



Northern Virginia Fire and EMS Assessment Phase II

GAP ANALYSIS REPORT

SUBMITTED MARCH 2017 TO:
NORTHERN VIRGINIA FIRE CHIEFS COMMITTEE

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MissionCriticalPartners

690 Gray's Woods Boulevard | Port Matilda, PA 16870 | 888.8.MCP.911 or 888.862.7911 | www.MCP911.com



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EXECUTIVE SUMMARY

Phase II of the Northern Virginia (NoVA) Fire and Emergency Medical Services (EMS) Assessment evaluated how 11 jurisdictions and agencies in the region staff their departments and deliver services to the communities they serve. This Phase II effort builds off the work performed in Phase I, which evaluated the ability of the NoVA jurisdictions to meet the standards set forth in National Fire Protection Association (NFPA) 1710, including the minimum response times for various incident types.

Phase II of the assessment focuses on two components of service delivery and staffing: 1) How the relationship between station location and special services company placement impacts response times; and 2) Minimum training and certification requirements for each rank, from Firefighter to Chief.

Assessing these components of service delivery and department staffing helps the NoVA Fire Chiefs Committee better understand:

- Each station's location, deployment capabilities, and special services equipment on hand
- Gaps in response coverage
- How the 11 jurisdictions align around minimum levels of training and certification required to hold each rank

STATION LOCATION & RESPONSE TIMES

Mission Critical Partners, Inc. (MCP) applied its subject-matter expertise and knowledge of industry standards to examine the relationship between station location and special services company placement to jurisdictional response times. Overall, the findings indicate that the urban areas, and most suburban areas, of the NoVA region are well served by fire response.

MCP compared the individual stations in each jurisdiction against the Insurance Services Office (ISO) standards for response areas of engine and truck companies. A fire department's ISO rating directly affects the insurance rates paid by surrounding citizens and businesses. Better scores equate to lower premiums (a rating of "1" is best). The NoVA region, when evaluated as a cooperative unit rather than separate jurisdictions, performs well against the ISO evaluation criteria. While mutual-aid and alternative first-due agreements between fire departments in NoVA improve the regional fire and EMS coverage and reduce response times, MCP found several opportunities for improvement across the region. Recommendations for improving individual ISO ratings are included within the analysis for each jurisdiction, and range from relocating existing apparatus or purchasing and staffing new apparatus, to constructing new fire stations. The recommendations to resolve service or station location gaps are as follows:

- Recommended staffing increases and equipment appropriation/new equipment purchases
 - City of Alexandria – Add truck company to Station 207
 - Arlington County – Add truck company to Station 109



- Fauquier County – Add truck company to Station 3
- Loudoun County – Add truck company to Station 610 and a Ladder truck to Station 607
- Prince William County – Add truck company to Station 504, 506 or 507

- Recommended fire station construction
 - Fairfax County – Consider Hunters Mill area and N/NW of McLean
 - Fauquier County – Bealeton area
 - Loudoun County – Route 15 in the area of Gap Road and Station 29 on Old Ox Road near the intersection of Shaw Road, which is a proffered site already in the planning stages
 - City of Manassas – Hastings Drive area
 - Prince William County – Catharpin

- Recommended apparatus relocation/station closings
 - Arlington County – Add a second medic unit at Station 105; move Medic 103 to Medic 105 station and make it a two-unit house; move Station 103 or Station 108 further north; close Station 107 or transition to EMS-only
 - Stafford County – Move truck from Station 10 to Station 9; close Station 3

MINIMUM TRAINING & CERTIFICATION REQUIREMENTS

After collecting and analyzing data about each jurisdiction's rank structure, training, and certification requirements to hold each departmental rank, MCP created tables to compare the similarities and differences across the region. In most cases, the 11 NoVA jurisdictions require similar training and certifications to hold each rank. Below are some comparative highlights according to rank.

Firefighter

- Position of Firefighter does not exist in Prince William County and Stafford County
 - Equivalent in Prince William County is Technician I
- Position requires nearly identical education, training and certification requirements except for Mayday Rapid Intervention Team (RIT) training, and Driver Pumper Operator (DPO), which varies between jurisdictions



Firefighter Medic

- Position of Firefighter Medic does not exist in Arlington County, Loudoun County, City of Manassas Park, Prince William County, or Stafford County
- All jurisdictions require Hazardous Materials (Hazmat) certification, Cardiopulmonary Resuscitation (CPR), Emergency Vehicle Operator Course (EVOC),¹ Emergency Medical Technician – Intermediate (EMT-I), EMT-Paramedic (EMT-P), and Incident Command System (ICS) 100/200/700/800²

Firefighter Technician

- Position of Technician does not exist in City of Alexandria, Arlington County, and City of Manassas Park
- All jurisdictions with this position require HazMat certification
- All but one jurisdiction requires EVOC
- Four of the six jurisdictions with this position require EMT-Basic (EMT-B)
- In Prince William County, Technician II is primarily a driver/operator position but may fill in as an Acting Officer

Lieutenant

- The most commonly shared training and certification requirements are: HazMat, EVOC, Fire Officer I, Instructor I, EMT-B, and ICS 100/200/700

Captain

- Nearly every jurisdiction required the following certifications: HazMat, CPR, EMT-B, EVOC, and ICS 100/200/300/700

Battalion Chief

- Varying educational requirements (High School [or equivalent] up to Bachelor's degree required) across all jurisdictions, but largely similar training and certification requirements
- All jurisdictions except MWAA require ICS 100/200/300/400
- EVOC required in all but two jurisdictions
- All jurisdictions except MWAA require EMT-B certification

Assistant Chief

- All jurisdictions required a Bachelor's degree, except for Loudoun County, which would accept a High School diploma (or equivalent), but preferred a candidate with a Master's degree
- All jurisdictions required: HazMat, CPR, EVOC³ and Firefighter I or II, except City of Manassas, which required Firefighter III

¹ With the exception of the Metropolitan Washington Airports Authority (MWAA)

² With the exception of MWAA

³ With the exception of MWAA



- About half of the jurisdictions required DPO and Fire Officer I, II or III
- All jurisdictions required ICS 100/200/300/400/700/800⁴

Deputy Chief

- Educational requirements varied from High School (or equivalent) to a preferred Master's degree
- Nearly all jurisdictions required the following: HazMat, CPR, DPO, EVOC, Firefighter II, Instructor II
- Every jurisdiction required Fire Officer certification, but each varied between Fire Officer I, II or III, with no detectable pattern
- ICS 100/200/300/400/700/800 all largely required except in Stafford County and at MWAA

Chief

- Of all ranks, Chief has the least consistent requirements across all jurisdictions
- All but one jurisdiction requires a Chief to hold a Bachelor's degree and some jurisdictions prefer he/she hold a Master's degree

⁴ With the exception of MWAA, which did not require ICS 100-300



BACKGROUND

In January 2016, the NoVA Fire Chiefs Committee selected Mission Critical Partners (MCP) to conduct a Fire and EMS Assessment to identify how the 11 NoVA Fire and EMS Departments operationalize against the NFPA 1710 standard that fire departments with career personnel use to organize and deploy fire-suppression operations, EMS, and special operations in response to emergencies.

As a follow-up to the Phase I effort, the NoVA Fire Chiefs Committee again selected MCP to help with Phase II of the assessment in August 2016. In Phase II, MCP assessed station locations, special services company placement, and the training and certification requirements to hold each rank/position across the NoVA jurisdictions.

PURPOSE

The findings from Phase II of the assessment will help the NoVA Fire Chiefs Committee better understand:

- Each station's deployment capabilities, the special services equipment on hand, and gaps in response coverage due to station locations
- Potential locations for future stations to improve coverage and minimize risk
- Jurisdictional alignment around minimum levels of training and certification required to perform the job duties of each rank

APPROACH

The NoVA region comprises 25 towns, cities, and counties with approximately 2.5 million residents, and covers 2,219 square miles. For this effort, data only was collected and assessed for jurisdictions or entities with independent fire and rescue departments, to include:

City of Alexandria
Arlington County
City of Fairfax
Fairfax County
Fauquier County⁵
Loudoun County

City of Manassas
City of Manassas Park
Metropolitan Washington Airports Authority (MWAA)
Prince William County
Stafford County

Working collaboratively with the NoVA Fire Chiefs Committee, the MCP team divided its focus between the station location component and the staff training/certification component of the project. The Fire

⁵ Fauquier County was contacted but was unresponsive in providing data for this assessment. Any analysis conducted is based off publicly available data.



Chief of each participating agency appointed one or two points of contact to coordinate with MCP in providing the requested information for review and analysis.

For the station location component of the project, MCP team members used the deployment data captured and documented in the Northern Virginia Fire & EMS Phase I report developed in fall 2016 at the request of the NoVA Fire Chiefs Committee.

For the staffing component of the project, MCP team members requested job descriptions and minimum training requirements for each position within each jurisdiction. MCP developed assessment sheets using the online data collection tool, Survey Monkey, and input the data received.

Assumptions:

- Data received is accurate and up to date.
- Equipment naming standards are conventional across jurisdictions (i.e., a Truck has the same functionality across jurisdictions).

STATION LOCATIONS & RESPONSE TIMES

In the NoVA region of the Commonwealth of Virginia, there are more than 130 fire and EMS stations spread across 11 jurisdictions and nearly 2,219 square miles. The locations and the response times of the individual stations are imperative to the life safety of the nearly 8 million residents who call Northern Virginia home. In the section below, MCP identifies and evaluates each jurisdiction's ISO rating and station locations, apparatus response times, and recommendations for improving service delivery.

INSURANCE SERVICES OFFICE (ISO) ALIGNMENT

In the fire service, it's imperative that fire apparatus can deploy to emergencies within a specific amount of time, as identified in the standard established by the ISO. The ISO is an arm of the insurance industry that has the responsibility to evaluate a jurisdiction's ability to provide fire protection and fire suppression capabilities to the communities they serve. The ISO evaluates these response capabilities to develop a Public Protection Classification (PPC), which is a factor in determining a property's insurance rating. The PPC program evaluates four main categories (emergency communications, fire department, water supply, and community risk reduction) using the Fire Suppression Rating Schedule (FSRS) to develop a community classification. A community's PPC rating directly correlates to the cost of property insurance for residents and businesses in the community.

Per ISO criteria, first-due engine companies within developed geographic areas are most effective within 1.5 road miles from the station location. Ladder or truck companies stretch the effective buffer out to 2.5 road miles from the station location. It is important to note that a special services company, i.e., a rescue squad, can be utilized in place of a ladder or truck company, but it does not get full credit due to its lack of elevated master stream.



PPC numbers are on a relative scale from 1 to 10, and 10w. A PPC Class 1 rating is assigned to a property that is the most protected and serviced by a fire department that has met the highest criteria of ISO standards. Conversely, a Class 10 is the lowest-rated, or least protected, property (i.e., furthest from a fire station).

Jurisdiction	Current ISO Rating
City of Alexandria	3 (City of Alexandria) 3-9 (Beyond 5 miles of a station)
Arlington County	2
City of Fairfax	3
Fairfax County	1/1Y
Fauquier County	3/3Y
Loudoun County	5 (Rural) 3 (Suburban)
City of Manassas	3
City of Manassas Park	3
MWAA	N/A
Prince William County	4 (Suburban areas) 8b (Rural non-hydrant areas)
Stafford County	4/4Y

This report examines three different areas that affect the PPC rating: coverage areas of engine companies; coverage areas of truck companies; and fire station locations. Analyzing these three categories helps to determine whether a jurisdiction’s current deployment and arrival times meet the ISO standards for coverage.

Though some are outdated and are due for reevaluation soon, all NoVA jurisdictions have an ISO rating. MCP met with the ISO representative responsible for the region to discuss the findings from the Fire & EMS Phase I report, which compared how each NoVA jurisdiction aligned with the NFPA 1710 standard.

The analyses in this report is based on the use of ISO standards. ISO uses road mileage distance from fire stations to determine if coverage is sufficient, and in turn credits property owners for insurance purposes. It measures exclusively for structure fire response. In lieu of ISO standards, the NFPA 1710 standard would have also been a useful benchmark for this study. The NFPA 1710 standard analyzes fire department dispatch and response times to ensure that fire apparatus arrive to their jurisdictional areas in a timely manner. The standard was developed for use by fire and rescue departments, and measures modern hazards response (EMS, fire suppression, special operations), etc. Namely the NFPA 1710 criteria mandate a first due engine company be on the scene of a fire suppression incident in 240 seconds and a full first alarm compliment within 480 seconds. Since NoVA fire and rescue departments respond to a full range of emergency incidents, with EMS incidents the most frequent call type in the region, there is value in using NFPA 1710 criteria to assist with station and apparatus



location decisions. It is worth noting that the results of the analysis and the recommendations would likely differ depending on which standard is used.

STATION LOCATIONS

Using parameters extracted from the most recent ISO standards for engine company, truck company and fire station location, MCP spatially analyzed each station in the NoVA region.

City of Alexandria

Presently, the City of Alexandria has 10 fire/rescue stations strategically deployed throughout the city. One of those stations, Station 202, is an EMS-only station. All other stations are staffed with either engine, truck, or rescue companies, or some combination of the three. Collectively, the fire department protects a static population of approximately 150,000 people over a 15.5-square-mile area. The area has a diverse mix of residential housing, commercial establishments and some heavy industry. Additionally, two major interstate highways traverse the city: I-395 and I-495. Adjacent jurisdictions are Arlington County to the north, Fairfax County to the west and south, the District of Columbia (D.C.) to the northeast, and Prince George's County, Maryland, to the east. The Potomac River divides D.C. and Prince George's County from the City of Alexandria, but waterway incidents and mutual-aid fire responses do occur.

Station #	Street Address
Station 201	317 Prince Street
Station 202	213 East Windsor Avenue (EMS only)
Station 203	2801 Cameron Mills Road
Station 204	900 Second Street (Headquarters)
Station 205	1210 Cameron Street
Station 206	4609 Seminary Road
Station 207	3301 Duke Street
Station 208	175 North Paxton Street
Station 209	2800 Main Line Boulevard
Station 210	5255 Eisenhower Avenue

Arlington County

Presently, Arlington County has 10 fire/rescue stations positioned throughout the county. The fire department protects a static population of approximately 230,000 people in a 26-square-mile area. This makes Arlington County one of the most densely populated counties in the United States. The area has a mix of residential housing and commercial properties. The largest employer in the county is the Department of Defense, and the Pentagon resides within the county's boundaries. Two major interstate



highways run through Arlington County, I-66 and I-395, along with other routes that are heavily traveled, including Routes 29 and 50. Adjacent jurisdictions include Fairfax County to the northwest and west, the City of Alexandria to the south and D.C. to the northeast. Like the City of Alexandria, the Potomac River separates Arlington County from D.C., but waterway incidents and mutual-aid fire responses do occur.

Station #	Street Address
Station 101	500 South Glebe Road
Station 102	4805 Wilson Boulevard
Station 103	4100 Old Dominion Drive
Station 104	3121 10 th Street N
Station 105	1750 S Hayes Street
Station 106	6950 Little Falls Road
Station 107	3116 S Abingdon Street
Station 108	4845 Lee Highway
Station 109	1900 S Walter Reed Drive
Station 110	1559 Wilson Boulevard

City of Fairfax

Presently, the City of Fairfax has two fire/rescue stations. The fire department protects a static population of 24,000 in a 6-square-mile area. The city is the government seat for Fairfax County. The city has a mix of residential housing and commercial properties, and there is a small area within the city that also is considered to be part of Fairfax County, which is unique. While major interstate highways run near the City of Fairfax, all are outside the city boundary. The most populated roadways that run through the city include Routes 29 and 50. The city is surrounded by Fairfax County and is not adjacent to any other jurisdiction.

Station #	Street Address
Station 403	4081 University Drive
Station 433	10101 Fairfax Boulevard

Fairfax County

Presently, Fairfax County has 38 fire/rescue stations. The fire department protects a static population of 1.1 million in a 406-square-mile area. Fairfax County is the most populous jurisdiction in the Commonwealth of Virginia. Fairfax County is home to many Fortune 500 companies, and the state and federal governments are the largest employers within the county. In the southern part of the county, Fort Belvoir is the largest federal employer. Being centrally located, Fairfax County is bordered by many



jurisdictions. The following counties or cities are adjacent to Fairfax County: City of Fairfax, which is centrally located within the county's borders; Loudoun County to the northwest; Prince William County to the southwest; Arlington County to the east; City of Alexandria to the east; Prince George's County to the east; Montgomery County, Maryland, to the north; and Charles County, Maryland, to the southeast. Fairfax County engages in mutual and automatic aid daily with these jurisdictions. The county has several major interstate highways running through it, including I-66, I-95, I-395 and I-495.

Station #	Street Address
Headquarters	4081 University Drive, Fairfax
Station 401	1455 Laughlin Avenue, Mclean
Station 402	400 Center Street, Vienna
Station 404	680 Spring Street, Herndon
Station 405	6300 Beulah Street, Alexandria
Station 408	7128 Columbia Pike, Annandale
Station 409	2601 Sherwood Hall Lane, Alexandria
Station 410	3601 Firehouse Lane, Falls Church
Station 411	6624 Hulvey Terrace, Alexandria
Station 412	9916 Georgetown Pike, Great Falls
Station 413	2148 Gallows Road, Dunn Loring
Station 414	9501 Old Burke Lake Road, Burke
Station 415	14005 Vernon Street, Chantilly
Station 416	12645 Chapel Road, Clifton
Station 417	5856 Old Centreville Road, Centreville
Station 418	3101 Hodge Place, Falls Church
Station 419	7701 Armistead Road, Lorton
Station 420	10417 Gunston Road, Lorton
Station 421	12300 Lee Jackson Memorial Highway, Fairfax
Station 422	7011 Backlick Road, Springfield
Station 423	8914 Little River Turnpike, Fairfax
Station 424	8701 Lukens Lane, Alexandria
Station 425	1820 Wiehle Avenue, Reston
Station 426	5316 Carolina Place, Springfield
Station 427	6140 Rolling Road, Springfield
Station 428	2949 Sleepy Hollow Road, Falls Church
Station 429	1560 Spring Hill Road, McLean
Station 430	8739 Lee Highway, Fairfax
Station 431	2610 Reston Parkway, Herndon
Station 432	5600 Burke Centre Parkway, Fairfax Station
Station 434	10511 Rosehaven Street, Fairfax
Station 435	7801 Maritime Lane, Springfield



Station #	Street Address
Station 436	2660 West Ox Road, Herndon
Station 437	7936 Telegraph Road, Alexandria
Station 438	6001 Oday Drive, Centreville
Station 439	1117 Reston Avenue, Herndon
Station 440	4621 Legato Road, Fairfax
Station 441	9610 Hampton Road, Fairfax Station
Station 442	1315 Beulah Road, Vienna

Fauquier County

Fauquier County has 12 fire/rescue stations. The fire department protects a static population of 69,000 people in a 651-square-mile area. Fauquier County, while not heavily populated, is one of the fastest-growing counties in United States. The area is considered rural with pockets of higher population around towns like Warrenton and Remington, to name a few. However, once one leaves these areas, the population is more sparse, rural and agricultural. The area has several historic landmarks, including many Civil War battlefields. Adjacent counties to Fauquier County are Clarke and Loudoun Counties to the north, Prince William County to the east, Stafford County to the southeast, Culpepper County to the southeast, Rappahannock County to the west and Warren County to the northwest. Interstate 66 runs through the county, as do many other state routes. Although Fauquier County is a part of NVERS, it was not part of the Metropolitan Washington Council of Governments (MWCOG) fire department renumbering effort; thus, their stations are one- and two-digit only.

Station #	Street Address
Station 1	167 West Shirley Avenue, Warrenton
Station 2	200 East Marshall Street, Remington
Station 3	4160 Rectortown Road, Marshall
Station 4	4260 Loudoun Avenue, Plains
Station 5	9167 John S Mosby Highway, Upperville
Station 7	3447 Catlett Road, Catlett
Station 8	14276 Goldvein Road, Goldvein
Station 9	8472 West Main Street, Marshall
Station 10	6550 Riley Road, Warrenton
Station 11	6838 Leeds Manor Road, Orlean
Station 13	12067 Marsh Road, Bealeton
Station 14	167 West Shirley Avenue, Warrenton



Loudoun County

Loudoun County has 19 fire/rescue stations. The fire department protects a static population of 376,000 in a 517-square-mile area. Loudoun County is one of the fastest-growing counties in the nation. The area has a unique mix of urban sprawl to the east side of the county, along with a rural area to the west, including a portion of the Blue Ridge mountains. Most of the busy Dulles Airport property resides in Loudoun County. Counties adjacent to Loudoun are as follows: to the north in Maryland, separated by the Potomac River, are Frederick, Washington and Montgomery counties; Prince William and Fauquier counties to the south in Virginia; Jefferson County and Clarke County, West Virginia, to the west; and Fairfax County, Virginia, to the east. While no major interstate highways run through Loudoun County, there are many heavily traveled state routes that bisect the county.

Station #	Street Address
Station 601	215 Loudoun Street, SW, Leesburg (not a full-time response)
Station 602/614*	500 North Maple Avenue, Purcellville
Station 603	910 West Washington Street, Middleburg
Station 604	4 Main Street, Round Hill
Station 605/617	39071 East Colonial Highway, Hamilton
Station 606	20688 Ashburn Road, Ashburn
Station 607	39459 John Mosby Highway, Aldie
Station 608	36560 Jeb Stuart Road, Philomont
Station 609	23675 Belmont Ridge Road, Brambleton
Station 610	42367 Lucketts Road, Leesburg
Station 611/615	104 Commerce Street, Sterling
Station 612	12837 Berlin Turnpike, Lovettsville
Station 613	143 Catoctin Circle, Leesburg (EMS only)
Station 618/625	46700 Middlefield Drive, Sterling
Station 619	25216 Loudoun County Parkway, Chantilly
Station 620	61 Plaza Street NW, Leesburg
Station 622	19485 Sandridge Way, Leesburg
Station 623	43495 Old Ryan Road, Ashburn
Station 624/635	21130 Pacific Boulevard, Sterling
Station 626	13345 Harpers Ferry Road, Purcellville
Station 627	41380 Gardenia Drive, Aldie (Opening Spring 2018)

* Some stations co-locate two entities (Fire Companies and EMS Rescue Squads) in the same station with two station numbers.



City of Manassas

The City of Manassas has two fire/rescue stations. The fire department protects a static population of 42,000 people in a 10-square-mile area. The City of Manassas is the county seat of Prince William County but is considered an independent city. The City of Manassas is a historic city, mostly recognized for the many Civil War battles fought in the area. The City of Manassas has a mix of residential housing, and commercial and industrial properties. However, the large majority of land is zoned for residential and high-density housing. The city sits within, and is surrounded by, Prince William County, except for the north where it borders the City of Manassas Park. No major interstate highways pass through the city. Within the city borders resides the Manassas Regional Airport, which is the largest regional airport in the Commonwealth of Virginia.

Station #	Street Address
Station 501	9322 Center Street (career)
Station 501	9322 Centreville Road (volunteer)

City of Manassas Park

The City of Manassas Park has one fire/rescue station. The fire department protects a static population of 15,000 in a 2.5-square-mile area. The City of Manassas Park is somewhat divided, with the western side being primarily residential housing and the eastern side being mixed use with a substantial industrial area and multifamily dwellings, which include townhouses and apartment buildings. The railroad cuts through the eastern side of the city and acts as a line of demarcation to separate the industrial area from the residential area. It should be noted that the railroad is not passable when a train is present, which can prove problematic to accessing the residential area during an emergency. The city is surrounded by Prince William County and adjoins the City of Manassas. No major interstate highways run through the city. The major state roadways include Route 28 and Route 213.

Station #	Street Address
Station 509	9080 Manassas Drive

Prince William County

Prince William County has 21 fire/rescue stations. The fire department protects a static population of 452,000 in a 348-square-mile area. The region has two main population centers, one along the I-95 corridor and one near the Manassas area, up toward Haymarket. The area has a mix of residential, commercial and industrial properties. Unique to the county is Marine Base Quantico headquarters. Although the Marine Base Quantico property encompasses 86 square miles and traverses three counties, the main base with most of the housing, airstrip and ancillary facilities resides on an 8-square-



mile section of land in the southeast part of the county. Marine Base Quantico has its own emergency services in two separate stations. Prince William County is adjacent to Loudoun and Fairfax counties to the north, Fauquier County to the west and Stafford County to the south. Across the Potomac River to the east is Charles County, and the Cities of Manassas and Manassas Park are independent cities within the County. Two major interstate highways run through the county, I-66 and I-95, along with several heavily traveled state routes.

Station #	Street Address
Station 502	1306 F Street, Woodbridge
Station 503F	18321 Jefferson Davis Highway, Triangle
Station 503R	3800 Graham Park Road, Dumfries
Station 504	14450 John Marshall Highway, Gainesville
Station 505	12826 Marsteller Drive, Nokesville
Station 506	13712 Dumfries Road, Manassas
Station 507	11310 Coles Drive, Manassas
Station 508	8277 Patton Lane, Manassas
Station 510	14998 Birchdale Avenue, Woodbridge
Station 511	7814 Garner Drive, Manassas
Station 512	2170 Montgomery Avenue, Woodbridge
Station 513	13511 Hillendale Drive, Woodbridge
Station 514	12400 Hedges Run Drive, Woodbridge
Station 515	3510 James Madison Highway, Haymarket
Station 516	7190 Yates Ford Road, Manassas
Station 517	15219 Holleyside Drive, Montclair
Station 518	5849 Dale Boulevard, Woodbridge
Station 520	31710 Prince William Parkway, Woodbridge
Station 523	16530 River Ridge Boulevard, Woodridge
Station 524	5901 Antioch Road, Haymarket
Station 525	94050 Devlins Grove Place, Bristow

Stafford County

Stafford County has 15 fire/EMS stations. The fire department protects a static population of 142,000 in a 280-square-mile area. The fire department is a combination department supported by 200 volunteers. The area is growing, with the central part of the county and the area north of the City of Fredericksburg being the most populated. Other portions of the county have pockets of development and the rest is rural or wooded. Marine Base Quantico resides in the northwest part of the county and one of its fire stations is located within Stafford County limits. Adjacent counties include: Fauquier to the northwest; Prince William to the north; Charles County across the river to the east; King George County, Virginia to the southeast; Caroline County, Virginia, and the City of Fredericksburg to the south, Spotsylvania County, Virginia, to the southwest and Culpeper County, Virginia, to the west. Interstate 95 bisects the



county, with other busy state routes traversing the county. Stafford County, while part of the NVERS region, is not part of the MWCOCG. Therefore, it does not have the same numbering nomenclature as the other jurisdictions, i.e., its station numbers are not pre-fixed with a county number and remain one or two digits.

Station #	Street Address
Station 1	250 Butler Road, Falmouth
Station 2	305 Jason Moody Drive, Stafford
Station 3	749 Widewater Road, Stafford
Station 4	924 Kellogg Mill Road, Stafford
Station 4R	1268 Mountain View Road, Fredericksburg
Station 5	222 Andrew Chapel Road, Brooke
Station 6	67 Hartwood Church Road, Hartwood
Station 7	12 Newton Road, Falmouth
Station 7R	535 White Oak Road, Falmouth (EMS only)
Station 8	2133 Garrison Road, Ruby
Station 8R	1565 Garrisonville Road, Garrisonville (EMS only)
Station 9	1001 Washington Drive, Stafford
Station 10	3528 Jefferson Davis Highway, Stafford
Station 12	20 Sebring Drive, Fredericksburg (Berea)
Station 14	53 Shelton Shop Road, Stafford

SERVICE DELIVERY AREAS & POTENTIAL NEEDS

The NoVA region is a vast mix of dense urban population, suburban sprawl and rural geographic regions. While response standards are designed to be met, it is difficult to meet all of them, especially in more suburban or rural areas with lower population density. While this report identifies some deficiencies that could be overcome with new fire stations, MCP recognizes that population density is a critical factor taken into consideration when planning for new stations or additional staff and/or apparatus.

The NoVA Region

As shown in Figure 1 below, the urban areas, and most suburban areas, of the NoVA region are well served by fire response. Individual jurisdictional assessments are detailed in the sections below.

