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Rick Wachowski
IT Manager
Village of Homewood
2020 Chestnut Rd,
Homewood, IL 60430

Dear Rick,

I am pleased to submit our proposal in response to your Request for Proposal (RFP) for network infrastructure upgrades at the Village of Homewood. Our team has conducted thorough site surveys, and we are excited to present our proposed solution that will enhance your network's performance, redundancy, and scalability.

During our site surveys, we identified the immediate need to replace existing Cisco firewalls, which will be the focus of the first phase of the project. Our proposed solution includes the installation and configuration of next-generation firewalls that not only meet current security requirements but also offer increased performance and flexibility for future growth.

Our solution includes the integration of additional 10 Gb ports. This was done to ensure that your network is equipped to handle future demands; allowing for increased bandwidth capacity as organizational needs grow. We understand the importance of a robust infrastructure and are committed to delivering a solution that will support your operational needs now and for years to come.

Our team has extensive experience in large-scale network infrastructure projects, and we are dedicated to providing high-quality service and support throughout the implementation process. We will work closely with your team to ensure minimal disruption to your operations and a smooth transition to the upgraded infrastructure.

We are excited about the opportunity to collaborate with the Village of Homewood on this important first step of the proposed network infrastructure upgrades. Please find attached our detailed proposal outlining our approach, timeline, and budget for the firewall upgrades. We look forward to the possibility of working together to enhance your network capabilities.

Thank you for considering our proposal. We are available at your convenience to discuss any questions or provide further information.

Sincerely,
David Paulsen
Project Manager/Solutions Engineer
Urban Communications, Inc.

Proposed Statement of Work:

To accommodate Secure and Reliable Internet throughout the Village of Homewood's Operations:

There are (6) Separate Locations requiring a physical firewall. We are recommending a firewall at the Village Hall, Police Department and Fire Department which will allow each of these sites to be independent as well as having the ability to be the primary internet connection if one of the other sites is down. We are providing Fortinet firewalls at the other (3) sites for their participation in the proposed SDWAN configuration.

Overview:

The information below will give a comparison of industry leading Firewalls specs, MSRP as well as what is currently in place for the sites that currently have a firewall. Our choice is to implement Fortinet's FortiGate firewalls to secure the network while not comprising on performance. Our recommendation is based on making sure that Homewood has total redundancy between the Village Hall, Police Department and Fire Department. Each of these sites will be able to shoulder the load as the primary internet connection if another sites internet is down. The equipment that we have identified as a solution, account for a 10Gb backbone for your internal network. We weighed the cost of going with smaller firewalls and found that it does not make much sense to handcuff Homewood to a 1Gb backbone for the next 5+ years. The cost difference for the identified all 1Gb Fortigate firewall is marginal.

Primary Factors:

- Cost
- Functionality
- Management
- Speed
- Setup

Why Fortinet?

Fortinet offers the best price/performance while having great safety, technology and support built in. Keeping an all-Fortinet environment will allow for management through FortiManager which boasts a range of tools, reporting and UI/UX features that makes for topology transparent. The ASIC's Security Processing Unit which is at the core of all Fortinet products is second to none when it comes to operation of a Next Generation Firewall.

While Cisco has been a long-term competitor within the market, it has lacked in Next Generation Firewall features. Its speed is behind the times and has lacked behind both Fortinet and Palo Alto in terms of Network Engineering professionals' development from a deployment and management perspective.

Palo Alto is a great NGFW which has great features, easy management and security features that are robust. The flip side of Palo Alto's positives are outweighed by its steep cost at time of purchase as well as its subscriptions associated. Palo is great for large organizations where cost is no factor when implementing the IT Infrastructure stack, but for this environment, a budget should not be broken to update a subscription on year 4 or compromise the security of the network as a whole.

As Cisco, Fortinet and Palo all support SD-WAN at a marginal cost, the Fortinet uniquely separates itself from its competitors using a proprietary processing set specifically manufactured for traffic optimization with having a built in second Power supply to have a clean, integrated redundant power setup. On top of this, Fortinet offers a 3-year HW Plus warranty.

