Proposed	Comments
FIRE AND RESCUE	
Intent	
The Fire and Rescue Plan is designed to maintain Prince William County as a safe community, reducing loss of life, injury, and property from fire and/or accident. The mission of the Department of Fire and Rescue is to protect lives, property, and the environment through timely, professional, humanitarian services essential to the health, safety, and well-being of the community. The ultimate goal is to most efficiently provide fire and rescue services in a manner that will ensure timely responses in a countywide manner. Responses include, but are not limited to, hazardous materials, swift water rescue, technical rescues, and natural disasters. Timely responses by emergency personnel and equipment enable resuscitation efforts to begin in the critical minutes immediately following a cardiac incident. Timely responses also minimize residential fire deaths. In order to supplement response time and reduce risk of injury or death to County residents, the establishment of educational programs, such as Cardio-Pulmonary Resuscitation (CPR) training, automatic external defibrillators (AED), and installation of additional fire protection systems – such as sprinklers, smoke detectors, and other architectural modifications is encouraged.	
Residents and businesses expect a high level of fire and rescue service from their community. This service increases their sense of safety and protects their investment. The intent of this Plan is to establish fire and rescue level of service (LOS) standards for the County, and to encourage new development to achieve those standards. LOS standards are defined as travel time as well as work load capacity, that has been quantified as building square footage, acreage, and equipment needed to provide fire and rescue service that meets local service standards for urban populations, expressed as cost/capita (residential) and cost/incident (non-residential).	
The intent of the Fire and Rescue Plan is to design a system with Fire and Rescue response units that are able to respond to the first call for each unit in a timely fashion, and that meet established LOS standards. It is also intended to provide additional units when the work load increases to the extent that multiple incidents consistently create delays. Where these response units are judged – through application of the LOS standards – to be too far from any proposed development, these standards provide for additional fire and rescue mitigation measures – such as adding fire suppression equipment or making transportation improvements that will reduce travel time for emergency units. This includes reducing travel time within commercial, high-rise residential, and institutional structures.	
The LOS standards for fire and receive facilities are contained in this Dlan in its reliaise and in Arnandin A. The LOS standards are based	
The LOS standards for fire and rescue facilities are contained in this Plan, in its policies and in Appendix A. The LOS standards are based upon recognized and accepted professional and County standards. They also reflect resident demand for such service, as reflected in fire and rescue service calls. These LOS standards ultimately quantify per capita monetary costs for providing Countywide fire and rescue service to new residential and non-residential development. These LOS standards are the basis for the maintenance of existing service and expansion of fire and rescue services in light of new development.	
The LOS standards for fire and rescue services address the location of new development relative to a travel time standard emanating from	
an existing station. LOS mitigation measures have been established for proposed new development that falls within or outside travel time.	
The LOS standards also address work load conscition expressed as calls for fire and rescue corrigion (or incidents). These standards	
The LOS standards also address work load capacities, expressed as calls for fire and rescue service (or incidents). These standards incorporate costs, such as facilities and equipment, for needs which are generated by new development.	
New development beyond the travel time standard for an existing station may require greater mitigation measures than new development located within the travel time standard for an existing station. Developments located outside the standard travel times may require mitigation such as the installation of residential fire suppression sprinklers and other measures as recommended with a rezoning or special use permit application.	