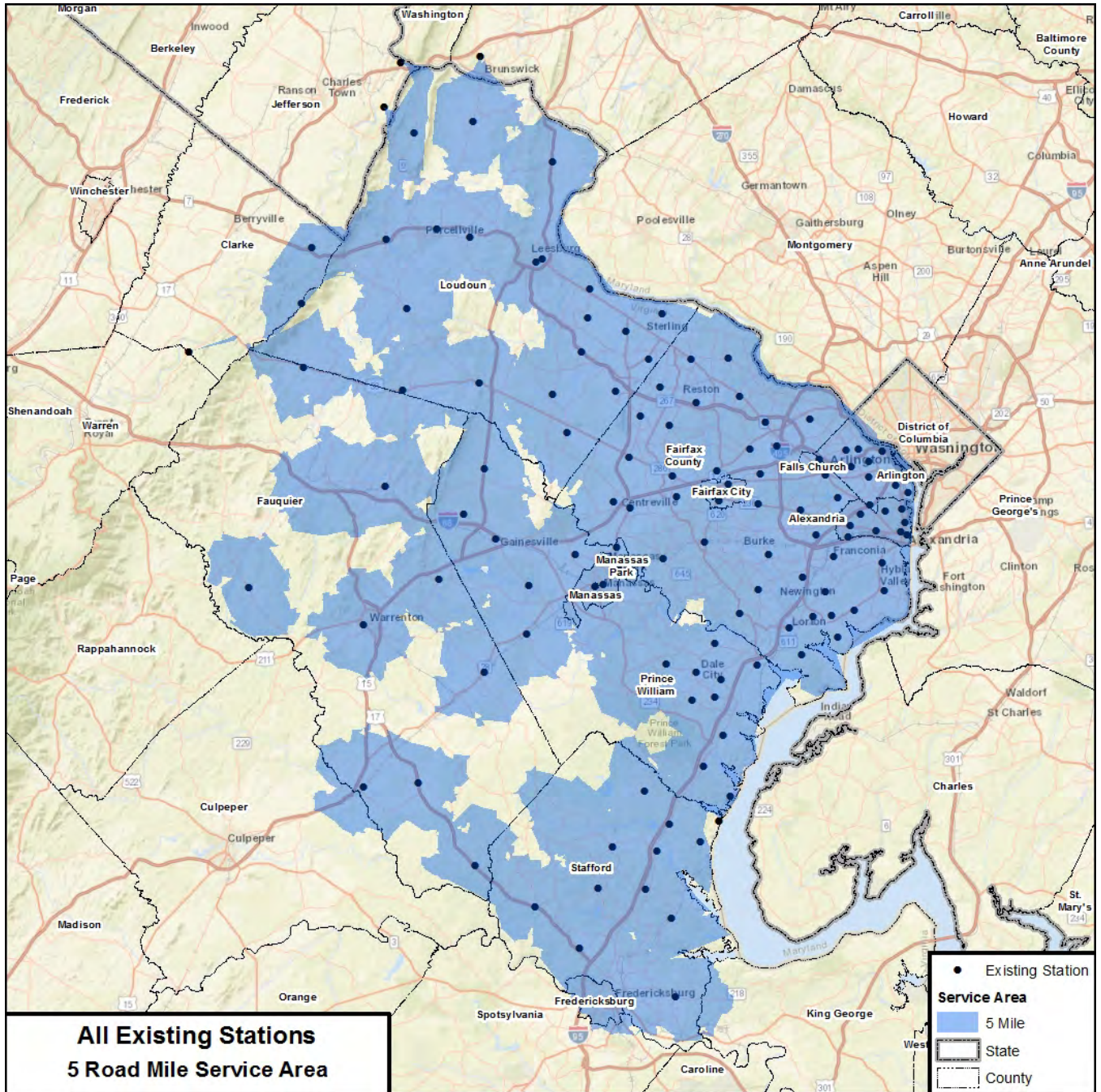


Figure 1: NoVA Regional Coverage

City of Alexandria

The 1.5-mile engine company ISO mileage parameters are being met except for a small area in the extreme western section of the City of Alexandria, as shown in Figure 2 below. This area is serviced by



Station 206 and Station 208. While both are close to this area, direct access or limited access seems to be the reason for the coverage lapse, as I-395 bisects the area. Additionally, Alexandria's western neighbor, Fairfax County, does not have a station near this coverage area.

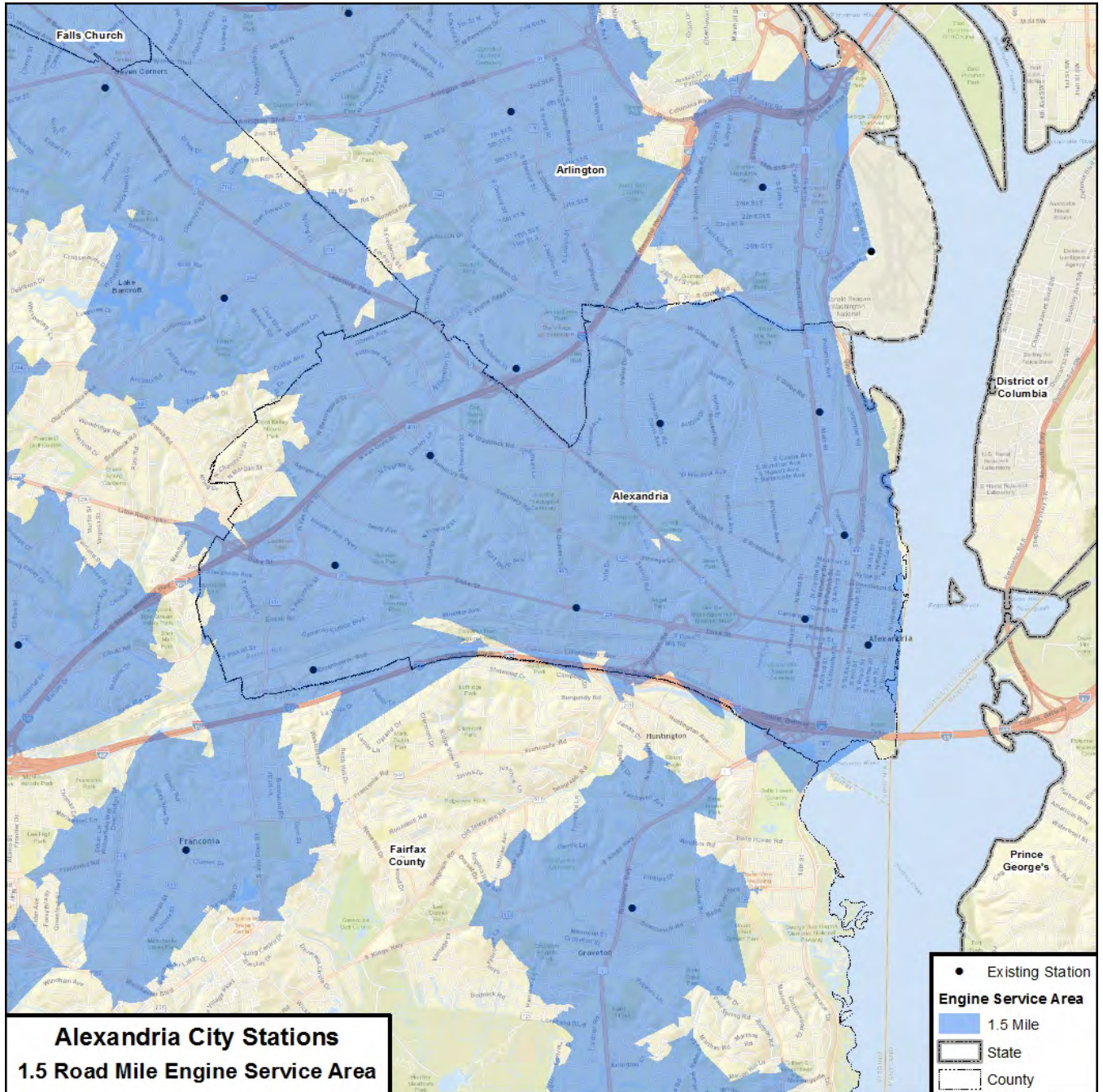


Figure 2: City of Alexandria – Engine Company Coverage



The 2.5-mile truck company response area is met except for an area starting at the Virginia Theological Seminary and going north to the city/county line, as shown in Figure 3 below.

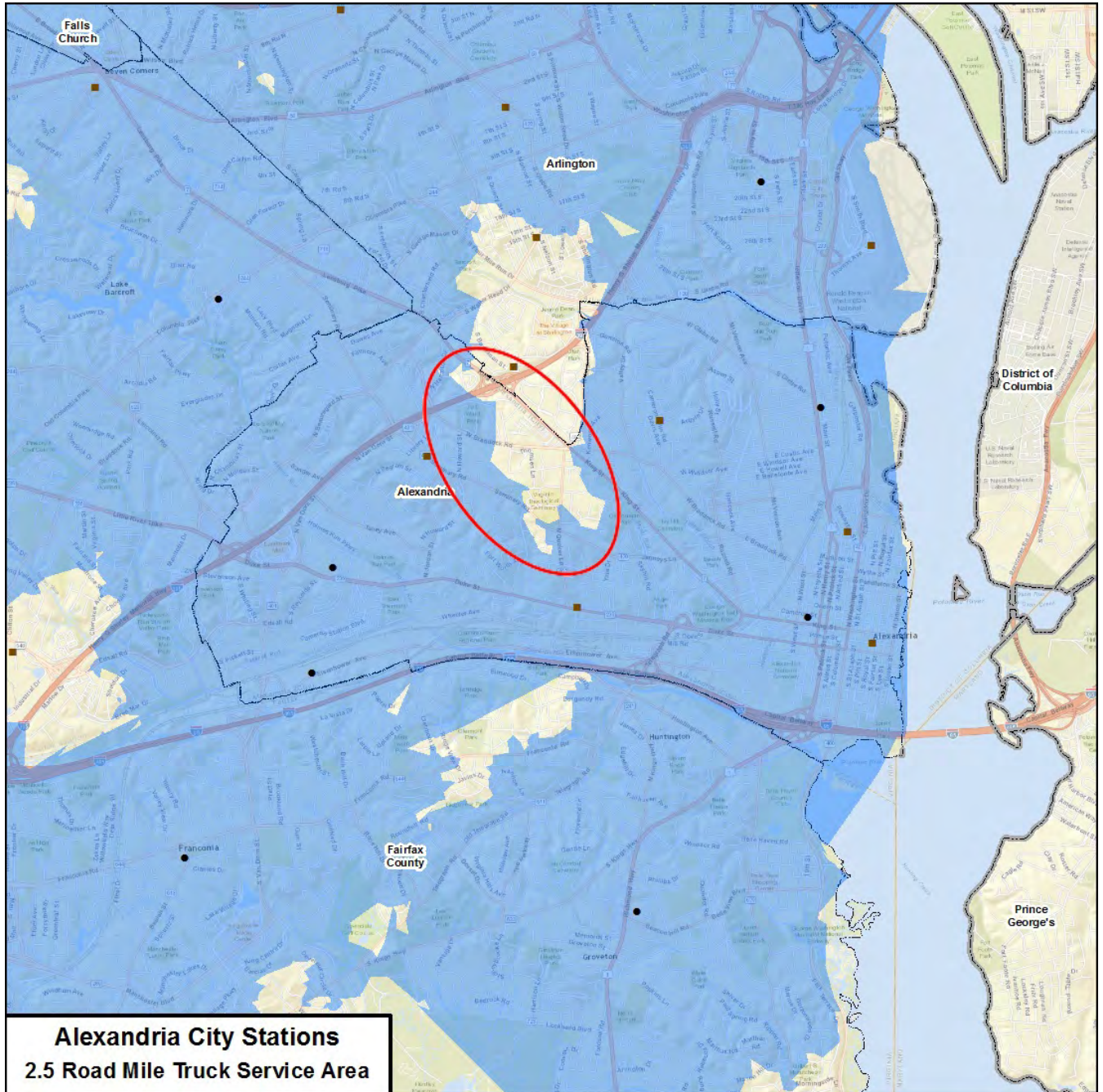


Figure 3: City of Alexandria – Truck Company Coverage



To cover this section, the City of Alexandria could add a truck company to Station 207 as shown in Figure 4 below. This addition would serve the area in need to the north and would be able to traverse the east-west corridor to serve other neighborhoods in a timely manner. Heavy Rescue Squad 206 does give special services coverage to this area, although as mentioned, it receives partial credit.

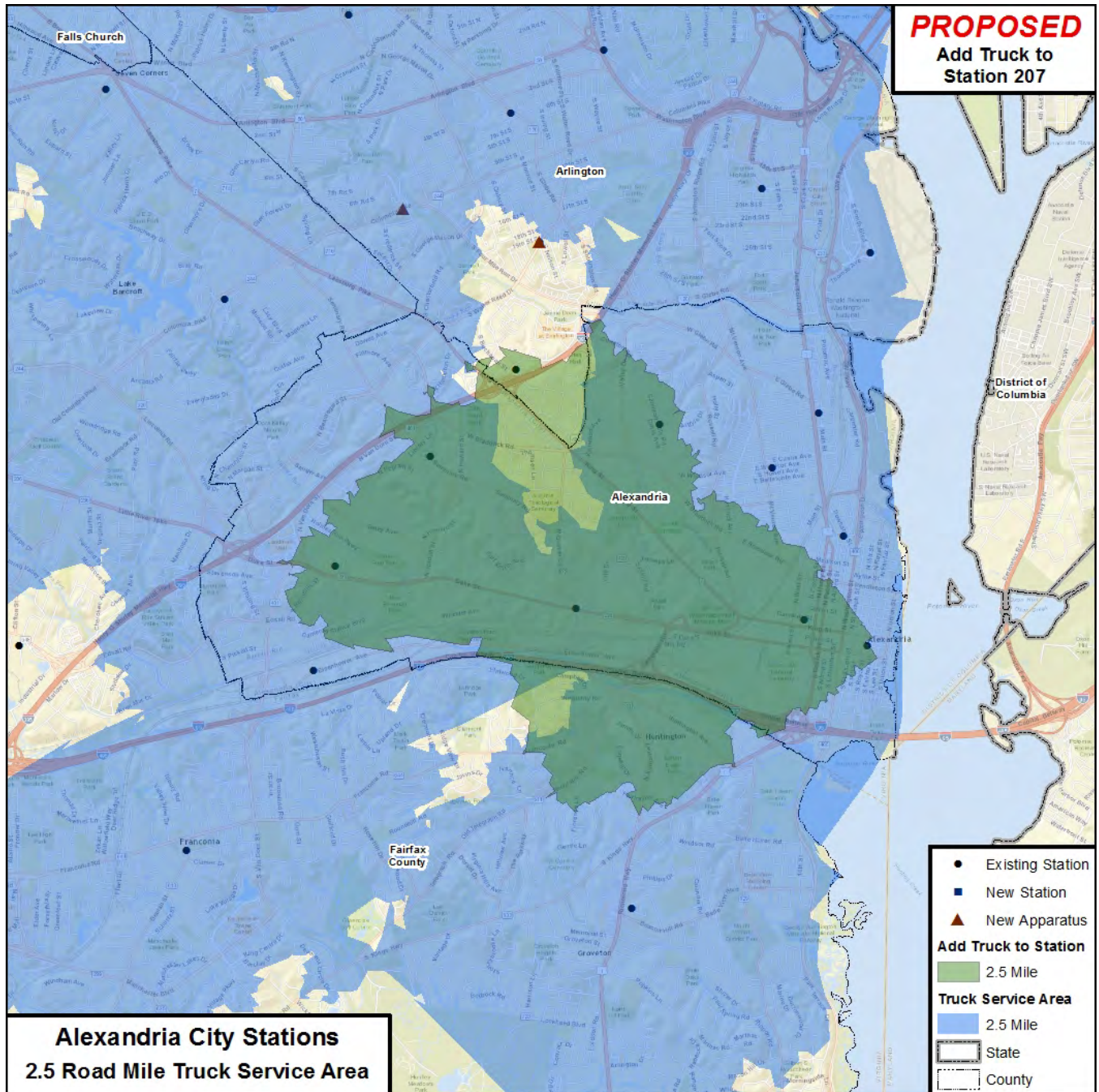


Figure 4: City of Alexandria – Proposed Changes



Another option for providing service to the deficient area within the city is to coordinate with Arlington County and request placement of a truck at Station 109. As shown in Figure 5 below, an additional truck at this location would help service most of the area in need of coverage within the City Alexandria, and help resolve the deficiency in Arlington County's southern area.

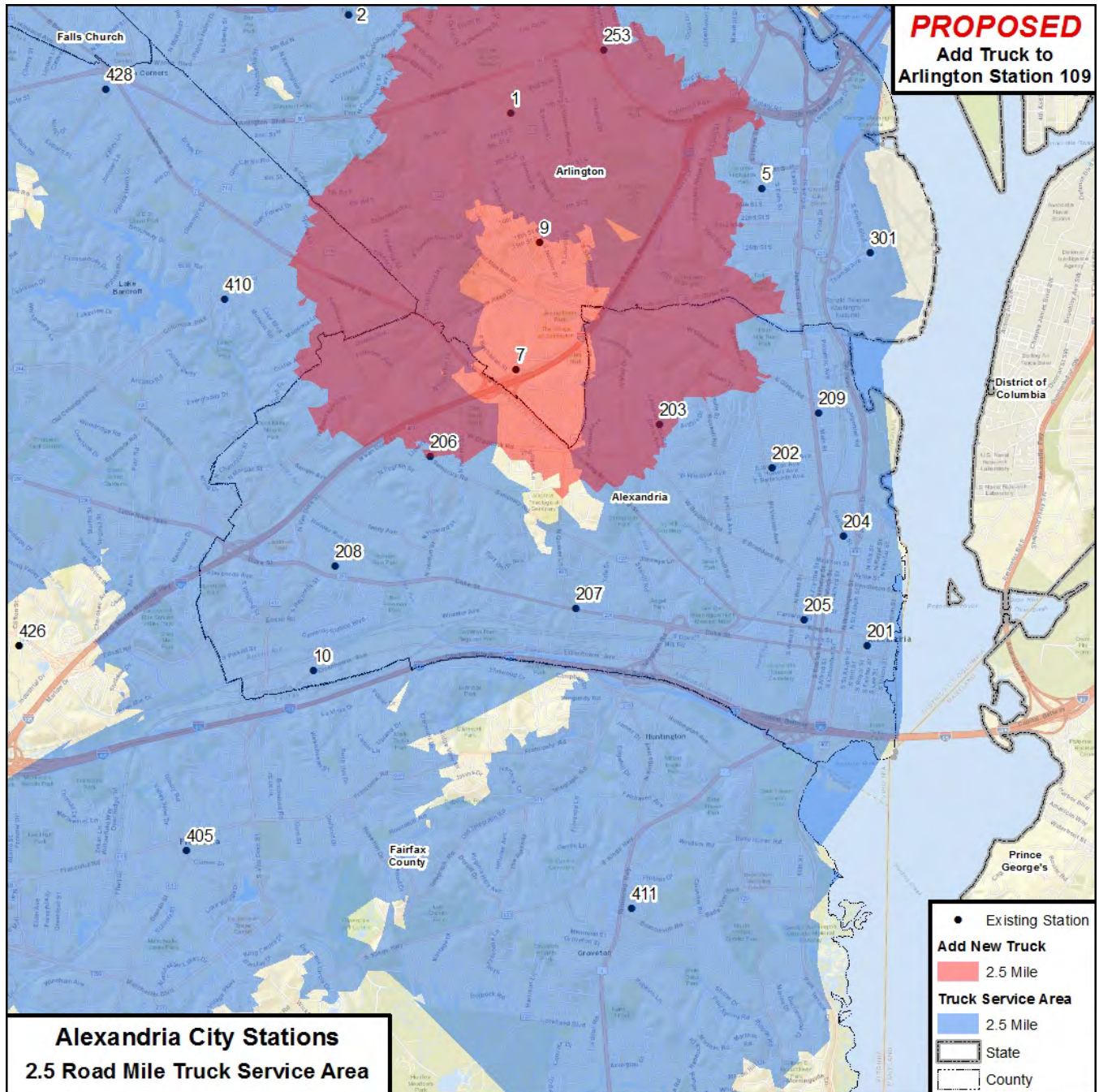


Figure 5: City of Alexandria – Proposed Changes



The City of Alexandria meets the 5-mile distance radius from any one fire station to any of its first-due areas.

Arlington County

Presently the 1.5-mile engine company response areas are relatively well covered with a few exceptions: a significant area in the northern part of the county, from the Williamsburg Road/Yorktown Road area up to the north/northeast and including the Chain Bridge Forest and Old Glebe neighborhoods. Unfortunately, no other station from neighboring jurisdictions can provide relief to this area. There also appears to be a coverage gap in an area near Glencarlyn. Other small areas include the footprint around Gunston Middle School and an area just south of Arlington Cemetery in the Arlington Views neighborhood. Both smaller areas do not get the 1.5-mile protection due to I-395 bisecting the region. This is all shown in Figure 6 below.

As mentioned, most call volume is concentrated in the Crystal City, Pentagon City and central areas of Arlington County. The area to the northeast that is not receiving timely coverage could be covered by moving Station 103 or Station 108 farther north into that area. Obviously building a new station would also be an option (see truck company discussion for map.) However, this area should be reviewed for needed coverage in that area and, depending on location, could give added relief to some parts of Fairfax County near McLean.

Presently Station 107 is a low-call-volume station. While it does provide coverage to the southeast tip of the county, it would serve a larger, more populous area if moved to the northwest, into or near the Columbia Forest/Columbia West area. If politically challenging to make such a move, the county could transition Station 107 to an EMS-only station by adding an advanced life support (ALS) unit. This would give some relief to Medic 101 and Medic 105, which are two of the busiest in the county system.

Consideration eventually should be given to looking at an alternate station location in the Crystal City region south of Station 105. With the already heavy workload in this area, and with continued growth, the call volume will continue to increase. While Alexandria Station 202 does not fall within the 1.5-mile radius of the county/city line, Station 209 does and would provide some relief to the southeast area of Arlington County.

Further, the map shows some diminished coverage near Arlington Cemetery; however, Fort Myers, which was not included on the map, would be close enough in proximity to cover that area of the county.

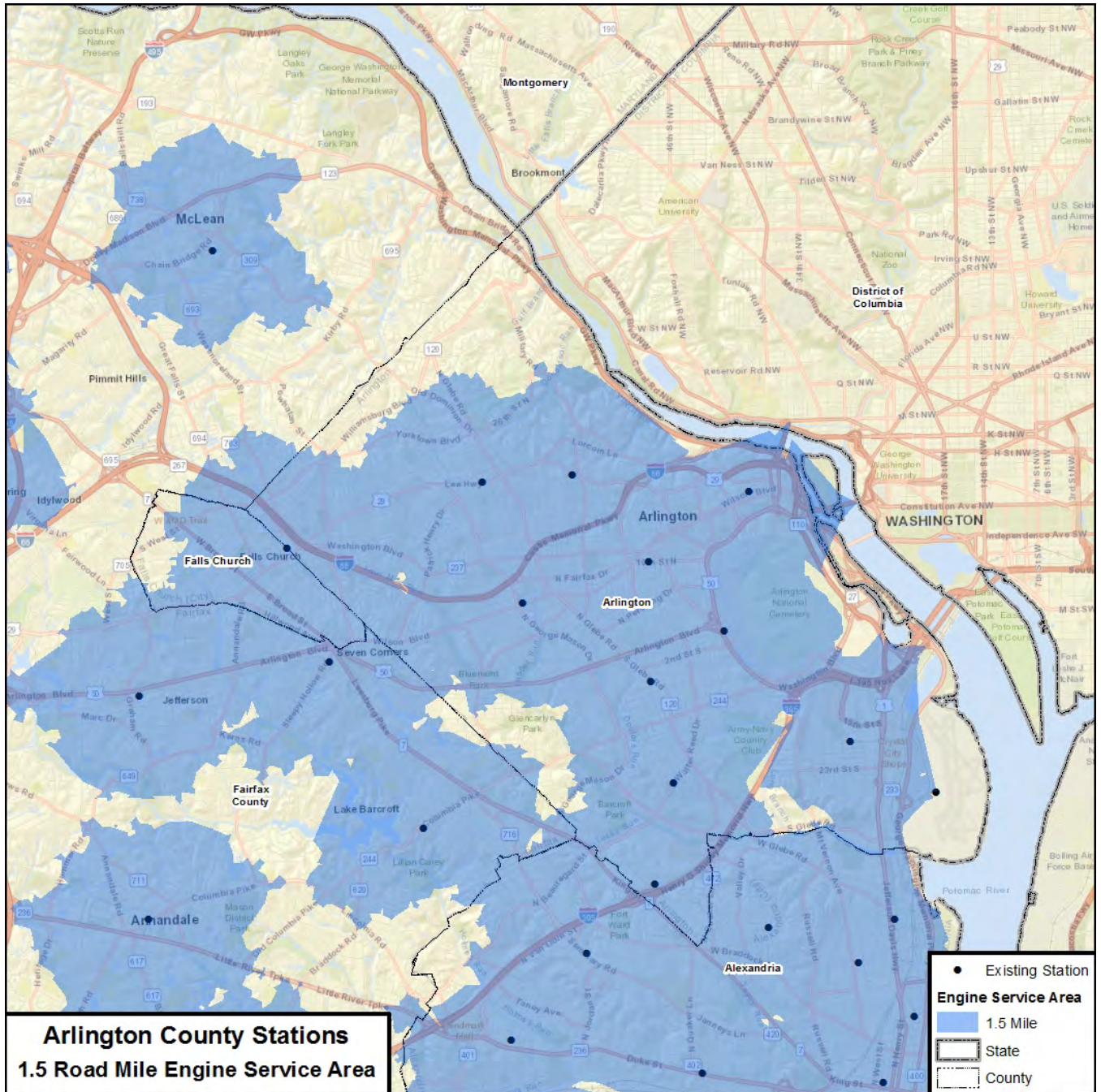


Figure 6: Arlington County – Engine Company Coverage

The 2.5-mile truck company response is being met with two exceptions: a coverage gap in the northernmost area of the county similar to the coverage gap experienced by the county's engine company, and an area between Station 109 to the southern tip of the county. These deficiencies are highlighted in Figure 7 below.

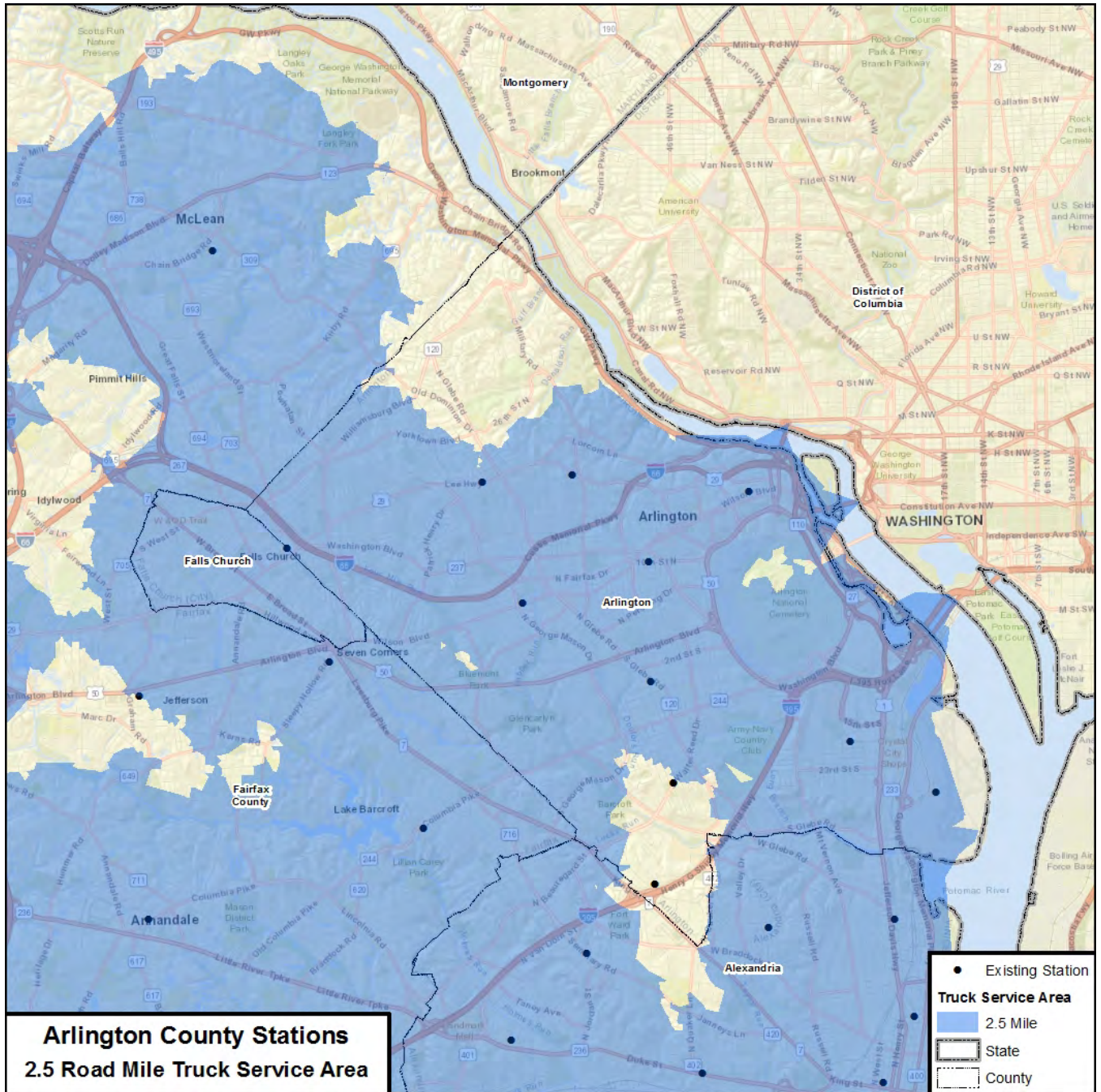


Figure 7: Arlington County – Truck Company Coverage

The lack of coverage in these two areas can be mitigated by adding a truck company to Station 109 and building a new station—or relocating a station—in the general area of North Glebe Road and Williamsburg Boulevard, as shown in Figure 8 below. Although the rescue squad at Station 109 gets



partial credit for ISO standards and is needed for the interstate responses nearby, a truck in this area would give support to the Crystal City region and fill in the void that is not presently covered.

