Pacific Grove Unified School District

Network Renovation

March 5, 2020

2010

EPSON

lenovo

2020

NETWORK/DATA Security

Phones and Speakers

One to One Device Deployment

BYOD

LMS and SIS Integration

Cameras

H-VAC

Access Control

Lights

Digital Curriculum and Testing

Private Industry	Higher Education	Typical K-12
1:60	**1:150**	**1:750**

IT Staffing Ratio

Private Industry	Higher Education	Pacific Grove
1:60	**1:150**	**1:1100**

IT Staffing Ratio

All Access Points and Switches – 12 years old and not supported

Little to no visibility into devices or applications

Trouble shooting and connectivity problems extremely difficult

Current cabling and hardware infrastructure insufficient to support needs

Security challenges

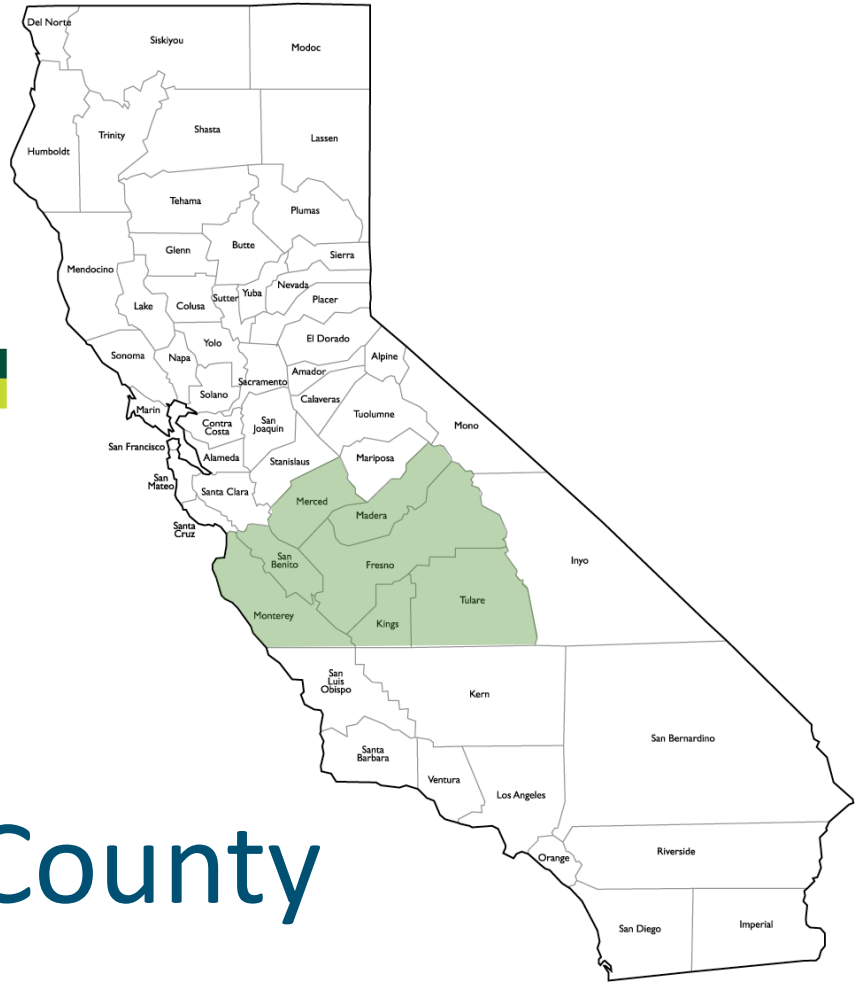
Current Network Status

Meraki

The Solution

1. District Reference Cases
2. Central Management and Visibility
3. Expansion Capabilities
4. Support
5. Increased Security

Central California



Monterey County

1. District Reference Cases
2. Central Management and Visibility
3. Expansion Capabilities
4. Support
5. Increased Security

Monitor
Dashboard
System
Radio
Station
Voice
WIPS
Fault Dashboard
Spectrum Manager
Diagnostics
Global Statistics
Devices
Statistics
QoS/Voice
Topology
Top 10
Configuration
Maintenance
Wizards

