMat: ≤6:20 first-due; ≤10:20 ERF (9); ≤15:00 high-risk (15).

Key Outcome Metrics

Fire Containment – Room of Origin Saves

- **District Performance**: 36% of structure fires confined to the room/point of origin.
- **Context:** Above the 5-year baseline (26%) but below the 90% benchmark.
- **Why it matters:** Containment is the single strongest predictor of civilian survival.
- **Supporting data:**
  - 93% of multiple-fatality fires (2021–2023) extended beyond the origin room.
  - Sprinklers: 97% confined to room vs. 74% without.
  - Smoke alarms: 60% lower death rate in homes with working alarms.
  - Modern fuels: Flashover in ~2 minutes vs. 8+ minutes in legacy rooms.

Cardiac Arrest Survival – ROSC Rate

- **District Performance**: 25% ROSC in 2024 (vs. 15% 5-year baseline; national average ~12%).
- **Year-by-year (2020–2024):** 67 arrests → 10 ROSC (15% overall).
- **2024 Impact**: 20 arrests, 5 ROSC (25%).
- **Why it matters:** Measurable, life-saving outcome demonstrating ALS strength and early intervention.

Training Investment

- **District Performance:** 27,952 hours in 2024; 436 hrs/FF average.
- **Why it matters:** Strong investment in readiness, professional development, and accreditation alignment.

KPI Dashboard (2020–2024)

🔥 Fire Suppression

- Fire Containment: 36% (↑ from 26%; Target ≥90%) 📉 Improving
- First Unit Arrival: 9:38 (Target ≤6:20) ❌ Missed
- ERF Arrival: 20:09 (Target ≤10:20) ❌ Missed
- Dollar Loss: $201K avg/fire (↑ year-over-year) 📈

🚑 EMS / Cardiac

- ROSC: 25% (Target 40–65%) ✅ Improving
- First Arrival: 10:39 (Target ≤6:00) ❌ Missed
- Turnout Time: 1:52 (Target ≤1:00) ❌ Missed
- Hospital Turnover: 58 min ⚠️ Monitor

🛡️ System Resilience

- Simultaneous Incidents: 16.2% ⚠️ Capacity concern
- Mutual Aid: 61% given vs. 39% received → imbalance
- Reliability: 71% (Target ≥90%) ❌

👩‍🚒 Workforce

- Training Hours: 27,952 (↑ trend) ✅ Strong
- Avg per FF: 436 hrs
- Alignment: Meets accreditation readiness

📌 Strategic Alignment

Performance directly supports the District's four priorities:

- **Financial Sustainability –** Data justifies funding and investment.
- **Community Involvement** – CPR training & prevention with measurable impact.
- **Operational Effectiveness** – Response benchmarks drive deployment planning.
- **Workforce Development** – Training ensures readiness and leadership growth.

✅ Summary

Strengths: Cardiac saves, improving fire containment, strong training & prevention.
Challenges: Travel time reliability, simultaneous incidents, and ERF assembly.
Next Step: Utilize KPIs to integrate risk, performance, and funding within a continuous quality improvement (CQI) loop, ultimately enhancing the District's operations to be better, faster, safer, and smarter.

Key Performance Indicators (KPI) Dashboard

Reporting Period: 2020–2024 | **Benchmarks:** NFPA 1710, Community Risk Assessment, Strategic Goals

FIRE SUPPRESSION KPIs

KPI	2024 Performance	Baseline 2022-2025 ytd	Benchmark	Trend
Fires Confined to Point or Room of Origin	**36.4%**	26%	≥90%	Improving
First Unit Arrival – Fire Incidents (90th %)	**9:38**	10:34	≤6:20	❌ Missed Improving
Effective Response Force Arrival – Fire	**20:09**	18:37	≤10:20	❌ Missed
Average Dollar Loss per Fire	**$201,818**	$165,500	↓ Year-over-Year	Increasing

EMS / CARDIAC CARE KPIs

KPI	2024 Performance	Baseline 2020-2024	Benchmark	Trend
Cardiac Arrest ROSC Rate (to Hospital)	**25%**	15% National Average 12%	Target: 40–65%	✅ Improving
EMS First Unit Arrival Time (90th %)	**10:39**	10:57	Goal ≤6:00	❌
Turnout Time – EMS Incidents	**1:52**	1:56	Goal: ≤1:00	❌
Hospital Turnover / Availability Time	**58:17**	tbd	Track for Trends	⚠️ Monitor

OUTPUT & ACTIVITY METRICS

KPI	2024 Value	5-Year Trend	Notes
Training Hours Completed	**27,952 hours**	↑ Increasing	Total Hours/64 FF
Simultaneous Incidents (% of Calls)	**16.2%**	↑ Increasing	Capacity concern
Total Calls for Service	**2,628**	↑**+27%** since 2020	Increasing demand
Mutual Aid Given/Received Ratio	**61%** Given/ **39%** Received	Unbalanced	

RESPONSE TIME PERFORMANCE – NFPA 1710 Benchmarks (90th %) – ALL EMERGENCY INCIDENTS

Metric	Target	(2023-2024)	2025 ytd	Status
Call Processing	≤1:00	**1:42**	1:28	❌
Turnout Time	≤1:20	**2:05**	2:01	❌
Travel Time	≤4:00	**8:07**	8:33	❌
Total Response Time	≤6:00 / 6:20	**11:04**	11:16	❌
ERF Assembly Time	≤10:00 / 10:20	**VARIES**		

STRATEGIC ALIGNMENT SCORECARD

Priority Area	Supporting KPI	2024 Status	Notes
Financial Sustainability	Fire Loss per Capita	↓Decreasing	Reduced impact on base; sustain proactive CRR & prevention
Community Involvement	% CPR Trained / Public Events	18%	Enhance outreach: expand CPR classes, senior safety focus
Operational Effectiveness	Response Times, Room of Origin	⚠️ Mixed	Travel times above NFPA benchmarks; containment improving
Workforce Development	Training Hours / FF	↑ Strong	436 hrs avg/Ff; continue investment in readiness and leadership development.

