

Statesville Fire Department

2025 Community Risk Assessment / Standards of Cover



Contents

Introduction	5
Executive Summary	6
Organizational Profile and Financial Basis	8
Organizational Profile	8
Financial Basis	10
Documentation of Area Characteristics	12
History of the City of Statesville Fire Department	12
Location and Size	19
Development Trends and Projections	20
Response Area Planning Zones	22
Demographics	24
Population Density	25
Housing	29
Climate & Weather	30
Transportation Network	34
Highway	34
Air	37
Rail	40
Critical Infrastructure	41
Community Expectations and Performance Goals	44
Strategic Planning	44
ISO Rating and Supporting Information	47
Deployment	50
Definitions	50
Historical Performance	52
Description of Agency Programs and Services	56
Services Provided	56
Fire Station Locations	57
Training Facilities	58
Administration	58
Certifications	60

All-Hazard Risk Assessment of the Community.....	61
Disaster Potential / Natural & Man-made Hazards.....	62
Iredell County Emergency Operations Plan.....	63
Additional Plans	63
Jurisdictional Hazard Risk Ranking.....	65
Current and Historical Data / Demands for Service Risk Assessment.....	66
Service Level Risk Assessment	72
Fire Risk Assessment	72
Emergency Medical Service (EMS) Risk Assessment	89
Hazardous Materials Risk Assessment	92
Technical Rescue Risk Assessment.....	101
ARFF Risk Assessment	105
Other Risks	108
Non-Emergency Risk Assessment- Legacy 2020-2022 Data	108
Other Incidents Risk Assessment.....	112
Geographic Planning Zone Risk Assessment.....	118
All Planning Zones Risk Assessment.....	118
Fire Station #1 Planning Zone Risk Assessment.....	135
Fire Station #2 Planning Zone Risk Assessment.....	146
Fire Station #3 Planning Zone Risk Assessment.....	155
Fire Station #4 Planning Zone Risk Assessment.....	164
Internal Fire Station Analysis 2021	174
Executive Summary	174
Background and Significance.....	174
Current Service Gaps 2021 Internal Study	177
Proposed Station 5	180
Relocation of Station 1.....	181
Modification of Access Points Station 2	182
Personnel and Effective Response Force.....	183
Considerations for the Future	184
External Station Location Study 2022(NC Fire Chief Consulting).....	186
Introduction and Scope.....	186

Coverage Analysis Methodology.....	188
Population.....	188
Land Use Risk.....	189
Demand for Services	191
Future Development	192
Population Changes	193
Structural Risk Changes	194
Service Demand Changes.....	195
Vulnerability Risk Index.....	196
Optimal Station Locations.....	197
Summary	199
Recommendations:.....	199
Mutual and Automatic Aid Risk Assessment	200
Critical Task Analysis	202
Critical Task Analysis Structure Fires.....	202
Critical Task Analysis EMS.....	206
Critical Task Analysis Technical Rescue	207
Critical Task Analysis ARFF	208
Critical Task Analysis Hazardous Materials.....	209
HazMat Level I Incidents.....	209
HazMat Level II Incidents.....	210
HazMat Level III Incidents.....	211
HazMat Critical Tasking.....	212
Performance Objectives and Performance Measurements.....	215
Benchmark Objectives and Baseline Performances for Fire Suppression	215
Benchmark Objectives and Baseline Performances for Medical.....	228
Benchmark Objectives and Baseline Performances for Hazardous Materials.....	236
Benchmark Objectives and Baseline Performances for Technical Rescue	248
Benchmark Objectives and Baseline Performances for Aviation Rescue and Suppression.....	259
Benchmark Objectives and Baseline Performances for Other Responses.....	268
Plan for Maintaining and Improving Response Capabilities	274
Statesville Fire Department Compliance Model	274



Performance Reporting Methods.....	275
Strategic Plan for Continuous Improvement.....	276
Overall Evaluation/Conclusion	276

Introduction

This document serves as the City of Statesville Fire Department's (SFD) Standards of Cover (SOC) and Community Risk Assessment. The Commission on Fire Accreditation International (CFAI) defines the process, known as deployment analysis, as "a written procedure which determines the distribution and concentration of fixed and mobile resources of an organization." The purpose of completing this document is to assist the agency in ensuring a safe and effective response for all hazards. It is the intention of the SFD to meet the standards found in the 6th edition of the CFAI Standards of Cover Guidelines.

To update and create this document, the SFD Accreditation Manager assigned a team to research, study, and evaluate all aspects of the Department. The team's work produced a thorough and accurate report. This report will begin with an overview of both the community and the Department. Following this overview, the agency will discuss services provided, risk assessment, current deployment and performance, and the plan for maintaining and improving response capabilities.



Executive Summary

The Statesville Fire Department (SFD) is proud to present the 2025 Standard of Cover (SOC), a comprehensive document that highlights our unwavering commitment to delivering exceptional service to our community. Since achieving accreditation through the Center for Public Safety Excellence (CPSE) in 2014, the SFD has consistently demonstrated its dedication to operational excellence and community safety. In February 2024, we successfully achieved reaccreditation, further solidifying our commitment to the continuous improvement process.

Through the accreditation process, the SFD has achieved significant advancements, including enhanced operational efficiency, improved safety practices, and strengthened community engagement. These accomplishments, combined with the City of Statesville's dedication to excellence, contributed to the Department earning a Class 1 ISO rating. The 2025 SOC builds on these achievements, providing a strategic framework for future growth and service enhancement.

The SFD is a municipal fire department operating four fire stations, each station is staffed with an engine company, and one ladder company is located at Station One. The City of Statesville covers 24.86 square miles and serves an estimated population of 28,419, based on the 2020 U.S. Census.

The SOC outlines the Department's capabilities, resources, and response strategies while assessing community risks and hazards. It establishes a comprehensive framework for understanding and addressing these risks, ensuring the Department's strategies align with the needs of the community. The SOC emphasizes that decisions about resource allocation and service levels must be grounded in a thorough and consistent risk assessment model, empowering community leaders to make informed decisions.

Our leadership team firmly believes that emergency service providers must base their strategies on detailed assessments of community risks. By applying a proven risk assessment methodology, the SFD ensures that its service delivery approach is strategic, effective, and focused on achieving the best outcomes for the community.

The SFD remains steadfast in its mission to serve and protect the residents and visitors of Statesville. Through continuous performance improvement, the Department evaluates service delivery, researches and tests new equipment, and engages in strategic planning. This ensures that the SFD remains a leader in fire suppression, emergency medical response, hazardous materials intervention, technical rescue, and community risk reduction.

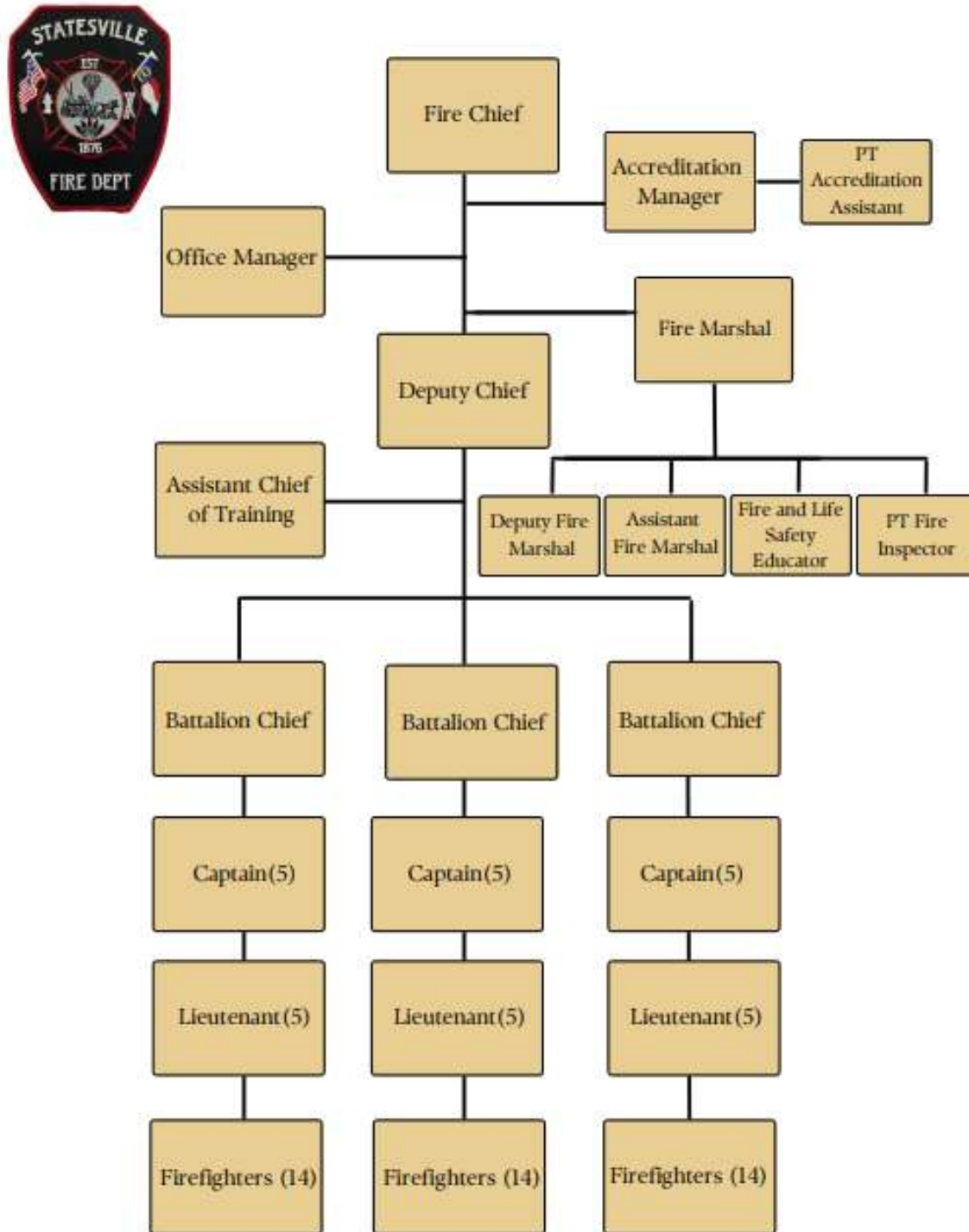
Achieving the goals outlined in the SOC will require the support and collaboration of our entire Department, community partners, and stakeholders. Together, we will implement the strategies detailed in this document and strive to continuously improve every aspect of our service.

In closing, the City of Statesville Fire Department is fortunate to have the steadfast support of the Mayor, City Manager, and elected officials. Their backing allows us to evolve, enhance efficiency, and improve safety for both our community and our firefighters. Amidst ongoing advancements and changes, one constant remains: the SFD's unwavering dedication to serving the City of Statesville with excellence.

Organizational Profile and Financial Basis

Organizational Profile

Chart 1: Fire Department Organization Chart



Map 1: Election Wards

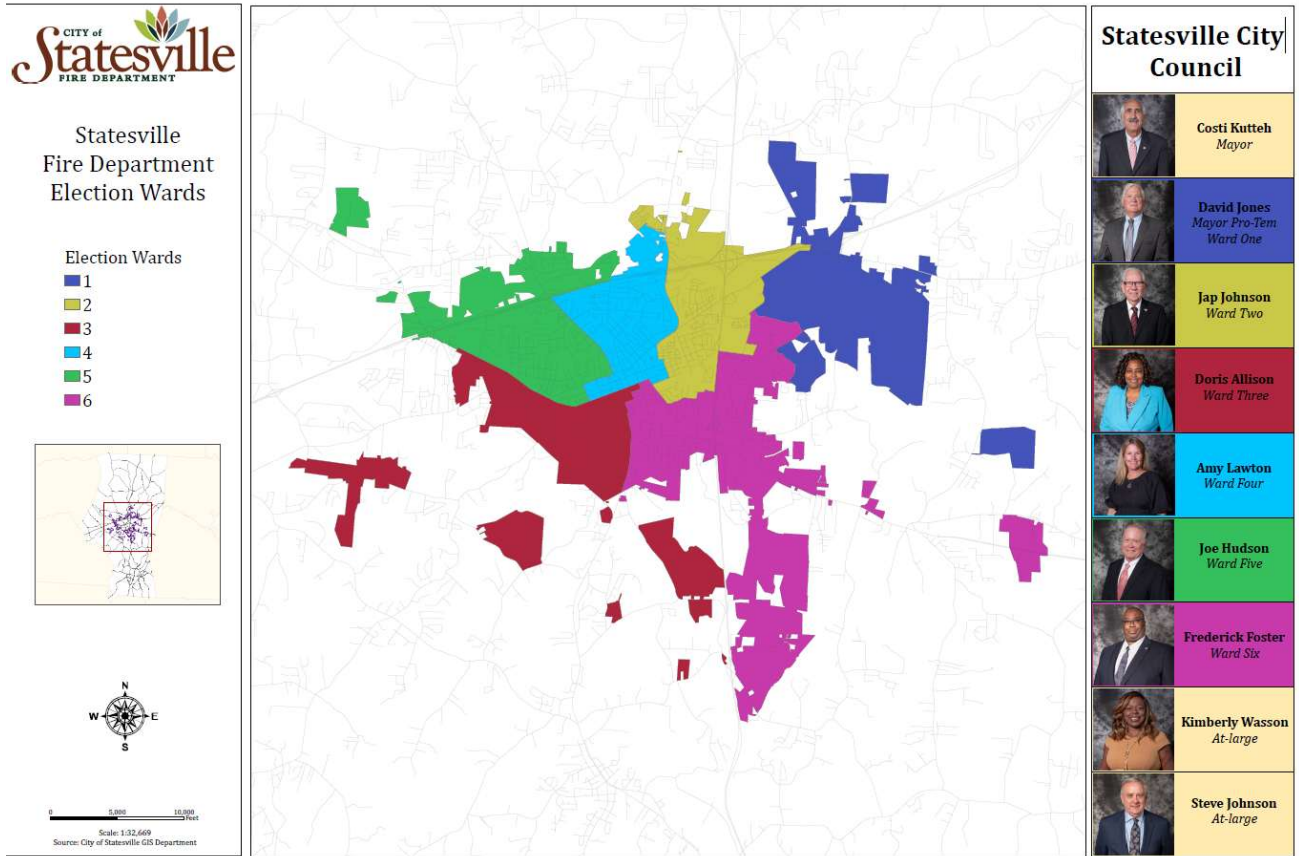
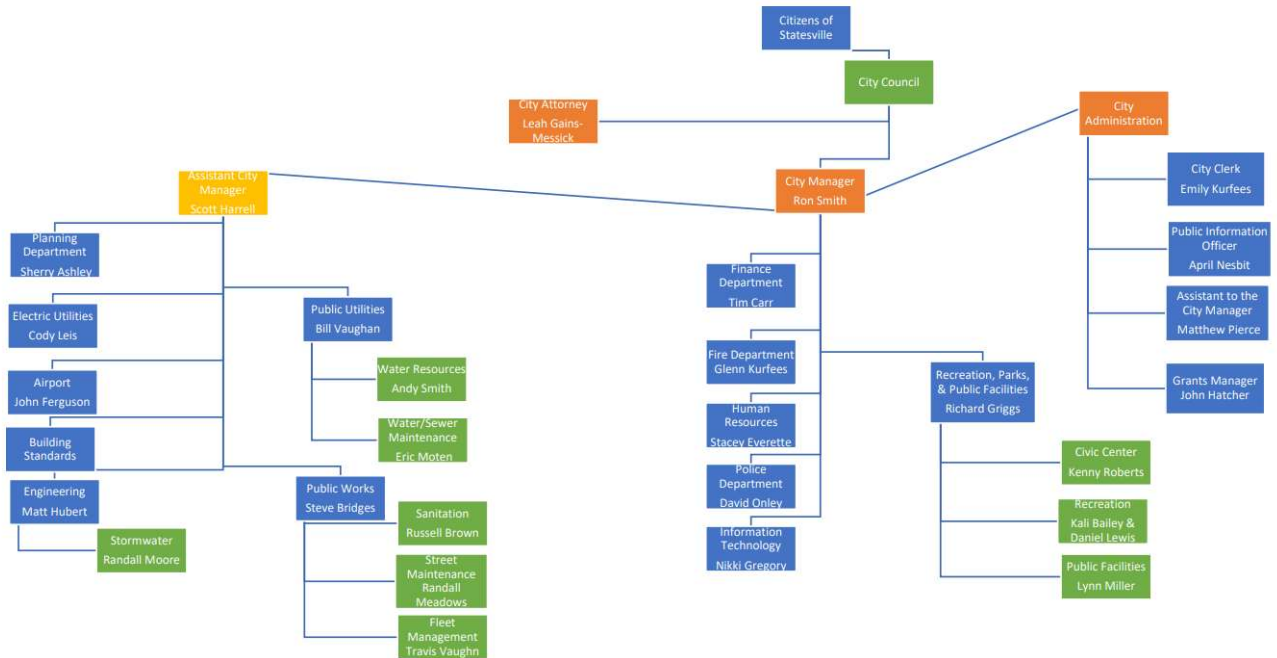


Chart 2: City Organization Chart

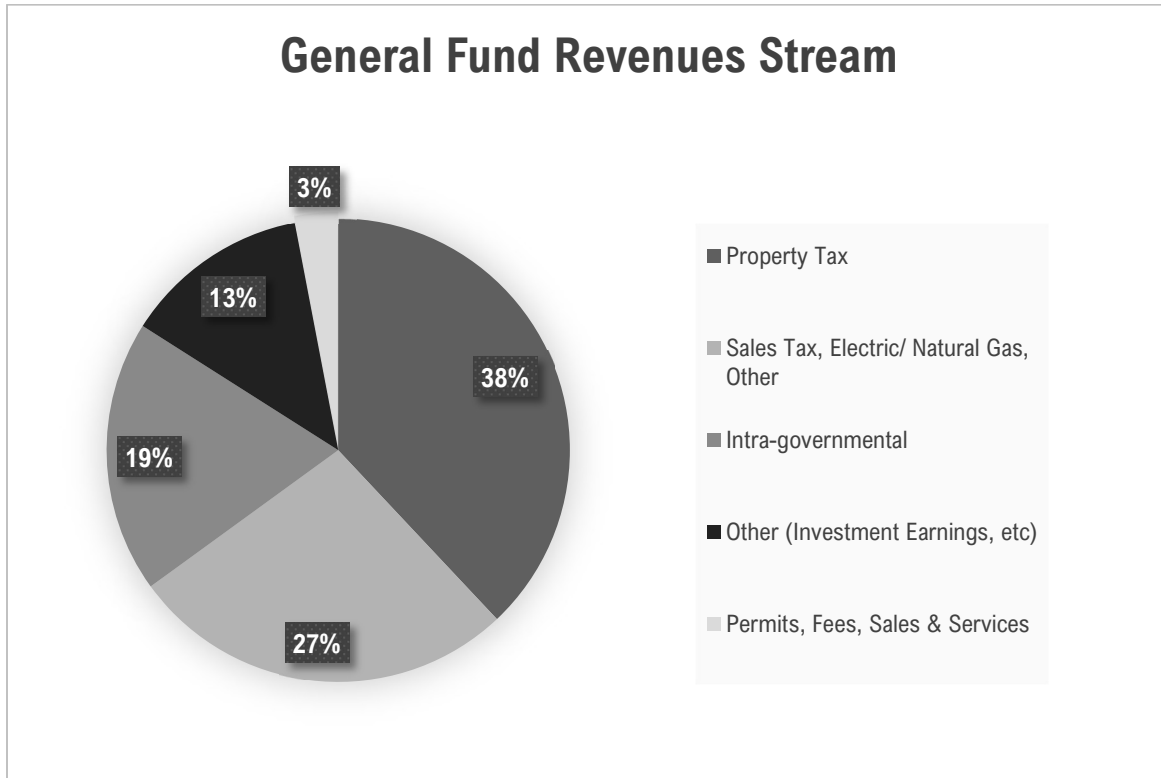


Financial Basis

The Statesville Fire Department is funded through the City of Statesville’s General Fund. The Fire Department receives 17% of the overall General Fund priorities. Public Safety receives 42% of the City of Statesville General Fund allotments. The current General Fund Budget total is \$52,280,740.

The City of Statesville has received the Government Finance Officer Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for 31 consecutive years. As well as the GFOA Distinguished Budget Presentation Award for its annual budget document for 20 consecutive years.

Chart 3: General Fund

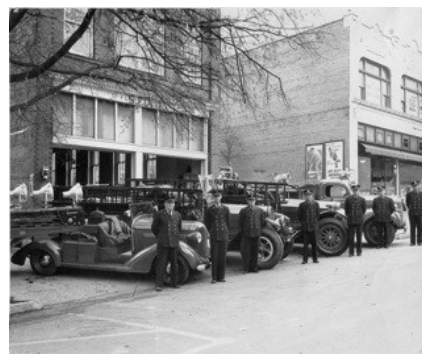


Documentation of Area Characteristics

History of the City of Statesville Fire Department

The first settlers in the Statesville area arrived in 1753 and established a small settlement known as Fourth Creek Congregation. Two years later the Colonial Governor Arthur Dobbs commissioned a fort to be built in the area to serve as a garrison for troops and to provide protection for the settlers. In 1789, the settlement was designated as the county seat and the name was changed to Statesville.

The town grew steadily, and a downtown business district of predominately wooden structures was well established by 1850. The city's fire protection consisted of a citizen's bucket brigade that occasionally battled small residential fires. On December 18, 1854, a residential fire began spreading from rooftop to rooftop through the city and by the morning of the 19th, half of the buildings and residences in the downtown area had been destroyed.



As the city was rebuilt, a change in fire protection slowly followed. A hook and ladder company were formed in 1876 and a second company added in 1878 along with more community wells and cisterns built near the center of town. The town purchased its first steam fire engine from LaFrance in 1881, and in 1885 a new fire station was built that housed the engine and lodged the department's horses and other equipment. By 1890, the department consisted of 25 volunteers.

The department battled major fires almost monthly through the early eighteen-nineties and as a result plans were made to install a water supply system with a bond vote passing in 1897. After two years of construction, the City's first hydrant system was opened on January 20, 1899.

The city hired its first full-time firefighters in 1902 at a salary of \$25 per month and purchased its first motorized engine in 1913. The department retired its last horse in 1917 and added two new engines in the early 1920s. In 1952 the current Fire Station 1 was opened on S. Meeting St. with Fire Station 2 being added in 1962 and Station 3 opening in 1975. Fire Station 4 was opened in 2011 and the department now employs 83 personnel.



CITY of
Statesville
FIRE DEPARTMENT
History Timeline





CITY of

Statesville
 FIRE DEPARTMENT
History Timeline









CITY of
Statesville
 FIRE DEPARTMENT
History Timeline



1961	1963	1964	1967
<ul style="list-style-type: none"> October 1st, the first Fire Prevention Week in Statesville 	<ul style="list-style-type: none"> March 4th, a second fire station would open on Security Drive Fire Station 2 would house two 750 gallon pumpers <ul style="list-style-type: none"> 1957 American LaFrance 1922 American LaFrance 	<ul style="list-style-type: none"> May, the Statesville Fire Dept. Ladies Auxiliary organized 	<ul style="list-style-type: none"> November 22nd, Statesville would experience its second LODD at 7:05am Captain Leeroy Horton would be killed in a car bombing in the parking area of Fire Station 2  <p>Capt. Lee Roy Horton</p>

1975	1980	1995
<ul style="list-style-type: none"> November 2th, the third fire station would open on East Side Drive Fire Station 3 would house two 1,000 gallon pumpers and an 85' aerial <ul style="list-style-type: none"> 1923 American LaFrance 	<ul style="list-style-type: none"> January 13th, a large fire occurred in the Dillon Building at 550 S. Center Street May 16th, a fire in the Greenbrier Apartments at 335 Davie Avenue  	<ul style="list-style-type: none"> The first Sutphen Aerial Platform was purchased for \$565,865.51 <ul style="list-style-type: none"> 105' Ladder 200 Gallon 



CITY of
Statesville
 FIRE DEPARTMENT
History Timeline



2011

2013

2014

- June 15th, a massive fire at the Old Furniture Factory, 607 Bond Street
 - 50 Firefighters fought the blaze for 12+ hours
- July 1st, the fourth fire station would open on Martin Lane



- April 7th, a fire occurred after a dust explosion at Bartlett Milling Company



- Statesville Fire Dept. would become Accredited for the first time





CITY of
Statesville
 FIRE DEPARTMENT
History Timeline



2019	2021	2022	2023
<ul style="list-style-type: none"> - Statesville would hire from a SAFER grant to fully staff the departments Ariel - The Statesville Fire Dept. would be reaccredited  	<ul style="list-style-type: none"> - March 8th, a large fire occurred at Crazy Dave's Store at 1521 Shelton Avenue - Firefighters from Statesville and Troutman would battle the blaze - Engine 1 would receive substantial damage from the fire 	<ul style="list-style-type: none"> - August 12th, Statesville Fire would attend the NC Hazmat Challenge in Raleigh coming in 1st - November 30th, groundbreaking for a new Fire Station 1 would take place on Wilson W Lee Boulevard  	<ul style="list-style-type: none"> - Statesville Fire Dept. would receive its first ISO 1 rating - The presentation was held by NC OSFM - October 6th, Statesville would receive a new Polaris UTV that would be utilized for city events and later deploy to assist with Hurricane Helene in 2024. 



CITY of
Statesville
 FIRE DEPARTMENT
History Timeline



2024

- May 15th, Statesville Fire would host a ribbon cutting ceremony after the completion of the new Fire Station 1. The new station would house Battalion 1, Engine 1, and Ladder 1 as well as SFD Administration.
- May 20th, new Station 1 would officially open and run its first calls.
- Statesville would add gear washers and dryers to Station 2 & 4 early in the year. Every station would now be equipped with a set.



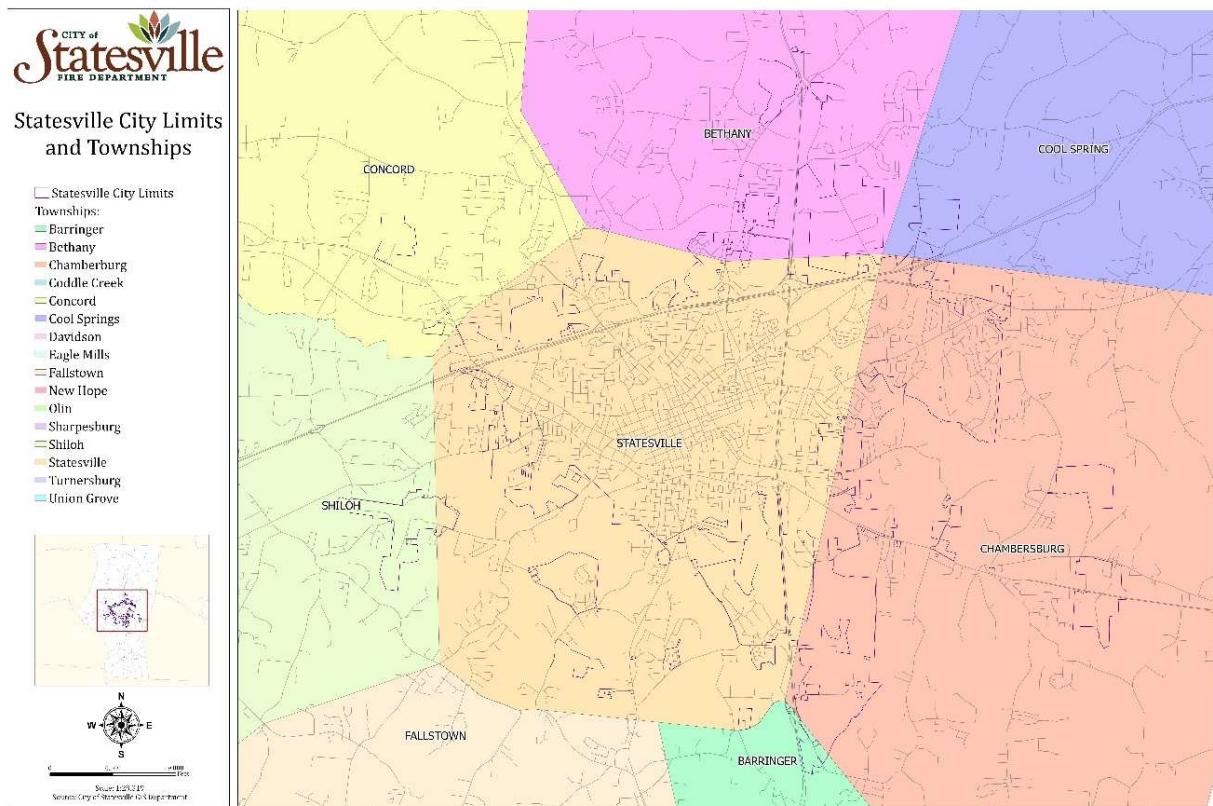
2025

- January, SFD would purchase a used rescue truck from the City of Stow Fire Department. This truck would be refurbished and set to replace Hazmat 1.
- February, SFD would receive a refurbished ARFF truck to replace the current apparatus.



Location and Size

The City of Statesville is located in Iredell County in the western Piedmont of North Carolina. Iredell County is bordered on the north by Wilkes and Yadkin counties; on the east by Davie and Rowan counties; on the south by Cabarrus and Mecklenburg; and on the west by Lincoln, Catawba and Alexander counties. Iredell County is dissected by two interstates, I-40 & I-77 which intersect within the Statesville city limits, providing Statesville with easy access to other areas of the state and the entire east coast. Iredell County is in the North Carolina Division of Emergency Management Region 11 and FEMA Region IV.



Map 2: Statesville City Limits and Townships

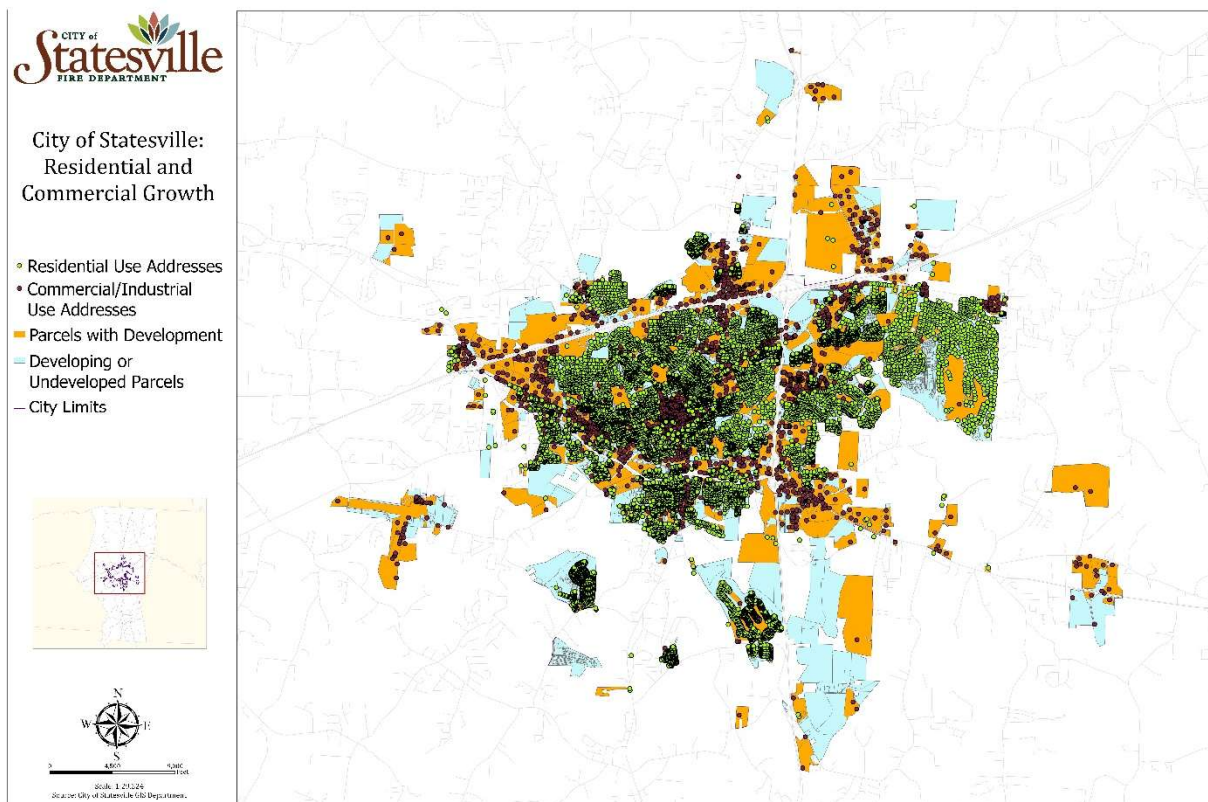
Development Trends and Projections

The City of Statesville is made up of predominantly residential communities, 83% versus 17% commercial occupancies. Currently, 73% of the city's parcels are developed. Of these developed parcels, 87% of them are residential and 13% are commercial or industrial.

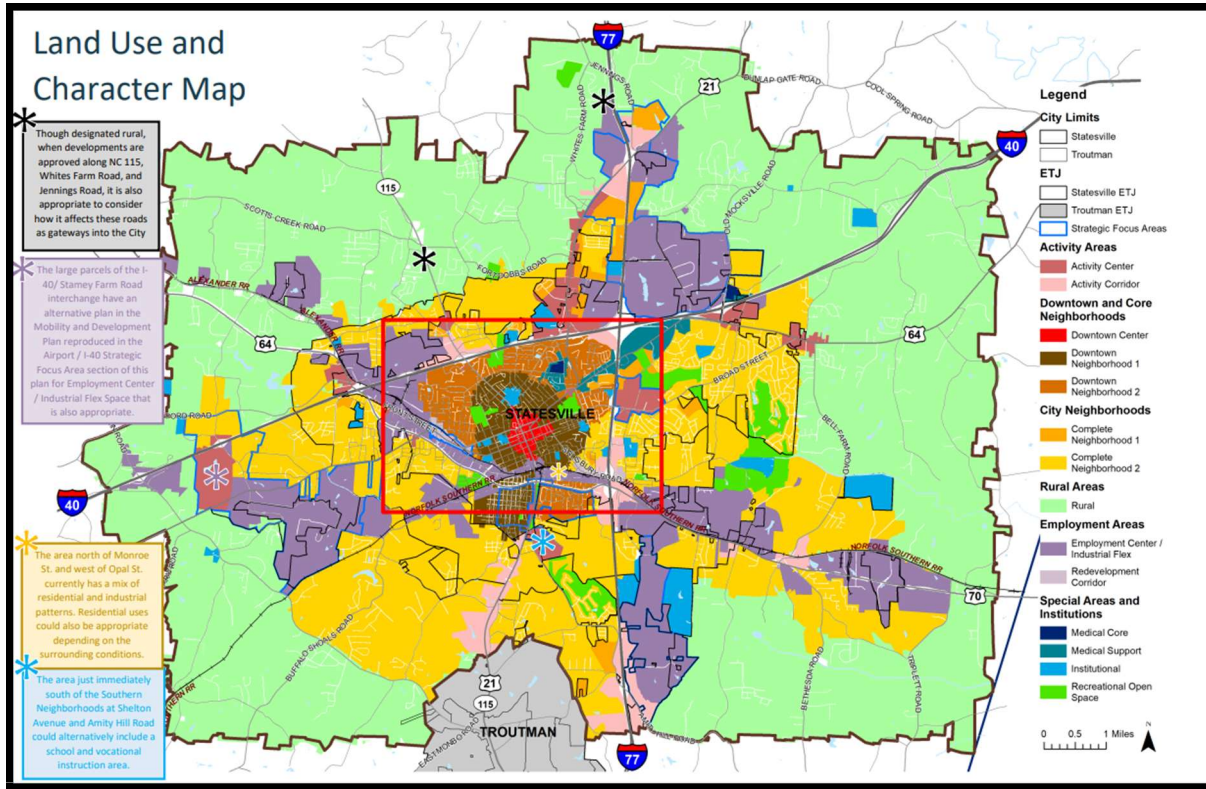
The county population has grown approximately 14.59% since 2010 and the City of Statesville has had an increase of 13.67% in the last decade. The County covers an area of approximately 574 square miles, while Statesville has 24.86 square miles.

The City of Statesville has a Land Development Plan that provides a statement of the vision for its future and a guide to achieve that vision through the year 2045. The Land Development Plan, Map 4, displays general ideas for future land use within the City of Statesville. It was adopted by the City Council in 2022 and is utilized by elected and appointed officials in making future development decisions. The overall strategy for land use includes a collection of policies and maps that serves as the city's blueprint for growth and is a fundamental element of land use management. The vision for the future of Statesville was developed through analysis of local planning trends, shaped by input from residents, and informed by insights from the Land Development Team and community stakeholders. The 2045 Land Development Plan sets out strategies to address immediate and long-term needs for the success of the City of Statesville.

Map 3: Residential and Commercial Growth



Map 4: Land Use and Character Map

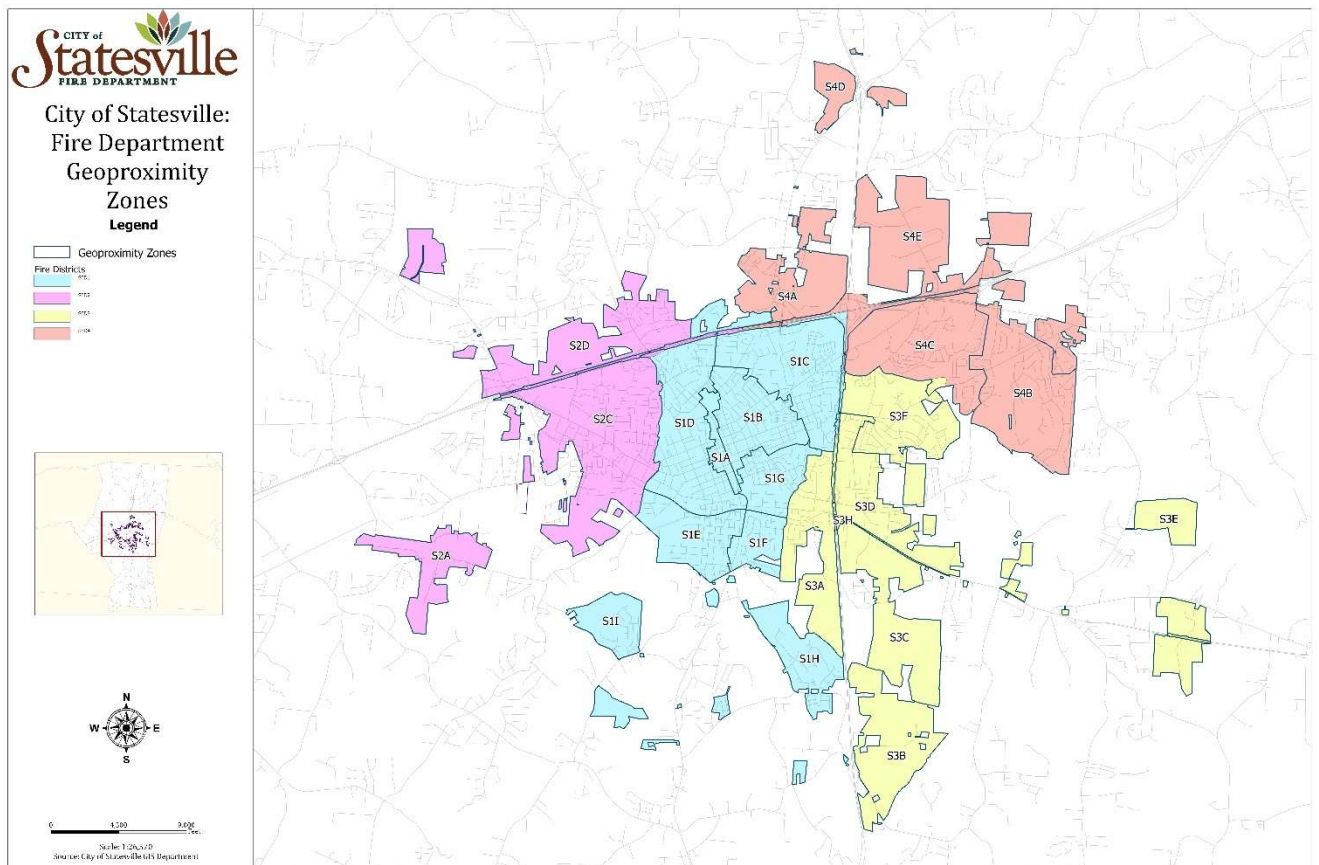


Response Area Planning Zones

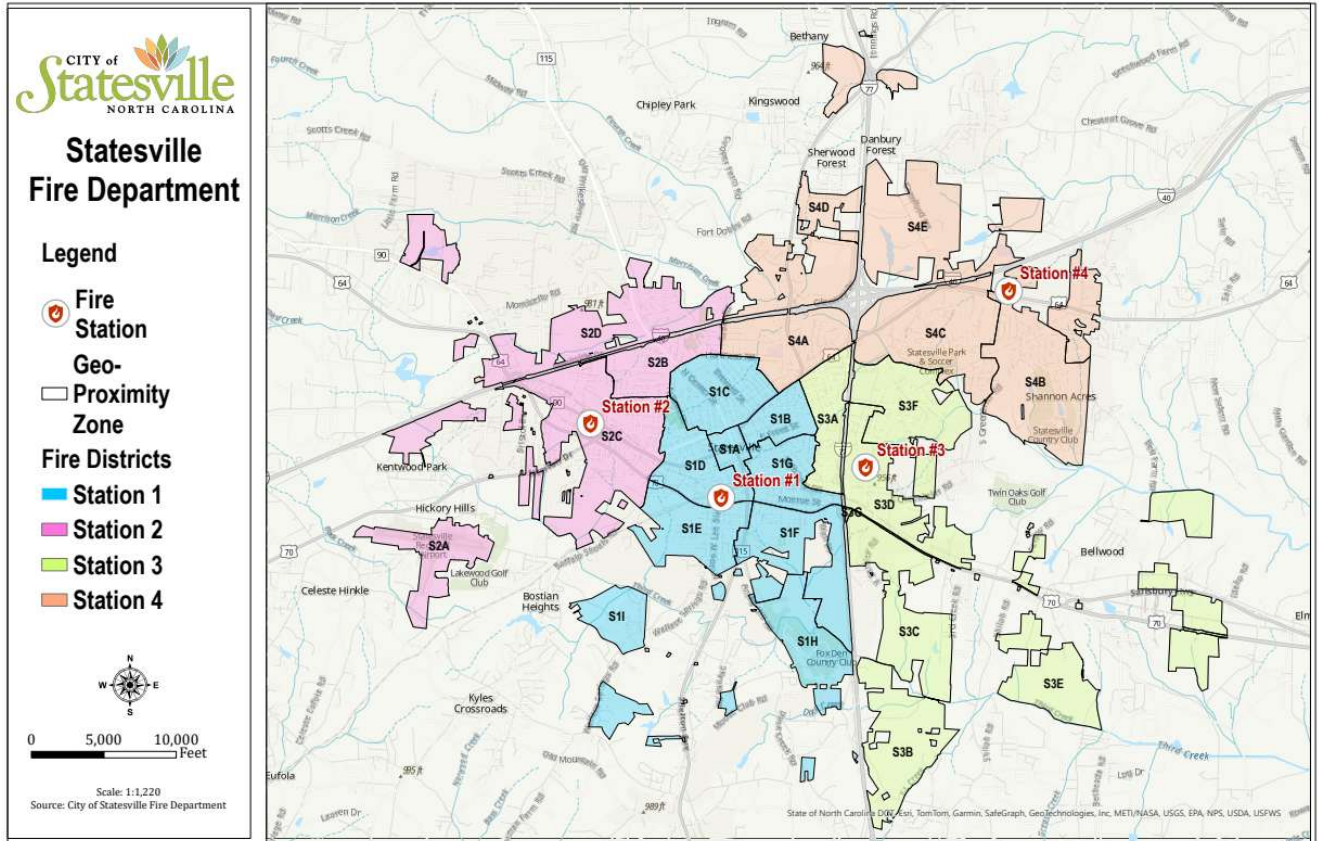
The Statesville Fire Department uses two different geographical planning zones. The first geographical planning zones are our four (4) Fire Station Districts. The second geographic planning zones are further refined into twenty-six (26) geo-proximity zones (GPZ). Fire Station #1 district is broken down into nine GPZs, Fire Station #2 district is broken-down into four GPZs, Fire Station #3 district is broken-down into eight GPZs, and Fire Station #4 district is broken-down into five GPZs. These GPZs were established by Iredell County's Geographic Information System (GIS) department in conjunction with the CAD system (Sunguard OSSI) and implemented by the Iredell County Emergency Communication's Center.

In 2017, the Fire Demand Zones were reduced from 212 Fire Demand Zones to 25 GPZs. In 2024, an additional GPZ was added to Station 2' s District and response is categorized into one of 26 GPZs.

Map 5: Legacy Fire Districts with 25 Geo-proximity Zones



Map 6: 2024 Fire Districts with Geo-proximity Zones



Demographics

Iredell county's population is 186,693 and Statesville's population 28,419 based on 2020 U.S. Census data. Population density in the City of Statesville is approximately 1,143 persons per square mile. Statesville has a median house-hold income of \$43,497, per capita income past 12 months of \$26,988, and a poverty rate of 19.6% for 2017-2021. Statesville has a population with a disability, under the age of 65 years of 9.7% and persons without health insurance, under the age of 65 years of 15.5%

Statesville's population breakdown is shown in the following charts:

Chart 4: Population Breakdown by Race

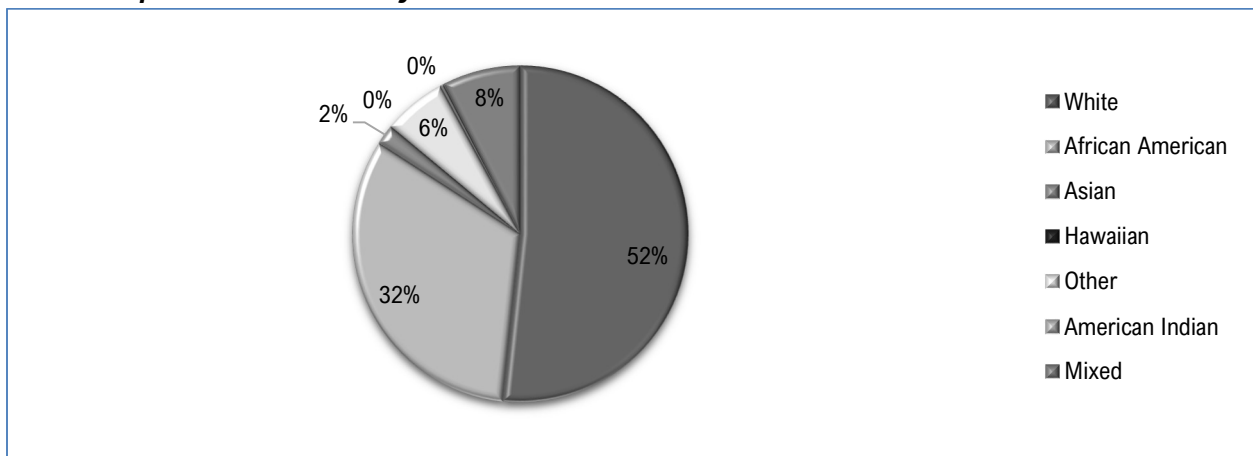


Chart 5: Population Percentage by Age

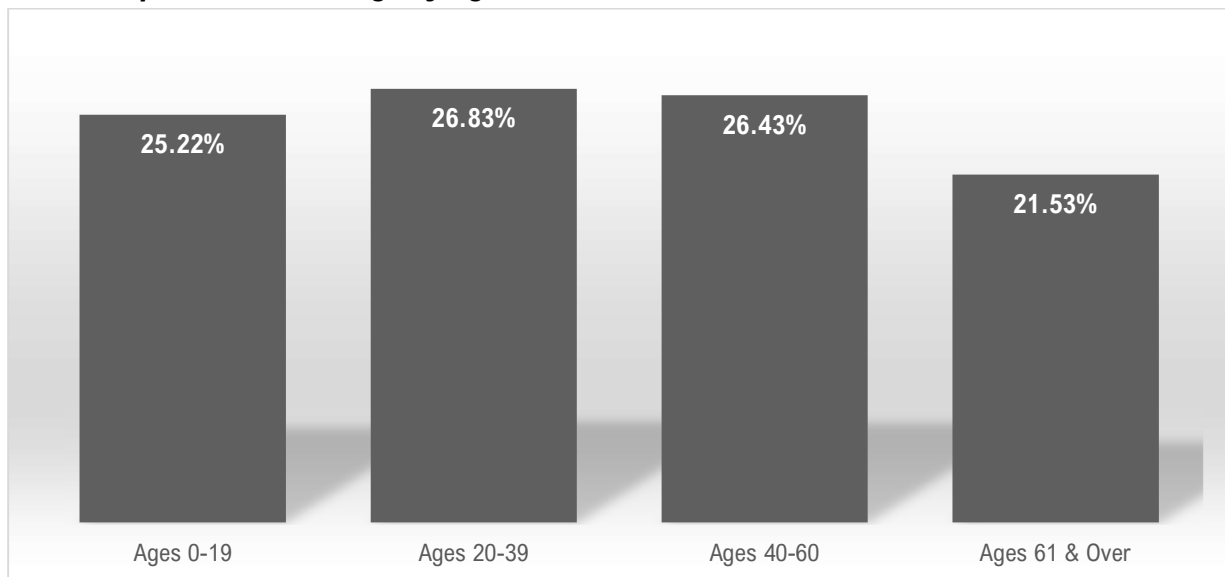


Chart 6: Population by Gender

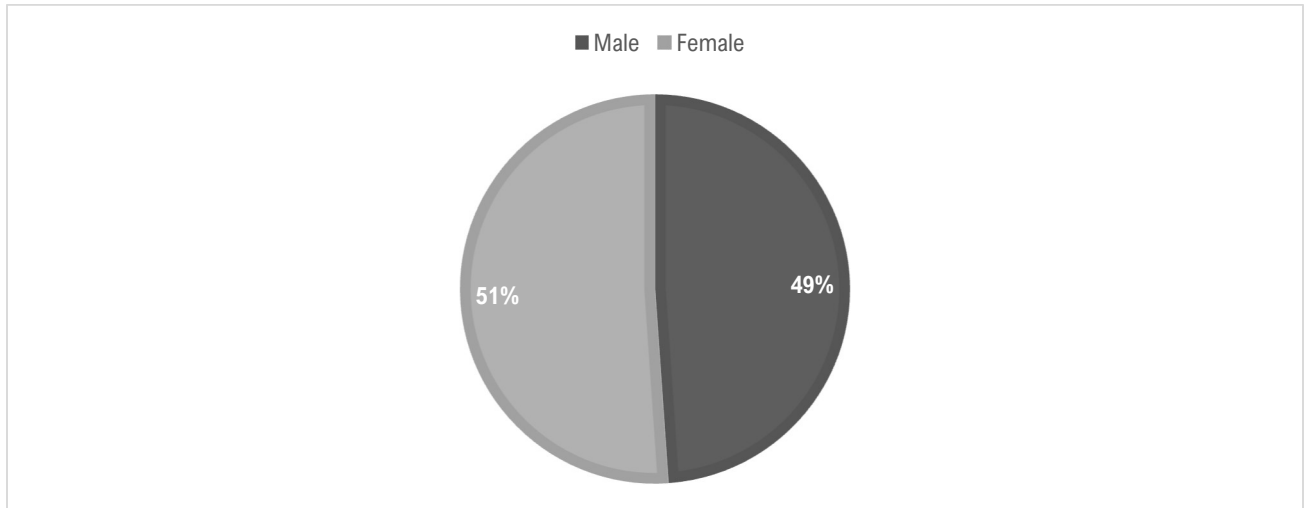


Table 1: Education population 25+ years and over

Education population 25+ years and over	
Less than High School Education	12.74%
High School Graduate	27.92%
Some College or Associate's Degree	32.54%
Bachelor's Degree	18.71%
Graduate or Professional Degree	8.09%

*Data has a +/- 3-5% margin of error

Population Density

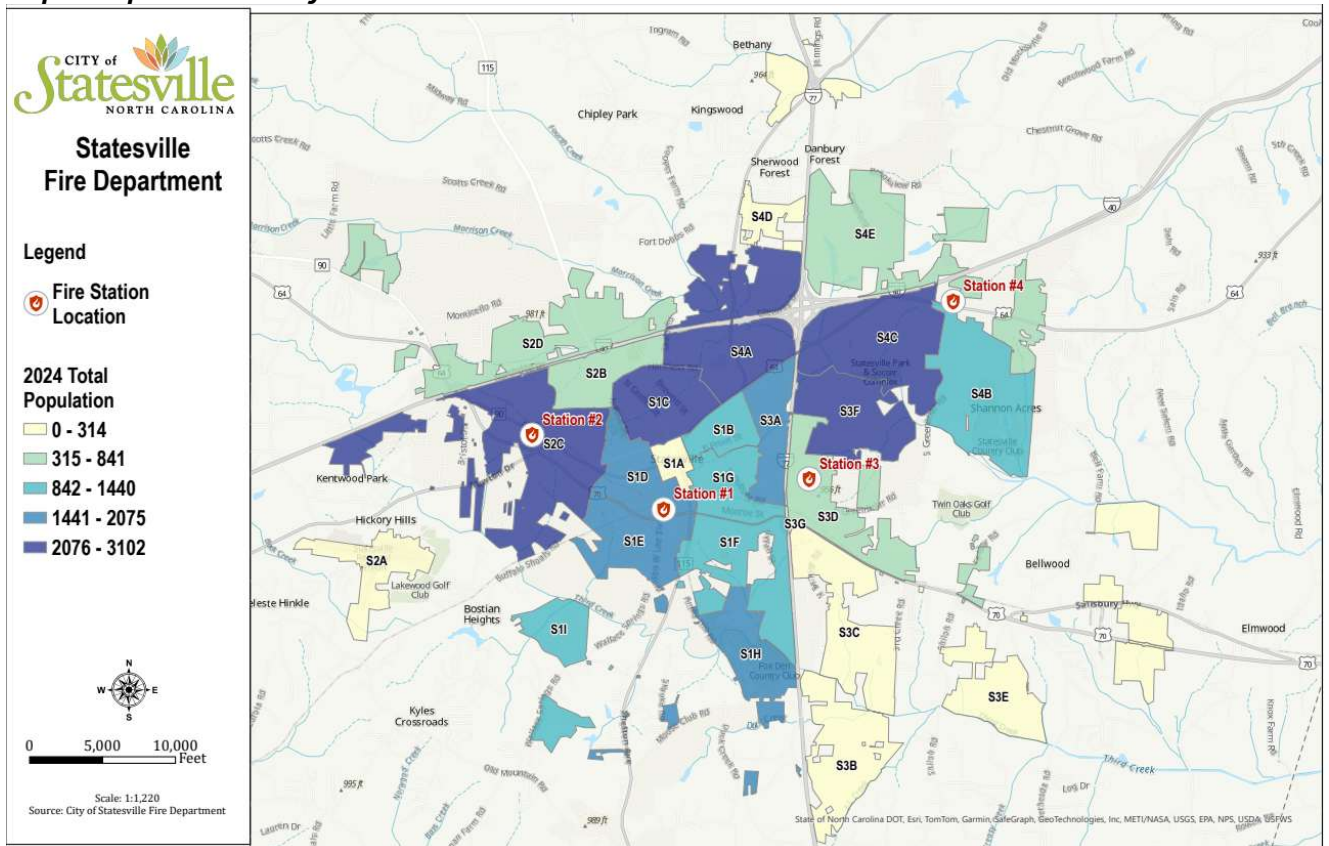
In 2010 the U.S. Census Bureau discontinued the use of suburban and metropolitan community classifications. Communities are now classified as either “Rural” (<50,000 persons) or “Urbanized” (>50,000 persons). Areas were broken down again into a classification of “Urban Clusters”. These are areas with a total population of less than 50,000 persons but have areas with 2,500 persons. In order for a census block to be qualified as “Urban” it must have a density of 1,000 persons per square mile (U.S. Census Bureau “Defining Rural” Michael Ratcliffe/ December 2016); SFD uses this rational for urban or rural classification.

The CFAI Accreditation Model Information Technology Specifications (2021, https://e724124b52ac8177dcbe-4770e2cad9e72ac207b1a4843856ba89.ssl.cf2.rackcdn.com/cpse_3fe6f6356aa7aa15601d95e03582ec5a.pdf) states “Reporting in the performance data charts can be broken down by two population densities as outlined in the Quality Improvement for the Fire and Emergency Services book.

1. Urban – Census track/block that contains at least 2,500 people (at least 1,500 of which reside outside institutional group quarters)
2. Rural – Census track/block with less than 2,500 people”

Calculations were compiled using data from the 2020 census. The data was applied to the census tracts to give us the population density per square mile. The City of Statesville is comprised predominately of urban areas with fringe areas meeting the requirements of rural according to CPSE classifications. The central Highway 115 (N. Center Street) corridor shows the highest population density.

Map 7: Population Density



Map 8: Population – Rural and Urban



City of Statesville:
 Population-
 Rural and Urban

- City Limits
- Population Density
 by Census Block:
- 0 - 22
- 22.1 - 75
- 75.1 - 160
- 160.1 - 320
- 320.1 - 532

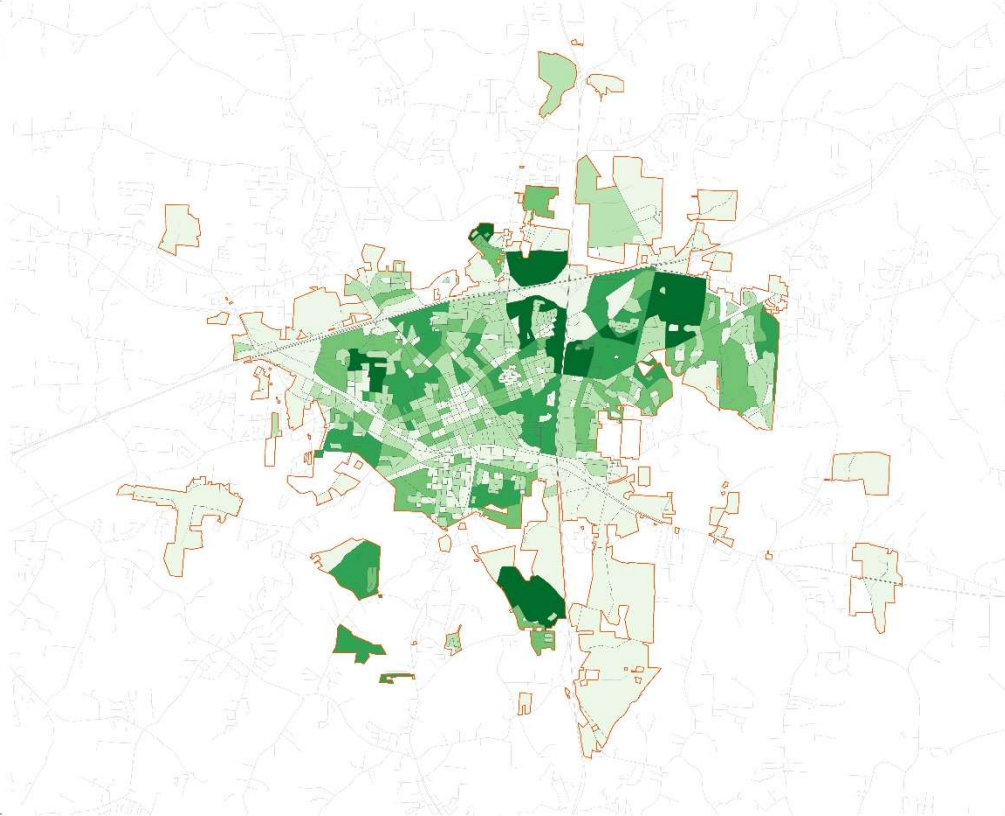


Table 2: Population per Square Mile & Geo-proximity Size

GPZ	Population	Area in Sq Miles	Area in Acres	Shape_Leng
S1A	314	0.218762969	140.0083	12402.70521
S1B	1017	0.443167945	283.6274846	16248.71481
S1C	2853	0.939950063	601.5680401	20604.62249
S1D	2075	0.805241277	515.354417	24915.81563
S1E	1610	0.999416322	639.6264464	35029.4015
S1F	1395	1.259816289	806.2824249	60299.43674
S1G	1440	0.713193413	456.4437844	24399.59061
S1H	1847	1.03101845	659.8518079	58609.01145
S1I	1186	0.733969332	469.7403725	32811.39215
S2A	4	0.750500094	480.3200604	37282.4342
S2B	841	0.700811852	448.5195851	26184.68217
S2C	2745	2.712066102	1735.722305	119112.8293
S2D	774	1.912072807	1223.726597	105870.8894
S3A	1637	0.687985575	440.3107678	26081.06426
S3B	10	1.233010893	789.1269717	50822.77707
S3C	6	1.360978381	871.0261636	51207.6527
S3D	696	1.381740673	884.3140304	76071.66261
S3E	2	1.948475793	1247.024507	90145.49548
S3F	2817	1.17874378	754.3960194	37690.23252
S3G	0	0.051196248	32.76559883	29270.18722
S4A	2982	2.054849718	1315.103819	66485.71871
S4B	1282	1.760830622	1126.931598	40843.49584
S4C	3102	1.732523412	1108.814984	37615.99212
S4D	193	0.711990579	455.6739704	52844.35219
S4E	447	2.373398113	1518.974792	101476.467

Housing

Transitional and post-modern designs, as well as traditional ranch homes line the streets of the community of Statesville. The city also has many Victorian homes listed on the National Register of Historic Places in the downtown area of the city. The 2021 Census data indicated 11,327 housing units were within the city limits. Housing tenure presents owner-occupied housing units as 53.7% with 46.3% of the population living in rental properties.

Statesville's minority population represents 55.1 % of the population. The largest minority is persons of Black/African American origin (33.7%), followed by persons of Hispanic/Latino origin (13.2%), followed by Asian origin (2.2%), and other ethnicities including American Indian (6%).