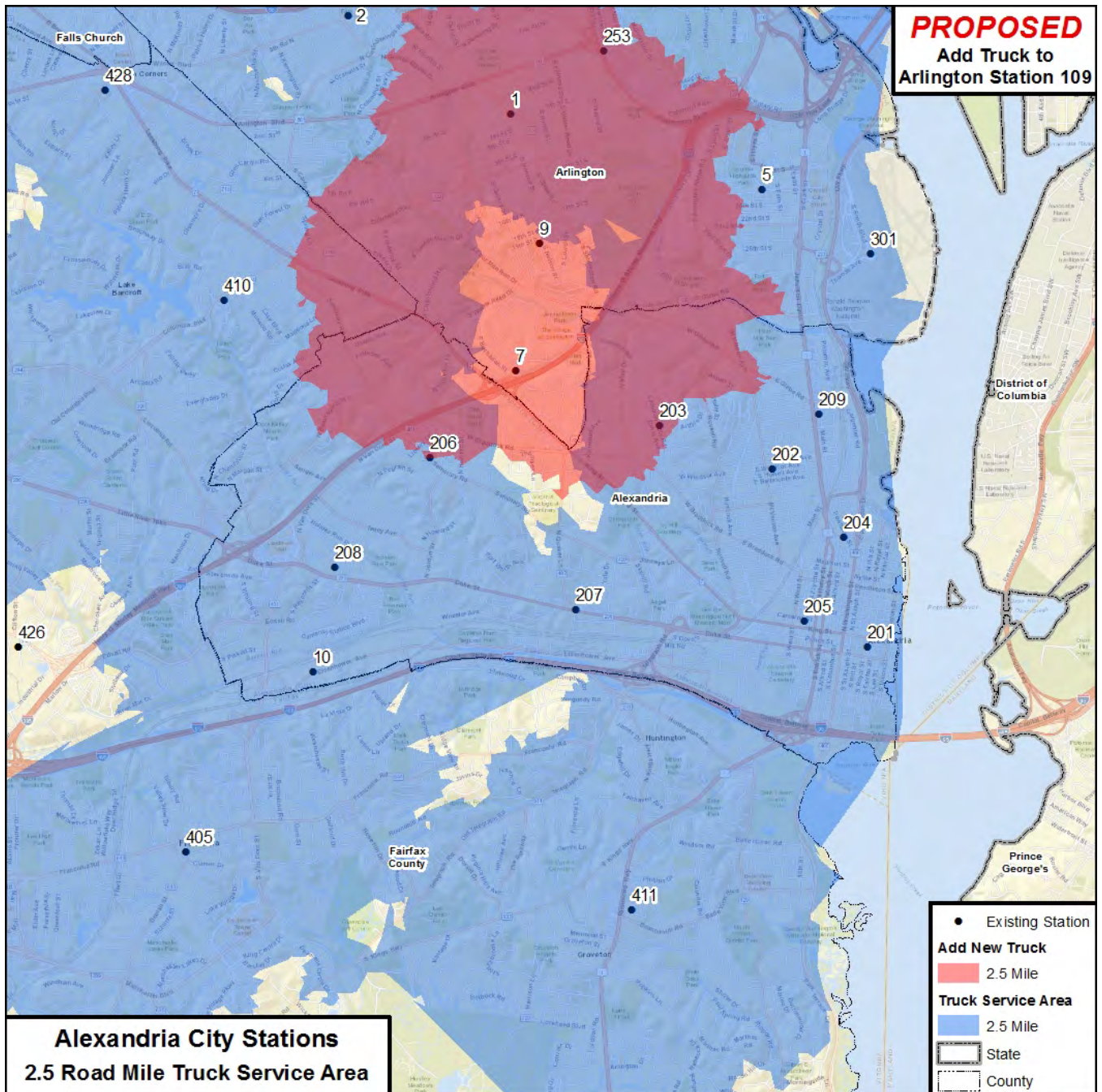


Figure 8: Arlington County – Proposed Changes



The 5-mile distance from fire stations in the county, as shown below in Figure 9 below, provides thorough coverage.

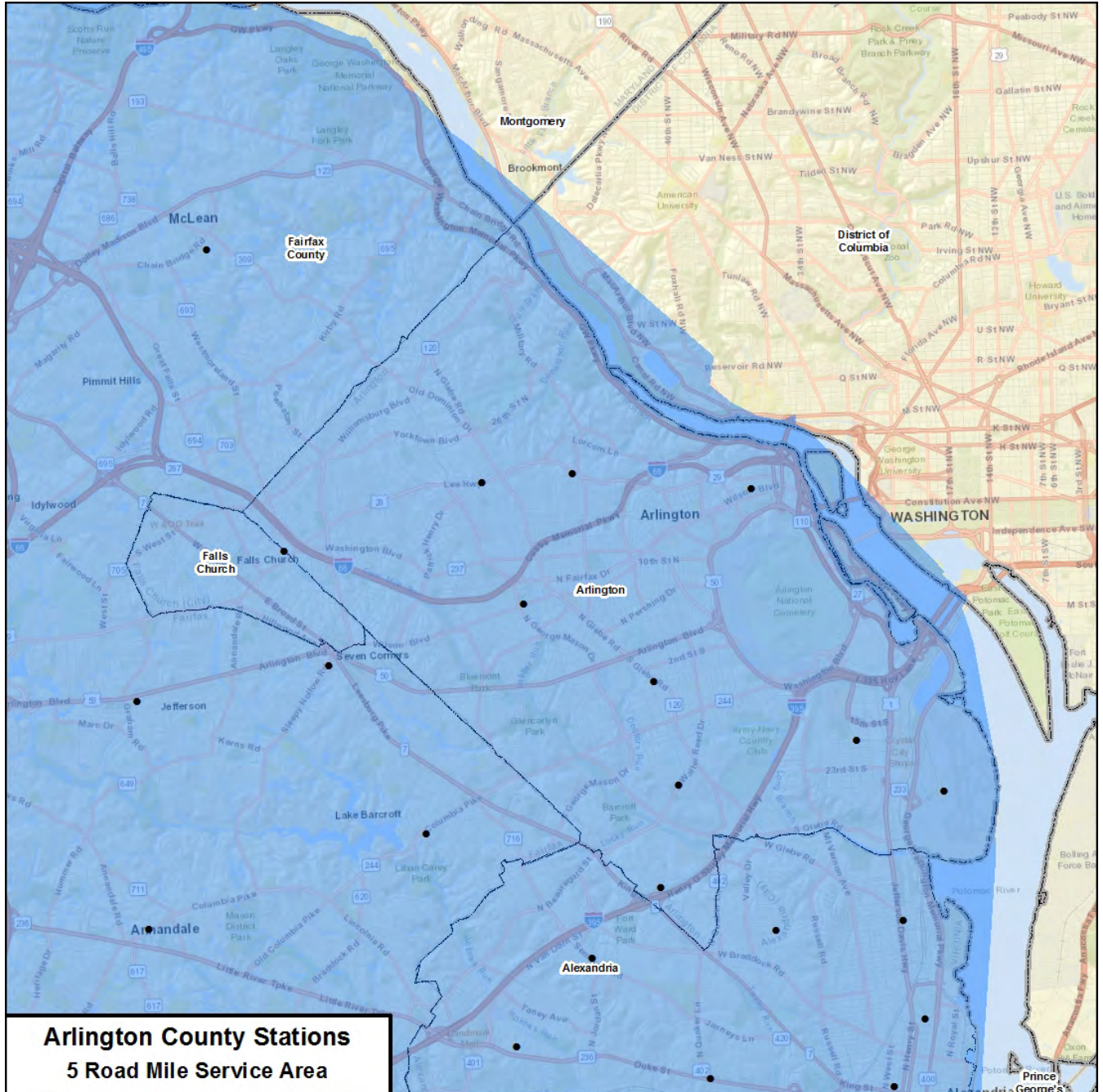


Figure 9: Arlington County – General Service Coverage



City of Fairfax

Presently the 1.5-mile engine company response areas are being met except for the far east and west ends of the city. This includes geographic areas on the west side from the Route 29 and Route 50 intersection to the west, north and south. The northern area is larger with a significant mix of single family residential and townhouse properties. The eastern area is less dense running from Daniels Run Park to the east and includes the park property and golf course. However, a large tank farm is in this area. Fairfax County Station 34 does provide some coverage in the northwest corner of the city, along with Station 23 providing some coverage to the far southeast corner. These areas are shown in Figure 10 below.

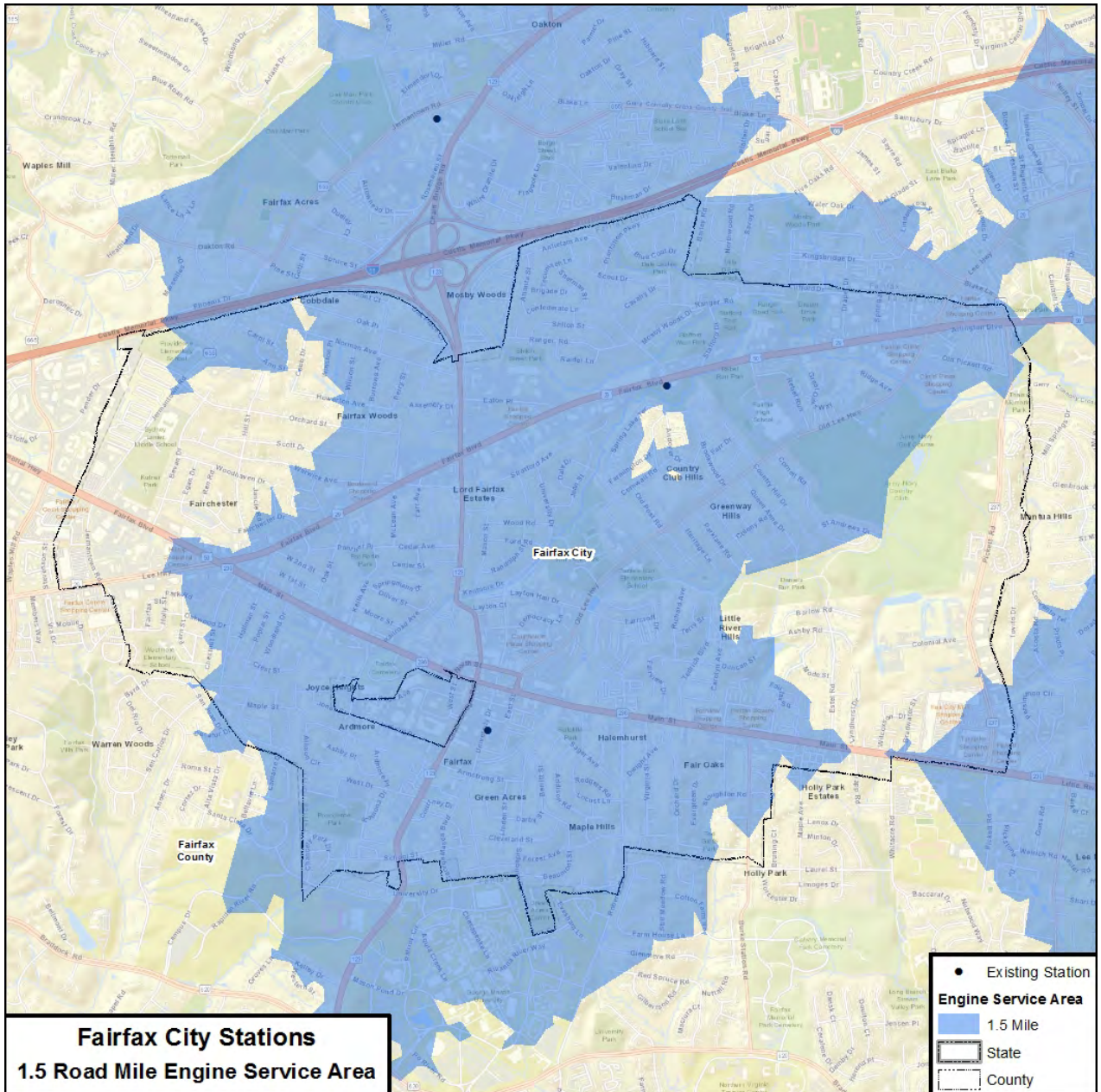


Figure 10: City of Fairfax – Engine Company Coverage

The 2.5-mile truck company response, shown in Figure 11 is being met except for a very small section in the northwest and a small section in the east. Most of the eastern area is part of a golf course property, but the tank farm mentioned previously does fall in this area.

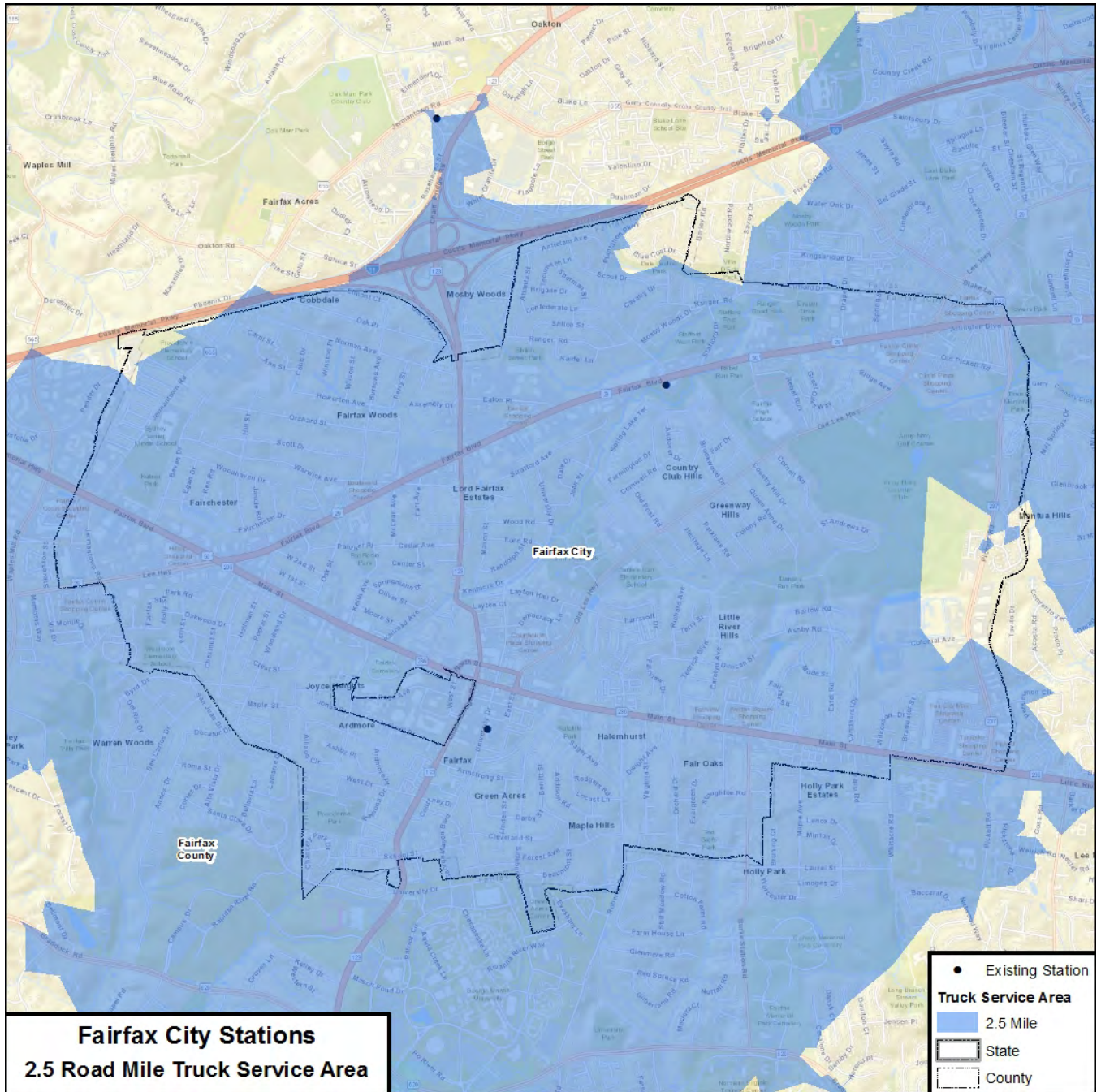


Figure 11: City of Fairfax – Truck Company Coverage

The 5-mile distance from any fire station is not an issue. Fairfax City is considered a protected class under ISO standards.



Fairfax County

Presently the 1.5-mile engine company response areas are being met for highly populated areas such as Tysons Corner, Centreville, Falls Church and Fair Lakes, to name a few. However, other areas of lighter, but still substantial, residential population with large dwellings do not meet the ISO response criteria. It is understood that meeting the 1.5-mile response is a daunting task and could be overkill if the road network can allow the response to certain areas in a timely fashion. However, in some regions of the county, distinct areas of large residential population are a concern, specifically the areas northwest of Vienna, as shown in Figure 12 below, which includes the developments of Timber Lake, Fox Lake and the Hunter Mill Road corridor. Another area is to the south between Clifton and Fairfax Station. This area is difficult to accommodate because of the lack of secondary or connecting roads. The areas east, north and northwest of McLean, and north of Station 12 and Station 39, are also a more distant area from existing facilities and response times are greater than the NFPA 1710 standard. Further, cluster housing just over the border in Loudoun County, and the sharing of cross streets in this area, could increase growth.

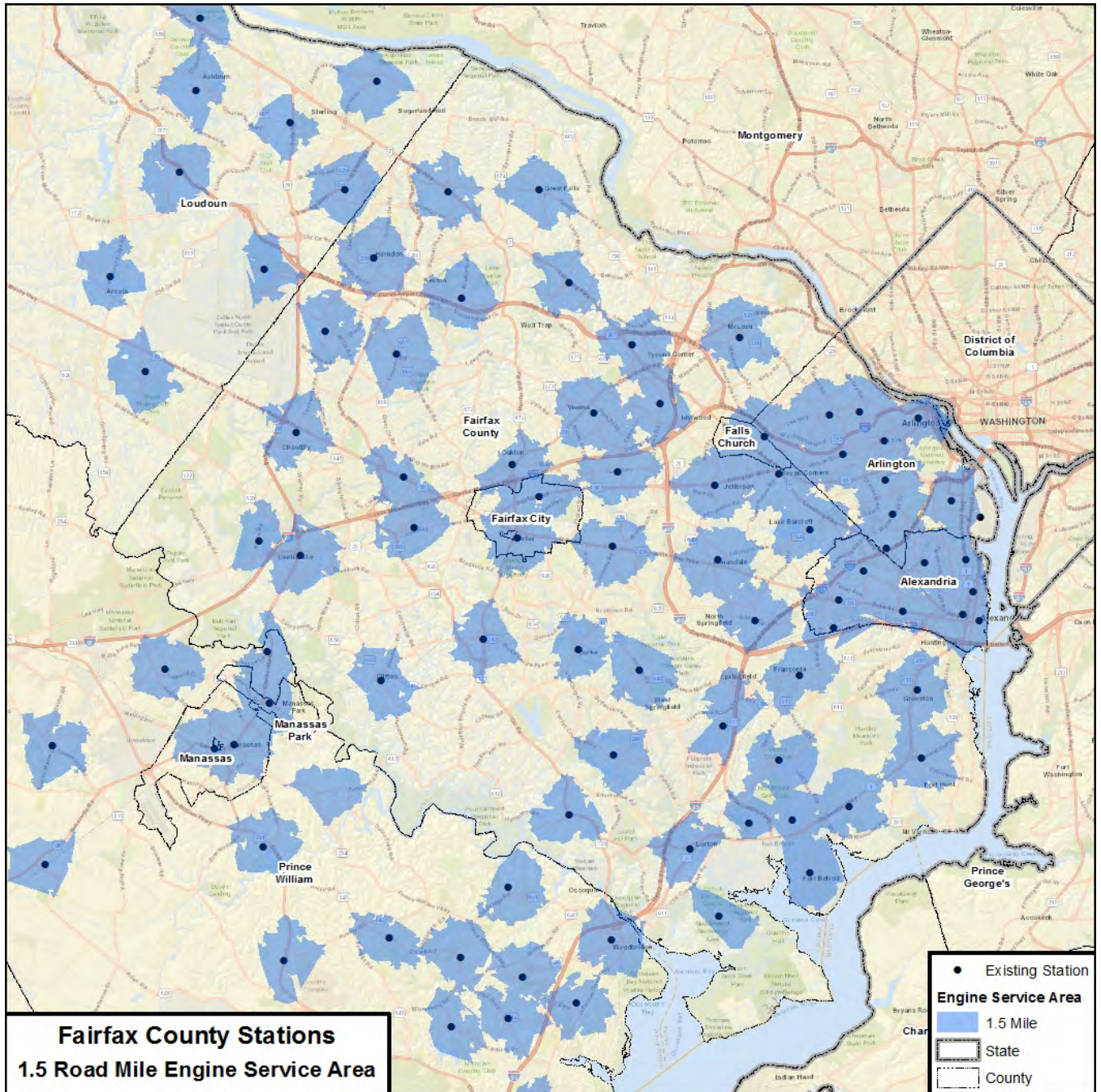


Figure 12: Fairfax County – Engine Company Coverage

To address these areas, the addition of some of the fire stations is denoted in Figure 13 below. Of great concern are the difficulties associated with the lack of a substantial road network in the south-central region of the county. A robust and interconnected road network is necessary to facilitate a useful service area. As depicted in Figure 13, note the ice crystal design of any response in the Henderson



Road area. This is a direct result of most roads being dead-ended and very few roads that traverse the area. Any present response to this area will be delayed due to this road design. While it is not imperative to locate a station in this area now, the present road network will delay response to this area for the first-due companies.

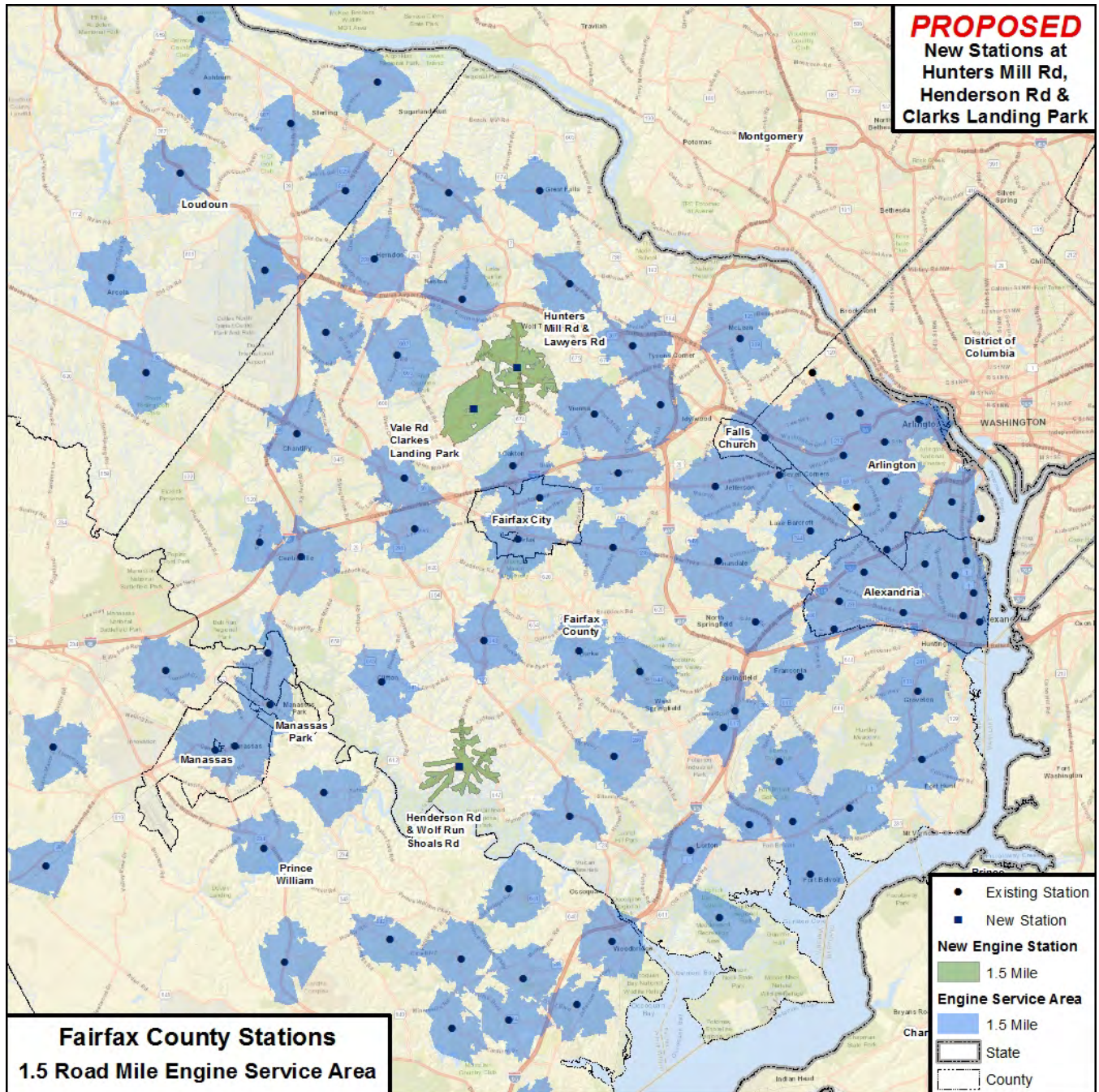


Figure 13: Fairfax County – Proposed Changes



As shown in Figure 14 below, the 2.5-mile truck company response area is being met for most of the high-population/high-occupancy areas.