Summary:

Key Strengths:

- Above-average cardiac save rate
- High fire containment performance
- Strong training and prevention activity

Areas for Improvement:

- Simultaneous incident rate and unit availability
- Travel time reliability in fringe/overlapping zones
- ERF timing during high-risk or mutual aid responses

Closing the Loop: From Data to Improvement

With clearly defined baselines and benchmarks, the District has two foundational pillars of **Continuous Quality Improvement (CQI)** in place. The next step is consistent monitoring, transparent reporting, and targeted system refinements based on real-world performance and evolving community risk.

Benchmarks (Goals) Statements

Benchmark Performance Objectives

The Manhattan Fire Protection District has established performance benchmarks for **Fire Suppression, EMS, Rescue/Special Operations, and Hazardous Materials Response**. These benchmarks define the expected **quality, quantity, and timeliness** of services based on risk classification. They are the foundation for the District's **Continuous Quality Improvement (CQI) framework**:

➡️ *Measure baseline → Set benchmark targets → Monitor outcomes → Drive improvements.*

🔥 Fire Suppression

First Due / Distribution

- 90% of incidents: First-arriving unit within **6:20 total response time**, staffed with **≥3 personnel**.
- Capabilities: establish command, entry, fire attack, search/rescue, secure utilities, property protection.
- Engines: **≥1500 GPM pump**, 750 gal tank; Trucks: ≥300 gal.
- Hose line: ≥150 GPM within **5 min of arrival**.

Moderate-Risk ERF / Concentration

- 90% of incidents: ERF within **10:20 total response time**, staffed with **15–17 personnel**.
- Functions: command transfer, backup lines, forcible entry, search, ventilation, RIT, overhaul, salvage.
- Command assigns divisions/groups for accountability per SOPs.

High-Risk ERF / Concentration

- ERF = **29 personnel** within **15:00**.
- Functions: Risk Management Plan, sector officers, Incident Action Plan.
- Relies on **mutual aid** for staffing and ladder/truck coverage.

🚑 Emergency Medical Services (EMS)

First Due / Distribution

- 90% of incidents: Unit within **6:00 total response time**, with **≥2 ALS providers**.
- Actions: scene safety, triage, assessment, vitals, initiate care within **1 min of arrival**.

Moderate-Risk ERF / Concentration

- Low-risk: **4–5 personnel** within **10:00**.
- Moderate-risk: **7 personnel** within **10:00**.
- Capabilities: CPR, defib, IV, meds, airway, extrication.

High-Risk ERF / Concentration

- ERF = **29 personnel** within **15:00**.
- Functions: establish medical, triage, and transport sectors.
- Relies on **mutual aid** for MCI/multi-patient events.

🛠️ Rescue / Special Operations

First Due / Distribution

- 90% of incidents: Unit within **6:20**, with **≥3 personnel**.
- Functions: establish command, size-up, hazard control, request resources.

Moderate-Risk ERF / Concentration

- ERF within **10:20**, staffed with **7–14 personnel**.
- Capabilities: stabilization, hazard containment, safe extrication.

High-Risk ERF / Concentration

- ERF within **15:00**, staffed with **13–24 personnel** (incident dependent).
- Functions: Site Safety Officer, technical ops, patient contact, ALS, staging.
- Relies on **mutual aid specialty teams**.

☣️ Hazardous Materials (HazMat)

First Due / Distribution

- 90% of incidents: Unit within **6:20**, with **≥3 personnel**.
- Functions: scene assessment, hazard ID, zone control, initial containment.

Moderate-Risk ERF / Concentration

- ERF within **10:20**, staffed with **≥9 personnel**.
- Functions: isolate hazard, identify/mitigate conditions.

High-Risk ERF / Concentration

- ERF within **15:00**, staffed with **15 personnel**.
- Functions: technical ID, decon, mitigation, Site Safety Officer.

- Must meet District SOGs + state/federal standards.

Summary:
Benchmarks provide measurable, risk-based objectives for **distribution** (first-due response) and **concentration** (ERF). They align with **NFPA 1710** and CFAI accreditation standards, ensuring the District's CQI loop continuously improves performance in time, capability, and outcomes.

PERFORMANCE – Baseline Times

Baselines (Actual) 2023-2025 ytd

The actual baseline times for the District have historically been as follows, with benchmark goals of 90%.