Table 3: Community Care residential (Home Care/Nursing/Assisted Living) facilities

Mill Creek Manor, 1902 Ora Drive (80 max.)	Autumn Care of Statesville, 2001 Van Haven Drive
The Green's at Maple Leaf, 2640 Davie Avenue	Crossroads Home Health, Inc., 1622 Davie Avenue
Home Care Helpers, LLC, 211 S. Center Street	Home Instead Senior Care, 117 N. Center Street
Iredell Council on Aging, 344 E. Front Street	Iredell Home Health Care, 541 Gaither Road
Journey's Assisted Living, 1942 Van Haven Drive (60 max.)	Mulberry School Apartments, 501 Mulberry Street
The Gardens of Statesville, 2147 Davie Avenue (67)	Kings Grant Apartments, 495 Signal Hill Drive
Plaza Apartments, 120 Meeting Street	Samaritan Healthcare, 1433 Davie Avenue
Brookdale East Broad, 2441 E. Broad Street (58 max.)	Brookdale Peachtree, 2806 Peachtree Road (87 max.)
The Clare Bridge at Statesville Place, 2814 Peachtree Road (40)	Hospice & Palliative Care of Iredell County, 2437 Simonton Road (inpatient 15 beds) and also offers Home Health across the City

Climate & Weather

The City of Statesville falls within the Greenville Spartanburg weather forecast office. Below are charts and graphs that indicate typical climate information recorded through the National Weather Service. Statesville is located in the central part of Iredell County, in the western part of the Piedmont region of North Carolina.

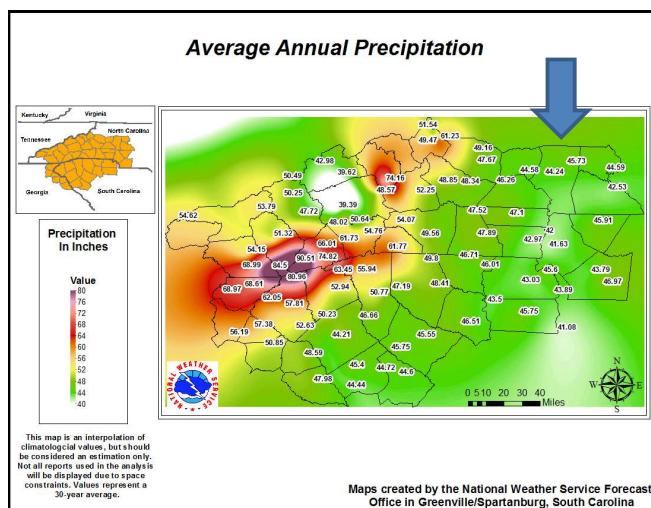
According to the U.S. Census Bureau, Statesville has a total area of 24.86 square miles (64.38 km²), of which 24.86 square miles (64.38 km²) are land and 0.1 square miles (0.3 km²), or 0.48%, are water. The north side of Statesville is drained by Fourth Creek, while the south side is drained by Third Creek. Both creeks flow east, joining just before reaching the South Yadkin River near Cooleemee.

Climate

Statesville has a humid subtropical climate like most of the state of North Carolina, although its higher elevation leads to cooler temperatures than much of the Piedmont. Summers are generally hot and humid, with mild nights, while winters are usually cool with chilly nights and sporadic snowfall. Severe thunderstorms can be an issue during summer, with wind speeds of 60 mph and even gusts of 95 mph being recorded during these storms.

Precipitation

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Statesville varies throughout the year. The wetter season lasts 3.8 months, from May 4 to August 30, with a greater than 32% chance of a given day being a wet day. The month with the most wet days in Statesville is July, with an average of 13.5 days with at least 0.04 inches of precipitation. The drier season lasts 8.2 months, from August 30 to May 4. The month with the fewest wet days in Statesville is October, with an average of 6.4 days with at least 0.04 inches of precipitation. Among wet days, we distinguish between those that experience rain alone, snow alone, or a mixture of the two. The month with the most days of rain alone in Statesville is July, with an average of 13.5 days. Based on this categorization, the most common form of precipitation throughout the year is rain alone, with a peak probability of 45% on July 13.



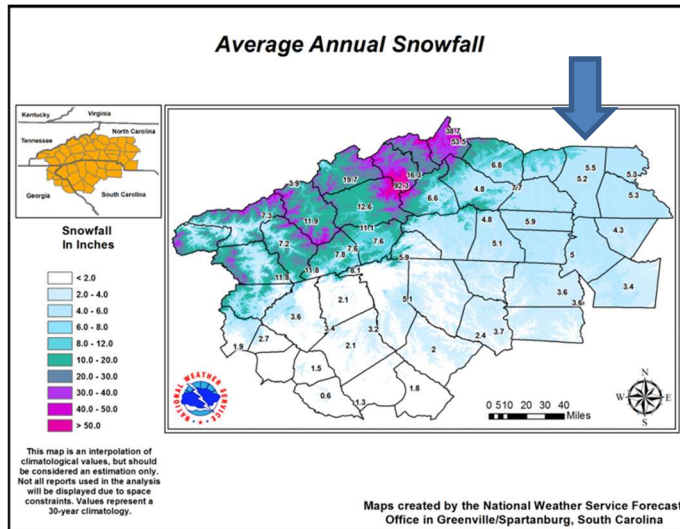
Rainfall

Rain falls throughout the year in Statesville. The month with the most rain in Statesville is April, with an average rainfall of 3.4 inches. The month with the least rain in Statesville is February, with an average rainfall of 2.8 inches.

Snowfall

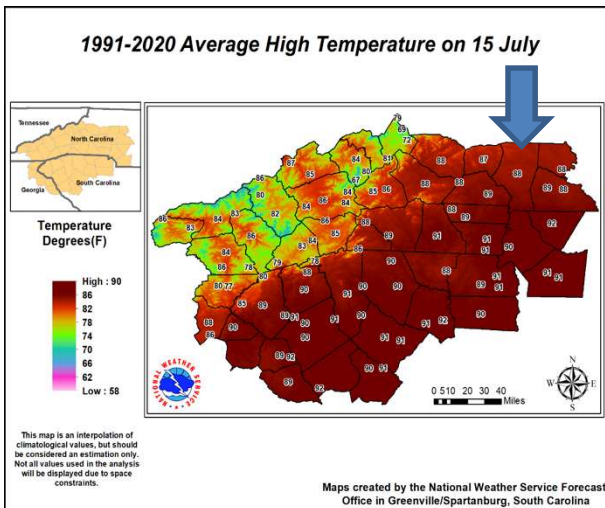
The snowy period of the year lasts for 3.6 months, from November 30 to March 17, with a sliding 31-day snowfall of at least 1.0 inches. The month with the most snow in Statesville is February, with an average snowfall of 3.1 inches.

The snowless period of the year lasts for 8.4 months, from March 17 to November 30. The least snow falls around July 18, with an average total accumulation of 0.0 inches.



Temperature

The hot season lasts for 3.7 months, from May 26 to September 15, with an average daily high temperature above 80°F. The hottest month of the year in Statesville is July, with an average high of 87°F and low of 68°F.



The cold season lasts for 3.0 months, from November 28 to February 28, with an average daily high temperature below 57°F. The coldest month of the year in Statesville is January, with an average low of 31°F and high of 50°F.

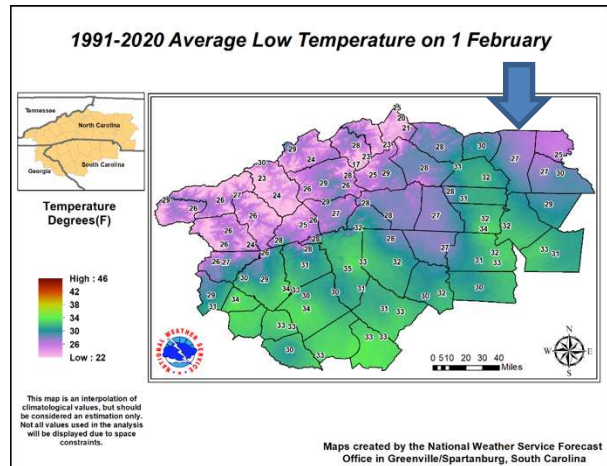


Table 4: Weather Records

Record	Amount	Date
Max Daily High Temperature	104 F	July 1, 2012
Min Daily High Temperature	14 F	February 12, 1899
Max Daily Low Temperature	82 F	August 13, 1882
Min Daily Low Temperature	-5 F	December 30, 1880
Most Precipitation	6.88"	July 23, 1997
Most Snowfall	14.0"	February 15, 1902
Warmest Month	85.5 F	July 1993
Coldest Month	30.1 F	January 1977
Wettest Month	16.55"	July 1916
Driest Month	T"	October 2000
Snowiest Month	19.3"	March 1960
Earliest Snowfall		October 31, 1887
Latest Snowfall		April 28, 1928

Table 5: Climate Data

Climate data for Statesville													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	81 (27)	83 (28)	93 (34)	95 (35)	99 (37)	105 (41)	105 (41)	106 (41)	104 (40)	96 (36)	85 (29)	80 (27)	106 (41)
Average high °F (°C)	48.8 (9.3)	52.9 (11.6)	60.5 (15.8)	70.1 (21.2)	77.4 (25.2)	84.1 (28.9)	87.3 (30.7)	85.5 (29.7)	79.7 (26.5)	70.8 (21.6)	60 (16)	51.6 (10.9)	69.1 (20.6)
Daily mean °F (°C)	37.6 (3.1)	40.6 (4.8)	47.6 (8.7)	56.9 (13.8)	65.5 (18.6)	73.3 (22.9)	77.0 (25.0)	75.4 (24.1)	69.2 (20.7)	56.3 (13.5)	47.1 (8.4)	37.9 (3.3)	57.0 (13.9)
Average low °F (°C)	26.4 (-3.1)	28.4 (-2.0)	34.7 (1.5)	43.7 (6.5)	53.6 (12.0)	62.5 (16.9)	66.8 (19.3)	65.2 (18.4)	58.8 (14.9)	45.8 (7.7)	34.3 (1.3)	28.9 (-1.7)	45.8 (7.6)
Record low °F (°C)	-8 (-22)	-7 (-22)	5 (-15)	17 (-8)	28 (-2)	36 (2)	44 (7)	44 (7)	30 (-1)	16 (-9)	6 (-14)	-3 (-19)	-8 (-22)
Average precipitation inches (mm)	3.71 (94)	3.18 (81)	3.99 (101)	4.05 (103)	3.70 (94)	4.27 (108)	4.42 (112)	4.91 (125)	3.87 (98)	3.23 (82)	3.38 (86)	3.94 (100)	46.65 (1,184)
Average snowfall inches (cm)	2.4 (6.1)	0.8 (2.0)	0.4 (1.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.3 (3.3)	4.9 (12.4)

Source: NOAA^[13]

Transportation Network

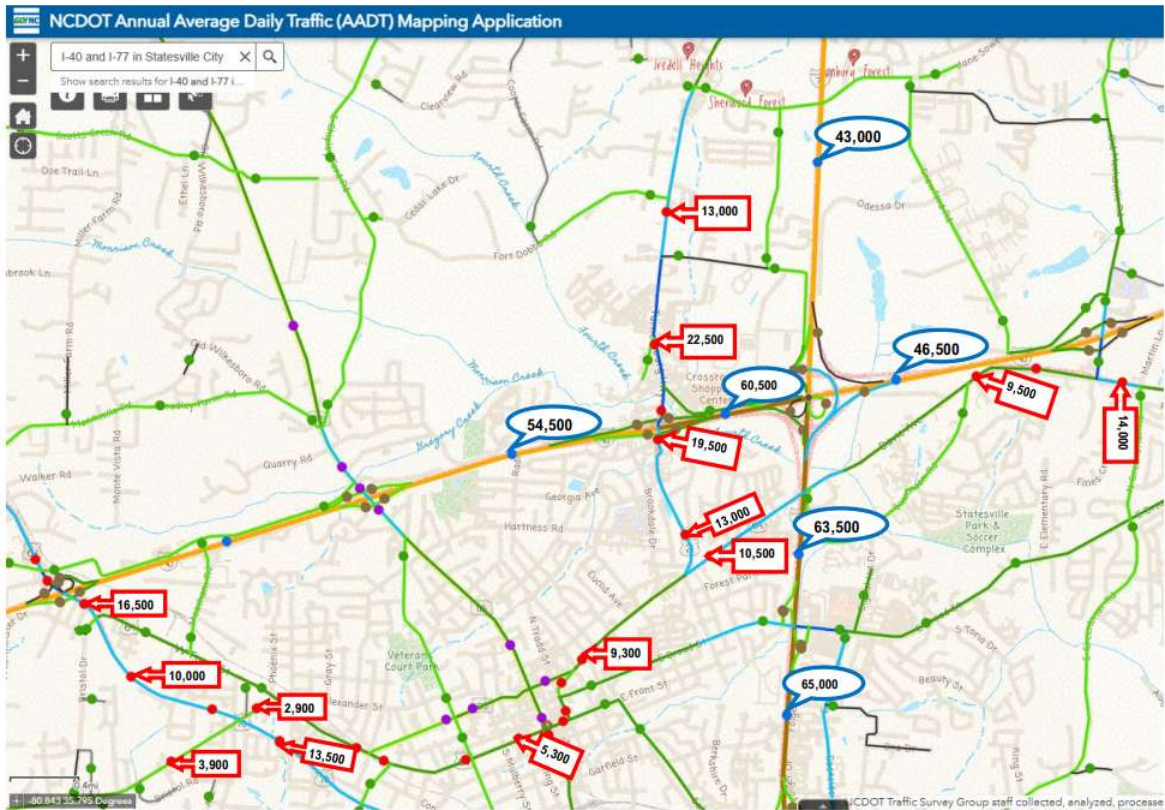
Highway

The City of Statesville is divided into quadrants by Interstate 40 (running east/west) and Interstate 77 (running north/south). I-77 runs from Cleveland, Ohio to Columbia, South Carolina. Interstate I-40, stretching coast-to-coast from Wilmington, North Carolina to Barstow, California. US Hwy. 70 (Garner Bagnal Blvd) also bisects the city on the south (running east/west). US Hwy. 115 (Center Street) bisects the city centrally (running north/south).

I-40, I-77, and US-21 multi-level interchange project has completed according to NCDOT as of January 29, 2018. I-40 has been widened from four lanes to six lanes between I-77 and the Radio Road Bridge. The previous interchange at US 21 and I-40 has been changed to a diverging diamond, with a new bridge constructed over US-21 and 4th Creek to meet current and future traffic needs. Additionally, a new bridge was constructed from Sunset Hill Road to Gaither Road. The new additions will improve the traffic flow. The interchange at Old US-64 has been eliminated. The I-40 & I-77 highway improvement project was completed in 2024 and confirmation was received from NC DOT at the 2024 Iredell County Local Emergency Planning Committee meeting. The projects of replacing the bridges on E. Broad St and Davie Ave where the roads cross I-77 are scheduled for completion in the Summer of 2024.

The following map shows the average number of vehicles per day traveling on the two Interstates that cross in the Statesville City limits. (“AADT” annual average daily traffic):

Map 9: Daily Travel Totals on Major Roadways



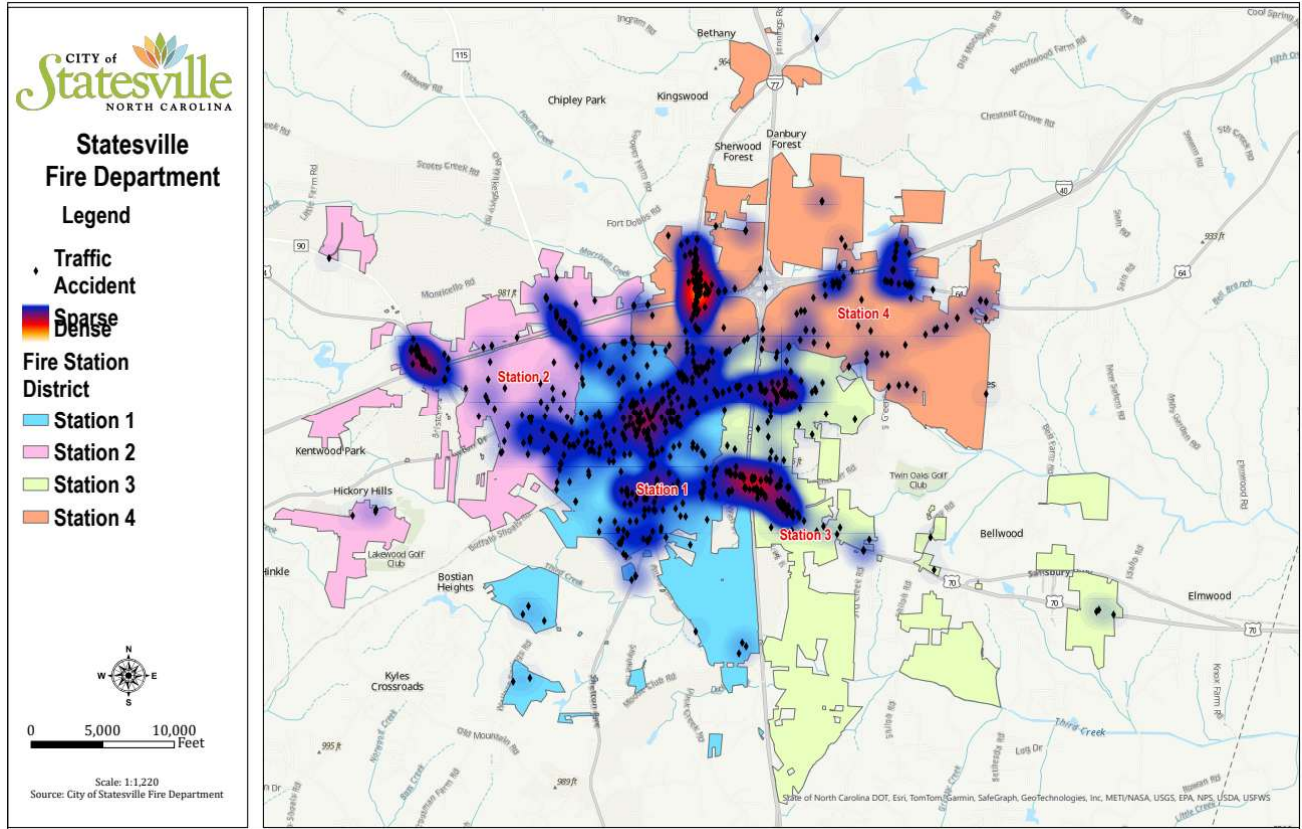
<https://www.arcgis.com/apps/webappviewer/index.html?id=964881960f0549de8c3583bf46ef5ed4> Data pulled from 2023

Map 10: Interstate Layout



<https://www.ncdot.gov/projects/i40-i77-interchange/Pages/default.aspx>

Map 11: 2024 Traffic Incident Heat map



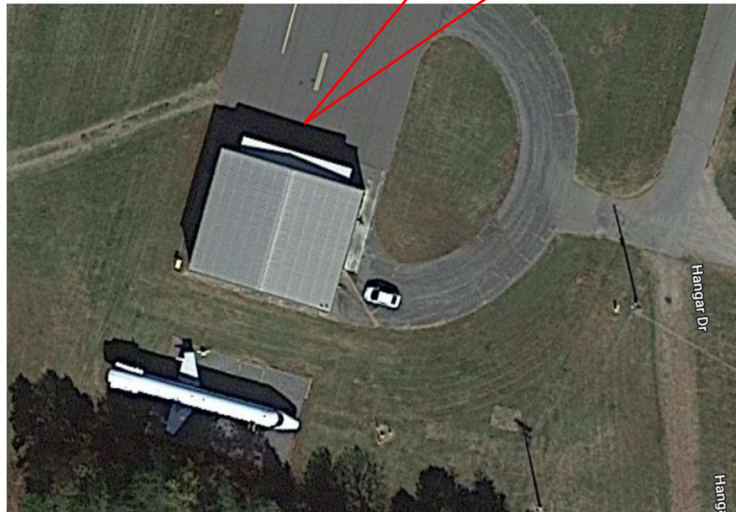
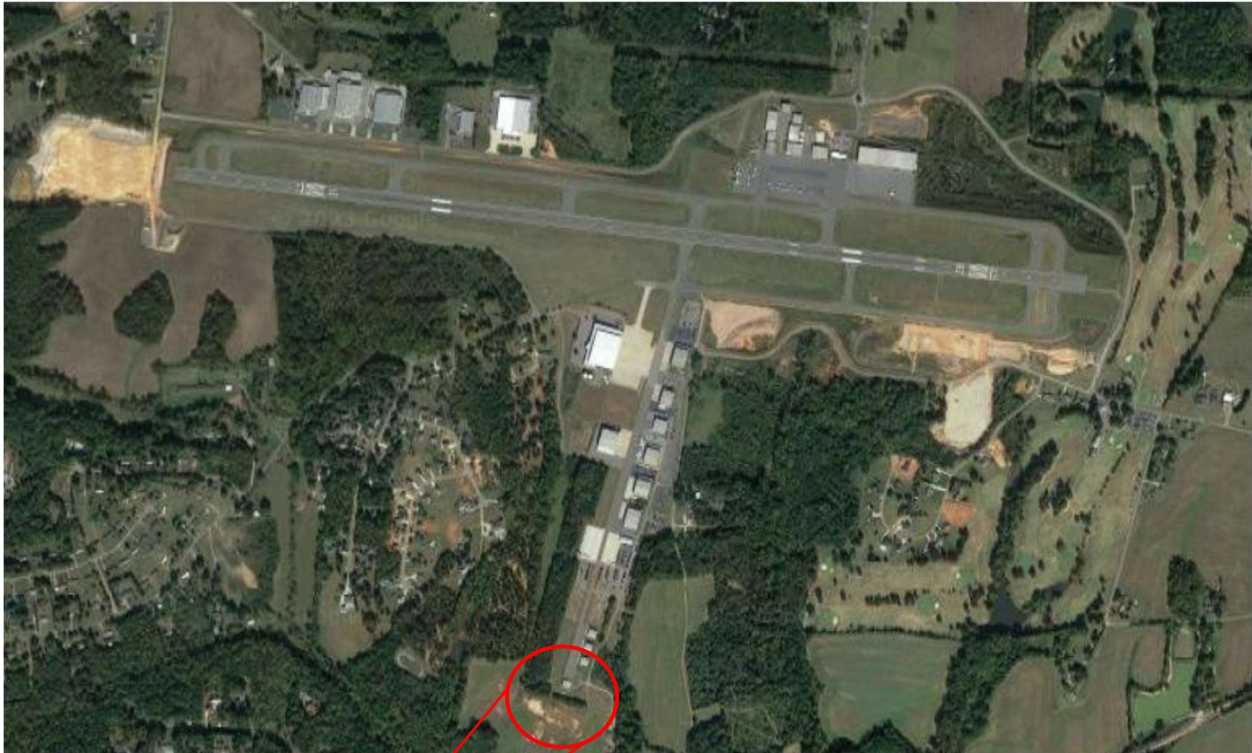
Air

The Statesville Regional Airport is located just south of I-40 on the outermost western side of the city in Fire Station #2 response district. The 453-acre regional airport currently utilizes a single 7,003-foot runway that averages 20,000 passengers annually.

Growth at the Statesville Regional Airport has been steady within the last five years with the addition of some new flight services, one being Victory Air which utilizes Statesville as its home base for its nine 50 passenger aircraft and is currently building a large hanger on airport property. Flight Services such as Champion Air have also expanded their operations. In 2020, the Eastern portion of the south taxiway was finished allowing for better access to taxiway F. The runway safety area extension project is due to be completed in July 2023, adding an additional 1,000 feet to the runway. Many other projects are in the works with in the next 3-5 years which includes a new fuel farm, apron extension, and completion of the south side taxiway. A new terminal is also planned which will allow for additional office space and conference rooms, as the operations of the airport have outgrown the current terminal. The Statesville Regional Airport has also filed for FAA Part 139 classification and is in the process of meeting the requirements of the FAA to obtain that classification.

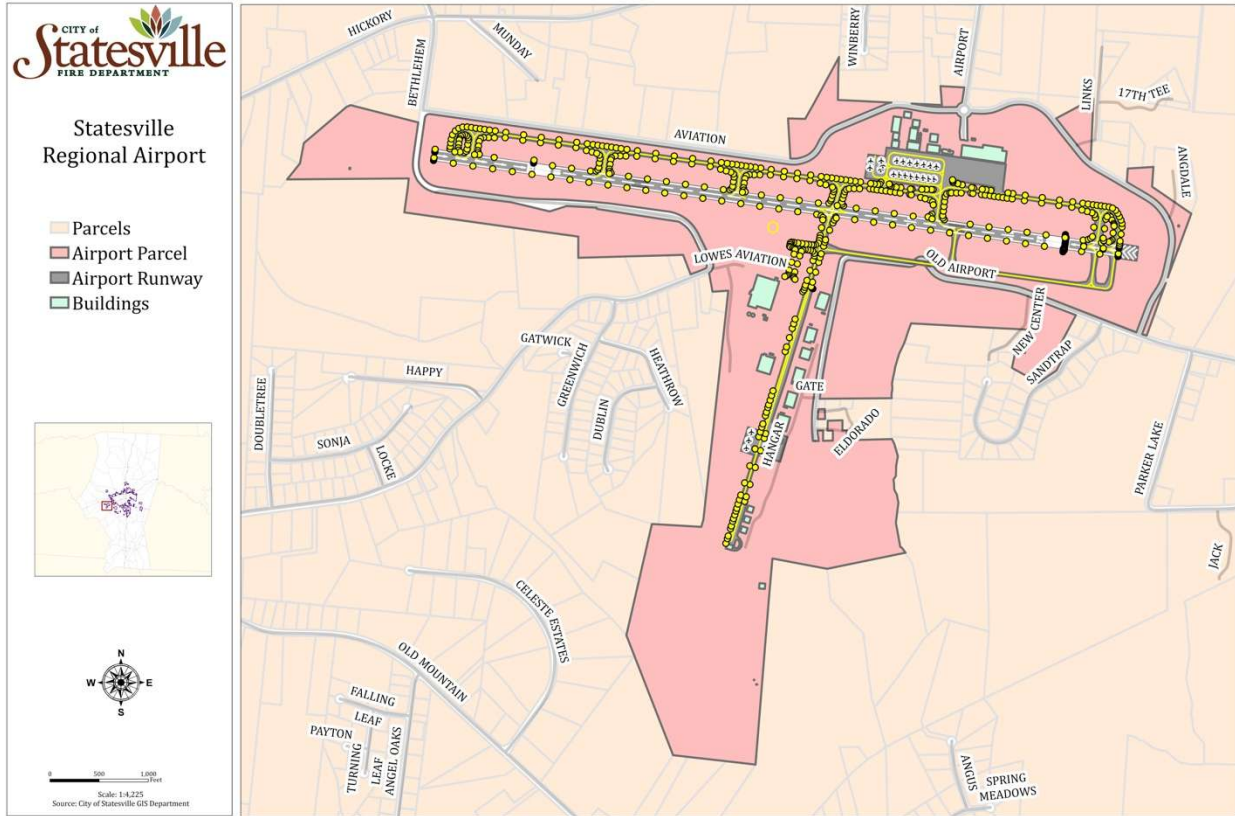
Statesville Regional Airport has been and continues to be one of the most important regional airports in the State of North Carolina. The North Carolina Department of Transportation Division of Aviation continues to support the Statesville Airport through the administration of grants for projects (such as the south parallel taxiway). Statesville Regional Airport is also an important site to the North Carolina Department of Commerce as it has been shown routinely to potential industrial tenants. The amount of land available for development and the addition of a south parallel taxiway combined will further enhance the appeal of the Statesville Regional Airport to potential tenants.

Map 12: Airport/ Training prop



The City of Statesville Fire Department continues to progress with ARFF capabilities. In 2024 assignments were given for upgrades to the existing ARFF prop, and the development of new standardized training (ARFF Task Book) to be implemented in 2025. There were no certification classes offered in 2024 outside of the normal in-service training.

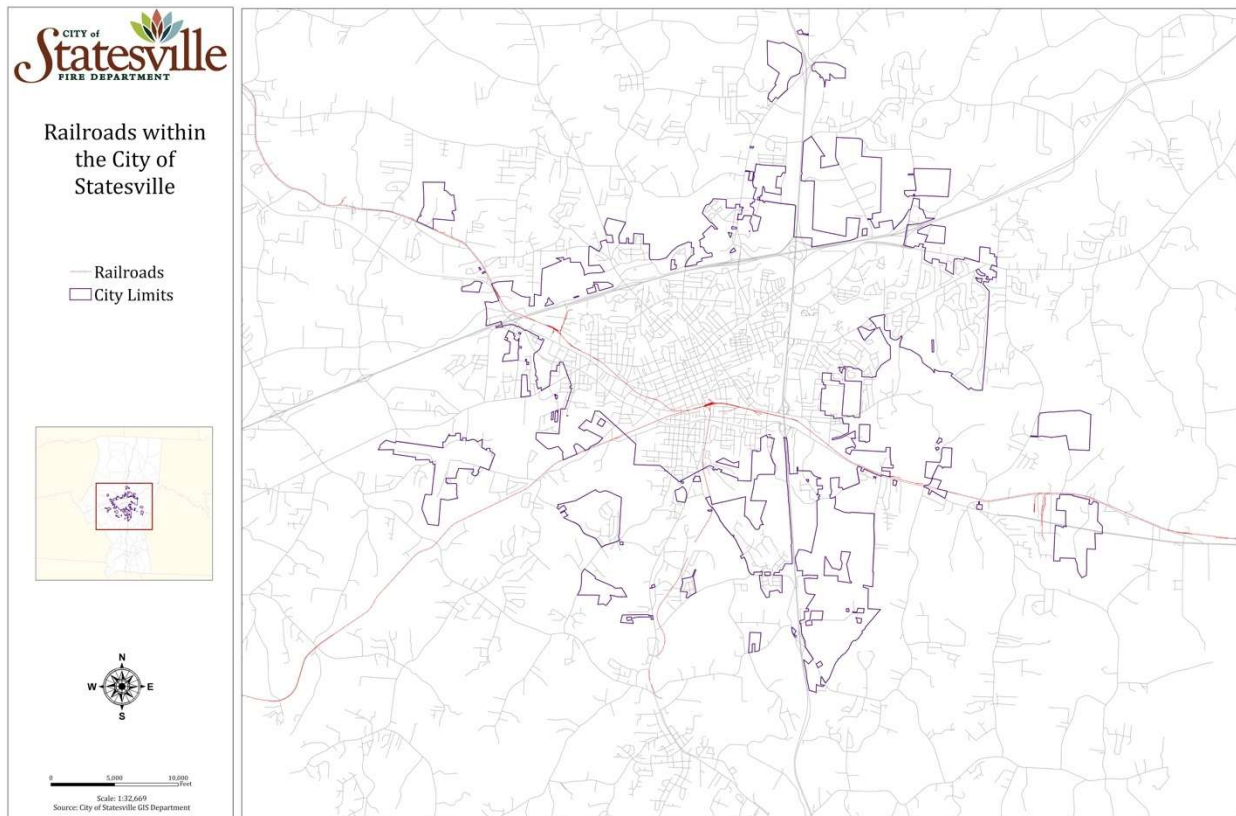
Map 13: Statesville Regional Airport



Rail

The Norfolk-Southern main line and Alexander Railroad short line system. Part of the 3,285-mile North Carolina track network that runs through the southern and western parts of the city. The Norfolk-Southern main line and Alexander Railroad short line, runs parallel with Hwy 70 (Garner Bagnal Blvd & Salisbury Hwy) to the south and Hwy 90 (Taylorsville Hwy) to the west. These rail lines are all commerce lines and do not include any passenger trains currently.

Map 14: Railroads within City of Statesville



Critical Infrastructure

There are several physical assets that are critical to the functionality of the City of Statesville and surrounding areas. This includes government buildings, fire & police facilities, hospitals, schools/college, bridges, power stations, and water treatment facilities. There are also several facilities that are centres for large concentrations of citizens such as entertainment venues, places of worship, medical buildings, schools/colleges, and high-density housing. In addition to these, a large area of the city is classified as national and state historical districts.

Map 15: City of Statesville Critical Infrastructure

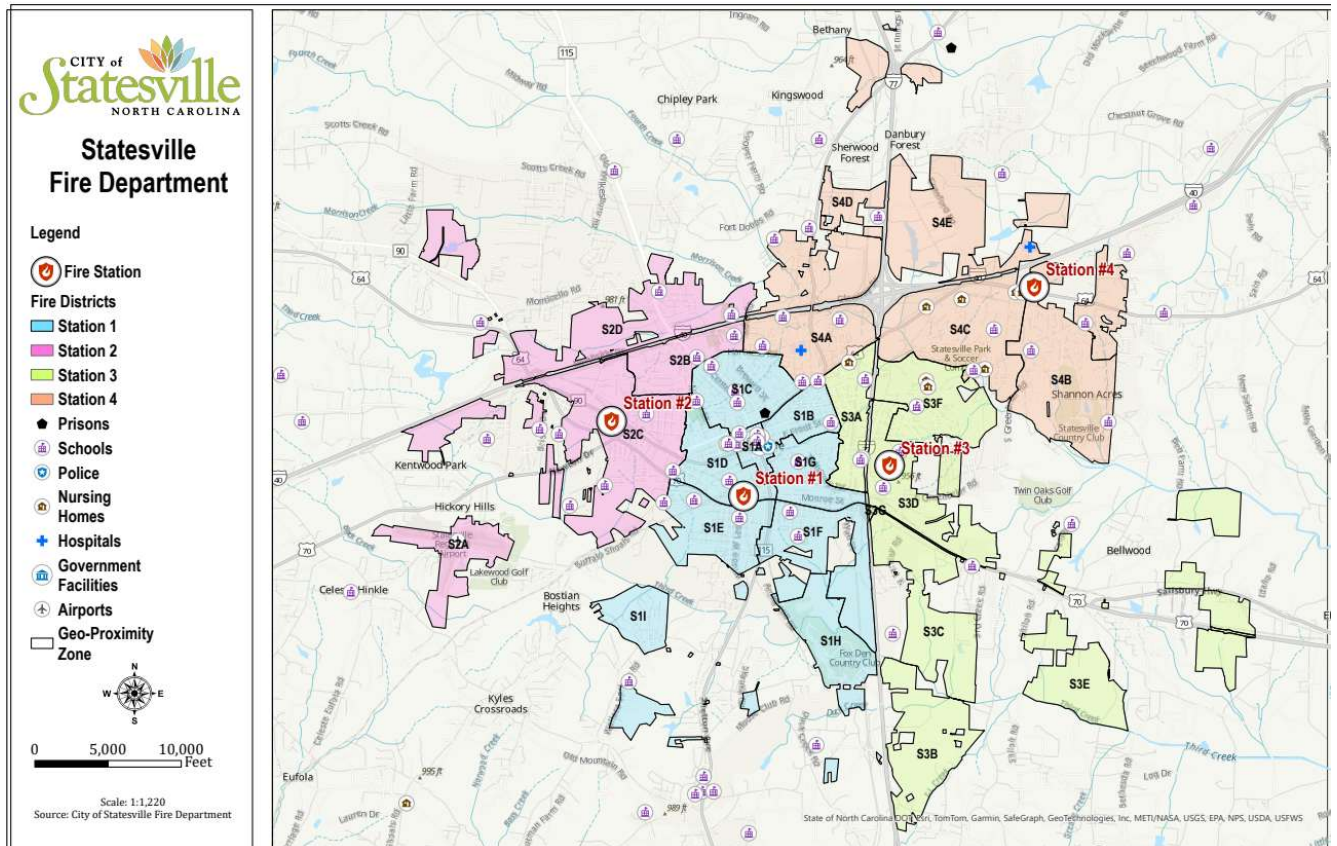


Table 6: Hospitals

Hospital	Location / Number of Beds
Iredell Memorial	557 Brookdale Drive (391 beds)
Iredell Davis – Behavioral Health Hospital	218 Old Mocksville Road (42 psychiatric beds)

Table 7: Schools / Colleges

School / College	Location
Academy of Excellence	612 S Race Street
American Renaissance Charter School	132 E. Broad Street
American Renaissance Middle School	217 S Center Street
American Renaissance School	212 Cooper Street
Cornerstone Christian Academy	650 Glover Street
Cornerstone Christian Academy (High School)	1668 E. Broad Street
ISS / East Iredell Elementary School	400 E. Elementary Road
ISS / EC Test Center	1147 Salisbury Road
ISS / N B Mills Elementary School	1410 Pearl Street
ISS / Northview Academy	625 Carolina Avenue N.
ISS / Oakwood IB School	321 Clegg Street
ISS / Virtual Academy	222 Knox Street
ISS / Statesville High School	474 N. Center Street
Redeemer Prep Academy	2200 E Broad Street
Statesville Christian School	1210 Museum Road
Statesville Christian School (Elementary)	1206 Museum Road #A
Statesville Montessori School	1012 Harmony Drive
Success Institute	1424 Rickert Street
Mitchell Community College	500 W. Broad Street
Mitchell Community College - Continuing Education	701 W. Front Street
Unity Center	1145 Salisbury Road

Table 8: Historical District Locations

Historic District	Location	Size
Academy Hill	Western Avenue, Bell, Mulberry, Wise, and Armfield Streets	350 acres with 40 buildings
Center Street A.M.E. Zion Church	537 S. Center Street	1 building
East Broad St. / Davie Ave.	Davie Avenue., Broad and Elm Street	350 acres and 65 buildings
Iredell County Courthouse	200 S. Center Street	1 building
Key Memorial Chapel	150 E. Sharpe Street	1 building
Mitchell College, main building	500 W. Broad St.	1 building
Mitchell College Historic District	Mulberry, Race, Cherry, Oak and Alexander Streets	300 acres and 87 buildings
Morrison-Mott House	332 N. Center Street	1 building
Col. Silas Alexander Sharpe, House	402 S. Center Street	1 building
South Race Street Historic District	S. Race, W. Armfield, W. Bell, W. Sharpe, S. Oak Streets, and Western Avenue	270 acres and 85 buildings
Statesville Commercial Historic District	Front, Meeting, Broad and Tradd Streets	300 acres and 54 buildings
Statesville City Hall	227 S. Center St.	1 building

Community Expectations and Performance Goals

This section defines the expectations set by our community and outlines our performance goals set to meet the needs of the City of Statesville. This section includes details on strategic planning, mission/vision/values, current ISO rating schedule and current recommendations made at the last evaluation by the Office of State Fire Marshal in the Fall of 2022. Service level expectations are also addressed as well as look at historical performance baselines from the past five years.

Strategic Planning

In 2008, our process of developing Performance Goals began with an in-depth look at the department by developing a comprehensive Strategic Plan. The strategic planning process revolved around the model set by the Center for Public Safety Excellence and the Commission for Fire Accreditation International.

In 2022, the Strategic Planning Team performed a complete 4th edition rewrite in accordance with guidelines set forth in the Commission Fire Accreditation International (CFAI) *Fire & Emergency Service Self-Assessment Manual 10th Ed.* with internal and external stakeholder viewpoints. A series of meetings were scheduled for internal and external stakeholders. In addition, a thorough survey was conducted for all current Fire Department employees. Once the survey was complete, the team met with suppression and fire prevention to seek follow-up information. The information ascertained through this process proved valuable and ultimately provided direction for this plan.

The original Strategic Plan identified 8 Strategic Initiatives and 64 Goals. Each goal had at least one action step with some more complex goals requiring multiple steps. Almost half of the action steps were related to our service delivery and training. After much deliberation, the team chose to keep those initiatives and goals intact but also add CPSE's recommended SWOT analysis. The current Plan maintains the 8 Strategic Initiatives and provides goals and action steps for each. By reviewing the previous versions, one can see this plan is a working document and not 'set in stone'. Future versions will concentrate on steady and modern improvements.

The Strategic Plan is reviewed annually by Fire Department Staff. A weekly task book of the Strategic Plan has been created and administrative staff reviews, edits, and updates the Strategic Plan weekly.

During the 2023 re-accreditation process, the recommendation was made by CFAI, for SFD to evaluate goals and objectives for a more focused approach utilizing the S.M.A.R.T. methodology. SFD is in the process of creating S.M.A.R.T. goals and objectives sheets for recommendations learned through the re-accreditation process. The Accreditation Manager will work with each of the SFD personnel assigned to the recommendations to develop S.M.A.R.T. goals and objectives for continuous improvement of the Department.

Table 9: Statesville Fire Department 2024-2029 Strategic Initiatives

Organization and Development
<p>The Department strives to operate an efficient fire and life safety service for the community of Statesville. The Department continuously looks to improve the service levels in the most effective manner possible by addressing local, state, and national recommendations. Our policies and procedures guide our decisions and lead us in our management process to create the professional department we desire, and the citizens deserve.</p>
Service Delivery
<p>The Department serves the citizens of Statesville in many different areas. The obvious is providing a quality fire protective response force that meets the needs of the community. Other life safety services provided are public safety education, community involvement programs, and investigative services. Emergency response continues to involve more specialty areas of responsibility with hazardous materials, technical rescue, airport crash/rescue and medical capabilities. The Department continues to improve in all of these areas and reviews each area on an ongoing basis.</p>
Physical Resources
<p>The Department has been given many resources to do the jobs assigned. As the city continues to grow, so does the Department. The Department plans for the growth in fixed and mobile resources. Renovation and replacement schedules provide guidance in planning. Equipment is maintained and tested annually according to national standards. Our Equipment committee leads the organization in the budgeting and purchasing process.</p>
Risk Management/Safety
<p>The Department provides the workforce with a controlled safe location inside of the city facilities. However, the emergency scene provides an uncertain environment. The Department monitors and does everything possible to meet the national recommendations provided by the fire service. Programs are in place and reviewed periodically to assure the safest possible environment is created on the emergency scene. Safety Committee of Department personnel provides direction in meeting the needs of the organization.</p>
Human Resources
<p>The Department has a partnership with the City Human Resource Department. Recruitment, hiring, and promotion plans are in place and monitored routinely. Orientation sessions of the Statesville Physical Abilities Course are presented and available for all applicants. Wellness and fitness continue to be a focus for the Department and a Health and Wellness Committee are the driving force in the Program.</p>

Table 10: Statesville Fire Department Mission/Vision/Values

Mission Statement
The Statesville Fire Department is dedicated to the safety and protection of our community’s quality of life from all hazards through a well-trained, professional, rapid response team, seeking opportunities to serve, and placing others before self.
Vision Statement
The Statesville Fire Department will be a community focused, value centered, modern and credible fire protection service serving the citizens of Statesville.
Values Statement
<p>The Statesville Fire Department achieves its mission and vision by building upon a system of values. We uphold professionalism as our core value. Our defining values also include: Integrity, Compassion, Service, Courtesy, and Accountability.</p> <ul style="list-style-type: none"> ➤ <u>Professionalism</u>: Our core value of professionalism defines who we are. We believe our chosen career is an upstanding and sound service to the community we serve. We take our role seriously and do all that we can to be a positive role model to the future generations. ➤ <u>Integrity</u>: We believe in living by moral and ethical principles. We demonstrate our values by the way we live our lives in the public’s eye and in the confines of the fire station walls. ➤ <u>Compassion</u>: We believe in caring for our community members who are suffering from tragic events in their lives and do all that is in our power to assist in stabilizing the situation with a merciful attitude. ➤ <u>Service Excellence</u>: We believe in providing the best possible service to the community where we live and work and do all we can to meet the needs of our neighbors through a humble, competent, and well trained, efficient team. ➤ <u>Courtesy</u>: We believe in being kind and polite to our fellow firefighters and the citizens we serve. ➤ <u>Accountability</u>: We accept responsibility for accomplishing our missions. We are transparent in our decision-making and expect to be held accountable for the actions we take.

ISO Rating and Supporting Information

For many years the Insurance Services Office (ISO), a private corporation funded by the insurance industry, established public protection districts for the purpose of setting premium rates for homeowners' and property insurance. ISO visited fire districts and evaluated their fire abilities to respond to fires, as well as the quality of their equipment, and then set fire district ratings.

ISO's Public Protection Classification (PPC) system has been in use since the early 1900's and has been continuously modified and refined over that time. The manual, Fire Suppression Rating Schedule (FSRS) looks at a great deal of specific information about the fire department, the water supply, and the types of property in the community, and uses a complex process to evaluate that information. They then assign a PPC from 1 to 10. Class 1 generally represents superior property fire protection, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria.

In 1987 the General Assembly gave the Commissioner of Insurance (Office of State Fire Marshal) the duty of rating the fire districts in rural areas of the State (HB 1696). This act simply gives the Commissioner the authority to rate fire districts in rural areas and in cities with populations of 100,000 or fewer. Therefore, the City of Statesville began being evaluated by the Office of State Fire Marshal (OSFM) in the 1990's.

ISO has extensive information on more than 44,000 fire response jurisdictions. In fact, until the national 'no-call' database was developed, it was the nation's largest database. The PPC program recognizes the efforts of communities to provide fire protection services for citizens and property owners. A community's investment in fire mitigation is a proven and reliable predictor of future fire losses. With that, insurance companies use PPC information to help establish fair premiums for fire insurance – generally lower premiums for communities with lower ISO ratings. By offering economic benefits for communities that invest in their firefighter services, the program provides a real incentive for improving and maintaining public fire protection.

To determine a community's PPC, OSFM conducts a field survey in conjunction with ISO standards. Trained OSFM staff visit the community to observe and evaluate features of the fire protection systems. Using the FSRS, OSFM objectively evaluates three major areas:

- **Water Supply** - A review of the water supply system accounts for 40% of the total classification and is the most important single factor. The FSRS compares the water supply available (hydrant size, type, inspection frequency, etc.) at representative areas of the community with the amount needed to fight a fire in the types of buildings there are at that location.

- **Fire Department** – A review of the fire department accounts for 50% of the total classification. OSFM focuses on first alarm response and initial attack to minimize potential loss. The review consists of areas such as engine companies, ladder companies, service companies, distribution of fire stations/companies, equipment carried on the apparatus, pumping capacity, reserve apparatus, departmental personnel (accounts for 24% of the total rating), and training.
- **Fire Alarm and Communications System** – A review of the fire alarm/dispatching system accounts for 10% of the total classification. The review focuses on the community’s facilities and support for handling and dispatching fire alarms.

The City of Statesville is amid growth, both residential and commercial, and the mission of the organization has expanded to include an all-hazards approach that plays a major role in deployment decisions. The city has completed an ISO review through the Office of State Fire Marshal in 2022 and received a rating of ISO Class 1. The city is now one of 373 nationwide and 24 statewide designated with an ISO Class 1 rating. The City of Statesville is now one of 11 departments in the State that are both accredited and an ISO Class 1. Several recommendations were made to improve the service levels and to strive towards retaining the superior rating in the following areas:

- Staffing
- Deployment
- Training
- Geographic Information System (GIS/AVL)
- Public Fire Safety and Education Programs and Qualifications

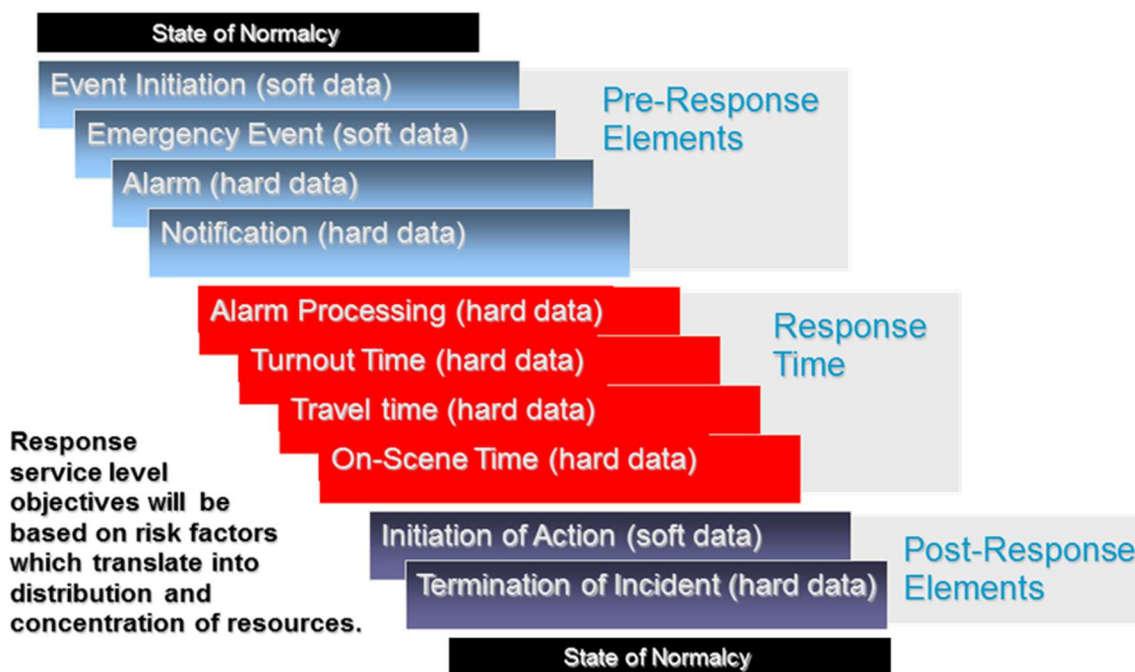
The Department received a 2008 SAFER Grant for 3 additional personnel, but those positions were lost due to the economy over the nine-year period. Those 3 SAFER Grant positions were recovered in January 2018 after the inspection from the awarding of FY16 SAFER. In addition, the SFD was recently awarded the FY17 SAFER for 6 additional personnel. The city applied for SAFER grants in FY21 and FY22 but were not awarded the funding. The department will continue to strive for staffing and comply with NFPA 1710. With no on call personnel responding on first alarm structure fires and the number and adequacy of existing engine and ladder-service companies to cover built-upon areas of the city was noted in the 2022 visit evaluation. Training records have been divided into ISO categories to allow better record keeping, but proper documentation of training facilities’ use and documentation was noted. The Iredell County Dispatch Center (ECOM) has added personnel and consoles but a deficiency of (EDP) Emergency Dispatch Protocols and the lack of fully integrated GIS and AVL unit locating systems were noted. Finally, the deficiencies of Public Fire Safety Education Programs and Qualifications of Fire and Life Safety Educators were noted in the evaluation.

In summarization, the SFD received an overall point rating of 94.45 out of a possible 105.5 points in 2022.

Deployment

There are four critical time segments in every response beginning with the moment the dispatch center receives a call from the public. These time segments are described below. Several other key definitions are included for total response time explanation.

- 1) Alarm or Call Processing
- 2) Turnout
- 3) Travel
- 4) On-Scene



Definitions

Baseline

The current measurement of performance in an organizational context; a usually initial set of critical observations or data used for comparison or a control. The activities that are currently in place to achieve the organization's goals and objectives.

Benchmark

A standard from which something can be judged. Searching for the benchmark, or best practice, will help define superior performance of a product, service, or process.

Call Processing

The time the dispatch center is notified from the public and includes the notification of specific emergency response units that are to respond. Call processing time ends at the beginning point of Turnout Time. (It should be noted that the Call Processing time includes the Alarm Handling Time which is the time interval the PSAP receives the call from the public and begins transmittal of the response information via voice or electronic means to emergency response units in the field).

Concentration

Spacing of multiple resources arranged so that an initial “effective response force” can arrive on scene within the time frames outlined in the on-scene performance expectations.

Distribution

Geographic location of all first-due resources for initial intervention. Generally measured from fixed response points, such as fire stations, and expressed as a measure of time.

Geo-proximity Zones (or Service Demand Zone)

A geographic area of a jurisdiction that is classified according to one or more risk categories. The size and classification is based upon a specific area with like properties within the city and identifies a focal property in the zone to determine hazard level.

Fractile

A term used to measure fractions of data, that added together, creates a whole. Used to support total response time which is composed of several elements such as alarm call processing, turnout time, and travel time.

Turnout Time

The time interval that begins when the emergency service agency is notified by either an audible or visual annunciation or both and ends at the beginning point of travel time.

Travel Time

The time interval that begins when a unit is enroute to the emergency and ends when the unit arrives at the scene. This can generally be interpreted as from wheels rolling to wheels stopped.

Total Response Time

The time interval from the receipt of the alarm at the primary PSAP to when the first emergency response unit is initiating action or intervening to control the incident.

Historical Performance

The objective of our performance is to evaluate the amount of time it takes the SFD to arrive on the scene. Data was collected for the five-year period 2020-2024. These times were broken down into four categories; call processing time, turnout time, travel time, and set up time, which allowed us to analyze our response to an emergency.

Fires will extend beyond the room of origin when flashover stage is reached (fire gases cause the room to become fully involved in flames). This stage of fire typically will occur in as little as 8 minutes of the onset of fire. The department has a response time goal of arriving on the scene, 90% of the time within 6 minutes, 20 seconds in urban geo-proximity zones and 7 minutes, 50 seconds in rural geo-proximity zones. . This response time allows 1 minute for the call taker to obtain the information in urban or rural geo-proximity zones; 1 minute, 20 seconds for the firefighters to listen to the call in both urban and rural geo-proximity zones, don their gear, mount the apparatus with seat belts attached; and 4 minutes of travel time to urban geo-proximity zones and 5 minutes, 30 seconds in rural geo-proximity zones. This allows only two minutes for set-up and making the fire attack.

The Fire Department has worked closely with the City of Statesville's Engineering Department to obtain all of the GIS Data in this document. Through their assistance it was determined that the department is capable of 5-minute travel times 94% of the time with four fire stations.

The following chart illustrates the time it takes an engine company to deploy a 1 ¾ fire attack line in accordance with NFPA 1410. A 1 ¾ attack line is the most likely line to be deployed on a structure fire to deliver an adequate water supply to mitigate the incident. The chart indicates each crew and the number of seconds it will take each crew to deploy the fire attack line. All SFD crews comply with National standards. These times are taken from Performance Training Evolutions (PTE's) conducted in 2022 and show an average setup of three minutes fifty seconds.

Chart 7: Setup Time (Attack Line Deployment)

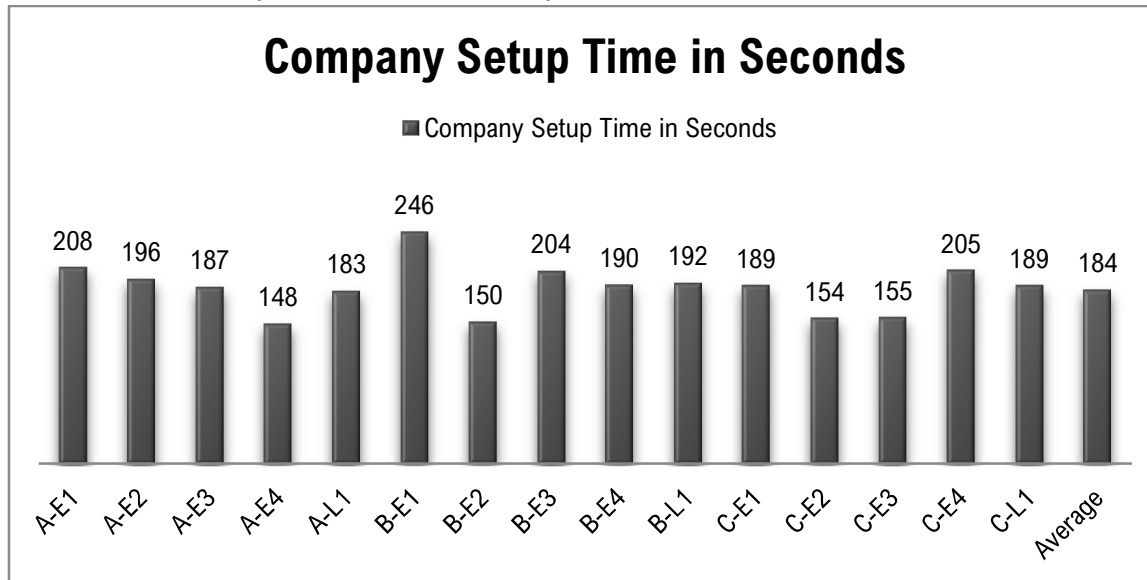
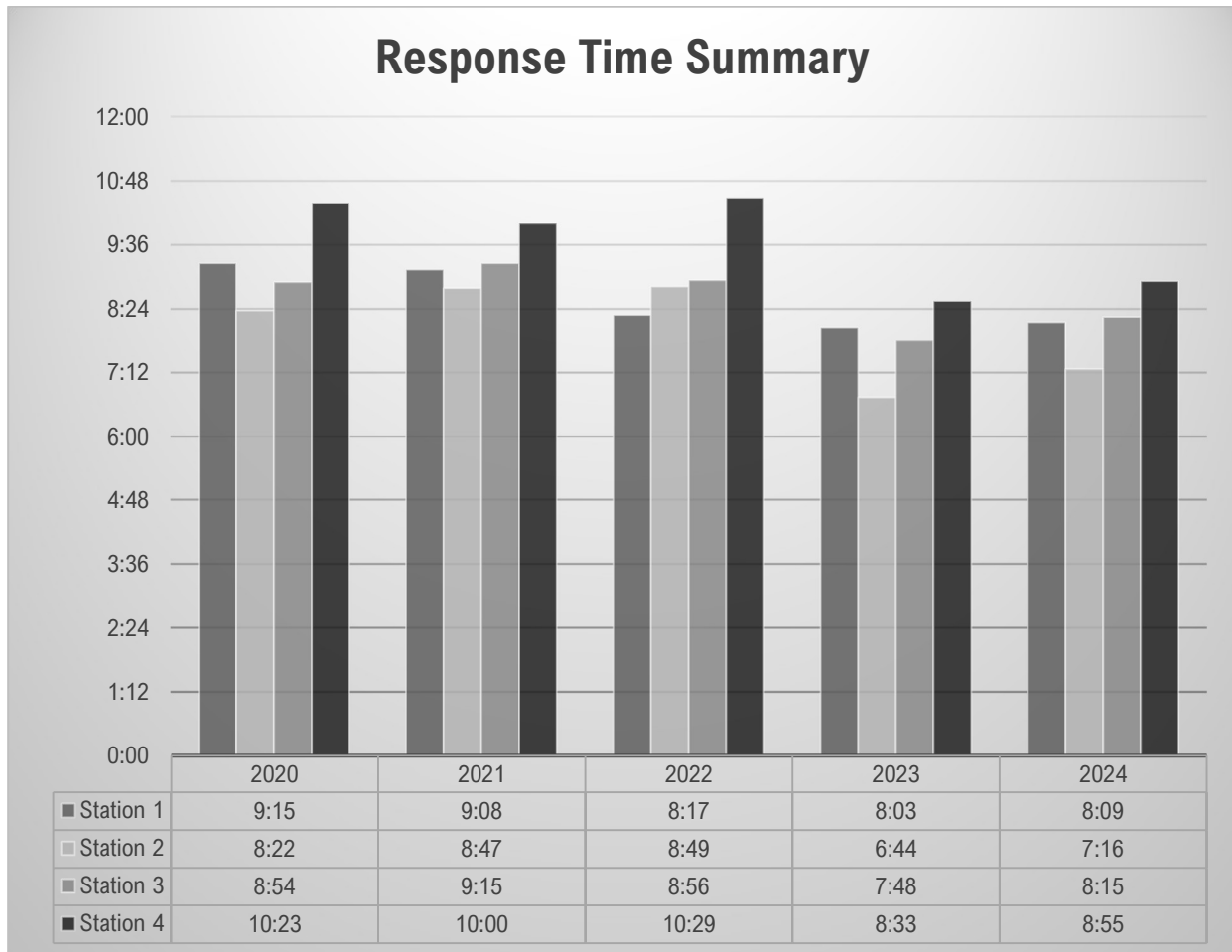


Table 11: Baseline Performance for 2024

Response Analysis				
Percentage of 1 st Due Under Standard 90 th Percentile	% Call Processing Under 1 min.	% Turnout Time Under 1 min. 20 sec.	% Travel Time Urban Under 6 min. 20 sec.	% Total Response Urban Under 10 min. 20 sec.
2024	82.23%	36.33%	67.36%	97.90%

Response Analysis				
Percentage of 1 st Due Under Standard 90 th Percentile	% Call Processing Under 1 min.	% Turnout Time Under 1 min. 20 sec.	% Travel Time Rural Under 7 min. 50 sec.	% Total Response Rural Under 11 min. 50 sec.
2024	79.59%	32.62%	73.98%	96.60%

Chart 8: Response Time Summary by Station 2020-2024



Description of Agency Programs and Services

Services Provided

The City of Statesville provides an all-hazards approach to serving the citizens of the community. The services include fire protection and response, technical rescue response, emergency medical response, hazardous materials response, airport fire protection and response, and fire prevention, investigation, and inspection activities. The department provides these services from four (4) fire stations with the administration offices operating from Station 1. Four (4) front line engine companies are staffed daily with a minimum of four (4) individuals (1 company officer, 1 lieutenant/fire equipment operator, and 2 firefighters). One (1) aerial/tower (Fire Station 1) is staffed with a minimum of four (4) individuals (1 company officer, 1 lieutenant/fire equipment operator, and 2 firefighters) daily. The department operates three (3) shifts on a 24/48-hour shift schedule. All personnel assigned to the Operations Division function within those guidelines.

The department also maintains four (4) reserve engine companies (not staffed) for use by recalled personnel. The department purchased a 75' Quint in 2021 to function as a reserve aerial device. The reserve aerial device is housed at Station 3. Each of the stations maintains additional reserve engines. Each station is also equipped with a squad vehicle (passenger truck/car) for general daily use. The ladder truck is located at Fire Station 1 and contains specialized rescue equipment for confined space and high angle rescue. ARFF 1 is housed at a hangar at Statesville Regional Airport and is used for airport emergencies.

The SFD participates in various levels of a tiered response by cooperating with rural fire departments, Iredell County Rescue Squad, Iredell County Emergency Medical Services, and Iredell County Office of Emergency Management. SFD is certified through the North Carolina Association of Rescue and EMS (NCAREMS) as a Heavy Rescue, Confined Space, and High-Angle provider along with Medical Responder Certification. Rural fire protection contracts are in place to provide service from the closest fire station. Iredell County Rescue Squad provides support to the department in technical rescue and provides basic emergency medical service with the Iredell County Emergency Medical Services. Iredell EMS provides paramedic service and provides convalescent and emergency medical transport. Additionally, the SFD provides hazardous materials technician level service in the city and the central and northern areas of Iredell County with support regionally from Mooresville Fire Department and Hazardous Materials Regional Response Team/RRT-7 (Charlotte Fire Department). The region is also supported by the Charlotte Fire Department in technical rescue operations. The USAR team in Charlotte is designated as North Carolina Task Force 3.