March 18, 2008

Туре	dmont to the Potomac New Location
1	

-

From the Piedmont to the Potomac	<del></del>
Proposed	Comments
The components of the Fire and Rescue Plan are:	Delete redundant language (Planning)
<ul> <li>Intent, Goal, Policies, and Action Strategies</li> </ul>	
<ul> <li>Level of Service Standards for Fire and Rescue Stations Travel Times (in minutes) (Table 1)</li> </ul>	
<ul> <li>Level of Service Standards for Fire and Rescue Station Work Load (Table 2)</li> </ul>	
<ul> <li>Level of Service Standards for Fire and Rescue Facilities (Table 3)</li> </ul>	
<ul> <li>Existing and Projected Fire and Rescue Facilities Map (Figure 1)</li> </ul>	
<ul> <li>Projected Fire and Rescue Station Needs (Table 4)</li> </ul>	
<ul> <li>Level of Service Standards for Fire and Rescue Facilities (Appendix A)</li> </ul>	
<b>GOAL:</b> To achieve and ensure an adequate and timely response to emergencies – including, but not limited to, fire, medical, hazardous materials, and natural disaster emergencies – in accordance with established LOS standards.	
<b>FIRE-POLICY 1:</b> Maintain an Information Management System, to evaluate the achievement of the LOS standards and to monitor service capabilities and needs. Include this information as part of the Fire and Rescue service status reports.	
ACTION STRATEGIES:	
<b>FIRE 1.1</b> Maintain the development of the Altaris Records Management System and integrated system tools, such as Safety PAD and MDC.	
<b>FIRE 1.2</b> Maintain the installation of the computerized reporting and office automation network at each Fire and Rescue Association member station and work site.	
<b>FIRE 1.3</b> Integrate all of the fire and rescue data collection, storage, and retrieval systems, to allow for efficient access to information necessary for the monitoring and evaluation of LOS standards.	
<b>FIRE 1.4</b> Develop LOS management evaluation reports that describe service delivery and capabilities to all areas of the County.	
<b>FIRE-POLICY 2:</b> Ensure the acquisition of an appropriate number of Fire and EMS facilities and response units to meet the LOS standards provided herein for the County.	
ACTION STRATEGIES:	
FIRE 2.1 Prioritize the sequence of site acquisition and funding for new station construction, in order to fill existing gaps in fire and EMS service delivery.	
<b>FIRE 2.2</b> Identify additional station sites and seek commitments from applicants for rezoning and from member departments of the Fire and Rescue Association for the construction of facilities and the provision of additional equipment, where the projected increase in demand, because of past development and future planned development consistent with the development density guidelines within the Comprehensive Plan, warrants the additional capacity (see Tables 1 and 2).	
<b>FIRE 2.3</b> Maintain a funding mechanism, such as earmarking funds, to ensure the construction of currently needed stations, as indicated in the County's Capital Improvements Program and Fire and Rescue Levy Capital Fund.	

Туре	<b>New Location</b>

Proposed	Comments
<b>FIRE 2.4</b> Encourage the collocation of other community uses with fire and rescue facilities. Following are examples of incompatible	
uses:	
FIRE 2.4.a Facility Incompatible Uses: schools, health care facilities (including hospitals and health clinics), and libraries.	Clarification (Planning)
♦ Schools	
◆ Library	
1-Health Care Facilities include Hospitals and Health Clinics	
FIRE 2.4.b Site Incompatible Uses: health care facilities and day care centers.	
♦ Health care facility	
◆ Day care center	
FIRE-POLICY 3: Ensure that new development does not result in the erosion of LOS standards in terms of work load capacity and	
facility size, acreage, and equipment. Encourage the installation and maintenance of fire and safety features in all buildings, beyond the	
minimum requirements as set forth in the Virginia Uniform Statewide Building Code.	
ACTION STRATEGIES:	
<b>FIRE 3.1</b> Require rezoning and special use permit applicants to provide information regarding fire and rescue LOS impacts with their	
applications. Apply the LOS standards developed under the action strategies in this Plan and contained in Appendix A, to mitigate the	
effect of proposed new development on the LOS of fire, rescue, and related emergency medical services (EMS). This mitigation should	
be a monetary contribution for fire and rescue services, provided with each rezoning and/or special use permit application. Mitigation	
may also be expanded to include installing sprinkler systems, improving the building construction type, using fire barriers, and other	
means.	
FIRE 3.2 Encourage infill development inside the Development Area – within the constraints of the designated land use	
classifications – in areas with above-standard LOS capacity.	
<b>FIRE 3.3</b> Discourage rezoning and special use permit approvals in areas having significantly substandard LOS, unless significant	
mitigation measures are a part of the development proposal.	
<b>FIRE 3.4</b> Identify and seek service delivery improvements as mitigation measures at existing station service areas through the	
development review process. Mitigation measures may include – but shall not be limited to – funding and installation of fire and rescue	
approved traffic signal preemption technology at signalized intersections near fire and rescue stations.	
<b>FIRE 3.5</b> Identify additional station sites and seek commitments for the construction of facilities and the provision of additional	
equipment, where the projected increase in demand – because of past development and future planned development consistent with the	
development density guidelines within the Comprehensive Plan – warrants the additional capacity (see Tables 1 and 2).	