ALL INCIDENTS (in town)

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

ALL INCIDENTS - in District

* NFPA 1710 Turnout Benchmark time is 1:20

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	1:42	1:28	1:33	2:02	1:00	0:42	64.7%
Turnout Time	Turnout Time - 1st Unit	2:05	2:01	2:04	2:10	1:20	0:45	62.3%
Travel Time	Travel Time - 1st Unit Distribution	8:07	8:32	8:02	8:00	4:00	4:07	52.1%
	Travel Time - ERF Concentration	*varies on type						
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	11:04 (n=5,356)	11:14 (n=1,410)	10:48 (n=2,124)	11:06 (n=1,822)	6:20	4:44	50.8%
	Total Response Time - ERF Concentration							
ERF - 1								

EMS

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

EMS - LOW 1 Unit

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	1:28	1:12	1:17	1:47	1:00	0:28	69.9%
Turnout Time	Turnout Time - 1st Unit	1:59	1:55	1:59	2:02	1:00	0:59	45.3%
Travel Time	Travel Time - 1st Unit Distribution	7:53	7:53	7:50	7:56	4:00	3:53	57.0%
	Travel Time - ERF Concentration							
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	10:20 (n=3,270)	10:14 (n=829)	10:10 (n=1,276)	10:41 (n=1,165)	6:00	4:20	52.1%
	Total Response Time - ERF Concentration							
ERF - 2	*NFIRS: 300,311, 320 321, 381, 554, 661*							
	CAD: AM-ABDO,ALLE,BATT,BITE,BACK,BLED,BURN,COLD,EYE,FALL,FRAC,HEAD,HEAT,INTOX,SEX,SICK,TRAUM,LIFT,COQ							

EMS - LOW 2 unit

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling		1:26	1:12	1:20	1:39	1:00	0:26	72.7%
Turnout Time	Turnout Time - 1st Unit	2:03	2:00	2:02	2:09	1:00	1:03	40.4%
Travel Time	Travel Time - 1st Unit Distribution	7:37	7:47	7:20	8:00	4:00	3:37	57.9%
	Travel Time - ERF Concentration	13:05	14:13	12:52	12:44	8:00	5:05	69.9%
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	10:04 (n=1,183)	09:49 (n=305)	09:46 (n=448)	10:32 (n=430)	6:00	4:03	53.3%
	Total Response Time - ERF Concentration	15:25 (n=551)	16:11 (n=166)	15:07 (n=221)	15:28 (n=164)	10:00	5:25	69.0%
ERF - 5	*NFIRS: 300,311, 320 321, 381, 554, 661*							
	Dispatch Type Code: AM-CHKE,CHST,DIB,ELEC,OVER,PSYCH,STRK,SUIC,UNCO,UNKNN							

EMS - MODERATE

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	1:42	1:26	1:18	1:40	1:00	0:42	57.7%
Turnout Time	Turnout Time - 1st Unit	2:19	2:22	0:59	2:46	1:00	1:18	60.0%
Travel Time	Travel Time - 1st Unit Distribution	7:17	4:54	7:10	8:07	4:00	3:17	65.4%
	Travel Time - ERF Concentration	15:25	8:03	13:27	16:02	8:00	7:25	55.0%
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	10:32 (n=26)	06:44 (n=6)	09:18 (n=9)	10:43 (n=11)	6:00	4:32	61.5%
	Total Response Time - ERF Concentration	17:15 (n=20)	09:38 (n=4)	15:01 (n=7)	17:47 (n=9)	10:00	7:15	45.0%
ERF - 6	*NFIRS: 321.2*							
	Dispatch Type Code - AMBIRTH- AMCPR-AMDOA-AEDF-AMDRWN-AMSHOT-AMSTAB							

FIRE

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

FIRE - LOW 1

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**2:03**	1:47	1:52	2:31	**1:00**	1:03	**58.6%**
Turnout Time	Turnout Time - 1st Unit	**2:13**	2:02	2:05	2:18	**1:20**	0:52	**56.2%**
Travel Time	Travel Time - 1st Unit Distribution	**9:27**	10:05	9:35	8:57	**4:00**	5:26	**43.3%**
	Travel Time - ERF Concentration	**10:22**	10:32	10:15	9:25	**8:00**	2:21	**76.4%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**12:56 (n=322)**	12:58 (n=102)	12:44 (n=118)	12:28 (n=102)	**6:20**	6:35	**39.1%**
	Total Response Time - ERF Concentration	**13:24 (n=193)**	13:24 (n=62)	14:20 (n=69)	13:01 (n=62)	**10:20**	3:03	**71.0%**
ERF - 3	*NFIRS:*							
	Disptach Type Codes: Single Engine -BOMBF-ALRMTF-BURNF-OTHERF-SMOKEF							

FIRE - LOW 2

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**1:40**	1:36	1:23	2:04	**1:00**	0:39	**68.6%**
Turnout Time	Turnout Time - 1st Unit	**2:13**	2:19	2:04	2:15	**1:20**	0:53	**39.9%**
Travel Time	Travel Time - 1st Unit Distribution	**8:26**	8:42	8:47	7:21	**4:00**	4:26	**44.0%**
	Travel Time - ERF Concentration	**10:11**	10:38	10:33	9:42	**8:00**	2:10	**78.7%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**11:47 (n=409)**	11:54 (n=125)	11:52 (n=154)	11:15 (n=130)	**6:20**	5:26	**44.0%**
	Total Response Time - ERF Concentration	**13:08 (n=338)**	14:22 (n=104)	12:55 (n=125)	12:21 (n=109)	**10:20**	2:47	**74.9%**
ERF - 5	*NFIRS: 100,118,150-155, 160-164,440-445. 480-482. 631-632,650-653,721,735*							
	Dispatch Type Codes: Engine Ambulance - 5 personnel - ALARMF-CARFF-DUMPF-TRUCKF							