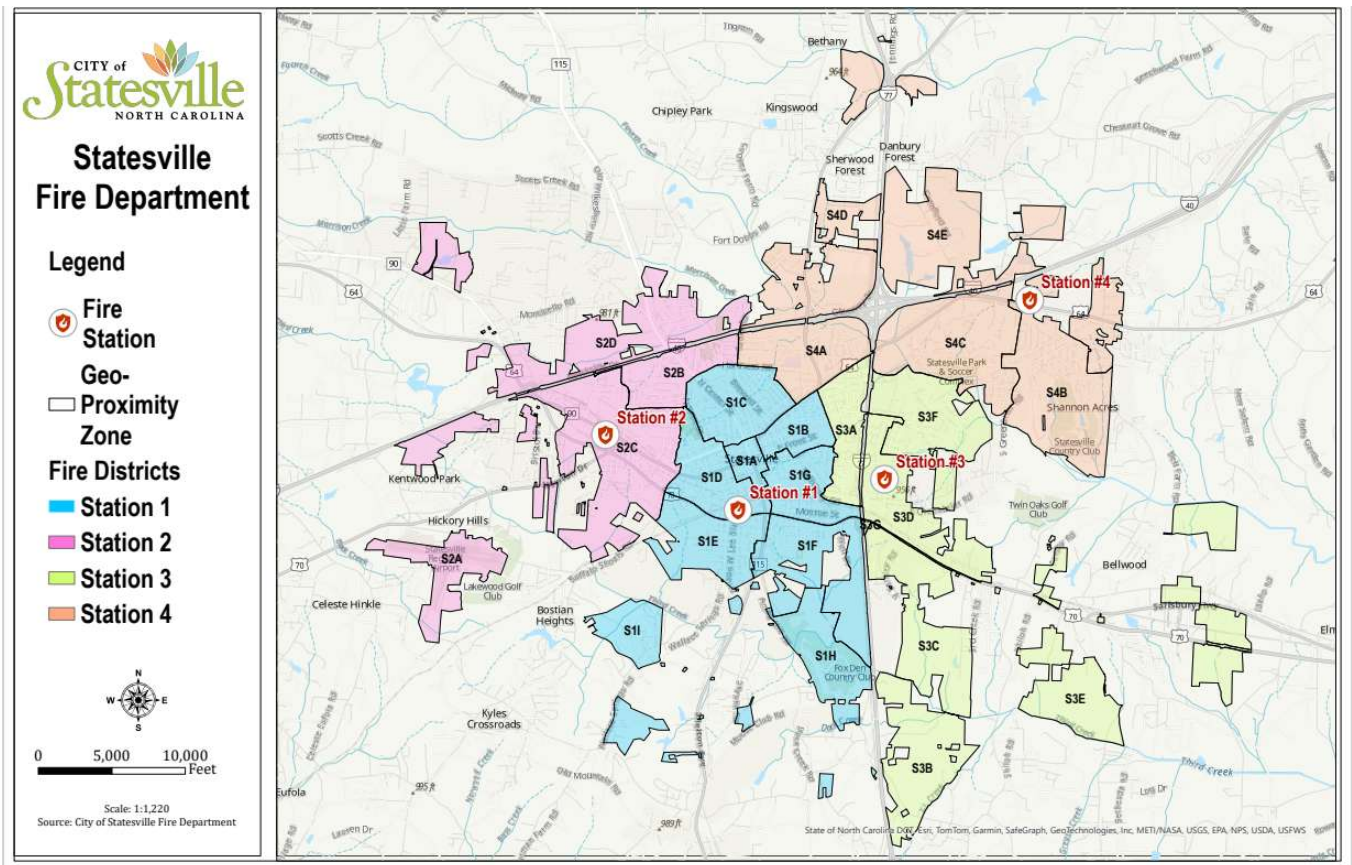
The majority of the City of Statesville falls into the CPSE density categories of urban and with a portion geographically encompassing rural density. However, due to the addition of Fire Station 4 in 2011 and the existing station locations, the Department has chosen to benchmark against the urban and rural density in relation to response throughout the city.

Fire Station Locations

The City of Statesville has four fire stations protecting the *24.86 square miles. The oldest, Fire Station #2, was constructed in 1962 and the newest, Fire Station #1, was completed in May 2024. This equates to a fire station for every 6.22 square miles. Other fire departments in the area have similar traits, i.e., the City of Hickory – 1 fire station for every 4.39 square miles and the City of Salisbury has 1 fire station for every 3.64 square miles.

*<https://www.census.gov/quickfacts/statesvillecitynorthcarolina>

Map 16: Fire Station Locations



Training Facilities

Training is a top priority for the City of Statesville Fire Department (SFD). Fire suppression personnel averaged over 193 hours of training in 2024. The department utilizes annual task books, performance training evolutions (PTEs), and special topics to maintain the professional requirements of our personnel. The department assigned Firefighter, Rescue, and HazMat task books for all firefighters to complete in the calendar year. In addition to the assigned task books, the agency created a HazMat Tech task book for the department's Hazmat Response Team. New recruits undergo a 6-12 week recruit program, and are assigned to complete a probationary task book within a six-month period upon being assigned to shift. All companies complete an assigned PTE monthly (quarterly fire, rescue, hazmat). Special topics in a multitude of areas are assigned throughout the year in addition to task book and PTE training. The SFD also utilizes a weekly Safety & Training Bulletin to highlight key issues and current events.

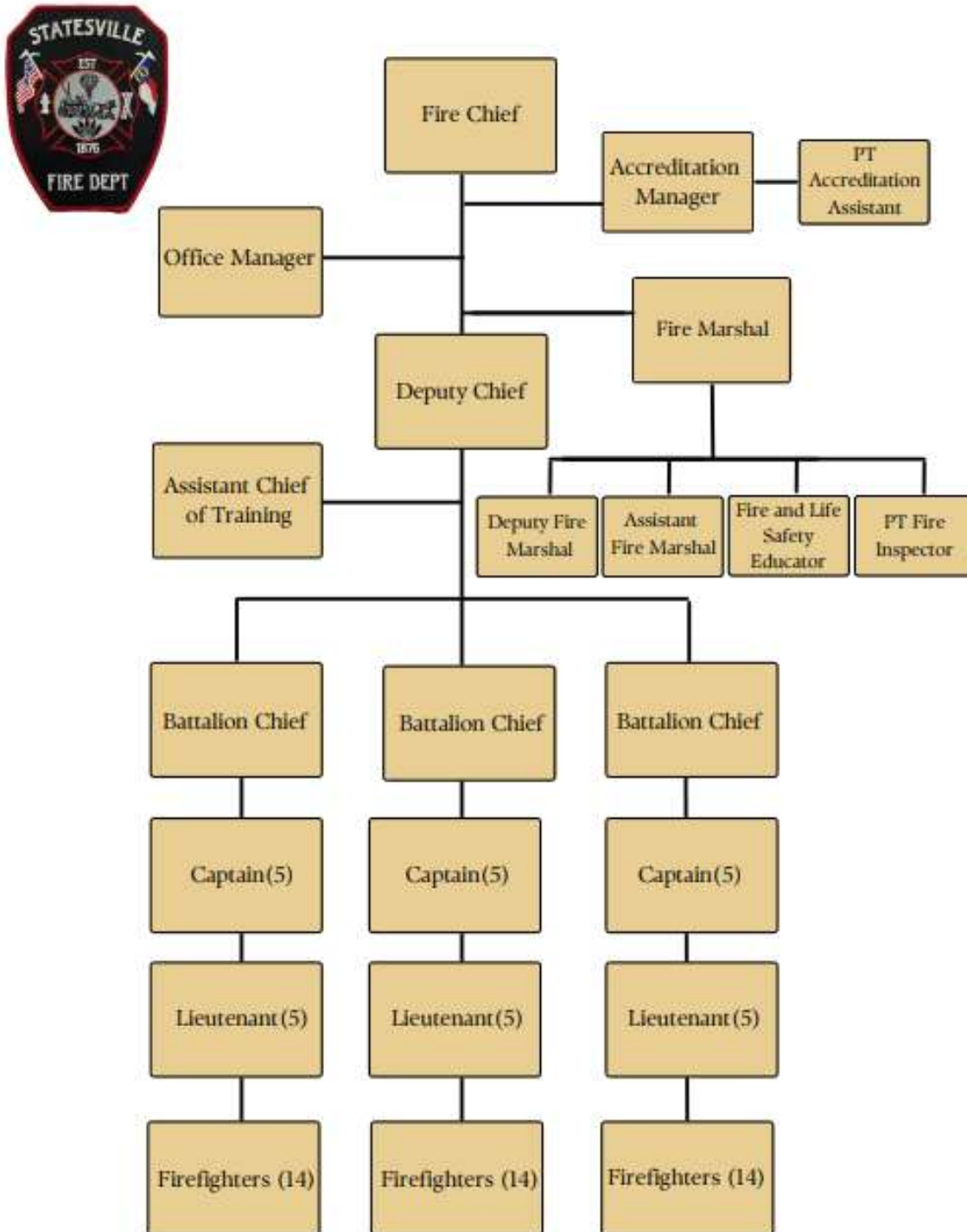
Currently, the SFD is without a fire training facility. In September of 2021, the SFD was informed by city administration that the land in which our training facility is located is being repurposed for expansion of the City's warehouse/garage. The SFD has partnered with Mitchell Community College (MCC) to construct a new Public Safety Training Facility on city property. As of December 2024, SFD continues to work closely with MCC in the planning stages of the training facility construction. In the meantime, the department is utilizing acquired structures and partnering with surrounding agencies to meet all training facility needs.

Administration

The Fire Administration Office of the Fire Chief and the Fire & Life Safety Division operate from Station 1 at 822 Fifth Street. The Fire Chief, Deputy Chief, Assistant Fire Chief, Accreditation Manager, Office Manager, Fire Marshals and Fire & Life Safety Educator staff this office.

The Fire & Life Safety Division is staffed by four full-time individuals and one part-time employee. The Fire Marshal coordinates all activities within the Division. A Deputy Fire Marshal serves as Fire Inspector and coordinates construction plans review. An Assistant Fire Marshal serves as a Fire Inspector and support. The Fire & Life Safety Educator coordinates all public fire education including schools and conducts fire inspections. The part time inspector conducts fire inspections.

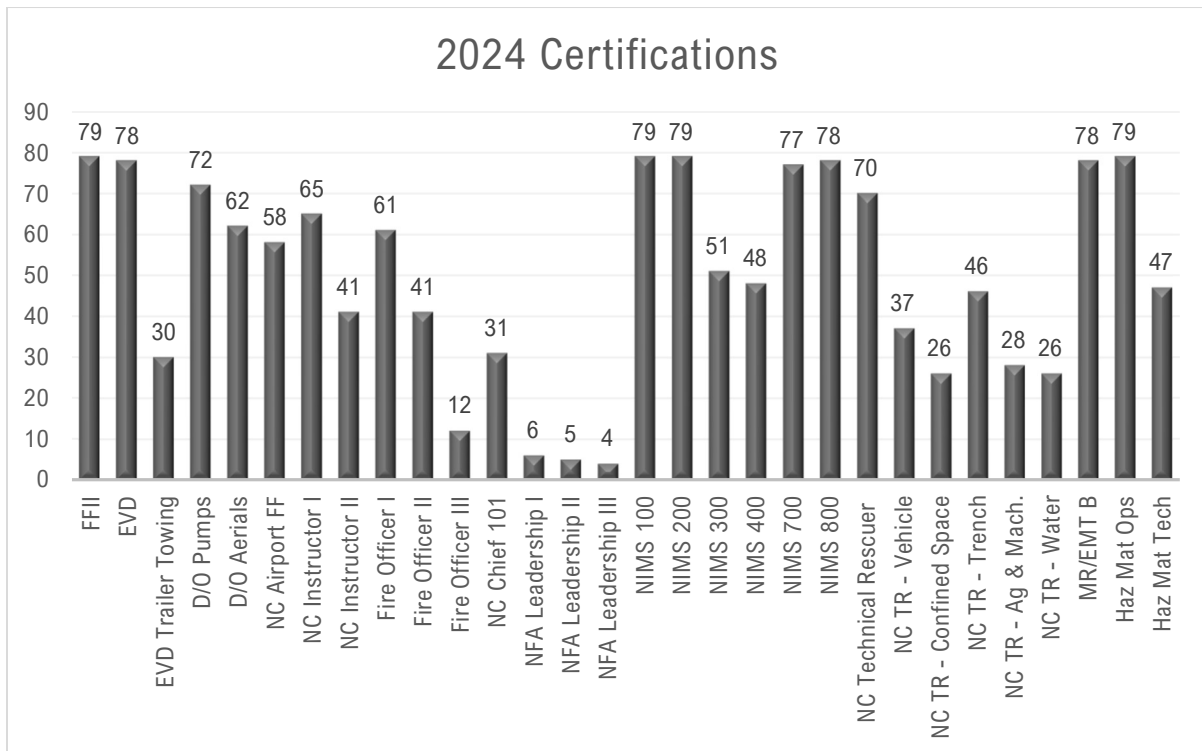
Chart 9: Organizational Structure



Certifications

The SFD requires personnel to maintain many North Carolina Certifications. Firefighter I & II and, Medical Responder and EMT are held by all employees with most Officers also holding Fire Officer I & II certification.

Chart 10: 2024 Certification Status



All-Hazard Risk Assessment of the Community

The SFD is an all-hazards response agency and responds to an array of emergency and non-emergency incidents at differing levels of risk. A structured all-hazard risk assessment is the foundation to determining given hazards and risk within any agency's jurisdiction. Through a proper all-hazards risk assessment, a realistic appraisal of the hazards and risks the community is likely to face was achieved. The SFD used the probability and frequency of known or potential hazards to determine the potential consequence of these hazards. Identification of these hazards provides the risk to each hazard to be assessed. Then based on the level of risk, a determination of the appropriate level of service and resources to mitigate such events is made to better serve the community.

The SFD identified, assessed, and categorized risk in a method that allows for the most efficient and effective deployment of resources. Developed from a broad base of information, including:

- Current hazard classification, planning, and mitigation measures from various sources.
- Current and historical demand for service data (frequency and distribution).
- Specific information about target hazards and land use.
- Station response areas and Geo-proximity zones.

As such, it provides information to help the department:

- Identify hazards and risks by Geo-proximity zones within jurisdiction.
- Prioritize risks in order to develop a community risk reduction strategy.
- Determine the appropriate resources necessary to reduce risks and attain desired outcomes.

Disaster Potential / Natural & Man-made Hazards

The SFD participates in planning efforts with Iredell County and assisted with the Iredell County Emergency Operations Plan (EOP) that was developed to address multiple hazards which threaten our jurisdiction and/or a municipality within the County.



Such as:

- Aircraft
- Major Fire
- Earthquake
- Major Power Failure
- Flooding
- Terrorist Event
- Fixed Chemical Facility Spill
- Tornado
- Transportation Chemical Spill
- Winter Storm
- Hurricane

Iredell County Emergency Operations Plan

Through use of a functional format, the Emergency Operations Plan (EOP) encourages an Integrated Emergency Management system utilizing Incident Command System (ICS) and the National Incident Management System (NIMS) approach to disasters; and fosters prompt, efficient and coordinated emergency response. This plan requires a system-wide integration of skills, people and resources. NIMS recognizes that plans developed for one type of emergency are extremely useful for other emergency situations and a significant amount of emergency operational capability can be established by addressing broadly applicable functions. As part of the Integrated Emergency Management System, Iredell County has formally adopted NIMS and as such has incorporated the NIMS and ICS into all major emergency and disaster response. The NIMS, ICS and this EOP do not differentiate between crisis management and consequence management; however, our focus is on consequence management.

This EOP presents a basic outline that serves as a summary document to multiple functional annexes. The annexes, their associated attachments, and references, define who will do what and when in emergency/disaster situations, as well as the coordinating agency or agencies responsible and cooperating agencies. Defining the roles of response agencies/personnel reduces the confusion, chaos, and conflicts during an emergency; and significantly decreases vulnerability of the public and their property to hazardous threats.

This plan meets the legal requirements of North Carolina General Statutes, Chapter 166-A, and complies with current objectives of NIMS. Additionally, it provides the necessary elements to ensure that our local government can fulfill its legal responsibilities for emergency preparedness.

Additional Plans

Technology has allowed the combination of other emergency plans and supplementary documents to be included as well. These plans have become an integral part of emergency response, preparedness, and mitigation efforts by the County. Each additional plan, while a separate document, is integrated seamlessly into this overall County EOP. As of the date above (October 05, 2016) the following additional plans are included.

- Rowan - Iredell Hazard Mitigation Plan
- Statesville Fire Department Continuity of Operations Plan (COOP)
- McGuire Nuclear Power Station - Radiological Emergency Response Plan (MNS-RERP)
- Response Plan for Aircraft Incidents
- Animal Disaster Response Plan

- State of North Carolina Hazard Mitigation Plan – 2018

Other plans for other agencies, departments or municipalities may be included when it is beneficial to do so or leads to more in-depth information that can be used to coordinate response forces. This plan is further supplemented by an integrated database that assists in resource management, local resource requests, damage assessment, shelter operations, vital facilities, and special needs as well as forms that are routinely used by responders, EOC management, Incident Commanders, Finance and others.

Certain parts of Iredell County, such as floodplains and steep slopes, are more prone to hazards. In addition, certain types of hazards are likely to produce only localized effects while others have widespread effects. Some natural hazards have extraordinary impacts but occur infrequently. Other hazards occur annually or several times a decade but cause little damage.

The total potential impact of each hazard on Iredell County, City of Statesville, and Towns of Mooresville, Troutman, Harmony, and Love Valley is projected in the table below. The projection is determined by combining the likely strength of the event with the size of area(s) affected and the density of human activity in the affected area. The table below depicts the composite index hazard rating for natural hazards affecting Iredell County:

Table 12: Iredell County Hazard Index - Annualized Frequency Values

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Cold Wave	0 events per year	0	2005-2021 (16 years)
Drought	29 events per year	784	2000-2021 (22 years)
Earthquake	0.051% chance per year	n/a	2021 dataset
Hail	5.5 events per year	188	1986-2021 (34 years)
Heat Wave	0.1 events per year	1	2005-2021 (16 years)
Hurricane	0.1 events per year	11	East 1851-2021 (171 years) / West 1949-2021 (73 years)
Ice Storm	1.7 events per year	116	1946-2014 (67 years)
Landslide	0 events per year	0	2010-2021 (12 years)
Lightning	61.8 events per year	1,360	1991-2012 (22 years)
Riverine Flooding	0.8 events per year	20	1996-2019 (24 years)
Strong Wind	2.5 events per year	86	1986-2021 (34 years)
Tornado	0.2 events per year	17	1950-2021 (72 years)
Wildfire	0.002% chance per year	n/a	2021 dataset
Winter Weather	2.2 events per year	35	2005-2021 (16 years)

The hazard index rating of winter storms in Iredell County is “high,” based on a “highly likely” occurrence; “large” range of occurrence, and “limited” level of impact. The hazard index rating of “high” indicates that severe winter storms are a serious threat that should be addressed by local hazard mitigation initiatives where possible. Because of the regional impact of severe winter storms, however, many initiatives are more appropriately addressed and coordinated by the State and utility providers. The most likely non-fire hazard in Iredell County is winter storms.

Jurisdictional Hazard Risk Ranking

In combination with the Iredell County EOP Hazard Index, based off recent events and historical data the SFD has comprised a risk ranking matrix for natural and man-made hazards. A probability and consequence value were given to hazards in relation to the likelihood of exposure, the magnitude of such an event, and the department’s ability to mitigate.

The highest risk identified for the City of Statesville is major fire. Based off community demographics and historical data, the hazard of a major fire has a greater probability and magnitude than other hazards. In 2024, the SFD responded to 173 fire related incidents: resulting in \$2,435,373.00 of property loss. These 173 fire incidents also resulted in five civilian casualties (1 death and 4 injuries).

The age, type of construction, and exposure potential of the City’s downtown area gives the event of a major fire a higher magnitude rating.

The SFD also experienced in 2016 a severe weather event in which 7 plus inches of rain fell within several hours. This resulted in significant flooding and required a multi-jurisdictional response into the city in which 21 water rescues were made. The city has experienced several severe storms since this time, resulting in multiple flooding events. In combination with a failing storm water drainage system within the city and increased likelihood of the event; severe weather/flooding is the next highest-ranking risk. In 2024 the SFD certified 5 Water Rescue Technicians, 5 SRTs, and 5 SRTAs to increase response capabilities. The SFD utilizes policy (2.2.9 - Severe Weather Operations) to assist in mitigation efforts for severe weather operations. Below is the risk ranking for natural and man-made hazards in the City of Statesville:

Table 13: Jurisdiction Hazard Risk Ranking

Hazard	Probability (Unlikely 1 – Highly Likely 6)	Magnitude (Limited 1 – Catastrophic – 5)	Risk Ranking
Major Fire	Highly Likely (6)	Critical (3)	1 (9)
Flooding/Severe Weather & Winter Storm	Likely (5)	Limited to Critical (2)	2 (7)
Fixed facility & Transportation Chemical Spill	Likely and Occasional (4)	Limited to Critical (2)	3 (6)
Terrorist Event & Earthquake	Unlikely (1)	Critical to Catastrophic (5)	4 (6)
Aircraft Emergencies & Wildfire	Occasional (3)	Limited to Critical (2)	5 (5)
Tornado & Major Power Failure	Occasional to Unlikely (2)	Limited to Critical (2)	6 (4)
Hurricane	Unlikely (1)	Limited to Critical (2)	7 (3)

Current and Historical Data / Demands for Service Risk Assessment

A further determination of community risks can be made by evaluating historical data to determine the probability of an event in a particular property and the consequences of that event. Historical experience was determined by analyzing incident report data stored in the Fire Records Management System. Data ranges from total incidents by year, incidents by service type, incidents by occupancy type, and fire prevention activity.

Chart 11: Total Incidents 2002-2024

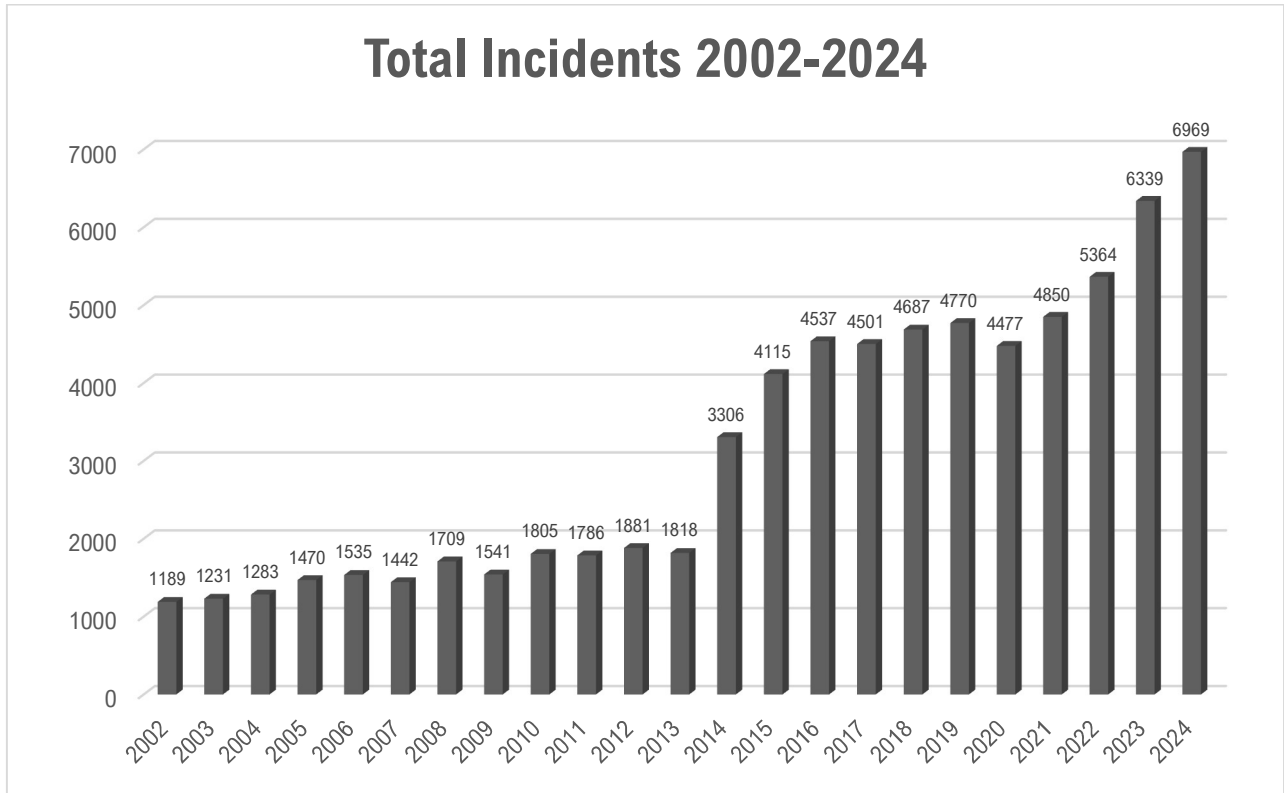


Table 14: Incidents by Response Class 2024

Response Class	Incidents	Percentage
Fire	173	2.48%
HazMat	126	1.81%
Medical	4,230	60.70%
Tech Rescue	530	7.61%
ARFF	1	0.01%
Other	1,909	27.39%
TOTAL	6,969	

Note: Non-Emergency Data merged with Other Response Class in 2023

Table 15: Incident Response by Incident Types 2020-2024

Response Class/Year	2020	2021	2022	2023	2024	Totals
Fire	101	135	129	171	173	709
HazMat	96	96	110	126	126	554
Medical	2,449	2,616	2,913	3,846	4,230	16,054
Tech Rescue	405	396	505	522	530	2,358
ARFF	0	2	2	0	1	5
Non-Emergency	293	296	356	-	-	945
Other-Emergency	669	733	738	1,674	1,909	5,723
TOTALS	4,013	4,274	4,753	6,339	6,969	26,348

Note: Non-Emergency eliminated in 2023

Chart 12: Incident Types by Fire Station District NFIRS Grouping 2024

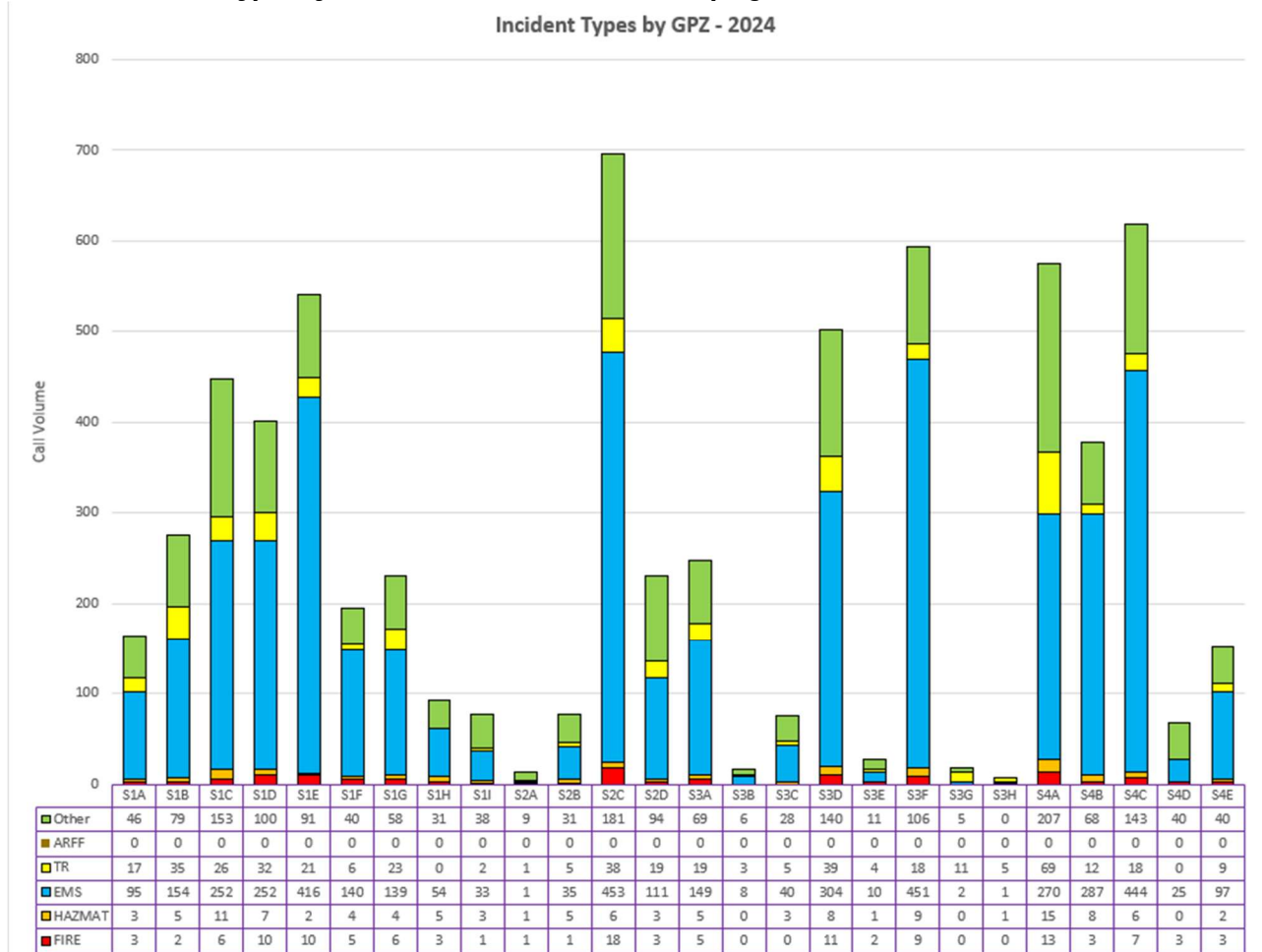


Table 16: Demand for Service by Occupancy Type 2024 (based on commercial inspections)

Occupancy Type - 2024	Total
Assembly 1	2
Assembly 2	134
Assembly 3	132
Assembly 4	1
Business	920
Educational	31
Factory 1	77
Factory 2	34
Foster Homes	66
High Hazard 1	0
High Hazard 2	5
High Hazard 3	3
High Hazard 4	3
Institutional 1	6
Institutional 2	12
Institutional 3	3
Institutional 4	13
Mercantile	286
Residential 1	23
Residential 2	33
Residential 3	3
Residential 4	9
Storage 1	300
Storage 2	39
U (Miscellaneous)	6

Table 17: Fire & Life Safety Division Activity 2024

Category 2024	Description	Value
Inspections	Regular / New Construction	826
Investigations	Total Investigations	173
	Cause / Determination – Intentional	17
	Cause / Determination – Failure of equipment or heat source	16
	Cause / Determination – Other	48
	Cause / Determination – Act of nature	1
	Cause / Determination – Undetermined after investigation	23
	Cause / Determination – Under investigation	6
	Cause / Determination – Unintentional	62
	Cause / Determination – Identification Percentage	83.24%
Planning Services	Plan Reviews	158

Table 18: Fire & Life Safety Division Activity 2020-2024

Category	Description	2020	2021	2022	2023	2024
Inspections	Regular / New Construction	864	1162	1198	939	826
Investigations	Fire Casualties	7	19	7	5	5
	Investigations	109	154	128	145	173
	Cause / Determination – Intentional	10	21	21	19	17
	Cause / Determination – Failure of equipment or heat source	21	20	10	20	16
	Cause / Determination – Other	0	0	0	10	48
	Cause / Determination – Act of nature	0	1	1	0	1
	Cause / Determination – Undetermined after investigation	14	22	19	14	23
	Cause / Determination – Under investigation	5	8	8	8	6
	Cause / Determination – Unintentional	59	82	69	74	62
	Cause / Determination – Identification Percentage	82.57%	80.52%	78.90%	84.83%	83.24%
Planning Services	Plan Reviews	77	89	111	59	158

Table 19: Community Education and Outreach 2024

Age Groups / Life Safety Programs	Number of Participants / Programs
Seniors	130
Adults	1,946
Children	4,217
Number of Life Safety Programs	175
Number of Public Radio Programs	12
Number of Newspaper Articles	4
Smoke / CO Detector Installations	123
TOTAL	6,607

Table 20: Community Education and Outreach 2020-2024

Age Groups / Life Safety Programs	2020	2021	2022	2023	2024
Seniors	45	0	3	70	130
Adults	17	0	20	480	1,946
Children	576	20	1278	3039	4,217
Number of Life Safety Programs	15	2	58	114	175
Number of Public Radio Programs	12	CW	12	12	12
Number of Newspaper Articles	4	CW	1	2	4
Smoke / CO Detector Installations	63	83	83	102	123
TOTAL	732	105	1445	3,819	6,607

*Fire & Life Safety programs were reduced in 2021 due to COVID-19 restrictions

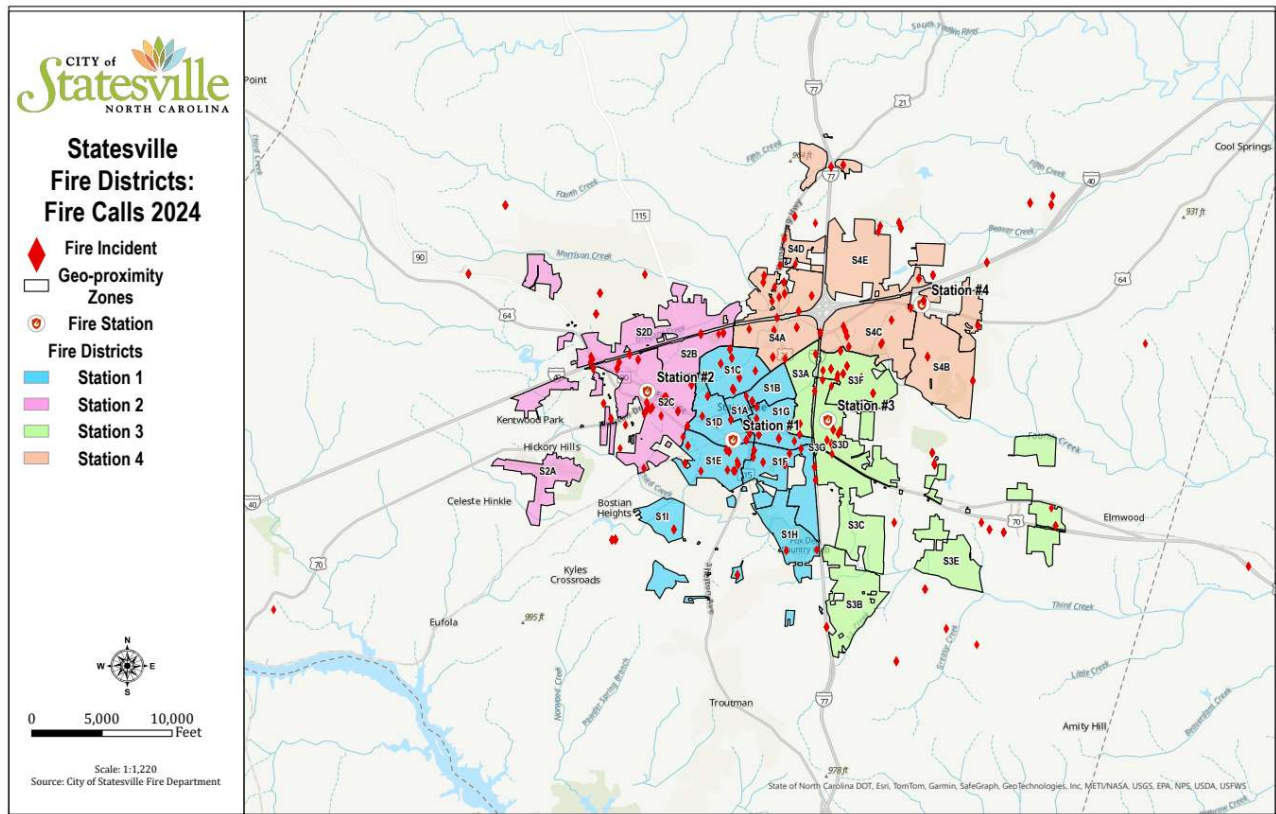
Service Level Risk Assessment

The SFD looked at historical data, 2020-2024, to determine the service level risk. From 2018-2022, every call for service was analysed by incident type and placed into one of seven categories. Each category was further analyzed to determine given risk. Those categories for 2018-2022 were Fire, Medical, Hazmat, Technical Rescue, ARFF, Non-emergency and Other. In 2023, after re-evaluation and re-accreditation, SFD modified the response classes. The major change occurring with combining Non-Emergency and Other into one response class, Other. All service level risk data from 2023 and 2024 is placed into one of six response classes: Fire, Medical, HazMat, Technical Rescue, ARFF, or Other.

Fire Risk Assessment

The fire risk assessment looked at several different areas to assess the risk of fire. This assessment looked at fire casualties (civilian and firefighter), property value/loss comparison, fires confined to room of origin, fire by type, and occupancy exposure. The SFD also applied an Occupancy Vulnerability Assessment Profile (OVAP) score to occupancies within response area. All areas assessed assisted in determining the level of risk (Low, Moderate, Significant, and Maximum).

Map 17: Fire Districts with Fires Maximum, Significant, Moderate & Low Risks – 2024



Map 18: Fire Districts with Fires Maximum, Significant, Moderate, & Low Risks – 2020-2024

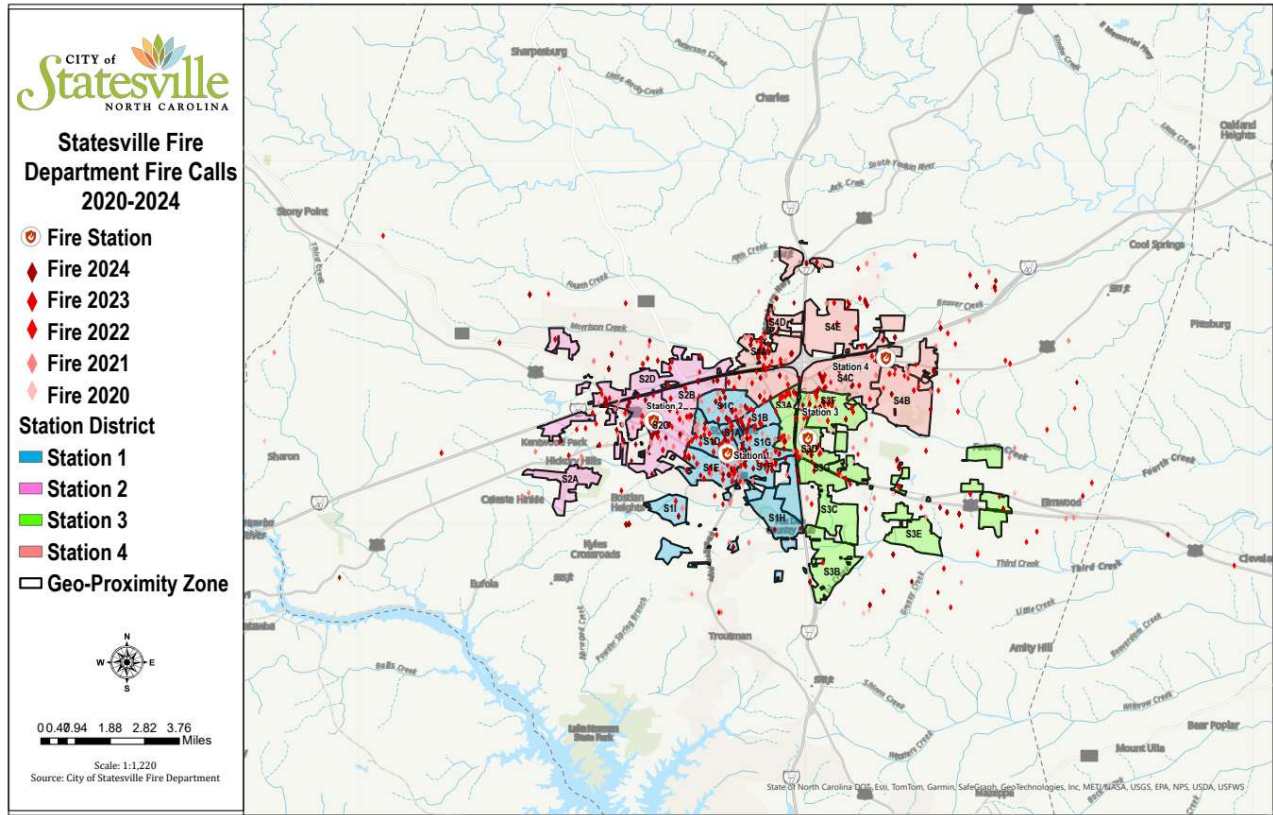


Table 21: Civilian Fire Casualties

Civilian Causality 2020-2024	2020	2021	2022	2023	2024
Minor	3	4	6	3	3
Moderate	2	2	0	2	0
Severe	0	0	2	0	0
Life Threatening	0	0	0	0	1
Undetermined	0	0	0	0	0
Fatality	0	0	0	0	1
Total	5	6	8	5	5

Table 22: Firefighter Fire Casualties

Firefighter Causality 2020-2024	2020	2021	2022	2023	2024	Total
Burns	1	1	1	1	0	4
Smoke or Gas Inhalation	0	0	0	1	0	1
Other Respiratory Distress	0	1	0	0	0	1
Burns and Smoke Inhalation	0	0	0	0	0	0
Wound, Cut, Bleeding, Bruise	0	0	1	1	1	3
Dislocation, Fracture	0	0	0	1	0	1
Heart Attack or Stroke	0	1	0	0	0	1
Strain, Sprain, Muscular Pain	0	0	0	3	1	4
Thermal Stress (frostbite, heat exhaustion)	0	0	0	2	0	2
Other	1	4	4	1	7	17
Total	2	7	6	10	9	34

Table 23: Property Value / Loss Comparison 2020-2024

Year	Property Value	Property Loss
2020	\$57,276,054	\$1,045,095
2021	\$29,746,578	\$6,220,861
2022	\$13,695,846	\$3,293,348
2023	\$101,639,684	\$6,873,927
2024	\$392,668,134	\$2,435,373
Total	\$595,026,296	\$19,868,604



Table 24: Fires Confined to Room of Origin and Less than Room of Origin 2020-2024

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.
2020	67%	0%	50%	33%	33%	No Fires
2021	75%	100%	33%	58%	No Fires	50%
2022	0%	100%	100%	100%	100%	50%
2023	67%	67%	75%	50%	40%	0%
2024	50%	40%	0%	0%	0%	66%

Year	Jul.	Aug.	Sept.	Oct.	Nov	Dec.
2020	100%	100%	0%	100%	100%	50%
2021	33%	No Fires	0%	67%	67%	No Fires
2022	50%	0%	50%	No Fires	28%	50%
2023	50%	80%	100%	100%	33%	100%
2024	100%	50%	100%	25%	20%	50%

Table 25: Fire Incident Overview 2020-2024

Fire Incident Types	2020	2021	2022	2023	2024	Totals
100 - Fire, other	3	7	6	1	2	19
111 - Building fire	36	66	48	50	31	231
112 - Fires in structure other than in a building	1	2	0	2	0	5
113 - Cooking fire, confined to container	12	18	17	22	15	84
114 - Chimney or flue fire, confined to chimney or flue	0	1	2	1	0	4
115 - Incinerator overload or malfunction, fire confined	0	0	1	0	0	1
116 - Fuel burner/boiler malfunction, fire confined	1	0	0	0	0	1
117 - Commercial Compactor fire, confined to rubbish	0	1	0	4	2	7
118 - Trash or rubbish fire, contained	7	11	5	8	13	44
121 - Fire in mobile home used as fixed residence	1	1	0	0	0	2
122 - Fire in motor home, camper, recreational vehicle	0	0	0	2	0	2
130 - Mobile property (vehicle) fire, other	0	1	3	4	1	9
131 - Passenger vehicle fire	29	30	23	23	15	120
132 - Road freight or transport vehicle fire	3	6	3	2	2	16
134 - Water vehicle fire	0	0	0	0	0	0
138 - Off-road vehicle or heavy equipment fire	0	1	1	1	2	5
140 - Natural vegetation fire, other	2	4	3	2	4	15
141 - Forest, woods or wildland fire	3	4	2	1	4	14
142 - Brush or brush-and-grass mixture fire	2	5	8	12	11	38
143 - Grass fire	9	7	18	10	7	51
150 - Outside rubbish fire, other	0	4	6	6	5	21
151 - Outside rubbish, trash or waste fire	6	12	7	13	9	47
152 - Garbage dump or sanitary landfill fire	0	1	2	0	0	3
153 - Construction or demolition landfill fire	0	1	1	0	0	2
154 - Dumpster or other outside trash receptacle fire	4	3	2	5	0	14
155- Outside stationary compactor/compacted trash fire	0	0	1	0	0	1
160 - Special outside fire, other	1	0	0	1	0	2
161 - Outside storage fire	0	1	0	0	0	1
162 - Outside equipment fire	3	3	0	1	0	7
171 - Cultivated grain or crop fire	1	0	0	0	0	1
173 - Cultivated trees or nursery stock fire	0	2	0	0	1	3
Totals	124	192	159	171	124	770

Table 26: Water Flow Risk Assessment - 2024

Station 1 GPZs	Sufficient	Insufficient	% Water Supply Met
S1A	266	2	99.25%
S1B	97	0	100.00%
S1C	87	0	100.00%
S1D	60	3	95.24%
S1E	52	0	100.00%
S1F	43	0	100.00%
S1G	57	1	98.28%
S1H	1	0	100.00%
S1I	2	0	100.00%
Station 2 GPZs	Sufficient	Insufficient	% Water Supply Met
S2A	22	0	100.00%
S2B	20	0	100.00%
S2C	225	2	99.12%
S2D	101	2	98.06%
Station 3 GPZs	Sufficient	Insufficient	% Water Supply Met
S3A	59	0	100.00%
S3B	1	0	100.00%
S3C	56	2	96.55%
S3D	140	1	99.29%
S3E	10	0	100.00%
S3F	114	0	100.00%
S3G	7	0	100.00%
S3H	0	0	N/A
Station 4 GPZs	Sufficient	Insufficient	% Water Supply Met
S4A	280	1	99.64%
S4B	22	0	100.00%
S4C	95	0	100.00%
S4D	3	1	75.00%
S4E	111	1	99.11%
All GPZs	Sufficient	Insufficient	% Water Supply Met
Total - 2024	1931	16	99.18%

Table 27: Fire Protection Systems by Occupancy Type -2024

Occupancy Type	Sprinkled	Not Sprinklered	Total	Percent
Assembly 1	0	2	2	0.00%
Assembly 2	14	118	132	10.61%
Assembly 3	14	117	131	10.69%
Assembly 4	1	0	1	100.00%
Business	74	834	908	8.15%
Educational	5	25	30	16.67%
Factory 1	49	26	75	65.33%
Factory 2	15	19	34	44.12%
Foster Home	0	59	59	0.00%
High Hazard 1	0	0	0	#DIV/0!
High Hazard 2	3	2	5	60.00%
High Hazard 3	1	2	3	33.33%
High Hazard 4	0	3	3	0.00%
Institutional 1	0	6	6	0.00%
Institutional 2	12	0	12	100.00%
Institutional 3	2	1	3	66.67%
Institutional 4	0	13	13	0.00%
Mercantile	75	209	284	26.41%
Residential 1	9	14	23	39.13%
Residential 2	13	20	33	39.39%
Residential 3	0	3	3	0.00%
Residential 4	4	5	9	44.44%
Storage 1	85	211	296	28.72%
Storage 2	9	30	39	23.08%
U (Miscellaneous)	1	6	7	14.29%
TOTAL -2024	386	1725	2111	18.29%

Table 28: Occupancy with Fire Protection Systems by GPZ - 2024

GPZ 2024	Fire Protection In Place	No Fire Protection In Place	Total	Percent with Fire Protection System in Place
S1A	26	272	298	8.72%
S1B	1	100	101	0.99%
S1C	3	88	91	3.30%
S1D	17	51	68	25.00%
S1E	3	51	54	5.56%
S1F	4	44	48	8.33%
S1G	8	52	60	13.33%
S1H	0	4	4	0.00%
S1I	0	9	9	0.00%
Totals	62	671	733	8.46%
S2A	4	19	23	17.39%
S2B	1	24	25	4.00%
S2C	64	176	240	26.67%
S2D	29	85	114	25.44%
Totals	98	304	402	24.38%
S3A	5	58	63	7.94%
S3B	1	0	1	100.00%
S3C	15	45	60	25.00%
S3D	50	97	147	34.01%
S3E	6	11	17	35.29%
S3F	39	80	119	32.77%
S3G	2	6	8	25.00%
S3H	0	0	0	0.00%
Totals	118	297	415	28.43%
S4A	64	235	299	21.40%
S4B	3	27	30	10.00%
S4C	13	94	107	12.15%
S4D	2	5	7	28.57%
S4E	26	92	118	22.03%
Totals	108	453	561	19.25%
All Zones	386	1725	2111	22.38%

Table 29: Square Footage of Commercial Buildings by GPZ - 2024

GPZ - 2024	1-19999 Square Feet	20000-49999 Square Feet	50000 + Square Feet	Total Square Feet
S1A	246	45	5	296
S1B	100	0	1	101
S1C	82	7	2	91
S1D	56	8	4	68
S1E	50	4	0	54
S1F	44	2	2	48
S1G	51	7	2	60
S1H	4	0	0	4
S1I	9	0	0	9
Totals	642	73	16	731
GPZ	1-19999	20000-49999	50000 +	Total
S2A	21	1	1	23
S2B	25	0	0	25
S2C	179	40	21	240
S2D	86	9	19	114
Totals	311	50	41	402
GPZ	1-19999	20000-49999	50000 +	Total
S3A	56	6	1	63
S3B	0	0	1	1
S3C	41	12	7	60
S3D	99	21	27	147
S3E	10	3	4	17
S3F	107	4	8	119
S3G	6	1	1	8
S3H	0	0	0	0
Totals	319	47	49	415
GPZ	1-19999	20000-49999	50000 +	Total
S4A	251	29	19	299
S4B	30	0	0	30
S4C	96	9	2	107
S4D	3	3	1	7
S4E	82	24	12	118
Totals	462	65	34	561
All Zones	1-19999	20000-49999	50000 +	Total
Totals	1734	235	140	2109

Table 30: Commercial Building Stories

GPZ	Stories 1	Stories 2	Stories 3	Stories 4	Stories 5	Stories 6	Stories 7	No Data	Total
S1A	89	197	8	4	1	1	1	-	301
S1B	59	44	-	-	-	-	-	-	103
S1C	47	42	2	-	-	-	-	-	91
S1D	42	25	2	-	-	-	-	-	69
S1E	49	4	1	-	-	-	-	-	54
S1F	41	7	-	-	-	-	-	-	48
S1G	56	4	-	-	-	-	-	-	60
S1H	1	3	-	-	-	-	-	-	4
S1I	4	5	-	-	-	-	-	-	9
Totals	388	331	13	4	1	1	1	-	739
S2A	21	1	1	-	-	-	-	-	23
S2B	23	2	-	-	-	-	-	-	25
S2C	222	19	-	-	-	-	-	-	242
S2D	106	6	2	-	-	-	-	-	114
Totals	372	28	3	-	-	-	-	1	404
S3A	52	9	1	1	-	-	-	-	63
S3B	1	-	-	-	-	-	-	-	1
S3C	53	6	-	-	-	-	-	1	60
S3D	140	3	2	2	-	-	-	-	147
S3E	13	-	-	-	-	-	-	4	17
S3F	109	8	3	-	-	-	-	-	120
S3G	6	2	-	-	-	-	-	-	8
S3H	-	-	-	-	-	-	-	-	-
S3I	-	-	-	-	-	-	-	-	-
Totals	374	28	6	3	-	-	-	5	416
S4A	261	27	7	1	1	-	-	3	300
S4B	25	2	-	-	-	-	-	1	28
S4C	95	12	-	1	-	-	-	-	108
S4D	4	-	1	-	-	-	-	2	7
S4E	112	4	1	-	1	-	-	-	118
Totals	497	45	9	2	2	-	-	6	561
All Zones	1644	436	31	9	3	1	1	18	2143

Table 31: Commercial Building Status

Building Status	St. 1	St. 2	St. 3	St.4	No Data	Totals
Occupied and operating	625	360	343	507	8	1843
Under construction	4	7	11	8	-	30
Under major renovation	4	2	1	1	-	8
Undetermined	5	-	-	-	13	18
Vacant and secured	57	20	40	26	-	143
Vacant	32	10	17	17	-	76
Being Demolished	4	1	-	1	2	8
Tag	3	2	2	1	-	8
Unsafe	5	2	2	-	-	9
Totals - 2024	739	404	416	561	23	2143

Table 32: OVAP Risk Assessment by GPZ – 2024

Risk Level	OVAP Score	Number Occupancies	Percent
ZONE: S1A			
Significant	59.99 - 40.00	7	0.36%
Moderate	39.99 - 15.00	261	13.41%
ZONE: S1B			
Significant	59.99 - 40.00	1	0.05%
Moderate	39.99 - 15.00	96	4.93%
ZONE: S1C			
Significant	59.99 - 40.00	1	0.05%
Moderate	39.99 - 15.00	86	4.42%
ZONE: S1D			
Significant	59.99 - 40.00	5	0.26%
Moderate	39.99 - 15.00	58	2.98%
ZONE: S1E			
Moderate	39.99 - 15.00	52	2.67%
ZONE: S1F			
Moderate	39.99 - 15.00	43	2.21%
ZONE: S1G			
Significant	59.99 - 40.00	2	0.10%
Moderate	39.99 - 15.00	56	2.88%
ZONE: S1H			
Moderate	39.99 - 15.00	1	0.05%
ZONE: S1I			
Moderate	39.99 - 15.00	2	0.10%
ZONE: S2A			
Moderate	39.99 - 15.00	22	1.13%
ZONE: S2B			
Moderate	39.99 - 15.00	20	1.03%
ZONE: S2C			
Maximum	60.00 +	1	0.05%
Significant	59.99 - 40.00	3	0.15%
Moderate	39.99 - 15.00	223	11.45%
ZONE: S2D			
Significant	59.99 - 40.00	2	0.10%
Moderate	39.99 - 15.00	101	5.19%
ZONE: S3A			
Significant	59.99 - 40.00	1	0.05%

Risk Level	OVAP Score	Number Occupancies	Percent
Moderate	39.99 - 15.00	58	2.98%
ZONE: S3B			
Moderate	39.99 - 15.00	1	0.05%
ZONE: S3C			
Significant	59.99 - 40.00	1	0.05%
Moderate	39.99 - 15.00	57	2.93%
ZONE: S3D			
Moderate	39.99 - 15.00	141	7.24%
ZONE: S3E			
Moderate	39.99 - 15.00	10	0.51%
ZONE: S3F			
Significant	59.99 - 40.00	3	0.15%
Moderate	39.99 - 15.00	111	5.70%
ZONE: S3G			
Moderate	39.99 - 15.00	7	0.36%
ZONE: S4A			
Significant	59.99 - 40.00	4	0.21%
Moderate	39.99 - 15.00	277	14.23%
ZONE: S4B			
Moderate	39.99 - 15.00	22	1.13%
ZONE: S4C			
Significant	59.99 - 40.00	2	0.10%
Moderate	39.99 - 15.00	93	4.78%
ZONE: S4D			
Significant	59.99 - 40.00	1	0.05%
Moderate	39.99 - 15.00	3	0.15%
ZONE: S4E			
Significant	59.99 - 40.00	2	0.10%
Moderate	39.99 - 15.00	110	5.65%
# Occupancies with OVAP Scores		1947	

Table 33: Heron Risk Assessment by GPZ – 2024

Heron Risk Rating - 2024					
GPZ	Low	Moderate	Significant	Maximum	Total
S1A	27	4	223	13	267
S1B	21	0	75	0	96
S1C	17	2	66	2	87
S1D	9	0	47	5	61
S1E	13	0	40	0	53
S1F	9	1	33	0	43
S1G	7	0	49	1	57
S1H	0	0	0	1	1
S1I	2	0	0	0	2
S2A	0	0	22	0	22
S2B	2	0	18	0	20
S2C	25	3	190	8	226
S2D	9	0	93	1	103
S3A	7	3	48	0	58
S3B	0	0	0	1	1
S3C	5	0	51	2	58
S3D	19	5	111	5	140
S3E	2	0	7	2	11
S3F	15	0	97	2	114
S3G	2	0	6	0	8
S4A	27	2	245	6	280
S4B	3	0	19	0	22
S4C	13	2	79	2	96
S4D	1	0	3	0	4
S4E	12	0	98	2	112
Total	247	22	1620	53	1942

Table 34: Fire Risk Categories

FIRE RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Car fires, dumpster fires, small outside fires. Fire incidents that only require a single engine response
MODERATE	Occupancy fires in residential 1 to 2 family structures
SIGNIFICANT	Occupancy fires in Public Assembly Property, Educational Property, Institutional Property, Store and Office Property, Basic Industry, Storage Property, Special Property, Multi-Family Dwellings (Apartments, Hotels, and Dormitories)
MAXIMUM	Fires at Healthcare, Detention, and Correction Facilities with NFIRS Codes 311, 323, 331, and 361

Table 35: Fire Critical Tasking

FIRE RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up Pump operator Establish water supply Deploy attack line 	4	4	4	4
2 ND ENGINE	<ul style="list-style-type: none"> Deploy back-up line Temporary RIT Search and Rescue Establish water supply if needed 	4	4	4	-

FIRE RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
3 RD ENGINE	<ul style="list-style-type: none"> Ventilation Salvage / Overhaul Provide Safety Officer 	4	4	4	-
4 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> Assume RIT Secure utilities Soften structure Air monitoring 	4	4	-	-
5 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> Mutual-Aid Manpower 	3	-	-	-
6 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> Mutual-Aid Manpower 	3	-	-	-
1 ST LADDER	<ul style="list-style-type: none"> Ventilation Forcible entry 	4	4	4	-
2 ND LADDER (WORKING FIRE)	<ul style="list-style-type: none"> Mutual-Aid Second Aerial Device Elevated Master stream 	3	-	-	-
1 ST CHIEF	<ul style="list-style-type: none"> Incident Command 	1	1	1	-
2 ND CHIEF (WORKING FIRE)	<ul style="list-style-type: none"> Accountability Division Operations Rehab 	1	1	-	-
3 RD CHIEF (WORKING FIRE)	<ul style="list-style-type: none"> Safety Officer 	1	-	-	-

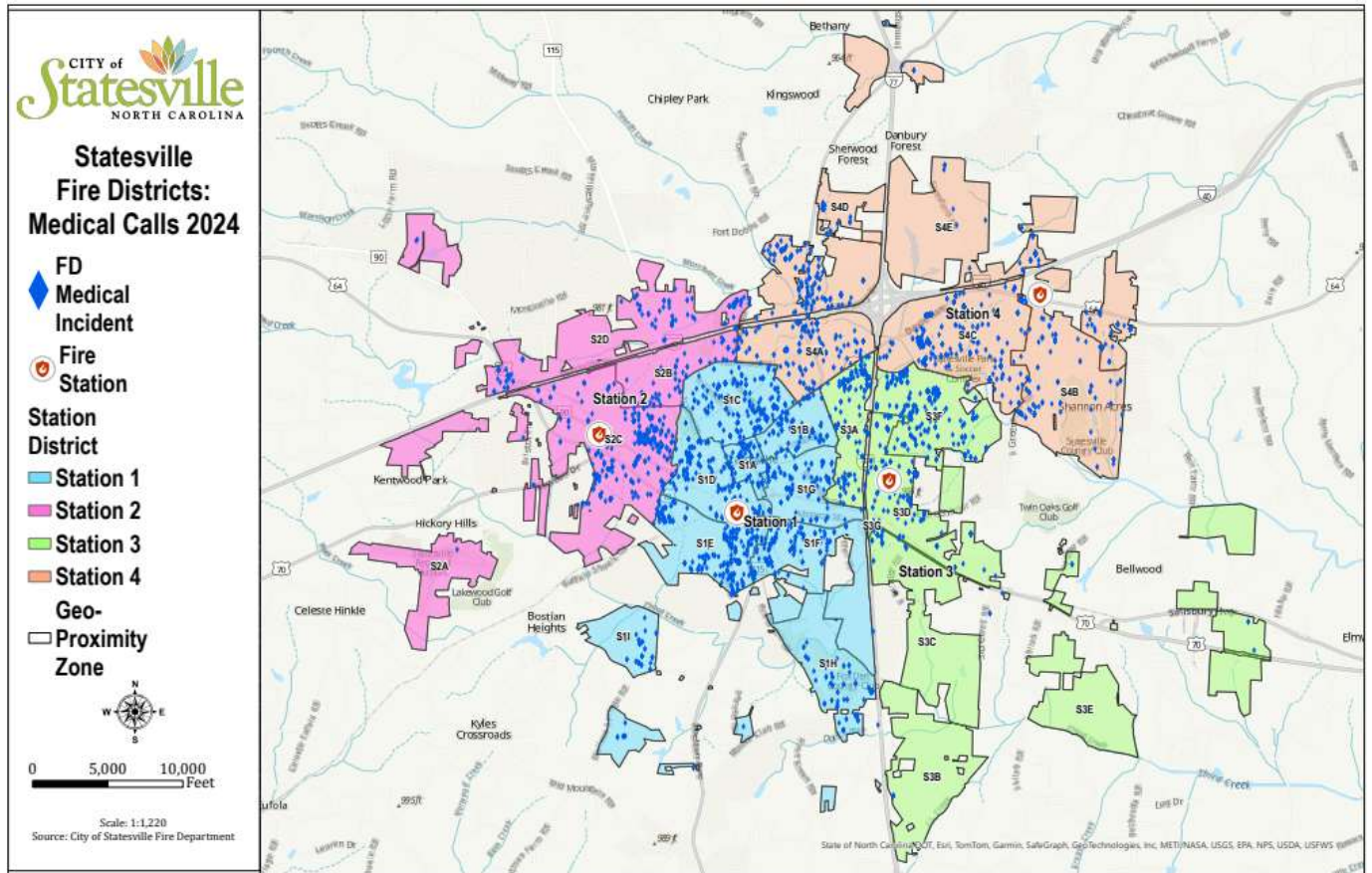


FIRE RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
TOTAL		31	21	17	4

Emergency Medical Service (EMS) Risk Assessment

The risk assessment for EMS involved a historical review of incidents by incident classification. All EMS calls have been determined low risk, as the SFD responds to medical emergencies as an assisting agency to Iredell County EMS. The potential for all levels were also assessed based of the type of event (Low, Moderate, or Significant).