With Fortinet's Enterprise Protection bundling Application Control, DNS Security, Web-Filtering, DLP and Zero-Day Protection, it provides a cost-effective framework without having to procure multiple A La Carte subscriptions. Subscriptions from Cisco such as the Thread Defense, Malware and URL filtering costs well over double the cost of the firewall within a 5-year span. Palo Alto has similar prohibitively expensive subscriptions, although they include the cost of the SD-WAN module, it still is outweighed immensely by 5 figure renewals. We added this as a mention but are not quoting it as Homewood is using CrowdStrike which has the ability to provide these options. In the event Homewood would like the added protection from Fortinet, we can always add this after the fact.

Fortinet's overall disposition geared towards IT Professionals who have a thorough understanding of Network Engineering, allows for it to strive as the best solution for the Village of Homewood's needs via Urban Communication's networking expertise.

Fire Department

Manufacturer	Cisco	Fortinet	Palo
Model	SF-3105	FG-120G	PA-1420
Firewall Throughput	10 Gbps	28	9.5 Gbps
IPSec VPN	5.5 Gbps	35	6.2 Gbps
10Gig Interfaces	8	4	8
5Gig Interfaces	0	0	8
1 Gig Interfaces	16	26	6
Cluster Mgmt Technology	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	Yes (Optional)	Yes (Built in)	Yes (Optional)
Cost	$21,105	$9,300	$18,995
PSU Cost	Marginal	No Cost	Marginal

The Fortinet FG-120G would best accommodate the solution as it provides the best throughput for the lowest cost from an initial outlay perspective as well as subscription basis over the years.

With 4x 10 Gig SFP+ ports, this will allow for 1 ingress from the Fiber provided by the Cienna Fiber Switch connection. This gives Homewood the ability for future growth if internet is ever expanded past a 1GB internet connection. The remaining 10gb ports will be used for egress to the interconnected firewalls (SDWAN) and switch uplinks to provide a 10GB internal backbone.

Police Station

Manufacturer	Cisco	Fortinet	Palo
Model	SF-3105	FG-120G	PA-1420
Firewall Throughput	10 Gbps	28	9.5 Gbps
IPSec VPN	5.5 Gbps	35	6.2 Gbps
10Gig Interfaces	8	4	8
5Gig Interfaces	0	0	8
1 Gig Interfaces	16	26	6
Cluster Mgmt Technology	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	Yes (Optional)	Yes (Built in)	Yes (Optional)
Cost	$21,105	$9,300	$18,995
PSU Cost	Marginal	No Cost	Marginal

The Police Station will add a Fortinet FG-120G Firewall to accommodate the Cienna Fiber Switch which will be on site to operate as an independent node. This network will be given the same throughput capacity as the surrounding environments to meet the demands and bandwidth requirements of all primary locations in network. The 10 Gig SFP+ will accommodate the Fiber Modem while the remaining 10 Gig SFP+'s will egress to the redundant firewalls (SDWAN) and intranet switches.

Village Hall

Manufacturer	Current	Cisco	Fortinet	Palo
Model	5516-X	SF-3105	FG-120G	PA-1420
Firewall Throughput	1.8 Gbps	10 Gbps	28	9.5 Gbps
IPSec VPN	450 Mbps	5.5 Gbps	35	6.2 Gbps
10Gig Interfaces	0	8	4	8
5Gig Interfaces	0	0	0	8
1 Gig Interfaces	8	16	26	6
Cluster Mgmt Technology	N/A	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	No	Yes (Optional)	Yes (Built in)	Yes (Optional)
Cost	N/A	$21,105	$9,300	$18,995
PSU Cost	N/A	Marginal	No Cost	Marginal

Village Hall will have a FG-120G with an ingress coming from the Cienna to the Village Hall firewall 10 Gig SPF+ port. The additional 10 Gig SFP+'s connections will be sent to the redundant firewalls (SDWAN) and switch uplinks for the Village Hall intranet.