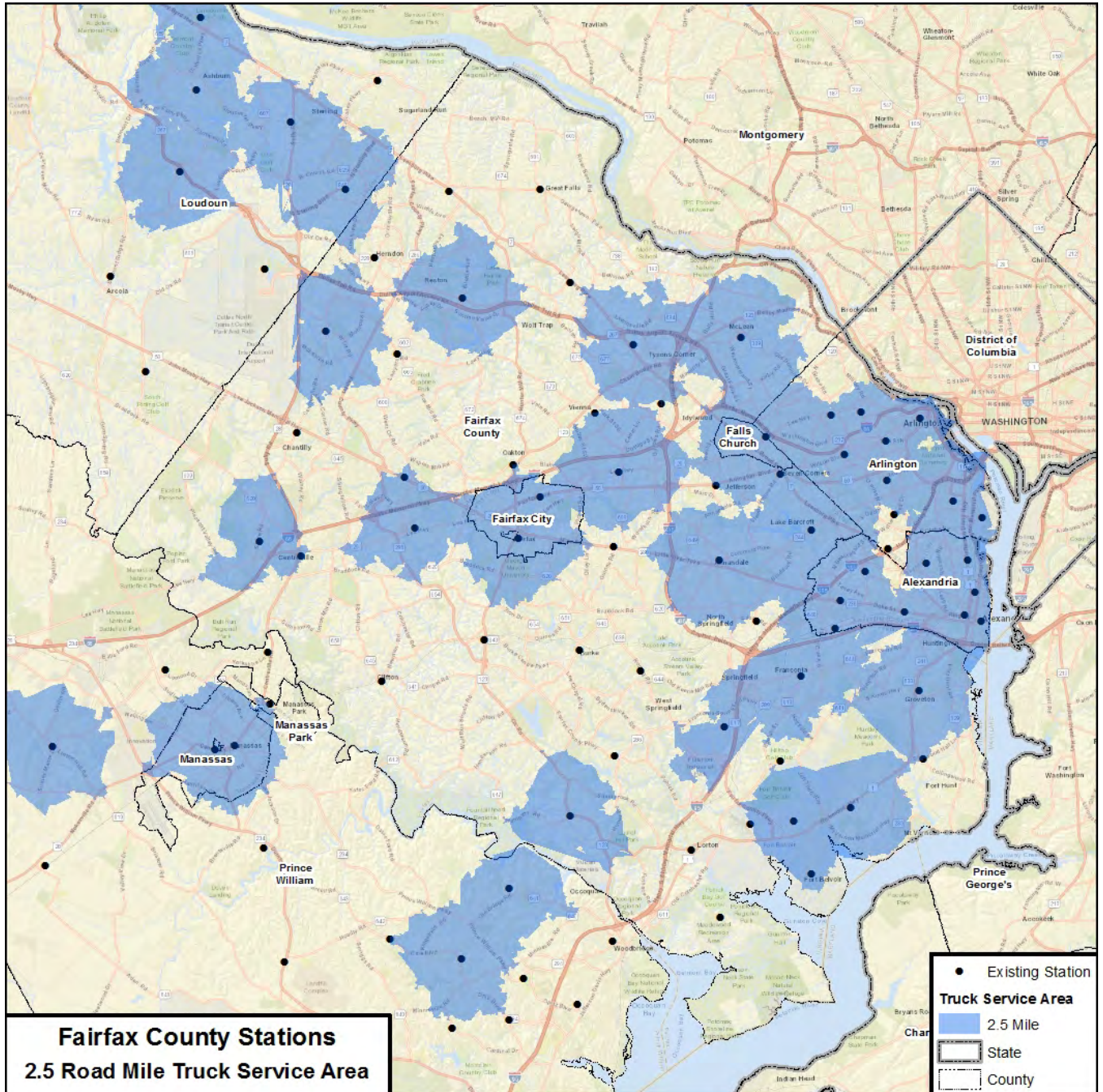


Figure 14: Fairfax County – Truck Company Coverage



However, the corridor between Station 414 and Station 416 is void of truck coverage. As shown in Figure 15 below, MCP feels that a truck at Station 414 would be a priority, followed by a truck at the new station around Hunters Mill Road. A truck at Station 416 also would cover an area lacking, though present demands may not warrant this change. Additionally, while truck coverage to the northern area of the county is being provided by Station 25 and Station 29, Station 39 does have a rescue squad that does count for the special services in that area if dispatched.

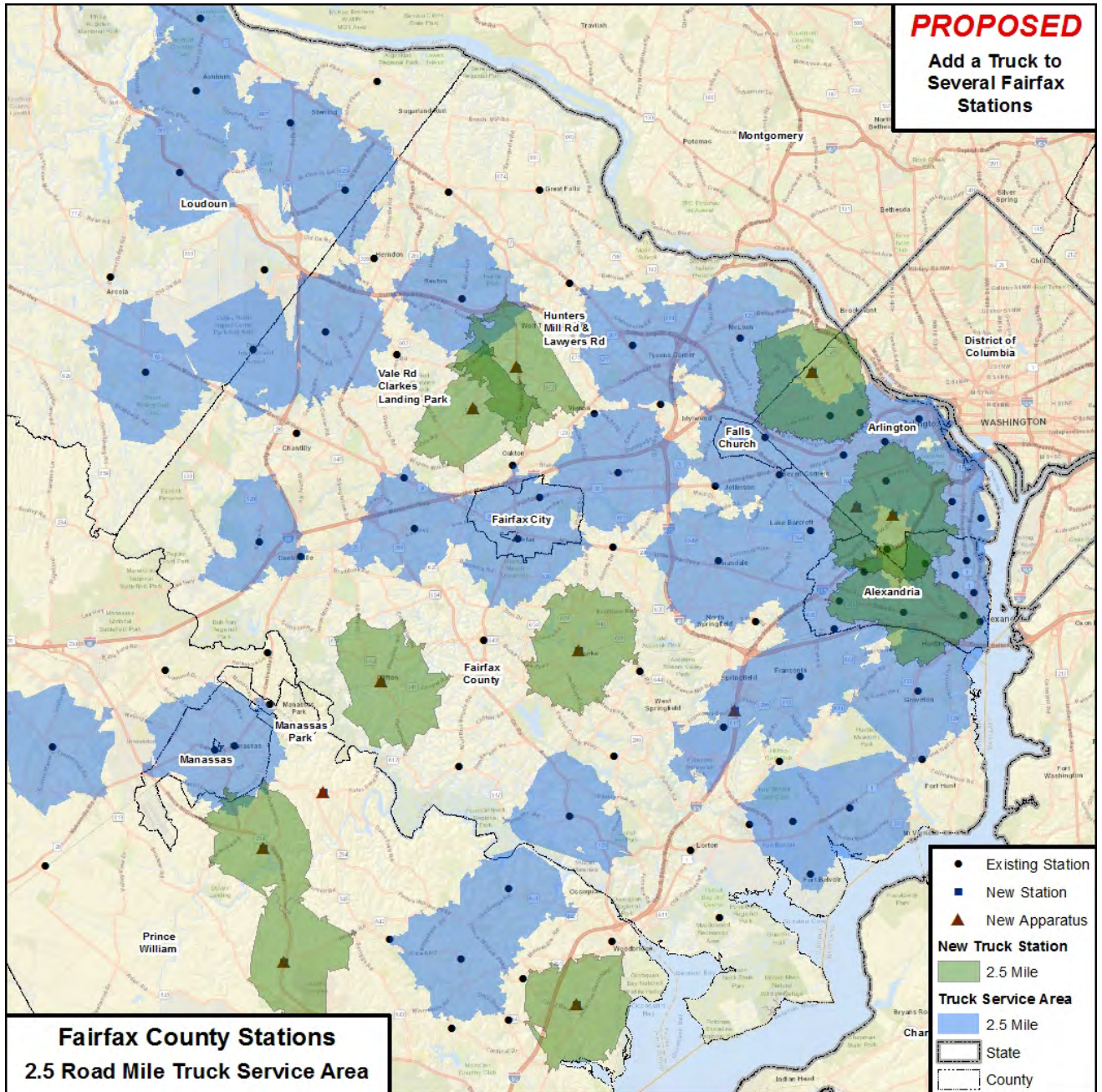


Figure 15: Fairfax County – Proposed Changes



The 5-mile distance from any fire station, as shown in Figure 16 below, provides coverage to nearly the entire county. A small section of non-coverage is denoted in the Occoquan Reservoir area, but few homes appear to be affected. Another small region is in the far southwestern tip of the county. While this area appears to be lightly populated, a larger development appears to be under construction. Additionally, this area receives no relief from any neighboring jurisdiction.

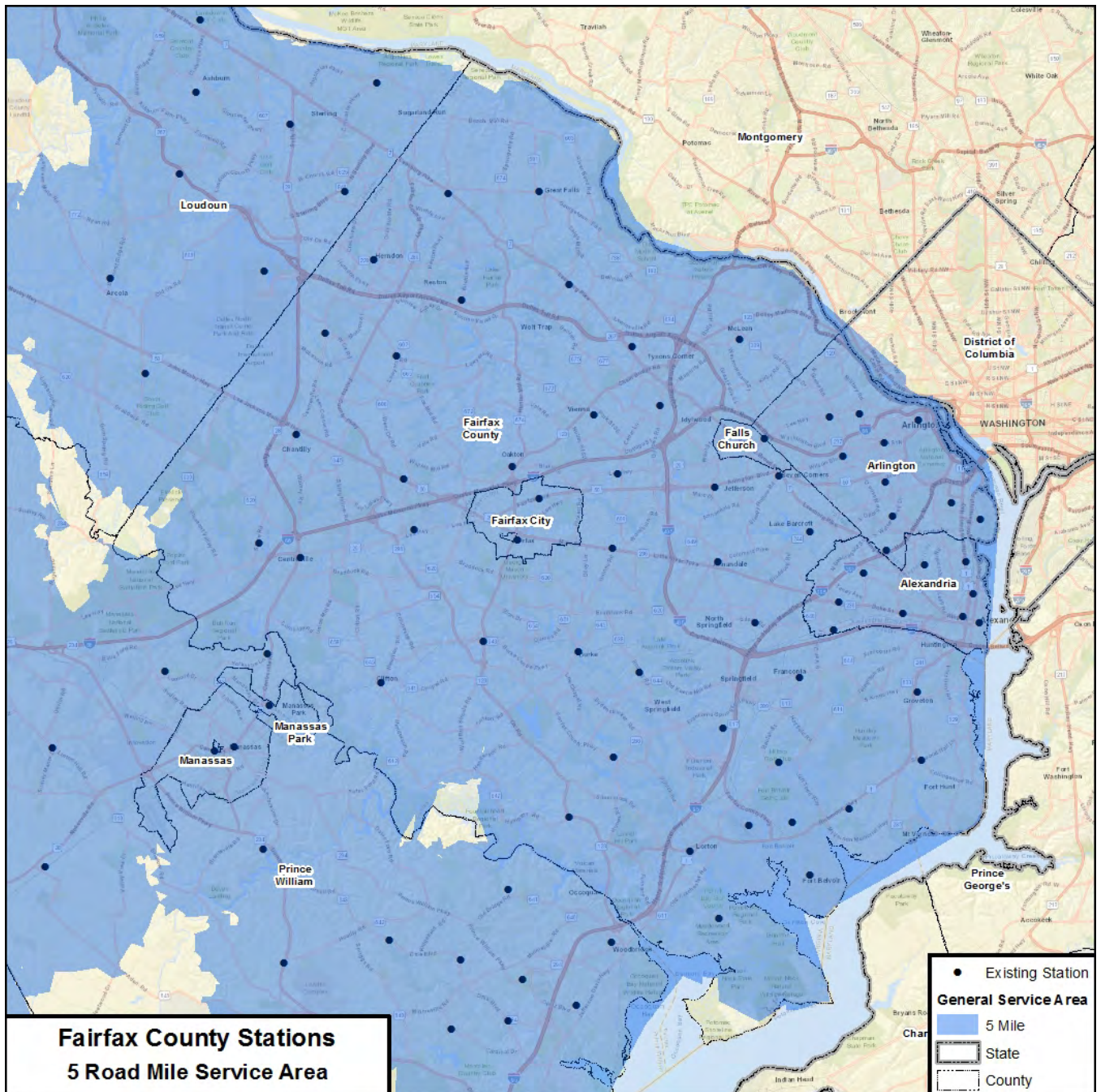


Figure 16: Fairfax County – General Service Coverage



Fauquier County

Presently the 1.5-mile engine company response areas are centered around the more populated areas of the county, which is understandable as these stations can draw on volunteer members from the residential areas nearby. However, Fauquier County is growing and the Bealeton area has a significant area of population. As shown in Figure 17 below, Station 2 and Station 13 are both four miles from the Bealeton area which, while not excessive, still represents more than five minutes of travel time once responding. Consideration should be given for a new station or substation of Station 2 or Station 13 to be placed in the downtown proper. As with any jurisdiction, population, building growth and response times should be monitored for gaps in timely response and coverage needs.

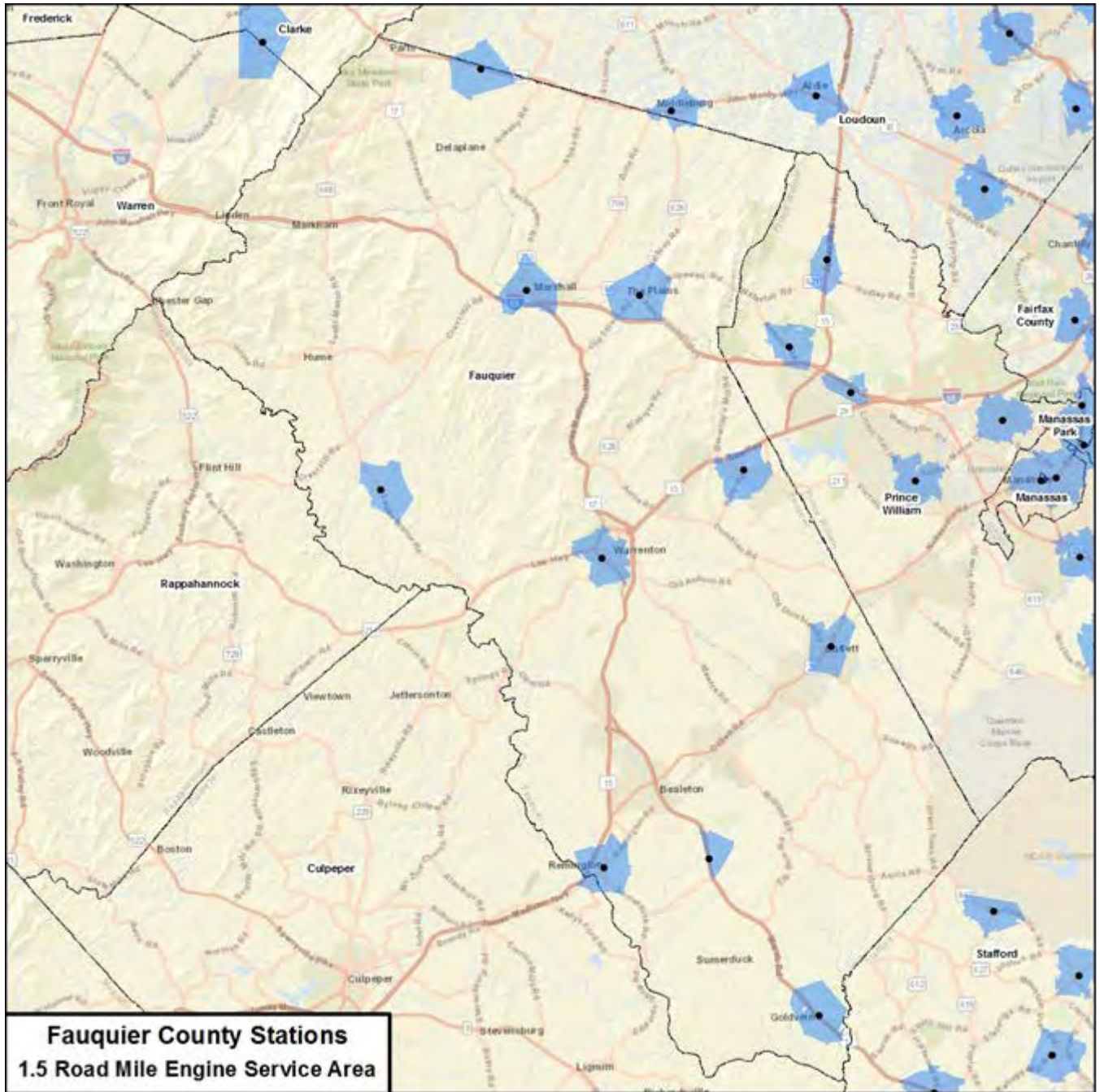


Figure 17: Fauquier County – Engine Company Coverage

The 2.5-mile truck company response area, shown in Figure 18 below, is somewhat strategically placed in the southern and middle part of the county. A truck likely is needed in the northern part of the county. Although this area is still somewhat rural, the town of Marshall and the area known as The Plains are growing.

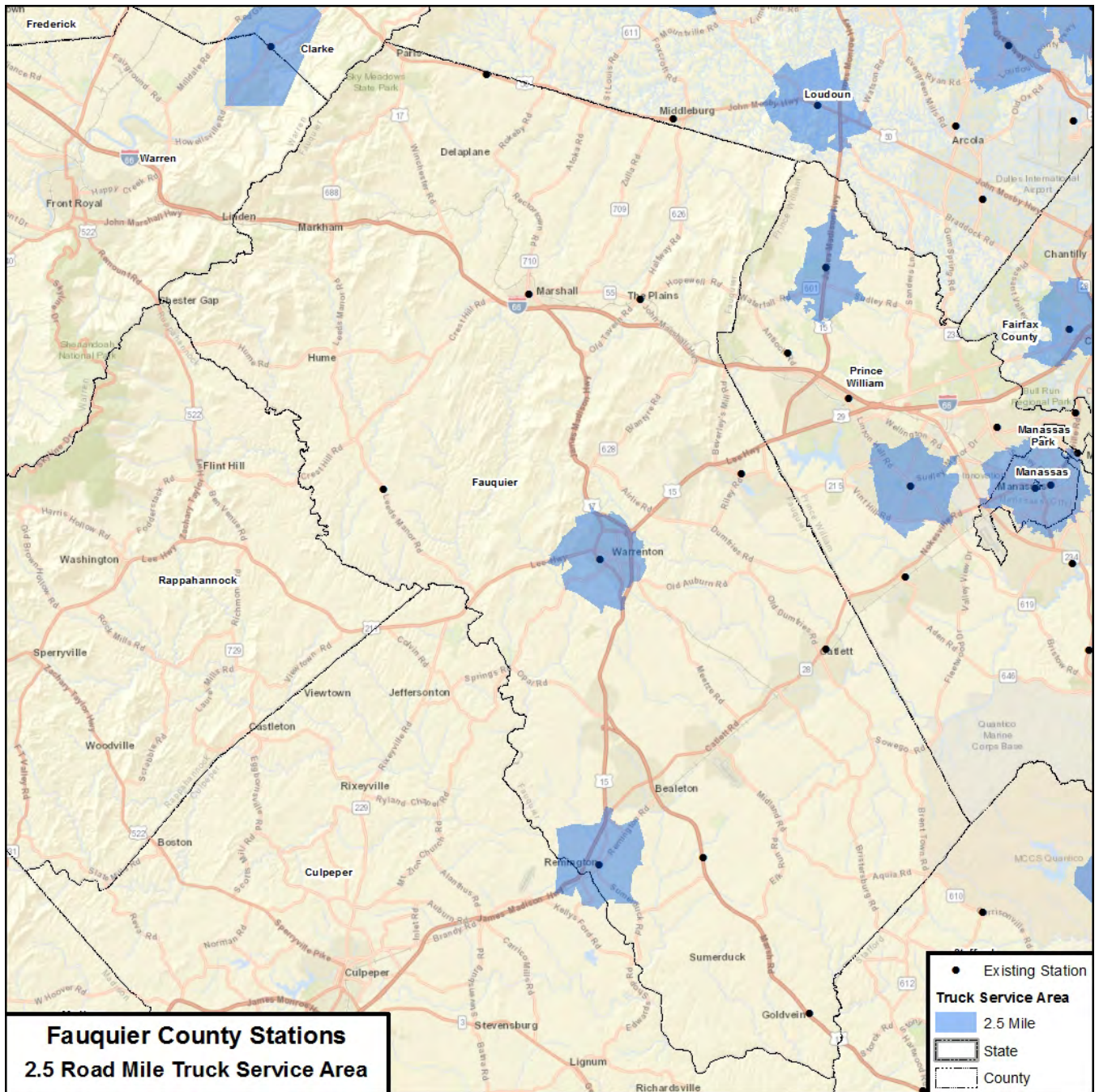


Figure 18: Fauquier County – Truck Company Coverage

Consideration should be given to placing a truck company in the northern area. Figure 19 below shows Station 3 would be the most ideally located to cover that area.

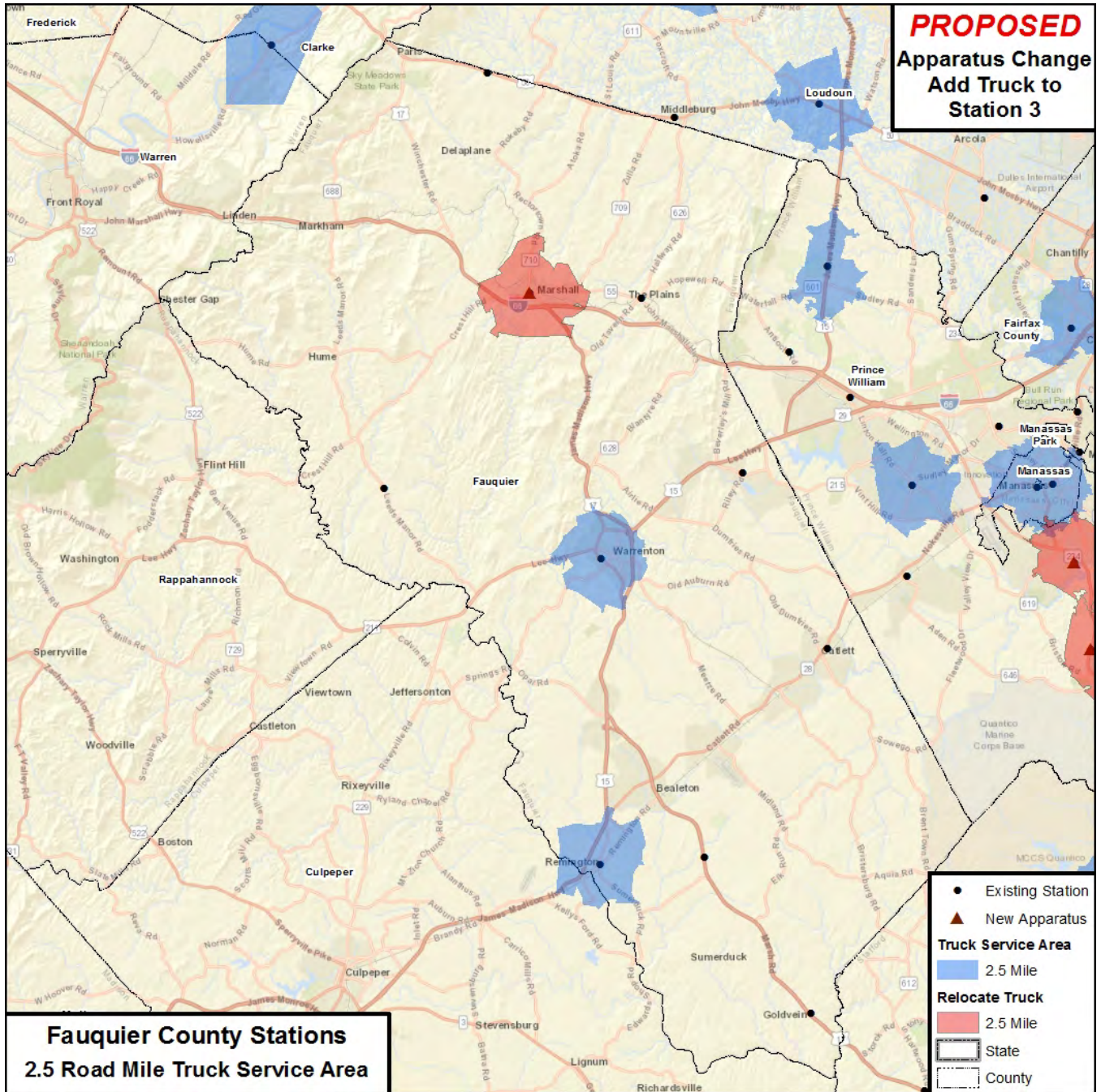


Figure 19: Fauquier County – Proposed Changes

The 5-mile distance from any fire station, as represented in Figure 20 below, shows much of Fauquier County is not covered.

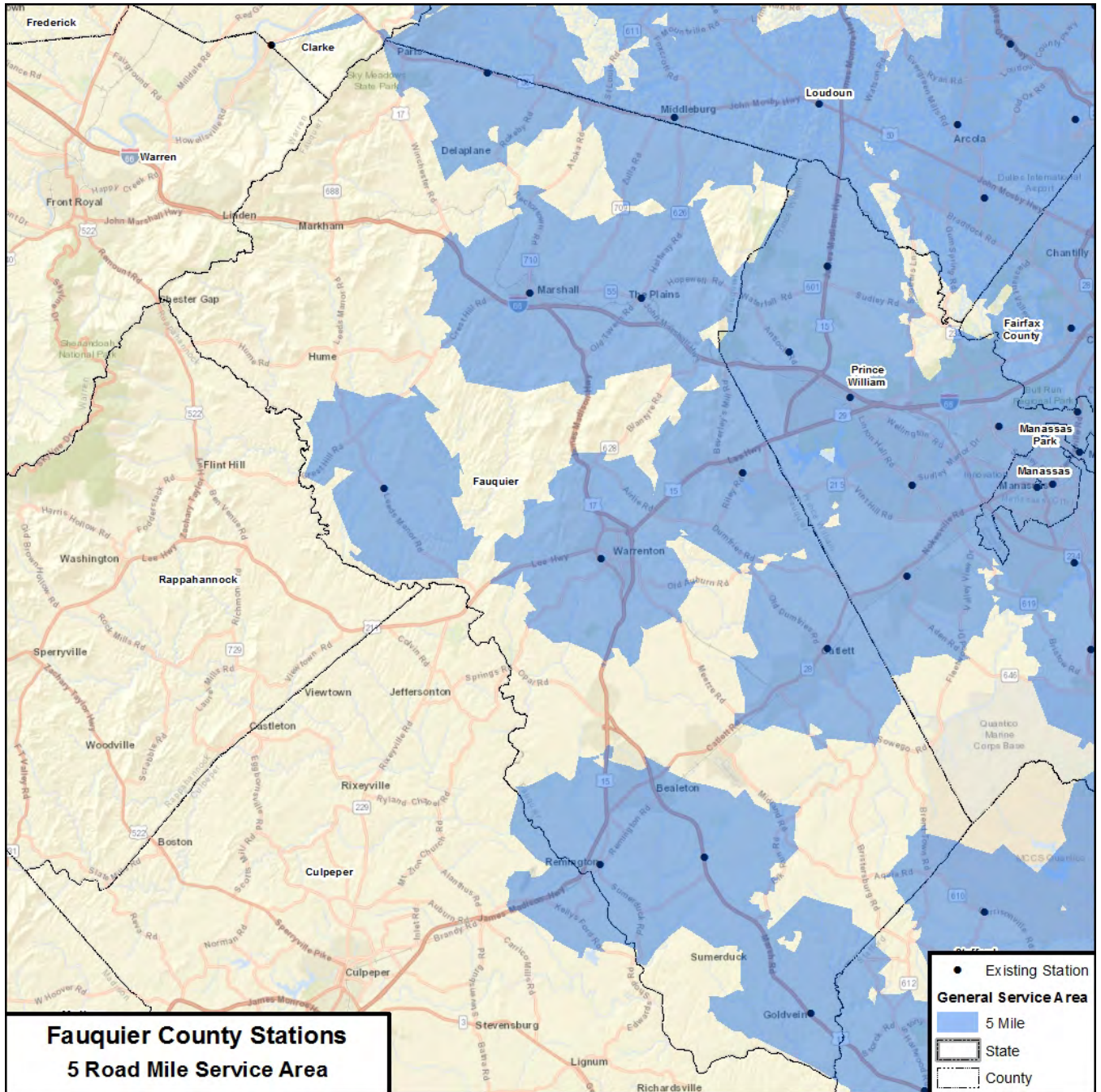


Figure 20: Fauquier County – General Service Coverage

This is understandable seeing that the county was rural and the need was not there. However, as the county starts to grow, the dynamics are changing and consideration must be given to adding stations. As an example, the crossroads of Opal, while still somewhat lightly populated, appears to have commercial properties in that area and highways converge there. At this time, this area is in a higher



class due to mileage from a fire station. Additionally, many of the areas outside the 5-mile fire station coverage zones have extensive response times, as many of these calls will take a minimum of 10 minutes to arrive.