Map 19: Fire District with Medical Calls 2024



Map 20: Fire District with Medical Calls 2020-2024

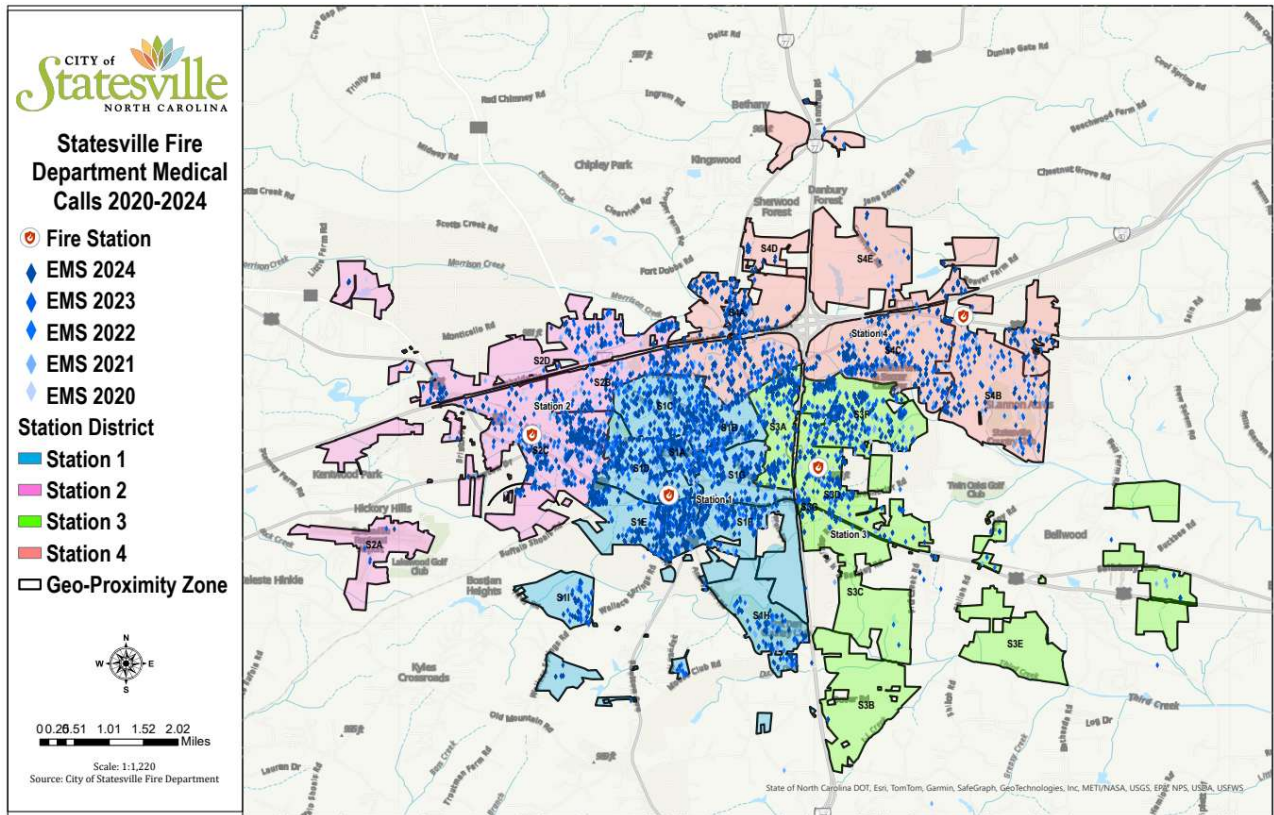


Table 36: Medical Incident Overview 2020-2024

Medical Incident Types	2020	2021	2022	2023	2024	Totals
300 - Rescue, EMS incident, other	2	0	1	331	569	903
311 - Medical assist, assist EMS crew	230	160	224	242	237	1,093
320 - Emergency medical service, other	2	3	2	10	17	34
321 - EMS call, excluding vehicle accident with injury	2,363	2,546	2,772	3,226	3,285	14,192
554 – Assist Invalid	N/A	N/A	N/A	37	122	159
TOTAL	2,597	2,709	2,999	3,846	4,230	

554 moved from Other (Non-emergency) incident type in 2023 to EMS Response Class

Table 37: EMS Risk Categories

EMS RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Alpha, Bravo, Charlie & Delta Determinantes
MODERATE	Echo Determinates
SIGNIFICANT	Active Shooter/Mass Casualty

Table 38: EMS Critical Tasking

EMS RESPONSE	CRITICAL TASKS	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> • Patient assessment • Initial treatment • Airway management • CPR 	4	4	2
2 ND ENGINE	<ul style="list-style-type: none"> • Mass causality treatment 	4	-	-
CHIEF	<ul style="list-style-type: none"> • Incident/Unified Command 	1	-	-
TOTAL		9	4	2

Hazardous Materials Risk Assessment

The risk assessment for hazardous materials involved a historical review of incidents, probability / consequence, and need for outside resources. Hazardous Materials emergency operations are divided into three incident levels (I, II, & III) based on the degree of hazard, required skills and duties of the responders, needed resources, and the emergency conditions of the incident. The three incident level designations greatly assist emergency responders in predetermining the needs of the incident. The three incident levels are defined in the NC State Regional Response Team Standard, the National Fire Academy and are listed in the NFPA 470 as a guide for response and training. Tier II reporting, which is web-based, was also utilized to determine the location of facilities with hazardous materials on location. Transportation networks (Highway & Rail) were also noted as high risk areas.

Level I: A minor situation within the capabilities of first responders trained at the “operational” level. A Level I incident involves the release, or possible release, of a small amount of gas, liquid or solid of a known (identified) hazardous material less than 50 gallons or pounds. In addition, the agency on-scene has the expertise and proper equipment to safely mitigate the incident.

As a minimum, a command post and an exclusion zone should be established with all incidents. The Emergency Response Guide should be referenced for initial isolation and protective action distances. The incident commander should restrict movement of personnel into the exclusion zone. Only personnel entering for a specific reason and in the proper level of protective equipment should be allowed.

An incident should be immediately upgraded to Level II for the release or potential release of an unknown hazardous material or suspected hazardous material.

Typical Level I incidents include:

- Minor leaks or spills from a 55-gallon drum, cylinders up to one-ton capacity, bags or packages.
- Minor leaks or spills which can be handled with absorbent materials and resources readily available on-site.
- Release of chemicals which do not produce an environment which is immediately dangerous to life and health (IDLH) or above the Lower Explosion Limit (LEL) of a product.
- Containers that are involved in an accident that have no visible damage.
- Chemical releases that have minimal environmental impact that do not require outside resources.
- Leaking valves on containers which do not require the product to be immediately off-loaded.
- Evacuations limited to a single intersection or building.
- No life-threatening situation from materials involved.
- Suspicious packages that the threat and substance are considered non-hazardous.
- Natural gas leaks regardless of line diameter

Level II: These are incidents that are beyond the capabilities of an agency with jurisdictional responsibility and that require mitigation by a hazardous materials team. This can range from a small incident involving any amount of an unknown substance to a large incident involving multiple agencies and jurisdictions.

A Level II incident should be declared by the Incident Commander and the Initial Response Team if the incident involves a sufficient quantity of gas, liquid or solid of a known hazardous substance or any quantity of an unknown material that has been released or offers the potential for release.

A Level II incident should be declared for the release of any quantity of a known solid or liquid toxic material in a critical public area or for the release or potential release of any quantity of an unknown solid, liquid, or gaseous toxic material or suspected toxic material (all gases other than natural gas are considered toxic).

In a Level II incident, a formal and properly identified Command Post with a removed staging area, an Incident Safety Officer, and a Hazardous Materials Sector should be established. Control zones must be established and maintained as early as possible and evaluated and monitored throughout the incident. Localized evacuation may need to be implemented and outside agencies should be notified.

Typical Level II incidents include:

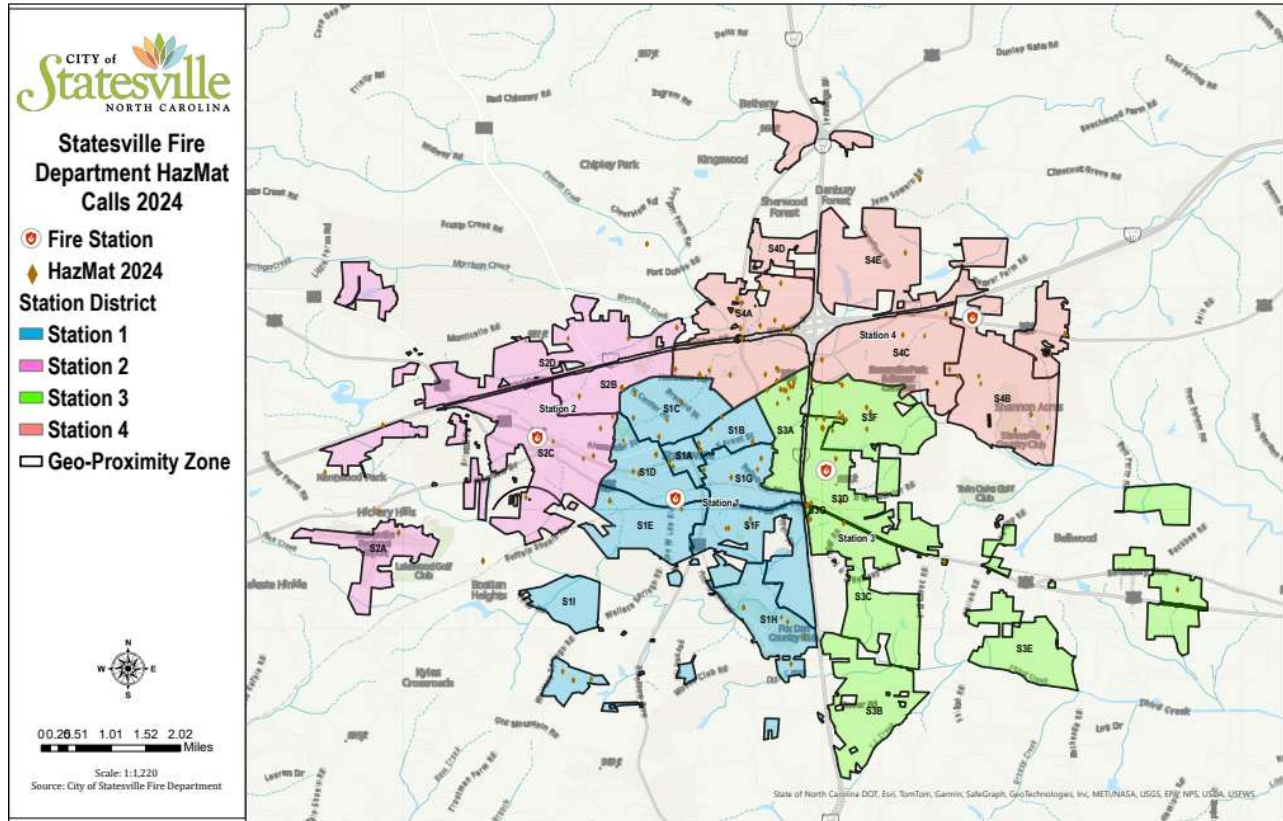
- One or more 55-gallon drums, one-ton cylinders, nurse tanks, totes, portable containers that are leaking considerable amounts of a known substance.
- A major, liquefied gas leak due to puncture, crack, or crease of a large tank where ignition sources are a real threat.
- Leaking containers, tank trucks or railroad tank cars with a hazardous material on board whose structural integrity is in question.
- Train derailments involving railroad tank cars filled with hazardous materials with leaks that can be controlled by local hazardous materials teams.
- A vehicle or train fire involving hazardous materials or hazardous wastes that pose a serious threat of a boiling liquid expanding vapor explosion (BLEVE).
- Incidents involving a fatality or serious injury attributed to hazardous substances.
- Evacuations consisting of an apartment complex, city block or large facility with many employees.
- Chemical releases that pose a moderate threat to the environment that require state agency involvement such as Department of Environment and Natural Resources (DENR), i.e., releases into a drinking water source or potential drinking water source.
- Suspicious package that has an unknown material but due to location is considered a credible threat. When the substance is identified and declared a WMD agent, the incident should be upgraded to a Level III incident. Incidents that involved non-hazardous substances should be downgraded to a Level I incident.

Level III: This includes any incident beyond the capabilities of the hazardous materials team and local resources. The incident may be quite lengthy in duration and may necessitate large-scale evacuations. It is likely a Level III incident will involve multiple agencies and jurisdictions, as well as resources from the private sector (including chemical manufacturers) and voluntary organizations.

Examples of Level III incidents include:

- Large releases from tank cars, tank trucks, stationary tanks, or multiple medium containers.
- Incidents involving large-scale evacuations that may extend beyond jurisdictional boundaries.
- Any spill, leak or fire involving hazardous materials that has gone to greater alarms.
- Any incident beyond local capabilities and resources (including the hazardous materials team) to safely identify, contain and mitigate.
- Train derailments involving railroad tank cars containing hazardous materials that require specialized resources to mitigate.
- Major leaks of compressed or liquefied gas cargo tanks or railroad tank cars caused by puncture or major structural damage.
- A vehicle or train fire involving hazardous materials or hazardous wastes that pose a serious threat of a boiling liquid expanding vapor explosion (BLEVE).
- Suspicious packages, that due to location, identification of material as WMD agent, or verbal threat that requires state and federal resources.
- Large-scale or catastrophic releases of hazardous materials (e.g., radiation, biological agents).

Map 21: Hazardous Materials Incidents Maximum, Significant, Moderate, & Low Risks – 2024



Map 22: Hazardous Materials Incidents Maximum, Significant, Moderate, & Low Risks – 2020-2024

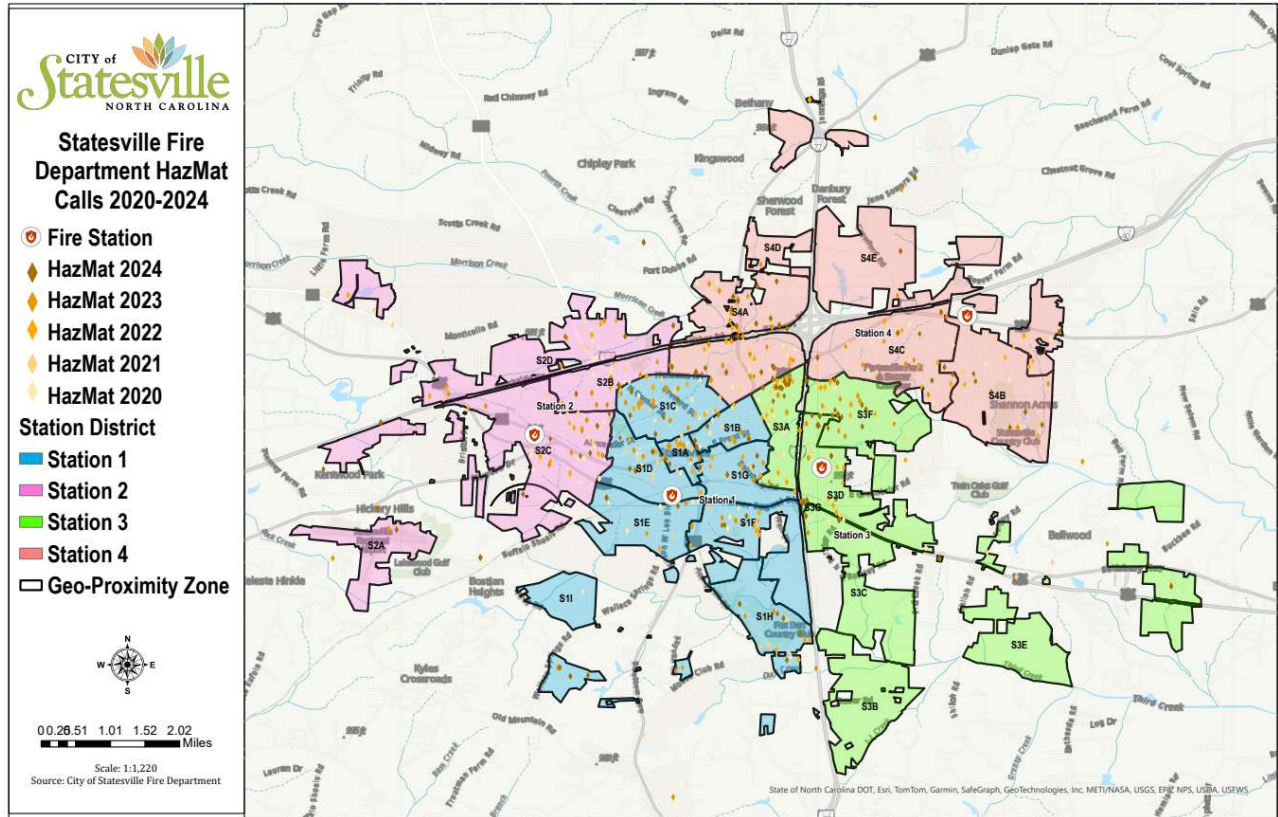


Table 39: Hazardous Conditions Incident Overview 2020-2024

Hazardous Materials Incident Types 2020-2024	2020	2021	2022	2023	2024	TOTAL
200 - Overpressure rupture, explosion, overheat other	0	3	2	1	1	7
220 - Overpressure rupture from air or gas, other	0	0	0	-	0	0
240 - Explosion (no fire), other	0	1	0	-	0	1
251 - Excessive heat, scorch burns with no ignition	16	12	20	10	2	60
400 - Hazardous condition, other	5	2	5	2	3	17
410 - Combustible/flammable gas/liquid condition, other	1	1	0	3	0	5
411 - Gasoline or other flammable liquid spill	9	3	10	9	7	38
412 - Gas leak (natural gas or LPG)	34	52	52	58	58	254
413 - Oil or other combustible liquid spill	10	5	5	2	1	23
420 - Toxic condition, other	0	0	1	0	0	1
421 - Chemical hazard (no spill or leak)	0	0	1	1	1	3
422 - Chemical spill or leak	1	4	2	2	1	10
423 - Refrigeration leak	1	1	0	0	0	2
424 - Carbon monoxide incident	22	12	13	7	5	59
671 - HazMat release investigation w/no HazMat	11	23	7	6	9	56
672 - Biological hazard investigation, none found	0	0	0	0	0	0
736 - Carbon Monoxide detector, activation due to malfunction	-	-	-	14	13	27
746 - Carbon Monoxide detector, activation (no carbon monoxide detected)	-	-	-	11	16	27
Totals	110	119	118	126	117	590

Table 40: Hazmat Risk Categories

Hazmat Risk Category	General Description of Associated Risk
LOW	Residential CO alarms and small fuel spills. Entry into a toxic environment is not required. Specialized HazMat equipment and Technician level knowledge/skills not required. Atmospheric monitoring may be required. Operations level knowledge/skills required. Defensive strategy only. NFIRS Incident Codes: 200, 251, 400, 410, 413, 420, 424, 736 & 746
MODERATE	Larger flammable liquid spills, natural gas leaks, unknown substance investigation/spill. Air monitoring and possible other specialized HazMat equipment required. Technician level knowledge/skills required. Offensive strategy may be required. Level I & II incidents. NFIRS Incident Codes: 220, 240, 411, 412, 421, 671, & 672
SIGNIFICANT	Large hazardous materials spill or release. Technician level entry required (offensive strategy). Large uncontained quantities of hazardous materials affect a large spatial area. Technician level knowledge/skills required. Level II & III incidents. NFIRS Incident Codes: 422, 423, & 430
MAXIMUM	Critical tasks exceed Department's resources to mitigate; includes WMD. Requires use of specialized personnel and equipment. Requires response of RRT or other specialized outside resources. Level III incidents. NFIRS Incident Codes: 431 & 451

Table 41: Hazmat Response Critical Tasking

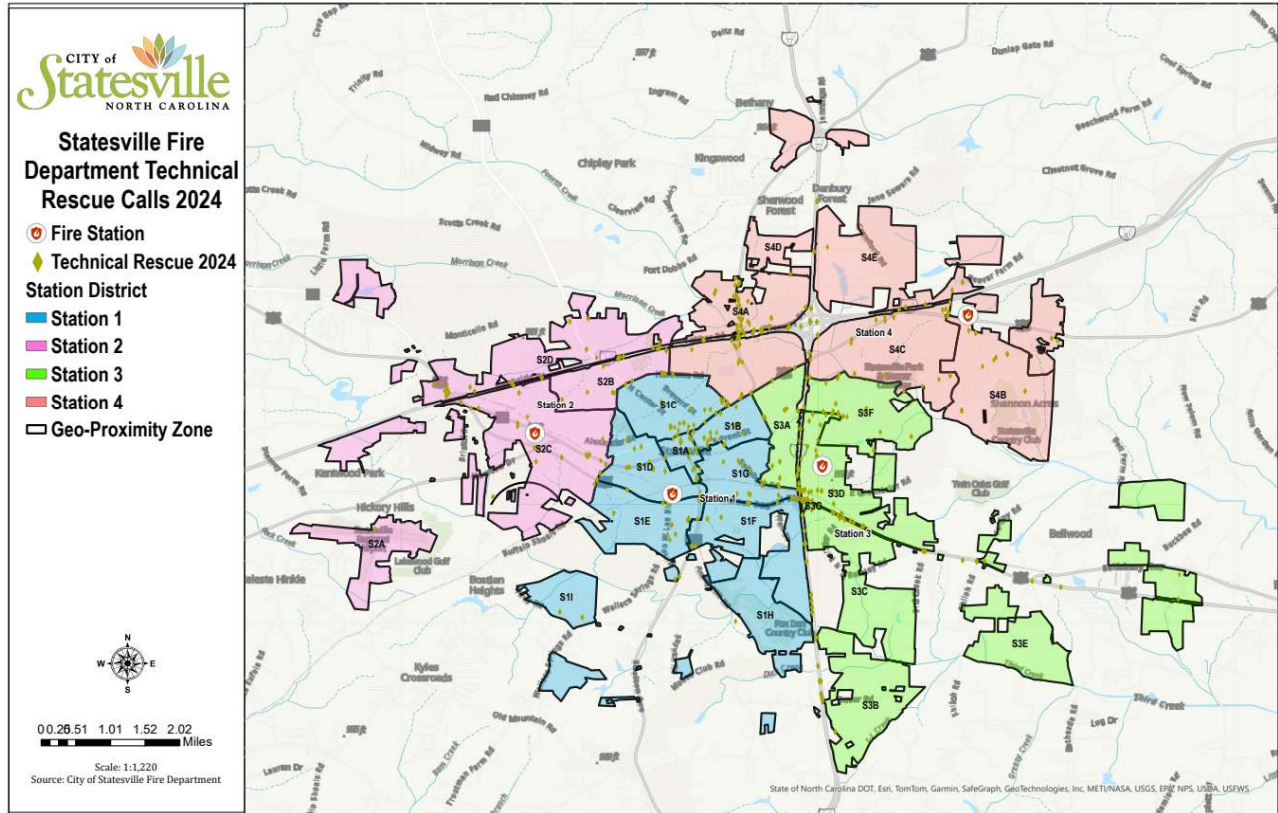
HAZMAT RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD (LEVEL III)	SIGNIFICANT HAZARD (LEVEL II & III)	MODERATE HAZARD (LEVEL I & II)	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up/Identify Isolate/Deny Entry Emergency decontamination 	4	4	4	4
ENGINE 4/HAZMAT 1	<ul style="list-style-type: none"> Research Hazard mitigation Entry Team ICS Positions 	4	4	4	-
ENGINE 3	<ul style="list-style-type: none"> Entry Team/Backup Team ICS Positions Assign as needed 	4	4	-	-
MOORESVILLE	<ul style="list-style-type: none"> Assign as needed 	4	-	-	-
RRT/OTHER SPECIALIZED RESPONSE	<ul style="list-style-type: none"> Assign as needed 	9	-	-	-
CHIEF	<ul style="list-style-type: none"> Incident/Unified Command 	1	1	1	-
2 ND CHIEF	<ul style="list-style-type: none"> Safety Officer / Unified Command 	1	1	-	-

HAZMAT RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD (LEVEL III)	SIGNIFICANT HAZARD (LEVEL II & III)	MODERATE HAZARD (LEVEL I & II)	LOW HAZARD
3 RD CHIEF	<ul style="list-style-type: none"> Assist with Unified Command 	1	-	-	-
TOTAL		28	14	9	4

Technical Rescue Risk Assessment

The risk assessment for technical rescue involved a historical review of incidents, probability / consequence, and need for outside resources. Technical rescue is broken down into six different classifications as the risks for each are different. The different classifications are extrications, low/high angle, Swiftwater, trench, confined space, structural collapse.

Map 23: Technical Rescue Incidents Maximum, Significant, Moderate, & Low Risks – 2024



Map 24: Technical Rescue Incidents Maximum, Significant, Moderate, & Low Risks – 2020-2024

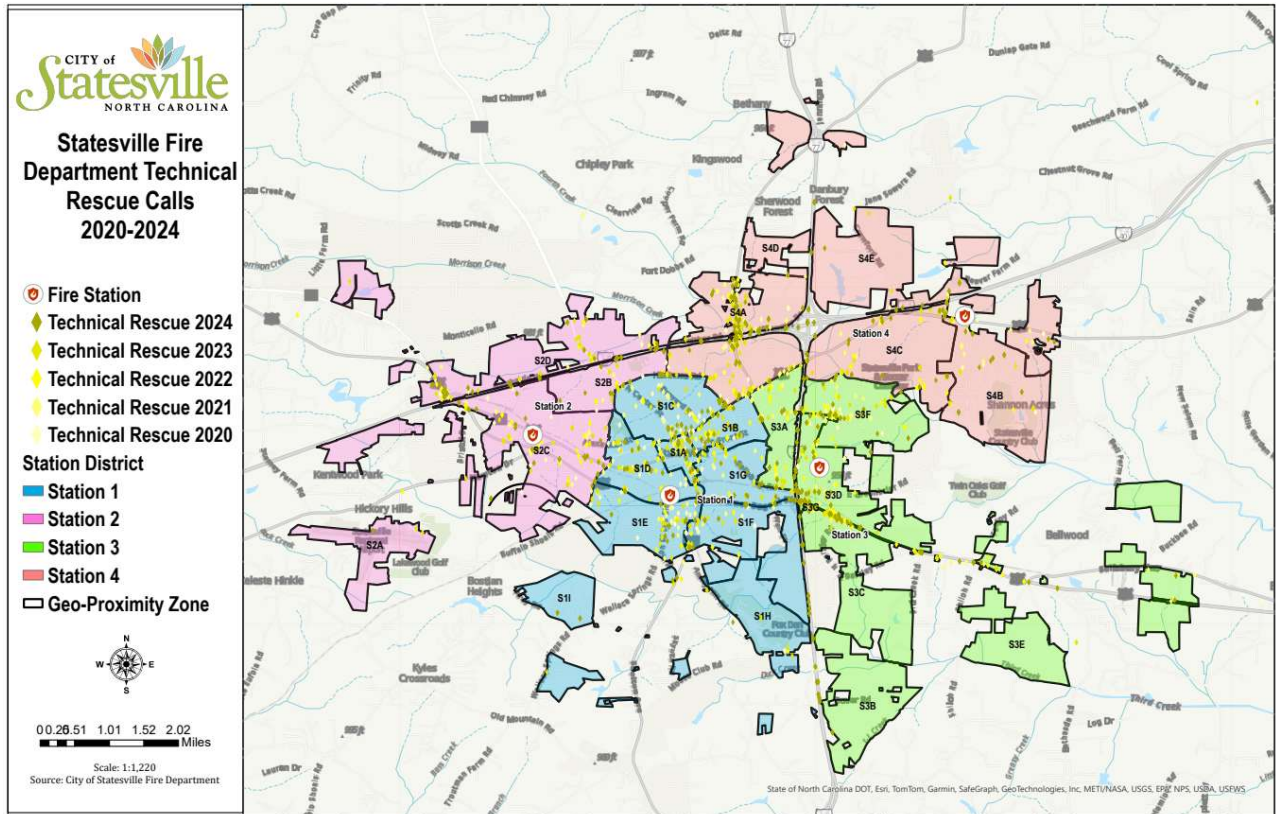


Table 42: Rescue Incident Overview 2020-2024

Technical Rescue Incident Types	2020	2021	2022	2023	2024	Totals
322 - Motor vehicle accident with injuries	264	263	284	244	200	1255
323 - Motor vehicle/pedestrian accident (MV Ped)	18	7	13	17	12	67
324 - Motor vehicle accident with no injuries.	114	148	217	230	196	905
331 - Lock-in (if lock out , use 511)	5	2	6	2	4	19
341 - Search for person on land	0	0	0	0	1	1
350 - Extrication, rescue, other	3	3	2	2	5	15
351 - Extrication of victim(s) from building/structure	0	2	0	0	0	2
352 - Extrication of victim(s) from vehicle	7	7	6	5	9	34
353 - Removal of victim(s) from stalled elevator	10	7	3	8	6	34
354 - Trench/below-grade rescue	1	0	0	0	0	1
355 - Confined space rescue	1	0	0	0	0	1
356 - High-angle rescue	0	0	0	2	0	2
357 - Extrication of victim(s) from machinery	1	1	0	1	0	3
360 - Water & ice-related rescue, other	0	0	0	0	0	0
363 - Swift water rescue	0	0	0	0	0	0
381 - Rescue or EMS standby	3	13	1	0	1	18
461 – Building structure weakened or collapsed	N/A	N/A	N/A	6	3	9
Totals	427	453	532	511	437	2,366

Table 43: Technical Rescue Categories

TECHNICAL RESCUE CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Motor vehicle accident with injuries, motor vehicle/pedestrian accident, motor vehicle accident with no injuries, lock-in or lock-out, search for person on land, removal of victim(s) from stalled elevator
MODERATE	Extrication of victims(s) from building/structure, extrication of victims(s) from vehicle. Extrication of victim(s) from machinery, vehicle into a building without affecting any structural members, i.e. picture windows, glass doors, etc.
SIGNIFICANT	Trench/below-grade rescue, confined space rescue, high-angle rescue, water and ice-related rescue, other, swift water rescue
MAXIMUM	Buildings with localized collapse, structural members are involved. High possibility of secondary collapse. Will require specialized equipment and Technician level knowledge/skills.

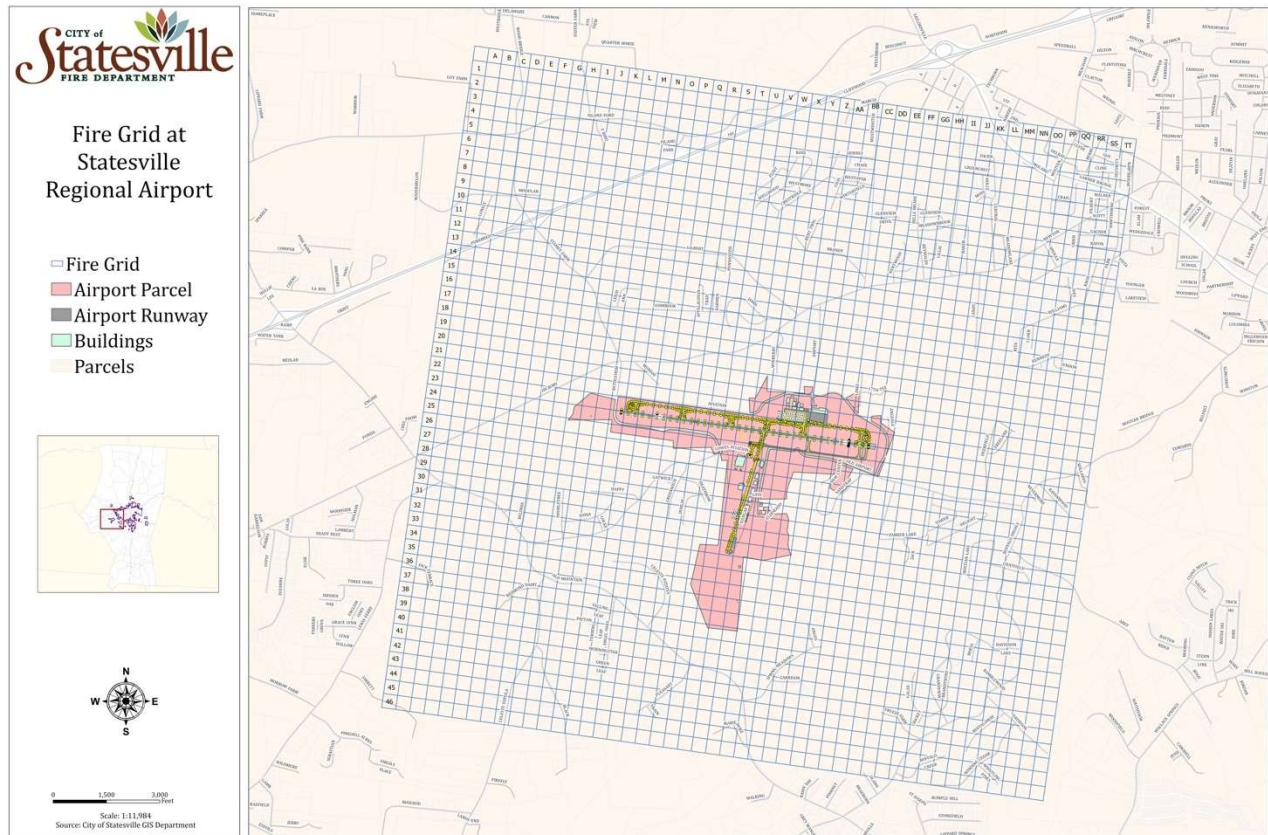
Table 44: Technical Rescue Response Critical Tasking

TECHNICAL RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish Command Perform size-up Hazard mitigation/rescue 	4	4	4	4
2 ND ENGINE/LADDER	<ul style="list-style-type: none"> Hazard mitigation/rescue Assigned as needed 	4	4	-	-
1 ST LADDER	<ul style="list-style-type: none"> Hazard Mitigation/rescue Assigned as needed Safety Officer 	4	-	-	-
RESCUE COMPANY (MUTUAL AID)	<ul style="list-style-type: none"> Specialized Equipment and personnel 	4	-	-	-
CHIEF	<ul style="list-style-type: none"> Incident/Unified Command 	1	1	1	-
2 ND CHIEF	<ul style="list-style-type: none"> Unified Command Safety Officer 	1	-	-	-
TOTAL		18	9	5	4

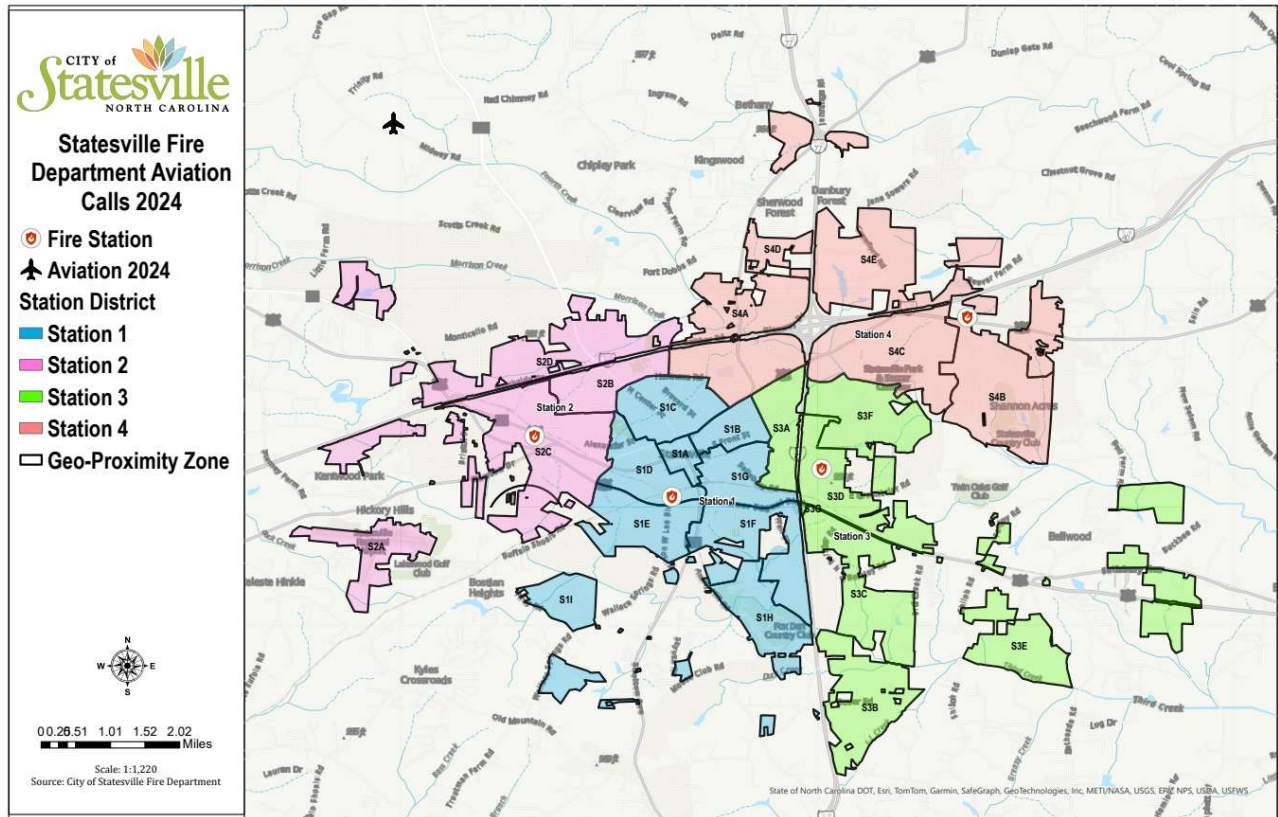
ARFF Risk Assessment

The risk assessment for Airport Rescue Fire Fighting (ARFF) involved a historical review of incidents, as well as probability / consequence. The typical risks associated with the Statesville Regional Airport are the same which would be associated with any airport. These risks include but are not limited to; landing undershoots / overshoots, takeoff overruns, aircraft crashes due to electrical or mechanical issues, and accidents which may occur to aircraft while taxiing (Alert 1, Alert 2, and Alert 3).

Map 25: Fire Grid at Statesville Regional Airport



Map 26: Aviation Rescue Firefighting Incidents Significant, Moderate, & Low Risks – 2024



Map 27: Aviation Rescue Firefighting Incidents Significant, Moderate, & Low Risks – 2020-2024

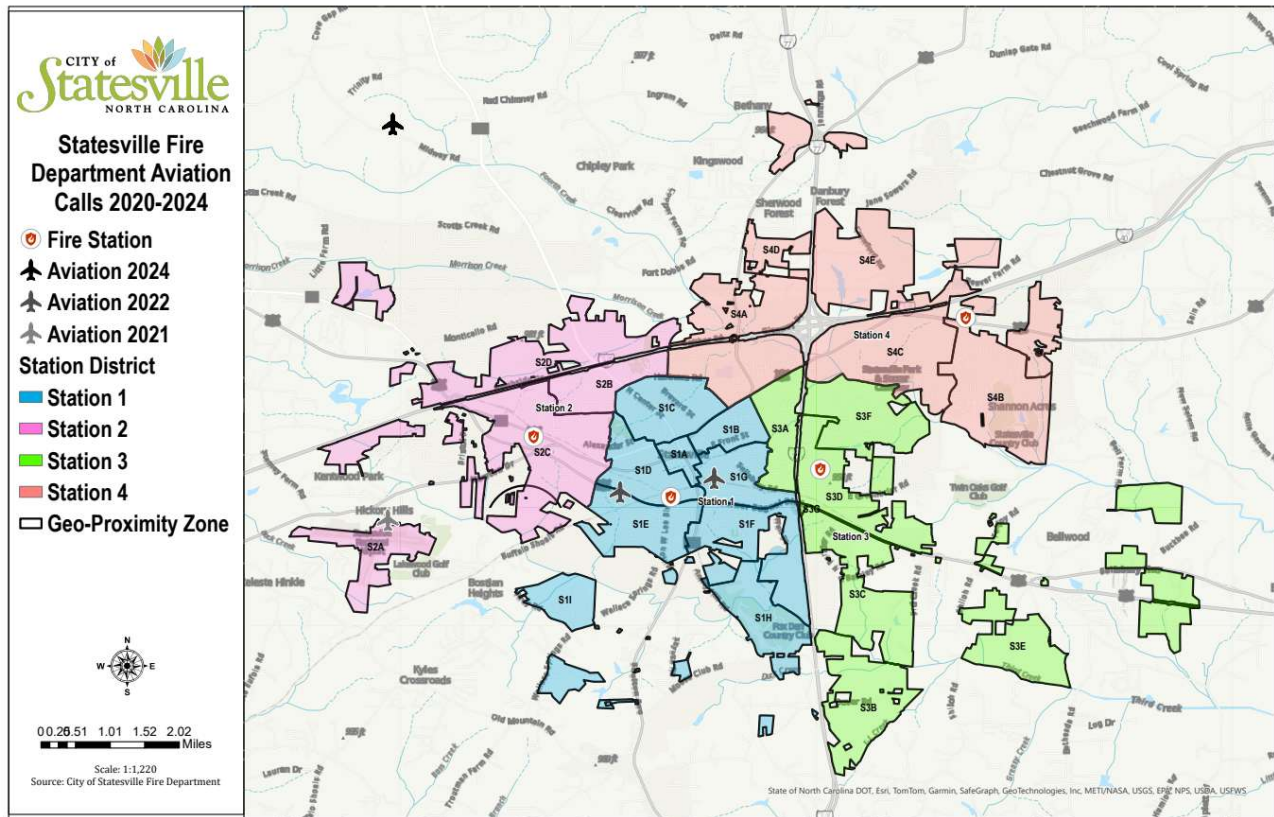


Table 45: ARFF Incident Overview 2020-2024

ARFF Incident Types	2020	2021	2022	2023	2024	Totals
462 - Aircraft standby	0	2	2	0	1	5

Table 46: ARFF Risk Categories

ARFF	General Description of Associated Risk
LOW	Alert 1 – An aircraft is having an issue without the likelihood of a crash
MODERATE	Alert 2 – An aircraft is having an issue with the likelihood of a crash
SIGNIFICANT	Alert 3 – Aircraft has crashed

Table 47: ARFF Response Critical Tasking

ARFF RESPONSE	CRITICAL TASKS	SIGNIFICANT HAZARD (ALERT 3)	MODERATE HAZARD (ALERT 2)	LOW HAZARD (ALERT 1)
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up Hazard mitigation/rescue Patient care/triage 	3	3	3
ARFF 1	<ul style="list-style-type: none"> Firefighting Operations 	1	1	1
2 ND ENGINE	<ul style="list-style-type: none"> Hazard mitigation/rescue Water supply Assigned as needed 	4	4	
ENGINE 4/ HAZMAT 1	<ul style="list-style-type: none"> Hazard Material containment/control 	4	4	
3 RD ENGINE	<ul style="list-style-type: none"> Patient care/triage Assigned as needed 	4		
CHIEF	<ul style="list-style-type: none"> Incident Command 	1	1	
2 ND CHIEF	<ul style="list-style-type: none"> Unified Command Safety Officer 	1		
TOTAL		18	13	4

Other Risks

The Department combined Non-Emergency incidents into the Response Class, Other in 2023.

Non-Emergency Risk Assessment- Legacy 2020-2022 Data

The risk assessment for non-Emergency incidents involved a historical review of incidents, as well as probability / consequence for years 2020-2022. All incident types within the Non-Emergency Risk Category were determined as Low/Moderate risk given their nature of non-emergency events.



Although these incidents are determined as non-emergency, they are a vital resource provided by the SFD. This category was combined with the Other Response Class in 2023.



Table 48: Non-Emergency Incident Overview 2020-2022 (merged with Emergency, Other in 2023)

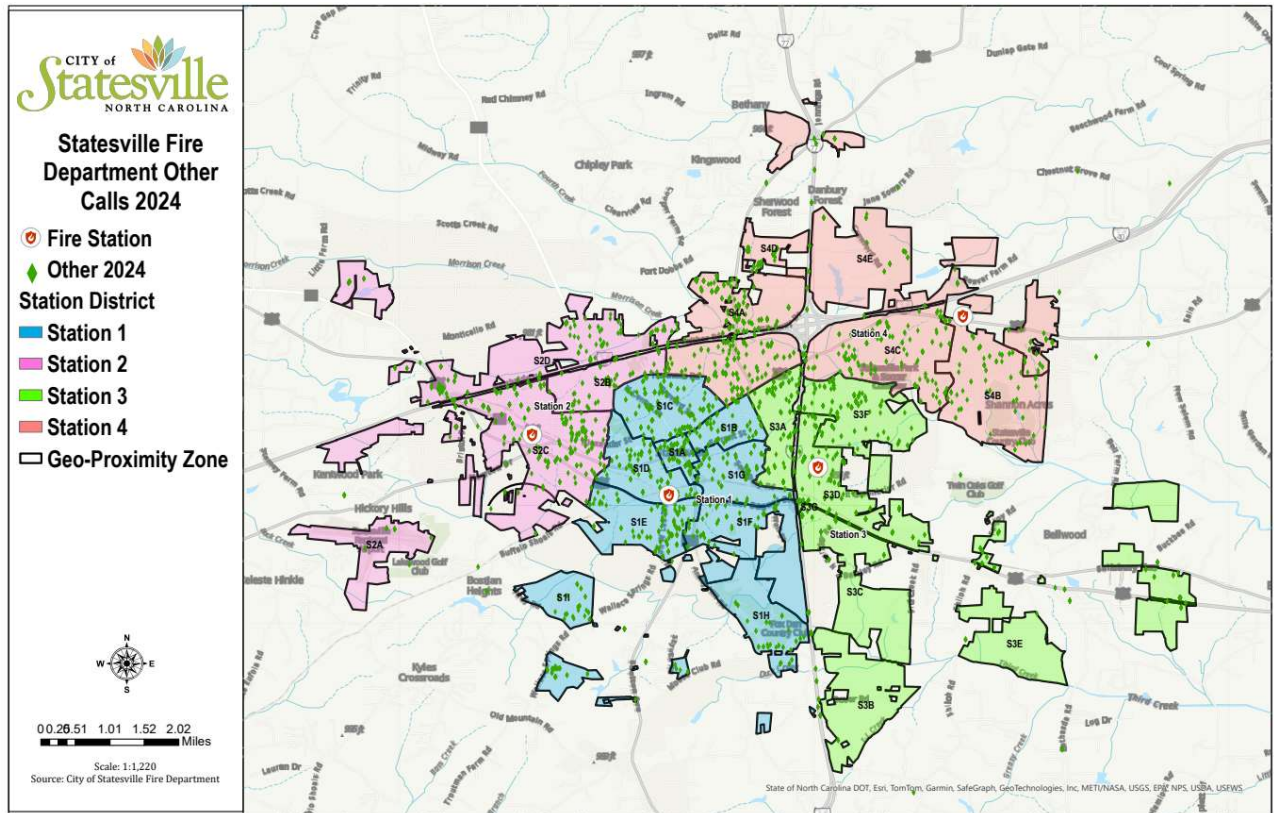
Non-Emergency Incident Types	2020	2021	2022	2023	2024	2020-2022 Totals
440 - Electrical wiring/equipment problem, other	10	5	14	COMBINED WITH OTHER RESPONSE CLASS		50
441 - Heat from short circuit (wiring), defective/worn	3	4	5		25	
442 - Overheated motor	4	6	4		30	
443 - Breakdown of light ballast	2	1	1		8	
444 - Power line down	37	17	37		166	
445 - Arcing, shorted electrical equipment	11	14	19		86	
460 - Accident, potential accident, other	2	2	1		30	
461 - Building or structure weakened or collapsed	6	3	7		19	
463 - Vehicle accident, general cleanup	16	13	7		100	
480 - Attempted burning, illegal action, other	0	0	1		1	
481 - Attempt to burn	0	1	0		5	
482 - Threat to burn	0	0	0		1	
510 - Person in distress, other	0	1	2		13	
511 - Lock-out	45	61	39		215	
520 - Water problem, other	10	10	15		49	
522 - Water or steam leak	14	18	22		72	
531 - Smoke or odor removal	8	8	2		28	
540 - Animal problem, other	0	0	1		1	
541 - Animal problem	0	2	1		5	
542 - Animal rescue	9	13	18		52	
700 - False alarm or false call, other	5	15	19		92	
710 - Malicious, mischievous false call, other	1	3	3		12	
711 - Municipal alarm system, malicious false alarm	2	1	0		3	
713 - Telephone, malicious false alarm	0	1	0		1	
714 - Central station, malicious false alarm	0	0	1		2	
715 - Local alarm system, malicious false alarm	0	2	2		7	
721 - Bomb scare - no bomb	0	0	2		2	
730 - System malfunction, other	7	5	4		26	
731 - Sprinkler activation due to malfunction	8	13	18		64	
732 - Extinguishing system activation due to malfunction	2	0	1		11	
733 - Smoke detector activation due to malfunction	30	53	32		182	
734 - Heat detector activation due to malfunction	0	3	1		10	
735 - Alarm system sounded due to malfunction	89	62	87	384		
736 - CO detector activation due to malfunction	13	10	16	70		

740 - Unintentional transmission of alarm, other	18	24	17	COMBINED WITH OTHER RESPONSE CLASS	119
741 - Sprinkler activation, no fire - unintentional	17	7	14		62
742 - Extinguishing system activation	1	2	3		8
743 - Smoke detector activation, no fire - unintentional	65	104	81		394
744 - Detector activation, no fire - unintentional	36	42	31		190
745 - Alarm system activation, no fire - unintentional	190	250	264		1082
746 - Carbon monoxide detector activation, no CO	10	5	8		46
800 - Severe weather or natural disaster, other	6	3	0		22
812 - Flood assessment	5	0	0		9
813 - Wind storm, tornado/hurricane assessment	49	8	20		161
814 - Lightning strike (no fire)	3	1	1		8
815 - Severe weather or natural disaster standby	0	0	0		3
TOTAL	734	793	821		3,926

Other Incidents Risk Assessment

The risk assessment for other incidents involved a historical review of incidents, as well as probability / consequence. All incident types within this category are determined as Low risk given the nature of the event. These incidents include alarm activations, investigations, and assessments.

Map 28: Other Incidents Low Risks – 2024



Map 29: Other Incidents Low Risks – 2020-2024

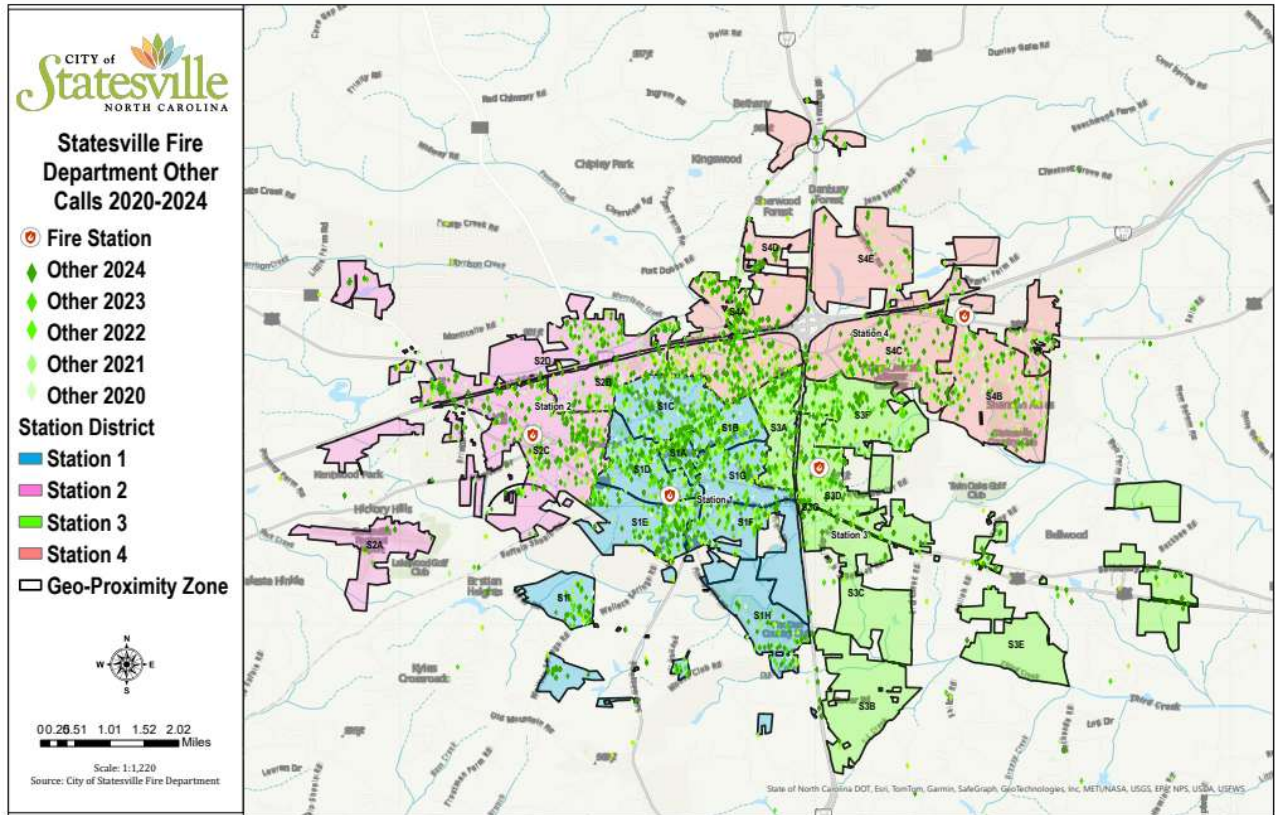


Table 49: Other Incident Overview 2020-2024

OTHER INCIDENT TYPES	2020	2021	2022	2023	2024	TOTALS
210 - Overpressure Rupture From Steam, Other	-	-	-	0	0	0
211 - Overpressure Rupture Of Steam Pipe Or Pipeline	-	-	-	0	0	0
212 - Overpressure Rupture Of Steam Boiler	-	-	-	0	0	0
213 - Overpressure Rupture Of Pressure Or Process Vessel From Steam	-	-	-	0	0	0
222 - Overpressure Rupture Of Boiler From Air Or Gas	-	-	-	0	0	0
223 - Overpressure Rupture Of Pressure Or Process Vessel From Air Or Gas, Not Steam	-	-	-	0	0	0
231 - Overpressure Rupture Of Pressure Or Process Vessel From Chemical Reaction	-	-	-	0	0	0
241 - Munitions Or Bomb Explosion (No Fire)	-	-	-	0	0	0
242 - Blasting Agent Explosion (No Fire)	-	-	-	0	0	0
243 - Fireworks Explosion (No Fire)	-	-	-	0	0	0
244 - Dust Explosion (No Fire)	-	-	-	0	0	0
340 - Search For Lost Person, Other	-	-	-	0	0	0
371 - Electrocution Or Potential Electrocution	-	-	-	0	0	0
440 - Electrical Wiring/Equipment Problem, Other	-	-	-	13	15	28
441 - Heat From Short Circuit (Wiring)	-	-	-	4	3	7
442 - Overheated Motor Or Wiring	-	-	-	13	10	23
443 - Breakdown Of Light Ballast	-	-	-	0	1	1
444 - Power Line Down	-	-	-	27	42	69
445 - Arcing, Shorted Electrical Equipment	-	-	-	24	13	37
460 - Accident, Potential Accident, Other	-	-	-	0	1	1
463 - Vehicle Accident, General Cleanup	-	-	-	9	16	25
471 - Explosive, bomb removal (for bomb scare, use 721)	0	0	1	0	0	1
480 - Attempted burning, illegal action, other	-	-	-	1	1	2
481 - Attempt to burn	-	-	-	1	0	1
482 - Threat to burn	-	-	-	0	0	0
500 - Service Call, other	18	18	26	14	45	121
510 - Person in distress, other	-	-	-	0	1	1
511 - Lock-out	-	-	-	0	50	50
512 - Ring or jewelry removal, without transport	-	-	-	0	1	1
520 - Water problem, other	-	-	-	13	9	22
521 - Water (not people) evacuation	-	-	-	0	0	0

OTHER INCIDENT TYPES	2020	2021	2022	2023	2024	TOTALS
522 – Water or steam leak	-	-	-	14	11	25
531 – Smoke or odor removal	-	-	-	2	4	6
550 - Public service assistance, other	23	36	18	32	54	163
551 - Assist police or other governmental agency	35	27	29	35	34	160
552 - Police matter	3	1	2	3	1	10
553 - Public service	57	56	91	86	101	391
554 - Assist invalid	10	14	16	N/A	N/A	40
555 - Defective elevator, no occupants	0	0	0	0	0	0
561 - Unauthorized burning	18	24	18	24	15	99
571 - Cover assignment, standby, moveup	4	6	1	10	4	25
600 - Good intent call, other	20	16	14	13	38	101
611 - Dispatched & cancelled en route	182	271	387	392	451	1683
621 - Wrong location	0	2	1	2	3	8
622 - No incident found on arrival at dispatch address	40	61	70	119	176	466
631 - Authorized controlled burning	3	3	7	7	2	22
641 - Vicinity alarm (incident in other location)	0	1	0	0	0	1
650 - Steam, other gas mistaken for smoke, other	2	1	1	3	1	8
651 - Smoke scare, odor of smoke	56	33	40	44	36	209
652 - Steam, vapor, fog or dust thought to be smoke	3	5	9	10	1	28
653 - Smoke from barbecue, tar kettle	5	2	1	4	1	13
661 - EMS call, party transported by non-fire agency	1	0	1	0	0	2
700 – False alarm or false call, other	-	-	-	10	43	53
710 – Malicious, mischievous false alarm, other	-	-	-	2	9	11
711 – Municipal alarm system, malicious false alarm	-	-	-	1	3	4
712 – Direct tie to Fire Department, malicious false alarm	-	-	-	0	0	0
713 – Telephone, malicious false alarm	-	-	-	1	0	1
714 – Central station, malicious false alarm	-	-	-	0	4	4
715 – Local alarm system, malicious false alarm	-	-	-	3	10	13
721 – Bomb scare (no bomb)	-	-	-	0	0	0
730 – System Or Detector Malfunction, Other	-	-	-	5	5	10
731 - Sprinkler Activated Due To Failure Or Malfunction Of Sprinkler System	-	-	-	24	8	32

OTHER INCIDENT TYPES	2020	2021	2022	2023	2024	TOTALS
732 - Extinguishing System Activation Due To Malfunction	-	-	-	3	1	4
733 - Smoke Detector Activation Due To Malfunction	-	-	-	38	20	58
734 - Heat Detector Activation Due To Malfunction	-	-	-	6	4	10
735 - Alarm System Activation Due To Malfunction	-	-	-	100	101	201
740 - Unintentional Transmission Of Alarm, Other	-	-	-	9	18	27
741 - Sprinkler Activation (No Fire), Unintentional	-	-	-	8	11	19
742 - Extinguishing System Activation	-	-	-	1	2	3
743 - Smoke Detector Activation (No Fire), Unintentional	-	-	-	116	95	211
744 - Detector Activation (No Fire), Unintentional	-	-	-	33	35	68
745 - Alarm System Activation (No Fire), Unintentional	-	-	-	239	311	550
751 - Biological Hazard, Malicious Fake Report	-	-	-	0	0	0
800 - Severe Weather Or Natural Disaster, Other	-	-	-	5	16	21
811 - Earthquake Assessment, No Rescue Or Other Service	-	-	-	0	0	0
812 - Flood Assessment, Excludes Water Rescue	-	-	-	0	1	1
813 - Wind Storm	-	-	-	42	50	92
814 - Lightning Strike (No Fire)	-	-	-	1	0	1
815 - Severe Weather Or Natural Disaster Standby	-	-	-	0	0	0
900 - Special type of incident, other	1	0	0	0	0	1
911 - Citizen complaint	1	1	0	0	1	3
Totals	482	578	733	1566	1,909	5268

Note: 2020-2022 data does not include non-emergency incidents, see Table 46.

2023-2024 data includes all emergency and non-emergency incidents in the Other response class.

544 moved from Other (Non-emergency) incident type in 2023 to EMS response class

Table 50: Other Risk Categories

OTHER CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	All non-emergency and other calls

Table 51: Other Response Critical Tasking

OTHER RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish Command Perform size-up Assess the situation Determine need for additional resources Estimate harm potential Mitigate 	-	-	-	4
TOTAL					4

Geographic Planning Zone Risk Assessment

The geographic planning zones used by the SFD are the four Fire Station Districts. Each stations' response district presents its own unique risk of varying degree. The geographic planning zones are further refined into 25 geo-proximity zones (GPZs) to assist in determining more specific higher risk/demand areas. Station #1 geographic planning area is broken down into nine GPZs. Two geo-proximity zones (S1G & S1I) were added in 2021 that addressed mutual aid responses. Station #2 geographic planning area is broken-down into four GPZs; an additional GPZ (S2B) was added to the Station #2 district in 2024. The Station #3 geographic planning area is broken-down into seven GPZs, and Station #4 geographic planning area is broken-down into five GPZs. One geo-proximity zone was added in 2022 in Station #4's district (S4E) that addressed mutual aid responses. One geo-proximity zone was combined with S3G in 2024 in Station 3's district. The risk assessment by planning zones involved a historical review of incidents, as well as probability/consequence, availability, and individual risk associated with each zone.