Туре	dmont to the Potomac New Location

<sup>1-</sup>Health Care Facilities include Hospitals and Health Clinics

## PRINCE WILLIAM COUNTY 2015 COMPREHENSIVE PLAN TECHNICAL UPDATE

From the Piedmont to the Potomac **Proposed Comments** Encourage the installation of fire suppression systems, medical alert systems, or other mitigation measures that exceed **FIRE 3.6** minimum building code requirements in large structures over 50,000 square feet in area or over 40 feet in height. Such mitigation measures may include – but shall not be limited to: **FIRE 3.6.a** commitment to provide CPR and Automated External Defibrillators (AED) **FIRE 3.6.b** trained staff available and on duty, along with AED equipment, within high density housing and at employment locations during business hours. **FIRE 3.6.c** sizing of elevators to accommodate stretchers **FIRE 3.7** Include transportation solutions as mitigation measures – such as interparcel connectors (public access roads connecting one or more parcels), installation of traffic signal pre-emption equipment, intersection improvements, and accessibility within a site. Any proposals to connect roads through residential areas for the purpose of providing emergency vehicle access should be reviewed on a caseby-case basis. Also encourage the provision of additional new development mitigation measures such as fire suppression systems (sprinklers), and emergency medical training for on-site staff. Such measures, where provided, shall be described in each rezoning or special use permit application. Ensure that road networks, water systems, and related parts of the service delivery system are built in the early phases of **FIRE 3.8** project development. Utilize temporary station locations and transportable facilities in the early phase of project development, when such **FIRE 3.9** development requires new fire and rescue facilities, and when an optimum station location(s) is(are) not immediately available. **FIRE 3.10** Develop a list of policies to be used in evaluation of rezoning and special use permit applications to improve response times for fire and rescue services. **FIRE 3.11** Encourage the Fire and Rescue Association to review and comment on rezoning and special use permit applications. TABLE 1 LEVEL OF SERVICE STANDARDS FOR FIRE AND RESCUE FACILITIES **TRAVEL TIMES** First Unit Area (Fire and Rescue) **Travel Time in** Minutes Fire Suppression Emergency Standard – (Gountywide) 4.0 Basic Life Support (BLS) Emergency Standard – (Countywide) 4.0 Advanced Life Support (Abs) Emergency Standard (Countywide) 8.0 Note: First Unit (Fire and Rescue) Travel Time to be achieved for 90% of all incidents. Source: NFA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments, 2000.

Туре	New Location

-

	Decessed					ont to the Potomac
		Proposed		Comments	Туре	New Location
	TABLE					
L	EVEL OF SERVICE STANDARDS FOR	FIRE AND RESCUE STATIO	Ν			
	WORK LOA	AD				
	Factor	Standard				
	Responses per Tactical Unit	2,000				
Source: Prin	ce William County Department of Fire and Rescue Pl	anning Office.				
	apacity standards are established by the Fire and Resorre and rescue incidents a tactical unit is able to serve.		n that department. Work load capacity is measured by the			
	rel time may be adversely impacted when tactical units serve more than 2,000 incidents per year. If the station designated to provide the first unit response is vailable, another station will be dispatched. The additional distance traveled also adversely affects travel time.					

-

-

		Proposed		C	Comments	Туре	New Location
		TABLE 3					
	LEVEL OF SE	RVICE STANDARDS FOR FIF RESIDENTIAI					
		Factor	Standard				
	E	Building Area	0.77 SF/capita				
	Acres		Acres 0.0002/capita				
	Ed	quipment Cost	\$ <sup>1</sup> /capita				
		NONRESIDENTI	AL				
	Capital Cost/ Incident	Incident Generation Factor	Cost/Square Foot				
-	\$ <sup>2</sup>	0.00022 <sup>3</sup>	Capital cost per incident x Incident Generation Factor				
The Department of Fire and F standards of urban jurisdictio		he LOS standards for fire and rescue fac iam County.	ilities based on the standards for station	load and national			
FIRE-POLICY 4: Purs	ue enabling legislat	tion and develop programs that w	ill improve public safety.				
ACTION STRATEGIE	ES:						
	s. Pursue state ena	bgy that will facilitate the installat abling legislation that will allow t dings.					
	protection requirement	tion, including participation in co ents for single-family detached he subdivision.	-	•			
		tion, including participation in co on systems in all new commercia		the County to require			
		tion, including participation in co	de and standards development, t commercial, industrial, and resi				