FIRE - MODERATE

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**1:27**	1:10	1:20	2:24	**1:00**	0:27	**67.5%**
Turnout Time	Turnout Time - 1st Unit	**2:30**	2:21	2:08	2:38	**1:20**	1:10	**41.2%**
Travel Time	Travel Time - 1st Unit Distribution	**7:25**	7:34	7:07	6:27	**4:00**	3:25	**54.1%**
	Travel Time - ERF Concentration	**9:17**	5:08	3:46	5:49	**8:00**	1:17	**0.0%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**10:34 (n=40)**	10:39 (n=13)	09:38 (n=17)	09:46 (n=10)	**6:20**	4:14	**50.0%**
	Total Response Time - ERF Concentration	**36:12 (n=17)**	31:60 (n=6)	28:39 (n=7)	33:09 (n=4)	**10:20**	25:51	**0.0%**
ERF - 17								
	Dispatch Type Codes: STRUCF							

FIRE - HIGH

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**0:40**		0:40		**1:04**	0:21	**100.0%**
Turnout Time	Turnout Time - 1st Unit	**0:37**		0:37		**2:00**	0:43	**100.0%**
Travel Time	Travel Time - 1st Unit Distribution	**2:08**		2:08		**4:00**	1:52	**100.0%**
	Travel Time - ERF Concentration	**0:00**		0:00		**8:00**	12:40	
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**04:57 (n=2)**		04:57 (n=2)		**7:04**	1:23	**100.0%**
	Total Response Time - ERF Concentration	**00:00 (n=0)**		00:00 (n=0)		**11:04**	12:40	
ERF - 29								

RESCUE

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

RESCUE - LOW

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**1:52**	1:29	0:41	2:00	**1:00**	0:52	**66.7%**
Turnout Time	Turnout Time - 1st Unit	**1:31**	1:32	0:56	0:00	**1:20**	0:11	**100.0%**
Travel Time	Travel Time - 1st Unit Distribution	**4:57**	5:00	4:45	3:21	**4:00**	0:57	**50.0%**
	Travel Time - ERF Concentration							
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**07:42 (n=8)**	07:50 (n=5)	05:44 (n=2)	06:22 (n=1)	**6:20**	1:21	**50.0%**
	Total Response Time - ERF Concentration							
ERF - 3								
	Dispatch code: PUBSRF, ELRELF							

RESCUE - MOD

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**2:19**	2:27	1:44	2:39	**1:00**	1:19	**51.6%**
Turnout Time	Turnout Time - 1st Unit	**2:23**	2:12	2:31	2:22	**1:20**	1:20	**46.1%**
Travel Time	Travel Time - 1st Unit Distribution	**8:10**	8:17	7:56	8:04	**4:00**	4:00	**35.2%**
	Travel Time - ERF Concentration	**27:36:00**	22:01:00	28:30:00	19:55:00	**8:00**	8:00	**0.0%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**11:20 (n=152)**	11:02 (n=39)	11:11 (n=56)	11:28 (n=57)	**6:20**	6:20	**27.6%**
	Total Response Time - ERF Concentration	**29:07 (n=12)**	24:24 (n=1)	30:10 (n=8)	22:11 (n=3)	**10:20**	10:20	**0.0%**
ERF - 14								

RESCUE - MOD (MVA)

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**1:54**	1:44	2:16		**1:04**	0:50	**61.0%**
Turnout Time	Turnout Time - 1st Unit	**2:26**	2:30	2:23		**2:00**	0:26	**79.1%**
Travel Time	Travel Time - 1st Unit Distribution	**7:57**	8:02	7:44		**4:00**	3:56	**37.0%**
	Travel Time - ERF Concentration	**14:33**	14:59	12:29		**8:00**	6:33	**39.6%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**11:27 (n=319)**	11:25 (n=169)	11:38 (n=150)		**7:04**	4:23	**40.8%**
	Total Response Time - ERF Concentration	**17:36 (n=187)**	17:50 (n=110)	15:59 (n=77)		**11:04**	6:31	**46.5%**
ERF - 6	***NFIRS: 322-324,460,463***							
	Dispatch Codes: PUBSRF, ELRELF							

RESCUE - MOD (MVA - EXTRICATION)

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	**1:44**	1:08	1:56	1:37	**1:00**	0:44	**55.6%**
Turnout Time	Turnout Time - 1st Unit	**2:23**	1:37	3:08	2:23	**1:20**	1:03	**47.8%**
Travel Time	Travel Time - 1st Unit Distribution	**6:17**	7:38	5:47	6:03	**4:00**	2:16	**40.0%**
	Travel Time - ERF Concentration	**21:34**	23:11	14:23	18:11	**8:00**	13:33	**37.0%**
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	**10:23 (n=27)**	09:19 (n=6)	09:27 (n=14)	11:02 (n=7)	**6:20**	4:02	**29.6%**
	Total Response Time - ERF Concentration	**23:36 (n=27)**	48:37 (n=6)	16:07 (n=14)	20:60 (n=7)	**10:20**	13:15	**33.3%**
ERF - 14	***NFIRS:***							
	Dispatch Codes: EXTRIF, RESCUF							