All Planning Zones Risk Assessment

Map 30: Fire Districts with All Calls Maximum, Significant, Moderate, & Low Risks - 2024

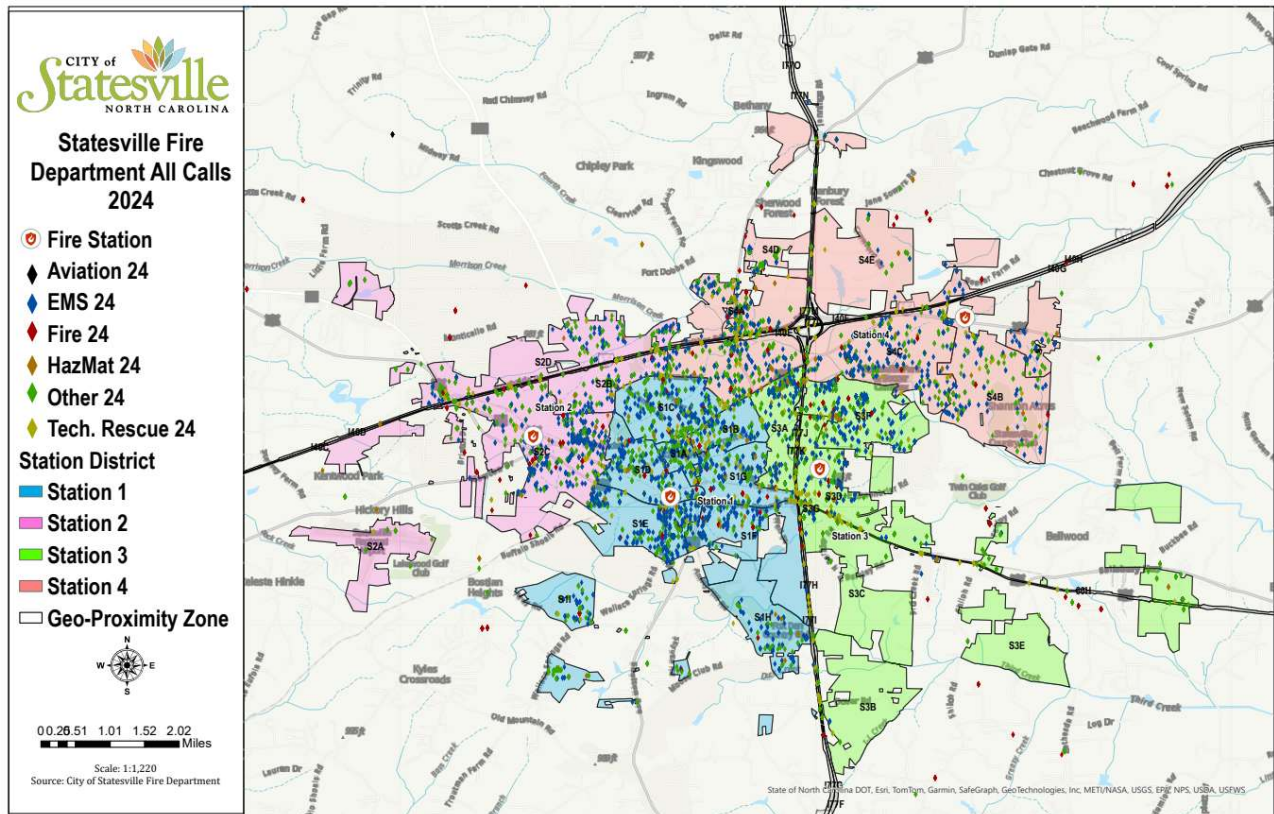


Table 52: Risk Levels by Geo-Proximity Zones 2024

Risk Level by Category by Geo-proximity Zones - 2024						
Zone	Fire	Medical	Hazmat	Technical Rescue	ARFF	Other Incidents
S1A	Low	Low	Low	Low	Low	Low
S1B	Low	Low	Low	Low	Low	Low
S1C	Moderate	Low	Moderate	Low	Low	Low
S1D	Moderate	Low	Moderate	Low	Low	Low
S1E	Moderate	Moderate	Moderate	Low	Low	Low
S1F	Low	Low	Low	Low	Low	Low
S1G	Low	Low	Low	Low	Low	Low
S1H	Low	Low	Low	Low	Low	Low
S1I	Low	Low	Low	Low	Low	Low
S2A	Low	Low	Low	Low	Low	Low
S2C	Moderate	Moderate	Moderate	Low	Low	Low
S2D	Low	Low	Low	Low	Low	Low
S3A	Low	Low	Low	Low	Low	Low
S3B	Low	Low	Low	Low	Low	Low
S3C	Low	Low	Low	Low	Low	Low
S3D	Low	Low	Low	Moderate	Low	Low
S3E	Low	Low	Low	Low	Low	Low
S3F	Low	Low	Low	Low	Low	Low
S3G	Low	Low	Low	Low	Low	Low
S3H	Low	Low	Low	Low	Low	Low
S4A	Moderate	Low	Low	Low	Low	Low
S4B	Low	Low	Low	Low	Low	Low
S4C	Low	Low	Low	Low	Low	Low
S4D	Low	Low	Low	Low	Low	Low
S4E	Low	Low	Low	Low	Low	Low

Table 53: Fire Gap Analysis 2023-2024

Gap Analysis for 1st Due Travel & Total Response Time – Fire - 2023-2024											
Low Risk Fires			Moderate Risk Fires			Significant Risk Fires			Maximum Risk Fires		
SFD Benchmarks											
Urban	06:20	06:20	Urban	06:20	10:20	Urban	06:20	11:00	Urban	06:20	20:30
Rural	07:50	07:50	Rural	07:50	11:50	Rural	07:50	12:30	Rural	07:50	22:00
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	04:57	05:03	S1A	05:12	09:09	S1A	N/A	N/A	S1A	N/A	N/A
S1B	06:41	06:41	S1B	04:43	07:58	S1B	07:14	12:54	S1B	N/A	N/A
S1C	08:05	08:43	S1C	07:03	08:42	S1C	N/A	N/A	S1C	N/A	N/A
S1D	05:30	08:33	S1D	05:13	12:16	S1D	N/A	N/A	S1D	N/A	N/A
S1E	08:00	08:00	S1E	05:44	15:57	S1E	N/A	N/A	S1E	N/A	N/A
S1F	08:20	06:57	S1F	05:54	07:02	S1F	N/A	N/A	S1F	N/A	N/A
S1G	05:44	05:44	S1G	05:56	26:09	S1G	06:39	10:20	S1G	N/A	N/A
S1H	08:34	08:34	S1H	09:27	09:48	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	07:14	13:32	S1I	N/A	N/A	S1I	N/A	N/A
S2A	03:31	03:31	S2A	N/A	N/A	S2A	N/A	N/A	S2A	N/A	N/A
S2B	N/A	N/A	S2B	04:29	05:05	S2B	N/A	N/A	S2B	N/A	N/A
S2C	07:33	07:33	S2C	07:08	10:17	S2C	05:03	06:04	S2C	N/A	N/A
S2D	07:42	N/A	S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	07:00	11:50	S3A	04:29	05:01	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	03:19	03:54	S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A
S3D	08:44	09:29	S3D	03:03	08:02	S3D	N/A	N/A	S3D	N/A	N/A
S3E	11:33	11:33	S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	06:44	06:50	S3F	07:10	08:33	S3F	04:48	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S4A	10:19	10:20	S4A	09:07	10:10	S4A	06:27	20:49	S4A	N/A	N/A
S4B	06:26	06:26	S4B	07:50	12:23	S4B	N/A	N/A	S4B	N/A	N/A
S4C	06:50	06:50	S4C	N/A	N/A	S4C	N/A	N/A	S4C	N/A	N/A
S4D	09:01	09:01	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	08:08	11:28	S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: **Urban Geo-Zones are Identified in Bold Red Front**

Table 54: Fire Gap Analysis 2024

Gap Analysis for 1st Due Travel & Total Response Time – Fire - 2024											
Low Risk Fires			Moderate Risk Fires			Significant Risk Fires			Maximum Risk Fires		
SFD Benchmarks											
Urban	06:20	06:20	Urban	06:20	10:20	Urban	06:20	11:00	Urban	06:20	20:30
Rural	07:50	07:50	Rural	07:50	11:50	Rural	07:50	12:30	Rural	07:50	22:00
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	04:57	05:03	S1A	N/A	N/A	S1A	N/A	N/A	S1A	N/A	N/A
S1B	04:32	04:32	S1B	N/A	N/A	S1B	07:14	12:54	S1B	N/A	N/A
S1C	08:07	08:07	S1C	07:03	08:42	S1C	N/A	N/A	S1C	N/A	N/A
S1D	08:33	08:33	S1D	04:45	08:18	S1D	N/A	N/A	S1D	N/A	N/A
S1E	10:45	10:45	S1E	05:44	15:57	S1E	N/A	N/A	S1E	N/A	N/A
S1F	06:37	06:37	S1F	05:54	05:54	S1F	N/A	N/A	S1F	N/A	N/A
S1G	05:44	05:44	S1G	05:56	26:09	S1G	06:39	10:20	S1G	N/A	N/A
S1H	08:34	08:34	S1H	09:27	09:48	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	07:14	13:32	S1I	N/A	N/A	S1I	N/A	N/A
S2A	03:31	03:31	S2A	N/A	N/A	S2A	N/A	N/A	S2A	N/A	N/A
S2B	N/A	N/A	S2B	04:29	05:05	S2B	N/A	N/A	S2B	N/A	N/A
S2C	07:33	07:33	S2C	04:17	07:43	S2C	05:03	06:04	S2C	N/A	N/A
S2D	04:42	04:42	S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	07:00	07:00	S3A	N/A	N/A	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A
S3D	06:09	10:14	S3D	03:03	08:02	S3D	N/A	N/A	S3D	N/A	N/A
S3E	11:33	11:33	S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	07:18	07:18	S3F	07:10	08:33	S3F	N/A	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	10:20	10:20	S4A	09:07	10:10	S4A	06:27	20:49	S4A	N/A	N/A
S4B	05:03	05:03	S4B	07:50	12:23	S4B	N/A	N/A	S4B	N/A	N/A
S4C	11:20	11:20	S4C	N/A	N/A	S4C	N/A	N/A	S4C	N/A	N/A
S4D	09:01	09:01	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	05:34	11:28	S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: **Urban Geo-Zones are Identified in Bold Red Front**



Table 55: EMS Gap Analysis 2023-2024

Gap Analysis for EMS 1st Due Travel & Total Response Time - 2023-2024								
Low Risk EMS			Moderate Risk EMS			Significant Risk EMS		
SFD Benchmarks								
Urban	06:20	06:20	Urban	06:20	06:20	Urban	06:20	08:20
Rural	07:50	07:50	Rural	07:50	07:50	Rural	07:50	09:50
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	06:23	06:23	S1A	06:21	06:21	S1A	N/A	N/A
S1B	07:32	07:39	S1B	06:27	06:27	S1B	N/A	N/A
S1C	08:51	08:51	S1C	08:03	08:03	S1C	N/A	N/A
S1D	07:07	07:07	S1D	06:11	06:11	S1D	N/A	N/A
S1E	06:54	06:54	S1E	07:15	07:20	S1E	N/A	N/A
S1F	08:21	08:21	S1F	18:44	18:44	S1F	N/A	N/A
S1G	07:29	07:29	S1G	05:52	08:16	S1G	N/A	N/A
S1H	10:41	10:41	S1H	08:45	16:49	S1H	N/A	N/A
S1I	10:21	10:21	S1I	N/A	N/A	S1I	N/A	N/A
S2A	09:27	09:27	S2A	N/A	N/A	S2A	N/A	N/A
S2B	08:15	08:15	S2B	06:51	06:51	S2B	N/A	N/A
S2C	06:16	06:16	S2C	05:31	05:31	S2C	N/A	N/A
S2D	08:02	08:02	S2D	05:38	05:38	S2D	N/A	N/A
S3A	08:11	08:11	S3A	07:02	07:02	S3A	N/A	N/A
S3B	07:36	07:36	S3B	N/A	N/A	S3B	N/A	N/A
S3C	08:32	08:32	S3C	05:53	05:53	S3C	N/A	N/A
S3D	07:42	07:42	S3D	08:18	08:18	S3D	N/A	N/A
S3E	11:00	11:00	S3E	N/A	N/A	S3E	N/A	N/A
S3F	07:34	07:34	S3F	06:35	06:35	S3F	N/A	N/A
S3G	05:54	05:54	S3G	N/A	N/A	S3G	N/A	N/A
S3H	06:04	06:04	S3H	N/A	N/A	S3H	N/A	N/A
S4A	09:52	09:52	S4A	08:42	08:43	S4A	N/A	N/A
S4B	08:12	08:12	S4B	05:02	05:02	S4B	N/A	N/A
S4C	07:42	07:42	S4C	06:48	06:48	S4C	N/A	N/A
S4D	10:29	10:29	S4D	10:33	10:33	S4D	N/A	N/A
S4E	07:27	07:27	S4E	04:24	06:34	S4E	N/A	N/A

Benchmark Statements: **Urban Geo-Zones are Identified in Bold Red Font**



Table 56: EMS Gap Analysis 2024

Gap Analysis for EMS 1st Due Travel & Total Response Time - 2024								
Low Risk EMS			Moderate Risk EMS			Significant Risk EMS		
SFD Benchmarks								
Urban	06:20	06:20	Urban	06:20	06:20	Urban	06:20	08:20
Rural	07:50	07:50	Rural	07:50	07:50	Rural	07:50	09:50
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	07:01	07:01	S1A	05:45	05:45	S1A	N/A	N/A
S1B	07:47	07:47	S1B	06:27	06:27	S1B	N/A	N/A
S1C	08:54	08:54	S1C	06:55	06:55	S1C	N/A	N/A
S1D	07:07	07:07	S1D	06:15	06:15	S1D	N/A	N/A
S1E	06:54	06:54	S1E	08:31	08:31	S1E	N/A	N/A
S1F	08:34	08:34	S1F	05:29	05:29	S1F	N/A	N/A
S1G	07:51	07:51	S1G	05:38	03:49	S1G	N/A	N/A
S1H	10:02	10:02	S1H	08:45	08:45	S1H	N/A	N/A
S1I	10:12	10:21	S1I	N/A	N/A	S1I	N/A	N/A
S2A	08:04	08:04	S2A	N/A	N/A	S2A	N/A	N/A
S2B	08:15	08:15	S2B	06:51	06:51	S2B	N/A	N/A
S2C	06:16	06:16	S2C	05:46	05:46	S2C	N/A	N/A
S2D	08:05	08:05	S2D	N/A	N/A	S2D	N/A	N/A
S3A	08:24	08:24	S3A	05:08	05:08	S3A	N/A	N/A
S3B	07:36	07:36	S3B	N/A	N/A	S3B	N/A	N/A
S3C	10:31	10:31	S3C	05:27	05:27	S3C	N/A	N/A
S3D	08:07	08:07	S3D	08:18	08:18	S3D	N/A	N/A
S3E	07:55	07:55	S3E	N/A	N/A	S3E	N/A	N/A
S3F	07:54	07:54	S3F	06:44	06:44	S3F	N/A	N/A
S3G	05:54	05:54	S3G	N/A	N/A	S3G	N/A	N/A
S3H	04:10	04:10	S3H	N/A	N/A	S3H	N/A	N/A
S4A	09:58	09:58	S4A	08:31	08:31	S4A	N/A	N/A
S4B	08:12	08:12	S4B	05:02	05:02	S4B	N/A	N/A
S4C	07:48	07:48	S4C	07:32	07:32	S4C	N/A	N/A
S4D	10:22	10:19	S4D	N/A	N/A	S4D	N/A	N/A
S4E	07:41	07:41	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: **Urban Geo-Zones are Identified in Bold Red Font**



Table 57: HazMat Gap Analysis 2023-2024

Gap Analysis for 1st Due Travel & Total Response Time – HazMat - 2023-2024											
Low Risk HazMat			Moderate Risk HazMat			Significant Risk HazMat			Maximum Risk HazMat		
SFD Benchmarks											
Urban	06:20	06:20	Urban	06:20	08:20	Urban	06:20	10:20	Urban	06:20	60:00
Rural	07:50	07:50	Rural	07:50	09:50	Rural	07:50	11:50	Rural	07:50	60:00
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	03:47	04:26	S1A	03:48	11:42	S1A	N/A	N/A	S1A	N/A	N/A
S1B	06:44	28:28	S1B	05:40	21:29	S1B	N/A	N/A	S1B	N/A	N/A
S1C	07:56	07:56	S1C	08:49	14:16	S1C	N/A	N/A	S1C	N/A	N/A
S1D	06:51	06:51	S1D	06:47	11:45	S1D	N/A	N/A	S1D	N/A	N/A
S1E	05:13	05:13	S1E	N/A	18:57	S1E	N/A	N/A	S1E	N/A	N/A
S1F	08:33	08:33	S1F	05:31	18:16	S1F	N/A	N/A	S1F	N/A	N/A
S1G	09:57	09:57	S1G	07:20	10:12	S1G	N/A	N/A	S1G	N/A	N/A
S1H	12:08	12:08	S1H	10:09	16:16	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	10:07	11:25	S1I	N/A	N/A	S1I	N/A	N/A
S2A	N/A	N/A	S2A	08:25	14:15	S2A	N/A	N/A	S2A	N/A	N/A
S2B	N/A	N/A	S2B	08:17	10:48	S2B	N/A	N/A	S2B	N/A	N/A
S2C	07:45	07:45	S2C	06:21	14:22	S2C	N/A	N/A	S2C	N/A	N/A
S2D	07:26	07:26	S2D	08:36	10:51	S2D	N/A	N/A	S2D	N/A	N/A
S3A	06:55	06:55	S3A	08:13	09:32	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	12:48	15:53	S3B	N/A	N/A	S3B	N/A	N/A
S3C	05:54	05:54	S3C	10:04	15:05	S3C	N/A	N/A	S3C	N/A	N/A
S3D	11:09	11:09	S3D	07:53	11:15	S3D	N/A	N/A	S3D	N/A	N/A
S3E	N/A	N/A	S3E	12:48	15:53	S3E	N/A	N/A	S3E	N/A	N/A
S3F	09:15	03:46	S3F	06:39	08:19	S3F	N/A	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	08:49	08:49	S4A	12:16	12:17	S4A	N/A	N/A	S4A	N/A	N/A
S4B	10:22	10:22	S4B	09:32	12:46	S4B	N/A	N/A	S4B	N/A	N/A
S4C	08:38	08:38	S4C	07:29	13:26	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	N/A	N/A	S4E	07:28	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: **Urban Geo-Zones are Identified in Bold Red Font**



Table 58: HazMat Gap Analysis 2024

Gap Analysis for 1st Due Travel & Total Response Time – HazMat - 2024											
Low Risk HazMat			Moderate Risk HazMat			Significant Risk HazMat			Maximum Risk HazMat		
SFD Benchmarks											
Urban	06:20	06:20	Urban	06:20	08:20	Urban	06:20	10:20	Urban	06:20	60:00
Rural	07:50	07:50	Rural	07:50	09:50	Rural	07:50	11:50	Rural	07:50	60:00
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	N/A	N/A	S1A	03:26	07:02	S1A	N/A	N/A	S1A	N/A	N/A
S1B	N/A	N/A	S1B	07:21	20:04	S1B	N/A	N/A	S1B	N/A	N/A
S1C	06:57	06:57	S1C	06:56	10:39	S1C	N/A	N/A	S1C	N/A	N/A
S1D	06:02	06:02	S1D	06:47	12:14	S1D	N/A	N/A	S1D	N/A	N/A
S1E	05:13	05:13	S1E	N/A	N/A	S1E	N/A	N/A	S1E	N/A	N/A
S1F	08:33	08:33	S1F	N/A	N/A	S1F	N/A	N/A	S1F	N/A	N/A
S1G	N/A	N/A	S1G	07:20	10:12	S1G	N/A	N/A	S1G	N/A	N/A
S1H	N/A	N/A	S1H	09:52	15:11	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	09:13	11:25	S1I	N/A	N/A	S1I	N/A	N/A
S2A	N/A	N/A	S2A	08:25	14:15	S2A	N/A	N/A	S2A	N/A	N/A
S2B	N/A	N/A	S2B	08:17	10:48	S2B	N/A	N/A	S2B	N/A	N/A
S2C	07:45	07:45	S2C	06:29	14:22	S2C	N/A	N/A	S2C	N/A	N/A
S2D	07:26	07:26	S2D	08:36	10:25	S2D	N/A	N/A	S2D	N/A	N/A
S3A	06:55	06:55	S3A	08:13	09:32	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	05:54	05:54	S3C	10:04	15:05	S3C	N/A	N/A	S3C	N/A	N/A
S3D	N/A	N/A	S3D	07:53	11:15	S3D	N/A	N/A	S3D	N/A	N/A
S3E	N/A	N/A	S3E	12:48	15:53	S3E	N/A	N/A	S3E	N/A	N/A
S3F	09:15	N/A	S3F	06:35	07:35	S3F	N/A	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	08:49	08:49	S4A	12:33	09:34	S4A	N/A	N/A	S4A	N/A	N/A
S4B	07:27	07:27	S4B	09:32	12:46	S4B	N/A	N/A	S4B	N/A	N/A
S4C	N/A	N/A	S4C	07:29	13:36	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	N/A	N/A	S4E	04:26	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**

Table 59: Technical Rescue Gap Analysis 2023-2024

Gap Analysis for Technical Rescue 1st Due Travel & Total Response Time 2023-2024											
Low Risk Technical Rescue			Moderate Risk Technical Rescue			Significant Risk Technical Rescue			Maximum Risk Technical Rescue		
SFD Benchmarks											
Urban	06:50	06:50	Urban	06:50	06:50	Urban	06:20	08:20	Urban	06:20	20:20
Rural	07:20	07:20	Rural	07:20	07:20	Rural	07:50	09:50	Rural	07:50	21:50
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	05:07	06:05	S1A	10:41	N/A	S1A	N/A	N/A	S1A	N/A	N/A
S1B	06:35	06:35	S1B	08:36	38:48	S1B	N/A	N/A	S1B	N/A	N/A
S1C	07:46	07:31	S1C	N/A	N/A	S1C	N/A	N/A	S1C	N/A	N/A
S1D	06:11	06:18	S1D	09:37	10:58	S1D	N/A	N/A	S1D	N/A	N/A
S1E	06:21	06:32	S1E	07:13	07:15	S1E	N/A	N/A	S1E	N/A	N/A
S1F	06:21	06:39	S1F	N/A	N/A	S1F	N/A	N/A	S1F	N/A	N/A
S1G	07:06	07:08	S1G	02:47	03:16	S1G	N/A	N/A	S1G	N/A	N/A
S1H	07:54	07:09	S1H	N/A	N/A	S1H	N/A	N/A	S1H	N/A	N/A
S1I	08:16	06:22	S1I	N/A	N/A	S1I	N/A	N/A	S1I	N/A	N/A
S2A	07:21	07:21	S2A	N/A	N/A	S2A	N/A	N/A	S2A	N/A	N/A
S2B	06:12	07:06	S2B	N/A	N/A	S2B	N/A	N/A	S2B	N/A	N/A
S2C	08:27	08:27	S2C	05:53	05:57	S2C	N/A	N/A	S2C	N/A	N/A
S2D	07:28	07:35	S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	06:35	07:02	S3A	06:20	06:33	S3A	N/A	N/A	S3A	N/A	N/A
S3B	07:46	07:47	S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	07:42	07:42	S3C	05:52	05:52	S3C	N/A	N/A	S3C	N/A	N/A
S3D	08:03	08:22	S3D	07:38	08:45	S3D	N/A	N/A	S3D	N/A	N/A
S3E	19:01	02:32	S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	06:17	06:32	S3F	03:54	05:14	S3F	N/A	N/A	S3F	N/A	N/A
S3G	07:07	07:07	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	05:54	05:54	S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	08:38	08:38	S4A	07:31	09:48	S4A	N/A	N/A	S4A	N/A	N/A
S4B	05:59	05:59	S4B	05:15	05:18	S4B	N/A	N/A	S4B	N/A	N/A
S4C	06:45	06:45	S4C	05:29	09:53	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	07:17	08:16	S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**

Table 60: Technical Rescue Gap Analysis 2024

Gap Analysis for Technical Rescue 1st Due Travel & Total Response Time 2024											
Low Risk Technical Rescue			Moderate Risk Technical Rescue			Significant Risk Technical Rescue			Maximum Risk Technical Rescue		
SFD Benchmarks											
Urban	06:50	06:50	Urban	06:50	06:50	Urban	06:20	08:20	Urban	06:20	20:20
Rural	07:20	07:20	Rural	07:20	07:20	Rural	07:50	09:50	Rural	07:50	21:50
GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF	GPZ	1st Due	ERF
S1A	07:51	06:15	S1A	N/A	N/A	S1A	N/A	N/A	S1A	N/A	N/A
S1B	06:48	06:48	S1B	03:43	05:42	S1B	N/A	N/A	S1B	N/A	N/A
S1C	07:47	09:20	S1C	N/A	N/A	S1C	N/A	N/A	S1C	N/A	N/A
S1D	05:43	05:49	S1D	09:37	10:58	S1D	N/A	N/A	S1D	N/A	N/A
S1E	07:02	06:32	S1E	04:31	06:03	S1E	N/A	N/A	S1E	N/A	N/A
S1F	06:39	06:39	S1F	N/A	N/A	S1F	N/A	N/A	S1F	N/A	N/A
S1G	07:08	07:27	S1G	N/A	N/A	S1G	N/A	N/A	S1G	N/A	N/A
S1H	N/A	N/A	S1H	N/A	N/A	S1H	N/A	N/A	S1H	N/A	N/A
S1I	07:50	06:22	S1I	N/A	N/A	S1I	N/A	N/A	S1I	N/A	N/A
S2A	07:21	07:21	S2A	N/A	N/A	S2A	N/A	N/A	S2A	N/A	N/A
S2B	06:12	07:06	S2B	N/A	N/A	S2B	N/A	N/A	S2B	N/A	N/A
S2C	06:53	06:53	S2C	N/A	N/A	S2C	N/A	N/A	S2C	N/A	N/A
S2D	08:14	08:56	S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	06:35	06:20	S3A	06:20	06:33	S3A	N/A	N/A	S3A	N/A	N/A
S3B	24:54	25:05	S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	05:57	05:57	S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A
S3D	06:49	06:49	S3D	N/A	N/A	S3D	N/A	N/A	S3D	N/A	N/A
S3E	09:33	02:32	S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	06:48	06:50	S3F	N/A	N/A	S3F	N/A	N/A	S3F	N/A	N/A
S3G	07:07	07:07	S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	07:36	07:36	S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	08:45	08:38	S4A	07:31	09:48	S4A	N/A	N/A	S4A	N/A	N/A
S4B	09:55	09:55	S4B	05:15	05:18	S4B	N/A	N/A	S4B	N/A	N/A
S4C	06:10	06:10	S4C	04:41	04:41	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	08:16	08:16	S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**



Table 61: ARFF Gap Analysis 2023-2024

Gap Analysis for Aviation Rescue Firefighting (ARFF) 1st Due Travel & Total Response Time – 2023-2024								
Low Risk ARFF			Moderate Risk ARFF			Significant Risk ARFF		
SFD Benchmarks								
Urban	06:20	06:20	Urban	06:20	08:20	Urban	06:20	10:20
Rural	07:50	07:50	Rural	07:50	09:50	Rural	07:50	11:50
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	N/A	N/A	S1A	N/A	N/A	S1A	N/A	N/A
S1B	N/A	N/A	S1B	N/A	N/A	S1B	N/A	N/A
S1C	N/A	N/A	S1C	N/A	N/A	S1C	N/A	N/A
S1D	N/A	N/A	S1D	N/A	N/A	S1D	N/A	N/A
S1E	N/A	N/A	S1E	N/A	N/A	S1E	N/A	N/A
S1F	N/A	N/A	S1F	N/A	N/A	S1F	N/A	N/A
S1G	N/A	N/A	S1G	N/A	N/A	S1G	N/A	N/A
S1H	N/A	N/A	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	N/A	N/A	S1I	N/A	N/A
S2A	N/A	N/A	S2A	N/A	N/A	S2A	05:42	07:25
S2B	N/A	N/A	S2B	N/A	N/A	S2B	N/A	N/A
S2C	N/A	N/A	S2C	N/A	N/A	S2C	N/A	N/A
S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	N/A	N/A	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A
S3D	N/A	N/A	S3D	N/A	N/A	S3D	N/A	N/A
S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	N/A	N/A	S3F	N/A	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	N/A	N/A	S4A	N/A	N/A	S4A	N/A	N/A
S4B	N/A	N/A	S4B	N/A	N/A	S4B	N/A	N/A
S4C	N/A	N/A	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**



Table 62: ARFF Gap Analysis 2024

Gap Analysis for Aviation Rescue Firefighting (ARFF) 1st Due Travel & Total Response Time - 2024								
Low Risk ARFF			Moderate Risk ARFF			Significant Risk ARFF		
SFD Benchmarks								
Urban	06:20	06:20	Urban	06:20	08:20	Urban	06:20	10:20
Rural	07:50	07:50	Rural	07:50	09:50	Rural	07:50	11:50
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	N/A	N/A	S1A	N/A	N/A	S1A	N/A	N/A
S1B	N/A	N/A	S1B	N/A	N/A	S1B	N/A	N/A
S1C	N/A	N/A	S1C	N/A	N/A	S1C	N/A	N/A
S1D	N/A	N/A	S1D	N/A	N/A	S1D	N/A	N/A
S1E	N/A	N/A	S1E	N/A	N/A	S1E	N/A	N/A
S1F	N/A	N/A	S1F	N/A	N/A	S1F	N/A	N/A
S1G	N/A	N/A	S1G	N/A	N/A	S1G	N/A	N/A
S1H	N/A	N/A	S1H	N/A	N/A	S1H	N/A	N/A
S1I	N/A	N/A	S1I	N/A	N/A	S1I	N/A	N/A
S2A	N/A	N/A	S2A	N/A	N/A	S2A	05:42	07:25
S2B	N/A	N/A	S2B	N/A	N/A	S2B	N/A	N/A
S2C	N/A	N/A	S2C	N/A	N/A	S2C	N/A	N/A
S2D	N/A	N/A	S2D	N/A	N/A	S2D	N/A	N/A
S3A	N/A	N/A	S3A	N/A	N/A	S3A	N/A	N/A
S3B	N/A	N/A	S3B	N/A	N/A	S3B	N/A	N/A
S3C	N/A	N/A	S3C	N/A	N/A	S3C	N/A	N/A
S3D	N/A	N/A	S3D	N/A	N/A	S3D	N/A	N/A
S3E	N/A	N/A	S3E	N/A	N/A	S3E	N/A	N/A
S3F	N/A	N/A	S3F	N/A	N/A	S3F	N/A	N/A
S3G	N/A	N/A	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	N/A	N/A	S4A	N/A	N/A	S4A	N/A	N/A
S4B	N/A	N/A	S4B	N/A	N/A	S4B	N/A	N/A
S4C	N/A	N/A	S4C	N/A	N/A	S4C	N/A	N/A
S4D	N/A	N/A	S4D	N/A	N/A	S4D	N/A	N/A
S4E	N/A	N/A	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**



Table 63: Other Incidents Gap Analysis 2023-2024

Gap Analysis for 1st Due Travel & Total Response Time – Other - 2023-2024								
Low Risk Other			Moderate Risk Other			High Risk Other		
SFD Benchmarks								
Urban	06:20	06:20	Urban	N/A	N/A	Urban	N/A	N/A
Rural	07:50	07:50	Rural	N/A	N/A	Rural	N/A	N/A
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	06:08	06:39	S1A	N/A	N/A	S1A	N/A	N/A
S1B	07:49	07:49	S1B	N/A	N/A	S1B	N/A	N/A
S1C	08:23	08:49	S1C	N/A	N/A	S1C	N/A	N/A
S1D	06:52	06:52	S1D	N/A	N/A	S1D	N/A	N/A
S1E	07:30	07:38	S1E	N/A	N/A	S1E	N/A	N/A
S1F	09:43	07:06	S1F	N/A	N/A	S1F	N/A	N/A
S1G	08:12	08:21	S1G	N/A	N/A	S1G	N/A	N/A
S1H	12:18	12:18	S1H	N/A	N/A	S1H	N/A	N/A
S1I	11:35	11:12	S1I	N/A	N/A	S1I	N/A	N/A
S2A	09:49	09:49	S2A	N/A	N/A	S2A	N/A	N/A
S2B	10:42	10:42	S2B	N/A	N/A	S2B	N/A	N/A
S2C	07:39	07:39	S2C	N/A	N/A	S2C	N/A	N/A
S2D	08:27	08:26	S2D	N/A	N/A	S2D	N/A	N/A
S3A	08:15	07:56	S3A	N/A	N/A	S3A	N/A	N/A
S3B	09:47	10:24	S3B	N/A	N/A	S3B	N/A	N/A
S3C	06:29	07:11	S3C	N/A	N/A	S3C	N/A	N/A
S3D	07:41	07:43	S3D	N/A	N/A	S3D	N/A	N/A
S3E	11:00	11:19	S3E	N/A	N/A	S3E	N/A	N/A
S3F	07:02	07:14	S3F	N/A	N/A	S3F	N/A	N/A
S3G	08:36	13:02	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	10:03	09:59	S4A	N/A	N/A	S4A	N/A	N/A
S4B	08:59	08:59	S4B	N/A	N/A	S4B	N/A	N/A
S4C	06:44	06:50	S4C	N/A	N/A	S4C	N/A	N/A
S4D	11:09	11:20	S4D	N/A	N/A	S4D	N/A	N/A
S4E	08:18	08:33	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**

Table 64: Other Incidents Gap Analysis 2024

Gap Analysis for 1st Due Travel & Total Response Time – Other - 2024								
Low Risk Other			Moderate Risk Other			High Risk Other		
SFD Benchmarks								
Urban	06:20	06:20	Urban	N/A	N/A	Urban	N/A	N/A
Rural	07:50	07:50	Rural	N/A	N/A	Rural	N/A	N/A
GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF	GPZ	Gap -1st Due	Gap - ERF
S1A	06:08	06:03	S1A	N/A	N/A	S1A	N/A	N/A
S1B	08:02	08:02	S1B	N/A	N/A	S1B	N/A	N/A
S1C	08:12	08:23	S1C	N/A	N/A	S1C	N/A	N/A
S1D	07:26	07:26	S1D	N/A	N/A	S1D	N/A	N/A
S1E	07:30	07:30	S1E	N/A	N/A	S1E	N/A	N/A
S1F	07:23	07:23	S1F	N/A	N/A	S1F	N/A	N/A
S1G	08:08	08:12	S1G	N/A	N/A	S1G	N/A	N/A
S1H	11:24	11:24	S1H	N/A	N/A	S1H	N/A	N/A
S1I	11:35	11:12	S1I	N/A	N/A	S1I	N/A	N/A
S2A	09:18	09:18	S2A	N/A	N/A	S2A	N/A	N/A
S2B	10:42	10:42	S2B	N/A	N/A	S2B	N/A	N/A
S2C	06:58	07:17	S2C	N/A	N/A	S2C	N/A	N/A
S2D	08:26	08:26	S2D	N/A	N/A	S2D	N/A	N/A
S3A	07:56	08:43	S3A	N/A	N/A	S3A	N/A	N/A
S3B	09:47	10:24	S3B	N/A	N/A	S3B	N/A	N/A
S3C	06:28	06:29	S3C	N/A	N/A	S3C	N/A	N/A
S3D	08:14	07:47	S3D	N/A	N/A	S3D	N/A	N/A
S3E	11:29	11:29	S3E	N/A	N/A	S3E	N/A	N/A
S3F	07:21	07:26	S3F	N/A	N/A	S3F	N/A	N/A
S3G	08:36	13:02	S3G	N/A	N/A	S3G	N/A	N/A
S3H	N/A	N/A	S3H	N/A	N/A	S3H	N/A	N/A
S4A	10:21	10:07	S4A	N/A	N/A	S4A	N/A	N/A
S4B	08:54	08:54	S4B	N/A	N/A	S4B	N/A	N/A
S4C	07:55	07:55	S4C	N/A	N/A	S4C	N/A	N/A
S4D	11:20	11:20	S4D	N/A	N/A	S4D	N/A	N/A
S4E	10:40	09:12	S4E	N/A	N/A	S4E	N/A	N/A

Benchmark Statements: Urban Geo-Zones are Identified in **Bold Red Front**

Table 65: 2020 Demands for Service / Availability

FY - 2020	1st Due	Total Calls	Station Availability
Station 1	1163	1862	62.46%
Station 2	549	610	90.00%
Station 3	705	795	88.68%
Station 4	631	731	86.32%

Table 66: 2021 Demands for Service / Availability

FY - 2021	1st Due	Total Calls	Station Availability
Station 1	1676	1934	86.66%
Station 2	604	656	92.07%
Station 3	833	958	86.95%
Station 4	630	721	87.38%

Table 67: 2022 Demands for Service / Availability

FY - 2022	1st Due	Total Calls	Station Availability
Station 1	2052	2234	91.85%
Station 2	604	673	89.75%
Station 3	811	923	87.87%
Station 4	683	838	81.50%

Table 68: 2023 Demands for Service / Availability

FY - 2023	1st Due	Total Calls	Station Availability
Station 1	2237	1440	91.68%
Station 2	720	813	88.56%
Station 3	961	1102	87.21%
Station 4	1010	1198	84.31%

Table 69: 2024 Demands for Service / Availability

FY - 2024	1st Due	Total Calls	Station Availability
Station 1	2038	2268	89.86%
Station 2	826	979	84.37%
Station 3	1161	1429	81.25%
Station 4	1331	1693	79.80%

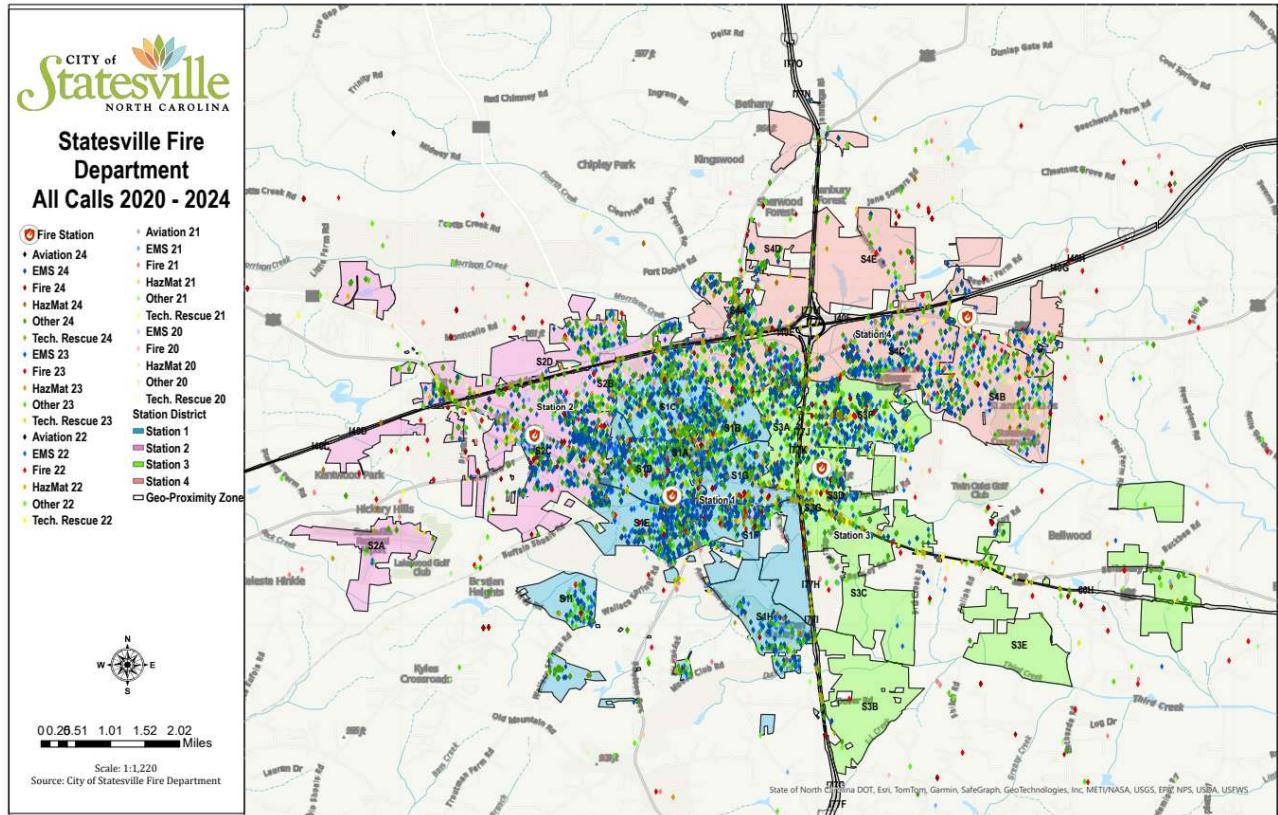
Table 70: 2020-2024 Call Distribution

Station	Calls	Distribution
Station 1	11,368	41.83%
Station 2	4,164	15.32%
Station 3	5,971	21.97%
Station 4	5,675	20.88%

Table 71: Total Response by Station District 2020-2024

Geo-Zones	2020	2021	2022	2023	2024	Totals	% by district	Prior Year Growth	Avg. Growth
S1A	100	124	151	210	164	749	2.95%	-22%	9.89%
S1B	331	316	334	386	275	1642	6.46%	-29%	-3.71%
S1C	368	366	446	405	448	2033	8.00%	11%	3.93%
S1D	422	435	514	538	401	2310	9.08%	-25%	-1.02%
S1E	349	352	435	526	540	2202	8.66%	3%	8.73%
S1F	121	123	113	131	195	683	2.69%	49%	9.54%
S1G	183	161	205	183	230	962	3.78%	26%	4.57%
S1H	17	34	64	66	93	274	1.08%	41%	56.65%
S1I	13	26	34	47	77	197	0.77%	64%	59.30%
S2A	7	7	11	45	13	83	0.33%	-71%	12.38%
S2B					77	77	0.30%	0%	0.00%
S2C	458	493	512	604	696	2763	10.87%	15%	8.37%
S2D	145	159	161	172	230	867	3.41%	34%	9.23%
S3A	135	145	156	182	247	865	3.40%	36%	12.08%
S3B	59	33	22	15	17	146	0.57%	13%	-24.89%
S3C	66	71	87	113	76	413	1.62%	-33%	2.82%
S3D	207	278	287	366	502	1640	6.45%	37%	17.72%
S3E	11	25	14	15	28	93	0.37%	87%	18.69%
S3F	314	389	345	415	593	2056	8.09%	43%	12.72%
S3G	0	0	0	1	18	19	0.07%	1700%	144.52%
S3H	6	17	25	9	7	64	0.25%	-22%	3.08%
S4A	311	290	351	374	574	1900	7.47%	53%	12.26%
S4B	152	161	161	211	378	1063	4.18%	79%	18.22%
S4C	259	264	267	462	618	1870	7.35%	34%	17.39%
S4D	11	5	24	19	68	127	0.50%	258%	36.43%
S4E			34	144	151	329	1.29%	5%	49.70%
Totals	4045	4274	4753	5639	6716	25427		19%	10.14%

Map 31: Fire Districts with All Calls Maximum, Significant, Moderate, & Low Risks – 2020-2024



Fire Station #1 Planning Zone Risk Assessment



The newest Station, Fire Station #1, was constructed in 2024 and is located at 822 Fifth Street. Fire Station #1 has the highest demand for service out of the four fire stations and is located near the downtown area of Statesville. Station #1 is classified as a high-angle and confined space specialty station. Engine 1, Ladder 1, Battalion 1, Squad 1, and Reserve Engine 11 respond from this station. The Fire Marshal Division and Administration also operate out of Station #1. The service area includes residential, high occupancy buildings, commercial, government buildings, facilities with hazardous materials, and historical downtown.

Table 72: Fire Risk Category Station #1

FIRE RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Car fires, dumpster fires, small outside fires. Fire incidents that only require a single engine response
MODERATE	Occupancy fires in residential 1 to 2 family structures
SIGNIFICANT	Occupancy fires in Public Assembly Property, Educational Property, Institutional Property, Store and Office Property, Basic Industry, Storage Property, Special Property, Multi-Family Dwellings (Apartments, Hotels, and Dormitories)
MAXIMUM	Fires at Healthcare, Detention, and Correction Facilities with NFIRS Codes 311, 323, 331, and 361

Map 32: Fire Station #1 District

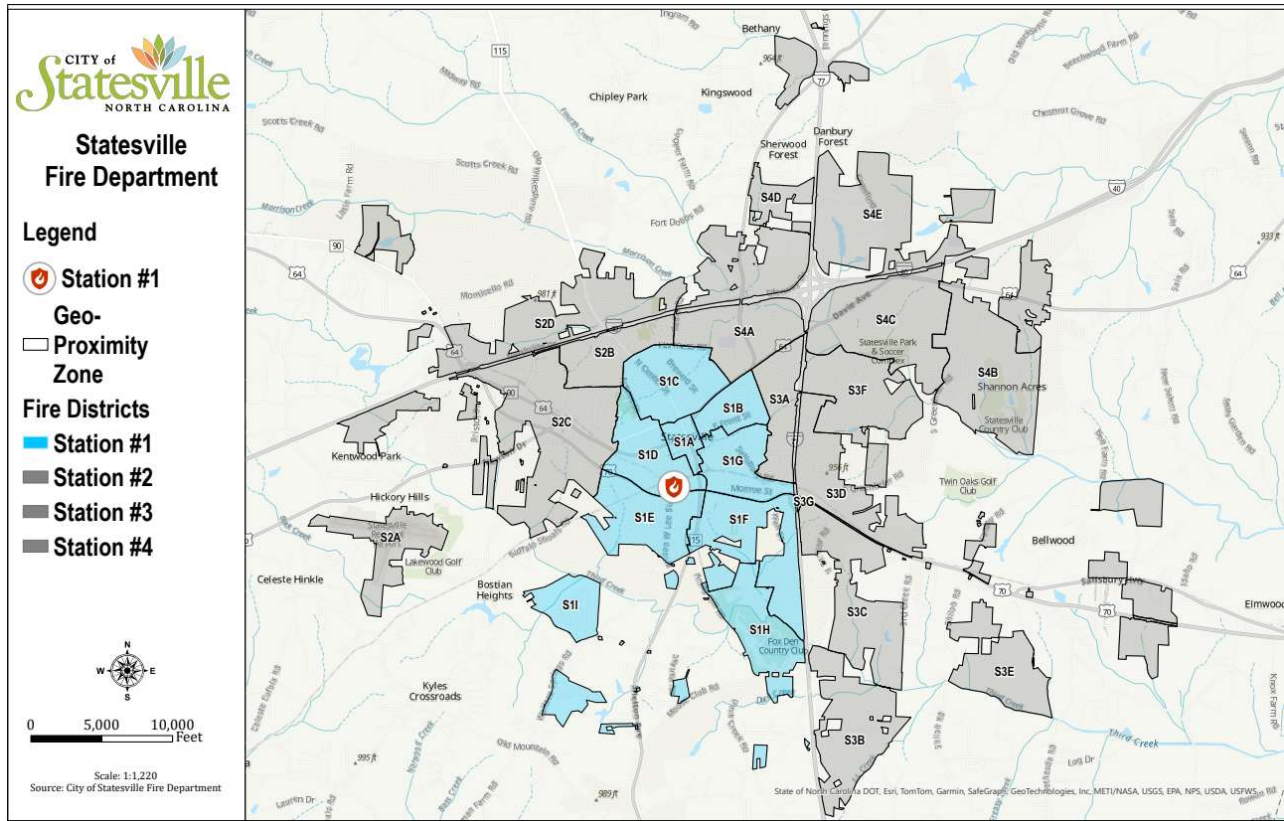





Table 73: Fire Station #1 Concentration – Mobile Assets

<p style="text-align: center;">Engine 1</p> 	<p>Engine 1 is a 2021 Marion Body Works Custom Rescue Pumper. Staffing of 4 per day. It is equipped with a Cummins ISX Engine and a Hale 1500 gpm pump. Engine 1 carries a 750-gallon booster tank. It is equipped with a full complement of Amkus Hydraulic Rescue tools as well as a Harrison Hydraulic Generator. The cab configuration allows for a total of 6 occupants and is equipped with the most up to date safety features on the market including airbags.</p>
<p style="text-align: center;">Ladder 1</p> 	<p>Ladder 1 is a 2019 Sutphen SPH 100 aerial tower with a 4 door, 6-person full tilt cab and 10" raised roof. The 252" wheelbase carries a 100' aluminum ladder platform and a 300-gallon custom fiber tank and 115' of ground ladders. The power comes from a Cummins X12 500hp engine and an Allison EVS 400 automatic transmission. The Hale QMAX200-23R pump delivers 1500 gpm and has 444 cubic ft. breathing air system @ 4500psi. Auxiliary power comes from a 10 KW PTO powered generator. Ladder 1 is dispatched on all structure fires, high angle rescue, and confined space incidents and is operated accordingly as needed. Minimum staffing of 4 firefighters per day.</p>

Battalion 1



Battalion 1 is 2022 Chevrolet Tahoe 4X4 equipped with two 800 MHz radios which enable communication with not only SFD units but with Emergency Services county wide. Staffing of 1 per day.

<p style="text-align: center;">Battalion 2</p> 	<p>Battalion 2 is a 2014 Ford Expedition 4X4 equipped with both 800 MHz and VHF radios which enables communication with not only SFD units but with Emergency Services county wide. This vehicle is used as a command vehicle on general alarms and a reserve unit for Battalion 1.</p>
<p style="text-align: center;">Squad 1</p> 	<p>2019 F350 Super Duty 4x4. It is equipped with a 6.7L Turbo Diesel as well as a crew cab.</p>
<p style="text-align: center;">Reserve Engine 11</p> 	<p>Engine 11 is a 2001 Sutphen 4 door, 5-person cab with a 15 3/4" raised roof. It has a 181" wheelbase and is powered by a Detroit Series 60 430 hp engine and a HD 4060 Allison World transmission. Engine 3 has a Hale QSMG 150 pump which delivers 1500 gpm and a 750-gallon tank and is equipped with a 10 KW Smart Power hydraulic generator with a full complement of Amkus Rescue tools. It also has a Zico hydraulic ladder rack.</p>

Map 33: Fire Station #1 All Calls Maximum, Significant, Moderate, & Low Risks – 2024

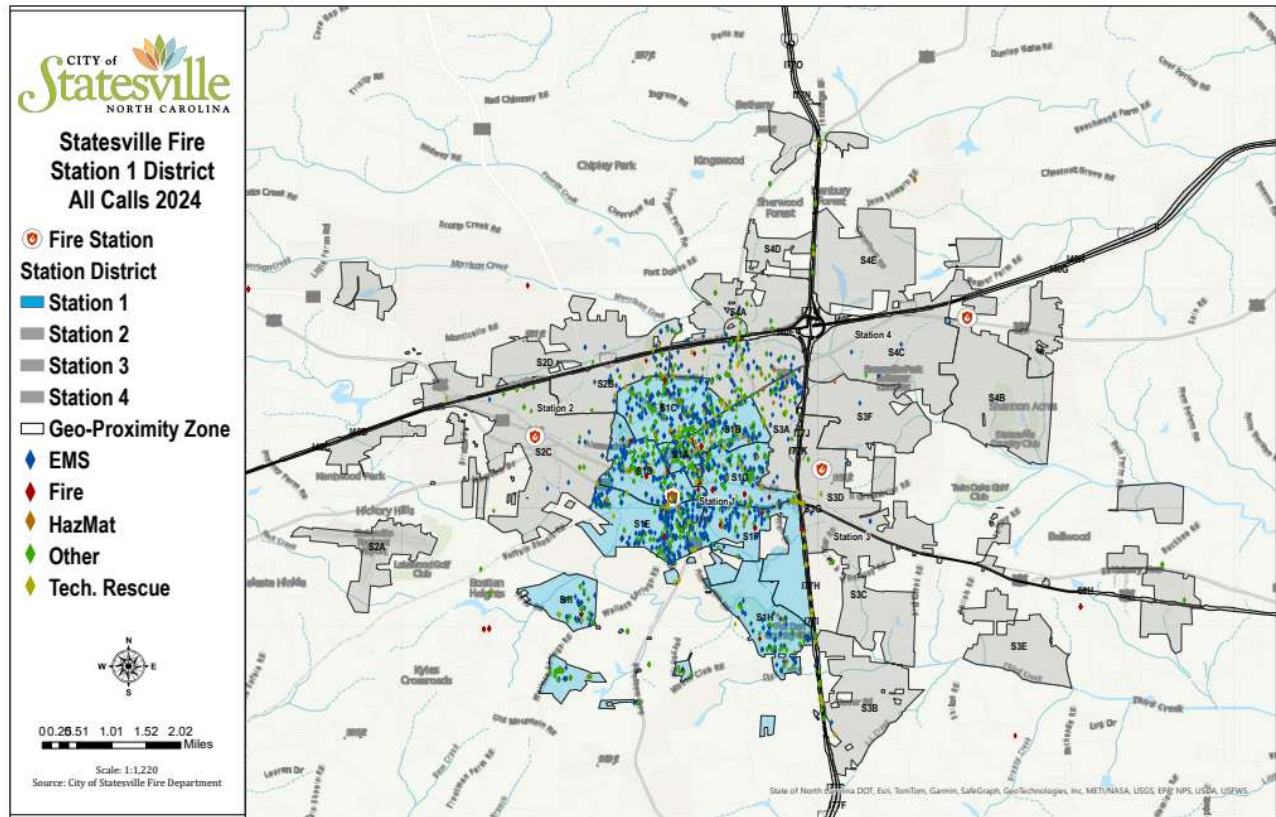


Table 74: Fire Station 1 Incidents by Type 2024

Incident Type - 2024	Number of Incidents
Fire	56
HazMat	45
Medical	1,549
Technical Rescue	180
ARFF	0
Other	667
Total Number of Incidents	2,497

Table 75: Fire Station #1 Availability 2020-2024

Year	Station #1 District Calls	Station Responses	Station Availability
2020	1862	1163	62.46%
2021	1934	1676	86.66%
2022	2234	2052	91.85%
2023	2440	2237	91.68%
2024	2,268	2038	89.86%

Table 76: Total Incidents by GPZ 2024

Station #1 GPZs	Number of Incidents
S1A	164
S1B	275
S1C	448
S1D	401
S1E	540
S1F	195
S1G	230
S1H	93
S1I	77
TOTAL	2,423

Table 77: Incidents by Type Station #1 GPZs 2020

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	Total
Fire	2	5	5	11	15	4	3	45
HazMat	0	11	11	13	6	4	1	46
Medical	69	197	222	232	249	88	137	1194
Technical Rescue	12	35	12	43	26	6	9	143
ARFF	0	0	0	0	0	0	0	0
Non-Emergency	6	24	27	41	18	9	11	136
Other Incidents	11	59	91	82	35	10	22	310
Total – 2020	100	331	368	422	349	121	183	1874

Table 78: Incidents by Type Station #1 GPZs 2021

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Total
Fire	4	8	9	13	12	8	8	0	0	62
HazMat	0	6	16	11	2	3	2	4	0	44
Medical	75	195	222	268	271	85	106	23	19	1264
Technical Rescue	16	28	34	34	21	3	7	0	0	143
ARFF	0	0	0	0	0	0	0	0	0	0
Non-Emergency	10	30	22	48	22	3	8	1	3	147
Other Incidents	19	49	63	61	24	21	30	6	4	277
Total - 2021	124	316	366	435	352	123	161	34	26	1937

Table 79: Incidents by Type Station #1 GPZs 2022

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Total
Fire	1	7	10	13	12	3	4	0	1	51
HazMat	6	6	13	12	3	1	4	3	0	48
Medical	104	209	248	330	346	81	152	43	20	1533
Technical Rescue	16	38	35	46	18	6	12	1	0	172
ARFF	0	0	0	0	1	0	1	0	0	2
Non-Emergency	8	27	45	58	25	5	8	7	5	188
Other Incidents	16	47	95	55	30	17	24	10	8	302
Total - 2022	151	334	446	514	435	113	205	64	34	2296

Table 80: Incidents by Type Station #1 GPZs 2023

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Total
Fire	3	10	11	10	12	6	7	0	0	59
HazMat	4	8	15	15	2	4	3	4	2	57
Medical	107	255	250	345	436	90	126	32	33	1674
Technical Rescue	8	38	31	48	18	10	17	4	1	175
ARFF	0	0	0	0	0	0	0	0	0	0
Other Incidents	48	112	171	157	102	32	37	32	24	715
Total - 2023	170	423	478	575	570	142	190	72	60	2,680

Table 81: Incidents by Type Station #1 GPZs 2024

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Total
Fire	3	2	6	10	10	5	6	3	1	46
HazMat	3	5	11	7	2	4	4	5	3	44
Medical	95	154	252	252	416	140	139	54	33	1535
Technical Rescue	17	35	26	32	21	6	23	0	2	162
ARFF	0	0	0	0	0	0	0	0	0	0
Other Incidents	46	79	153	100	91	40	58	31	38	636
Total - 2024	164	275	448	401	540	195	230	93	77	2423

Table 82: Incidents by Type Station #1 GPZs 2020-2024

Incident Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Total
Fire	13	32	41	57	61	26	28	3	2	263
HazMat	12	36	61	53	14	15	12	14	5	222
Medical	464	996	1181	1421	1700	481	660	152	103	7158
Technical Rescue	69	173	138	201	103	30	68	5	3	790
ARFF	0	0	0	0	1	0	1	0	0	2
Non-Emergency	24	81	94	147	65	17	27	8	8	471
Other Incidents	167	324	518	431	258	114	166	75	63	2116
Total – 2020-2024	749	1642	2033	2310	2202	683	962	257	184	11022

Non-Emergency merged with Other Incidents in 2023

Table 83: Calls by Day of Week by Hour of Day 2020-2024

Station #1: 2020-2024	00:00-05:59	06:00-11:59	12:00-17:59	18:00-23:59	Total
Monday	217	435	602	414	1,668
Tuesday	178	464	563	417	1,622
Wednesday	198	436	627	381	1,642
Thursday	193	450	608	455	1,706
Friday	203	424	590	416	1,633
Saturday	210	379	554	470	1,613
Sunday	243	348	474	419	1,484
Total	1,442	2,936	4,018	2,972	11,368
Percent	12.68%	25.83%	35.34%	26.14%	



Table 84: Incident by Occupancy Type Station 1 GPZs 2024

Occupancy Type	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Totals
Assembly 1	1									1
Assembly 2	21	2	2	1	3	2		1		32
Assembly 3	18	7	10	5	15	10	6		2	73
Assembly 4		1								1
Business	190	72	57	25	13	9	17			383
Educational	3	3	1	2		3				12
Factory 1		1	1	3	1		5			11
Factory 2				3		1				4
Foster Homes		1	3	5		3		3	6	21
High Hazard 1										
High Hazard 2	1									1
High Hazard 3										
High Hazard 4										
Institutional 1			3							3
Institutional 2										
Institutional 3			1							1
Institutional 4	1	1	3		2					7
Mercantile	44	12	7	5	5	10	5			88
Residential 1	1				1	1				3
Residential 2	5		1	4						10
Residential 3	1				1					2
Residential 4				1						1
Storage 1	14	2	2	14	10	9	25			76
Storage 2		1		1	3		1			6
U (Miscellaneous)	1						1	1		3
Totals - 2024	301	103	91	69	54	48	60	4	9	739

Table 85: Commercial Building Stories

GPZ	Stories 1	Stories 2	Stories 3	Stories 4	Stories 5	Stories 6	Stories 7	No Data	Total
S1A	89	197	8	4	1	1	1		301
S1B	59	44							103
S1C	47	42	2						91
S1D	42	25	2						69
S1E	49	4	1						54
S1F	41	7							48
S1G	56	4							60
S1H	1	3							4
S1I	4	5							9
Totals	388	331	13	4	1	1	1		739

Table 86: Commercial Building Status

Building Status	S1A	S1B	S1C	S1D	S1E	S1F	S1G	S1H	S1I	Totals
Occupied and operating	249	89	79	62	44	42	48	4	8	625
Under construction	1				2				1	4
Under major renovation	2			1	1					4
Undetermined	4	1								5
Vacant and secured	25	7	11	3	3	4	4			57
Vacant	15	6		1	2	2	6			32
Being Demolished	2				1		1			4
Vacant										
Tag	2		1							3
Unsafe	1			2	1		1			5
Totals - 2024	301	103	91	69	54	48	60	4	9	739

Fire Station #2 Planning Zone Risk Assessment

Fire Station #2 was constructed in 1962 and is located at 110 Security Drive. It is the oldest Fire Station in the Department. Fire Station #2 response district is in the western part of the city and includes the Statesville Regional Airport. Engine 2, Squad 2, and Reserve Engine 12 respond from this station. This station also responds ARFF 1 from its location at the airport. Service area includes residential, commercial, schools, and facilities with hazardous materials. In 2024, with the relocation of Station #1, the geo-proximity zones (GPZs) were reevaluated and GPZ S2B was added to Station #2’s fire district.



Table 87: Fire Risk Category Station #2

FIRE RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Car fires, dumpster fires, small outside fires. Fire incidents that only require a single engine response
MODERATE	Occupancy fires in residential 1 to 2 family structures
SIGNIFICANT	Occupancy fires in Public Assembly Property, Educational Property, Institutional Property, Store and Office Property, Basic Industry, Storage Property, Special Property, Multi-Family Dwellings (Apartments, Hotels, and Dormitories)
MAXIMUM	Fires at Healthcare, Detention, and Correction Facilities with NFIRS Codes 311, 323, 331, and 361

Map 34: Fire Station #2 District

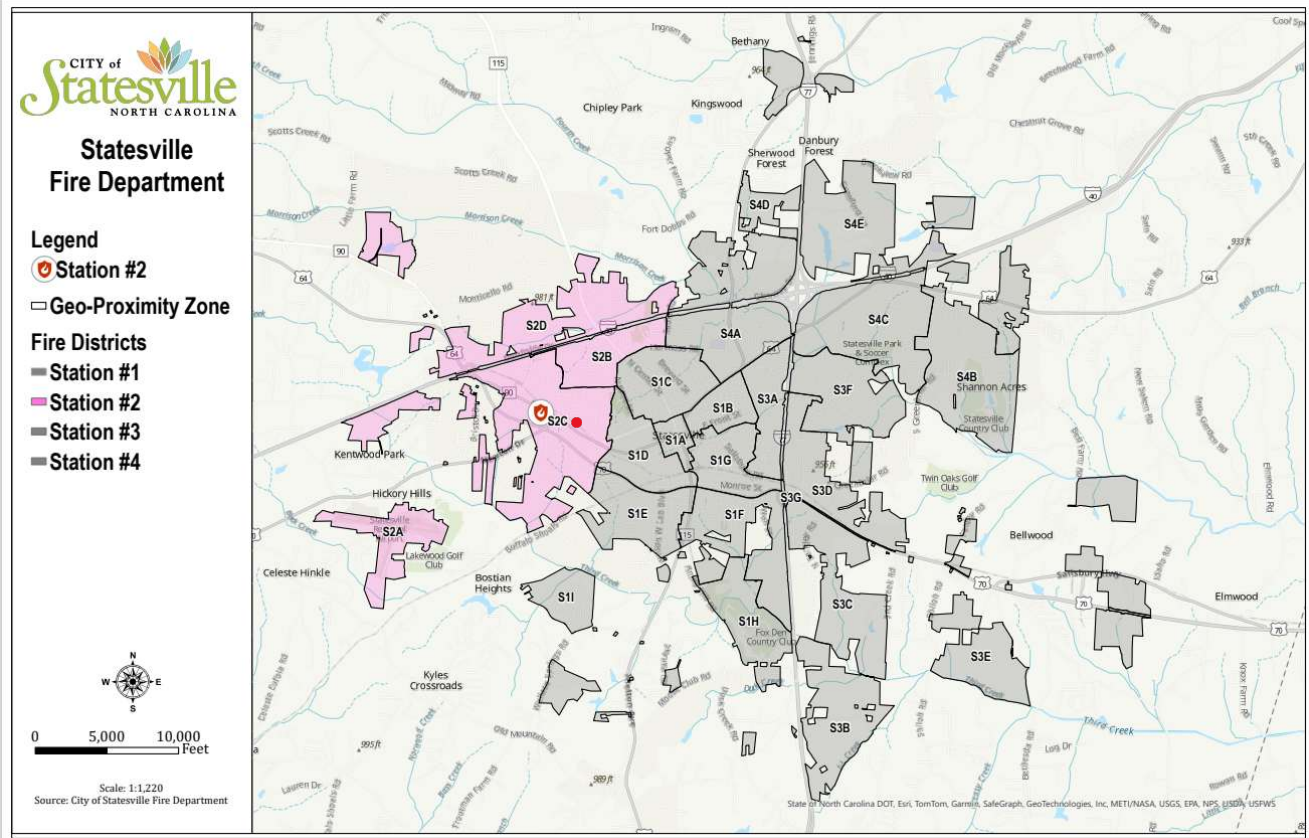


Table 88: Fire Station #2 Concentration – Mobile Assets

Engine 2



Engine 2 is a 2018 Marion Body Works Custom Rescue Pumper. It is designed on a Spartan Metro Star Cab and Chassis and equipped with a Cummins ISL 9 Engine. It is complete with a 1250 gallon per minute Hale fire pump, 700-gallon water tank, (2) 20-gallon foam tanks, and a Foam Pro 2001 Dual Agent Foam System. The lighting system, all LED, and hydraulic pumps are powered by a Harrison 10kw hydraulic generator, with a full complement of Amkus Rescue tools. The cab configuration allows for a total of 6 occupants and is equipped with the most up to date safety features on the market including airbags. Staffing of 4 per day and is one 2 new apparatus.