Public Works

Manufacturer	Current	Cisco	Fortinet	Palo
Model	ASA 5508-X	SF-3105	FG-120G	PA-1420
Firewall Throughput	1 Gbps	10 Gbps	28	9.5 Gbps
IPSec VPN	175 Mbps	5.5 Gbps	35	6.2 Gbps
10Gig Interfaces	0	8	4	8
5Gig Interfaces	0	0	0	8
1 Gig Interfaces	8	16	26	6
Cluster Mgmt Technology	N/A	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	No	Yes (Optional)	Yes (Built in)	Yes (Optional)
Cost	N/A	$21,105	$9,300	$18,995
PSU Cost	N/A	Marginal	No Cost	Marginal

Public Works will also have a FG-120G with an ingress coming from the Cienna to the 10 Gig SPF+ port. This firewall will participate in the SDWAN over the internet connection we are providing by Urbancom. The additional 10 Gig SFP+ connection will be sent to the intranet switches. With additional room to grow with 2 remaining SFP+ ports available.
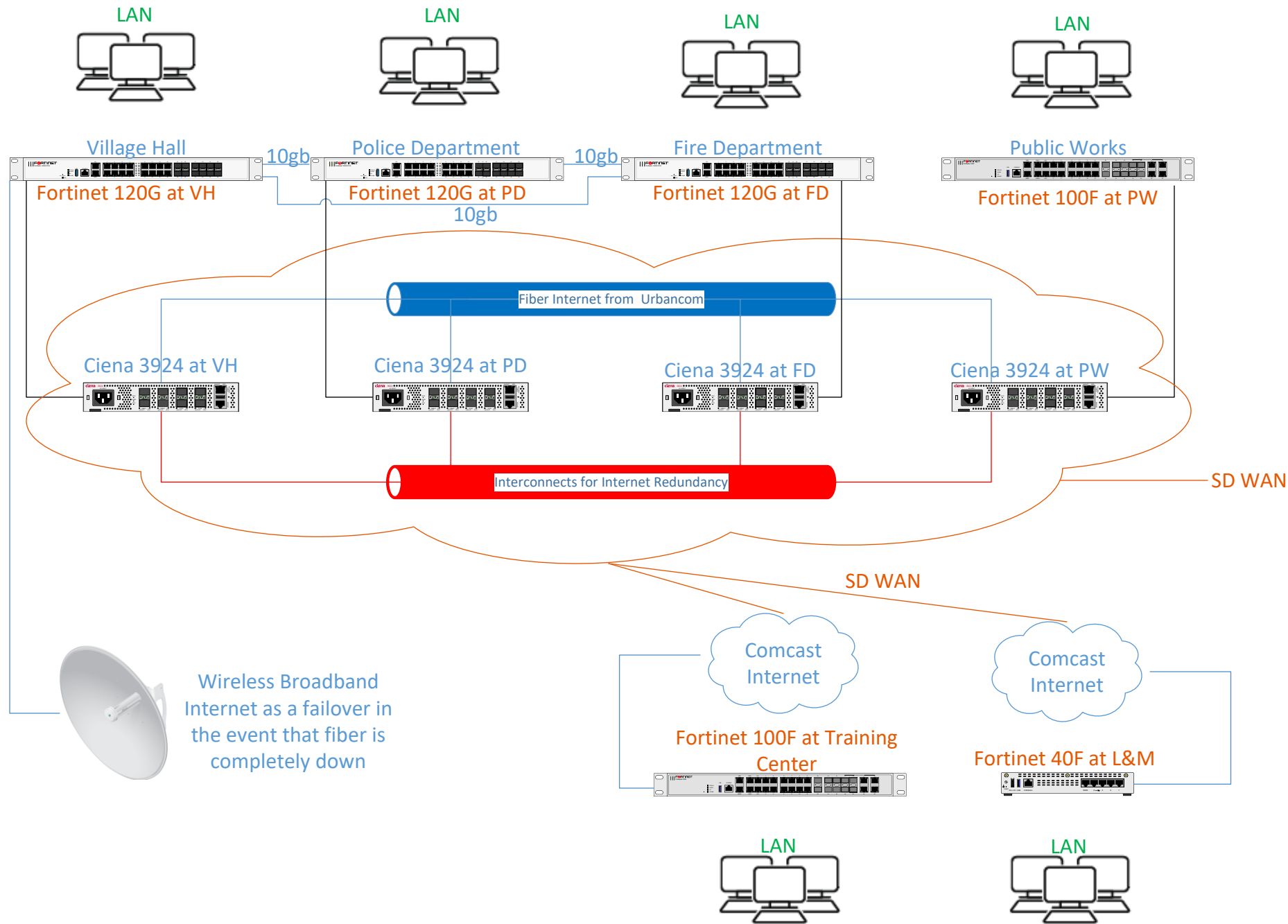
Training Center