HAZMAT

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

HAZMAT - LOW

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	2:24	1:28	15:39	2:17	1:00	1:23	51.0%
Turnout Time	Turnout Time - 1st Unit	1:57	1:53	1:58	1:57	1:20	0:36	56.0%
Travel Time	Travel Time - 1st Unit Distribution	8:06	6:41	8:02	8:30	4:00	4:06	52.1%
	Travel Time - ERF Concentration	9:06	8:34	10:32	9:04	8:00	1:05	82.5%
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	12:28 (n=203)	09:41 (n=56)	26:32 (n=83)	10:59 (n=64)	6:20	6:08	44.3%
	Total Response Time - ERF Concentration	13:09 (n=134)	11:00 (n=38)	24:23 (n=52)	12:18 (n=44)	10:20	2:49	76.1%
ERF - 3								

HAZMAT - MODERATE

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	2:31	2:48	0:51	1:21	1:00	1:30	33.3%
Turnout Time	Turnout Time - 1st Unit	2:02	2:16	0:13	1:04	1:20	0:41	66.7%
Travel Time	Travel Time - 1st Unit Distribution	4:11	1:04	1:25	4:53	4:00	0:11	66.7%
	Travel Time - ERF Concentration	19:13	0:00:00	19:13	0:00	8:00	11:13	0.0%
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	08:36 (n=3)	08:56 (n=1)	05:31 (n=1)	07:18 (n=1)	6:00	2:36	33.3%
	Total Response Time - ERF Concentration	21:29 (n=1)	00:00 (n=0)	21:29 (n=1)	00:00 (n=0)	10:20	11:09	0.0%
ERF - 9								

SERVICE

90th Percentile Times - Baseline Performance

Jan 01, 2023 to August 31, 2025

SERVICE

Metric	Specific Metric	2023 - 2025	2025* ytd	2024	2023	Target Benchmark	GAP	Achieved Goal
Alarm Handling	Pick-up to Dispatch	2:17	2:04	2:08	2:42	1:00	1:17	52.2%
Turnout Time	Turnout Time - 1st Unit	2:01	1:56	1:53	2:04	1:20	0:40	65.3%
Travel Time	Travel Time - 1st Unit Distribution	10:07	13:19	9:31	8:26	4:00	6:06	42.3%
	Travel Time - ERF Concentration							
Total Response Time	Total Response Time - 1st Unit on Scene Distribution	14:25 (n=357)	15:34 (n=104)	14:01 (n=147)	12:44 (n=106)	6:20	8:04	36.4%
	Total Response Time - ERF Concentration							

Call Processing

🔧 **Benchmark (90% of Incidents):** **Baseline Average 2020-25 - 1:37 2025 ytd – 1:19**
< 1:04 (Target: 1:00) per NFPA 1710
< 30 sec (95%) PSAP transfer time per NFPA 1221

📌 **Observations:**
All 911 calls in this district are routed through the Laraway Communication Center (LCC), the designated PSAP under Illinois law. NFPA 1221 sets the expectation that PSAP transfers occur in ≤ 30 seconds, 95% of the time. However, transfer times are not currently tracked, meaning we're flying blind on a key component of total response time.

Informal LCC estimates suggest a 30-45 second transfer time using a dedicated "one-button" system. That's a start, but without hard data, there's no way to prove compliance or make targeted improvements.

Per NFPA 1710, call processing (from PSAP pickup to dispatch-ready) must be completed in < 64 seconds for 90% of incidents. During the 2020–2023 study period, baseline call processing exceeded this benchmark by **an average of 37 seconds** (range: 49–56+). That's nearly double the target—**a red flag** for response efficiency.

⏱️ **Other Critical Pre-Processing Times (Not Yet Tracked):**

Time Interval	NFPA Benchmark
911 Call Answered (Ring Time)	< 15 sec (95%), < 40 sec (99%)
PSAP Transfer to Secondary PSAP	< 30 sec (95%)

🎯 **Key Takeaway:**
The full lifecycle of a 911 call—ring, transfer, processing—needs complete time-stamping and analysis. Until that happens, we're operating on partial data, which limits our ability to determine compliance.

Turnout Time

🔧 **Benchmark (90% of Incidents):** **Baseline Average 2020-25 – 2:05 2025 ytd 2:01**

- < 1:00 – EMS
- < 1:20 – Fire

📌 **Observations:**
Turnout performance consistently exceeded the benchmark by **approximately 45 seconds on average, with values ranging from 0:21 to** 0:30+ above the standard.

🎯 **Key Takeaway:**
Turnout is a controllable element. Targeted improvements in station alerting systems, staffing models, and shift-readiness protocols can shave vital seconds off this lag.

Travel Time

🔧 **Benchmark (90% of Incidents):** **Baseline Average 2020-25 – 8:01 2025 ytd 8:11**

- < 4:00 – First Due Unit
- < 6:00 – Second Due (per 2020 NFPA 1710)
- < 8:00 – Effective Response Force (ERF)

📌 **Observations:**
The travel time for the first due engine exceeded the 4:00 benchmark by **4:01 on average** (range:3:55–4:11+). In other words, the "wheels are turning," but they're not getting there fast enough.

🎯 **Key Takeaway:**
Response geography, traffic patterns, and station placement may be impacting travel performance. This reinforces the need for regular deployment analysis and long-term planning (i.e., station relocation or a new Station 81).

Call to Arrival (Total Response Time)

🔧 **Benchmark (90% of Incidents):** **Baseline Average 2020-25 – 10:47 2025 ytd 10:54**

- < 6:00–6:20 – First Due Unit
- < 10:00–10:20 – ERF

📌 **Observations:**
This "Hello-to-Hello" metric—911 call to on-scene arrival—exceeded the 6:20 benchmark by **an average of 4:27** (range: 4:37–4:56). That's four minutes past the limit, compounded by delays across the call chain.

