

Fire and Rescue Department

LOB #229:

FIRE PREVENTION SERVICES

Purpose

Fire Prevention Services is responsible for the review of fire alarm, building, sprinkler, tank, range hood, site, and other types of engineering plans for compliance with the Uniform Statewide Building and Statewide Fire Prevention Codes and the Fairfax County Fire Prevention Code. Fire Marshal Plan Review staff provide code interpretations for the building industry and the general public. Service is provided to all developers, architects, engineers, owners, contractors, and designers, and the public at-large who submit plans for new construction, alterations, renovations, or modifications of sites, buildings, building tenants, and fire protection systems.

Description

By 1970, the Office of the Fire Marshal had review and approval authority for all site plans, subdivision rezoning, and sprinkler plans. In 1973, the County Executive directed the Fire Marshal's Office to review all construction plans with the exception of single-family dwellings. In August 1973, the Commonwealth of Virginia adopted the Virginia Uniform Statewide Building Code, which superseded all local building regulations throughout the Commonwealth, including the Fairfax County Building Code. Since that time, the Office of the Fire Marshal has been the agent of the Fairfax County Building Official for the review of construction plans and the inspection of fire protection and life safety features of all new construction except single-family dwellings.

County fire protection engineers review engineering drawings of fire protection systems (e.g., fire alarms, sprinkler systems, etc.) submitted to the County for review for new construction buildings and renovation of existing buildings to ensure compliance with established codes and standards. Staff also provides fire protection plan review services for certain types of plans submitted for the Town of Herndon.

Staff reviews over 25 discrete types of engineering plans for compliance with various codes and standards pertaining to fire protection. Staff reviews sprinkler, fire alarm, site, evacuation, high piled storage, door lock/storage, kitchen hood systems, above/underground tanks, foam, evacuation/lockdown and various types of public safety plans. Staff also provides fast track and walk through services for certain types of plans submitted for review that are eligible for expedited services. Services are provided Monday through Friday from 7:30 a.m. – 4:00 p.m. at the Burkholder Building located at 10700 Page Avenue in Fairfax and at the Monday through Friday from 8:00 a.m. – 4:00 p.m. at the Herrity Building.

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Benefits

This LOB ensures engineering drawings submitted to the County comply with the Uniform Statewide Building Code and the Fire Prevention Code and various industry standards (e.g., NFPA, etc.). Staff also reviews plans associated with installation of aboveground and underground fuel tanks, evacuation plans, high piled storage, and other miscellaneous public safety plans. Reviewing various plans submitted to ensure conformity to these various codes and standards ensures structures are constructed/modified in a safe manner, large events are conducted in a manner so crowds can be evacuated efficiently and safely in the event of an incident, and fuel tanks are installed in a manner to best protect the environment.

Another added benefit of having these systems constructed properly and having public safety plans in place to aid in the evacuation of large crowds is that it helps operational firefighters by having properly installed fire suppression systems to aid in the control and suppression of fires, warning systems and alarms to alert to the presence of fire and smoke, and to evacuate crowds so operational tactics can be focused on firefighting more quickly. This leads to lower life loss and lower fire loss in structures.

This LOB charges a fee for these services and has a BOS directed mandate to recover 90-100 percent of all direct costs associated with enforcing these codes.

Mandates

This LOB is mandated by Title 36-98 of the Code of Virginia which promulgates the Uniform Statewide Building Code. This service is mandatory under Virginia Code § 36-98 et seq. as well as Uniformed Statewide Building Code Section 105.2 and Virginia Code Title 27-97 Statewide Fire Prevention Code Section F-105.3 and then further adopted by Chapter 61-1-3 of the Fairfax County Code, Building Provisions and Chapter 62-2-6 of the Fairfax County Code, Fire Prevention.

Trends and Challenges

The Fire Prevention Services LOB involves engineering plan review and has a direct impact on economic development in the County and is an indicator for workload in the other Fire Marshall's Office LOB (Inspections and Fire Protection Systems).

Additional staffing has allowed this LOB to be more responsive to industry, by meeting with architects and engineers on large projects to discuss plan review comments, participate on large project teams to provide guidance where fire protection systems are concerned and to allow cross training of engineering staff so they can review multiple types of plans.

It is anticipated this LOB will continue to see modest growth in the area of engineering plans review submittals. It is anticipated the currently authorized staffing levels should be able to handle the number of plans submittals; however, the engineering plans complexity is increasing with more urban style development. Requests for phased-in construction/occupancy adds to complex life safety considerations and will require additional staff time to be devoted to evaluate code modification request submittals that may impact overall plan lag times. Additionally, more time will need to be devoted to staff familiarization and training as these types of plans come into the review process because this is a new style of development to the County. It is too early in the planning development cycle at this point to evaluate the full impact of the urban style development and submittal of plans for high-rises in excess of 20 stories on staff's ability to respond to workload demand.

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Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
LOB #229: Fire Prevention Services			
FUNDING			
Expenditures:			
Compensation	\$2,569,548	\$2,746,211	\$1,969,635
Operating Expenses	229,333	267,390	567,954
Total Expenditures	\$2,798,881	\$3,031,596	\$2,537,589
General Fund Revenue	\$1,272,357	\$1,697,863	\$1,485,790
Net Cost/(Savings) to General Fund	\$1,526,524	\$1,333,733	\$1,051,799
POSITIONS			
Authorized Positions/Full-Time Equivalents (FTEs)			
Positions:			
Regular	27 / 27	27 / 27	27 / 27
Total Positions	27 / 27	27 / 27	27 / 27

Metrics

Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Number of engineering plans reviewed annually	8,466	9,895	11,004	11,250	11,500
Revenue generated for engineering plans review annually	\$803,048	\$903,848	\$1,304,391	\$1,450,000	\$1,600,000
Percent of plans review costs recovered annually	98.2%	82.2%	95.6%	90.6%	94.1%
Average number of plans per reviewer	1,058	1,237	1,100	938	958

There has been a significant increase in the number of engineering plan reviews performed between FY 2013 – FY 2015. During FY 2013-FY 2014 there were well in excess of 200 plans on hand ultimately resulting in unacceptable lag time for plan review. The BOS authorized additional engineering staff in FY 2014 and FY 2015 for a total of 4 additional engineers, ultimately resulting in a more timely review of plans. The number of plans on hand currently remains under 100. Plan lag times vary drastically by the types of plans submitted (there are 27 different types of plan submitted for fire marshal review), the quality of plans submitted, and the number of times a plan has been submitted for review, so lag times cannot easily be used as a means of measure due to complexity.

Additional staffing has allowed this LOB to be more responsive to industry, and positively impacted the average number of plans per reviewer. It is anticipated this LOB will continue to see modest growth in the area of engineering plans review submittals.