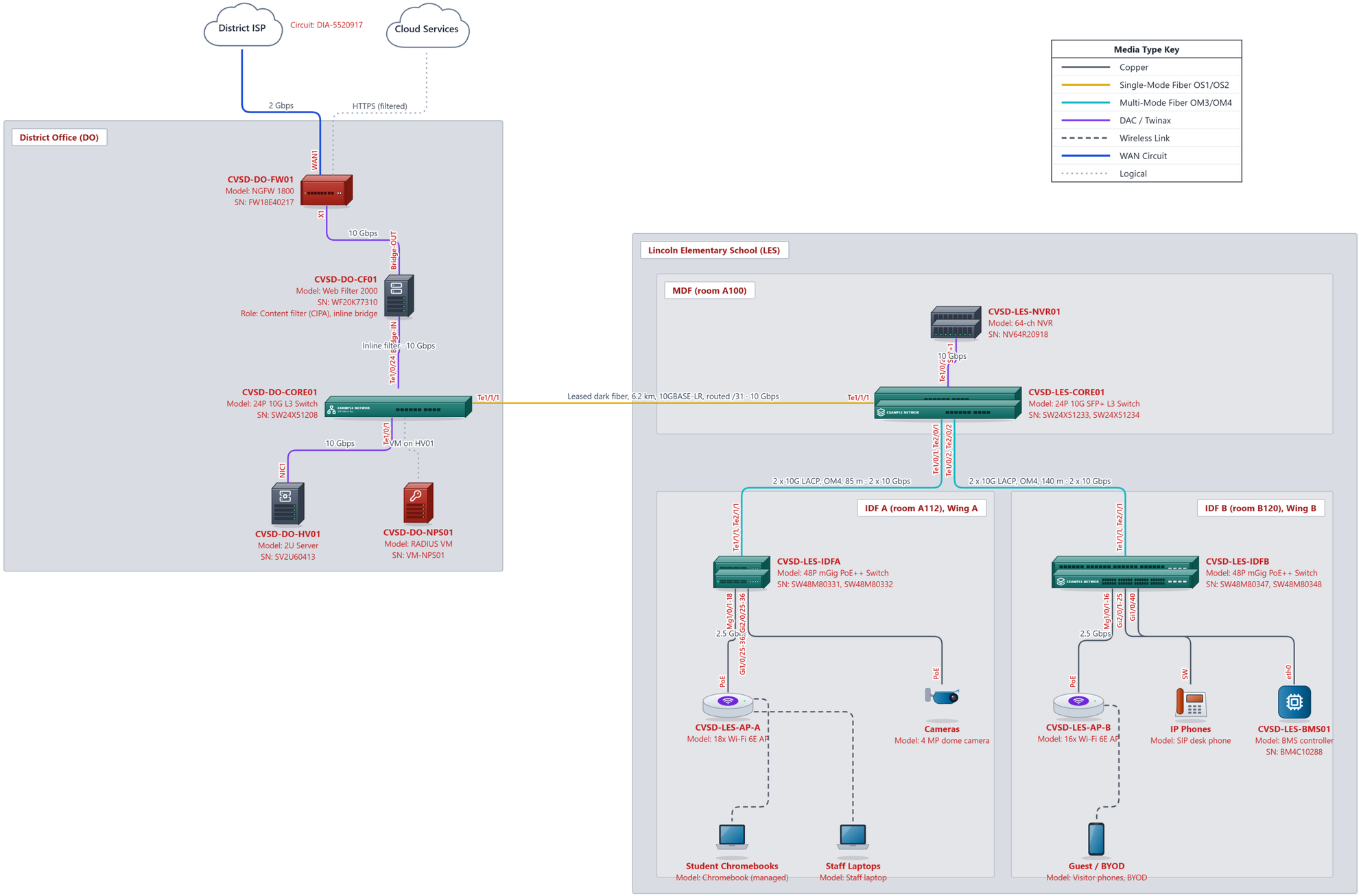


DOCUMENT

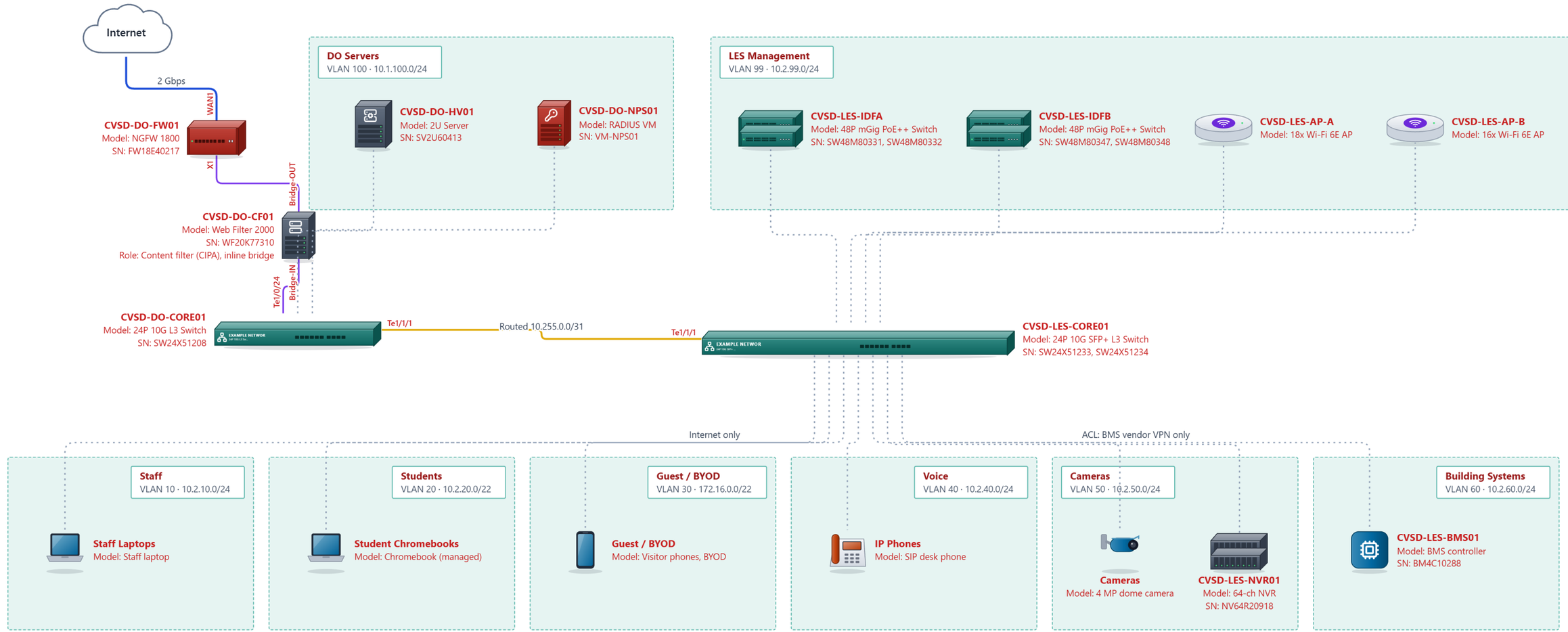
Cedar Valley School District - Lincoln Elementary Network

Cedar Valley School District · 1450 Lincoln Avenue, Springfield

SHEET TITLE

Physical: District and School

VERSION	LAST CHANGED	VERIFIED	SHEET
1.0	2026-11-25		1 of 7
DRAWN BY	LAST EDITOR	APPROVED	



Media Type Key
Copper
Single-Mode Fiber OS1/OS2
Multi-Mode Fiber OM3/OM4
DAC / Twinax
Wireless Link
WAN Circuit
Logical

DOCUMENT **Cedar Valley School District - Lincoln Elementary Network** Cedar Valley School District · 1450 Lincoln Avenue, Springfield	SHEET TITLE **Logical: VLANs and Subnets**	VERSION 1.0	LAST CHANGED 2026-11-25	VERIFIED	SHEET **2** of 7
		DRAWN BY	LAST EDITOR	APPROVED	