🎯 **Key Takeaway:**
When call processing, turnout, and travel drift off target, the result is late arrivals and delayed interventions. All elements need aligned tuning.

Dispatch to Arrival

🔧 **Benchmark (90% of Incidents):** **Baseline Average 2020-25 – 10:47 2025 ytd 10:54**

- < 5:00–5:20 – First Due Unit
- < 9:00–9:20 – ERF

📌 **Observations:**
This benchmark isolates performance from the time dispatch occurs to arrival on the scene, eliminating the pre-dispatch noise. Still, it's often delayed by extended turnout and travel performance.

🎯 **Key Takeaway:**
This is the "cleanest" metric to assess response operations—but without improvements in the upstream processes, it too remains off the mark.

Scene Duration

🔧 **Benchmark:**
No formal benchmark—context matters.

📌 **Observations:**
Longer scene durations can indicate complexity & reduce system availability, as well as degrade unit reliability.

🎯 **Key Takeaway:**
Track, analyze, and flag high-duration incidents to identify training, resource, or mutual aid needs.

Transport & Hospital Turnaround

Transport Baseline 2020-25 – 18:30 **Transport Baseline 2020-25 – 58:17**

- ⏱ **Time to Hospital (Transport):** Scene departure to hospital arrival
- ⏱ **Hospital Turnaround:** Arrival to hospital departure

📌 **Observations:**
Although it is not benchmarked, it has a direct impact on EMS unit availability and system coverage.

Benchmark Scorecard – Manhattan FPD

Fire Suppression

- ✅ First Due: ≤6:20 / 3+ staff / hose line in ≤5:00
- ⚠️ Moderate Risk ERF: ≤10:20 / 15–17 staff
- ❌ High Risk ERF: ≤15:00 / 29 staff (mutual aid dependent)

EMS

- ✅ First Due: ≤6:00 / 2 ALS staff/care within 1:00 of arrival
- ⚠️ Moderate ERF: ≤10:00 / 4–7 staff (depending on risk)
- ❌ High Risk ERF: ≤15:00 / 29 staff (MCI, mutual aid required)

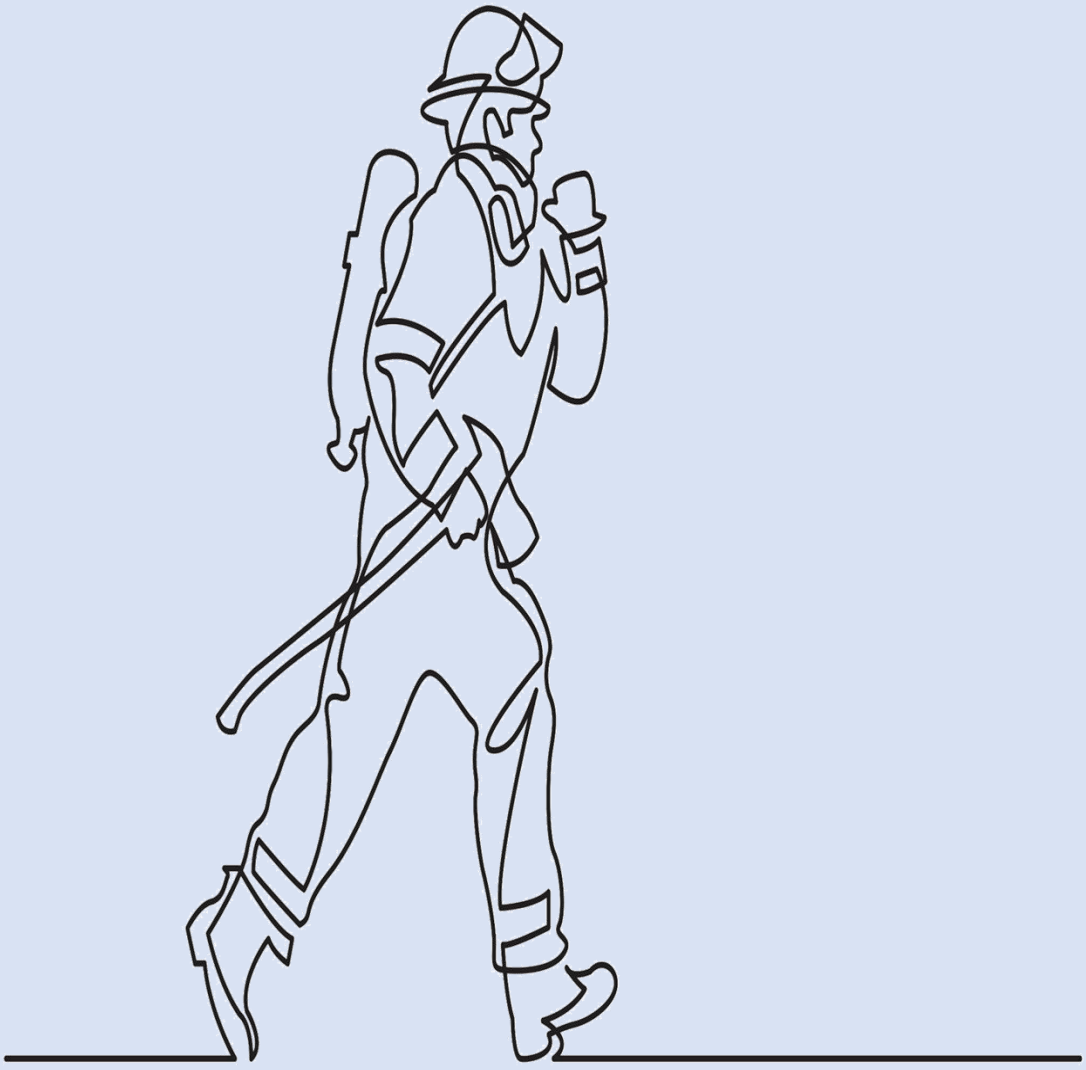
Rescue / Special Ops

- ✅ First Due: ≤6:20 / 3+ staff
- ⚠️ Moderate ERF: ≤10:20 / 7–14 staff
- ❌ High Risk ERF: ≤15:00 / 13–24 staff (mutual aid specialty teams)