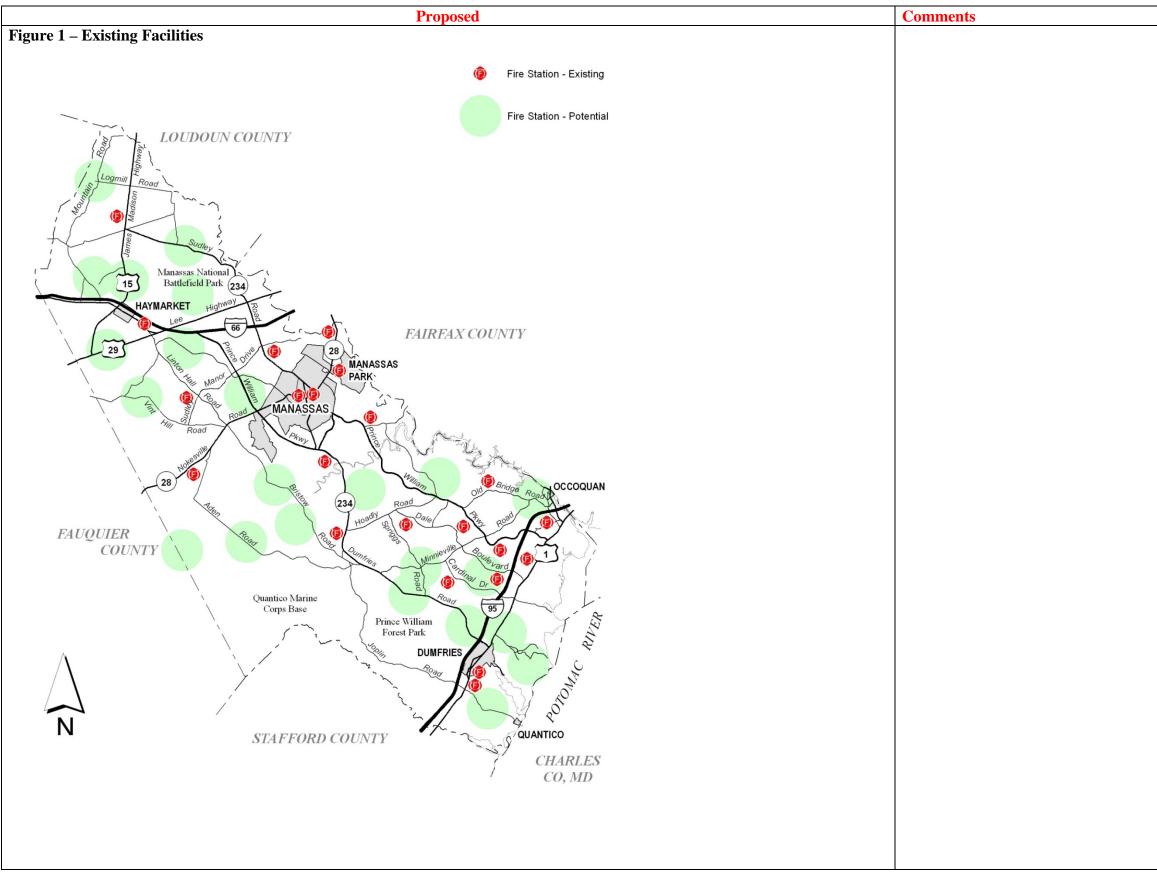
-

Proposed	Comments
<b>FIRE 4.5</b> Pursue state enabling legislation, including participation in code and standards development, to require installation of smoke detectors in existing buildings.	
<b>FIRE 4.6</b> Develop information on the value of fire, medical, and safety features, and present this information to consumers and developers.	
FIRE 4.7       Encourage the installation of residential fire suppression sprinklers.	
<b>FIRE 4.8</b> Encourage infection control training, hazardous material identification, and CPR and AED training and certification for all County and school system employees.	
FIDE 4.0 Encourse CDD and AED to initiation of locatification and the second Counter a substitute	
FIRE 4.9         Encourage CPR and AED training and certification among the general County population.	
<b>FIRE 4.10</b> Evaluate and recommend programs and standards to increase the number of CPR- and AED-trained staff available and on duty – along with AED equipment – at commercial and industrial locations and in high-density residential buildings during business hours.	
<b>FIRE 4.11</b> Develop a method to evaluate services provided by those jurisdictions that may be involved in regional services and cooperative efforts.	
<b>FIRE 4.12</b> Pursue and/or maintain mutual response agreements with the cities, military bases, and surrounding counties, in the interest of regional planning and the cooperative provision of fire, rescue, and hazardous materials response services.	
<b>FIRE-POLICY 5:</b> Consider site location, site suitability, building design and timing of construction as standards for new facilities while also recognizing that each site is unique and may involve variable application of the standards.	
Figure 1 presents general locations of new fire and rescue facilities to meet the future fire and rescue service needs of the County, based upon the Long-Range Land Use Plan Map, other portions of the Comprehensive Plan, and Fire and Rescue LOS standards. Changes to the Long-Range Land Use Plan and Map – and other Plan chapters (such as the Transportation Plan), as well as LOS changes at existing stations – will affect the information presented on Figure 1.	
ACTION STRATEGIES:	
FIRE 5.1       Strategically locate new stations with the following general considerations:	
FIDE 5.1.0	
FIRE 5.1.ato obtain and maintain response travel time standards in accordance with Table 1;FIRE 5.1.bto be near, but not at, intersections of arterial and/or collector highways where alternative response routes	