Others 11ac Others

WIRELESS CONFIGURATION

	SSID	RF Virtualization Mode	Dataplane Mode	Multicast	L2 Security Mode	Captive Portal	MAC Filtering	2.4G Radio	5G Radio
	PGUSD_Guest	VirtualCell	Tunneled	On	Open	Webauth	Off	7	6
	PGUSD_Logins	VirtualCell	Tunneled	On	Open	Disabled	Off	4	4
	PGUSD_Guest	VirtualCell	Tunneled	On	Open	Webauth	Off	3	3
	Chromecast24	VirtualCell	Tunneled	On	Open	Disabled	Off	30	0
	Chromecast2.4_FG	VirtualCell	Tunneled	On	Open	Disabled	Off	23	2
	Chromecast2.4_HS	VirtualCell	Tunneled	On	Open	Disabled	Off	40	0
	Chromecast2.4_RD	VirtualCell	Tunneled	On	Open	Disabled	Off	25	2
	Devices_5Ghz	VirtualCell	Tunneled	On	Open	Disabled	Off	1	39
	Devices_AE	VirtualCell	Tunneled	On	Open	Disabled	Off	13	10
	Devices_AE_5Ghz	VirtualCell	Tunneled	On	Open	Disabled	Off	0	13
	Devices_CH	VirtualCell	Tunneled	On	Open	Disabled	Off	4	3
	Devices_CH_5Ghz	VirtualCell	Tunneled	Off	Open	Disabled	Off	0	4
	Devices_FG	VirtualCell	Tunneled	On	Open	Disabled	Off	28	24
	Devices_FG_5Ghz	VirtualCell	Tunneled	On	Open	Disabled	Off	0	27
	Devices_HS	VirtualCell	Tunneled	On	Open	Disabled	Off	43	42
	Devices_HS_5Ghz	VirtualCell	Tunneled	Off	Open	Disabled	Off	0	43
	Devices	VirtualCell	Tunneled	On	Open	Disabled	Off	40	25
	Devices_RD	VirtualCell	Tunneled	On	Open	Disabled	Off	27	25
	Devices_RD_5Ghz	VirtualCell	Tunneled	On	Open	Disabled	Off	0	27
	PGUSD_Guest	VirtualCell	Tunneled	On	Open	Webauth	Off	18	13
	PGUSD_Guest	VirtualCell	Tunneled	On	Open	Webauth	Off	42	42
	PGUSD_Guest	VirtualCell	Tunneled	On	Open	Webauth	Off	31	25
	AE_Guest	VirtualCell	Tunneled	On	Open	Disabled	Off	12	10
	PGCHS_Guest	VirtualCell	Tunneled	On	Open	Disabled	Off	3	3
	FG_Guest	VirtualCell	Tunneled	On	Open	Disabled	Off	20	19