ARFF 1



The City of Statesville received a 2003 Colet K15 ATTCC Jaguar airport fire suppression vehicle in 2012 through the Federal Excess Personal Property Program. This vehicle has a stainless-steel frame and is equipped with a 1500-gallon water tank, 1050 gpm pump (pump and roll), 96-gallon foam tank, and dry chemical capabilities. ARFF 1 is housed at Fire Statesville Regional Airport.

Squad 2



2021 F250 Super Duty 4x4. The truck is equipped with a crew cab and a covered bed for storage.

Reserve Engine 12



Engine 12 is a 1998 Sutphen apparatus equipped with a 4 door, 5-person cab and has a 15" raised roof and a 181" wheelbase. The power comes from a 400 HP 60 Series Detroit with a HD 4060 Allison transmission. The Hale QSMG 150 delivers 1500 gpm water flow. E-2 has a 750-gallon poly tank, an M-8 Smart Power PTO generator with a full complement of Amkus Rescue tools, and a Zico hydraulic ladder rack.

Map 35: Fire Station #2 All Calls Maximum, Significant, Moderate, & Low Risks 2024

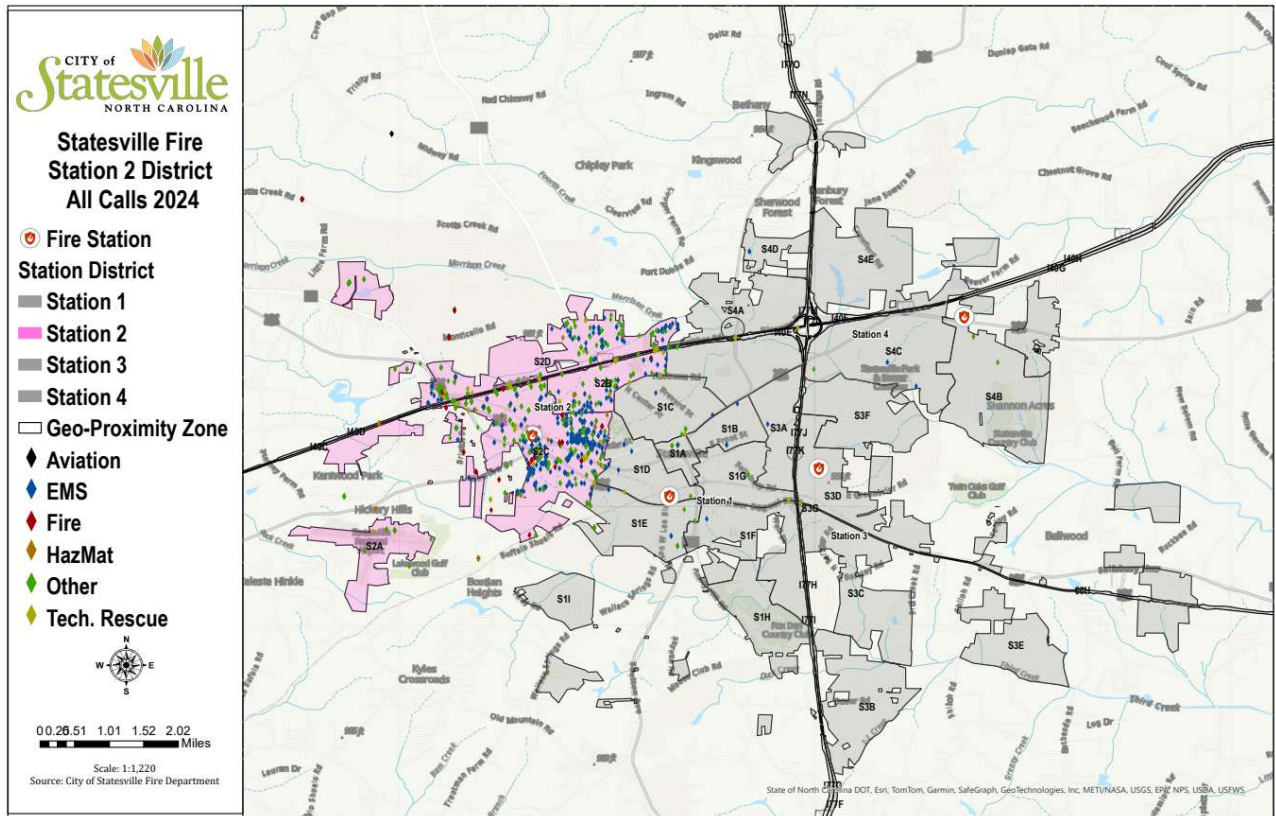


Table 89: Fire Station #2 Incidents by Type 2024

Incidents Type - 2024	Number of Incidents
Fires	36
HazMat	20
Medical	602
Technical Rescue	83
ARFF	1
Other	345
Total Number of Incidents	1,087

Non-Emergency merged with Other Incidents

Table 90: Fire Station #2 Availability 2020-2024

Year	Station #2 District Calls	Station Responses	Station Availability
2020	610	549	90.00%
2021	656	604	92.07%
2022	673	604	89.75%
2023	813	720	88.56%
2024	979	826	84.37%

Table 91: Total Incidents by GPZ 2024

GPZ	Number of Incidents
S2A	13
S2B	77
S2C	696
S2D	230
Total – 2024	1016

S2B GPZ added in 2024

Table 92: Incidents by Type Station #2 GPZs 2020

Incident Type	S2A	S2C	S2D	Total
Fire	0	16	3	19
HazMat	0	14	5	19
Medical	0	295	62	357
Technical Rescue	0	48	22	70
ARFF	0	0	0	0
Non-Emergency	2	27	16	45
Other Incidents	5	58	37	100
Total – 2020	7	458	145	610

Table 93: Incidents by Type Station #2 GPZs 2021

Incident Type	S2A	S2C	S2D	Total
Fire	0	18	3	21
HazMat	0	9	4	13
Medical	0	347	71	418
Technical Rescue	2	37	25	64
ARFF	2	0	0	2
Non-Emergency	1	27	13	41
Other Incidents	2	55	43	100
Total – 2021	7	493	159	659

Table 94: Incidents by Type Station #2 GPZs 2022

Incident Type	S2A	S2C	S2D	Total
Fire	3	12	5	20
HazMat	0	12	5	17
Medical	2	335	61	398
Technical Rescue	0	59	27	86
ARFF	0	0	0	0
Non-Emergency	1	35	17	53
Other Incidents	5	59	46	110
Total - 2022	11	512	161	684

Table 95: Incidents by Type Station #2 GPZs 2023

Incident Type	S2A	S2C	S2D	Total
Fire	0	15	5	20
HazMat	1	9	4	14
Medical	10	385	82	477
Technical Rescue	2	37	24	63
ARFF	0	0	0	0
Other Incidents	14	152	74	240
Total – 2023	27	598	189	814



Table 96: Incidents by Type Station #2 GPZs 2024

Incident Type	S2A	S2B	S2C	S2D	Total
Fire	1	1	18	3	23
HazMat	1	5	6	3	15
Medical	1	35	453	111	600
Technical Rescue	1	5	38	19	63
ARFF	0	0	0	0	0
Other Incidents	9	31	181	94	315
Total - 2024	13	77	696	230	1016

Non-Emergency merged with Other Incidents in 2023. S2B GPZ added in 2024

Table 97: Incidents by Type Station #2 GPZs 2020-2024

Incident Type	S2A	S2B	S2C	S2D	Total
Fire	4	1	79	19	103
HazMat	2	5	50	21	78
Medical	13	35	1815	387	2250
Technical Rescue	5	5	219	117	346
ARFF	2	0	0	0	2
Non-Emergency	4	0	89	46	139
Other Incidents	35	31	505	294	865
Total – 2020-2024	65	77	2757	884	3783

Non-Emergency merged with Other Incidents in 2023. S2B GPZ added in 2024

Table 98: Calls by Day of Week by Hour of Day 2020-2024

Station #2: 2020-2024	00:00-05:59	06:00-11:59	12:00-17:59	18:00-23:59	Total
Monday	61	183	224	164	632
Tuesday	76	167	248	137	628
Wednesday	66	154	218	125	563
Thursday	63	182	222	169	636
Friday	70	209	233	167	679
Saturday	57	142	185	155	539
Sunday	78	101	164	144	487
Total	471	1138	1494	1061	4,164
Percent	11.31%	27.33%	35.88%	25.48%	

Table 99: Incidents by Occupancy Type Station #2 GPZs 2024

Occupancy Type	S2A	S2B	S2C	S2D	Totals
Assembly 1					
Assembly 2			8	11	19
Assembly 3		3	17	2	22
Assembly 4					
Business	1	7	57	40	105
Educational		1	3	2	6
Factory 1			25	6	31
Factory 2			6	5	11
Foster Homes		3	5	1	9
High Hazard 1					
High Hazard 2			2	1	3
High Hazard 3					
High Hazard 4				1	1
Institutional 1			1		1
Institutional 2					
Institutional 3					
Institutional 4		1	3		4
Mercantile		5	30	20	55
Residential 1		1	1	1	3
Residential 2		1		2	3
Residential 3					
Residential 4		1			1
Storage 1	22	1	71	19	113
Storage 2		1	11	2	14
U (Miscellaneous)			2	1	3
Totals - 2024	23	25	242	114	404

Table 100: Commercial Building Stories

GPZ	Stories 1	Stories 2	Stories 3	Stories 4	Stories 5	Stories 6	Stories 7	No Data	Total
S2A	21	1	1						23
S2B	23	2							25
S2C	222	19						1	242
S2D	106	6	2						114
Totals	372	28	3					1	404

Table 101: Commercial Building Status

Building Status	S2A	S2B	S2C	S2D	Totals
Occupied and operating	22	24	210	104	360
Under construction	1	1		5	7
Under major renovation			1	1	2
Undetermined					
Vacant and secured			18	2	20
Vacant			8	2	10
Being Demolished			1		1
Vacant					
Tag			2		2
Unsafe			2		2
Totals - 2024	23	25	242	114	404

Fire Station #3 Planning Zone Risk Assessment

Fire Station #3 was constructed in 1975 and is located at 779 Eastside Drive. Fire Station #3 is centrally located within the city and has easy access to major highways (I-77 and Hwy 70). Fire Station #3 has the second highest call volume out of the four fire stations. Engine 3, Ladder 2, and Squad 3 respond from this station. Service areas include residential, high occupancy buildings, commercial, government buildings, and facilities with hazardous materials.



Table 102: Fire Risk Category Fire Station #3

FIRE RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Car fires, dumpster fires, small outside fires. Fire incidents that only require a single engine response
MODERATE	Occupancy fires in residential 1 to 2 family structures
SIGNIFICANT	Occupancy fires in Public Assembly Property, Educational Property, Institutional Property, Store and Office Property, Basic Industry, Storage Property, Special Property, Multi-Family Dwellings (Apartments, Hotels, and Dormitories)
MAXIMUM	Fires at Healthcare, Detention, and Correction Facilities with NFIRS Codes 311, 323, 331, and 361

Map 36: Fire Station #3 District

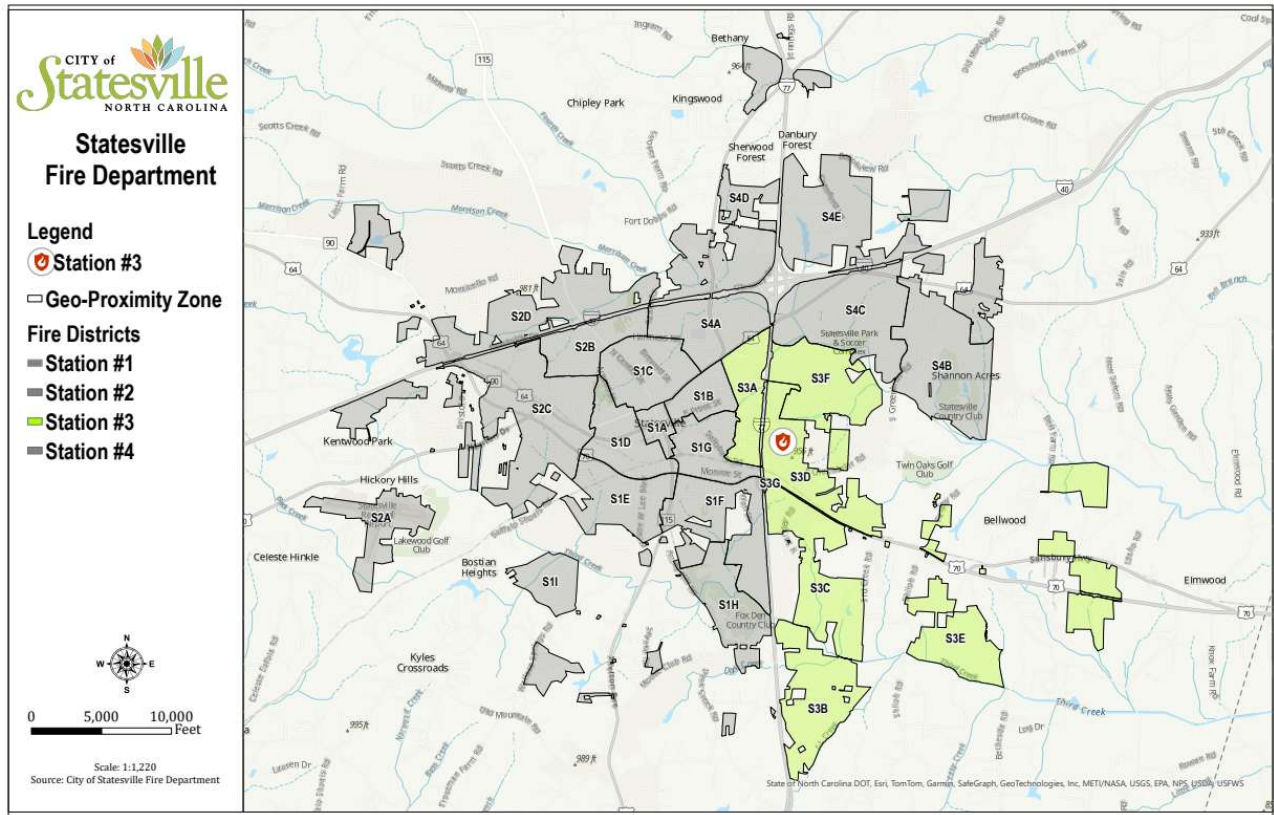





Table 103: Fire Station #3 Concentration – Mobile Assets

<p style="text-align: center;">Engine 3</p> 	<p>Engine 3 is a 2011 Rosenbauer CT 4 door, 6-person cab with a 20” raised roof. This engine is powered by a Cummins ISX 500 hp engine with an Allison Gen IV-E transmission and has a Hale 1250 QMax pump with a Williams A and B foam system. This apparatus is equipped with a 700-gallon poly tank and (2) 20-gallon foam tanks. Electrical power is provided by a Smart Power 10kw generator with a full complement of Amkus Rescue tools. Staffing of 4 per day.</p>
<p style="text-align: center;">Ladder 2</p> 	<p>Ladder 2 is a 2001 Marion Body Works Aerial Quint. Ladder 2 is equipped with a 75ft Aerial Device, 120 ft of Ground Ladders, as well as an on-board generator.</p>
<p style="text-align: center;">Squad 3</p> 	<p>2008 Ford F-250 4x4</p>

Map 37: Fire Station #3 All Calls Maximum, Significant, Moderate, & Low Risks – 2024

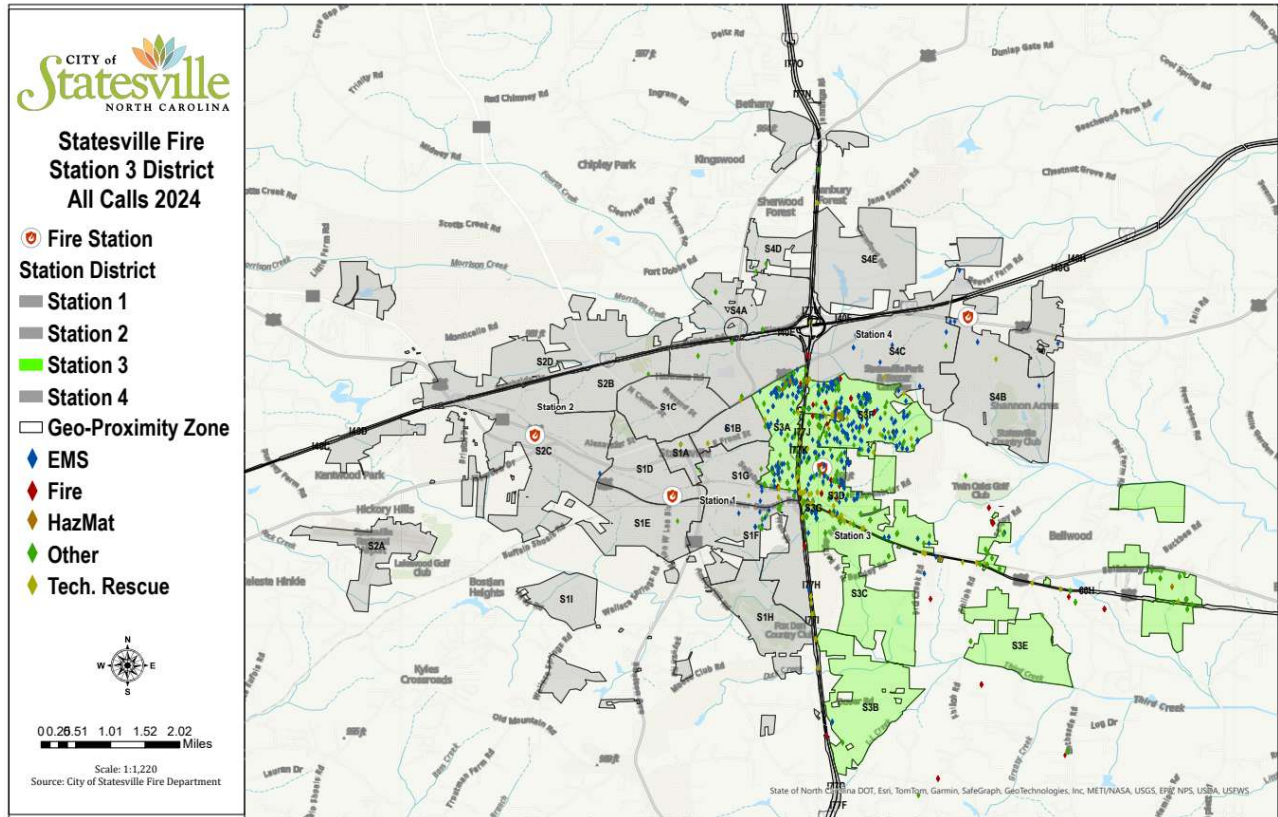


Table 104: Fire Station #3 Incidents by Type 2024

Incident Type	Number of Incidents
Fire	27
HazMat	27
Medical	965
Technical Rescue	104
ARFF	0
Other Incidents	365
Total Number of Incidents	1,488

Non-Emergency merged with Other Incidents

Table 105: Fire Station #3 Availability 2020-2024

Year	Station #3 District Calls	Station Responses	Station Availability
2020	796	705	88.57%
2021	958	833	86.95%
2022	923	811	87.87%
2023	1102	961	87.21%
2024	1693	1351	79.80%

Table 106: Total Incidents by GPZ 2024

Station #3 GPZs	Number of Incidents
S3A	247
S3B	17
S3C	76
S3D	502
S3E	28
S3F	593
S3G	18
S3H	7
Total – 2024	1488

S3G & S3H, combined in 2024, to only be S3G

Table 107: Incidents by Type Station #3 GPZs 2020

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	6	1	0	8	0	7	0	0	22
HazMat	2	1	2	4	0	5	0	0	14
Medical	81	38	27	105	6	208	0	0	465
Technical Rescue	30	6	7	49	1	24	0	5	122
ARFF	0	0	0	0	0	0	0	0	0
Non-Emergency	9	3	4	12	2	30	0	0	60
Other Incidents	7	10	26	29	2	40	0	1	115
Total – 2020	135	59	66	207	11	314	0	6	798

Table 108: Incidents by Type Station #3 GPZs 2021

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	9	2	1	8	0	10	0	0	30
HazMat	8	0	0	12	1	1	0	1	23
Medical	80	13	40	128	9	273	0	1	544
Technical Rescue	20	8	8	59	1	13	0	11	120
ARFF	0	0	0	0	0	0	0	0	0
Non-Emergency	9	5	2	10	1	25	0	3	55
Other Incidents	19	5	20	61	13	67	0	1	186
Total – 2021	145	33	71	278	25	389	0	17	958

Table 109: Incidents by Type Station #3 GPZs 2022

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	7	2	0	14	0	6	0	0	29
HazMat	7	1	4	6	0	5	0	2	25
Medical	74	1	52	128	8	254	0	2	519
Technical Rescue	28	17	10	71	1	15	0	19	161
ARFF	0	0	0	0	0	0	0	0	0
Non-Emergency	16	0	0	22	0	18	0	1	57
Other Incidents	24	1	21	46	5	47	0	1	145
Total – 2022	156	22	87	287	14	345	0	25	936

Table 110: Incidents by Type Station #3 GPZs 2023

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	8	0	1	9	0	8	0	1	27
HazMat	1	1	2	1	0	5	0	0	10
Medical	89	2	67	189	10	271	1	1	630
Technical Rescue	33	11	8	51	1	21	0	6	131
ARFF	0	0	0	0	0	0	0	0	0
Other Incidents	51	1	35	116	4	110	0	1	318
Total – 2023	182	15	113	366	15	415	1	9	1116

Table 111: Incidents by Type Station #3 GPZs 2024

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	5	0	0	11	2	9	0	0	27
HazMat	5	0	3	8	1	9	0	1	27
Medical	149	8	40	304	10	451	2	1	965
Technical Rescue	19	3	5	39	4	18	11	5	104
ARFF	0	0	0	0	0	0	0	0	0
Other Incidents	69	6	28	140	11	106	5	0	365
Total - 2024	247	17	76	502	28	593	18	7	1488

Table 112: Incidents by Type Station #3 GPZs 2020-2024

Incident Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	S3H	Total
Fire	35	5	2	50	2	40	0	1	135
HazMat	23	3	11	31	2	25	0	4	99
Medical	473	62	226	854	43	1457	3	5	3123
Technical Rescue	130	45	38	269	8	91	11	46	638
ARFF	0	0	0	0	0	0	0	0	0
Non-Emergency	34	8	6	44	3	73	0	4	172
Other Incidents	170	23	130	392	35	370	5	4	1129
Total – 2020-2024	865	146	413	1640	93	2056	19	64	5296

Table 113: Calls by Day of Week by Hour of Day 2020-2024

Station #3: 2020-2024	00:00-05:59	06:00-11:59	12:00-17:59	18:00-23:59	Total
Monday	103	235	298	205	841
Tuesday	116	250	315	213	894
Wednesday	100	222	342	184	848
Thursday	98	232	346	226	902
Friday	108	257	326	217	908
Saturday	123	200	248	260	831
Sunday	117	183	235	212	747
Total	765	1579	2110	1517	5,971
Percent	12.81%	26.44%	35.34%	25.41%	

Table 114: Incident by Occupancy Type Station #3 GPZs 2024

Occupancy Type	S3A	S3B	S3C	S3D	S3E	S3F	S3G	Totals
Assembly 1				1				1
Assembly 2			1	18		14	1	34
Assembly 3	2			9		9		20
Assembly 4								
Business	41		17	46	2	46	1	153
Educational	2			4		1		7
Factory 1	1		4	13	1		1	20
Factory 2			2	3	2			7
Foster Homes	4			1		5		10
High Hazard 1								
High Hazard 2					1			1
High Hazard 3		1	1					2
High Hazard 4								
Institutional 1						1		1
Institutional 2	1			1		2		4
Institutional 3								
Institutional 4								
Mercantile	2		7	28		33	1	71
Residential 1	1		4	4		1		10
Residential 2	4					5		9
Residential 3								
Residential 4						2		2
Storage 1	5		20	15	9	1	4	54
Storage 2			4	4	2			10
U (Miscellaneous)								
Totals - 2024	63	1	60	147	17	120	8	416

Table 115: Commercial Building Stories

GPZ	Stories 1	Stories 2	Stories 3	Stories 4	Stories 5	Stories 6	Stories 7	No Data	Total
S3A	52	9	1	1					63
S3B	1								1
S3C	53	6						1	60
S3D	140	3	2	2					147
S3E	13							4	17
S3F	109	8	3						120
S3G	6	2							8
Totals	374	28	6	3				5	416

Table 116: Commercial Building Status

Building Status	S3A	S3B	S3C	S3D	S3E	S3F	S3G	Totals
Occupied and operating	57		56	117	10	96	7	343
Under construction		1	1		7	1	1	11
Under major renovation				1				1
Undetermined								
Vacant and secured	2		2	20		16		40
Vacant	4		1	6		6		17
Being Demolished								
Vacant								
Tag				1		1		2
Unsafe				2				2
Totals - 2024	63	1	60	147	17	120	8	416

Fire Station #4 Planning Zone Risk Assessment

Fire Station #4 was constructed in 2011 and is located at 115 Martin Lane. Fire Station #4 is located on the eastern edge of the city with easy access to I-40. Engine 4, Squad 4, Hazmat 1, and Reserve Engine 14 respond from this station. Service area includes residential, high occupancy buildings, commercial, and facilities with hazardous materials.



Table 117: Fire Risk Category Fire Station #4

FIRE RISK CATEGORY	GENERAL DESCRIPTION OF ASSOCIATED RISK
LOW	Car fires, dumpster fires, small outside fires. Fire incidents that only require a single engine response
MODERATE	Occupancy fires in residential 1 to 2 family structures
SIGNIFICANT	Occupancy fires in Public Assembly Property, Educational Property, Institutional Property, Store and Office Property, Basic Industry, Storage Property, Special Property, Multi-Family Dwellings (Apartments, Hotels, and Dormitories)
MAXIMUM	Fires at Healthcare, Detention, and Correction Facilities with NFIRS Codes 311, 323, 331, and 361

Map 38: Fire Station #4 District

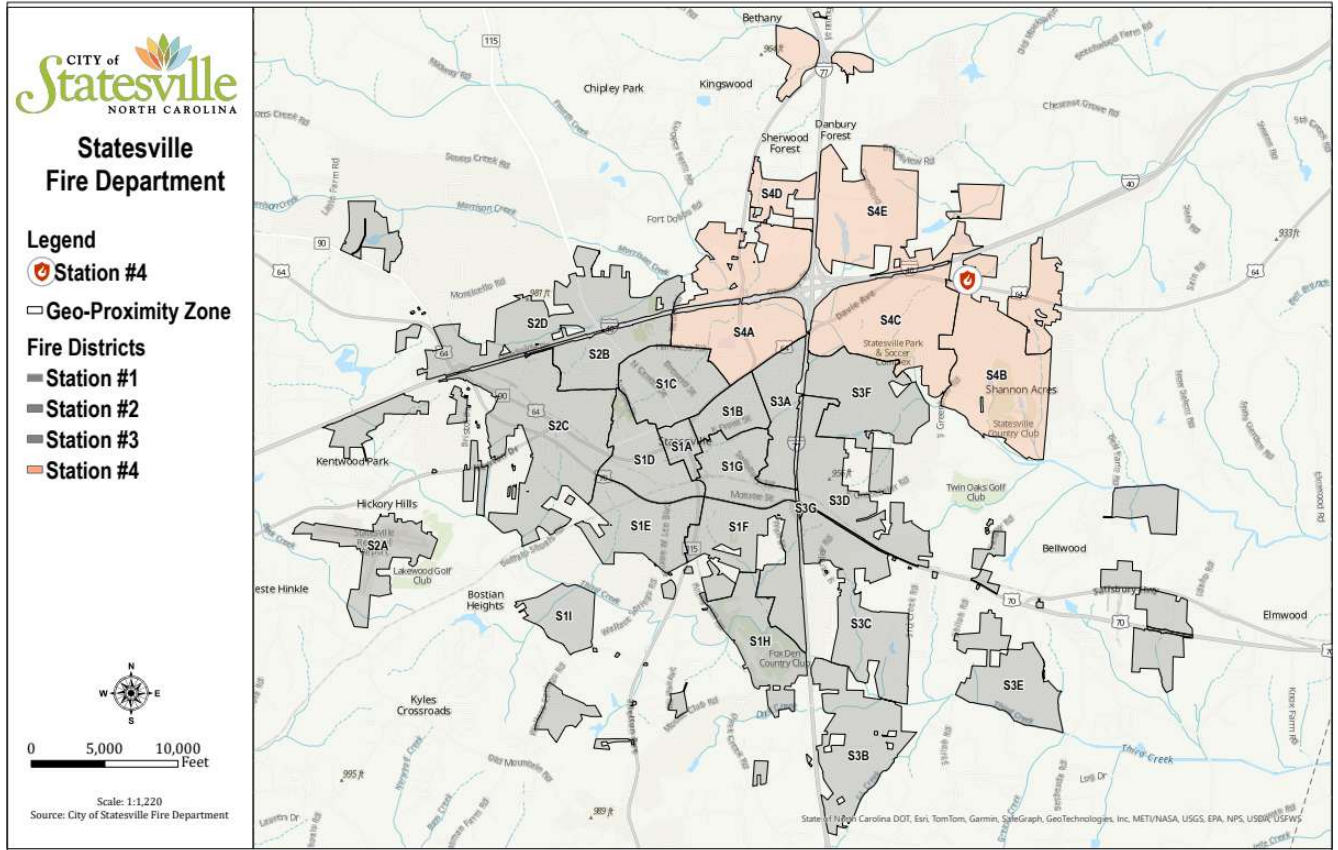




Table 118: Fire Station #4 Concentration – Mobile Assets

<p style="text-align: center;">Engine 4</p> 	<p>Engine 4 is a 2018 Marion Body Works Custom Rescue Pumper. It is designed on a Spartan Metro Star Cab and Chassis and equipped with a Cummins ISL 9 Engine. It is complete with a 1250 gallon per minute Hale fire pump, 700-gallon water tank, (2) 20-gallon foam tanks, and a Foam Pro 2001 Dual Agent Foam System. The lighting system, all LED, and hydraulic pumps are powered by a Harrison 10kw hydraulic generator with a full complement of Amkus Rescue tools. The cab configuration allows for a total of 6 occupants and is equipped with the most up to date safety features on the market including airbags. Staffing of 4 per day and is the second of 2 new apparatus.</p>
<p style="text-align: center;">Squad 4</p> 	<p>2019 F-250 Crew Cab</p>

HazMat 1



HazMat 1 is a 2000 model Ford F-550 with a Mickey 8 bay body. It is a 4x2 with a 7.3l turbo diesel and an automatic transmission. It has a 19,000 gvw package. This vehicle along with a tandem axle 24,000 lb trailer carries equipment to supplement the Engine 3 with equipment to operate as a NC DOT regional response Hazardous Materials team. Staffed with personnel from Engine 4.

Reserve Engine 14



Reserve Engine 14 is a 2007 Sutphen Custom Engine that operates out of the downtown station and is powered by a 500 hp Caterpillar C-12 engine with an Allison Automatic transmission. The apparatus has a 6 person cab with a 16" raised roof; this fire fighting force comes from Hale QMAX 1500 GPM pump and has a 750 gallon booster tank. The vehicle also has a Williams Foam System with a 20 gallon Class A tank and a 20 Gallon Class B tank that can place foam on any discharge of the truck. It carries a full complement of Amkus Hydraulic Rescue tools that are pre-plumbed to hose reels on the passenger side and front bumper. The apparatus also carries a 10 kW Smart Power Generator that operate Scene lights and other electric equipment.

Map 39: Fire Station #4 All Calls Maximum, Significant, Moderate, & Low Risks – 2024

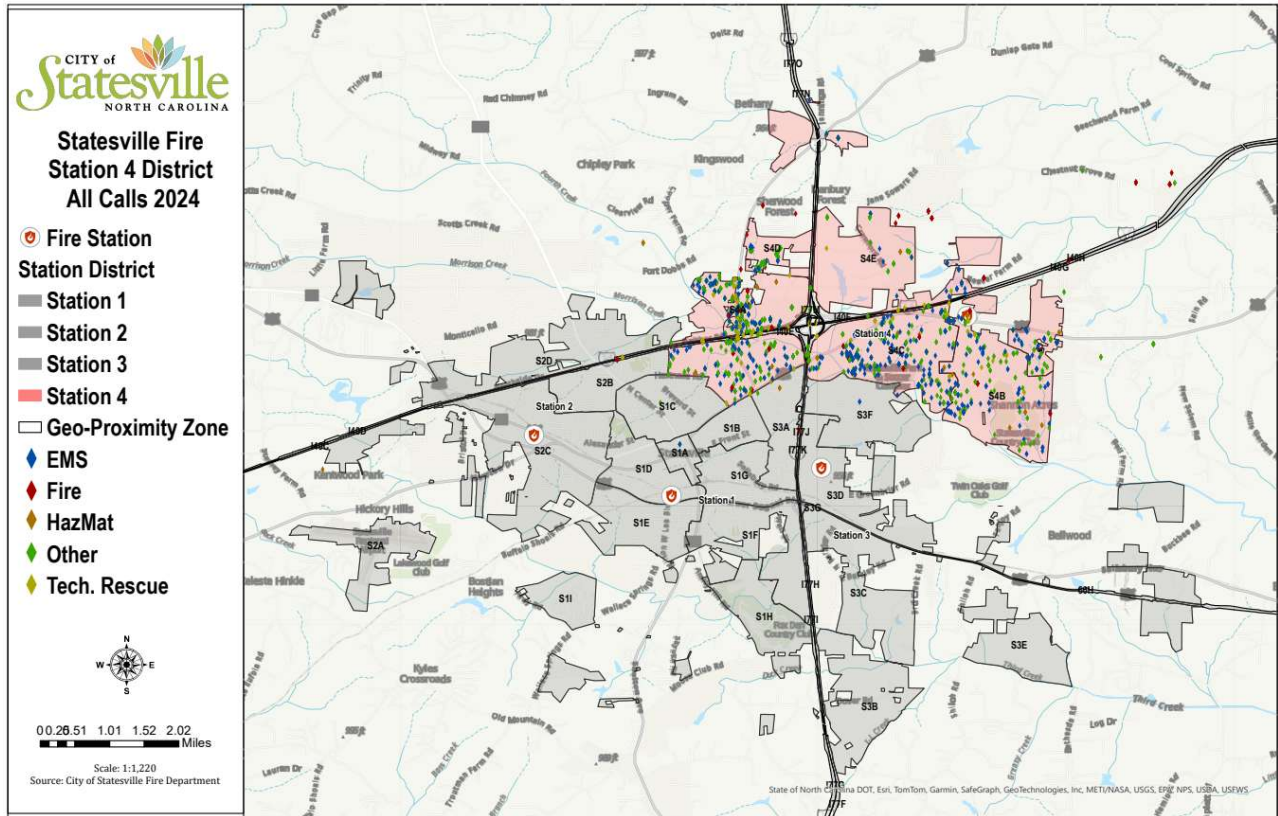


Table 119: Fire Station #4 Incidents by Type 2024

Incident Type	Number of Incidents
Fire	29
HazMat	31
Medical	1123
Technical Rescue	108
ARFF	0
Other Incidents	498
Total Number of Incidents	1789

Non-Emergency merged with Other Category in 2023

Table 120: Fire Station #4 Availability 2020-2024

Year	Station #4 District Calls	Station Responses	Station Availability
2020	731	631	86.32%
2021	721	630	87.38%
2022	838	683	81.50%
2023	1198	1010	84.31%
2024	1693	1351	79.80%

Table 121: Total Incidents by GPZ 2024

Station #4 GPZs	Number of Incidents
S4A	574
S4B	378
S4C	618
S4D	68
S4E	151
Total - 2024	1789

Table 122: Incidents by Type Station #4 GPZs 2020

Incident Type	S4A	S4B	S4C	S4D	Total
Fire	6	4	3	2	15
HazMat	6	3	7	1	17
Medical	182	62	186	3	433
Technical Rescue	44	17	8	1	70
ARFF	0	0	0	0	0
Non-Emergency	19	15	18	2	54
Other Incidents	54	51	37	2	144
Total – 2020	311	152	259	11	733

Table 123: Incidents by Type Station #4 GPZs 2021

Incident Type	S4A	S4B	S4C	S4D	Total
Fire	11	3	7	1	22
HazMat	9	4	3	0	16
Medical	134	79	177	0	390
Technical Rescue	46	14	9	0	69
ARFF	0	0	0	0	0
Non-Emergency	20	10	21	2	53
Other Incidents	70	51	47	2	170
Total – 2021	290	161	264	5	720

Table 124: Incidents by Type Station #4 GPZs 2022

Incident Type	S4A	S4B	S4C	S4D	S4E	Total
Fire	16	6	4	1	2	29
HazMat	6	3	8	1	2	20
Medical	150	93	181	13	26	463
Technical Rescue	60	7	14	1	4	86
ARFF	0	0	0	0	0	0
Non-Emergency	28	12	17	1	0	58
Other Incidents	91	40	43	7	0	181
Total - 2022	351	161	267	24	34	837

Table 125: Incidents by Type Station #4 GPZs 2023

Incident Type	S4A	S4B	S4C	S4D	S4E	Total
Fire	14	4	6	0	4	28
HazMat	9	4	4	0	1	18
Medical	179	99	287	13	75	653
Technical Rescue	63	11	22	0	5	101
ARFF	0	0	0	0	0	0
Other Incidents	109	93	143	6	59	410
Total - 2023	374	211	462	19	144	1210

Non-Emergency merged with Other Category in 2023

Table 126: Incidents by Type Station #4 GPZs 2024

Incident Type	S4A	S4B	S4C	S4D	S4E	Total
Fire	13	3	7	3	3	29
HazMat	15	8	6	0	2	31
Medical	270	287	444	25	97	1123
Technical Rescue	69	12	18	0	9	108
ARFF	0	0	0	0	0	0
Other Incidents	207	68	143	40	40	498
Total - 2024	574	378	618	68	151	1789

Table 127: Incidents by Type Station #4 GPZs 2020-2024

Incident Type	S4A	S4B	S4C	S4D	S4E	Total
Fire	60	20	27	7	9	123
HazMat	45	22	28	2	5	102
Medical	915	620	1275	54	198	3062
Technical Rescue	282	61	71	2	18	434
ARFF	0	0	0	0	0	0
Non-Emergency	67	37	56	5	0	165
Other Incidents	531	303	413	57	99	1403
Total – 2020-2024	1900	1063	1870	127	329	5289

Merged Non-Emergency with Other in 2023

Table 128: Calls by Day of Week by Hour of Day 2020-2024

Station #4: 2020-2024	00:00-05:59	06:00-11:59	12:00-17:59	18:00-23:59	Total
Monday	85	245	316	181	827
Tuesday	90	264	305	194	853
Wednesday	85	227	283	208	803
Thursday	84	230	322	199	835
Friday	82	218	308	228	836
Saturday	110	217	278	226	831
Sunday	108	172	246	164	690
Total	644	1573	2058	1400	5,675
Percent	11.35%	27.72%	36.26%	24.67%	

Table 129: Incident by Occupancy Type Station #4 GPZs 2024

Occupancy Type	S4A	S4B	S4C	S4D	S4E	Totals
Assembly 1						
Assembly 2	37	3	3		4	47
Assembly 3	6	2	4		4	16
Assembly 4						
Business	163	6	64		41	274
Educational	1	1	2		1	5
Factory 1	1			1	11	13
Factory 2	1		2		9	12
Foster Homes	5	7	7	1	1	21
High Hazard 1						
High Hazard 2						
High Hazard 3					1	1
High Hazard 4	1		1			2
Institutional 1	1					1
Institutional 2	1	2	4		1	8
Institutional 3			2			2
Institutional 4	1	1				2
Mercantile	54	1	4	1	10	70
Residential 1	6		1			7
Residential 2	6		3	1	1	11
Residential 3		1				1
Residential 4	1	2	1		1	5
Storage 1	14	2	8	2	27	53
Storage 2			2	1	6	9
U (Miscellaneous)	1					1
Totals - 2024	300	28	108	7	118	561

Table 130: Commercial Building Stories

GPZ	Stories 1	Stories 2	Stories 3	Stories 4	Stories 5	Stories 6	Stories 7	No Data	Total
S4A	261	27	7	1	1			3	300
S4B	25	2						1	28
S4C	95	12		1					108
S4D	4		1					2	7
S4E	112	4	1		1				118
Totals	497	45	9	2	2			6	561

Table 131: Commercial Building Status

Building Status	S4A	S4B	S4C	S4D	S4E	Totals
Occupied and operating	277	24	98	5	103	507
Under construction	3	1	1	2	1	8
Under major renovation	1					1
Undetermined						
Vacant and secured	11	3	4		8	26
Vacant	7		4		6	17
Being Demolished	1					1
Vacant						
Tag			1			1
Unsafe						
Totals - 2024	300	28	108	7	118	561

Internal Fire Station Analysis 2021

Executive Summary

This report summarizes the results of a station location, staffing, and emergency vehicle travel time analysis conducted for the Statesville Fire Department. The department currently operates four staffed fire stations and provides emergency response services to the City of Statesville, including fire prevention and suppression, first response basic life support emergency medical services, technical rescue, airport/aircraft suppression, and hazardous materials response.

The Statesville Fire Department typically staffs fire suppression apparatus with four firefighters, which is in accordance with the minimum staffing levels outlined in the industry standard. The National Fire Protection Agency (NFPA) Standard 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* requires that fire suppression apparatus be staffed with a minimum crew size of four firefighters. As a result of a SAFER Grant, one fire suppression apparatus, Ladder 1 previously staffed with one firefighter now has a minimum of three firefighters assigned and often meets NFPA 1710 standard of four firefighters.

For several years, the City of Statesville has planned a fire station at 1707 Shelton Avenue. The idea was to relocate Fire Station 1, currently located at 316 South Meeting Street, to 1707 Shelton Avenue. This relocation was planned due to an increase in development south of Garner-Bagnal. The growth was slow to come, and the project was postponed. City growth, increased call volume, and an aging Fire Station 1 have created the need to reevaluate fire station locations and overall fire protection.

Background and Significance

The City of Statesville has four fire stations protecting 24.3 square miles. The oldest, Fire Station 1, was constructed in 1952 and the newest, Fire Station 4, was completed in 2011. Fire Station 1 is the station responsible for protecting areas south of Garner-Bagnal Boulevard, downtown, and Historic Mitchell Community College. Engine 1, Ladder 1, Battalion 1, Squad 1, and Reserve Engine 13 respond from this station. In 2010, the City of Statesville began looking at plans to move Fire Station 1 further south. During this time, the thought was a relocation south would protect the downtown area and the newly proposed Larkin development. The proposed relocation never came to fruition. This station is now sixty-eight years old and is experiencing structural deterioration.



Fire Station 2 was constructed in 1962 and is located at 110 Security Drive. Fire Station 2 response district is in the western part of the city and includes the Statesville Regional Airport. Engine 2, Squad 2, and Reserve Engine 11 respond from this station. This station also responds ARFF 1 (Airport Rescue Fire Fighting Apparatus) from its location at the airport. Service areas include residential, commercial, schools, and facilities with hazardous materials. This station is not in disrepair, but it does need significant upgrades.



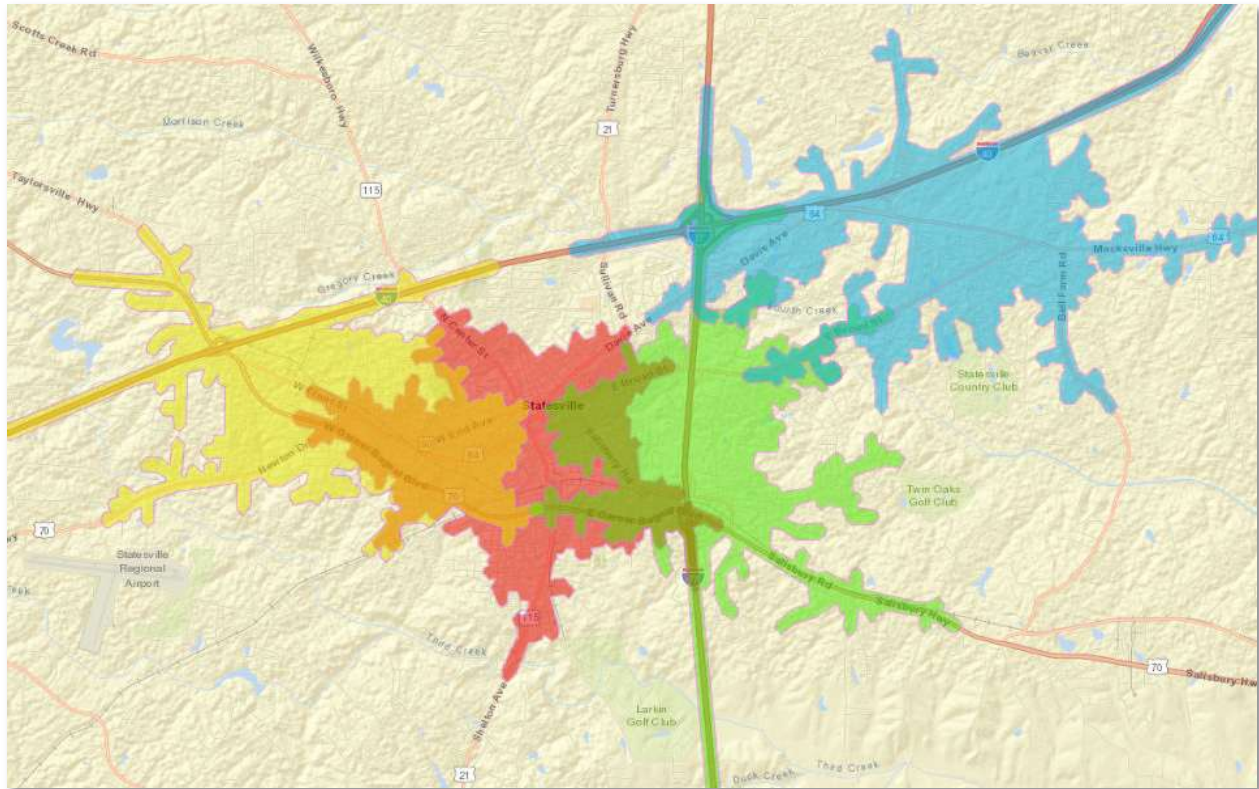
Fire Station 3 was constructed in 1975 and is located at 779 Eastside Drive. Fire Station 3 is centrally located within the city and has easy access to major highways (I-77 and Hwy 70). Fire Station 3 has the second highest call volume out of the four fire stations. Engine 3, HazMat 1 (mutual aid assistance in the county for hazmat), and Squad 3 respond from this station. Service area includes residential, high occupancy buildings, commercial, government buildings, and facilities with hazardous materials. Fire Station 3 is in good condition but due to SFD's ever expanding hazardous materials program, additional storage is needed.



Fire Station 4 was constructed in 2011 and is located at 115 Martin Lane. Fire Station 4 is the newest fire station in the city and is located on the eastern edge of the city with easy access to I-40. Engine 4, Squad 4, Reserve Engine 12, and Reserve Engine 14 respond from this station. Service area includes residential, high occupancy buildings, commercial, and facilities with hazardous materials.



Map 40: Current Fire Station Coverage



Fire station location is an important component in the SFD's ability to mitigate all emergencies, especially structural fires. Fires will extend beyond the room of origin when flashover stage is reached (fire gases cause the room to become fully involved in flames). This stage of fire typically will occur in as little as 8 minutes of the onset of fire. The department has a response time goal of arriving on the scene within 6 minutes, 20 seconds 90% of the time. This response time allows 1 minute for the call taker to obtain the information; 1 minute, 20 seconds for the firefighters to listen to the call, don their gear, mount the apparatus with seat belts attached; and 4 minutes of travel time. This allows only two minutes for set up and making the fire attack. Considering these scientific facts and our department goals, fire station location is an important component of the fire departments ability to mitigate fires.

Fire station location models and methodology vary. This study was conducted internally by our department's accreditation team. Before choosing a methodology, the team met with several accredited jurisdictions to determine a model that would not only work for our current situation but assist all city departments with future fire suppression planning. It was also important for this study to assist the City Manager and elected officials with future locations and methods for dealing with growth. This model used incident data, travel time, and future growth to determine best location for fire stations. The team was assisted by City of Statesville GIS department and their system, ArcGIS.

Key Findings

The Statesville Fire Department currently meets staffing objectives outlined by industry standards but does not meet response time goals. This increases risk to the citizens of, and visitors to, City of Statesville. Findings highlighted:

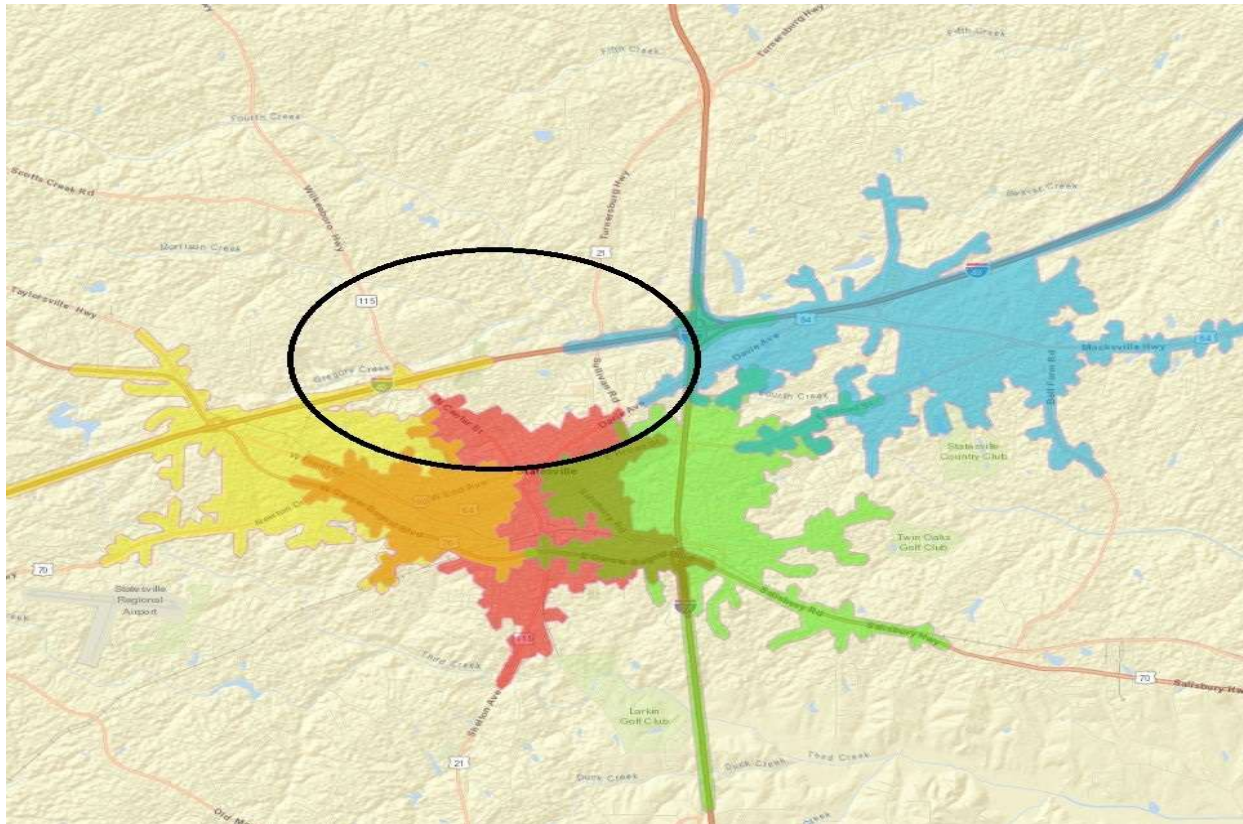
- Current fire station location reveals unacceptable service gaps.
- Results show the need for a fifth fire station.
- A relocation of Fire Station 1 would increase coverage while also replacing the deteriorating structure of its current location.
- Modifying Security Drive will increase response capability to Statesville Regional Airport and far West Statesville.
- While fire stations geographical locations are important, equally important is the staffing. An addition of Station 5 would require the City of Statesville to continue funding current SAFER grant employees and add an additional five firefighters.

This study was designed with continuous growth and improvement in mind. As the City of Statesville expands, so does our ability to add fire stations and continue to provide adequate fire protection for all citizens.

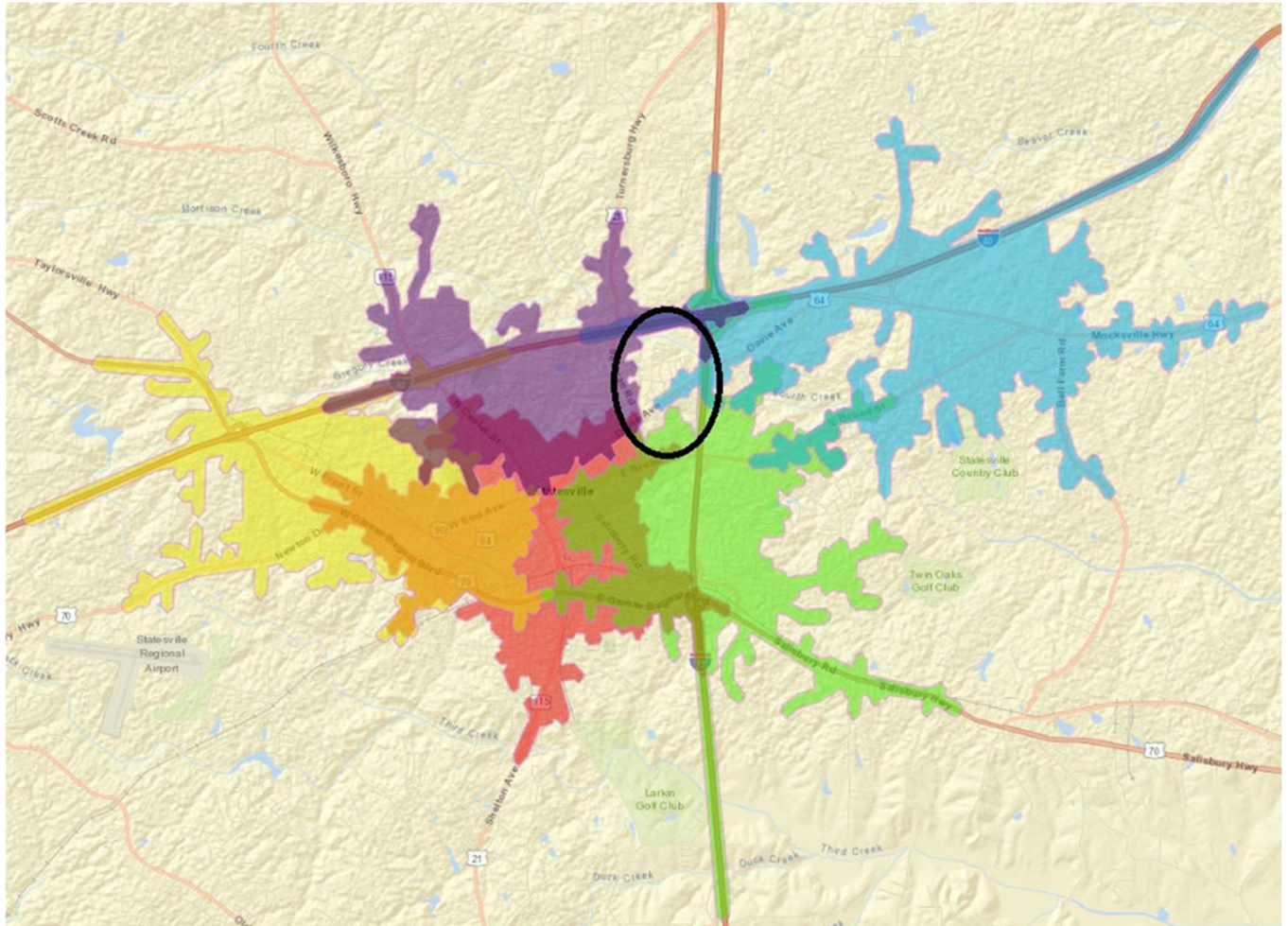
Current Service Gaps 2021 Internal Study

A service gap is identified as an area that cannot be reached within a five-minute travel time or an overall response time of 6 minutes and 20 seconds. This example is illustrated in *Map 36: Existing Service Gap* and identified by the black circle. While SFD wants to avoid all service gaps, we have identified acceptable service gaps. These gaps are areas where access points, neighborhoods, and speed limits drastically reduce our ability to reach an incident. An acceptable service gap is an area such as the Statesville County Club, Valley Brook, and Tara's Trace Development. An example of this type of service gap is illustrated in *Map 40: Acceptable Service Gap*.

Map 41: Existing Service Gap



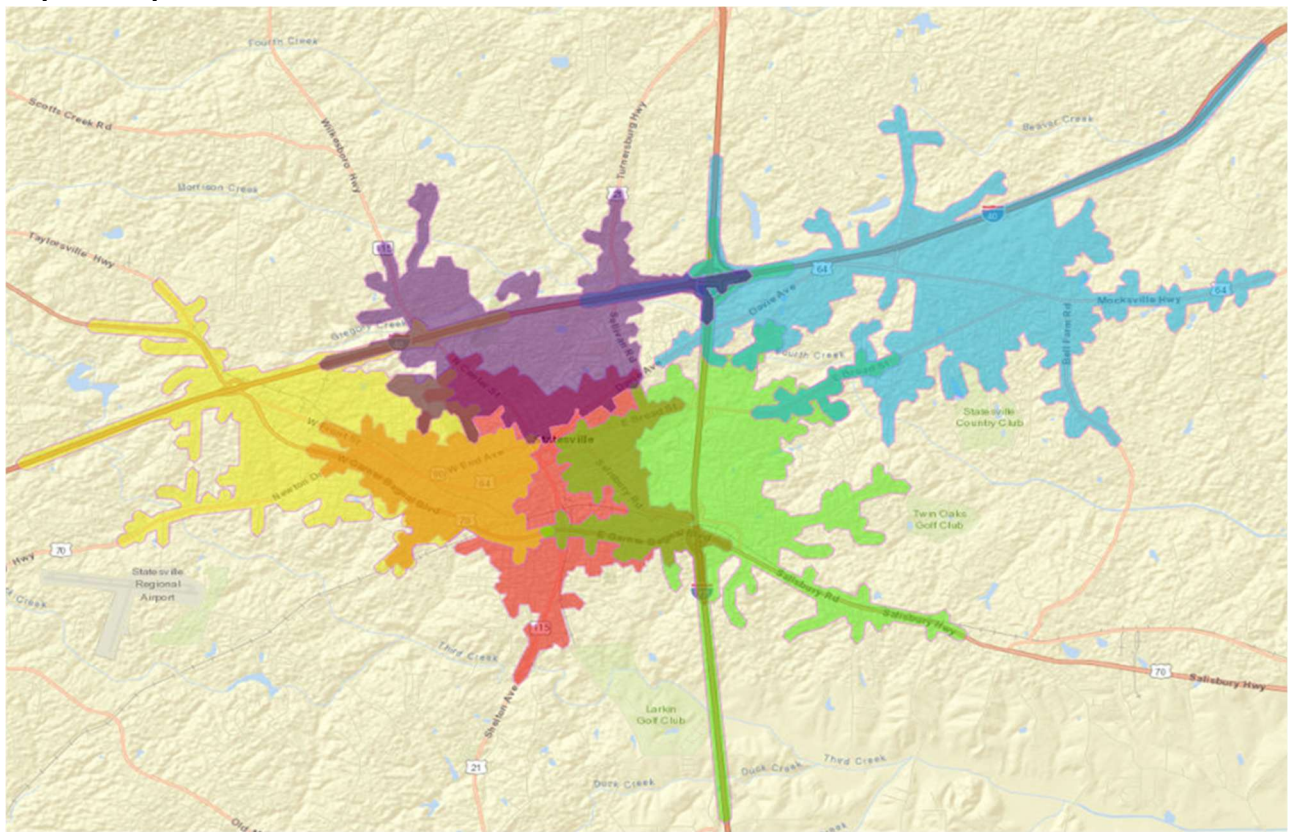
Map 42: Acceptable Service Gap Example



Proposed Station 5

This study identified a clear service gap in the Hwy 21 North and Hwy 115 North areas, along with Iredell Memorial Hospital, and surrounding area. A proposed fire station in the Gaither Road and Radio Road intersection would not only close this gap but allow for increased growth in the existing Hwy 21 North corridors. Adding Fire Station 5 closes most service gaps and leaves only a few acceptable service gaps. The addition of Fire Station 5 is illustrated in *Map 41: Proposed Fire Station 5*.