Loudoun County

Presently the 1.5-mile engine company response areas understandably are concentrated in the populated areas, as shown in Figure 21 below.

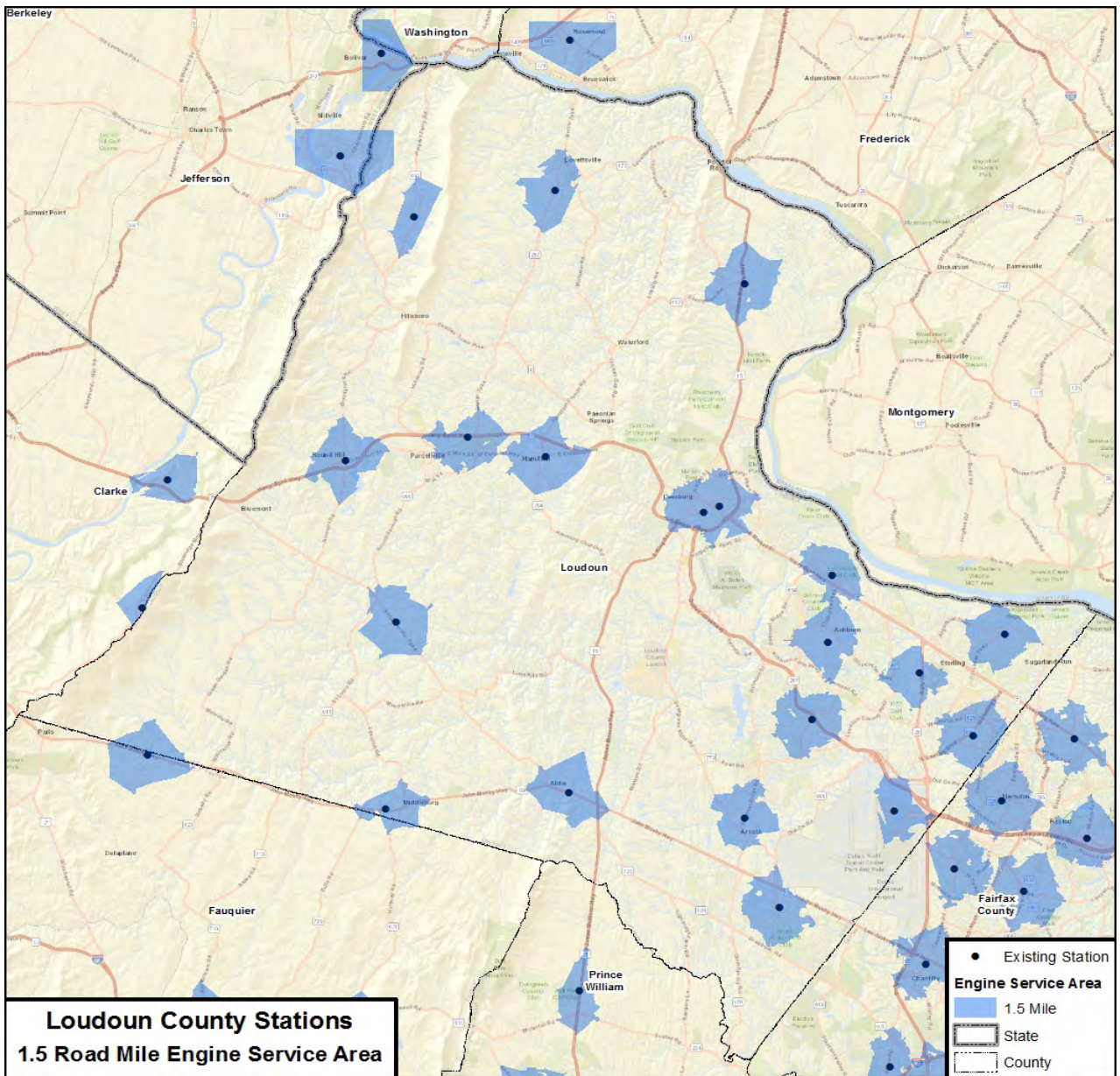


Figure 21: Loudoun County – Engine Company Coverage



However, Loudoun County continues to grow, with large housing developments being built in areas that were previously rural. One of those areas is in and around the county landfill. This area also will be discussed in the 5-mile protected class section. As stated previously in this report, it is financially and feasibly impossible to cover every area of a county as large as Loudoun with the 1.5-mile engine company standard. However, Loudoun County Fire Rescue should monitor and study calls that are in the western part of the county for adherence to on-scene times of companies. Most companies in this area have long travel times to assist each other, which heightens safety concerns for first-arriving companies. As stated, this area should be frequently monitored.

The 2.5-mile truck company response area has strategically placed trucks to serve the populated areas of the county. Figure 22 below shows the current coverage areas of the county.

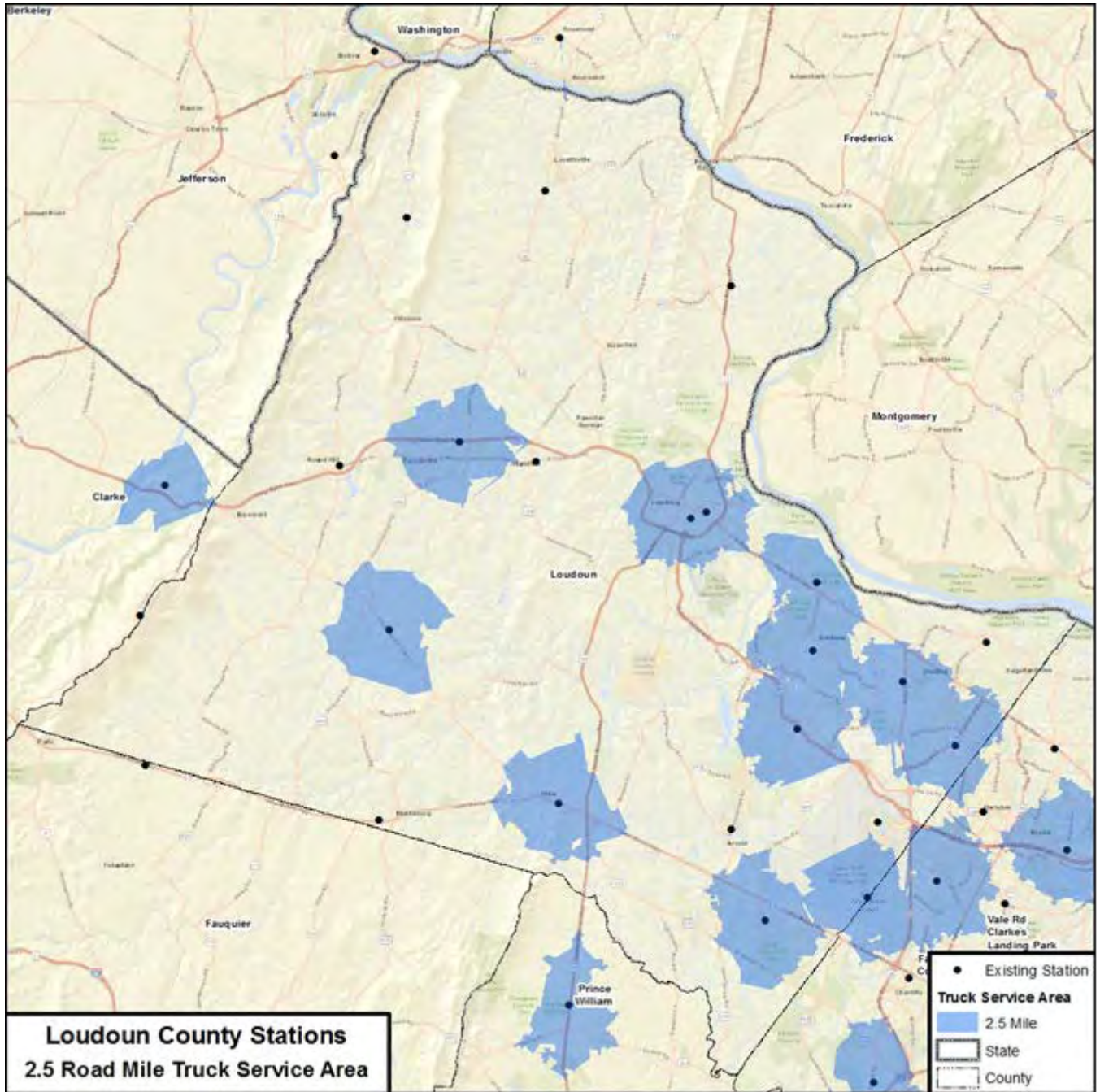


Figure 22: Loudoun County – Truck Company Coverage



The one area that appears underserved would be the northern tier of the county. Although Station 20 and Station 2 can provide support to that area, the travel time is significant. Placing a truck at Station 10, as shown in Figure 23 below, would reduce that travel time. Using ISO and NFPA 1710 standards, there would be value in adding a Ladder truck to the Aldie Area. This would be in the location of Aldie Station 607, 39459 John Mosby Highway, Aldie.

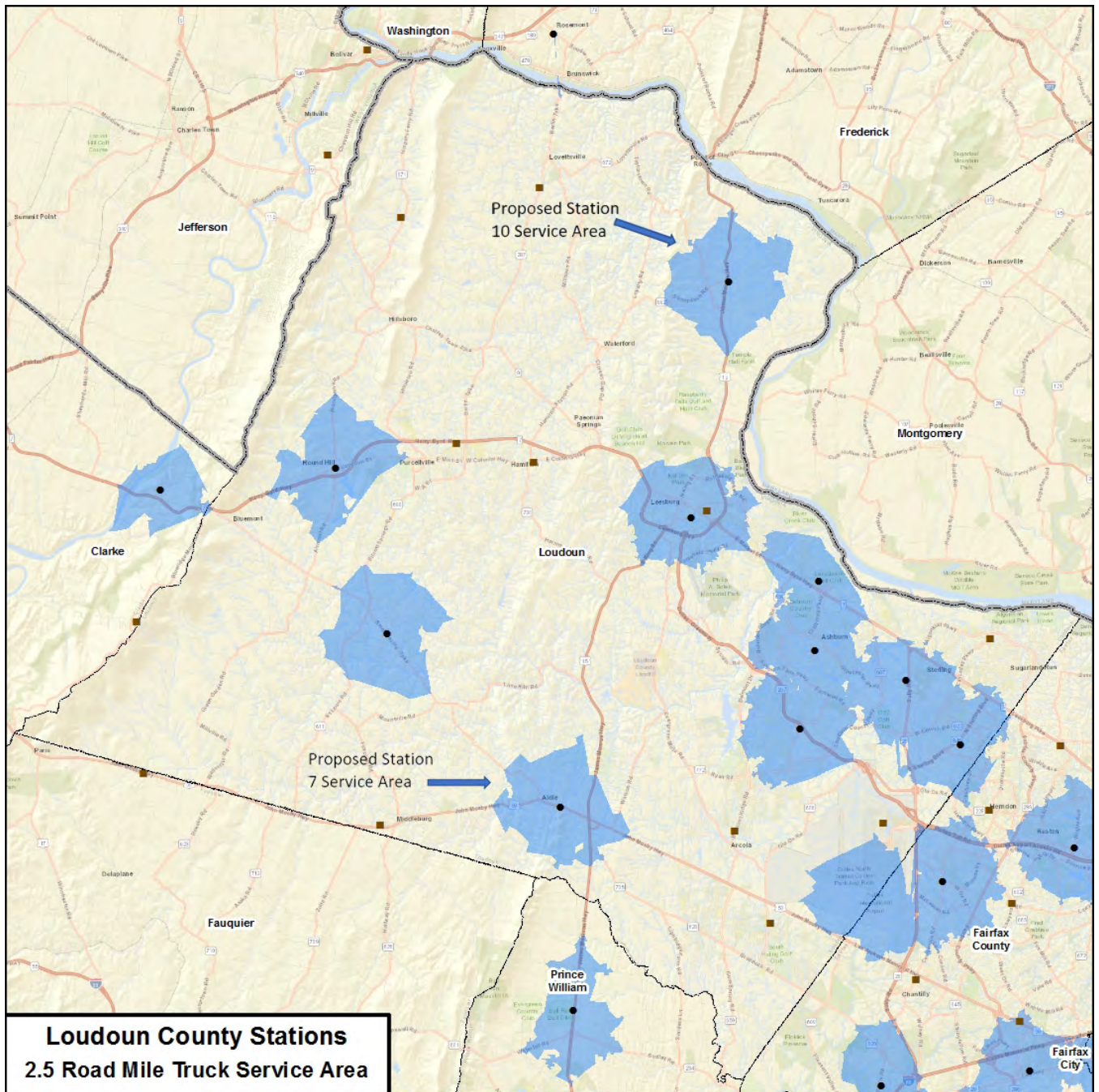


Figure 23: Loudoun County – Proposed Changes



Represented in Figure 24 below, the 5-mile distance from any fire station shows three areas of coverage concern. The most significant area of concern relates to engine company coverage in Figure 21. This area has increased development and sits outside the protected class 5-mile zone. This area should be under consideration for a new station due to the increased population growth.

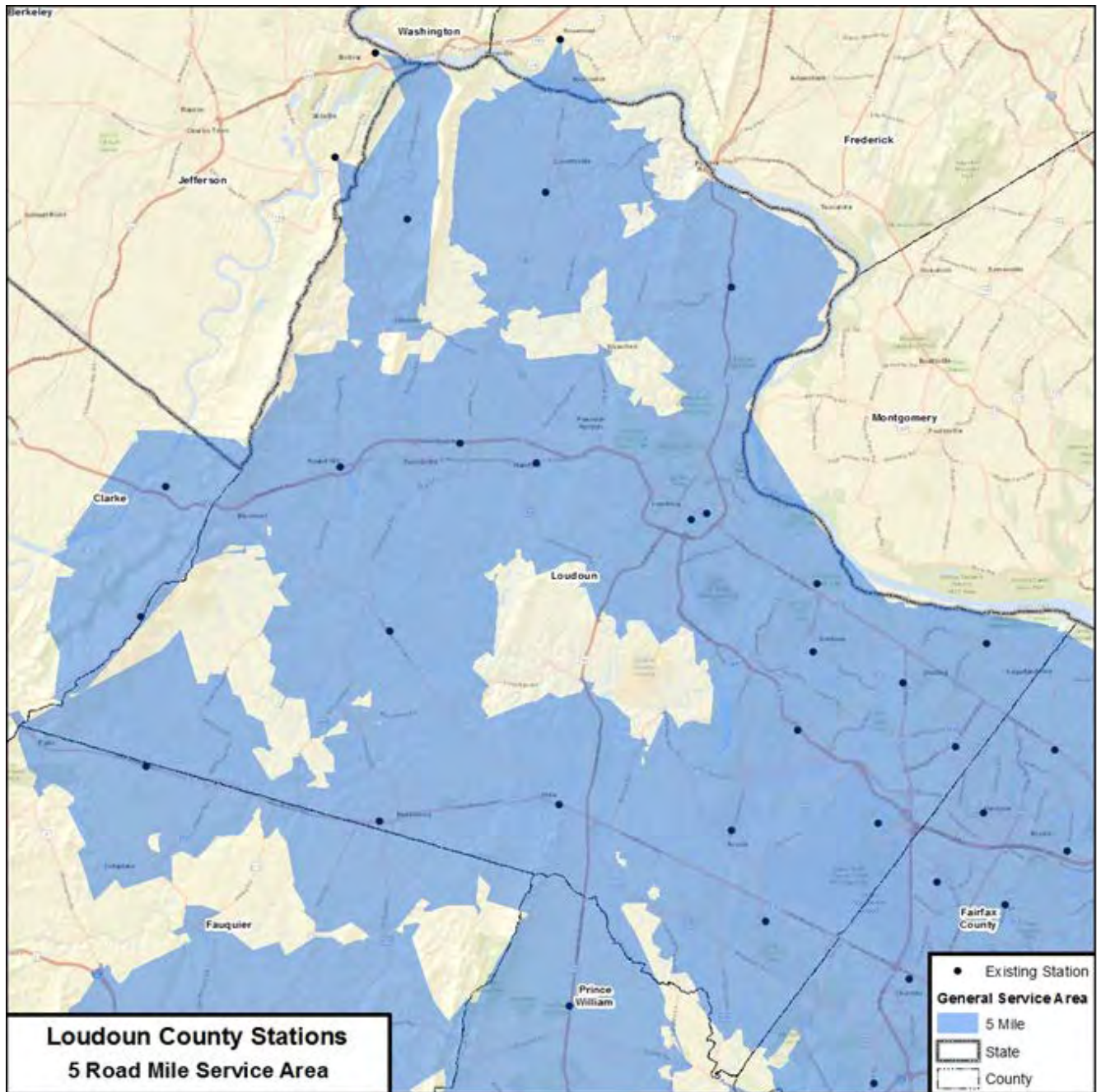


Figure 24: Loudoun County – General Service Coverage



Figure 25 below shows relief to this area through the construction of a new fire station at or near the intersection of Highway 15 and Gap Road, and the addition of Station 29, which is a proffered site already in the planning stages.

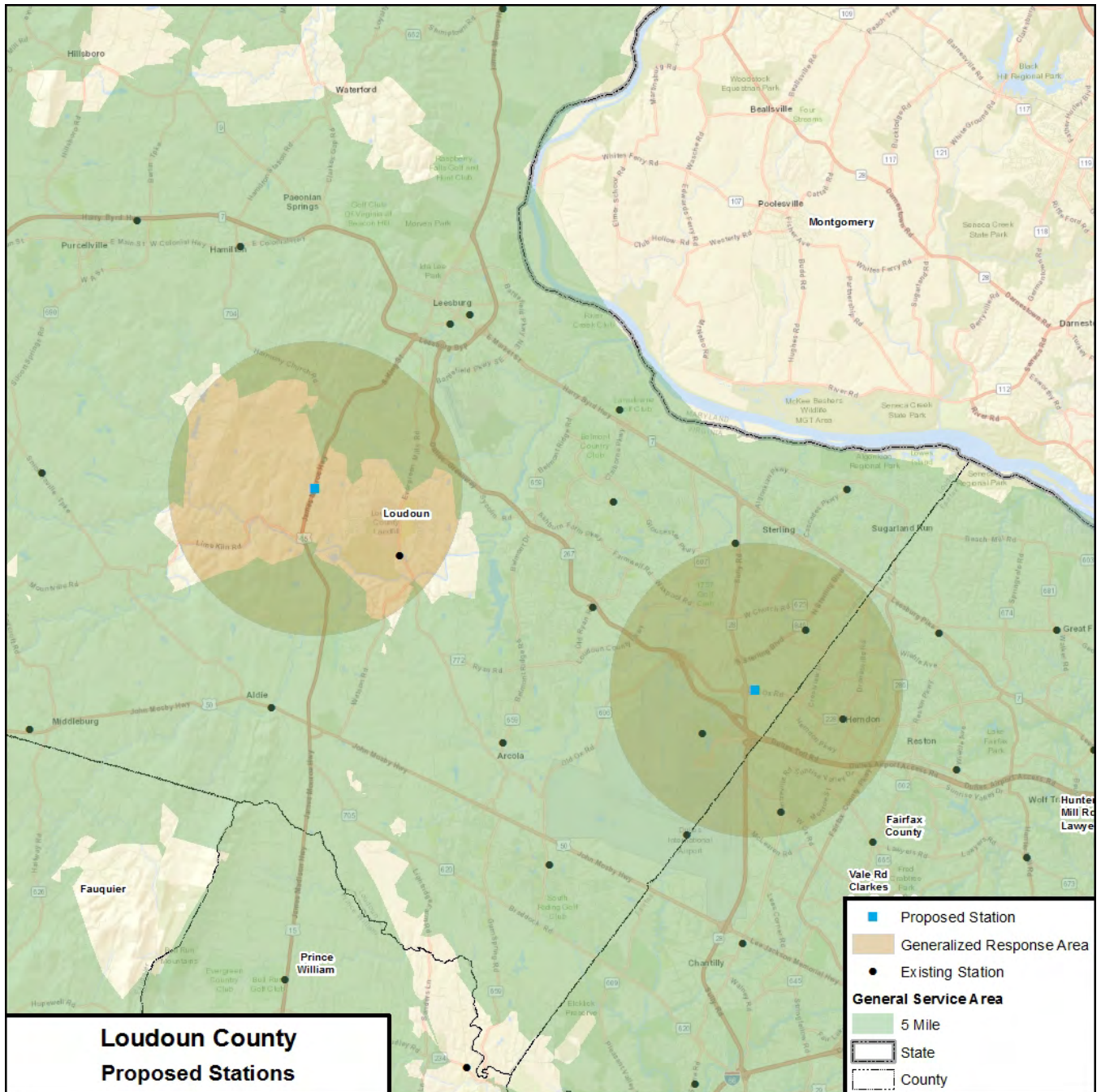


Figure 25: Loudoun County – Proposed Changes



The second area of concern is the southwest area of the county. This area remains rural and at this time does not appear to be targeted for development. Outside county resources do provide some relief to this area. The third area is in and around the small village of Waterford. Again, as with the southwest area, this area is predominately rural, albeit the village of Waterford and the surrounding area appear to be starting to be developed. Some of this area to the north/northeast does get coverage from Station 10, but, areas to the west do not. Further monitoring of this area's response times and population growth is suggested.

City of Manassas

Presently the 1.5-mile engine company response areas cover the central section of the city. This leaves sections of the periphery not within the coverage area. However, most of these areas are near the centrally located stations. The furthest area outside the 1.5 miles is the airport itself. Overall the coverage is adequate as shown in Figure 26 below.

If another station is contemplated, a station centrally located along the Hastings Drive corridor would give the apparatus an east/west thoroughfare to access the southern section of the city and give quicker access to the airport property.

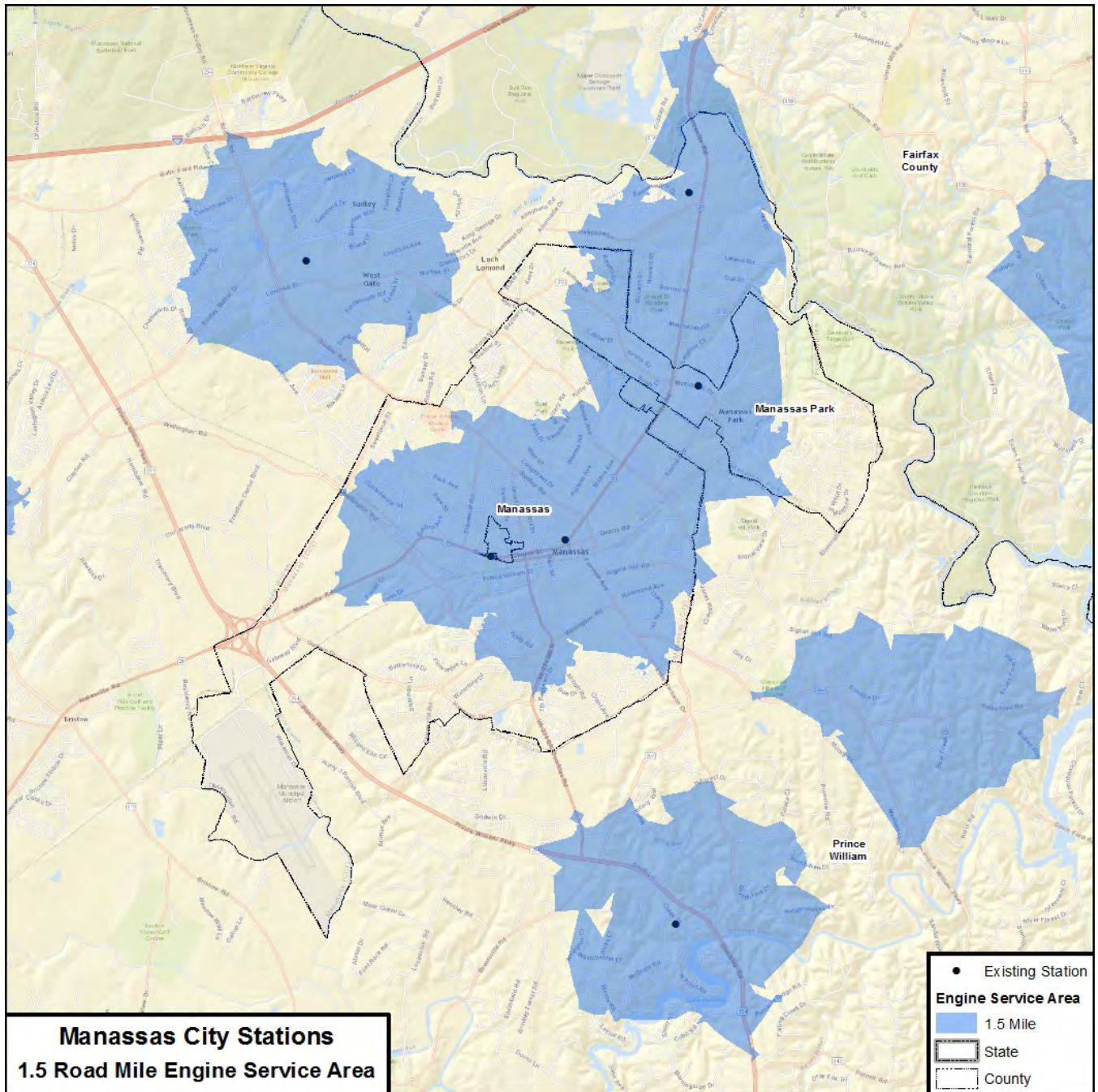


Figure 26: City of Manassas – Engine Company Coverage

As shown in Figure 27 below, the 2.5-mile truck company response area covers almost all of the city except for the area from Route 234 down to the airport property.

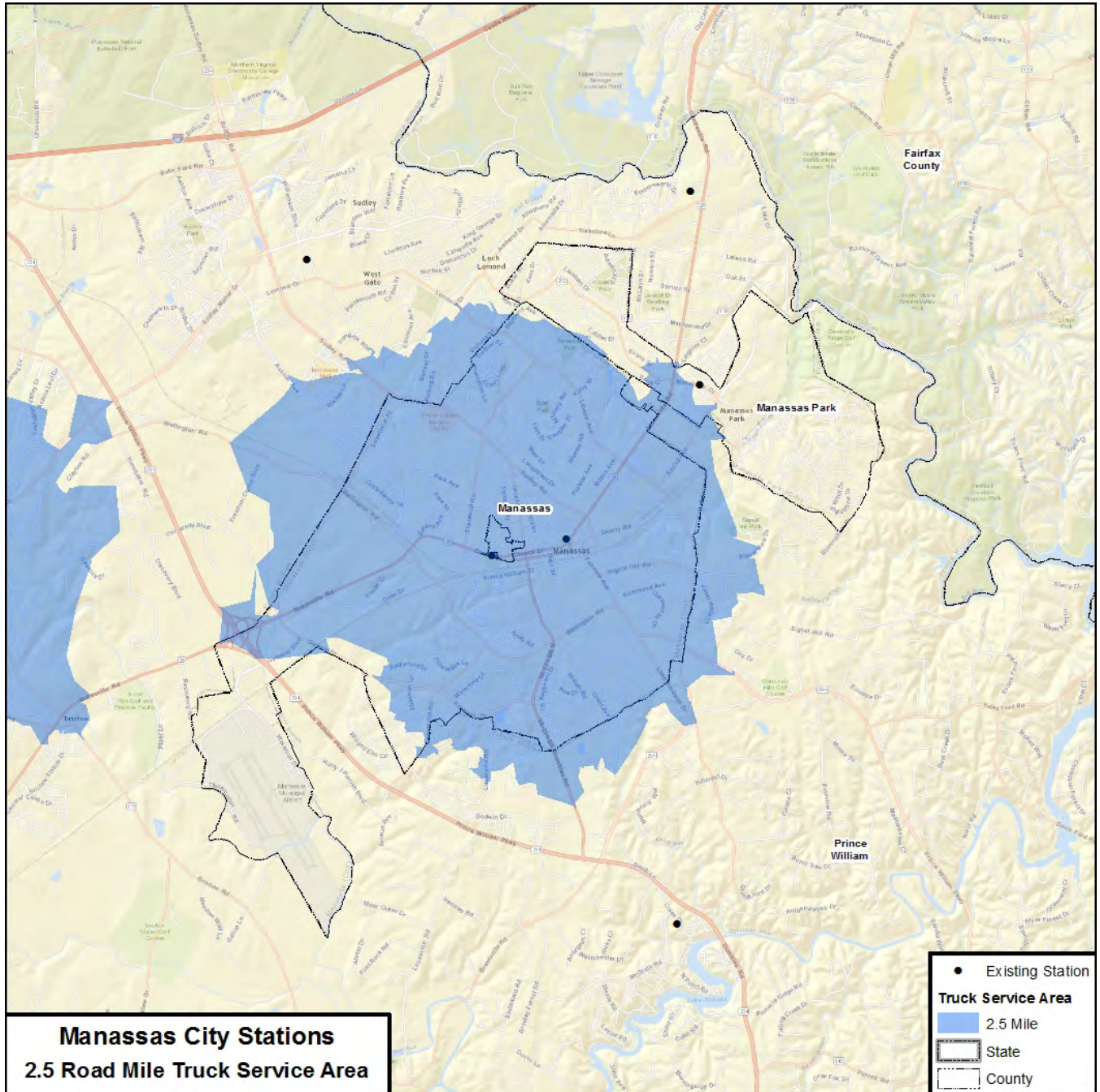


Figure 27: City of Manassas – Truck Company Coverage

The 5-mile area covers the city entirely and is not an issue. All structures would be considered protected class.