are available to all parts of the station's first, second, and third due response areas;	
FIRE 5.1.c       to be away from the base of long or steep roadway grades;	
FIRE 5.1.dto be where there is at least 350 feet of sight distance for approaching traffic at the point of discharge;	
<b>FIRE 5.1.e</b> existence of transportation barriers, such as impediments to access, i.e., narrow shoulders or availability of	
cross-overs or cut-throughs;	
<b>FIRE 5.1.f</b> proximity to adjacent locality which has agreed to furnish mutual aid; and	

March 18, 2008

Туре	dmont to the Potomac New Location

From the Piedmont to the Potomac Proposed	Comments	Туре	New Location
<b>FIRE 5.1.g</b> existing or planned non-residential uses which may need different levels of protection, such as schools or	Comments	Туре	
industry.			
industry:			
<b>FIRE 5.2</b> Determine the suitability of a site with the following specific considerations:			
The of Determine the suitability of a site with the following specific considerations.			
FIRE 5.2.a minimum of five buildable acres;			
<b>FIRE 5.2.b</b> soils suitable for building construction and able to support high-weight (30 ton) vehicles;			
<b>FIRE 5.2.c</b> space for landscaping and buffering on-site and/or where there is adequate off site buffering; direct public street			
access from both the front and from a side or rear location;			
FIRE 5.2.d access to utilities in close proximity to the site;			
FIRE 5.2.e outcome of an environmental constraints analysis to determine extent of wetlands, 100-year floodplain, endangered			
species, and/or Resource Protection Area;			
FIRE 5.2.f square or rectangular-shaped property;			
<b>FIRE 5.2.g</b> appropriate grade and rough grading if supplied by a developer; and			
FIRE 5.2.h location and description of easements			
<b>FIRE 5.3</b> Design and construct fire and rescue facilities and sites according to the relevant guidelines of the Community Design Plan.			
<b>FIRE 5.4</b> Plan the timing of construction and operation of new stations to meet level of service standards and concurrent with the first			
<b>FIRE 5.4</b> Plan the timing of construction and operation of new stations to meet level of service standards and concurrent with the first phases of major development projects.			
<b>FIRE 5.5</b> Allow use of temporary sites and transportable structures, provided that these facilities will only be used until suitable sites for building permanent stations become available.			