HazMat

- ✅ First Due: ≤6:20 / 3+ staff / initial containment
- ⚠️ Moderate ERF: ≤10:20 / 9 staff
- ❌ High Risk ERF: ≤15:00 / 15 staff (HazMat team required)

⚡ **Board Takeaway:**
Benchmarks are established, measurable, and aligned to **NFPA 1710**. They highlight **where MFPD is self-reliant (first-due)** and **where mutual aid is essential (high-risk ERF)**.



SECTION VI

SECTION 6 – A Plan for Maintaining and Improving Response Capabilities

📖 Overview

The Manhattan Fire Protection District is committed to an **intentional, data-driven plan** to maintain and elevate its response capabilities. This plan guides the ongoing evaluation and improvement of the District's **Standards of Cover (SOC)**, ensuring service delivery aligns with:

- Identified community risks,
- Defined performance benchmarks, and
- Evolving community expectations.

Our approach is grounded in **continuous improvement, strategic accountability, and proactive adaptation**—not maintaining the status quo.

📝 Compliance & Review Methodology

With executive leadership from the Fire Chief and support from the SOC Team, the District follows a **six-step process** to ensure performance objectives remain relevant, attainable, and measurable.

1️⃣ Establish & Review Performance Objectives

Set clear expectations, then **pressure-test** them to ensure they are met. This includes:

- Identifying all services provided.
- Defining the level of service for each program.
- Categorizing risk by type and severity.
- Establishing benchmarks for **distribution** (first-due) and **concentration** (ERF).

Review/Update Triggers:

- Changes in service delivery (e.g., EMS upgrades, new programs).
- New laws, mandates, or regulations.
- Major shifts in population, development, or call volume.
- Strategic direction from the Board or Fire Chief.

⚡ *Pro Tip: Don't treat this as an annual checkbox—risk doesn't follow calendars.*

2️⃣ Evaluate Performance at All Levels

Performance evaluation must be **consistent, transparent, and tiered**:

- **Daily:** Unit & Station-level reviews (incl. EMS CQI).
- **Monthly:** Battalion/Shift reviews across all three shifts.
- **Quarterly:** Operations + Administration cross-shift review.
- **Annually:** District-wide deployment & SOC evaluation.

➡️ *Analytics without accountability is just trivia. This cycle ensures that trends, outliers, and gaps are addressed in real-time.*

3️⃣ Develop Compliance Strategies

When gaps are found, fix them **efficiently and creatively**:

- Maximize existing resources.
- Expand partnerships/mutual aid.
- Explore alternative service models.
- Prioritize investments to close gaps.
- Empower crews to innovate at the ground level.
- Recommend upgrades to tracking/reporting systems.

4️⃣ Communicate Expectations

Benchmarks only work if they are **understood at every level**. Communication tools include:

- Direct Chief-to-crew briefings.
- Publishing CRA-SOC internally and on the website.
- Automated, near real-time alerts tied to live performance data.

📢 *If it matters, make it loud, clear, and repeated.*

5️⃣ Validate Compliance

Real-time data is a **leadership tool**. Validation steps include:

- **Daily:** Chiefs monitor performance deviations.
- **Monthly:** Standardized reports by unit, station, shift.
- **Quarterly:** Leadership reviews of performance reports.
- **Annually:** Comprehensive performance report to Fire Chief & Board.

➡ *Doubles as an accreditation readiness and strategic alignment check.*

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6 Adjust Based on Results

Where there are **gaps**, there must be **plans in place**. Command Staff develops targeted improvement strategies based on validated results.

🔄 Annual CRA-SOC Review

The entire CRA-SOC will be **reviewed annually** by the SOC Team. After internal updates, the draft will be submitted to the **Board of Trustees** for formal review and adoption—ensuring the plan remains **relevant, actionable, and aligned** with District priorities.

⚡ Section 6 Summary:

This structured cycle ensures Manhattan FPD's SOC is not static but a **living system** that continuously aligns risk, performance, and community expectations with District capabilities.

Accreditation: Raising the Bar

The **Community Risk Assessment / Standards of Cover (CRA-SOC)** is just one leg of the accreditation triad, alongside a **Strategic Plan** and a **Self-Assessment Manual**. Together, they form the foundation of the **CPSE/CFAI Accreditation** process.

Accreditation isn't a trophy—it's a **promise**:

- A promise of **transparency**
- A commitment to **performance excellence**
- And the gold standard of **third-party validation**

Why Pursue Accreditation?

✅ Enhances **credibility** with policymakers and the public
✅ Fosters a culture of **continuous improvement**
✅ Strengthens **labor-management collaboration**
✅ Aligns operations with **industry best practices**
✅ Supports **data-driven budgeting** and **strategic growth**

It's not about perfection—it's about honest self-assessment and intentional progress.