NETWORK

Meraki San Francisco

Network-wide

Switch

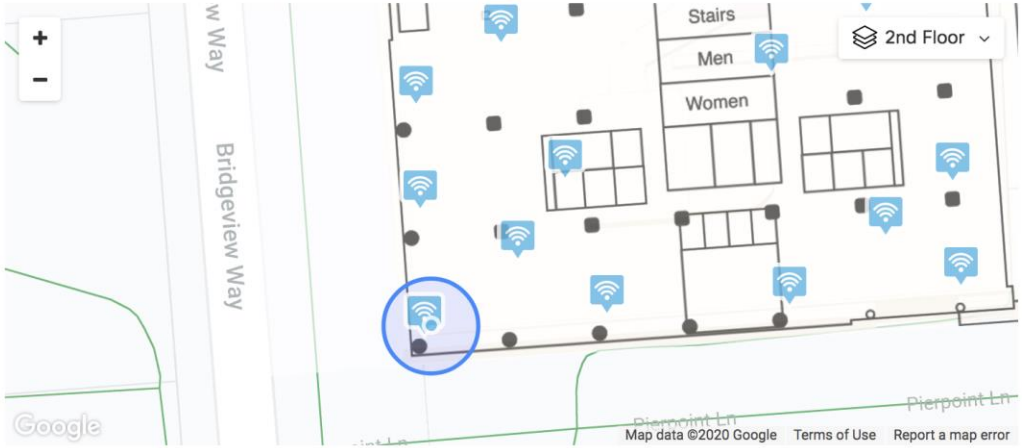
Wireless

CLIENTS

Ryan-Sack-MBP

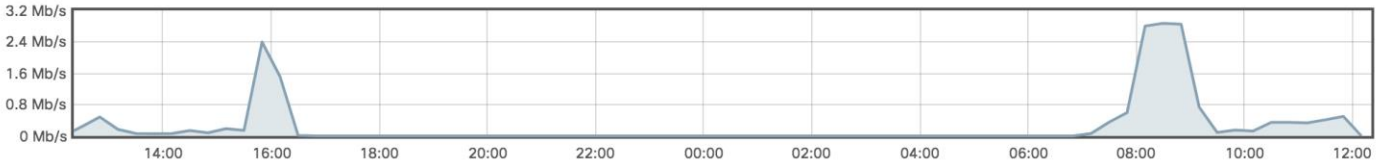
Status	associated since Feb 20 10:56
SSID	Meraki-Corp
Access point	2.50 topology
Splash	Systems Manager Sentry splash Authorized 10 days ago.
Signal	52dB (channel 161)
User	ryan.sack (802.1X login)
Device type	Apple Mac OS X 10.13
Capabilities	802.11ac - 2.4 and 5 GHz, Fastlane capable details

event log packet capture

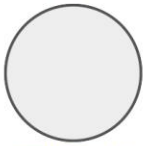


Usage for the last day

2.65 GB (↓2.47 GB, ↑184.1 MB)



Applications



show details »

Web App Health

No applications with data.

Policy

Device policy: normal

Bandwidth:	unlimited
Layer 3 firewall:	2 rules
Layer 7 firewall:	0 rules
Traffic shaping:	0 rules

Network

IPv4 address:	10.92.188.64
IPv6 address (link-local):	fe80:0:0:0:1442:cd63:1ff4:19fd
MAC address:	78:4f:43:98:91:c0
VLAN:	188
Port forwarding:	none

Ping

Loss rate: -
Average latency: -

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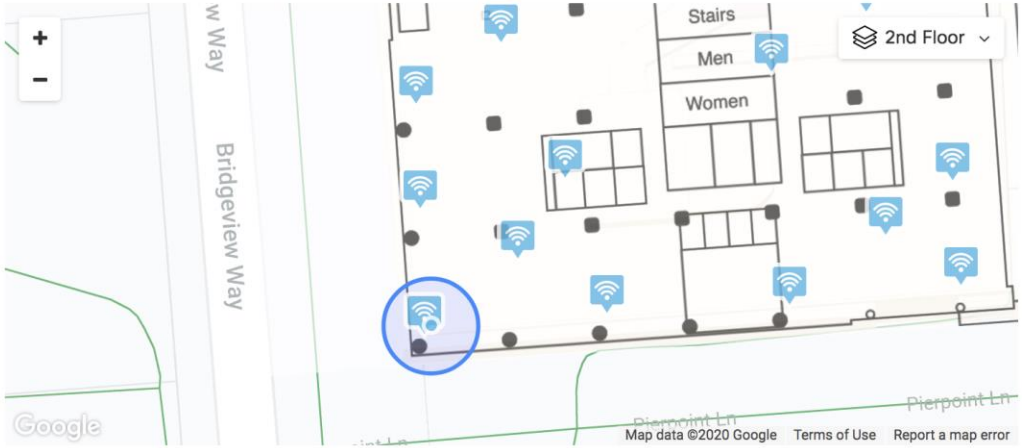

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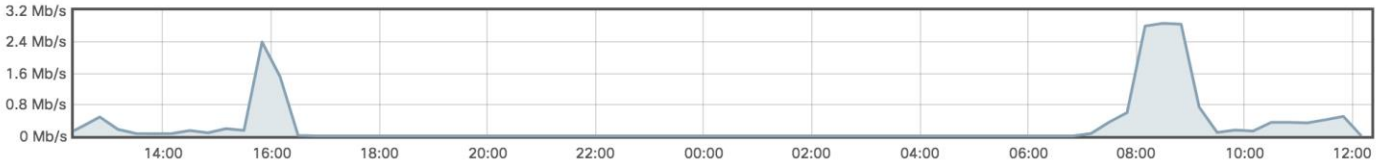