City of Manassas Park

Presently the 1.5-mile engine company response area covers the central section of the city. As shown in Figure 28 below, the area not covered is the far western side from Tremont Street/Courtney Drive to the municipal line. On the eastern side, the coverage gap is from approximately Manassas Drive at Signal View Drive and areas north and east. Due to the central location of the station and the close proximity to the other areas of the city from that station, the need for a second full station is minimal. However, a substation of a single engine company (ALS) on either side would give timely service to those areas. A recent residential structure fire on Baker Street had an on-scene time of five minutes. Although outside the 240-second mark prescribed by the NFPA 1710 standards, it was still a good response time given that this street was farthest west from the station.

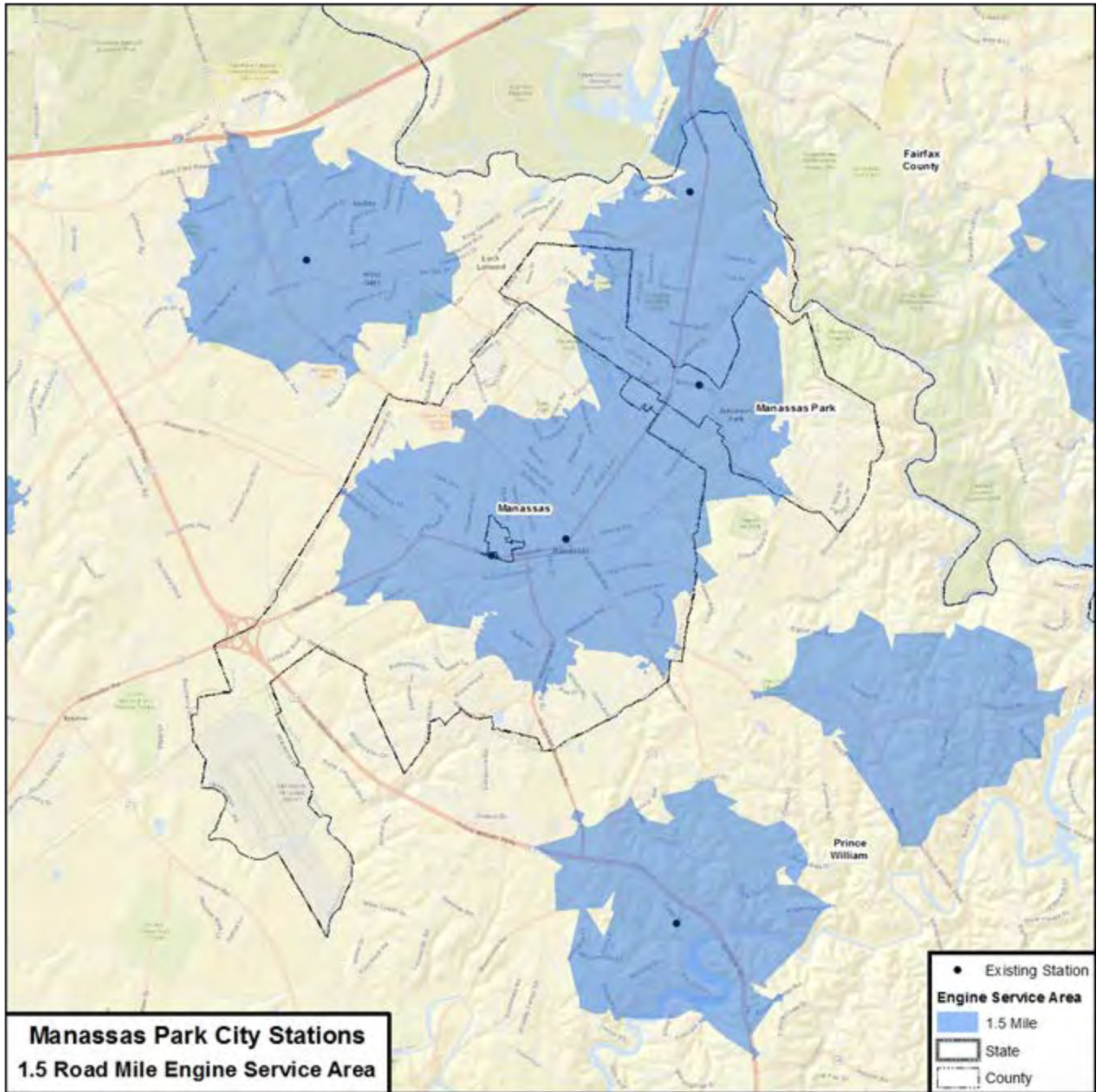


Figure 28: City of Manassas Park – Engine Company Coverage

At this time, the City of Manassas Park does not have a truck company. Unfortunately, no other jurisdiction gives the city the 2.5-mile coverage. Figure 29 below shows that the City of Manassas and Prince William County Station 11 both have a truck, and would be the closest stations to provide this service.

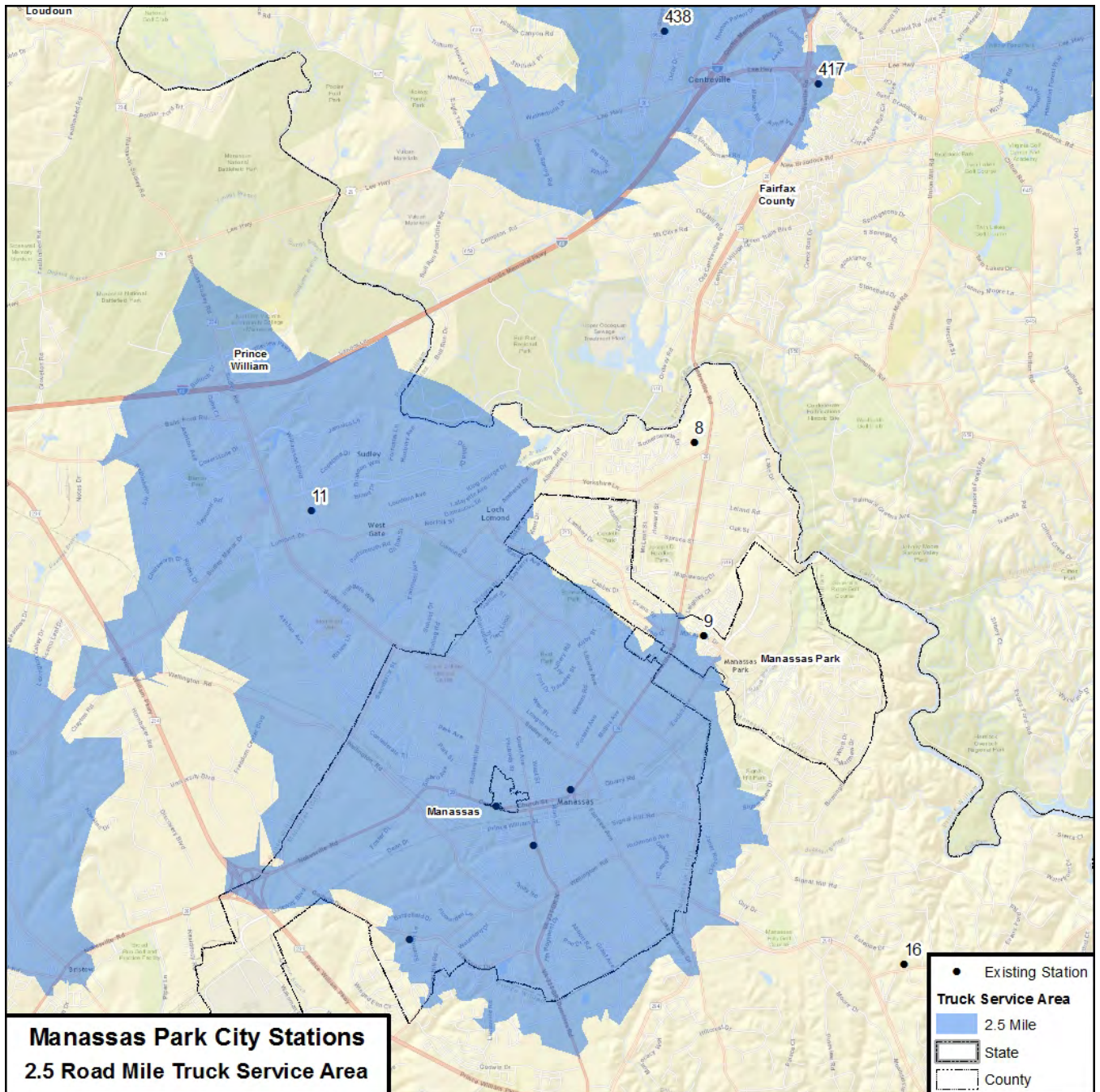


Figure 29: City of Manassas Park – Truck Company Coverage

The 5-mile area covers the city entirely and coverage is not an issue. All structures would be considered protected class.



Prince William County

Presently the 1.5-mile engine company response area covers a large majority of the more populated areas of the county. Figure 30 below demonstrates thoughtful placement of stations.

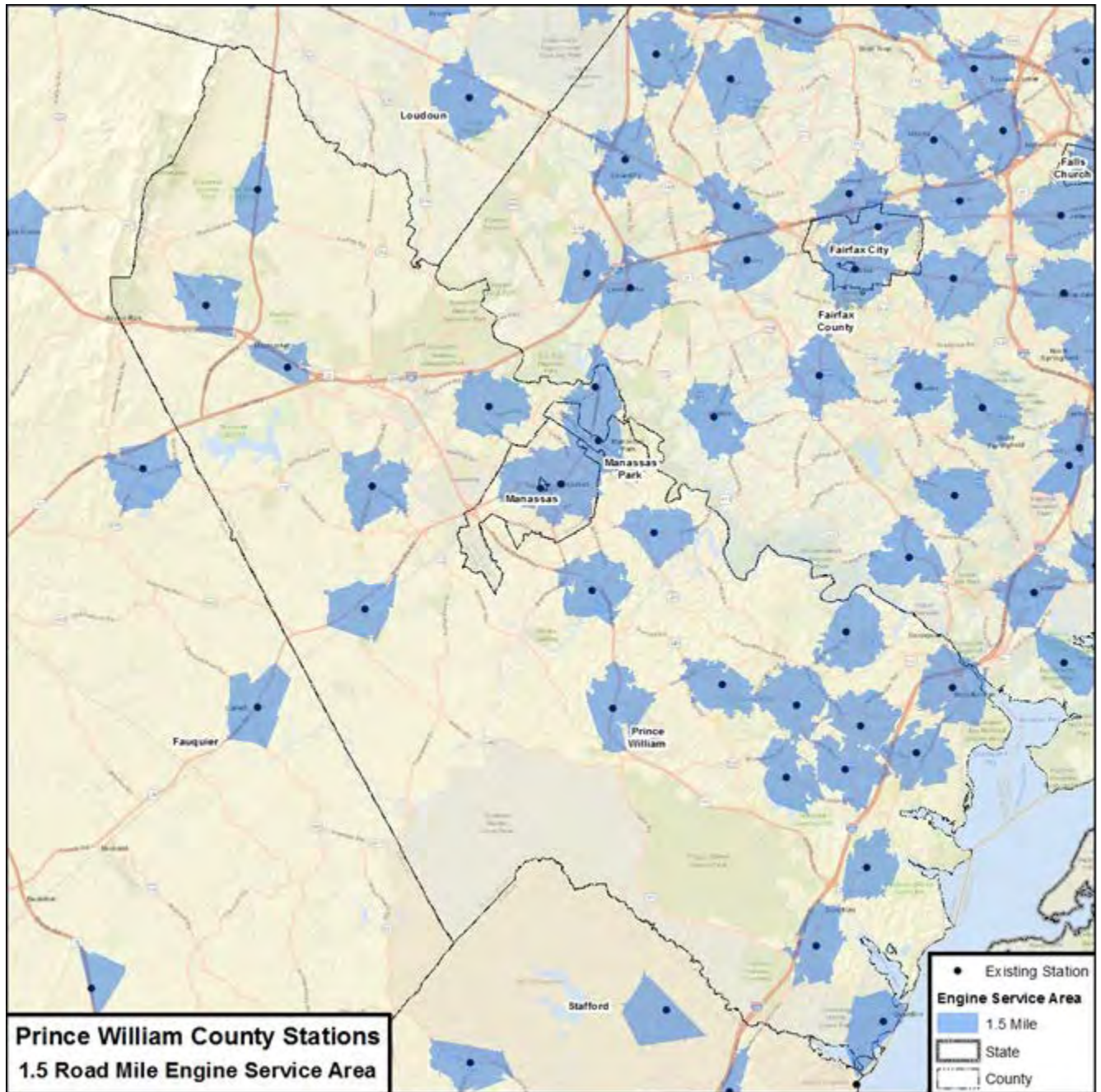


Figure 30: Prince William County – Engine Company Coverage



Some areas remain somewhat distant from a station and should be reviewed and considered as potential locations for future new fire stations. The area north of Station 14 and Station 18, and the area south of Station 16, already are developed and are most likely prime for more development due to I-95 corridor sprawl. Additionally, the area of Catharpin, while not overly developed at this time, eventually will increase in population from more development in the Haymarket area and Loudoun County encroaching from the north. This area also will be discussed in the 5-mile unprotected class discussion. The farming area north of Quantico and south of Nokesville is more than six miles in linear distance from either Station 5 or Station 6. It is assumed after looking at the road network, the response to this area is greater than 10 minutes. While this area is mostly rural, there are large homesteads and some roads with multiple housing units. This area should be reviewed regularly for trends in call volume and times.

As shown in Figure 31 below, some relief can be provided to the developing area of the county along the northeast border with the addition of a new fire station in the Catharpin area. Additionally, two stations in active development are Station 26, which will open in the summer of 2017 and Station 22, which is scheduled to open in FY20. Based on call volume and response time (hallmarks of the NFPA 1710 standard), Figure 31 represents where Prince William County Fire and Rescue could propose other new stations (denoted as red dots on the map). Most of these stations are in the more populated area of the county and would relieve some of the excessive call volume currently experienced by existing stations. As seen on the map, these new stations would fill in the deficiencies in coverage by both NFPA 1710 and ISO standards.

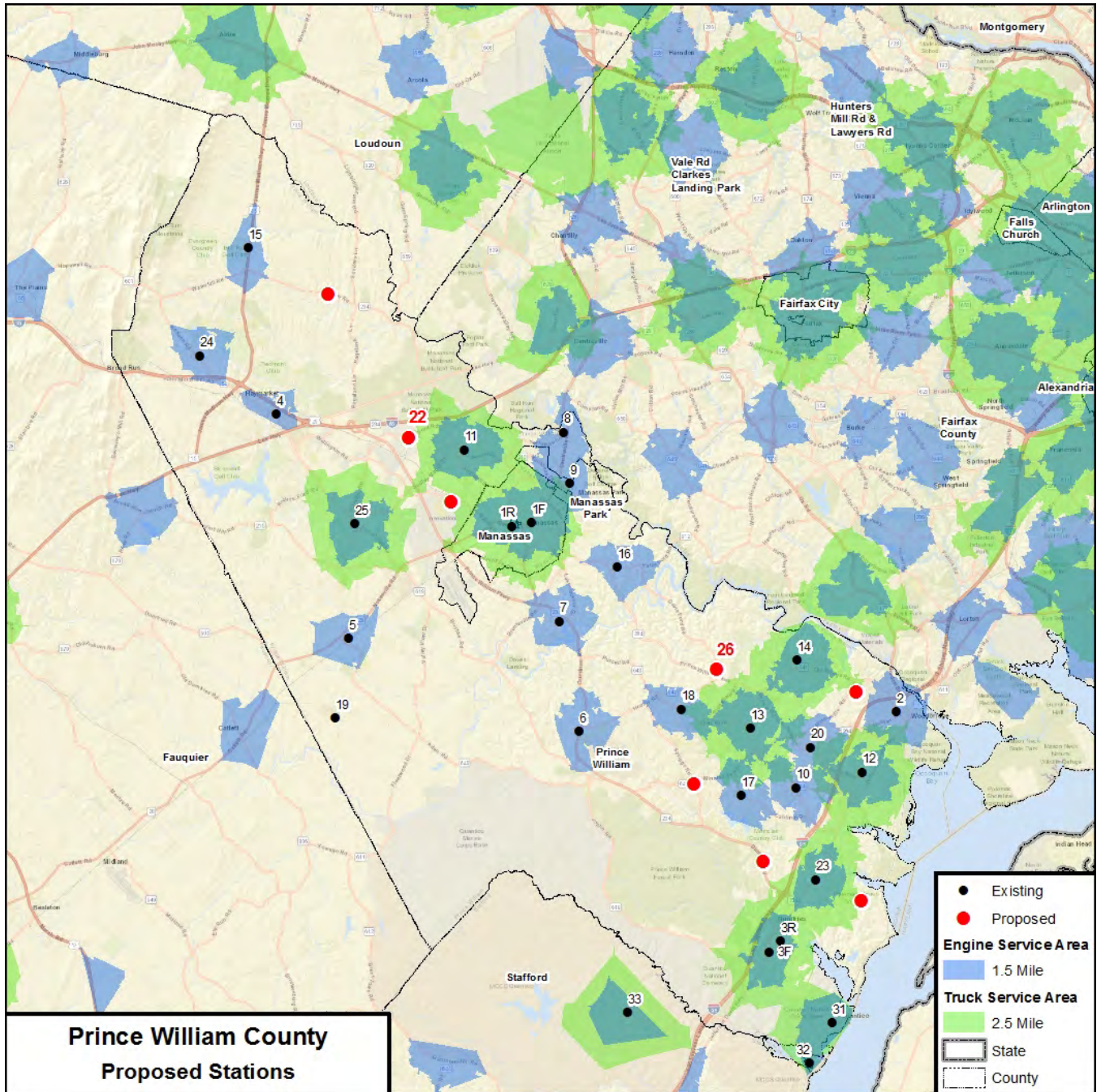


Figure 31: Prince William County – Proposed Changes

The 2.5-mile truck company response areas in the eastern section of the county and the Manassas region are sufficient and these areas are heavily populated. The existing coverage for the county is shown in Figure 32 below.

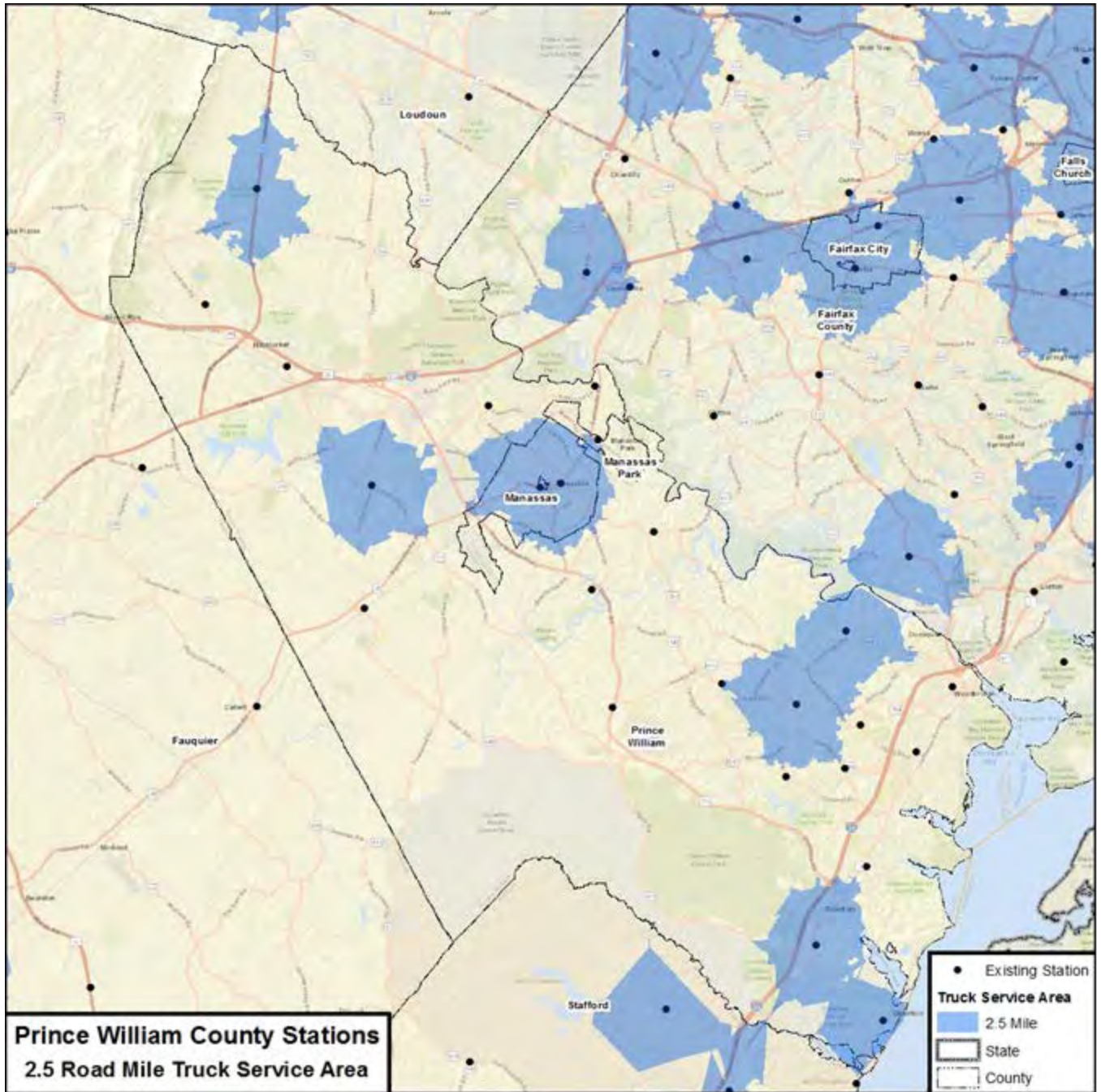


Figure 32: Prince William County – Truck Company Coverage

To the south of Manassas toward the I-95 corridor, development is prevalent and the suggestion of a truck at either Station 6 or Station 7 is denoted on the map in Figure 33 below. While the data suggests a ladder truck at Station 6 or 7 would help, the recent staffing of Rescue 506 does count for the special services in the mid-county if dispatched.



Additionally, the Haymarket area is heavily populated and should have a truck located in Station 4, which gives protection to the immediate area and allows coverage as growth continues north and west of this area.

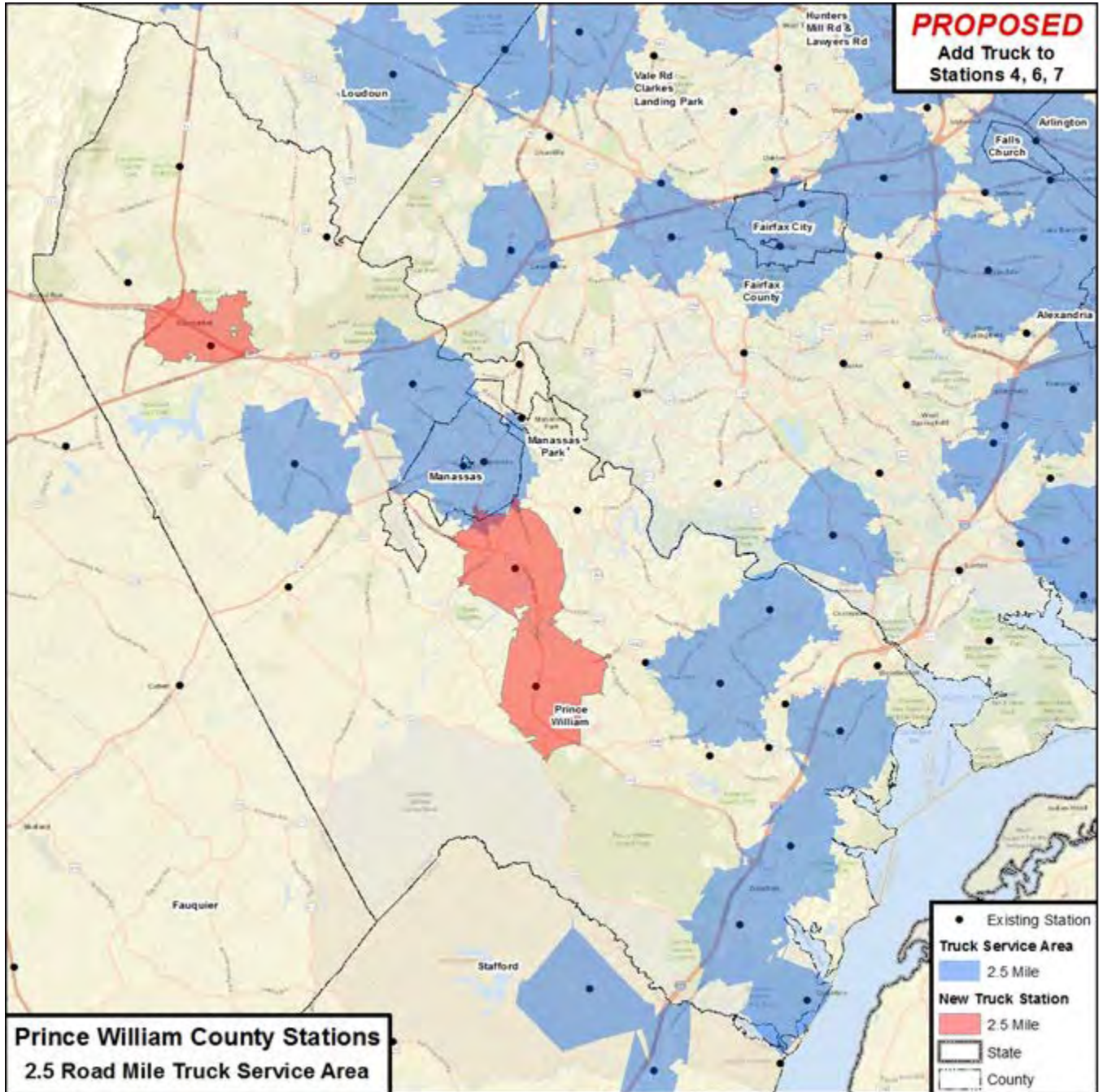


Figure 33: Prince William County – Proposed Changes



The 5-mile coverage area in the northwest part of the county is a non-issue if a station is placed in Catharpin as mentioned in the 1.5-mile briefing. Presently, this area has a coverage lapse. Also, the area just north of Military Base Quantico shows a coverage lapse. This area is rural with pockets of larger homes and gets no relief from any other county department. However, it could be difficult to justify the addition of a station in this area. These findings are depicted in Figure 34 below.