Manufacturer	Current	Cisco	Fortinet	Palo
Model	ASA 5505	SF-3105	FG-120G	PA-1420
Firewall Throughput	150 Mbps	10 Gbps	28	9.5 Gbps
IPSec VPN	75 Mbps	5.5 Gbps	35	6.2 Gbps
10Gig Interfaces	0	8	4	8
5Gig Interfaces	0	0	0	8
1 Gig Interfaces	8	16	26	6
Cluster Mgmt Technology	N/A	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	No	Yes (Optional)	Yes (Built in)	Yes (Optional)
Cost	N/A	$21,105	$9,300	$18,995
PSU Cost	N/A	Marginal	No Cost	Marginal

As the training facility will act as an area for all hands-on deck personnel accommodating environment, we scoped out the same appliance to handle the bandwidth and personnel needs for when the location is at full capacity being the same as Public Works with a Fortinet 120G. This firewall will participate in the SDWAN over the internet connection provided by Comcast.

Lawn & Maintenance

Manufacturer	Current	Fortinet	Palo
Model	Cisco 1010	FG-40F	PA-440
Firewall Throughput	0.9 Gbps	5 Gbps	2.55 Gbps
IPSec VPN	0.4 Gbps	4.4 Gbps	1.1 Gbps
1 Gig Interfaces	8/12	5	8
Cluster Mgmt Technology	Threat Defense Manager	FortiManager	Panorama
Redundant Power Supply	No	No	Yes (Optional)
Cost	N/A	$1,430.55	$1,420
PSU Cost	N/A	N/A	Marginal

To keep a harmonious environment and ease of management, the FG-40F would be the perfect low-cost solution for the Lawn & Maintenance location. While it does not offer Redundant Power Supplies, it does still offer SD-WAN capabilities. This firewall will participate in the SDWAN over the internet connection provided by Comcast.

LAN   LAN   LAN   LAN

Village Hall   10gb   Police Department   10gb   Fire Department   Public Works

Fortinet 120G at VH   Fortinet 120G at PD   Fortinet 120G at FD   Fortinet 100F at PW

10gb

Fiber Internet from Urbancom

Ciena 3924 at VH   Ciena 3924 at PD   Ciena 3924 at FD   Ciena 3924 at PW

Interconnects for Internet Redundancy

SD WAN

SD WAN

Wireless Broadband Internet as a failover in the event that fiber is completely down

Comcast Internet

Comcast Internet

Fortinet 100F at Training Center

Fortinet 40F at L&M

LAN   LAN

Budget Summary:

Description	Mfg #	Cost	Quantity	Total Cost
Fortinet FortiGate 120G - security appliance - with 3 years FortiCare Premium Support + 3 years FortiGuard Unified	FG-120G-BDL-950-36	$7,180.62	3	$21,541.86
Fortinet FortiGate 100F - security appliance - with 3 years FortiCare Premium Support + 3 years FortiGuard Enterprise	FG-100F-BDL-809-36	$6,869.18	2	$13,738.36
Fortinet FortiGate 40F - security appliance - with 3 years FortiCare Premium Support + 3 years FortiGuard Enterprise	FG-40F-BDL-809-36	$1,253.99	1	$1,253.99
Project Implementation Cost		$14,000.00	1	$14,000.00
			Total:	$50,534.21

References:

Cook County – Bureau of Technology:

- Doug Coupland – Director of Network & Telecommunications
- douga.coupland@cookcountyil.gov
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Village of Monee:

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