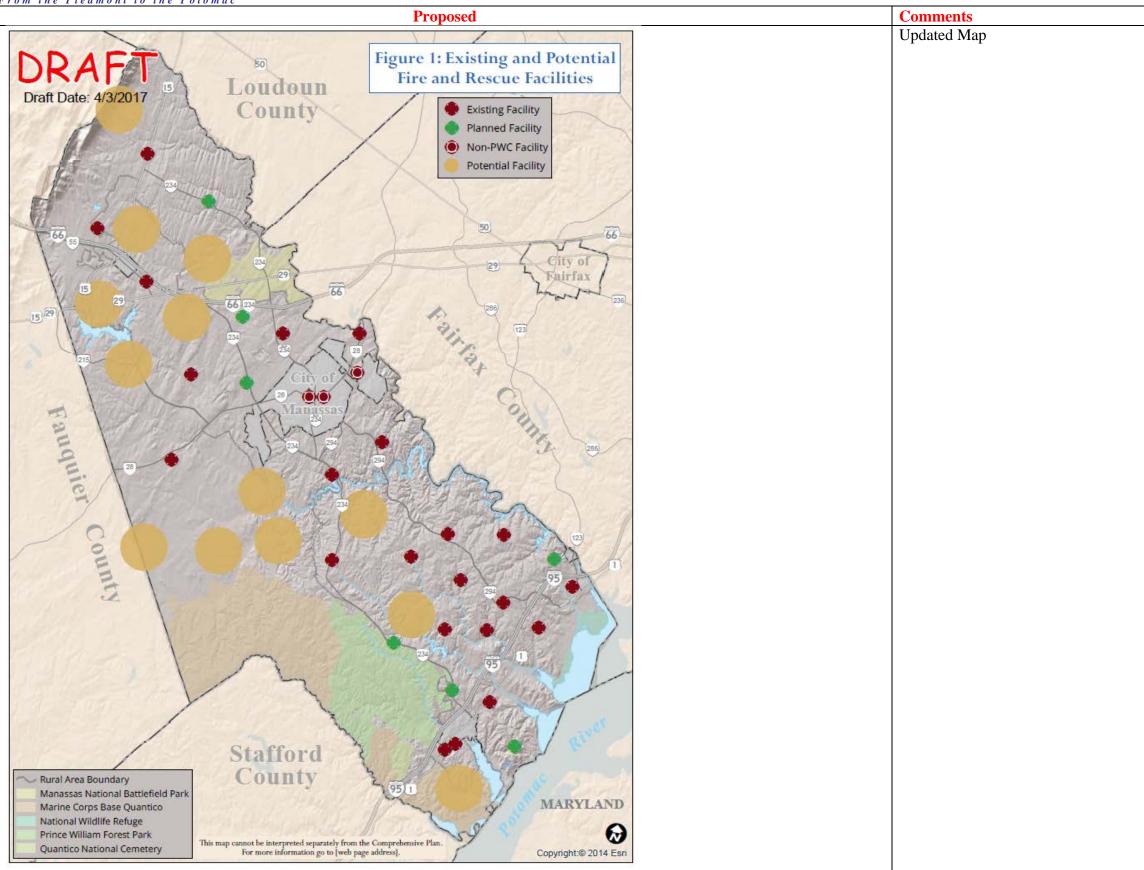


From the Pied	lmont to the Potomac
Туре	<b>New Location</b>
1	

## PRINCE WILLIAM COUNTY 2015 COMPREHENSIVE PLAN TECHNICAL UPDATE

Fire and Rescue

From the Piedmont to the Potomac



March 18, 2008

Туре	New Location

		Proposed			Comments	Туре	New Locatio
TABLE 4         PROJECTED FIRE AND RESCUE STATION NEEDS BY         EXISTING AND PROJECTED POPULATION		The Updated numbers are based on new population projections (Planning)					
ire and Rescue Stations	Existing (2006) 378,455	Projected 2015 463,343	Projected 2 555,012				
		22	20				
TOTAL ctions of need within the text of th	e Fire and Rescue Plan are ba	23 sed upon the information of the sed upon	on contained in the	e COG			
	e Fire and Rescue Plan are ba ployment projections prepar	sed upon the information by Prince William	on contained in th County <del>,</del> and the	Prince			
ctions of need within the text of th $\frac{1}{100}$ the population and en	e Fire and Rescue Plan are ba ployment projections prepar	sed upon the information by Prince William	on contained in th County <del>,</del> and the	Prince			
ctions of need within the text of th $\frac{1}{100}$ the population and en	e Fire and Rescue Plan are ba ployment projections prepar <del>Program Fiscal Years 2008 2</del>	sed upon the information by Prince William	on contained in th County <del>,</del> and the	Prince			