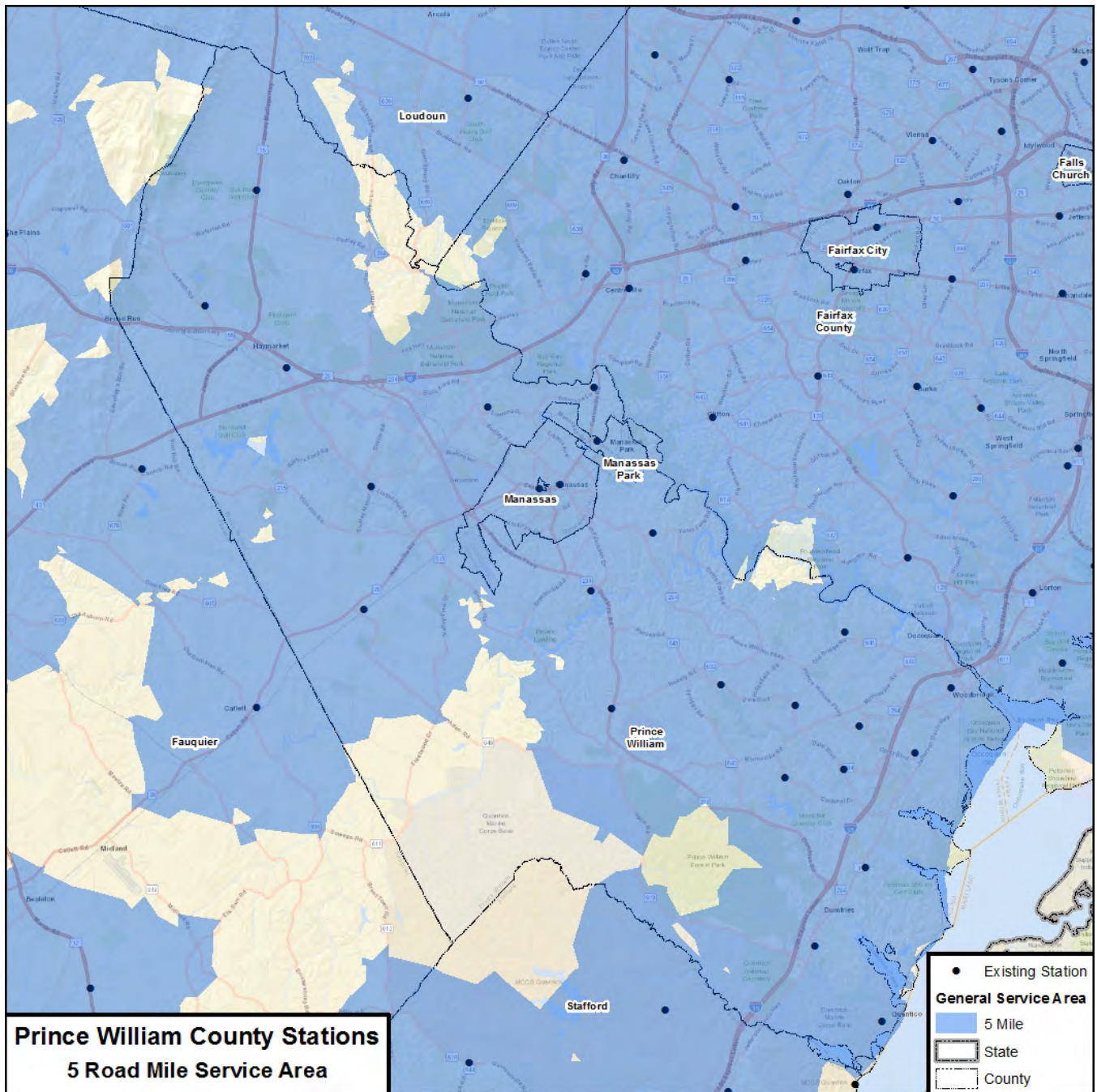


Figure 34: Prince William County – General Service Coverage



Stafford County

Presently the 1.5-mile engine company response gives coverage to some of the populated regions. Namely the companies nearest the east side of I-95 and the Berea and Garrisonville areas, as shown in Figure 35 below.

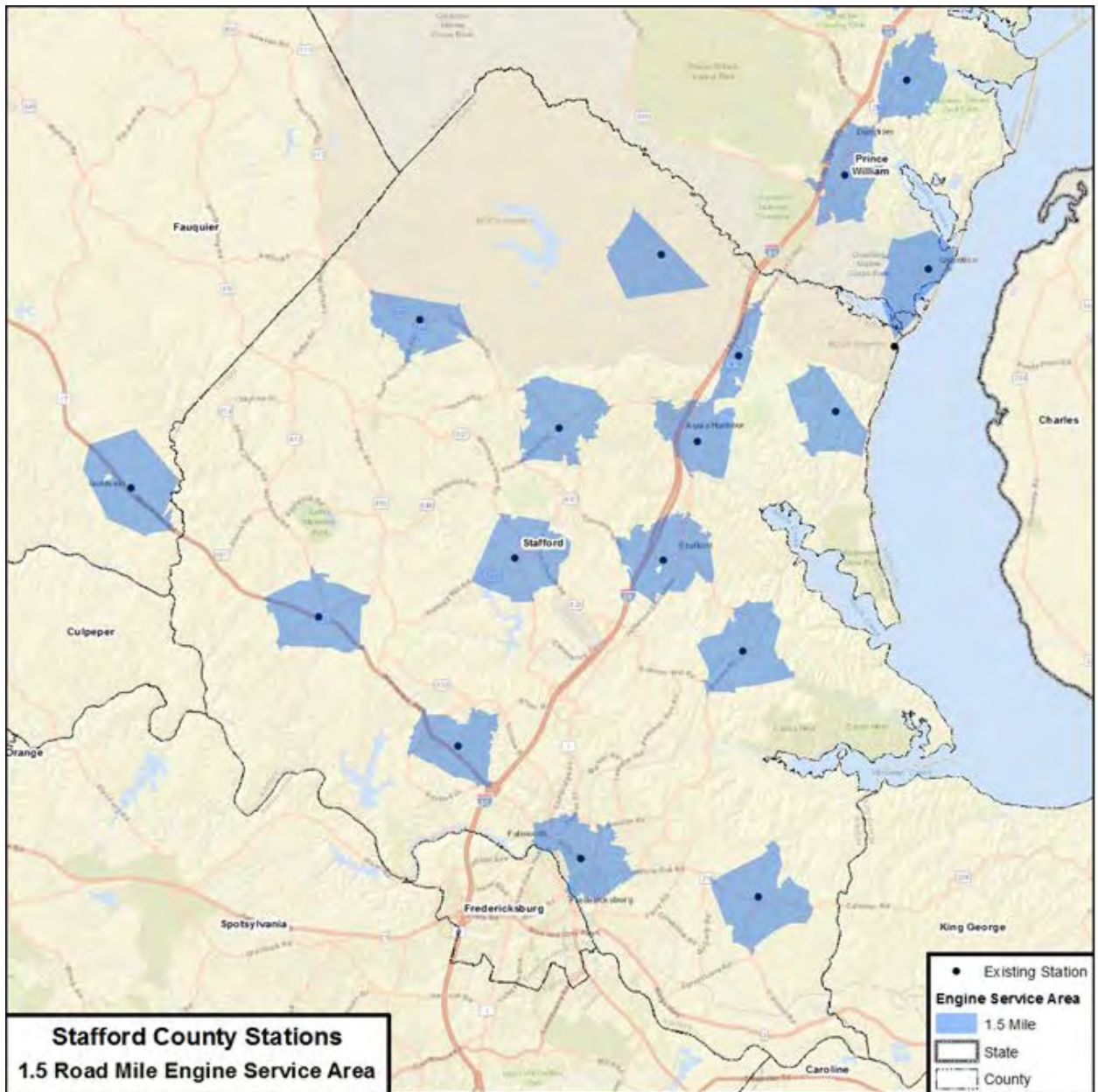


Figure 35: Stafford County – Engine Company Coverage



Other stations are in the rural parts of the county, and while needed due to distance, are relatively low-call-volume stations. Station 3 and Station 5 appear to have low call volume and somewhat duplicated service. Understandably, both stations provide water rescue services due to their proximity to the Potomac River. However, review of the area shows largely unpopulated land around Station 3, which adjoins Marine Base Quantico. Station 9 and Station 10 could cover this region. While Station 9 and Station 10 would be outside the 1.5-mile coverage area for that region, it is still fiscally sound to consider whether Station 3 is needed. This could be a difficult decision, given that Station 3 likely has a proud history of volunteers. One area that appears to be getting developed and should be reviewed in the future is the Dodds Corner and Cropp area. While still fairly rural, development appears to be impeding upon the region. Additionally, this region is in the unprotected class that will be discussed below.

The 2.5-mile truck company response area should be reviewed for coverage footprint and populous protected. Existing coverage is depicted in Figure 36 below.

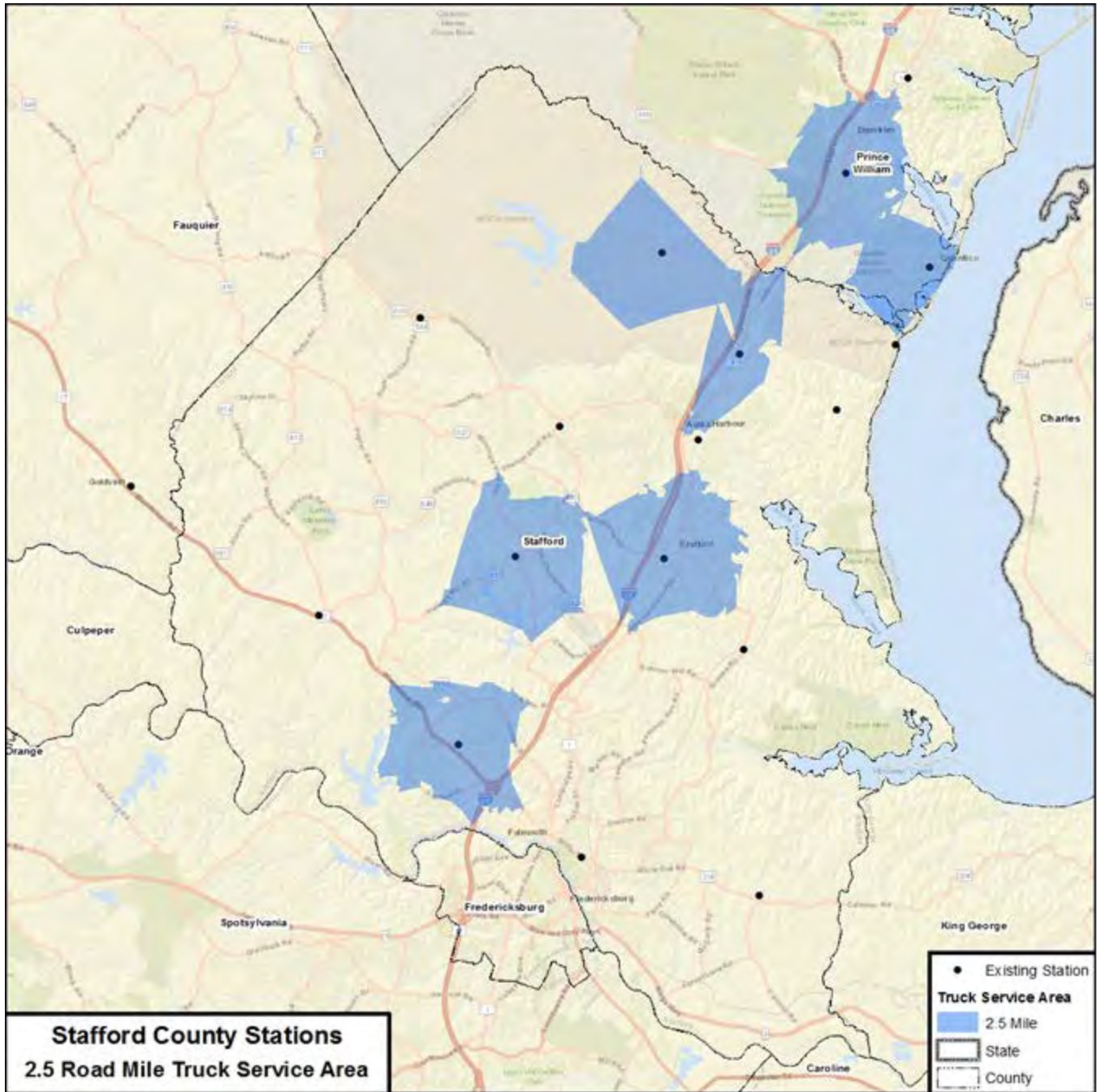


Figure 36: Stafford County – Truck Company Coverage

In reviewing and analyzing the region, the response area footprint for Station 10 is limited due to access streets being dead-end or non-existent for cross travel. A more advantageous location would be at Station 9, where a more heavily populated area could be covered along with better access to the west. Eventually, the county may need to place an additional truck in the north/northwest region of the



county. Presently, Station 8 would be the most appropriate. These recommendations are depicted in the maps below.

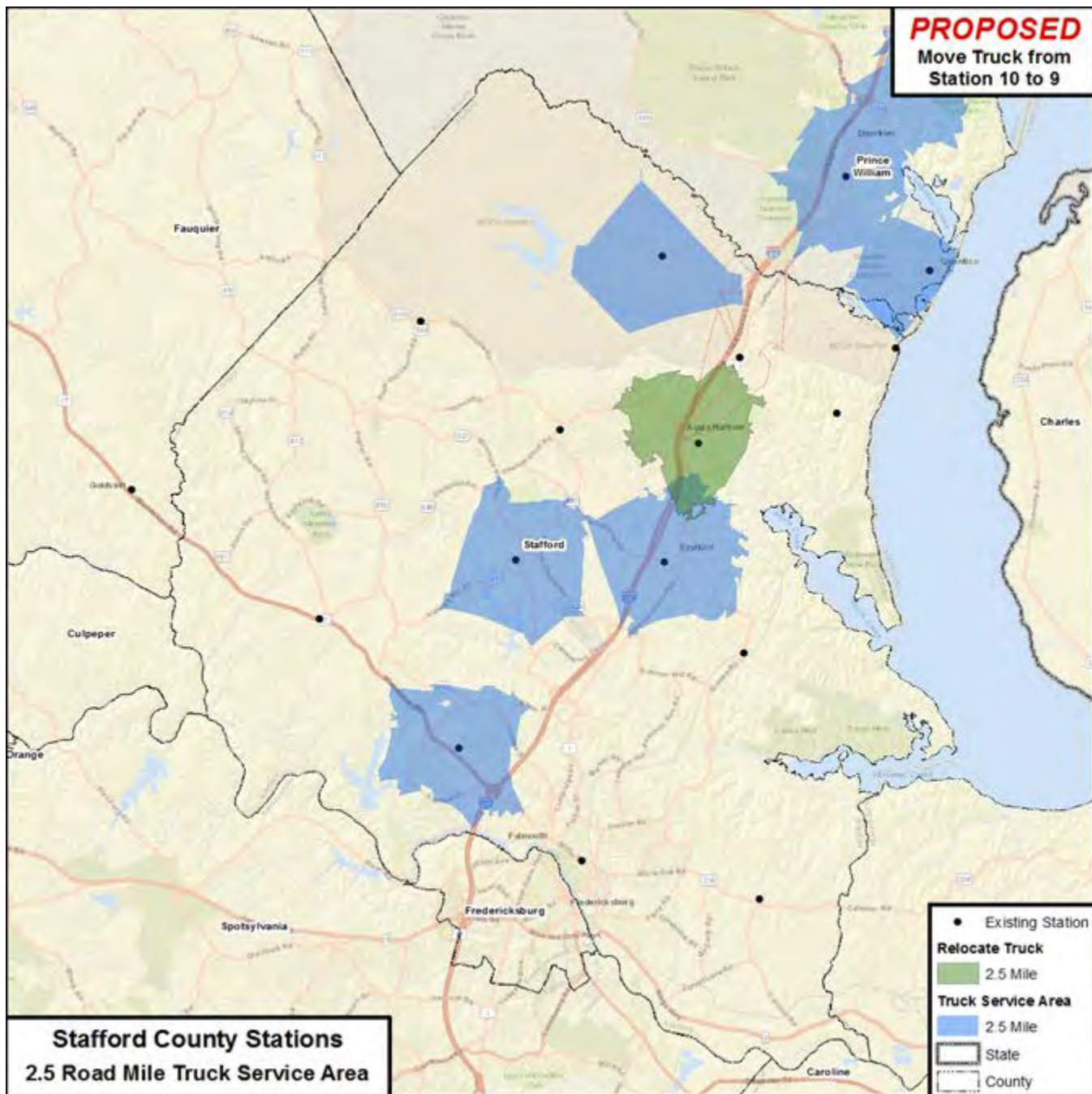


Figure 37: Stafford County – Proposed Changes

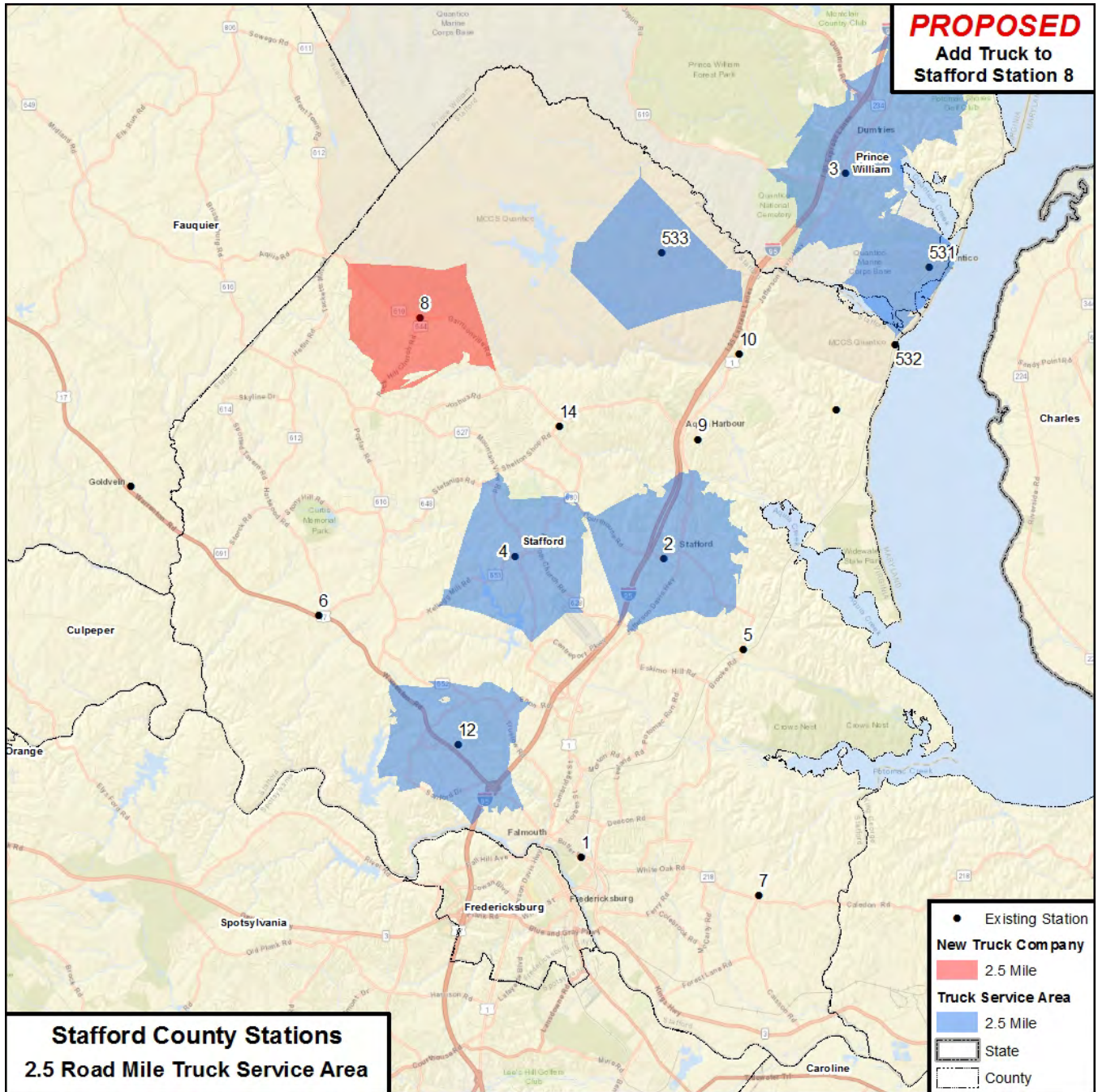


Figure 38: Stafford County – Proposed Changes

The 5-mile station coverage area for the county is not a huge issue. However, there are specific regions that are outside the protected area. As mentioned previously, the Cropp/Dodds Corner region is in the non-protected class, as is the peninsula along State Route 655 and that surrounding region. The



peninsula region appears to have large single-family dwellings. Due to a lack of bridges, it appears the area receives no relief from other counties. These details are represented in Figure 39 below.

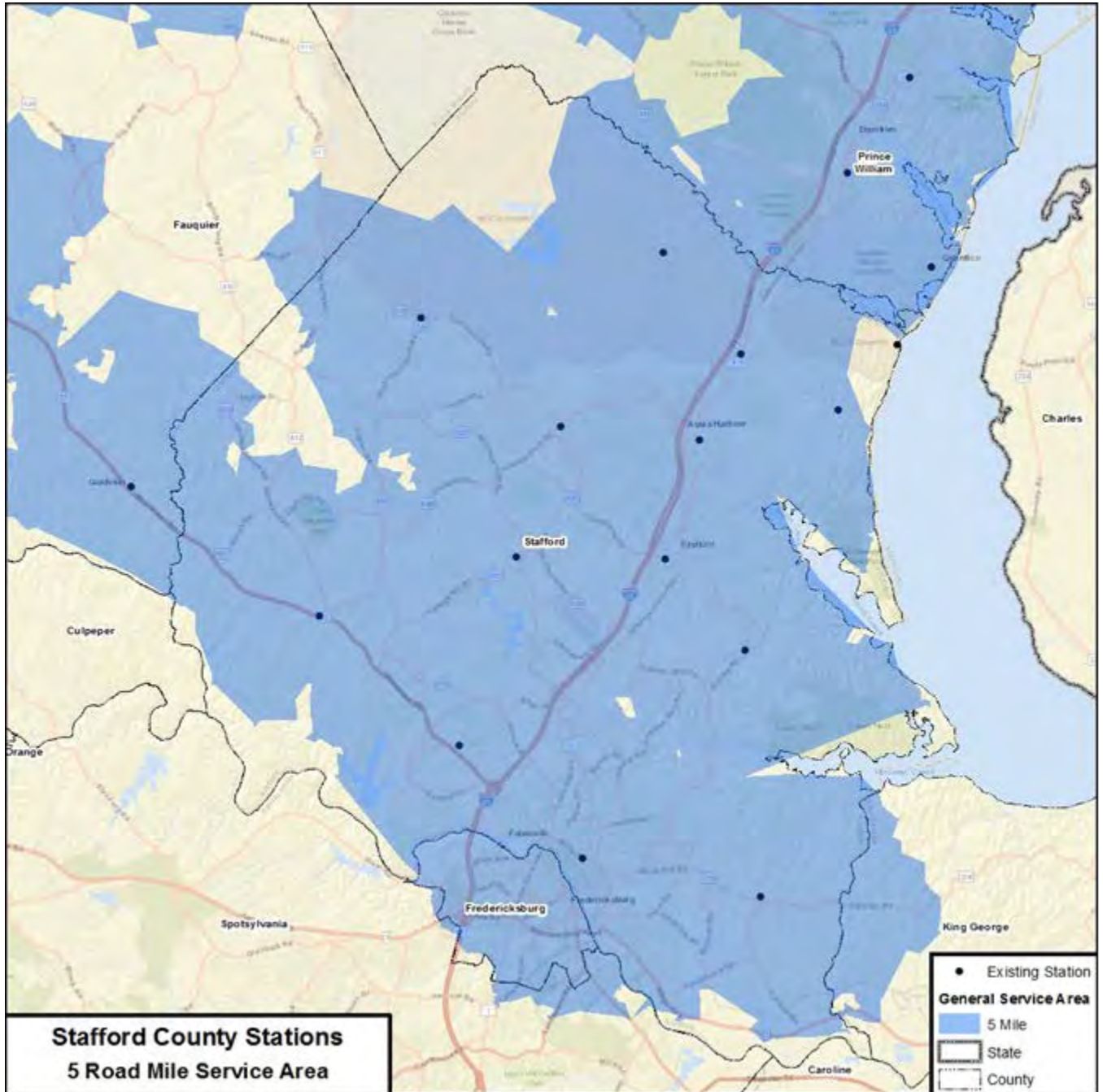


Figure 39: Stafford County General Service Coverage



TRAVEL DISTANCES & ON-SCENE TIME

The expectation when someone dials 9-1-1 is an immediate or timely response by first responders. Understanding and recognizing that, time parameter best practices and standards are set by several different associations and entities in the public safety industry, including the National Emergency Number Association (NENA), NFPA and ISO. This report does not analyze the performance in the emergency communications; however, their performance is indeed the first facet of time. Delayed dispatch of services directly impacts the on-scene time, which in turn affects overall performance. Standards state that communications centers should meet a 60-second call-processing-to-dispatch threshold; reports show a 90-second timeframe is more realistic. In 2016, MCP delivered a gap analysis report on the NoVA region based on standards in NFPA 1710. The information regarding deployment capabilities of the region gathered in that report is directly related to this Phase; therefore, excerpts were used in this report to show compliance levels to the standards. Additionally, data provided by each jurisdiction was studied and is used to reinforce whether times are being met in geographic areas of concern. While standards use 90 percent-of-the-time benchmarks, a more realistic goal is usually in the 80 percent range. The overall response times used to analyze were those identified in the Phase I report for each of the following jurisdictions.

City of Alexandria

Travel time to all structure-related calls was in the 60 percent range. To that end, and analyzing 2016 data that was provided and specifically looking at the area of Alexandria West, the on-scene times to the area in question are not excessive and fall within the parameters of the previous study. Average on-scene time for medical care was 3:30 after response if the unit was in its primary area. Extended estimated times of arrival (ETA) were seen as part of the review if units other than first-due units were handling the call.

Arlington County

Travel time for the first-due engine company to all structure-related calls was 78 percent of the time on scene within 240 seconds. As stated earlier in the report, the Crystal City/Pentagon City area is the busiest station in the system. Both fire and EMS surpass the next station by hundreds of calls. Covering multiple calls in this area is a challenge to meet the required time standards. Albeit, for the county in general, their response to fire alarms is substantial compared with other types of calls. Thus, turnaround time for these fire units is relatively quick. On the other hand, EMS calls for Station 105 are 700 calls more than any other station. Thus, second- and third-due calls in that area – most likely handled by Metropolitan Washington Airports Authority EMS, Station 101 or Station 109 – have extended on-scene times. Consideration should be given to adding a second ALS at Station 105 and having two units deployed from that station during the busiest times of the day.



City of Fairfax

Travel time for the first-due engine company to all structure-related calls was 71 percent of the time on scene within 240 seconds. Advanced medical care was on scene 93 percent of the time, meeting the 480-second standard.

Fairfax County

Travel time for the first-due engine company to all structure-related calls was 47.5 percent of the time on scene within 240 seconds. Advanced medical care was on scene 82 percent of the time, meeting the 480-second standard. MCP reviewed response statistics to structure-related calls and found that for a large majority of calls some element of Fairfax County Fire Rescue was on the scene within four minutes. Some of these units were duty Chiefs and EMS units. However, size-up could be done and information provided to incoming apparatus. Statistics showed that a first-due suppression unit arriving was in line with the previous, Phase I, NFPA 1710-based study. It is noted that on full assignments, most on-scene times were usually from four to ten minutes, with time of day being a factor for extended arrival times.

Fauquier County

The county did not supply data for this report.

Loudoun County

Travel time for the first-due engine company to all structure-related calls in the urban/suburban areas met the on-scene standard approximately 50 percent of the time. A spot check of times indicated the standard was met the most for the more populated area around Dulles airport. Obviously in the rural area the standard is a challenge to meet.

City of Manassas

Travel time for the first-due engine company to all structure-related calls in the city meets the 90 percent threshold.

City of Manassas Park

Travel time for the first-due engine company to all structure-related calls in the city meets the 90 percent threshold.



Prince William County

Travel time for the first-due engine company to all structure-related calls was in the 50 percent range. A review of response times to various areas of the county reflected a wide array of arrival times. As with Loudoun County, higher population and proximity to a fire station led to better times. However, more rural parts of the county see times of up to 10 minutes for arrival of a first-due suppression piece.

Stafford County

Travel time for the first-due engine company to all structure-related calls was not provided. However, review of EMS statistics shows a wide range of on-scene times. Most elevated times show that an EMS unit was covering for another and had a distance to travel.