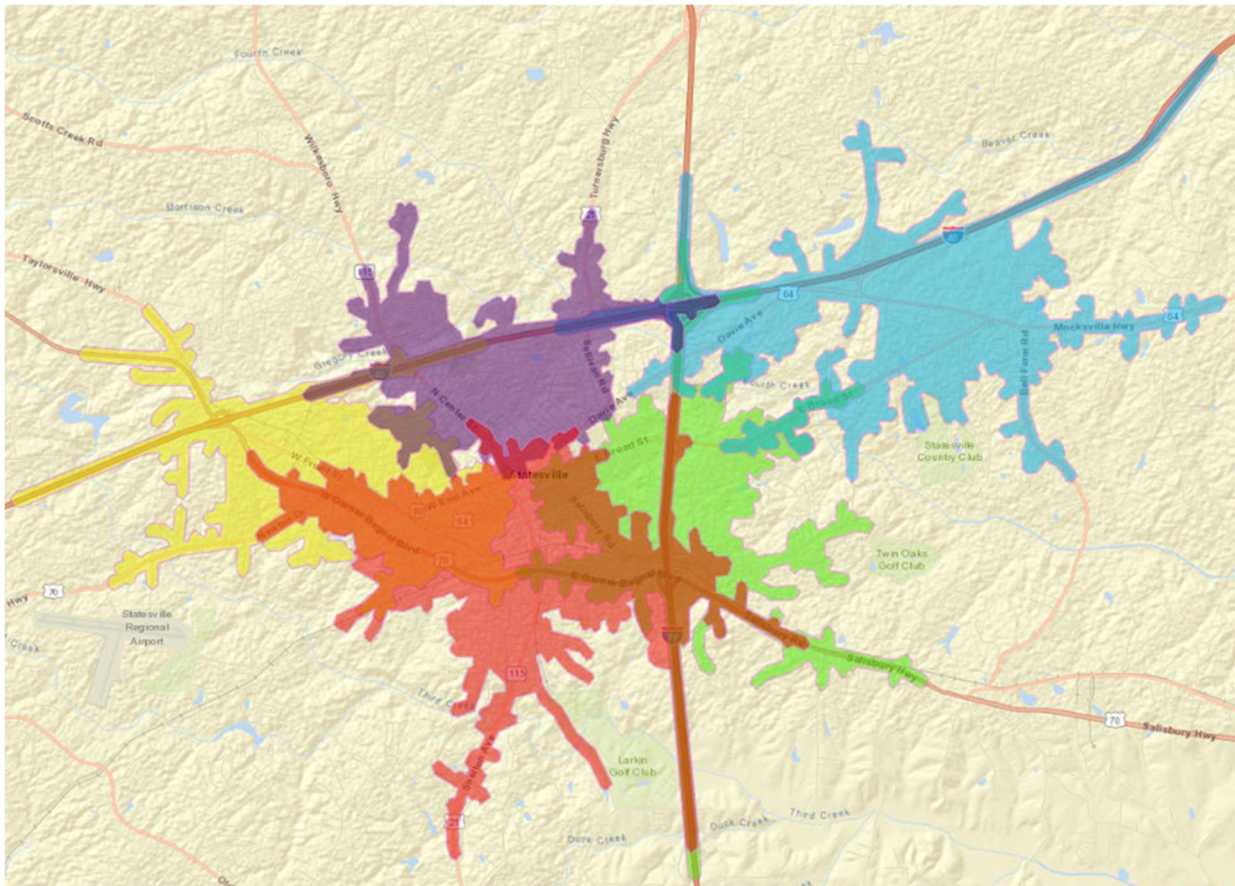
Map 43: Proposed Station 5



Relocation of Station 1

Fire Station 1, built in 1952, is currently a functioning fire station which houses between 8 and 10 firefighters daily. This station needs extensive repair or an entirely new facility. Relocation and building a new facility is the best option and increases the department's ability to meet response time goals. It is recommended Fire Station 1 relocate in area of Gardner-Bagnal Blvd and Shelton Avenue

Map 44: Proposed Fire Station 5 and Relocation of Fire Station 1



Modification of Access Points Station 2

Fire Station 2 was built in 1962 and is currently in need of upgrades. Though upgrades are needed, the station is functioning and could be remodeled. At a minimum, a remodel should be considered in the next three years. This facility needs additional storage, a workout facility, and accommodations for female firefighters. The current geographical location is adequate but could be enhanced by opening Security Drive, presently a dead-end street.

Opening Security Drive provides two clear advantages. First, it decreases response time to the Statesville Regional Airport. In fact, it allows the SFD to reach the airport in less than five minutes. Now owned by the City of Statesville, the general aviation facility possesses typical risks associated any airport. These risks include but are not limited to; landing undershoots / overshoots, takeoff overruns, aircraft crashes due to electrical or mechanical issues, and accidents which may occur to aircraft while taxiing. Recently, ARFF 1 was placed at the airport to assist with any aircraft

emergencies and provide a firefighter unit on the property. As the airport continues to expand, the department with continue to assess risk levels and provide recommendations for future growth.

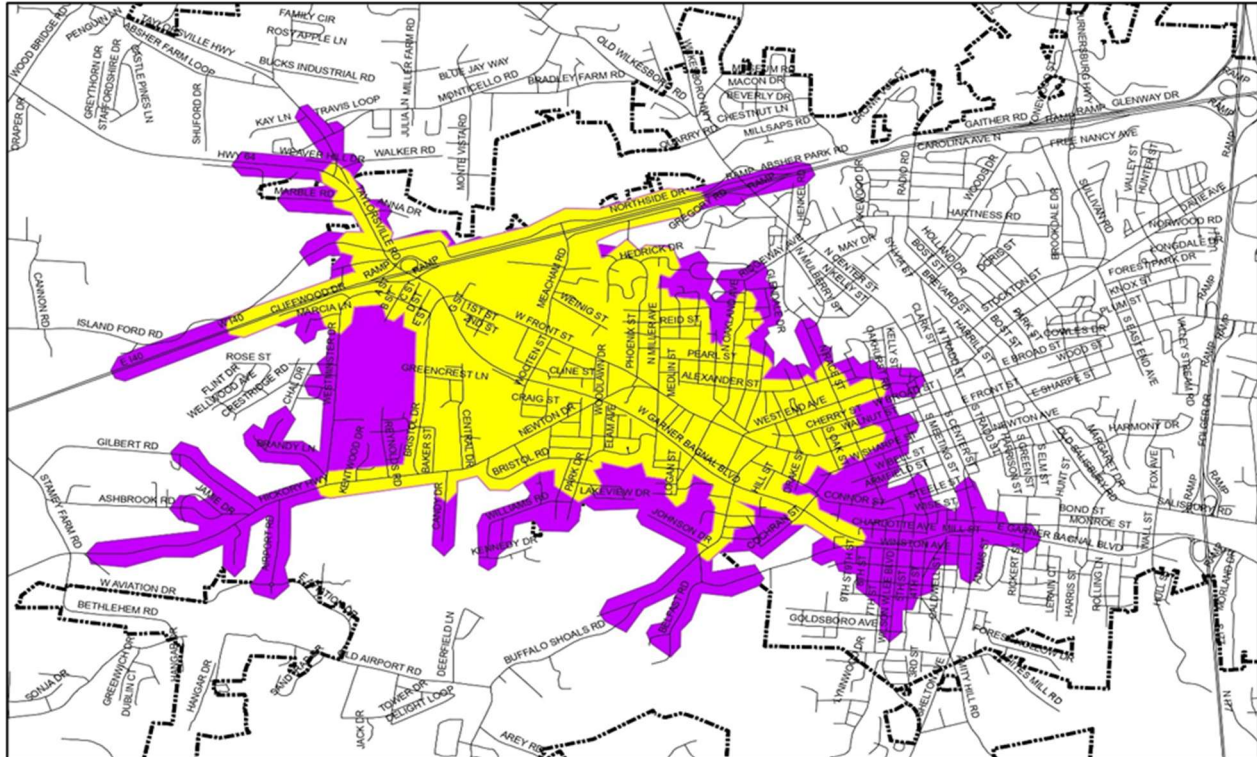
Second, opening Security Drive drastically reduces the response time to South and West



Statesville area. In addition, this increases the effective response force (ERF) efficiency. Essentially, this means more firefighters will arrive on the scene in less time. This creates a positive increase in fire protection and suppression abilities in the South and West corridors of the City.

In summary, Fire Station 2 is geographically located in an optimal spot. Upgrades to this station should be considered. Opening Security Drive will decrease response time to Statesville Regional Airport and areas South and West. The improved response times are illustrated in *Map 43: Current Fire Station 2 Coverage and Overlay of Security Dr. Opening Coverage*. It is worth noting this change would need NCDOT approval. Initial inquiries have been made but final approval has not been received by City of Statesville

Map 45: Current Fire Station 2 Coverage and Overlay of Security Dr. Opening Coverage



Personnel and Effective Response Force

Fire station location is an important component to provide adequate fire protection for City of Statesville; however, it is not the only component. Firefighters are needed to extinguish fires and mitigate emergencies. Much like the importance of geographical locations, the number of firefighters on scene is equally important. The National Fire Protection Agency (NFPA) Standard 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* requires that fire suppression apparatus be staffed with a minimum crew size of four firefighters.

NFPA 1710 also requires an ERF (Effective Response Force) of 17 firefighters for a single-family residential structure fire, 28 firefighters for a multi-family residential or commercial structure fire, and 43 firefighters for a high-rise structure fire. These requirements are also an expectation of our accrediting body Center for Public Safety Excellence (CPSE). Staffing will be a continued priority for the Statesville Fire Department. It is essential that each apparatus maintain four personnel. The addition of Fire Station 5 will require maintaining 9 SAFER Grant firefighters and adding an additional 5 personnel. This will ensure NFPA standards are met, CPSE expectations are accounted for, and all most importantly that our fire fighting force remains safe.

In addition to ERF, overall response time for the appropriate firefighter force needed must also be considered. For 90 percent of all fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 4 firefighters and 1 officer, shall be: 6 minutes and 20 seconds in urban areas; and 6 minutes and 20 seconds in rural areas. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.

For 90 percent of all low/moderate risk fires, an effective response force (ERF) arrives within 10 minutes, 20 seconds total response time. For 90 percent of all fire suppression incidents, the total response time for the arrival of the ERF, staffed with 14 firefighters and officers, shall be: 10 minutes and 20 seconds in urban areas; and 10 minutes and 20 seconds in rural areas.

The ERF shall be capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two in-two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. The ERF for high and special risk fires shall also be capable of placing elevated streams into service from aerial ladders. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.

Considerations for the Future

One important goal of this study was to create a model that expands as the city grows. Through this process, we identified a significant service gap in North/West corridor of the city and a Station 5 is recommended to address this gap. It is reasonable to assume future fire stations will be needed as the city grows. For example, it appears current growth trends are showing increased development in the Hwy 21 North area. Using this model, we can show as future growth occurs in the area between North Point Boulevard and I-77 at Exit 54 will need an additional station. The same methodology can be used in future growth or growth that City of Statesville is considering. In addition, this will assist council in predicting real cost for providing fire protection for proposed areas.

While geographic location of stations is important, we must also consider the cost of personnel and equipment. Personnel are a continued annual cost but necessary to maintain NFPA standards, CPSE expectations, firefighter safety, current ISO Class 2 rating, and to provide adequate services to the citizens. Like other city services, growth creates the need for additional personal to maintain the excellent fire protection for our citizens. Through staffing data and requirements, we can also provide a cost of the additional personnel.

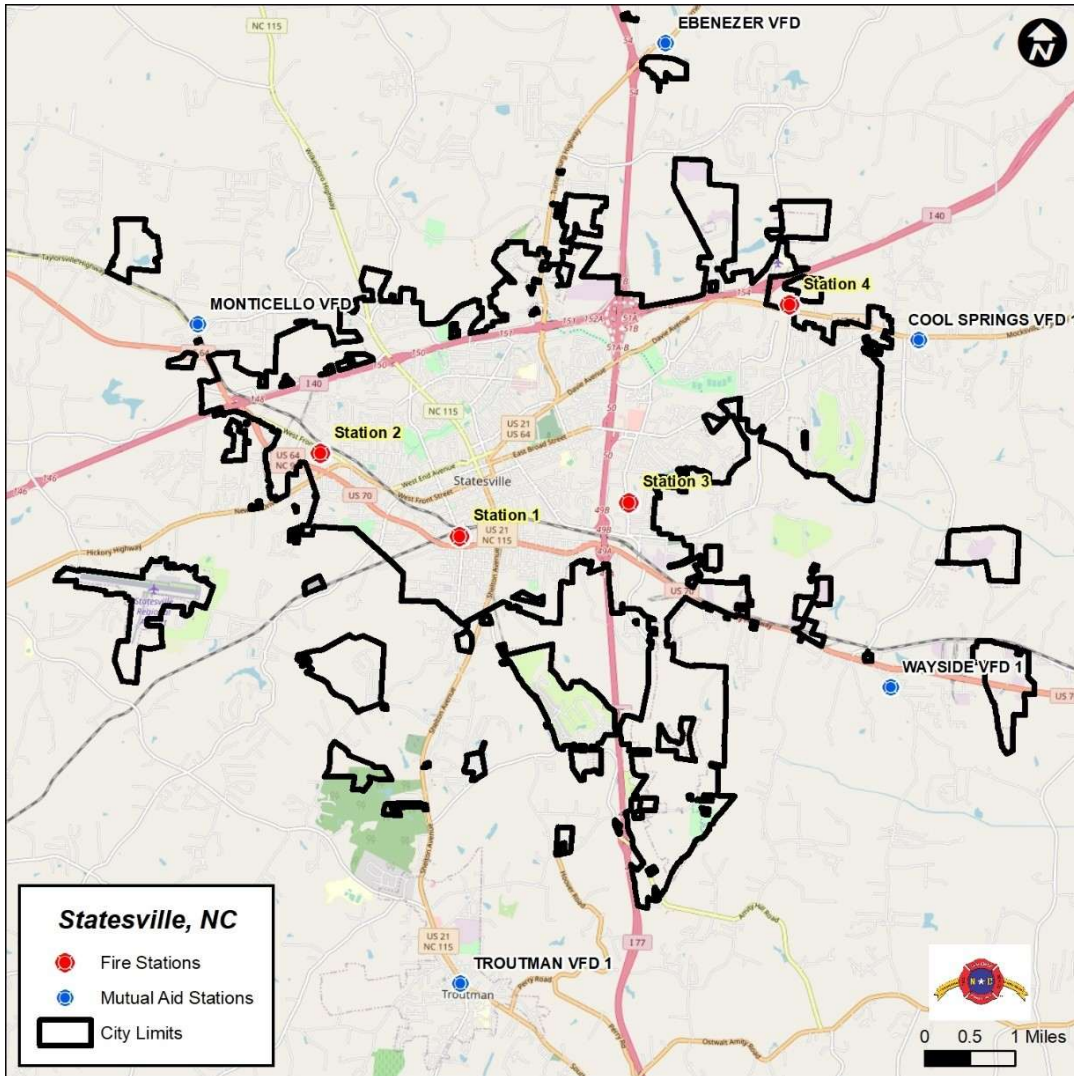
In addition to personal, the city will need to add an additional ladder truck. This truck will likely be smaller, and thus more economical, than the recently purchased truck but it will increase our firefighting capability throughout the city. In the past, ISO has recommended an additional aerial and if received would move SFD closer to ISO Class I rating. In most cases, the initial cost is figured into the construction cost. The recommendation is Station 5 plan also include the cost of a quint aerial device.

External Station Location Study 2022(NC Fire Chief Consulting)

Introduction and Scope

The City of Statesville is located north of the City of Charlotte, west of Winston-Salem, and east of Asheville, North Carolina. Interstate 77 and Interstate 85 along with a railroad bisect parts of the city, limiting road access. The fire department operates from four stations across the 25 square mile city area. There is a regional airport on the west side of the city. The mutual aid fire agencies that surround the city are not simultaneously dispatched and response level is not consistent. The following map shows the fire station locations within the current fire service area.

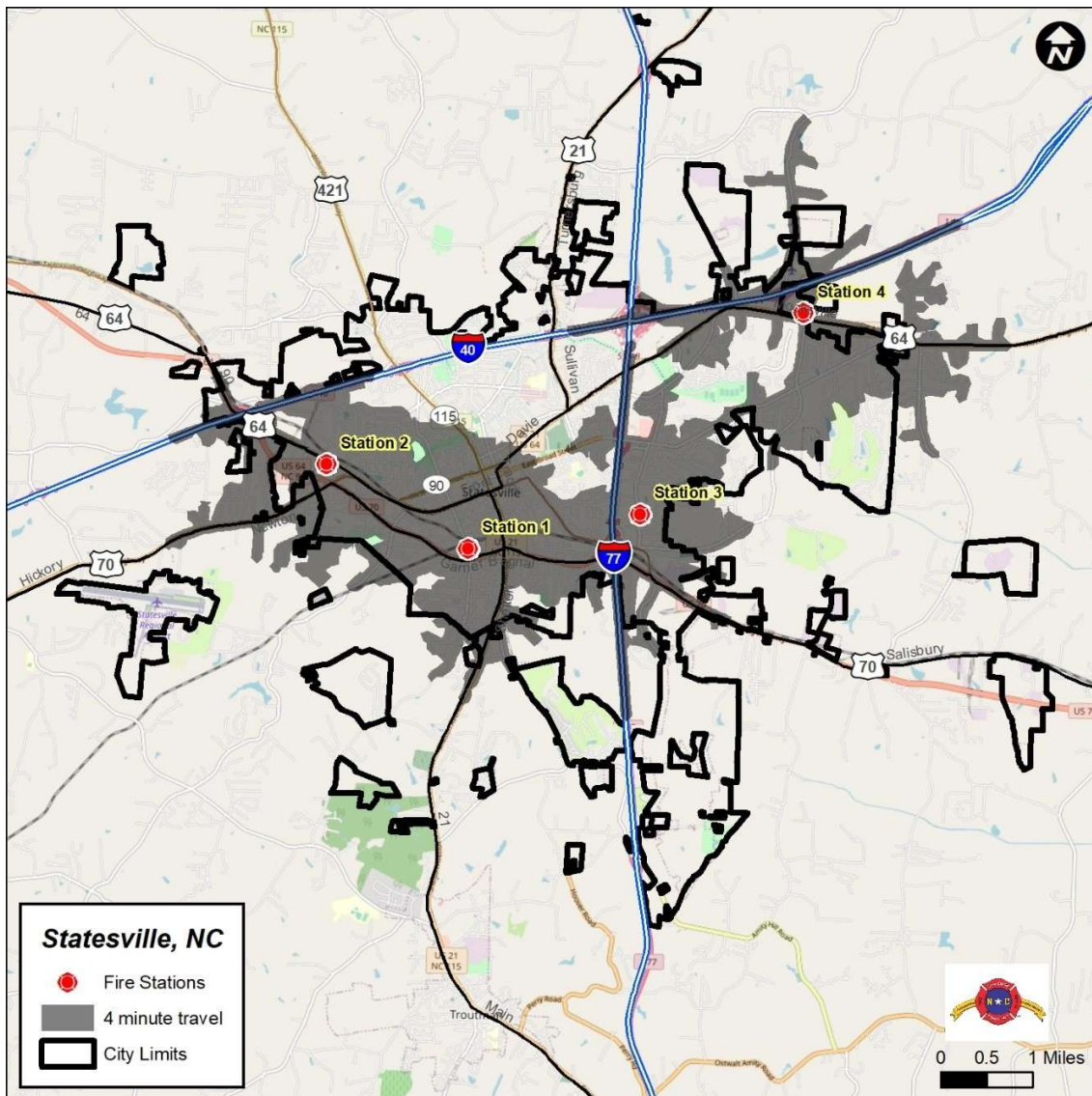
FIGURE 1: Current Fire Service Area & Fire Stations



This analytic study is conducted to select optimal locations for a total of seven stations except for Station 1 and Station 4 without consideration of any mutual and automatic aid station locations. Station 1 is being constructed and will be relocated from further north in the heart of downtown and taken into consideration. Station 4 is 12 years old. These scenarios will be evaluated against the current and former deployment coverage using a four-minute travel time model as directed by the fire department.

The most important element to the citizens is the time it takes to receive help in an emergency. The fire department adheres to the National Fire Protection Association's (NFPA) Standard 1710 that it uses a four-minute travel time to evaluate part of its response performance. The following map represents the extent of a modelled travel time using the street network, posted speed limits, and the restrictions in place, if any. While turns, intersection crossings, and at-grade railroad crossings are time reduced, uncontrollable events such as weather, detours, and traffic congestion are not.

FIGURE 2: Travel Time Extent



There are several areas of the city outside of the four-minute travel reach from a fire station. Residents and property owners will likely wait longer for arrival of fire crews to their emergency than recommended by national standard consensus.

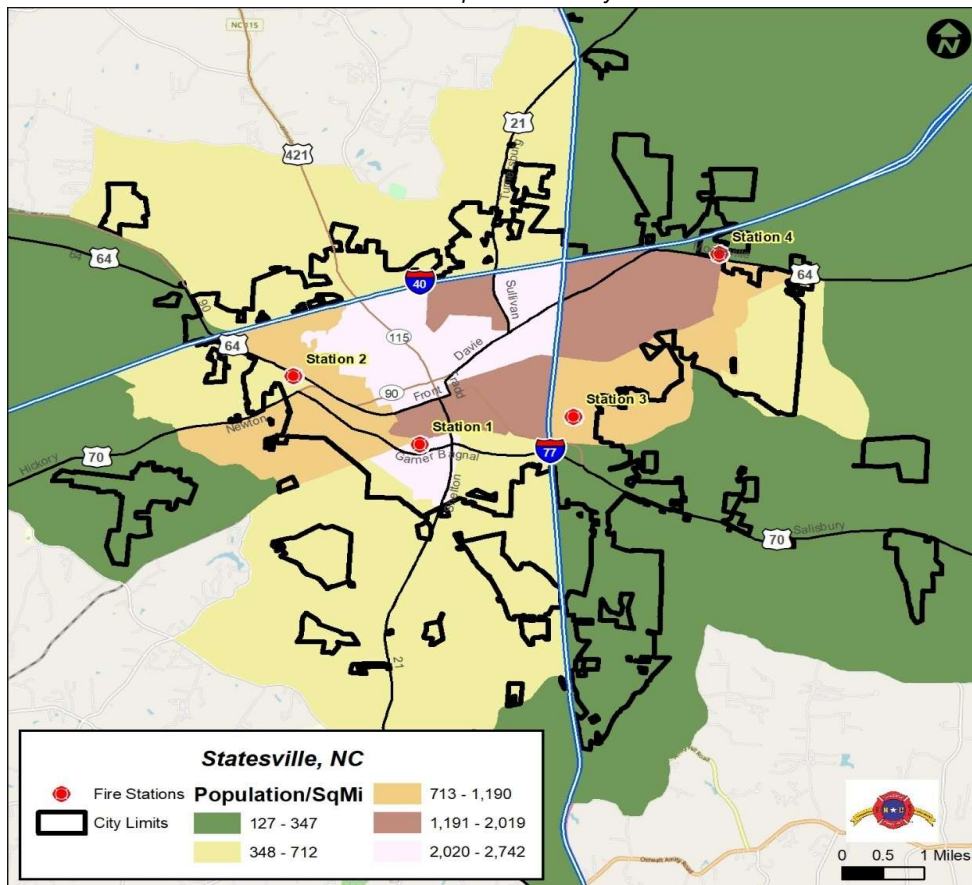
Coverage Analysis Methodology

To assess the coverage of the current locations of the fire stations, many measures can be tabulated from street mileage to square miles, population, events, address points, property use, traffic volume counts, etc. These multiple results would vary upon the measure and the impact on the fire service. For instance, mileage assumes development. This is not true; streets simply provide a means to the development. There are miles of open fields along a roadway which is why area coverage is also discouraged. What is needed is one methodology that levels the playing field of measures that impact the fire service the most and create an index of vulnerability to evaluate coverage. The goal is to provide the most risk coverage.

Population

There are three elements that impact the fire service the most. First is population because areas of higher amounts correlate with more demand for services. Additionally, these are residential taxpayers funding the fire department services. The following map shows the census block group areas with the 2020 estimated population.

FIGURE 3: Population Density



The higher concentrations of population surround the central core of the fire district. A drawback of examining population coverage alone is that it does not consider the risk that commercial and industrial properties (with no residential population) pose to a community.

Land Use Risk

Secondly, the use of land related to the structures and stockpiles vary in size and type. Some uses of land pose more risk to a community than others, such as a single-family home versus a chemical storage facility. Because of the myriad of uses, a macro analysis of risk based upon future land use is employed in the methodology. The study team was supplied with a zoning code attribute for each area within the fire city limits as well as extending outward into the current unincorporated county area.

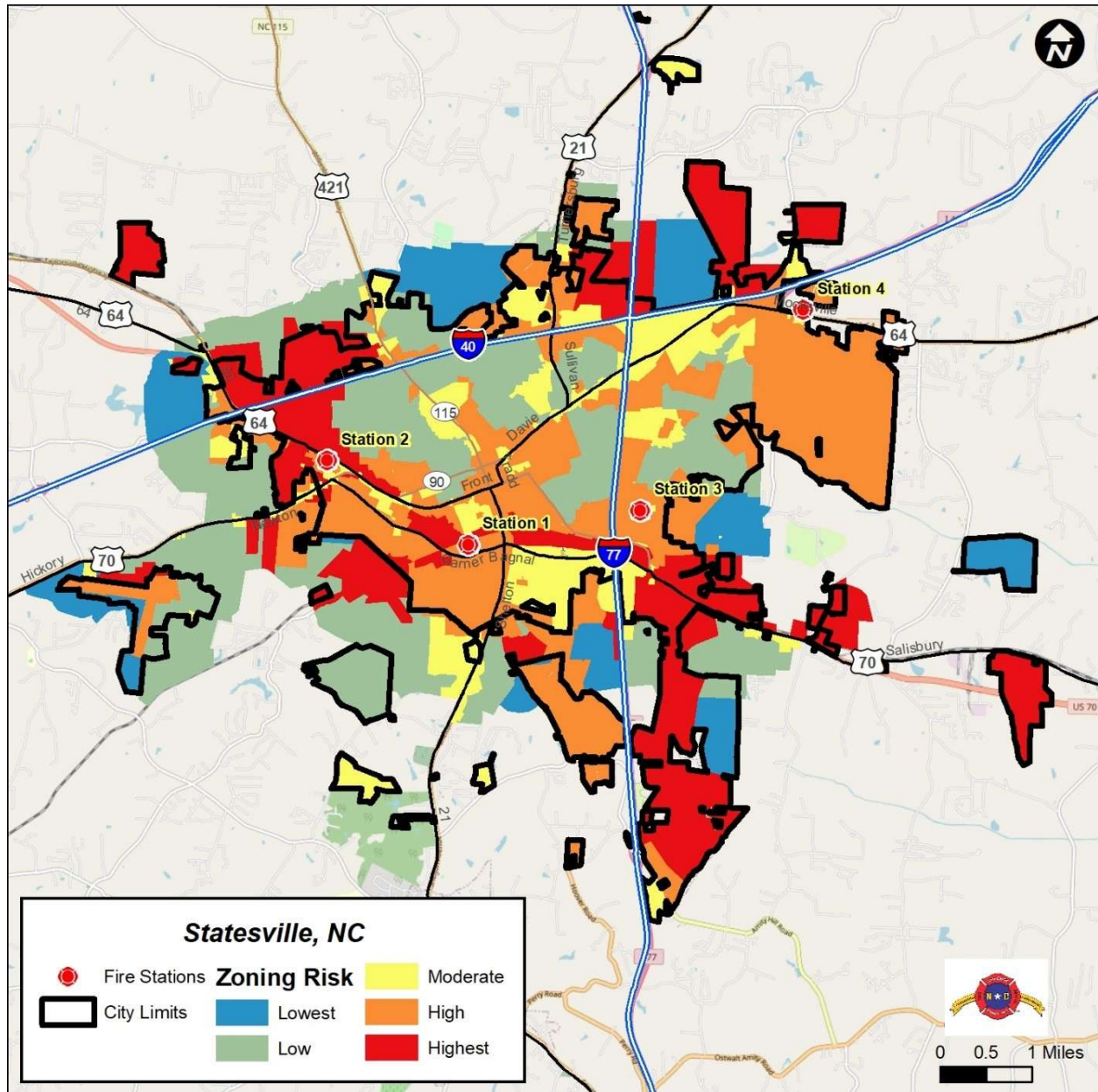
The types of uses pose differing risks to a community. Some may be a point of public assembly; others may be a facility that contains hazardous materials for its processes. Others are homes, that if lost to a fire is tragic to the owner and family. A loss of a structure that employs 300 residents is a greater overall impact loss to the community. The study team defines risk level as follows with some examples noted:

Risk Category Criteria

1. Lowest - Wide separation of single-family dwellings and farmland.
2. Low - Single-family dwellings with a separation of at least 100 feet between buildings.
3. Moderate - Commercial and light industrial facilities, small shopping centers, and high-density, low-rise residential buildings.
4. High - High-rise hotels and residential buildings, large shopping centers, and industrial complexes.
5. Highest - Refineries, large industry, lumber yards, and propane storage facilities.

These risk levels were applied to the zoning data provided in the resulting map.

FIGURE 4: Land Use Risk Map

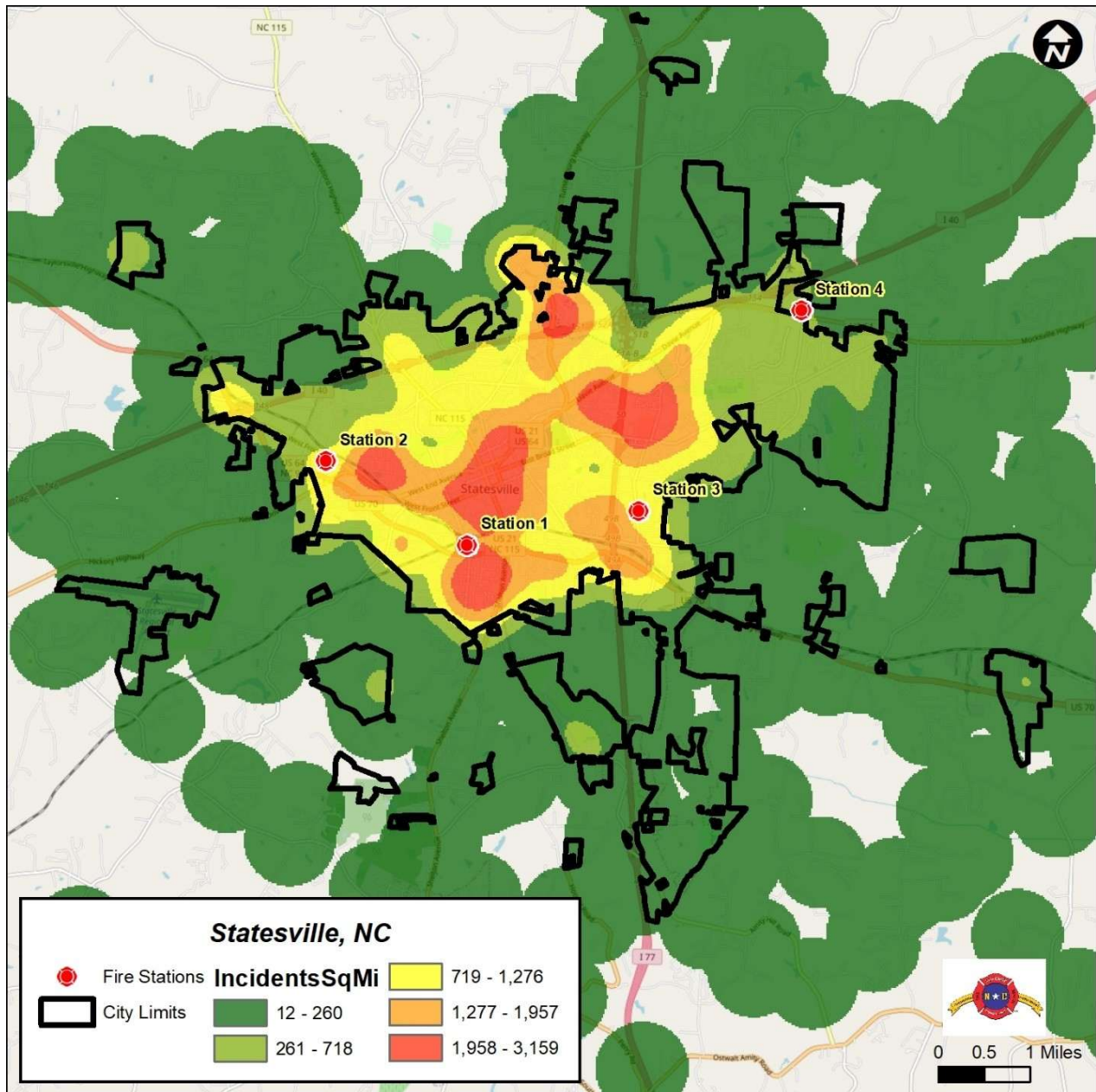


Most of the district has moderate or higher risk levels. Higher risk can be seen along the arterial roadways and along the rail lines.

Demand for Services

Thirdly, the demand for services although do correlate with higher population, can also be driven by non-residential commercial facilities like nursing homes, higher educational, and public facilities such as airports, and transportation terminals. Highly congested and unimproved intersections can also drive service demand for the fire service. Because of these factors, the demand for services is also a major element in coverage analysis. The following map demonstrates where the demand for services is the most intense based upon the fire department's raw incident data provided.

FIGURE 5: Service Demand Density

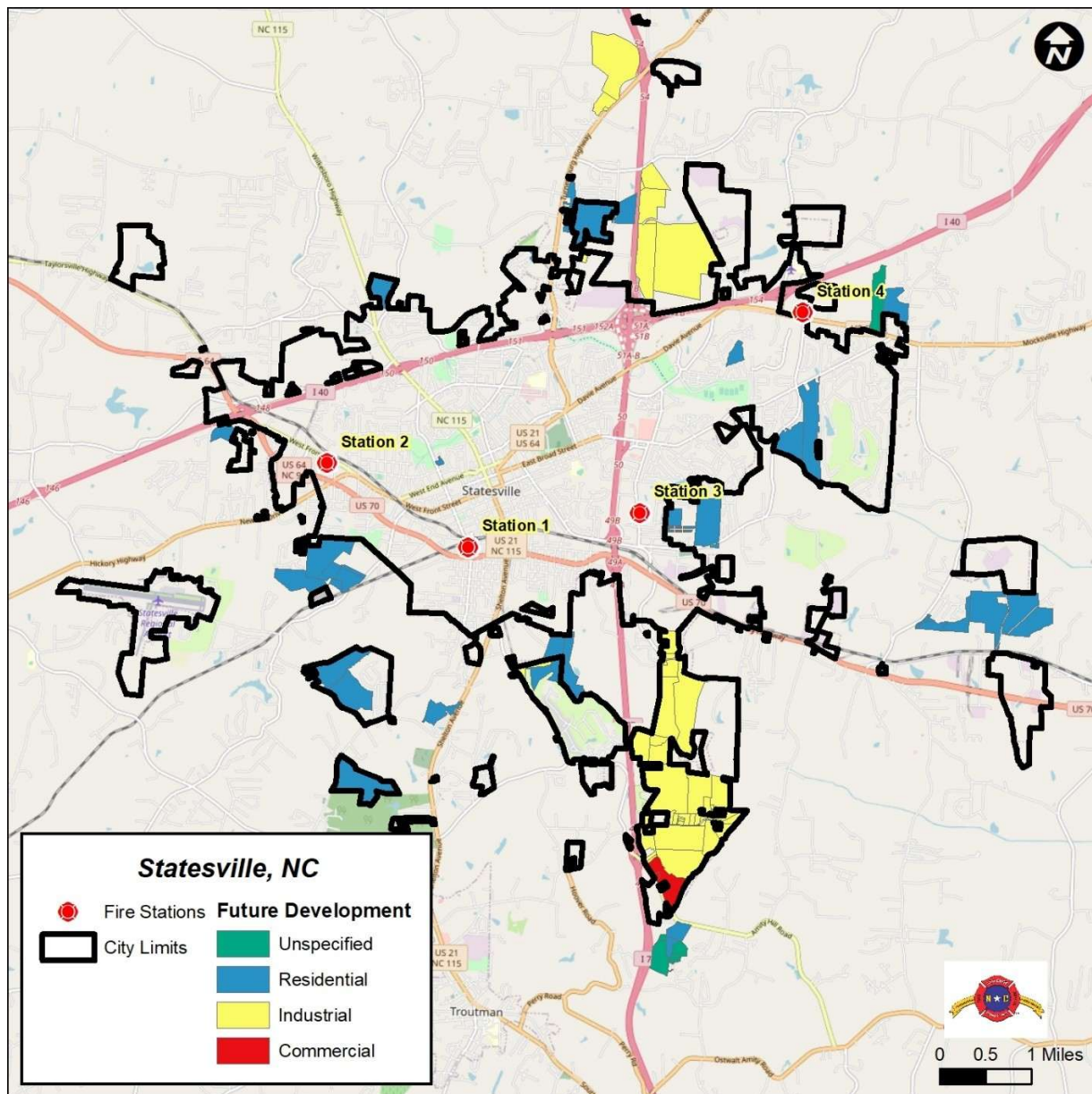


Much of the demand is concentrated where higher population density is located. The highest demand is near downtown area.

Future Development

There is planned development in several areas of the fire service area as seen in the following figure. Most of it is for residential developments which included the number of units expected and future roadways. It is expected by the fire department that developments outside the city will be annexed into the city.

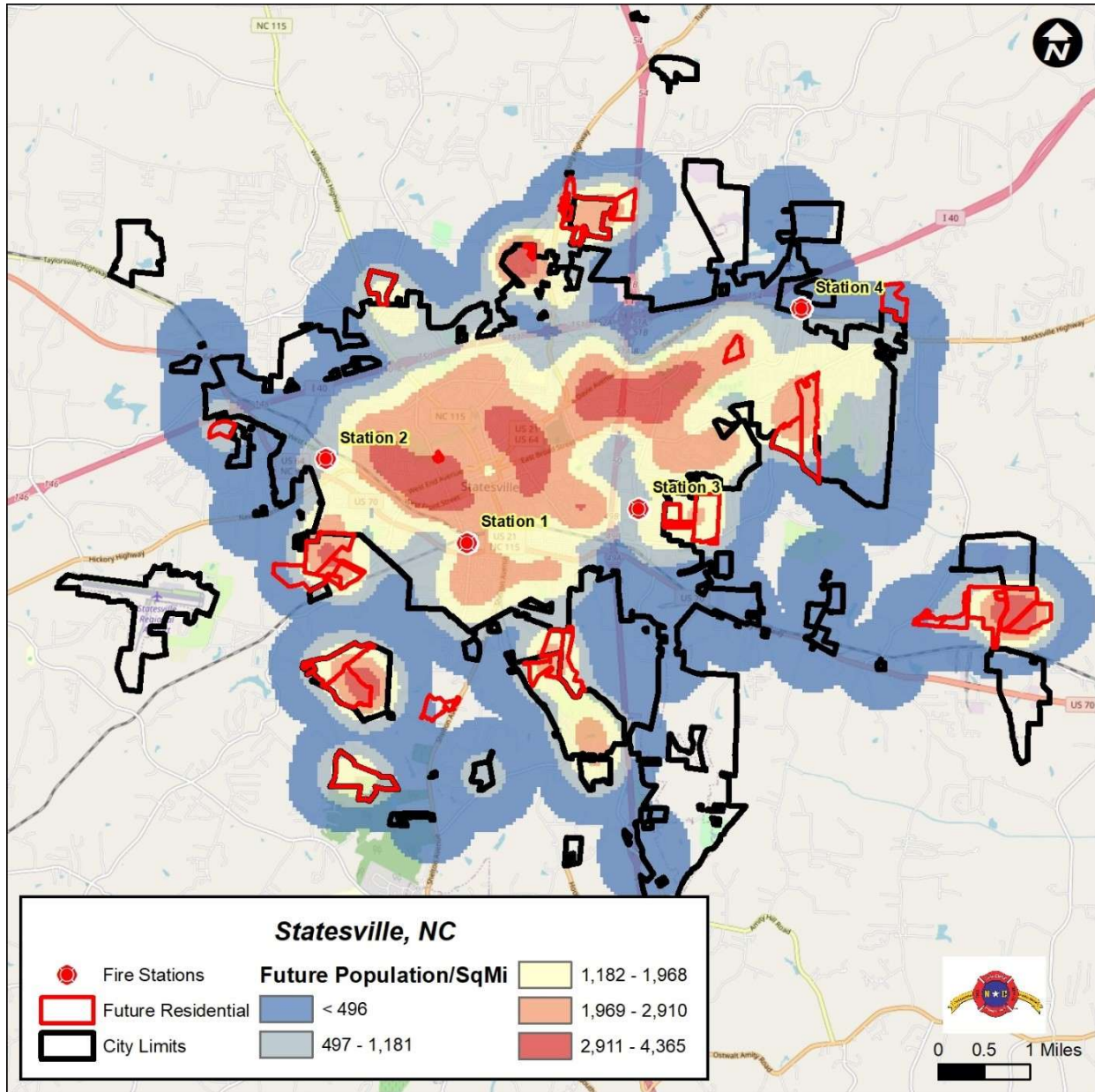
FIGURE 6: Future Development



Population Changes

The number of units (4,865) were multiplied by the overall persons per household from the US census Bureau (2.44) to estimate the population within each development. 11,871 additional residents are expected at buildout. These figures were added to existing residential population to create a population density of future development.

FIGURE 7: Future Population

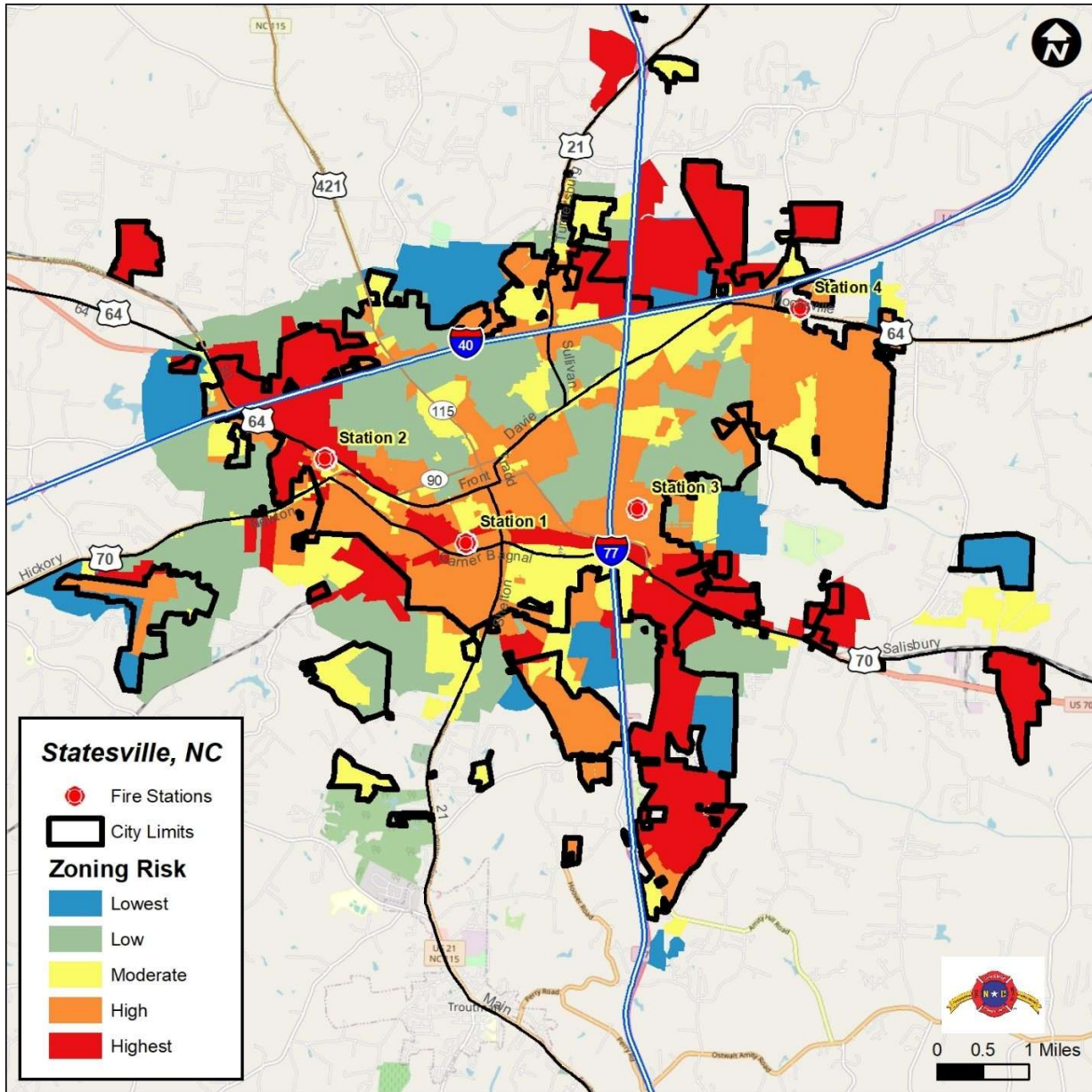


Noticeable changes can be noted in areas where the residential developments are planned. The impact depends upon the number of planned units and negatively influenced by the scattered locations of the development.

Structural Risk Changes

The City of Statesville has identified the future developments. These were translated into the same categories used for the city zoning data earlier.

FIGURE 8: Future Land Use Risk

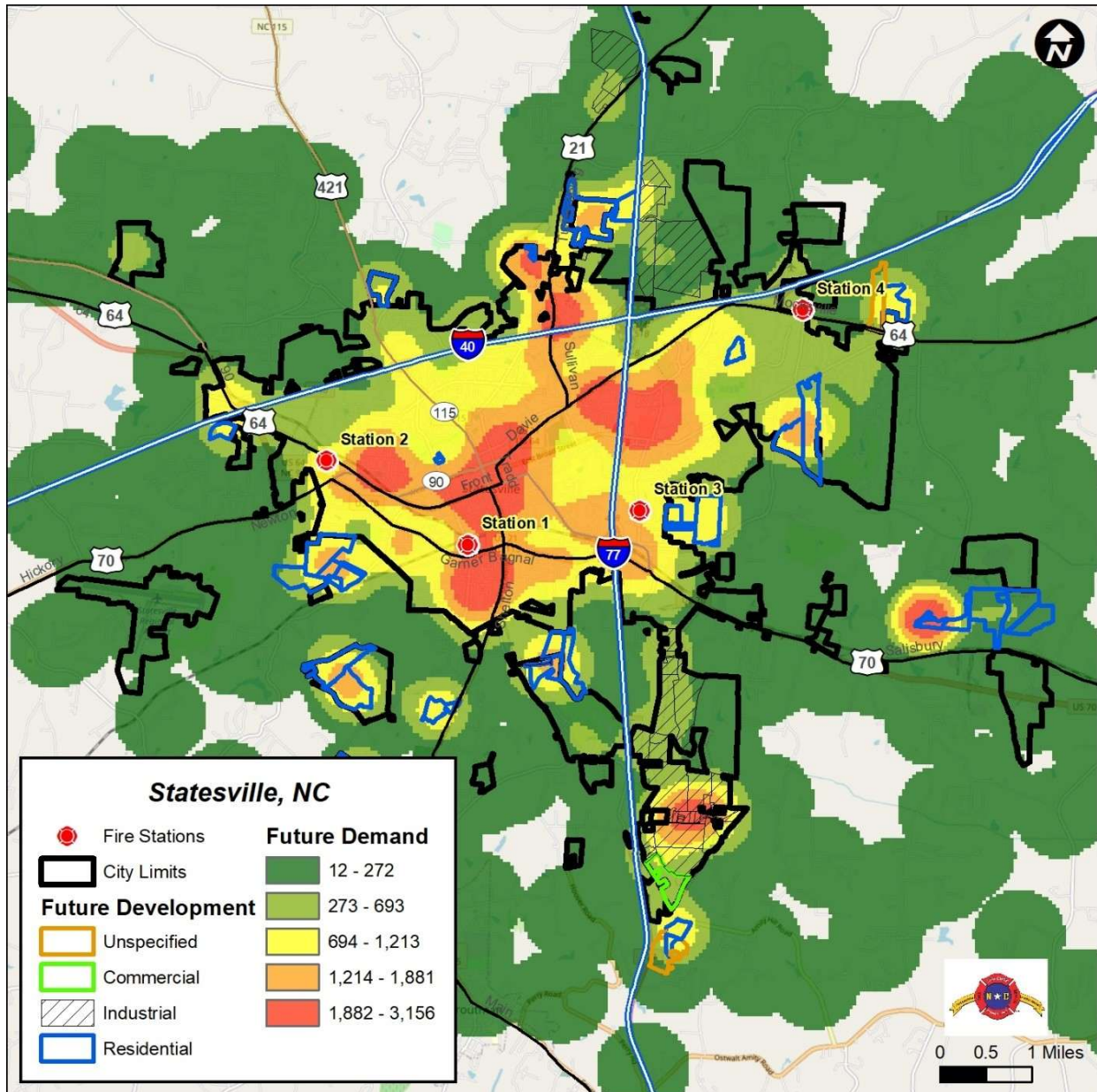


Compared to the current zoning, structural risk increases in the northern, eastern areas and south of US 70.

Service Demand Changes

With the change in population and the changes in structural risk, the demand for services changes due to development. The rate of incidents per population were applied to the projected new residential developments. Similarly, the incidents per acre for non-residential properties were applied to new non-residential developments. This created a different pattern of demand for services as seen in the following map.

FIGURE 9: Future Service Demand



Compared to the previous service demand map, increased demand can be seen south of US 70, southwest of Station 7, northeast of Station 4, and south of Station 2.

Vulnerability Risk Index

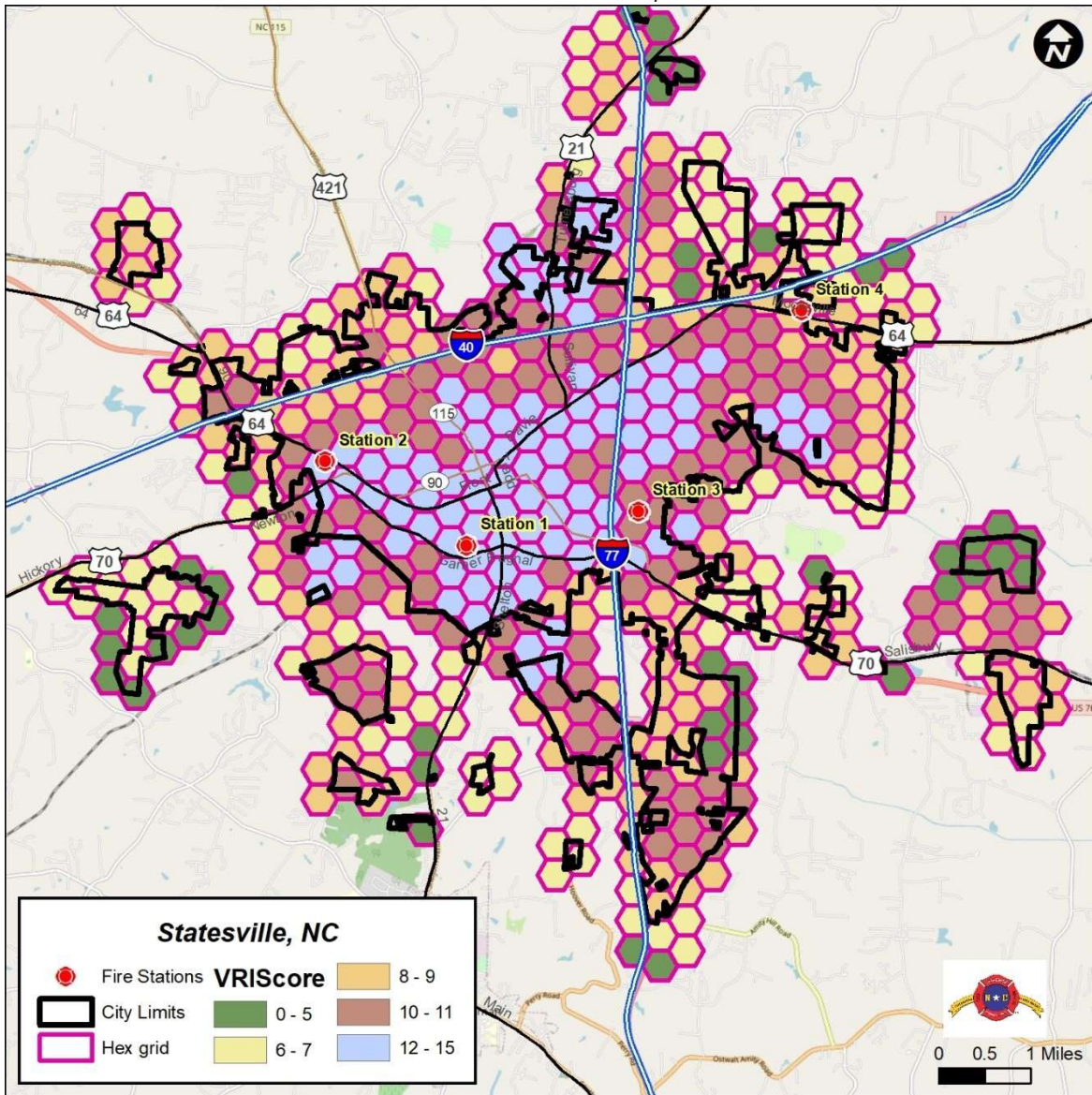
To measure the coverage adequacy by the fire station’s travel time extents, the elemental aspects of future population, future land use risk, and future demand for services are combined after equalizing each aspect into five sets of data from least to most (1-5). A 1/2-mile hexagonal grid was digitally constructed and overlaid atop the fire service area. The combined elemental scores were applied to the hexagonal areas to create a Vulnerability Risk Index (VRI). The lowest score would be a 3, while the highest score possible would be a 15.

FIGURE 10: VRI Scoring

Population per Sqmi	Score	Zoning Risk	Score	Service Demand per Sqmi	Score	Total Score
>2911	5	Highest	5	1882-3156	5	15
1969-2910	4	High	4	1214-1881	4	12
1182-1968	3	Moderate	3	694-1213	3	9
497-1181	2	Low	2	273-693	2	6
<496	1	Lowest	1	12-272	1	3

The following map shows geographically where the scores are higher or lower.

FIGURE 11: VRI Score Map

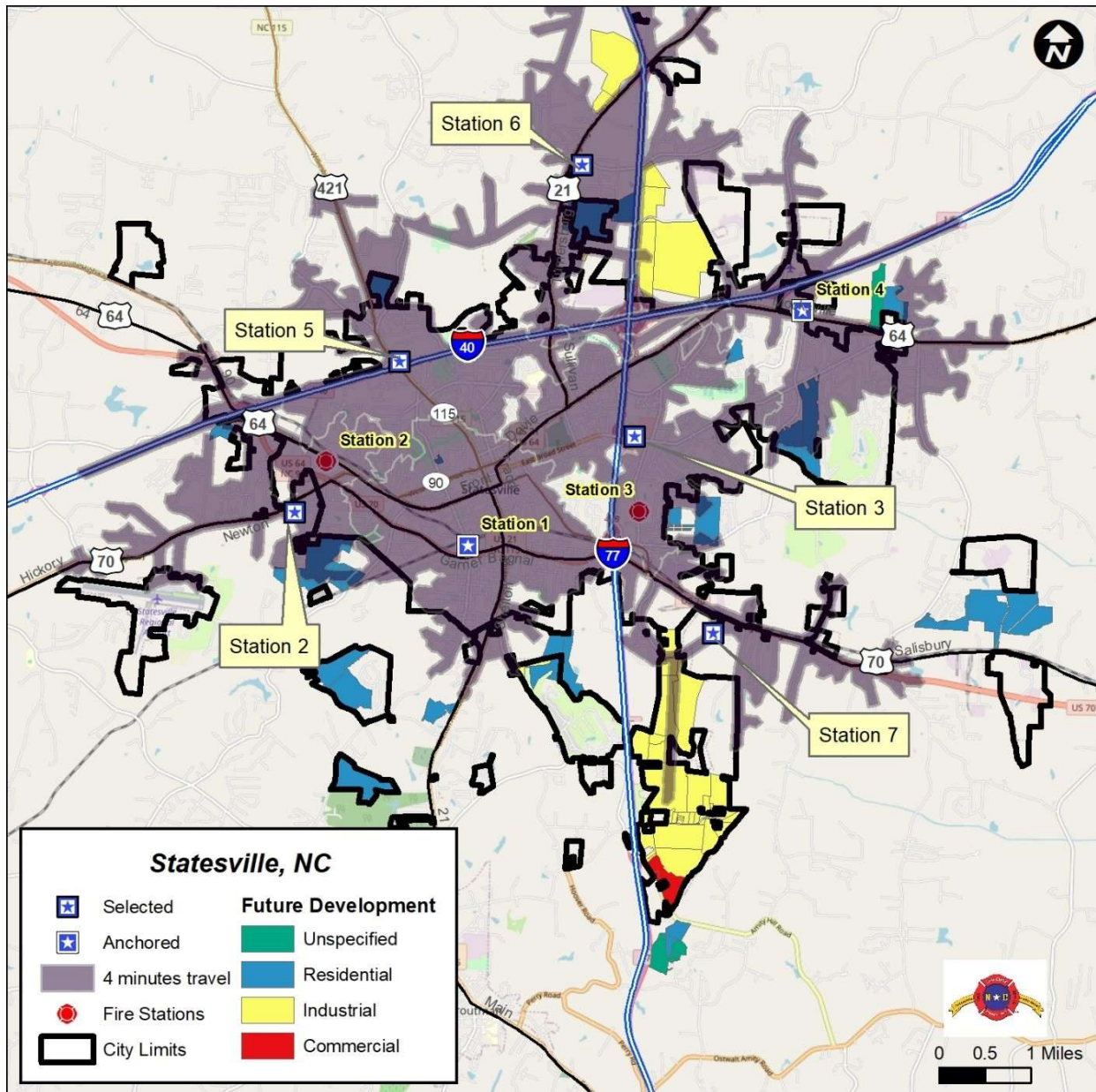


512 Hexagonal cells were retained with a total VRI score of 4,656. For the current four station locations, the coverage of the VRI score using the travel time model was 40.8% of the total. This serves as the benchmark to compare with any station renovations or relocations in this report.

Optimal Station Locations

In the following scenario, the geographic intelligent technology attempts to optimize/improve the VRI score from the current conditions by siting best locations using the travel time model to reach the hexagons. The fire department elected to “anchor” Station 1 in place, and out of consideration for relocation as it is the newest constructed station. It also “anchored Station 4 as it too is a recent construction. The following figure shows where the locations of the fire stations ought to be to optimize the total VRI score with seven stations within a four-minute travel time.

FIGURE 12: Scenario Coverage



The area of stations selected is as follows:

**Note that these station numbers are for this study only for ease of reader understanding and can be altered as seen fit by the fire department.

- Station 2: Newton Dr & Spiegel Ln. (reaches Airport)
- Station 3: E. Broad St & I-77
- Station 5: NC 115 & I-40
- Station 6: US 21 & Jane Sowers Rd
- Station 7: US 70 & Barkley Rd. East

The timing of the developments between future station 6 and future station 7 may alter the order in which these are constructed. Future Station 5 is needed imminently due to the current gap in coverage that exist with established development. Stations 2 and 3 can operate until the future locations can be secured for relocation.

Summary

These relocations of Station 2, 3, and new stations 5, 6, and 7 increased to total VRI score coverage from 40.8% to 65.5%, an 24.7 % improvement. Each additional station represents an over 8% improvement in score coverage. The following chart demonstrate the coverage share between the current station deployment and the scenario station locations.

FIGURE 13: Station Coverage Share Summary

Current		
Station	Count	%Share
1	546	11.7%
2	435	9.3%
3	449	9.6%
4	471	10.1%
Scenario		
Station	Count	%Share
1	545	11.7%
2	386	8.3%
3	505	10.8%
4	439	9.4%
5	447	9.6%
6	368	7.9%
7	362	7.8%

Recommendations:

1. Build Station 5 now to alleviate the current coverage gap in the northwest.
2. Build Station 6 and 7 in order depending upon development progress.
3. Relocate Station 2 & 3 when land secured.
4. Consider adding ladder apparatus in Station 6 and Station 7 as only the westside of the city is covered by the Station 1 Ladder ISO distance.
5. Reassess growth and development at five years or sooner as conditions dictate to assess future station location needs and changes in VRI score coverage.