Fire and Rescue

-

From the Piedmont to the Potomac

Tom the Iteumont to the Iotomuc	
Proposed	Comments
APPENDIX A	
LEVEL OF SERVICE STANDARDS FOR FIRE AND RESCUE FACILITIES	
New development presents demands for Countywide fire and rescue service that affect the ability of facilities to meet	
established LOS standards. It is important, therefore, that Prince William County provide fire and rescue services	
Countywide that address these demands. The demand for Countywide fire and rescue service and facilities must be	
measured, and means must be identified for maintaining the established Countywide LOS standards for fire and rescue	
facilities after new development occurs.	
LOS standards are to be used to evaluate new proposals and to evaluate Fire and Rescue Service system capabilities.	
These are not to be considered as actual requirements to be met by all proposals for by the County – on all occasions. There are many factors – characteristic of each coverage area and for each individual incident – that affect actual system	
performance. These standards represent desired level of service and should not be interpreted as being one hundred percent	
attainable with every particular incident.	
Any application for a rezoning or special use permit shall contain the following information:	
Number of dwelling units proposed.	
• Name(s) and location(s) of fire and rescue station(s) serving the project area.	
Rezonings or special use permits for new developments shall meet the established LOS standards for fire and rescue	
facilities, set forth more fully below. Applications that fail to meet the LOS standards shall be considered inconsistent	
with the Fire and Rescue Plan.	
<b>8</b> .	
The following represent the LOS measurements for fire and rescue services:	
Travel time.	
Work load capacity.	
"Travel time" is defined as the estimated amount of time it takes from departure of an emergency response unit from the	
fire and rescue station to arrival on the scene of an emergency. It does not include the estimated time between receipt of	
the call and departure from the fire station. Factors included in estimating travel time are speed limits and distance; this	
time frame does not include roadway LOS, road conditions, prevailing traffic volumes, traffic calming devices, or weather.	
"Work load capacity" is defined as the number of fire and rescue incidents that a facility is able to serve based on Prince	
William County Fire and Rescue standards, using national guidelines for urban jurisdictions. Work load capacity	
standards are established by the Fire and Rescue Department and can be obtained from that department. Work load	
capacity is measured by the number of fire and rescue incidents a facility is able to serve.	
Usia Drin co William County ston doubt for station mode lood and emploine matical stor doubt for such 1 - 1 - 1 - 1 - 1	
Using Prince William County standards for station work load and applying national standards for suburban jurisdictions such as Prince William County. Fire and Passue has developed LOS standards for fire and rescue facilities	
such as Prince William County, Fire and Rescue has developed LOS standards for fire and rescue facilities.	



Туре	New Location
-5100	

-

Proposed	Comments
Projections of need within the text of the Fire and Rescue Plan are based upon the information contained in the	
Metropolitan Washington Council of Governments (COG) Round 7.1 population and employment projections prepared	
by Prince William County, and the Prince William County Capital Improvements Program Fiscal Yor's 2004-2009.	
Alternative locations and/or additional stations may be needed.	
L. VA.	
LOS standards will be determined to have been met by an applicant for a rezoning or special use permit based on the	
following:	
NTL	
1. The proposed new development is within the travel time standard for a existing fire and rescue station and a	
monetary contribution in an equitable amount is offered to mitigate erosion of work load capacity, at the LOS standards	
contained in the Fire and Rescue Plan.	
2. The proposed new development is outside the travel time standard for an existing fire and rescue station and a	
monetary contribution in an equitable amount is offered to mitigate erosion of work load capacity, at the LOS standards	
contained in the Fire and Rescue Plan and the applicant has committed to at least one of the following:	
A fully automatic fire suppression system (sprinklers) in each proposed residential unit; or	
• Installation of fire suppression systems and a fire barrier equivalent to one hour rating on the exterior wall that	
is subject to the fire exposure in new single-family, detached residential developments that feature reduced	
side setbacks and designed in a manner acceptable to the Prince William County Fire and Rescue Association.	
• Provision of a fire and rescue station site, acceptable to the Prince William County Fire and Rescue	
Association; or	
Transportation improvements acceptable to the Prince William County Fire and Rescue Association, such as	
an interparcel connector, installation of traffic signal pre-emption equipment, and/or intersection improvements to decrease the travel time.	
The methodology for determining equitable monetary contributions for new development is outlined in the <i>Policy Guide</i>	
for Monetary Contributions, Prince William County Planning Office.	

Туре	New Location