RECOMMENDATIONS

Below are recommended changes to the current station locations, or service equipment locations, in order to improve coverage areas and response times.

- Appropriation of equipment or purchase of new equipment to cover service gaps
 - City of Alexandria and Arlington County – City of Alexandria can add truck to Station 207 or Arlington County can add truck to Station 109
 - Fauquier County – Add truck to Station 3
 - Loudoun County – Add truck to Station 610
 - Prince William County – Add truck to Station 504, Station 506 or Station 507

- Construction of fire stations to cover station location gaps
 - Fairfax County – Consider Hunters Mill area and N/NW of McLean
 - Fauquier County– Bealeton area
 - Loudoun County – Route 15
 - City of Manassas – Hastings Drive area
 - Prince William County – Catharpin

- Movement of apparatus or station closings
 - Arlington County – Move Medic 103 to Medic 105 station and make it a two-unit house; move Station 103 or Station 108 further north; close Station 107 or transition to EMS only
 - Stafford County – Move truck from Station 10 to Station 9; close Station 3



MINIMUM TRAINING & CERTIFICATION REQUIREMENTS

The 11 jurisdictions of Northern Virginia were asked to provide job descriptions along with the required training and certification requirements for each rank/position within their fire and rescue department. Ten of the 11 jurisdictions in the NoVA region participated. The collection and analysis of this data helped shed light on the similarities and differences between the jurisdictions – from the variance in rank structure and primary duties to the required training and certification necessary to hold a specific rank. The tables below demonstrate, by position, the requirements to hold that position in each jurisdiction.

In the charts and additional requirements addressed below, the following acronyms will be used.

Term/Acronym	Explanation
ACFD	Arlington County Fire Department
ACLS	Advanced Cardiac Life Support
AED	Automatic External Defibrillator
BLS	Basic Life Support
CPR	Cardiopulmonary Resuscitation
DPO	Driver Pumper Operator
EMT-I	Emergency Medical Technician – Intermediate
EMT-P	Emergency Medical Technician – Paramedic
EMS	Emergency Medical Services
EVOC	Emergency Vehicle Operator Course
GED	General Education Development
HazMat	Hazardous Materials
HTR	Heavy Technical Rescue
ICS	Incident Command System
ISO	Insurance Services Office
ITLS	International Trauma Life support
NFPA	National Fire Protection Association
NoVA	Northern Virginia
PALS	Pediatric Advanced Life Support
RIT	Rapid Intervention Team
VDFP	Virginia Department of Fire Programs



FIREFIGHTER	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County ⁶	Stafford County
Education											
High School/GED	X	X	X	X	ND ⁷	X	X	X			NP ⁸
Some College											
Associate's Degree											
Bachelor's Degree											
Master's Degree											
Certifications											
HazMat	X	X	X	X		X	X	X	X	X	
CPR	X	X	X	X		X	X	X	X	X	
DPO		X						X			
EVOC	X	X	X			X	X	X		X	
Rural Water											
MayDay RIT						X	X			X	
Firefighter I	X	X	X			X		X	X	X	
Firefighter II	X	X	X			X	X	X		X	
Firefighter III											
Instructor I											
Instructor II											
Fire Officer I											
Fire Officer II											
Fire Officer III											
EMT-B	X	X	X	X		X	X	X	X	X	
EMT-I											
EMT-P											
ICS 100	X	X	X	X		X	X	X		X	
ICS 200	X	X	X	X		X	X	X			
ICS 300											
ICS 400											

⁶ In Prince William County, the Technician I position (Lead Firefighter) is equivalent to other jurisdictions' Firefighter position

⁷ No data provided by Fauquier County

⁸ Stafford County does not have the position of Firefighter. The lowest ranking position is Technician.



FIREFIGHTER	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County ⁶	Stafford County
ICS 700	X	X	X	X		X	X	X			
ICS 800	X	X	X	X			X	X			
Special Requirements											
Age	18		18	18		18 ⁹		18		18	
Years of Experience								2			
Fitness Evaluation	X	X	X			X		X	X	X	
Criminal Background Check	X	X	X	X		X		X		X	
Driver's License	X	X	X	X		X	X	X		X	
Driving Record		X	X			X		X		X	

Additional requirements, by jurisdiction, to be a Firefighter:

- City of Alexandria
 - HazMat Awareness and Operations
 - EVOC III
 - Successful completion of Fire and Rescue recruit training
 - Successful completion of a polygraph examination

- Arlington County
 - EVOC I/II
 - VDFP and County Aerial Apparatus Operator
 - VDFP Vehicle Extrication I
 - VDFP HTR MOD (technical rescue modules I/II)
 - ACFD Rescue Company Training
 - Traffic Incident Management Safety Course
 - NoVA Manuals

⁹ Must be 21 years old to drive heavy apparatus



- 30 hours monthly training
- City of Fairfax
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on/off-duty
- Fairfax County
 - Successful completion of a polygraph examination
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on/off-duty
 - Successful completion of Fire and Rescue recruit training
 - Obtain Class A Medical Rating
- Loudoun County
 - EMT-B or EMT-I/EMT-P is acceptable
 - Loudoun County Bloodborne Pathogens
 - EVOC III
 - VDFP Introduction to HTR
 - NoVA Manuals Introduction
 - Liquid Propane Gas Emergencies
 - Successful completion of a polygraph examination
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on or off-duty
 - Successful completion of Fire and Rescue recruit training
 - Firefighters can drive standard vehicles at 18 years old, light- and medium-duty apparatus at 18 years old and heavy apparatus at 21 years old
- Prince William County
 - EMT-B or EMT-I/EMT-P is acceptable
 - Prince William County's Infection Control
 - Prince William County's Stress First Aid
 - Truck/Rescue Requirements



- Confined Space Level I
 - Trench Operations Level I
 - Rope Level I
 - EVOC III
 - VDFP Introduction to HTR
 - VDFP Vehicle Level I
 - If assigned to a Truck Company, drivers must have Aerial Operations training
- City of Manassas
 - Vocational/technical training in fire suppression and emergency medical care; previous experience preferred
 - EVOC II
- City of Manassas Park
 - HazMat Awareness and Operations
 - EVOC III
 - Successful completion of Fire and Rescue training
 - Successful completion of a polygraph examination
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on/off-duty
 - EMT-B or EMT-I/EMT-P is acceptable



FIREFIGHTER MEDIC	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County	
Education												
High School/GED	X	NP ¹⁰	X	X	No Data ¹¹	NP ¹²	X	X	X	NP ¹³	NP ¹⁴	
Some College												
Associate's Degree												
Bachelor's Degree												
Master's Degree												
Certifications												
HazMat	X		X	X			X	X	X			
CPR	X		X	X			X	X				
DPO								X				
EVOC	X		X	X			X	X				
Rural Water								X				
MayDay RIT								X				
Firefighter I	X		X						X			X
Firefighter II	X		X						X			X
Firefighter III												
Instructor I												
Instructor II												
Fire Officer I												
Fire Officer II												
Fire Officer III												
EMT-B												

¹⁰ No position in Arlington County

¹¹ No data provided by Fauquier County

¹² No position in Loudoun County

¹³ There is no dedicated position known as Firefighter/Medic in Prince William County. Any ALS provider, regardless of rank, can staff a medic unit. Rank of Captain and below assigned to medic units.

¹⁴ No position in Stafford County



FIREFIGHTER MEDIC	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County
EMT-I	X ¹⁵		X ¹⁶	X ¹⁷			X	X	X ¹⁸		
EMT-P	X		X	X			X	X	X		
ICS 100	X		X	X			X	X			
ICS 200	X		X	X			X	X			
ICS 300											
ICS 400											
ICS 700	X		X	X			X	X			
ICS 800	X		X	X			X	X			
Special Requirements											
Age	18		18	18				18	18		
Years of Experience	1							2	1		
Fitness Evaluation	X		X	X				X	X		
Criminal Background Check	X		X	X				X			
Driver's License	X		X	X			X	X	X		
Driving Record			X					X			

Additional requirements, by jurisdiction, to be a Firefighter Medic:

- City of Alexandria
 - HazMat Awareness and Operations
 - EVOC III
 - Successful completion of Fire and Rescue recruit training
 - Successful completion of a polygraph examination
 - Advanced Cardiac Life Support (ACLS)
 - International Trauma Life support (ITLS) Pediatric Advanced Life Support (PALS)

¹⁵ EMT-I or EMT-P certification is acceptable

¹⁶ EMT-I or EMT-P certification is acceptable

¹⁷ EMT-I or EMT-P certification is acceptable

¹⁸ EMT-I or EMT-P certification is acceptable



- City of Fairfax
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on/off-duty
 - Pass the Department's ALS certification standards
 - Have a Class "A" medical rating (Class "B"/"C" ratings case by case, Class "D" not considered)

- Fairfax County
 - Full Advanced Life Support provider certification (A & C)
 - Advanced Cardiac Life Support (ACLS)
 - International Trauma Life support (ITLS) Pediatric Advanced Life Support (PALS)
 - Successful completion of a polygraph examination
 - Must be tobacco-free and nicotine-free at the time of appointment and willing to sign agreement not to use either while on/off-duty
 - Successful completion of Fire and Rescue recruit training
 - Obtain Class A Medical Rating

- City of Manassas
 - Vocational/technical training in fire suppression and emergency medical care; previous experience preferred
 - Incident Officer Certification
 - Infection Control Certification
 - EVOC II

- City of Manassas Park
 - Meet all requirements of Firefighter position
 - Advanced Cardiac Life Support (ACLS)
 - International Trauma Life Support (ITLS) Pediatric Advanced Life Support (PALS)

- MWAA
 - Advanced Cardiac Life Support (ACLS) certification



FIREFIGHTER TECHNICIAN	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County ¹⁹	Stafford County
Education											
High School/GED	NP ²⁰	NP ²¹	X	X	ND	X	X	NP ²²		X	X
Some College											
Associate's Degree											
Bachelor's Degree											
Master's Degree											
Certifications											
HazMat			X	X ²³		X	X		X	X	X
CPR			X	X		X			X	X	
DPO			X	X		X	X			X	
EVOC			X	X		X	X		X	X	X
Rural Water										X	
MayDay RIT						X				X	
Firefighter I			X	X		X				X	X
Firefighter II			X	X		X	X			X	X
Firefighter III											
Instructor I											
Instructor II											
Fire Officer I											
Fire Officer II											
Fire Officer III											
EMT-B			X	X		X	X		X	X	
EMT-I				X ²⁴							X

¹⁹ Firefighter Technician is similar to Technician II in Prince William County. Technician II can be an ALS provider.

²⁰ No position in City of Alexandria

²¹ No position in Arlington County

²² No position in City of Manassas Park

²³ Fairfax County has a Technician position with four separate specialties. Each specialty (HazMat, Technical Rescue, and EMS) requires certification of either HazMat, EMT-I, or EMT-P, depending on specialty area.

²⁴ Ibid.



FIREFIGHTER TECHNICIAN	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County ¹⁹	Stafford County
EMT-P				X ²⁵							
ICS 100			X	X		X	X			X	
ICS 200			X			X	X			X	
ICS 300											
ICS 400											
ICS 700			X	X		X				X	
ICS 800			X								
Special Requirements											
Age			18	18						18	
Years of Experience			2	2		3 ²⁶	2			2	
Fitness Evaluation			X	X						X	
Criminal Background Check			X	X		X				X	
Driver's License			X	X			X			X	X
Driving Record			X	X		X				X	
Operate all Dept. Vehicles			X	X ²⁷					X	X	X
Tobacco Free			X						X	X	X

Additional requirements, by jurisdiction, to be a Firefighter Technician:

- Loudoun County:
 - Liquid Propane Gas Emergencies
 - EVOC III
 - Loudoun County Bloodborne Pathogens

²⁵ Ibid.

²⁶ As a career LCFR Firefighter/EMT or LCFR Assistant Fire Marshal

²⁷ Dependent upon Technician specialty area



- City of Manassas:
 - Education supplemented by vocational/technical training
 - An equivalent combination of education, training and experience is acceptable
 - Aerial Operations

- Prince William County:
 - Technician II is primarily a driver/operator position and routinely rides as an Acting Officer
 - If assigned to a Truck Company, drivers must have Aerial Operations training
 - Truck/Rescue Requirements
 - Rope Level I
 - Confined Space Level I
 - Trench Operations Level I



LIEUTENANT	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County		
Education													
High School	X		X	X	ND ²⁸	X	X	NP ²⁹	ND ³⁰	X			
Some College		X ³¹									X ³²		
Associate's Degree													X
Bachelor's Degree													
Master's Degree													
Certifications													
HazMat	X	X	X	X		X	X			X	X		
CPR	X	X	X			X	X			X			
DPO	X	X		X		X					X		
EVOC	X	X	X			X	X				X	X	
Rural Water							X				X		
MayDay RIT						X	X				X		
Firefighter I	X	X	X			X					X		
Firefighter II	X	X	X			X					X	X	
Firefighter III													
Instructor I	X		X	X		X	X				X	X	
Instructor II							X						
Fire Officer I	X	X	X	X		X	X				X	X	
Fire Officer II							X						
Fire Officer III													
EMT-B	X	X	X	X		X	X				X		
EMT-I													
EMT-P													
ICS 100	X	X	X	X	X	X		X					

²⁸ No data provided by Fauquier County

²⁹ No position in City of Manassas Park

³⁰ No data provided for this position

³² 15 semester hours or more from a college or university

³² 15 semester hours or more from a college or university



LIEUTENANT	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County
ICS 200	X	X	X	X		X	X			X	
ICS 300			X			X					
ICS 400			X								
ICS 700	X	X	X	X		X	X			X	
ICS 800	X	X	X	X			X				
Special Requirements											
Age			18								
Years of Experience	3	5	3	5		4				X	
Fitness Evaluation	X	X	X	X		X				X	
Criminal Background Check		X	X			X				X	
Driver's License	X	X	X	X		X	X			X	X
Driving Record		X	X			X				X	

Additional requirements, by jurisdiction, to be a Lieutenant:

- City of Alexandria
 - Continuous service of three years from date of hire as a City of Alexandria Fire Department Firefighter

- City of Fairfax
 - Must have three years' experience with the City
 - ICS 300 and 400 must be completed within one year of promotion
 - If serving as an EMS Lieutenant, then Paramedic is required
 - Successful completion of the Move-Up Officer Practical Application of Knowledge Evaluation Program prior to or within 60 days of promotion
 - Completion of City Officer Development School
 - Adhere to the No Tobacco Use Policy



- Fairfax County
 - Five years of paid field experience following graduation from a recruit school as a Firefighter or higher rank

- Loudoun County
 - High School diploma/GED and any combination totaling four years as a career LCFR Firefighter/EMT, LCFR Technician, or LCFR Assistant Fire Marshal,
 - EVOC III
 - Liquid Propane Gas Emergencies
 - Loudoun County Bloodborne Pathogens
 - e-Learning sexual harassment course

- City of Manassas
 - Crew leader for one year

- Prince William County
 - Six years of paid field experience following graduation from recruit school as a Firefighter or higher rank
 - Prince William County's Incident Officer
 - Can be ALS providers
 - Trust/Rescue Requirements (if assigned to a Truck/Rescue)
 - Rope Level I
 - Confined Space Level I
 - Trench Operations Level I

- Stafford County
 - Driver Aerial Operations



CAPTAIN	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County	
Education												
High School	X		X	X	ND ³³	X	X			X		
Some College		30+ hrs						30+ hrs		45 hrs ³⁴		
Bachelor's Degree											X ³⁵	
Master's Degree												
Certifications												
HazMat	X	X	X	X		X	X	X	X	X	X	
CPR	X	X	X	X		X	X	X	X	X	X	X
DPO	X					X	X	X		X	X	
EVOC	X	X	X			X	X	X		X	X	
Rural Water							X	X		X		
MayDay RIT						X	X	X		X		
Firefighter I	X	X	X			X		X		X		
Firefighter II	X	X	X			X		X		X		
Firefighter III												
Instructor I	X		X			X	X	X		X	X	
Instructor II	X		X	X		X	X			X		
Fire Officer I	X		X			X	X	X		X	X	
Fire Officer II	X		X			X	X	X		X		
Fire Officer III				X								
EMT-B	X	X	X	X		X	X	X		X	X	
EMT-I												
EMT-P									X			
ICS 100	X	X	X	X		X	X	X		X	X	
ICS 200	X	X	X	X		X	X	X		X	X	

³³ No data provided

³⁴ 45 quarter hours of education at the community college level, 23 of which are in Fire/Rescue related subjects excluding internship

³⁵ Any combination of education and experience equivalent to graduation from an accredited college or university with a degree



CAPTAIN	City of Alexandria	Arlington County	City of Fairfax	Fairfax County	Fauquier County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	PW County	Stafford County
ICS 300	X	X	X	X		X	X	X		X	X
ICS 400	X	X	X	X		X		X			
ICS 700	X	X	X	X		X	X	X		X	X
ICS 800	X	X	X	X			X	X		X	
Special Requirements											
Age			18								
Years of Experience	1 as Lt.	4	3	3 as Lt.		2 as Lt.	2 as Lt.	2 as Acting Company Officer		2 as Lt.	
Rank as Lt.	X	X	X	X		X				X	
Fitness Evaluation	X	X	X	X		X		X		X	
Criminal Background Check	X		X			X		X		X	
Driver's License	X	X	X	X		X	X	X		X	X
Driving Record			X			X		X		X	

Additional requirements, by jurisdiction, to be a Captain:

- Arlington County
 - Four years of experience with one as a Lieutenant and one year post-probation
- Fairfax County
 - Must obtain ICS 300 and ICS 400 before sitting for the Captain II exam
- Loudoun County
 - High School diploma/GED and any combination totaling six years as a career LCFR Firefighter/EMT, LCFR Technician, LCFR Assistant Fire Marshal, LCFR Lieutenant, or LCFR Lieutenant with at least two years as a career LCFR Lieutenant
 - Mass Casualty Incident Level II
 - Liquid Propane Gas Emergencies



- EVOC III
- Loudoun County Bloodborne Pathogens
- e-Learning sexual harassment course

- City of Manassas
 - Certification/training in operation of aerial equipment
 - Airport Fire (16 hours)

- City of Manassas Park
 - NIMS 701, 702, 703, 704

- Prince William County
 - EVOC III



PRIMARY DUTIES/RESPONSIBILITIES

In addition to evaluating training and certification requirements, MCP also examined the primary duties and responsibilities assigned to each position in each jurisdiction. The full chart can be found following the synopsis below.

Station Supervisors

In nine jurisdictions, Captains perform the duties of Station Supervisors. They include: City of Alexandria, Arlington County, City of Fairfax, Fairfax County, Loudoun County, City of Manassas, MWAA, Prince William County and Stafford County. Additionally, in the City of Manassas and Stafford County, Lieutenants also serve as shift supervisors. In the City of Manassas Park, Battalion Chiefs fulfill this role.

Shift Supervisors

Shift Supervisor responsibilities are handled by the Deputy Chiefs in Stafford County. Battalion Chiefs fulfill the duties in five jurisdictions, including: City of Fairfax, City of Manassas, City of Manassas Park, MWAA, and Prince William County. Captains are shift supervisors in the City of Alexandria, Fairfax County, Arlington County and in the City of Manassas Park. In Loudoun County, Lieutenants fulfill the duties. Additionally, in Prince William County, Technicians I and II help to fulfill the responsibilities. Note that those in the rank of Technician I act as a back-up when there is not a Battalion Chief or Technician II available.

Battalion Commander

In all but one jurisdiction, the Battalion Chief acts as the primary Battalion Commander. The only exception is in the City of Manassas Park, where in addition to the Battalion Chief, Assistant Chiefs and Chiefs serve in this role.

Division Commander

Five jurisdictions have Deputy Chiefs who primarily serve as the Division Commander: City of Alexandria, Arlington County, Fairfax County, Stafford County and Loudoun County. Three jurisdictions assign this role to their Battalion Chief: City of Manassas Park, MWAA, and Prince William County. The City of Manassas Park also assigns these duties to its Assistant Chief. The City of Fairfax and the City of Manassas do not assign this role to anyone; the duties are not necessary for day-to-day operations.

Section Commander

Section Commander duties are performed by Chiefs in all eight jurisdictions that assign this as a primary duty. The City of Fairfax and the City of Manassas do not assign the role of Section



Commander as a primary duty. The City of Alexandria, Fairfax County, Loudoun County, MWAA, the City of Manassas Park, Prince William County and Stafford County all assign the duties to their Assistant Chief. Arlington County assigns the duties to the Deputy Chief as does MWAA, which assigns the responsibilities to two different ranks. The City of Manassas Park assigns the duties to the Battalion Chief and the Chief. Loudoun County also assigns this duty to the Firefighter/Medic rank.

Department Supervisor

The Chief primarily serves as the Department Supervisor in the following jurisdictions: City of Alexandria, the City of Fairfax, Fairfax County, Loudoun County, MWAA, and Stafford County. In Arlington County and the City of Manassas Park, the role is filled only by the Assistant Chief. In the City of Manassas, the role is filled by the Deputy Chief. In Prince William County, it is fulfilled by the Chief and the Deputy Chief. It should be noted that the Deputy Chief is the second in command in both the City of Manassas and in Prince William County.



PRIMARY DUTIES	City of Alexandria	Arlington	City of Fairfax	Fairfax County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	Prince William County	Stafford County
Primarily responsible for providing fire suppression	Firefighter/ EMT I Firefighter/ EMT II Firefighter/ EMT III Lieutenant Captain	Firefighter Lieutenant Fire/EMS Captain I Fire/ EMS Captain II Battalion Chief	Firefighter Fire Technician Lieutenant Captain	Firefighter	Firefighter/ EMT	Firefighter/ EMT	Firefighter/ EMT I Firefighter/ EMT II Captain Battalion Chief	Firefighter Fire Technician	Technician I Technician II Lieutenant Captain Battalion Chief	Technician I Technician II Master/ Senior Technician Lieutenant
Primarily responsible for providing Basic EMS care	Firefighter/ EMT I Firefighter/ EMT II Firefighter/ EMT III	Firefighter/ EMT I Firefighter/ EMT II Firefighter/ EMT III Lieutenant Fire Captain I Fire/EMS Captain II Battalion Chief	Firefighter Firefighter/ Medic Master Firefighter/ Medic Fire Technician Lieutenant Captain	Firefighter/ EMT	Firefighter/ EMT	Firefighter/ EMT	Firefighter/EMT I and II Captain Battalion Chief	Firefighter/ EMT Firefighter/ Medic	Technician I Technician II Lieutenant Captain Battalion Chief	Technician I Technician II Master/ Senior Technician
Primarily responsible for providing Advanced EMS care	Firefighter/ Medic I Medic II Medic III Medic IV	Firefighter/ EMT III Lieutenant Fire/EMS Captain I Fire/EMS Captain II Battalion Chief	Firefighter/ Medic Master Firefighter/ Medic Lieutenant	Fire Technician	Firefighter Technician Lieutenant Captain (with ALS certification)	Firefighter/ Medic	Firefighter/EMT II Captain Battalion Chief	Firefighter/ Medic	Technician I Technician II Lieutenant Captain Battalion Chief (with ALS certification)	Technician I Technician II Master/ Senior Technician
Primarily responsible for driving and maintaining fire apparatus	Firefighter/ EMT II	Firefighter/ EMT I Firefighter/ EMT II Firefighter/ EMT III	Fire Technician	Fire Technician	Fire Technician	Master/Se nior Technicia n	Firefighter/ EMT I Firefighter/ EMT II	Firefighter Fire Technician	Technician I (acts as back-up) Technician II	Master/ Senior Technician
Primarily responsible for driving and	Firefighter/ EMT II Firefighter/ Medic IV	Firefighter/ EMT I Firefighter/ EMT II	Firefighter/ Medic Master	Firefighter/ EMT	Firefighter/ EMT	Firefighter/ Medic	Captain Battalion Chief	Firefighter Fire Technician EMS Captain	Technician I Technician II	Technician I Technician II



PRIMARY DUTIES	City of Alexandria	Arlington	City of Fairfax	Fairfax County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	Prince William County	Stafford County
maintaining EMS apparatus	Medic II Medic III Medic IV	Firefighter/ EMT III	Firefighter/ Medic							
Primarily serves as your Shift Supervisor/ Commander	Captain	Fire Captain I Fire/ EMS Captain II	Battalion Chief	Fire Captain I	Lieutenant	Battalion Chief	Captain Battalion Chief	Battalion Chief	Battalion Chief	Deputy Chief
Primarily serves as your Station Supervisor/ Commander	Captain	Fire/ EMS Captain II	Fire Captain	Fire Captain II	Captain	Captain Lieutenant	Battalion Chief	Fire Captain	Captain	Captain Lieutenant
Primarily serves as Battalion Commander	Battalion Chief	Battalion Chief	Battalion Chief	Battalion Chief	Battalion Chief	Battalion Chief	Battalion Chief Assistant Chief Chief	Battalion Chief	Battalion Chief	Battalion Chief
Primarily serves as Division Commander	Deputy Chief	Deputy Chief		Deputy Chief	Deputy Chief		Battalion Chief Assistant Chief	Battalion Chief	Battalion Chief	Deputy Chief
Primarily serves as Section Commander	Assistant Chief	Deputy Chief		Assistant Chief	Firefighter/ Medic Assistant Chief		Battalion Chief Assistant Chief Chief	Deputy Chief Assistant Chief	Assistant Chief	Assistant Chief
Primarily responsible for providing oversight to overall Shift Training	Deputy Chief	Battalion Chief Fire/ EMS Captain II	Lieutenant	Deputy Chief	Captain Lieutenant	Battalion Chief	Captain Battalion Chief	Battalion Chief	Battalion Chief	Lieutenant
Serves as Department Supervisor	Chief	Assistant Chief	Chief	Chief	Chief	Deputy Chief	Assistant Chief	Chief Assistant Chief	Chief Deputy Chief	Chief
Primarily responsible for mitigating Hazardous Materials incidents	Firefighter/ EMT III Captain Lieutenant	HazMat Technician HazMat Specialist	Firefighter Firefighter/ Medic Master Firefighter/ Medic Fire	Fire Technician	Firefighter/ EMT (with HazMat Certification)	Firefighter/ EMT	Firefighter/ EMT I and II Captain Battalion Chief	Fire Technician	Technician I Technician II Lieutenant Captain Civilian HazMat Officer Battalion Chief	Technician I Technician II Master/Senior Technician Lieutenant Battalion Chief

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PRIMARY DUTIES	City of Alexandria	Arlington	City of Fairfax	Fairfax County	Loudoun County	City of Manassas	City of Manassas Park	MWAA	Prince William County	Stafford County
			Technician Lieutenant Captain							
Primarily responsible for mitigating Technical Rescue incidents	Firefighter/ EMT III Captain Lieutenant	All personnel certified to the state technician or specialist level in Technical Rescue	Firefighter/ Medic Master Firefighter/ Medic Fire Technician Lieutenant Captain	Fire Technician	Firefighter/ EMT	Firefighter/ EMT Firefighter/ Medic	Firefighter/ EMT I and II Captain Battalion Chief	Firefighter Fire Technician	Technician I Technician II Lieutenant Captain Battalion Chief	Technician I Technician II Master/Senior Technician Lieutenant Battalion Chief
Primarily responsible for mitigating Water/Marine/Swift Water incidents	Firefighter/ EMT III Captain Lieutenant	All personnel certified to the state technician or specialist level in swift water	Firefighter/ Medic Master Firefighter/ Medic Fire Technician Lieutenant Captain	Fire Technician	Firefighter/ EMT (with Swift Water Certification)	Firefighter Firefighter/ Medic	Firefighter/ EMT I and II Captain Battalion Chief	Fire Technician	Technician I Technician II Lieutenant Captain Battalion Chief	Technician I Technician II Master/ Senior Technician Lieutenant Battalion Chief



CONCLUSION

Through extensive data collection, and evaluation, the NoVA Fire & EMS Phase II assessment identified areas in the region where Fire and EMS coverage can be improved through future construction of fire stations, or relocation of apparatus. This knowledge will help the NoVA Fire Chiefs cooperatively plan and budget for future stations in a way that improves service to the most people with the least economic impact.

Further, this assessment identified the levels of training and the certifications required for each rank/position within the region's fire and EMS departments. This data will help the NoVA Fire Chiefs evaluate whether it is imperative and impactful to change the requirements within specific jurisdictions in order to meet a standard level of service at each rank.