Mutual and Automatic Aid Risk Assessment

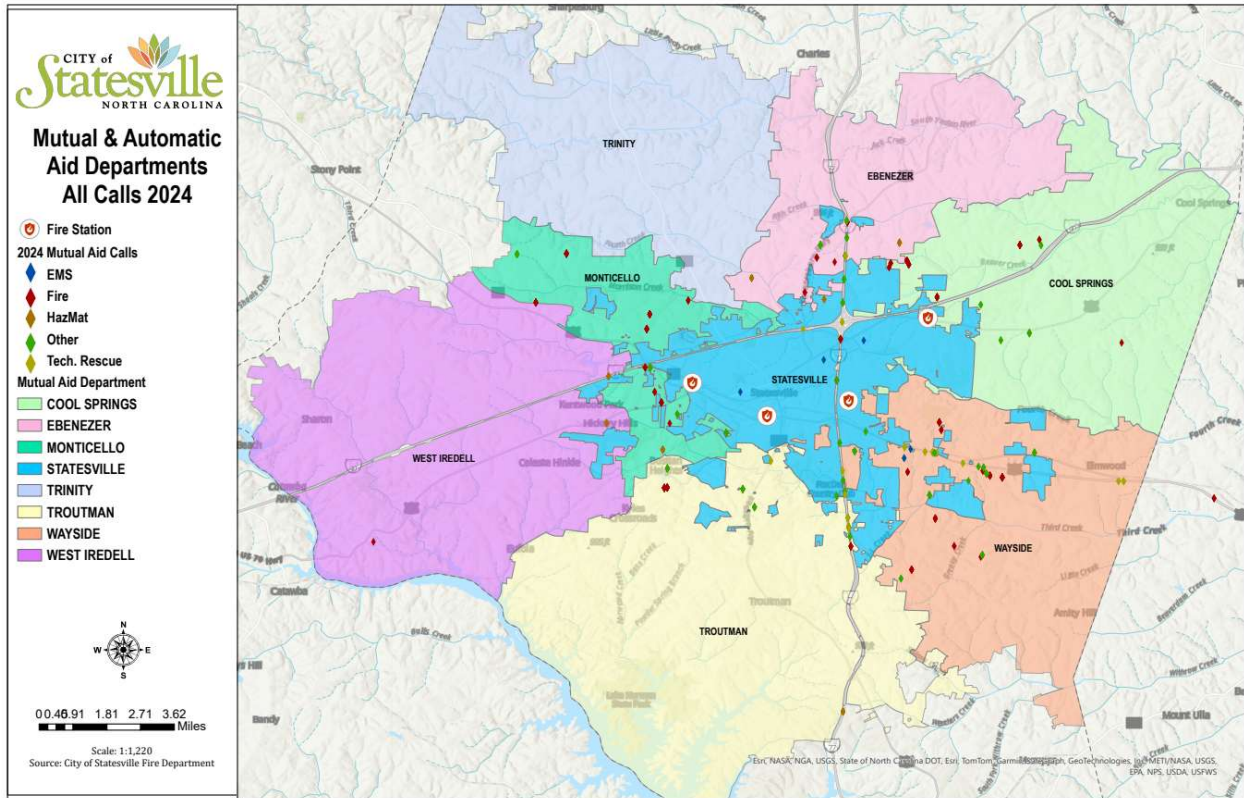
The SFD has established an external relationship that assists our agency in meeting our vision and mission statements. Automatic and mutual aid agreements have been established with other agencies within Iredell County which will provide continuity of service during large/multiple incidents. The department has six contracts for automatic aid in place that provides coverage by the closest fire station to areas near the periphery of Statesville City limits. The department also operates under the North Carolina Statewide Emergency Management Mutual Aid and Assistance Agreement which coordinates mutual aid assistance throughout the state. The mutual and automatic aid agreements allow for continuity of services in fire, medical, technical rescue, Hazmat, and aircraft incidents. The list contains local fire departments that our agency has automatic aid and mutual aid agreements with:

- Cool Springs VFD
- Ebenezer VFD
- Monticello VFD
- Troutman VFD
- Wayside VFD
- West Iredell VFD

Table 132: Mutual and Automatic Aid Given and Received 2020-2024

Aid Type	Number of Incidents	Percent of Aid Given or Received
Mutual aid received	56	8.18%
Automatic aid received	167	24.38%
Mutual aid given	127	18.54%
Automatic aid given	335	48.91%
Total		685

Map 46: Mutual and Automatic Aid Departments



Critical Task Analysis

Critical task analysis is identifying the critical tasks that must be accomplished to successfully mitigate an emergency incident. The resources necessary to accomplish critical tasks are established based upon the different service levels provided by the SFD.

Critical Task Analysis Structure Fires

The typical risk for the SFD is a one/two family residential structure with less than 1800 square feet of living space. The department has adequate resources and staffing to deal with these emergencies the majority of the time. A task analysis of the typical hazards indicates the following as critical tasks for the effective response force.

Fire Attack – Usually a 1 3/4” hose line used for offensive/interior extinguishment of the fire. Should conditions necessitate, a defensive/exterior extinguishment would be accomplished using a 2 1/2” hose line or master stream appliance. A back-up line, of appropriate size, will also be deployed by the fire attack group for the protection of personnel on the primary attack line should an emergency condition occur.

Search and Rescue – The checking of the interior of a structure for anyone who may be trapped or remain in such structure in the event of an emergency or fire; obtain an “All Clear”.

Ventilation – Opening of a structure to remove smoke or other toxic gases so as to reduce the danger to life and/or damage to property and to facilitate firefighting operations. Ventilation can be natural, positive pressure ventilation (PPV), or by smoke ejector. At most incidents, the third-in engine is assigned this task. Another duty of this crew is to turn off utilities, which include water, gas, or electricity.

Water Supply – The available water used for a fire attack. This water can be a positive source (hydrant), static source (creek, river, drop tank, or lake), or tanker apparatus. In the typical scenario, the water source is established quickly by the first-arriving or second-arriving unit. Personnel accomplishing this task can then be reassigned to another duty. Each apparatus is assigned a Lieutenant. This individual is responsible for the operation of the apparatus whether it be a pumper or aerial ladder.

Salvage – Actions related to the protection and preserving of property from the effects of fire and firefighting operation. These actions include the removal of water and covering merchandise or furniture with tarps.

Incident Command – Individual ultimately responsible for incident and control activities and establishing an effective emergency scene management structure. The incident commander is responsible for the overall safety of units working at the scene, the accountability of firefighters in the hazard zones, and ensuring that the fire is properly investigated.

Safety – Individual assigned to monitor all aspects of safety in accordance with SFD standard operating guidelines. On the typical event, the driver of the third in engine performs this task. A policy for personnel accountability establishes responsible parties at various levels of operations.

Rapid Intervention Team – A dedicated company, positioned outside the fire area, that is available for immediate deployment in the fire area for the purpose of rescuing firefighters in the case that they may become trapped, lost, or in distress. This company may also be tasked with softening the structure, throwing exterior ladders, and assisting with securing of utilities.

Table 133: Critical Tasking for Structure Fires

FIRE RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up Pump operator Establish water supply Deploy attack line 	4	4	4	4
2 ND ENGINE	<ul style="list-style-type: none"> Deploy back-up line Temporary RIT Search and Rescue Establish water supply if needed 	4	4	4	-
3 RD ENGINE	<ul style="list-style-type: none"> Ventilation Salvage / Overhaul Provide Safety Officer 	4	4	4	-
4 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> Assume RIT Secure utilities Soften structure Air monitoring 	4	4	-	-
5 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> Mutual-Aid Manpower 	3	-	-	-

FIRE RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
6 TH ENGINE (WORKING FIRE)	<ul style="list-style-type: none"> • Mutual-Aid • Manpower 	3	-	-	-
1 ST LADDER	<ul style="list-style-type: none"> • Ventilation • Forcible entry 	4	4	4	-
2 ND LADDER (WORKING FIRE)	<ul style="list-style-type: none"> • Mutual-Aid • Second Aerial Device • Elevated Master stream 	3	-	-	-
1 ST CHIEF	<ul style="list-style-type: none"> • Incident Command 	1	1	1	-
2 ND CHIEF (WORKING FIRE)	<ul style="list-style-type: none"> • Accountability • Division Operations • Rehab 	1	1	-	-
3 RD CHIEF (WORKING FIRE)	<ul style="list-style-type: none"> • Safety Officer 	1	-	-	-
TOTAL		31	21	17	4

Critical Task Analysis EMS

The SFD responds in conjunction with Iredell County EMS and Iredell Rescue Squad to provide basic and advanced life support services. Tasks performed by SFD personnel are done under the direction of Iredell County Medical Protocols. The typical task performed by SFD companies on EMS scenes is performing initial assessment/treatment and CPR efforts. Patient care is transferred to Iredell County EMS upon arrival and continued assistance is provided as needed. Engine company personnel may be asked to accompany paramedics to the hospital by assisting the paramedic or driving the ambulance.

Table 134: Critical Tasking for EMS

EMS RESPONSE	CRITICAL TASKS	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> • Patient assessment • Initial treatment • Airway management • CPR 	4	4	2
2 ND ENGINE	<ul style="list-style-type: none"> • Mass causality treatment 	4	-	-
CHIEF	<ul style="list-style-type: none"> • Incident/Unified Command 	1	-	-
TOTAL		9	4	2

Critical Task Analysis Technical Rescue

The SFD provides technical rescue response on vehicle/machinery extrications, trench/structural collapse, high-angle, Swiftwater, and confined space emergencies. Iredell Rescue Squad, Troutman Fire/Rescue, and Mooresville Fire/Rescue respond under mutual and automatic aid agreements on heavy vehicle extrications, trench, structural collapse, and Swiftwater emergencies. The SFD primarily handles vehicle extrication, high-angle and confined space emergencies within the city limits. A task analysis of the typical hazards indicates the following as critical tasks for the effective response force.

Table 135: Critical Tasking for Technical Rescue

TECHNICAL RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD	SIGNIFICANT HAZARD	MODERATE HAZARD	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish Command Perform size-up Hazard mitigation/rescue 	4	4	4	4
2 ND ENGINE/LADDER	<ul style="list-style-type: none"> Hazard mitigation/rescue Assigned as needed 	4	4	-	-
1 ST LADDER	<ul style="list-style-type: none"> Hazard Mitigation/rescue Assigned as needed Safety Officer 	4	-	-	-
RESCUE COMPANY (MUTUAL AID)	<ul style="list-style-type: none"> Specialized Equipment and personnel 	4	-	-	-
CHIEF	<ul style="list-style-type: none"> Incident/Unified Command 	1	1	1	-
2 ND CHIEF	<ul style="list-style-type: none"> Unified Command Safety Officer 	1	-	-	-
TOTAL		18	9	5	4

Critical Task Analysis ARFF

The SFD is responsible for incident coverage at the Statesville Regional Airport. The typical hazards associated with the Statesville Regional Airport are the same which would be associated with any airport. These hazards include landing undershoots/overshoots, takeoff overruns, accidents which may occur to aircraft while taxiing, and aircraft crashes. A task analysis of the typical hazards indicates the following as critical tasks for the effective response force.

Fire Suppression / Rescue – The initial units responding to a low impact crash will clear and maintain a rescue path to the aircraft. If the aircraft is involved in fire, the attack crew will gain and maintain control of escape exits. This will be accomplished with the use of 1 ¾” attack lines, water supply, and Aqueous Film Forming Foam. Rescue is an ongoing activity within the crash site until all passengers and crew are accounted for.

Water / Foam Supply – The water supply for the Statesville Regional Airport is maintained by the City of Statesville. This water supply can be easily accessed from the airport property. The water supply can also be relay pumped and transported via tanker truck if needed. Each initial responding unit will carry at least a twenty-gallon supply of Aqueous Film Forming Foam. ARFF contains ninety-six gallons of foam. An additional eighty-five gallons of foam is stored at Fire Station 1. Other foam resources can be obtained through mutual aid contacts.

Safety – Individual assigned to monitor all aspects of safety in accordance with SFD operational guidelines. On the typical event, the driver of the third in engine performs this task. A policy for personnel accountability establishes responsible parties at various levels of operations.

Incident Command – The incident commander is responsible for the overall incident, management structure / task, and safety / accountability of units working at the scene.

Table 136: Critical Tasking for ARFF

ARFF RESPONSE	CRITICAL TASKS	SIGNIFICANT HAZARD (ALERT 3)	MODERATE HAZARD (ALERT 2)	LOW HAZARD (ALERT 1)
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up Hazard mitigation/rescue Patient care/triage 	3	3	3
ARFF 1	<ul style="list-style-type: none"> Firefighting Operations 	1	1	1



ARFF RESPONSE	CRITICAL TASKS	SIGNIFICANT HAZARD (ALERT 3)	MODERATE HAZARD (ALERT 2)	LOW HAZARD (ALERT 1)
2 ND ENGINE	<ul style="list-style-type: none"> Hazard mitigation/rescue Water supply Assigned as needed 	4	4	
ENGINE 4/ HAZMAT 1	<ul style="list-style-type: none"> Hazard Material containment/control 	4	4	
3 RD ENGINE	<ul style="list-style-type: none"> Patient care/triage Assigned as needed 	4		
CHIEF	<ul style="list-style-type: none"> Incident Command 	1	1	
2 ND CHIEF	<ul style="list-style-type: none"> Unified Command Safety Officer 	1		
TOTAL		18	13	4

Critical Task Analysis Hazardous Materials

The SFD provides a FEMA Type III hazardous materials response to the City of Statesville and surrounding jurisdictions. In the event of a hazardous material (HazMat) incident in the City of Statesville assistance from Mooresville Fire Department and the NC Regional Response Team (RRT-7) located in the Charlotte Fire Department can be requested through local Emergency Management. The SFD has developed and implemented to handle anticipated Hazardous Material operations prior to the commencement of emergency response operations. Hazardous Materials emergency operations are divided into three incident levels based on the degree of hazard, required skills and duties of the responders, needed resources, and the emergency conditions of the incident (Level I, II, & III). A task analysis of the typical hazards indicates the following as critical tasks for the effective response force.

HazMat Level I Incidents

The SFD’s emergency response and operations at a Level I incident will utilize the first due fire suppression companies. All SFD fire suppression personnel are trained at the minimum to the First Responder Operations level as defined by OSHA 29 CFR 1910.120 (q) (6) (vi) and EPA 40 CFR 311. In addition, this response level closely parallels recommended response standards outlined by NFPA 470. First Responders at the Operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site

for the purpose of protecting persons, property, or the environment from the effects of the release. They are trained to respond primarily in a defensive fashion, to control the release from a safe distance with no intentional contact to the material, keep it from spreading, and prevent exposures. Offensive operations are permitted on hydrocarbon fuel tank leaks for the purpose of stopping the release of hydrocarbon fuels used to propel the vehicle for highway, industrial, agricultural and construction use. The SFD provides splash protection garments to all engine companies to minimize hydrocarbon fuel exposure to personnel and turn out gear. The SFD also provides all Engine companies with containment pools to be used for hydrocarbon fuel leaks.

HazMat Level II Incidents

Level II incidents are limited emergency conditions which pose a potential threat to life and the environment. This is a more serious situation than a Level I incident due to a greater quantity or higher degree of hazardous materials involved. Normally a limited evacuation will be necessary. Level II incidents will require a Technician Level Response with specialized chemical protective clothing and specialized control equipment for control and/or stabilization of the incident.

The SFD has set parameters for emergency response and operations at Level II incidents by utilizing the SFD Hazardous Materials Response Team, and the Mooresville Fire/Rescue (MFR) Hazardous Materials Team based on the severity of the incident.

A Hazardous Materials Response Team is defined by OSHA 29 CFR 1910.120 as an organized group of employees, designated and expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. All SFD and MFR HazMat team members are trained to or are receiving training at the Hazardous Materials Technician Level as defined by OSHA 29 CFR 1910.120 (q)(6)(iii) and EPA 40 CFR 311. In addition, this response level closely parallels the recommended response standards outlined in NFPA 470. Hazardous Materials Technicians are individuals who respond to releases or potential releases for the purpose of stopping the release, control or stabilization of the incident. They assume a more aggressive role than the first responder at the operations plus level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance.

HazMat Level III Incidents

Level III incidents are large-scale emergency conditions which are beyond the controlling capabilities of local resources. Level III incidents pose a major threat to life, property, and /or the environment. Level III incidents may include large quantities of extremely hazardous, toxic substances released with the potential for massive fire, explosions, and/or severe environmental and property damage over a large area. These incidents may require a large-scale evacuation and a greater commitment of equipment and personnel.

Under SARA Title III Section 303 “Emergency Planning and Community Right to Know Act,” Iredell County has developed an Emergency Response Plan to handle an incident of this magnitude. Under this plan the SFD along with assistance by the MFD will continue to be the first line of defense in a HazMat emergency and will play a critical role in implementing the Iredell County Emergency Response Plan for Level III incidents. The IC with input from the Iredell County Emergency Management Director will determine the need for activating the Iredell County Emergency Response Plan and the Iredell County Emergency Operations Center (EOC). Activation of the EOC will help provide the transition of administrative functions between the IC and the EOC staff. The EOC will also provide a better control and coordination between other agencies and the emergency scene. When local resources are depleted the EOC would request additional resources from State or Federal agencies such as HazMat Regional Response Teams, SERC, NRC, FEMA, EPA, State and Local DOT, private contractors, etc.

HazMat Critical Tasking

Critical tasks for hazmat incidents fall into four general responsibilities as defined by the National Fire Academy and the National Fire Protection Association.

1. Recognition and Identification

- Survey the incident to identify the containers and materials involved, whether hazardous materials have been released, and the surrounding conditions.
- Collect hazard and response information (the SFD supplies a North American ERG and the NFPA Fire Protection Guide to Hazardous Materials to all suppression companies).
- Analyze the magnitude of the incident and predict the likely behavior of the material.
- Estimate the potential harm to life, property, and the environment.

2. Notification

- Notify proper agencies as required by the department's HazMat General Operating Guideline (i.e. Iredell County Environmental Health, Iredell County, Emergency Management, etc.)
- Evaluate incident and provide updates (i.e. critical emergency conditions).

3. Isolation

- Set safety perimeters, establish control zones, and determine isolation and evacuation distances utilizing the North American Emergency Response Guidebook.
- Establish scene control and deny entry within the endangered area.
- Identify and initiate evacuation and/or in place protection.

4. Protection

- Initiate the ICS. On Level I incidents the Incident Commander (Company Officer) may also serve as the Incident Safety Officer.
- Determine appropriate personnel protective equipment.
- Vapor suppression and dispersion.
- Elimination of ignition sources.
- Provide water supply and/or exposure lines if needed.
- Diking or diverting to keep product in a confined area.
- Product control by remote or emergency shut-off.
- Perform emergency decontamination procedures.

Table 137: Critical Tasking for HazMat

HAZMAT RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD (LEVEL III)	SIGNIFICANT HAZARD (LEVEL II & III)	MODERATE HAZARD (LEVEL I & II)	LOW HAZARD
1 ST ENGINE	<ul style="list-style-type: none"> Establish command Perform size-up/Identify Isolate/Deny Entry Emergency decontamination 	4	4	4	4
ENGINE 4/HAZMAT 1	<ul style="list-style-type: none"> Research Hazard mitigation Entry Team ICS Positions 	4	4	4	-
ENGINE 3	<ul style="list-style-type: none"> Entry Team/Backup Team ICS Positions Assign as needed 	4	4	-	-
MOORESVILLE	<ul style="list-style-type: none"> Assign as needed 	4	-	-	-
RRT/OTHER SPECIALIZED RESPONSE	<ul style="list-style-type: none"> Assign as needed 	9	-	-	-
CHIEF	<ul style="list-style-type: none"> Incident/Unified Command 	1	1	1	-
2 ND CHIEF	<ul style="list-style-type: none"> Safety Officer / Unified Command 	1	1	-	-

HAZMAT RESPONSE	CRITICAL TASKS	MAXIMUM HAZARD (LEVEL III)	SIGNIFICANT HAZARD (LEVEL II & III)	MODERATE HAZARD (LEVEL I & II)	LOW HAZARD
3 RD CHIEF	<ul style="list-style-type: none"> Assist with Unified Command 	1	-	-	-
TOTAL		28	14	9	4

Performance Objectives and Performance Measurements

The SFD plans to limit the risks to our community and citizens from fire, injury, death, and property damage associated from fires, accidents, serious illness, explosions, hazardous materials, and other natural and manmade emergencies through prevention, education, and mitigation.

Performance level objectives follow to show the commitment of the SFD in meeting pre-established objectives regarding and effective response to four key call type classifications: Fire, Medical, Technical Rescue, and Hazardous Materials. Each risk has been thoroughly analyzed based on historical data to determine the future likelihood of the incident occurring again. Specific performance measures have been established based on analysis and the mission/vision of the SFD.

Benchmark Objectives and Baseline Performances for Fire Suppression

Overall Fire Response Risk Benchmarks

For 90 percent of all risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 6 minutes and 20 seconds in urban geo-proximity zones: and 7 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all fire suppression incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, shall be: 6 minutes and 20 seconds in urban geo-proximity zones: and 7 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Overall Fire Response Risk Baseline 2023-2027

For 90 percent of all risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 07 minutes and 07 seconds in urban geo-proximity zones: and 09 minutes and 01 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all fire suppression incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is 07 minutes and 33 seconds in urban geo-proximity zones: and 09 minutes and 48 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Table 138: Overall Fire Suppression Risk Benchmark Objectives

Overall Fire Suppression Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time – ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 139: 90th Percentile Baseline Performance Fire Suppression

(Overall) Fire Suppression - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:34				01:35	01:23
		Rural	01:41				01:38	01:30
Turnout Time	Turnout Time 1st Unit	Urban	02:10				02:22	01:20
		Rural	02:06				02:02	02:06
Travel Time	Travel Time 1st Unit Distribution	Urban	04:18				04:56	04:12
		Rural	06:16				06:53	05:36
	Travel Time ERF Concentration	Urban	05:02				05:18	04:32
		Rural	06:53				07:10	06:17
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:07				07:18	06:26
			n=102	n=	n=	n=	n=46	n=54
		Rural	09:01				09:48	08:39
			n=135	n=	n=	n=	n=74	n=63
	Total Response Time ERF Concentration	Urban	07:33				07:50	07:14
			n=100	n=	n=	n=	n=47	n=53
Rural	09:48				10:05	09:13		
	n=133	n=	n=	n=	n=70	n=62		

Low Fire Response Risk Benchmarks

For 90 percent of low risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of low fire suppression incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Low Fire Response Risk Baseline 2023-2027

For 90 percent of low risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 07 minutes and 07 seconds in urban geo-proximity zones: and 08 minutes and 39 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of low fire suppression incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is 07 minutes and 33 seconds in urban geo-proximity zones: and 10 minutes and 19 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Table 140: Low Fire Suppression Risk Benchmark Objectives

Low Fire Suppression Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time – ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 141: 90th Percentile Baseline Performance Low Fire Suppression

(Low) Fire Suppression - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:36				01:53	01:26
		Rural	01:48				01:54	01:30
Turnout Time	Turnout Time 1st Unit	Urban	02:11				02:01	02:13
		Rural	02:02				01:56	02:06
Travel Time	Travel Time 1st Unit Distribution	Urban	04:08				03:55	04:12
		Rural	05:57				07:06	05:35
	Travel Time ERF Concentration	Urban	05:02				05:14	04:32
		Rural	06:56				07:33	06:16
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:07				07:18	06:44
			n=69	n=	n=	n=	n=34	n=35
		Rural	08:39				10:14	08:35
			n=110	n=	n=	n=	n=56	n=56
	Total Response Time ERF Concentration	Urban	07:33				07:36	06:57
			n=68	n=	n=	n=	n=34	n=33
Rural	10:19				10:45	08:49		
n=109	n=	n=	n=	n=53	n=55			

Moderate Fire Response Risk Benchmarks

For 90 percent of moderate risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of moderate fire suppression incidents, the total response time for the arrival of the ERF, staffed with 17 firefighters and officers, shall be: 10 minutes and 20 seconds in urban geo-proximity zones: and 11 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Moderate Fire Response Risk Baseline 2023-2027

For 90 percent of moderate risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 07 minutes and 10 seconds in urban geo-proximity zones: and 09 minutes and 48 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of moderate fire suppression incidents, the total response time for the arrival of the ERF, staffed with 17 firefighters and officers, is 12 minutes and 16 seconds in urban geo-

proximity zones: and 13 minutes and 32 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Table 142: Moderate Fire Suppression Risk Benchmark Objectives

Moderate Fire Suppression Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time – ERF	08:00	09:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	09:20	10:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	10:20	11:50

Table 143: 90th Percentile Baseline Performance Moderate Fire Suppression

(Moderate) Fire Suppression - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:02				00:43	01:09
		Rural	00:59				00:59	00:32
Turnout Time	Turnout Time 1st Unit	Urban	02:10				02:25	01:59
		Rural	02:29				02:29	01:42
Travel Time	Travel Time 1st Unit Distribution	Urban	05:01				05:26	04:31
		Rural	06:33				06:33	02:54
	Travel Time ERF Concentration	Urban	07:43				07:13	10:25
		Rural	11:11				15:00	05:05
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:10				07:50	05:20
			n=19	n=	n=	n=	n=9	n=9
		Rural	09:48				09:48	05:01
			n=17	n=	n=	n=	n=14	n=3
	Total Response Time ERF Concentration	Urban	12:16				08:42	12:16
			n=14	n=	n=	n=	n=6	n=7
Rural		13:32				15:57	07:02	
		n=10	n=	n=	n=	n=9	n=1	

Significant Fire Response Risk Benchmarks

For 90 percent of significant risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of significant fire suppression incidents, the total response time for the arrival of the ERF, staffed with 21 firefighters and officers, shall be: 11 minutes and 00 seconds in urban geo-proximity zones: and 12 minutes and 30 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Significant Fire Response Risk Baseline 2023-2027

For 90 percent of significant risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 07 minutes and 14 seconds in urban geo-proximity zones: and 06 minutes and 39 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of significant fire suppression incidents, the total response time for the arrival of the ERF, staffed with 21 firefighters and officers is 12 minutes and 54 seconds in urban geo-proximity zones: and 20 minutes and 49 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Table 144: Significant Fire Suppression Risk Benchmark Objectives

Significant Fire Suppression Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	08:40	10:10
Response Time 1st Unit on Scene	05:20	07:30
Response Time ERF	10:00	11:30
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	11:00	12:30

Table 145: 90th Percentile Baseline Performance Significant Fire Suppression

(Significant) Fire Suppression - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	02:45				02:45	00:07
		Rural	01:11				01:11	N/A
Turnout Time	Turnout Time 1st Unit	Urban	03:30				01:32	03:30
		Rural	01:28				01:28	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	02:27				02:27	01:08
		Rural	04:48				04:48	N/A
	Travel Time ERF Concentration	Urban	08:01				08:01	N/A
		Rural	19:19				19:19	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:14				07:14	04:48
			n=3	n=	n=	n=	n=2	n=1
		Rural	06:39				06:39	N/A
			n=2	n=	n=	n=	n=2	n=0
	Total Response Time ERF Concentration	Urban	12:54				12:54	N/A
			n=2	n=	n=	n=	n=2	n=0
Rural	20:49				20:49	N/A		
	n=2	n=	n=	n=	n=2	n=0		

Maximum Fire Response Risk Benchmarks

For 90 percent of maximum risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of maximum fire suppression incidents, the total response time for the arrival of the ERF, staffed with 31 firefighters and officers, shall be: 20 minutes and 30 seconds in urban geo-proximity zones: and 22 minutes and 00 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Maximum Fire Response Risk Baseline 2023-2027: The department did not respond to any fire Maximum risk hazards from 2023-2027.

For 90 percent of maximum risk fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is non-applicable in urban geo-proximity zones: and non-applicable in rural geo-proximity zones. The first due unit shall be capable of: providing 750 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of maximum fire suppression incidents, the total response time for the arrival of the ERF, staffed with 31 firefighters and officers is non-applicable in urban geo-proximity zones:

and non-applicable in rural geo-proximity zones. The ERF is capable of: establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in and two out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; performing salvage and overhaul. The ERF for moderate, significant, and maximum risk fires is also capable of placing elevated streams into service from aerial ladders. These operations are done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Table 146: Maximum Fire Suppression Risk Benchmark Objectives

Maximum Fire Suppression Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	18:10	19:40
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	19:30	21:00
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	20:30	22:00

Table 147: 90th Percentile Baseline Performance Maximum Fire Suppression

(Maximum) Fire Suppression - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
Rural								
		n=	n=	n=	n=	n=	n=	

Table 148: Effective Response Force Staffing Benchmarks Fire

Fire Effective Response Force Staffing Benchmarks	
Fire - Low	4
Fire - Moderate	17
Fire - Significant	21
Fire - Maximum	31
Fire - Overall	4

Benchmark Objectives and Baseline Performances for Medical

EMS Overall Risk Benchmark:

For 90 percent of all overall risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 2 firefighters, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all overall risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 2 firefighters shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

EMS Overall Baseline: 2023-2027

For 90 percent of all overall risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 2 firefighters is: 07 minutes and 33 seconds in urban geo-proximity zones and 08 minutes and 41 seconds in rural geo-proximity zones. The first-due unit is capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all overall risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 2 firefighters is: 07 minutes and 34 seconds in urban geo-proximity zones and 08 minutes and 42 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

Table 149: Overall EMS Risk Benchmark Objectives

Overall EMS Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 150: 90th Percentile Baseline Performance Overall EMS

(Overall) EMS - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:40				00:41	00:38
		Rural	00:39				00:40	00:36
Turnout Time	Turnout Time 1st Unit	Urban	02:17				02:14	02:20
		Rural	02:33				02:23	02:25
Travel Time	Travel Time 1st Unit Distribution	Urban	05:15				05:27	05:04
		Rural	06:31				06:33	06:26
	Travel Time ERF Concentration	Urban	05:15				05:26	05:07
		Rural	06:35				06:36	06:32
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:33				07:46	07:19
			n=2906	n=	n=	n=	n=1393	n=1511
		Rural	08:41				08:47	08:36
			n=3103	n=	n=	n=	n=1605	n=1501
	Total Response Time ERF Concentration	Urban	07:34				07:46	07:26
			n=2508	n=	n=	n=	n=1263	n=1244
	Rural	08:42				08:48	08:36	
		n=2776	n=	n=	n=	n=1462	n=1314	

EMS Low Risk Benchmark:

For 90 percent of all low risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 2 firefighters, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all low risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 2 firefighters shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

EMS Overall Baseline: 2023-2027

For 90 percent of all low risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 2 firefighters is: 07 minutes and 33 seconds in urban geo-proximity zones and 08 minutes and 42 seconds in rural geo-proximity zones. The first-due unit is capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all low risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 2 firefighters is: 07 minutes and 34 seconds in urban geo-proximity zones and 08 minutes and 41 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

Table 151: Low EMS Risk Benchmark Objectives

Low EMS Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 152: 90th Percentile Baseline Performance Low EMS

(Low) EMS - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:40				00:41	00:38
		Rural	00:39				00:40	00:36
Turnout Time	Turnout Time 1st Unit	Urban	02:17				02:14	02:20
		Rural	02:24				02:23	02:25
Travel Time	Travel Time 1st Unit Distribution	Urban	05:16				05:29	05:05
		Rural	06:31				06:35	06:26
	Travel Time ERF Concentration	Urban	05:17				05:31	05:07
		Rural	06:31				06:33	06:28
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:33				07:47	07:19
			n=2827	n=	n=	n=	n=1362	n=1461
		Rural	08:42				08:48	08:36
			n=3014	n=	n=	n=	n=1571	n=1446
	Total Response Time ERF Concentration	Urban	07:34				07:47	07:22
			n=2827	n=	n=	n=	n=1361	n=1461
	Rural	08:41				08:45	08:36	
		n=3009	n=	n=	n=	n=1568	n=1444	

EMS Moderate Risk Benchmark:

For 90 percent of all moderate risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all moderate risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid; performing AED; and initiating cardiopulmonary resuscitation (CPR); assisting transport personnel with packaging the patient; and producing related documentation.

EMS Moderate Baseline: 2023-2027

For 90 percent of all moderate risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 4 firefighters and officers is: 06 minutes and 17 seconds in urban geo-proximity zones and 08 minutes and 16 seconds in rural geo-proximity zones. The first-due unit is capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all moderate risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is: 06 minutes and 21 seconds in urban geo-proximity zones and 08 minutes and 18 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid; performing

AED; and initiating cardiopulmonary resuscitation (CPR); assisting transport personnel with packaging the patient; and producing related documentation.

Table 153: Moderate EMS Risk Benchmark Objectives

Moderate EMS Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 154: 90th Percentile Baseline Performance Moderate EMS

(Moderate) EMS - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:34				00:36	00:33
		Rural	00:34				00:39	00:28
Turnout Time	Turnout Time 1st Unit	Urban	02:20				02:12	02:24
		Rural	02:20				02:11	02:20
Travel Time	Travel Time 1st Unit Distribution	Urban	04:12				04:11	04:28
		Rural	06:01				06:02	05:59
	Travel Time ERF Concentration	Urban	04:23				04:11	04:57
		Rural	06:28				06:02	06:35
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	06:17				06:35	06:11
			n=77	n=	n=	n=	n=31	n=48
		Rural	08:16				08:18	08:16
			n=90	n=	n=	n=	n=35	n=55
	Total Response Time ERF Concentration	Urban	06:21				06:35	06:21
			n=72	n=	n=	n=	n=31	n=43
		Rural	08:18				08:18	08:16
			n=77	n=	n=	n=	n=31	n=46

EMS Significant Risk Benchmark:

For 90 percent of all significant risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all significant risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers shall be: 08 minutes and 20 seconds in urban geo-proximity zones and 09 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid; performing AED; and initiating cardiopulmonary resuscitation (CPR); assisting transport personnel with packaging the patient; and producing related documentation.

EMS Significant Baseline: 2023-2027 The department did not respond to any EMS Significant risk hazards from 2023-2027.

For 90 percent of all significant risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The first-due unit is capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid and assisting transport personnel with packaging the patient.

For 90 percent of all significant risk EMS response incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The ERF shall be capable of: assessing scene safety and establishing command; sizing up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid; performing AED; and initiating cardiopulmonary resuscitation (CPR); assisting transport personnel with packaging the patient; and producing related documentation.

Table 155: Significant EMS Risk Benchmark Objectives

Significant EMS Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	06:00	07:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	07:20	08:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	08:20	09:50

Table 156: 90th Percentile Baseline Performance Significant EMS

(Significant) EMS - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
Rural	N/A				N/A	N/A		
n=0	n=	n=	n=	n=0	n=0			

Table 157: Effective Response Force Staffing Benchmarks EMS

EMS Effective Response Force Staffing Benchmarks	
EMS - Low	2
EMS - Moderate	4
EMS - Significant	9
EMS - Maximum	N/A
EMS - Overall	2

Benchmark Objectives and Baseline Performances for Hazardous Materials

Hazmat Overall Risk Benchmark:

For 90 percent of overall risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all overall risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Hazmat Overall Risk Baseline 2023-2027:

For 90 percent of overall risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 08 minutes and 27 seconds urban geo-proximity zones and 10 minutes and 56 seconds and in rural geo-proximity zones. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all overall risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer is: 08 minutes and 27 seconds in urban geo-proximity zones and 10 minutes and 58 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Table 158: Overall HazMat Risk Benchmark Objectives

Overall HazMat Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 159: 90th Percentile Baseline Performance Overall HazMat

(Overall) HazMat - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:31				01:32	01:22
		Rural	01:42				01:39	01:43
Turnout Time	Turnout Time 1st Unit	Urban	02:11				02:04	02:16
		Rural	02:23				02:24	02:10
Travel Time	Travel Time 1st Unit Distribution	Urban	05:22				04:37	06:23
		Rural	06:58				06:45	07:39
	Travel Time ERF Concentration	Urban	06:23				05:03	06:27
		Rural	07:11				07:11	07:39
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	08:27				07:25	08:47
			n=93	n=	n=	n=	n=34	n=58
		Rural	10:56				09:52	11:50
			n=82	n=	n=	n=	n=46	n=35
	Total Response Time ERF Concentration	Urban	08:27				07:45	09:02
			n=92	n=	n=	n=	n=32	n=57
Rural		10:58				10:04	11:50	
		n=81	n=	n=	n=	n=47	n=34	

Hazmat Low Risk Benchmark:

For 90 percent of low risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all low risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment,

technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Hazmat low Risk Baseline 2023-2027:

For 90 percent of low risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 09 minutes and 04 seconds urban geo-proximity zones and 09 minutes and 57 seconds and in rural geo-proximity zones. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all low risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer is: 07 minutes and 56 seconds in urban geo-proximity zones and 09 minutes and 57 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Table 160: Low HazMat Risk Benchmark Objectives

Low HazMat Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 161: 90th Percentile Baseline Performance Low HazMat

(Low) HazMat - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:25				02:17	01:15
		Rural	01:28				01:21	01:28
Turnout Time	Turnout Time 1st Unit	Urban	02:16				02:16	02:20
		Rural	02:10				02:25	02:10
Travel Time	Travel Time 1st Unit Distribution	Urban	06:19				06:19	06:38
		Rural	07:11				05:07	08:57
	Travel Time ERF Concentration	Urban	06:00				05:12	06:38
		Rural	07:11				05:07	08:57
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	09:04				09:15	09:04
			n=23	n=	n=	n=	n=7	n=16
		Rural	09:57				08:33	11:09
			n=20	n=	n=	n=	n=10	n=11
	Total Response Time ERF Concentration	Urban	07:56				07:45	09:04
			n=21	n=	n=	n=	n=6	n=15
		Rural	09:57				08:33	11:09
			n=20	n=	n=	n=	n=10	n=11

Hazmat Moderate Risk Benchmark:

For 90 percent of moderate risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers shall be: 08 minutes and 20 seconds in urban geo-proximity zones and 09 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Hazmat Moderate Risk Baseline 2023-2027:

For 90 percent of moderate risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 08 minutes and 07 seconds urban geo-proximity zones and 10 minutes and 58 seconds and in rural geo-proximity zones. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all moderate hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers is: 14 minutes and 16 seconds in urban geo-proximity zones and 18 minutes and 04 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Table 162: Moderate HazMat Risk Benchmark Objectives

Moderate HazMat Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	06:00	07:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	07:20	08:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	08:20	09:50

Table 163: 90th Percentile Baseline Performance Moderate HazMat

(Moderate) HazMat - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:31				01:46	01:21
		Rural	01:54				02:12	01:52
Turnout Time	Turnout Time 1st Unit	Urban	02:07				02:04	02:07
		Rural	02:24				02:24	02:29
Travel Time	Travel Time 1st Unit Distribution	Urban	05:15				04:35	05:23
		Rural	06:52				06:45	06:52
	Travel Time ERF Concentration	Urban	10:45				09:43	10:45
		Rural	15:39				10:42	16:52
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	08:07				06:56	08:43
			n=70	n=	n=	n=	n=28	n=41
		Rural	10:58				10:58	11:50
			n=60	n=	n=	n=	n=36	n=24
	Total Response Time ERF Concentration	Urban	14:16				12:46	13:50
			n=47	n=	n=	n=	n=19	n=26
		Rural	18:04				14:15	18:34
			n=39	n=	n=	n=	n=24	n=14

Hazmat Significant Risk Benchmark:

For 90 percent of significant risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all significant risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 14 firefighters and officers shall be: 10 minutes and 20 seconds in urban geo-proximity zones and 11 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Hazmat Significant Risk Baseline 2023-2027: The department did not respond to any hazmat Significant risk hazards from 2023-2027.

For 90 percent of significant risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all significant risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 14 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Table 164: Significant HazMat Risk Benchmark Objectives

Significant HazMat Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	08:00	09:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	09:20	10:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	10:20	11:50

Table 165: 90th Percentile Baseline Performance Significant HazMat

(Significant) HazMat - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=	n=	n=	n=	n=	n=
Rural	N/A				N/A	N/A		
n=0	n=	n=	n=	n=	n=0	n=0		

Hazmat Maximum Risk Benchmark:

For 90 percent of maximum risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all maximum risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 28 firefighters and officers shall be: 60 minutes and 00 seconds in urban geo-proximity zones and 60 minutes and 00 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Hazmat Maximum Risk Baseline 2023-2027: The department did not respond to any hazmat Maximum risk hazards from 2023-2027.

For 90 percent of maximum risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The first-due unit is capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all maximum risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with 28 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.

Table 166: Maximum HazMat Risk Benchmark Objectives

Maximum HazMat Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	57:40	57:40
Response Time 1st Unit on Scene	05:20	07:30
Response Time ERF	59:00	59:00
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	60:00	60:00

Table 167: 90th Percentile Baseline Performance Maximum HazMat

(Maximum) HazMat - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=	n=	n=	n=	n=	n=
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0

Table 168: Effective Response Force Staffing Benchmarks HazMat

HazMat Effective Response Force Staffing Benchmarks	
HazMat - Low	4
HazMat - Moderate	9
HazMat - Significant	14
HazMat - Maximum	28
HazMat - Overall	4

Benchmark Objectives and Baseline Performances for Technical Rescue

Technical Rescue Overall Risk Benchmark:

For 90 percent of overall risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all overall risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Technical Rescue Overall Risk Baseline 2023-2027:

For 90 percent of overall risk technical rescue response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 07 minutes and 02 seconds in urban geo-proximity zones and 08 minutes and 14 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all overall risk technical rescue response incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is: 07 minutes and 46 seconds in urban geo-proximity zones and 08 minutes and 29 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Table 169: Overall Technical Rescue Risk Benchmark Objectives

Overall Technical Rescue Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 170: 90th Percentile Baseline Performance Overall Technical Rescue

(Overall) Technical Rescue - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:55				00:56	00:49
		Rural	00:58				01:11	00:46
Turnout Time	Turnout Time 1st Unit	Urban	02:18				02:03	02:26
		Rural	02:28				02:28	02:28
Travel Time	Travel Time 1st Unit Distribution	Urban	04:40				04:29	04:49
		Rural	05:47				05:46	05:49
	Travel Time ERF Concentration	Urban	05:31				05:10	05:17
		Rural	06:11				06:06	06:14
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:02				06:48	07:09
			n=305	n=	n=	n=	n=135	n=170
		Rural	08:14				08:15	08:10
			n=485	n=	n=	n=	n=256	n=229
	Total Response Time ERF Concentration	Urban	07:46				06:53	07:07
			n=287	n=	n=	n=	n=121	n=158
Rural	08:29				08:29	08:28		
n=463	n=	n=	n=	n=246	n=215			

Technical Rescue Moderate Risk Benchmark:

For 90 percent of low risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all low risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Technical Rescue Low Risk Baseline 2023-2027:

For 90 percent of low risk technical rescue response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 07 minutes and 02 seconds in urban geo-proximity zones and 08 minutes and 15 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all low risk technical rescue response incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is: 07 minutes and 10 seconds in urban geo-proximity zones and 08 minutes and 31 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Table 171: Low Technical Rescue Risk Benchmark Objectives

Low Technical Rescue Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 172: 90th Percentile Baseline Performance Low Technical Rescue

(Low) Technical Rescue - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:55				00:56	00:50
		Rural	00:58				01:11	00:46
Turnout Time	Turnout Time 1st Unit	Urban	02:18				02:05	02:21
		Rural	02:26				02:25	02:27
Travel Time	Travel Time 1st Unit Distribution	Urban	04:42				04:29	04:49
		Rural	05:47				05:46	05:50
	Travel Time ERF Concentration	Urban	04:58				05:13	04:49
		Rural	06:12				06:09	06:16
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	07:02				06:52	07:09
			n=293	n=	n=	n=	n=129	n=164
		Rural	08:15				08:16	08:10
			n=472	n=	n=	n=	n=249	n=223
	Total Response Time ERF Concentration	Urban	07:10				06:53	07:16
			n=259	n=	n=	n=	n=115	n=144
Rural	08:31				08:32	08:28		
n=450	n=	n=	n=	n=239	n=210			

Technical Rescue Moderate Risk Benchmark:

For 90 percent of moderate risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all moderate risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 5 firefighters and officers, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Technical Rescue Moderate Risk Baseline 2023-2027:

For 90 percent of moderate risk technical rescue response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: 08 minutes and 36 seconds in urban geo-proximity zones and 07 minutes and 31 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all moderate risk technical rescue response incidents, the total response time for the arrival of the ERF, staffed with 5 firefighters and officers is: 10 minutes and 58 seconds in urban geo-proximity zones and 09 minutes and 48 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Table 173: Moderate Technical Rescue Risk Benchmark Objectives

Moderate Technical Rescue Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 174: 90th Percentile Baseline Performance Moderate Technical Rescue

(Moderate) Technical Rescue - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	00:36				00:39	00:35
		Rural	01:02				01:02	02:43
Turnout Time	Turnout Time 1st Unit	Urban	01:51				01:55	01:51
		Rural	02:56				02:56	03:00
Travel Time	Travel Time 1st Unit Distribution	Urban	03:46				02:15	03:46
		Rural	04:52				04:52	04:55
	Travel Time ERF Concentration	Urban	08:20				08:20	35:36
		Rural	07:09				07:09	07:57
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	08:36				05:35	10:41
			n=12	n=	n=	n=	n=6	n=6
		Rural	07:31				07:31	07:38
			n=11	n=	n=	n=	n=7	n=5
	Total Response Time ERF Concentration	Urban	10:58				10:58	38:48
			n=9	n=	n=	n=	n=5	n=5
Rural	09:48				09:48	09:53		
n=12	n=	n=	n=	n=7	n=5			

Technical Rescue Significant Risk Benchmark:

For 90 percent of significant risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all significant risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers, shall be: 08 minutes and 20 seconds in urban geo-proximity zones and 09 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Technical Rescue Significant Risk Baseline 2023-2027: The department did not respond to any technical rescue Significant risk hazards from 2023-2027.

For 90 percent of significant risk technical rescue response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all significant risk technical rescue response incidents, the total response time for the arrival of the ERF, staffed with 9 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.



Table 175: Significant Technical Rescue Risk Benchmark Objectives

Significant Technical Rescue Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	06:00	07:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	07:20	08:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	08:20	09:50

Table 176: 90th Percentile Baseline Performance Significant Technical Rescue

(Significant) Technical Rescue - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0

Technical Rescue Maximum Risk Benchmark:

For 90 percent of maximum risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all maximum risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with 18 firefighters and officers, shall be: 20 minutes and 20 seconds in urban geo-proximity zones and 21 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.

Technical Rescue Maximum Risk Baseline 2023-2027: The department did not respond to any technical rescue Maximum risk hazards from 2023-2027.

For 90 percent of maximum risk technical rescue response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.

For 90 percent of all maximum risk technical rescue response incidents, the total response time for the arrival of the ERF, staffed with 18 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones. The ERF is capable of: appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents, mitigate a technical rescue incident in accordance with department standard operating guidelines; and providing first responder medical support.



Table 177: Maximum Technical Rescue Risk Benchmark Objectives

Maximum Technical Rescue Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	18:00	19:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	19:20	20:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	20:20	21:50

Table 178: 90th Percentile Baseline Performance Maximum Technical Rescue

(Maximum) Technical Rescue - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0

Table 179: Effective Response Force Staffing Benchmarks Technical Rescue

Technical Rescue Effective Response Force Staffing Benchmarks	
Technical Rescue - Low	4
Technical Rescue - Moderate	5
Technical Rescue - Significant	9
Technical Rescue - Maximum	18
Technical Rescue - Overall	4

Benchmark Objectives and Baseline Performances for Aviation Rescue and Suppression

ARFF Overall Risk Benchmark:

For 90 percent of all overall risk aviation rescue and firefighting response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all overall risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and officer 1 shall be: 08 minutes and 20 seconds in urban geo-proximity zones and 09 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: conducting rescue operations and fire suppression in accordance with department policies and directives.

ARFF Overall Risk Baseline 2023-2027:

For 90 percent of all overall ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is non-applicable in urban geo-proximity zones and 07 minutes and 25 seconds in rural geo-proximity zones for pre-announced airfield emergencies. The first-due unit is capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all overall risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer is: non-applicable in urban geo-proximity zones and 07 minutes and 25 seconds in rural geo-proximity zones for pre-announced airfield emergencies. The ERF is capable of: providing incident command; appointing a site safety officer; and conducting rescue operations and fire suppression in accordance with department policies and directives.

Table 180: Overall ARFF Risk Benchmark Objectives

Overall ARFF Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 181: 90th Percentile Baseline Performance Overall ARFF

(Overall) ARFF - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	01:43				01:43	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	01:55				01:55	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	03:47				03:47	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	03:47				03:47	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	07:25				07:25	N/A
			n=1	n=	n=	n=	n=1	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
Rural		07:25				07:25	N/A	
		n=1	n=	n=	n=	n=1	n=0	

ARFF Low Risk Benchmark:

For 90 percent of all low risk aviation rescue and firefighting response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all low risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and officer 1 shall be: 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: conducting rescue operations and fire suppression in accordance with department policies and directives.

ARFF Low Risk Baseline 2023-2027:

For 90 percent of all low ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is non-applicable in urban geo-proximity zones and 07 minutes and 25 seconds in rural geo-proximity zones for pre-announced airfield emergencies. The first-due unit is capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all low risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 3 firefighters and 1 officer is: non-applicable in urban geo-proximity zones and 07 minutes and 25 seconds in rural geo-proximity zones for pre-announced airfield emergencies. The ERF is capable of: providing incident command; appointing a site safety officer; and conducting rescue operations and fire suppression in accordance with department policies and directives.

Table 182: Low ARFF Risk Benchmark Objectives

Low ARFF Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 183: 90th Percentile Baseline Performance Low ARFF

(Low) ARFF - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	01:43				01:43	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	01:55				01:55	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	03:47				03:47	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	03:47				03:47	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	07:25				07:25	N/A
			n=1	n=	n=	n=	n=1	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
Rural		07:25				07:25	N/A	
		n=1	n=	n=	n=	n=1	n=0	

ARFF Moderate Risk Benchmark:

For 90 percent of all moderate risk aviation rescue and firefighting response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones. The first-due unit shall be capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all moderate risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 13 firefighters and officers shall be: 08 minutes and 20 seconds in urban geo-proximity zones and 09 minutes and 50 seconds in rural geo-proximity zones. The ERF shall be capable of: conducting rescue operations and fire suppression in accordance with department policies and directives.

ARFF Moderate Risk Baseline 2023-2027: The department did not respond to any ARFF Moderate risk hazards from 2023-2027.

For 90 percent of all moderate ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer is non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones for pre-announced airfield emergencies. The first-due unit is capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all moderate risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 13 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones for pre-announced airfield emergencies. The ERF is capable of: providing incident command; appointing a site safety officer; and conducting rescue operations and fire suppression in accordance with department policies and directives.

Table 184: Moderate ARFF Risk Benchmark Objectives

Moderate ARFF Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	06:00	07:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	07:20	08:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	08:20	09:50

Table 185: 90th Percentile Baseline Performance Moderate ARFF

(Moderate) ARFF - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
Rural	N/A				N/A	N/A		
	n=0	n=	n=	n=	n=0	n=0		

ARFF Significant Risk Benchmark:

For 90 percent of all significant risk aviation rescue and firefighting response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be 06 minutes and 20 seconds in urban geo-proximity zones and 07 minutes and 50 seconds in rural geo-proximity zones . The first-due unit shall be capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all significant risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 18 firefighters and officers shall be 10 minutes and 20 seconds in urban geo-proximity zones and 11 minutes and 50 seconds in rural geo-proximity zones . The ERF shall be capable of: providing incident command; appointing a site safety officer; and conducting rescue operations and fire suppression in accordance with department policies and directives.

ARFF Significant Risk Baseline 2023-2027: The department did not respond to any ARFF Significant risk hazards from 2023-2027.

For 90 percent of all significant risk aviation rescue and firefighting response incidents, the total response time for the arrival of the first-due unit, staffed with 4 firefighters, is non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones (no data sets) for pre-announced airfield emergencies. The first-due unit is capable of: assessing the situation; requesting additional resources; controlling the hazards; and if possible, beginning basic life support of victims and hazard mitigation.

For 90 percent of all significant risk aviation rescue and firefighting response incidents, the total response time for the arrival of the ERF, staffed with 18 firefighters and officers is: non-applicable in urban geo-proximity zones and non-applicable in rural geo-proximity zones (no data sets). The ERF is capable of: providing incident command; appointing a site safety officer; and conducting rescue operations and fire suppression in accordance with department policies and directives.

Table 186: Significant ARFF Risk Benchmark Objectives

Significant ARFF Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	08:00	09:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	09:20	10:50
Total Response Time 1st Unit on Scene	06:20	07:50

Table 187: 90th Percentile Baseline Performance Significant ARFF

(Significant) ARFF - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Turnout Time	Turnout Time 1st Unit	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Travel Time	Travel Time 1st Unit Distribution	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
	Travel Time ERF Concentration	Urban	N/A				N/A	N/A
		Rural	N/A				N/A	N/A
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	N/A				N/A	N/A
			n=0	n=	n=0	n=0	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0
	Total Response Time ERF Concentration	Urban	N/A				N/A	N/A
			n=0	n=	n=0	n=0	n=0	n=0
		Rural	N/A				N/A	N/A
			n=0	n=	n=	n=	n=0	n=0

Table 188: Effective Response Force Staffing Benchmarks ARFF

ARFF Effective Response Force Staffing Benchmarks	
ARFF - Low	4
ARFF - Moderate	13
ARFF - Significant	18
ARFF - Maximum	N/A
ARFF - Overall	4

Benchmark Objectives and Baseline Performances for Other Responses

Other Overall Response Risk Benchmarks

For 90 percent of all overall risk other incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

For 90 percent of all overall risk other incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Other Overall Response Risk Baseline 2023-2027:

For 90 percent of all overall risk other incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 08 minutes and 02 seconds in urban geo-proximity zones: and 09 minutes and 24 seconds in rural geo-proximity zones. The first due unit shall be capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

For 90 percent of all overall risk other incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is 08 minutes and 12 seconds in urban geo-proximity zones: and 09 minutes and 22 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Table 189: Overall Other Risk Benchmark Objectives

Overall Other Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 190: 90th Percentile Baseline Performance Overall Other

(Overall) Other - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:34				01:21	01:34
		Rural	01:16				01:14	01:15
Turnout Time	Turnout Time 1st Unit	Urban	02:20				02:23	02:17
		Rural	02:20				02:18	02:22
Travel Time	Travel Time 1st Unit Distribution	Urban	05:01				04:57	05:03
		Rural	06:34				06:58	06:04
	Travel Time ERF Concentration	Urban	05:27				05:05	06:05
		Rural	06:51				07:02	06:30
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	08:02				07:55	07:54
			n=689	n=	n=	n=	n=330	n=342
		Rural	09:24				09:40	08:47
			n=896	n=	n=	n=	n=502	n=395
	Total Response Time ERF Concentration	Urban	08:12				07:57	08:17
			n=626	n=	n=	n=	n=303	n=311
Rural	09:22				09:50	08:47		
	n=817	n=	n=	n=	n=456	n=362		

Other Low Response Risk Benchmark:

For 90 percent of all low risk other incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The first due unit shall be capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

For 90 percent of all low risk other incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers, shall be: 06 minutes and 20 seconds in urban geo-proximity zones: and 07 minutes and 50 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Other Low Response Risk Baseline 2023-2027:

For 90 percent of all low risk other incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer is 08 minutes and 02 seconds in urban geo-proximity zones: and 09 minutes and 24 seconds in rural geo-proximity zones. The first due unit shall be capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

For 90 percent of all low risk other incidents, the total response time for the arrival of the ERF, staffed with 4 firefighters and officers is 08 minutes and 12 seconds in urban geo-proximity zones: and 09 minutes and 22 seconds in rural geo-proximity zones. The ERF is capable of: establishing command; sizing up and assessing the situation; determining the need for additional resources; estimating the potential harm without intervention; mitigate the incident in accordance with department standard operating guidelines while providing for the safety of responders and the general public.

Table 191: Low Other Risk Benchmark Objectives

Low Other Risk Benchmark Objectives		
	Urban	Rural
Alarm Handling	01:00	01:00
Turnout Time 1st Unit	01:20	01:20
Travel Time - 1st Unit	04:00	05:30
Travel Time - ERF	04:00	05:30
Response Time 1st Unit on Scene	05:20	06:50
Response Time ERF	05:20	06:50
Total Response Time 1st Unit on Scene	06:20	07:50
Total Response Time ERF	06:20	07:50

Table 192: 90th Percentile Baseline Performance Low Other

(Low) Other - 90th Percentile Times - Baseline Performance			2023-2027	2027	2026	2025	2024	2023
Alarm Handling	Pick-up to Dispatch	Urban	01:34				01:21	01:34
		Rural	01:16				01:14	01:15
Turnout Time	Turnout Time 1st Unit	Urban	02:20				02:23	02:17
		Rural	02:20				02:18	02:22
Travel Time	Travel Time 1st Unit Distribution	Urban	05:01				04:57	05:03
		Rural	06:34				06:58	06:04
	Travel Time ERF Concentration	Urban	05:27				05:05	06:05
		Rural	06:51				07:02	06:30
Total Response Time	Total Response Time 1st Unit on Scene Distribution	Urban	08:02				07:55	07:54
			n=689	n=	n=	n=	n=330	n=342
		Rural	09:24				09:40	08:47
			n=896	n=	n=	n=	n=502	n=395
	Total Response Time ERF Concentration	Urban	08:12				07:57	08:17
			n=626	n=	n=	n=	n=303	n=311
		Rural	09:22				09:50	08:47
			n=817	n=	n=	n=	n=456	n=362

Table 193: Effective Response Force Staffing Benchmarks Other

Other Effective Response Force Staffing Benchmarks	
Other – Low	4
Other - Moderate	N/A
Other - Significant	N/A
Other - Maximum	N/A
Other - Overall	4

Resiliency

The definition of resiliency, according to the *10th Edition Fire and Emergency Services Self-Assessment Manual (FESSAM)*, is the organization's ability to quickly recover from an incident or event, or to adjust easily to changing needs or requirements. It lists the system components as resistance, absorption, and restoration. The SFD accomplishes these in several different ways.

Resistance, the ability to deploy only the necessary resources, is addressed through the department's critical task analysis. This analysis identifies the critical tasks that must be accomplished to successfully mitigate an incident in the most effective and efficient manner. The department's critical task analysis shown in the Critical Task Analysis section of this document represents the resources needed to mitigate each type of incident. Note, officers retain the ability to call for additional resources as needed.

Absorption, the ability to quickly add or duplicate resources, is addressed through several different policies and through the use of mutual and automatic aid agreements. SFD Administrative Directive 1.4.5, Recall of Personnel, defines how personnel will be added in order to maintain normal service delivery during a large-scale event that depletes departmental resources. SFD Administrative Directive 1.4.1, Work Time Procedure section 2, defines how personnel will be replaced in order to maintain minimum staffing and provide normal service delivery on a typical day. Surrounding agencies in which the SFD has mutual aid or automatic aid agreements with are used to supplement SFD resources during large-scale incidents.

Restoration, the rapid return of resources to normal capabilities, is addressed through general practices. Medical supplies are restocked on scene from Iredell County EMS, or from stocked inventory located at Fire Station 1 and Fire Station 4. Air cylinders can be refilled on scene by the counties mobile air unit or from one of two fill stations located at Fire Stations 3 and 4. The SFD also keeps a stocked inventory of spare air cylinders at all stations. Every member of the SFD is issued two sets of turnout gear to maintain a state of operational readiness while a given set of gear is being decontaminated at Fire Station 1 and/or Station 3 where the department's gear cleaning equipment is located. The SFD can quickly repair and maintenance SCBA's through an annual contract with MSA distributor Newton's Fire & Safety, and spare SCBA at Fire Station 3. The department can also quickly restore apparatus down due to maintenance from its inventory of four reserve apparatus (3 engines and 1 Ladder).

The SFD utilizes the City of Statesville Emergency Operations Plan. This plan is used in conjunction with the Iredell County Emergency Operations Plan. The plan ensures the continuity of all city department functions under any unusual circumstances that may disrupt normal business operations. The plan lists primary contacts for all city officials, assigns fire department officials to specific areas of responsibilities and tasks, incident complexity types and readiness levels, and designates orders of succession for city leaders.

Plan for Maintaining and Improving Response Capabilities

Statesville Fire Department Compliance Model

Compliance is best achieved through a systematic approach. The SFD has identified the following six-step compliance model:

Step 1 – Update Data & Review Performance Measures

The Community Risk Assessment / Standard of Cover will be updated annually with the previous year's data. A review of the performance measures will be conducted annually to review and validate:

- Risk Assessment
- Standard of Cover
- Service level objectives
- Performance objectives and measures

Step 2 – Evaluate Performance

Performance measures are applied to actual services provided:

- Activity and performance by fire station district.
- Activity and performance by GPZ.
- Overall performance by incident category.

Step 3 – Develop Compliance Strategies

Determine strengths, weaknesses, opportunities, and threats annually:

- Determine what needs to be done to address service gaps.
- Determine if resources can be/should be reallocated.
- Seek/research alternative methods to provide services at desired level.
- Develop budget estimates as necessary to determine projected cost.

Step 4 – Communicate Expectations to Organization and Governing Body

Communicate expectations:

- Explain methods of measuring compliance to personnel who are expected to perform the services.
- Explain reasoning/importance of compliance to governing body.
- Provide feedback mechanisms.

Train personnel:

- Provide appropriate levels of training/direction for all affected personnel.
- Modify (remediate) response processes, application systems, and technical infrastructure as necessary to comply.

Step 5 – Revalidate Compliance

- Annual review of performance with senior staff and chief officers to ensure revalidation of CRA/SOC.
- Determine whether independent validation and verification techniques will be used to measure performance.
- Solicit external assistance as necessary.

Step 6 – Make Adjustments/Repeat Process

- Annually review changes to ensure that service levels have been maintained or improved.
- Develop and implement a review program to ensure ongoing compliance.
 - Annual review and evaluation (Annual Compliance Report, monthly Performance Reports, Work Plans)
 - Annual update of standards to ensure department is prepared for reaccreditation.

Performance Reporting Methods

Performance data is extracted on a regular basis and reports are provided to administration on a daily, weekly, monthly, quarterly, and annual basis. Data included in these reports include demands for service total and distribution, response time performance, and reliability. On July 1, 2017, SFD implemented a records management software (RMS), Emergency Reporting (ER), to develop reporting methods to easily extract the necessary data for analysis. In June 2024, the Department adopted a more robust RMS, EPR FireWorks. The EPR FireWorks RMS is a comprehensive platform for the Department operations that enhances data collection and analysis. Moving to a different RMS has presented some challenges. The SFD currently uses EPR FireWorks, StatsFD, and Essential Personnel to collect and analyze data.

Strategic Plan for Continuous Improvement

The SFD regularly assesses performance data and addresses gaps in service delivery. A written continuous improvement strategic plan is developed to establish time frames for addressing existing gaps and variations, specific actions for remediation, and proposed new benchmark targets to ensure quality improvement. The Department has a Strategic Planning Committee that meets regularly and reviews the strategic plan as part of the continuous improvement process.

Overall Evaluation/Conclusion

It is recommended that the City of Statesville City Manager and Council adopt by reference the SFD's Community Risk Assessment / Standards of Cover (CRA/SOC) by Resolution. SFD's CRA/SOC has been reviewed in detail and developed to conform to the *6th ed. of the CFAI Community Risk Assessment: Standard of Cover guidelines and 10th ed. Commission on Fire Accreditation Fire & Emergency Service Self-Assessment Manual*. A critical analysis was conducted of the risk assessment, distribution, concentration, and reliability of the SFD's services provided.

It is vital that the CRA/SOC process be integrated into the SFD's strategic and budget planning process. To accomplish this, the SFD will continue to utilize a vision centered management process that incorporates team participation and input of personnel from all levels both vertically and horizontally within the structure of the organization. Through this team approach, the CRA/SOC provides a set of deployment objectives that assure responder and citizen safety, enhances the community service, is fiscally responsible, and provides a method for measurement and reporting.