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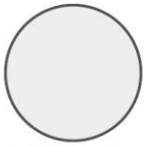

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Installation and Configuration completed by AMS

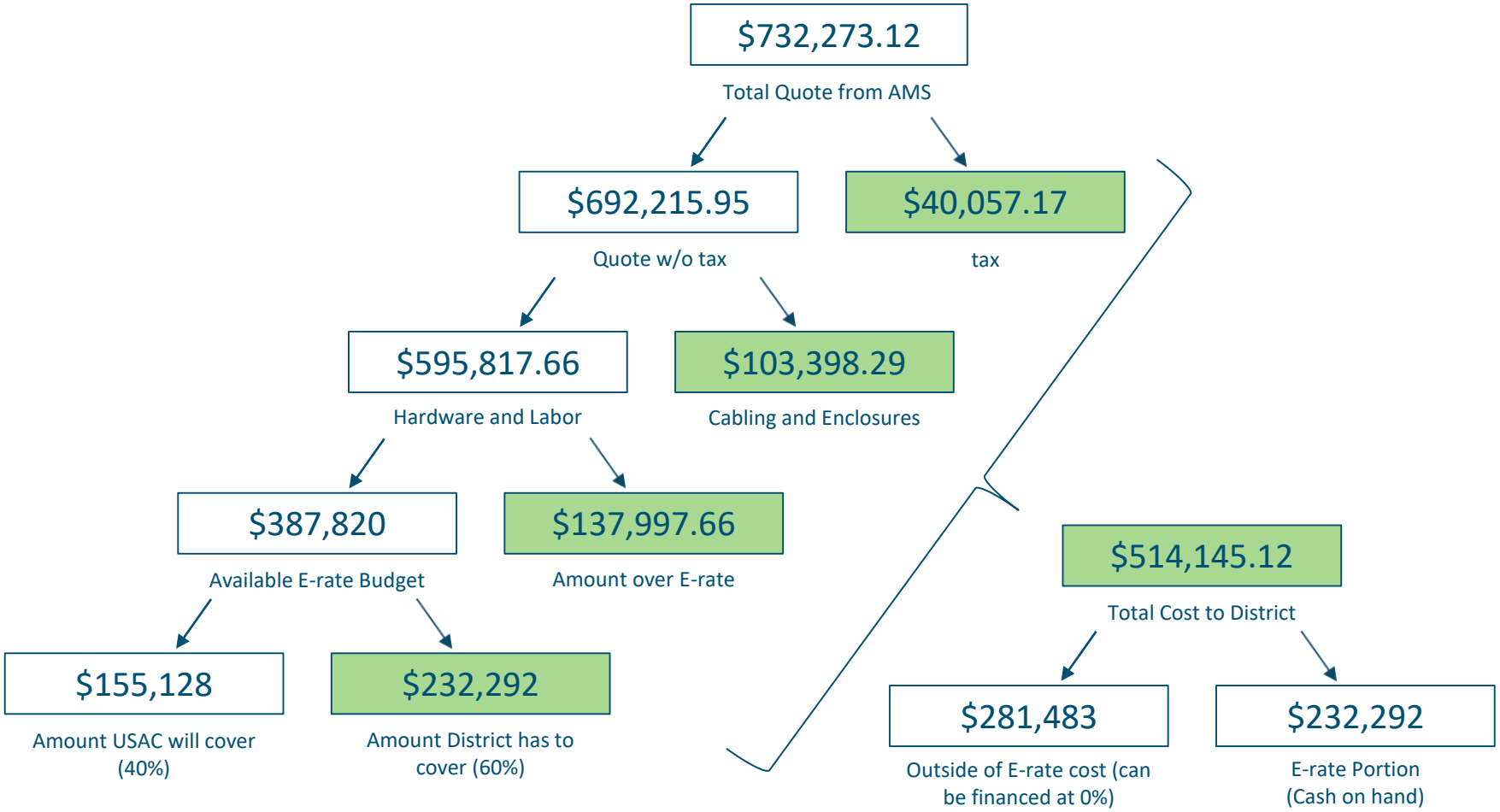
24x7 Call-In Support

Staff Training at Meraki in SF

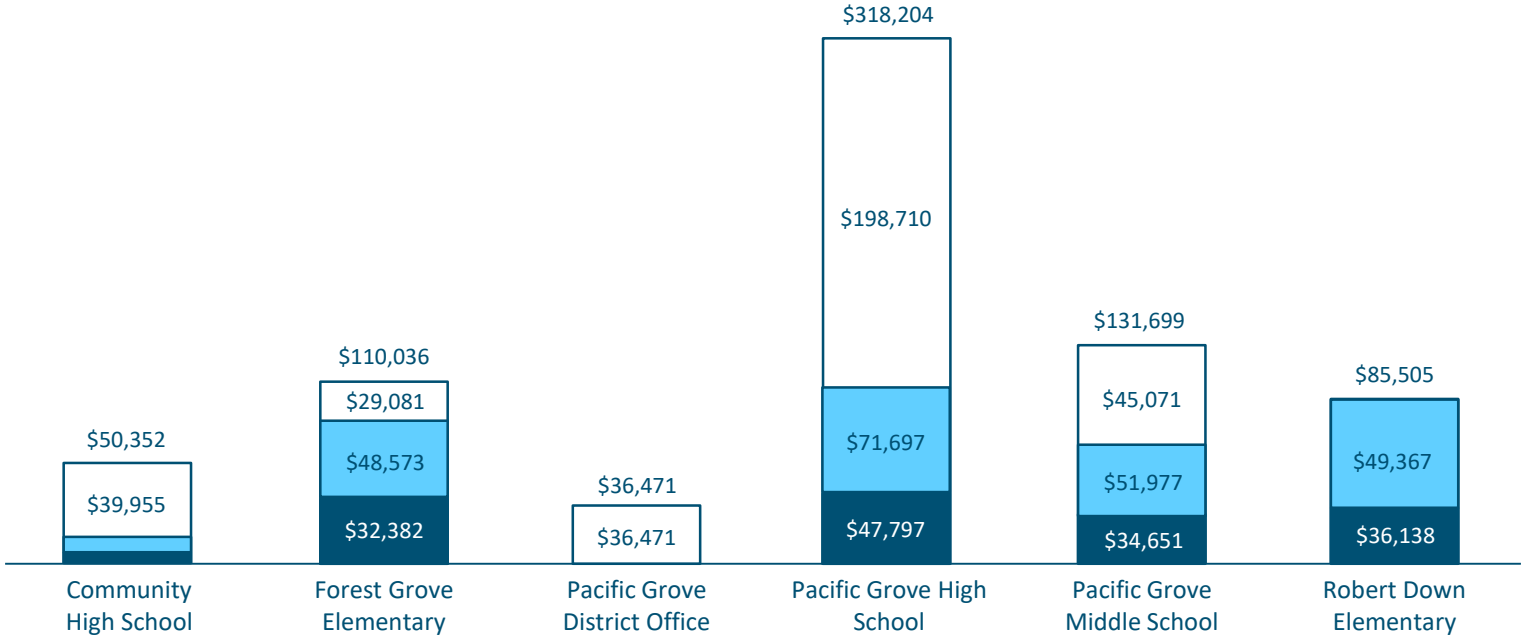
ECMS Certification

Surrounding District Support

The Cost


$732,273.12
Total Quote from AMS
$692,215.95
Quote w/o tax
$40,057.17
tax
$595,817.66
Hardware and Labor
$103,398.29
Cabling and Enclosures
$387,820
Available E-rate Budget
$137,997.66
Amount over E-rate
$155,128
Amount USAC will cover (40%)
$232,292
Amount District has to cover (60%)
$514,145.12
Total Cost to District
$281,483
Outside of E-rate cost (can be financed at 0%)
$232,292
E-rate Portion (Cash on hand)

The Cost



$155,128	Covered USAC Portion
$232,692	District Matching Funds
$349,288	Cost Over E-Rate

Best-in-class network management

WiFi 6 Access Points – New standard and future-proof

Multi-gigabit switches – Capable of current traffic and IP speakers/VOIP

New cabling at sites needed in order to utilize the new technology

Sustainability and stability for 5+ years

6th year of licensing at no cost (approx. $17,500 value)

Complete installation and design of the network

Approximately $155,000 of USAC use-it-or-lose-it money to supplement

What We Are Getting

Thank you!