What Gets Evaluated?

The CFAI Accreditation model digs deep:

- **11 Categories**
- **252 Performance Indicators**

Including (but not limited to):

- Governance & Administration
- Strategic Planning
- Risk Assessment
- Training, Staffing & Resources
- External Partnerships
- Program Delivery across all services

Category 5: Program Areas

If your agency delivers it, CFAI assesses it:

- 🚒 Fire Suppression

- 🚑 Emergency Medical Services
- ☣️ Hazardous Materials
- 🛟 Rescue (Technical, Marine, Wildland, etc.)
- 🔥 Fire Investigation
- 🧯 Public Education
- 🛡️ Community Risk Reduction
- 🧰 Domestic Preparedness

If you do it, it gets measured. And that's a good thing.

Final Thought

Maintaining current performance in a growing district isn't enough.

We must evolve. Optimize. Lead.

This isn't just a document—it's a **response capability roadmap** and a **call to action**:

To leadership.
To the crews.
To the community we serve.
To all of us.

SECTION VII

SECTION 7 - Key Findings and Recommendations

🚒 Key Findings & Recommendations

The following findings and recommendations reflect the Manhattan Fire Protection District's proactive approach to **continuous improvement and risk-informed decision-making**. Developed from analysis of **operational data (NFIRS, CAD, RMS), financials (budgets, audits), geospatial analysis (GIS), third-party analytics (Continuum, StatsFD), and input from Command Staff**, they highlight high-impact opportunities aligned with **best practices, CPSE accreditation, ISO standards, and the District's mission**:

➡️ *Deliver timely, professional, and data-driven emergency services.*

🏛️ Administration & Strategic Planning

- **AVL/ARL Dispatching:** Expand to "closest unit dispatch" using GPS to cut response times.
- **ISO Rating Review:** Target rural/merged areas for insurance rate improvements.
- **Revenue Optimization:** Benchmark EMS & tech rescue billing; explore cost recovery.
- **Grants & Capital Strategy:** Aggressively pursue grants; explore creative financing.
- **Stakeholder Engagement:** Expand surveys, outreach, and interviews.
- **Regionalization:** Finalize consolidation; integrate overlapping functions.
- **CPSE Accreditation:** Complete SAM and Strategic Plan deliverables.
- **Performance Reporting:** Standardize monthly/quarterly dashboards (compliance, outcomes).
- **NFPA 1710 Monitoring:** Build internal compliance tracking (turnout, travel, response).
- **Outcome-Based Goals:** Expand beyond activity → include clinical, operational, community impact (e.g., ROSC, fire containment).
- **Command Staff Structure:** Evaluate adding Deputy/Division Chiefs and support staff.
- **Risk-Based Deployment:** Align resource models with NFPA 1710 Low/Mod/High risk.
- **Annual Program Appraisal:** Formalize annual review of programs tied to goals/budget.
- **Regional QA/QI:** Standardize QA tools across affiliated agencies.
- **Simplify Deployment Model:** Design a scalable deployment to match growth and risk zones.

🚒 Apparatus & Fleet Management

- **Fleet Replacement Plan:** Update and fund, aligned to NFPA 1901 and ISO.
- **Regional Maintenance:** Explore cost-sharing for apparatus maintenance facility.

🚒 Staffing & Operations

- **Dedicated Companies:** Transition from jump staffing to dedicated fire/EMS units.
- **Stabilize Staffing Models:** Maintain consistent daily minimums; forecast-driven peaks.
- **Peak-Time Units:** Pilot ALS/BLS ambulances or squads for workload surges.
- **4-Person Engines:** Target NIST/NFPA standards for safety & task completion.
- **Shared Staffing Pools:** Regional staffing coverage for shortages/events.
- **Shared Facilities/Staffing Agreements:** Partner with neighbors for shared command, reserves.
- **Dynamic Deployment:** Use incident density/workload data to adjust deployment.

🏗️ Facilities & Stations

- **Improve Turnout Times:** Invest in alerting tech and ergonomic station design.
- **Reassess Station Locations:** GIS-driven review post-merger (focus on 81/82).
- **Long-Term Facility Expansion:** Develop master plan; evaluate need for Station 84.

🎓 Training & Professional Development

- **Special Ops Competency:** Provide/document technician-level training (rescue, hazmat, CART).
- **Officer Development:** Expand credentialing (state, CPSE, national).
- **Training Documentation:** Digitize ISO-required hours & multi-company drills.
- **Exceed ISO Benchmarks:** Build an annual calendar emphasizing company/officer ops.
- **Regional Training Facilities:** Explore shared multi-purpose training sites.

📡 Dispatch & Communications

- **Call Processing Times:** Partner with PSAPs to meet/exceed benchmarks.
- **Enhanced Dispatch:** Implement ProQA, CAD, and triage upgrades.

⚡ Summary:

These recommendations position MFPD to sustain ISO Class 1, advance CFAI accreditation, and deliver **Better, Faster, Safer, Smarter** service. They blend quick wins (AVL dispatch, staffing stabilization) with long-term strategies (Station 84, regional partnerships, officer development).

APPENDIX

SECTION 8 – APPENDIX

Appendix A – Supporting Documents & Data

FLASHPOINT strategies, llc

MANHATTAN FIRE PROTECTION DISTRICT

COMMUNITY RISK ASSESSMENT
STANDARDS OF COVER

2025

FLASHPOINT Strategies LLC