Device Inventory 37 devices

Hostname	Type	Vendor / model	Serial	Mgmt IP	Area	Location	Page
District ISP	ISP / Carrier						Physical: District and School
Cloud Services	Cloud Provider						Physical: District and School
CVSD-DO-FW01	Firewall	Example Networks NGFW 1800	FW18E40217	10.1.99.1	District Office (DO)	DO server room, Rack 1, U30	Physical: District and School
CVSD-DO-CF01	Server	Example Filtering Web Filter 2000	WF20K77310	10.1.99.5	District Office (DO)	DO server room, Rack 1, U28	Physical: District and School
CVSD-DO-CORE01	Core / L3 Switch	Example Networks 24P 10G L3 Switch	SW24X51208	10.1.99.2	District Office (DO)	DO server room, Rack 1, U26	Physical: District and School
CVSD-DO-HV01	Virtual Host	Example Systems 2U Server	SV2U60413	10.1.100.10	District Office (DO)	DO server room, Rack 1, U20-21	Physical: District and School
CVSD-DO-NPS01	NAC / RADIUS	Example Systems RADIUS VM	VM-NPS01	10.1.100.20	District Office (DO)	Runs on CVSD-DO-HV01	Physical: District and School
CVSD-LES-CORE01	Switch Stack	Example Networks 24P 10G SFP+ L3 Switch	SW24X51233, SW24X51234	10.2.99.1	MDF (room A100)	LES MDF, Rack 1, U38-39	Physical: District and School
CVSD-LES-NVR01	Storage / NAS	Example Security 64-ch NVR	NV64R20918	10.2.50.10	MDF (room A100)	LES MDF, Rack 1, U30-31	Physical: District and School
CVSD-LES-IDFA	Switch Stack	Example Networks 48P mGig PoE++ Switch	SW48M80331, SW48M80332	10.2.99.11	IDF A (room A112), Wing A	IDF A (room A112), Rack 1	Physical: District and School
CVSD-LES-AP-A	Wireless AP	Example Networks 18x Wi-Fi 6E AP			IDF A (room A112), Wing A	One per classroom, A101-A118	Physical: District and School
Cameras	Camera / IoT	Example Security 4 MP dome camera			IDF A (room A112), Wing A	Halls, entrances, parking	Physical: District and School
Student Chromebooks	Laptop	Chromebook (managed)			IDF A (room A112), Wing A		Physical: District and School
Staff Laptops	Laptop	Staff laptop			IDF A (room A112), Wing A		Physical: District and School
CVSD-LES-IDFB	Switch Stack	Example Networks 48P mGig PoE++ Switch	SW48M80347, SW48M80348	10.2.99.12	IDF B (room B120), Wing B	IDF B (room B120), Rack 1	Physical: District and School
CVSD-LES-AP-B	Wireless AP	Example Networks 16x Wi-Fi 6E AP			IDF B (room B120), Wing B	One per classroom B101-B112, 2 in the gym, library, cafeteria	Physical: District and School
IP Phones	IP Phone	Example Voice SIP desk phone			IDF B (room B120), Wing B	Wing B classrooms, office, nurse	Physical: District and School
CVSD-LES-BMS01	Generic Device	Example Controls BMS controller	BM4C10288	10.2.60.10	IDF B (room B120), Wing B	Boiler room	Physical: District and School
Guest / BYOD	Mobile Device	Visitor phones, BYOD			IDF B (room B120), Wing B		Physical: District and School
Internet	Internet						Logical: VLANs and Subnets
CVSD-DO-FW01	Firewall	Example Networks NGFW 1800	FW18E40217	10.1.99.1		DO server room, Rack 1, U30	Logical: VLANs and Subnets
CVSD-DO-CF01	Server	Example Filtering Web Filter 2000	WF20K77310	10.1.99.5		DO server room, Rack 1, U28	Logical: VLANs and Subnets
CVSD-DO-CORE01	Core / L3 Switch	Example Networks 24P 10G L3 Switch	SW24X51208	10.1.99.2		DO server room, Rack 1, U26	Logical: VLANs and Subnets
CVSD-DO-HV01	Virtual Host	Example Systems 2U Server	SV2U60413	10.1.100.10	DO Servers	DO server room, Rack 1, U20-21	Logical: VLANs and Subnets
CVSD-DO-NPS01	NAC / RADIUS	Example Systems RADIUS VM	VM-NPS01	10.1.100.20	DO Servers	Runs on CVSD-DO-HV01	Logical: VLANs and Subnets
CVSD-LES-CORE01	Core / L3 Switch	Example Networks 24P 10G SFP+ L3 Switch	SW24X51233, SW24X51234	10.2.99.1		LES MDF, Rack 1, U38-39	Logical: VLANs and Subnets
CVSD-LES-IDFA	Switch Stack	Example Networks 48P mGig PoE++ Switch	SW48M80331, SW48M80332	10.2.99.11	LES Management	IDF A (room A112), Rack 1	Logical: VLANs and Subnets
CVSD-LES-IDFB	Switch Stack	Example Networks 48P mGig PoE++ Switch	SW48M80347, SW48M80348	10.2.99.12	LES Management	IDF B (room B120), Rack 1	Logical: VLANs and Subnets
CVSD-LES-AP-A	Wireless AP	Example Networks 18x Wi-Fi 6E AP			LES Management	One per classroom, A101-A118	Logical: VLANs and Subnets
CVSD-LES-AP-B	Wireless AP	Example Networks 16x Wi-Fi 6E AP			LES Management	One per classroom B101-B112, 2 in the gym, library, cafeteria	Logical: VLANs and Subnets
Staff Laptops	Laptop	Staff laptop			Staff		Logical: VLANs and Subnets

Device Inventory (continued) 37 devices

Hostname	Type	Vendor / model	Serial	Mgmt IP	Area	Location	Page
Student Chromebooks	Laptop	Chromebook (managed)			Students		Logical: VLANs and Subnets
Guest / BYOD	Mobile Device	Visitor phones, BYOD			Guest / BYOD		Logical: VLANs and Subnets
IP Phones	IP Phone	Example Voice SIP desk phone			Voice	Wing B classrooms, office, nurse	Logical: VLANs and Subnets
Cameras	Camera / IoT	Example Security 4 MP dome camera			Cameras	Halls, entrances, parking	Logical: VLANs and Subnets
CVSD-LES-NVR01	Storage / NAS	Example Security 64-ch NVR	NV64R20918	10.2.50.10	Cameras	LES MDF, Rack 1, U30-31	Logical: VLANs and Subnets
CVSD-LES-BMS01	Generic Device	Example Controls BMS controller	BM4C10288	10.2.60.10	Building Systems	Boiler room	Logical: VLANs and Subnets

Link / Cabling Schedule 35 links

Cable ID	End A	Interface	End B	Interface	Media	Speed	VLANs	Length	Test	Label / notes	Page
	District ISP		CVSD-DO-FW01	WAN1	WAN Circuit	2 Gbps					Physical: District and School
	CVSD-DO-FW01		Cloud Services		Logical					HTTPS (filtered)	Physical: District and School
DO-C001	CVSD-DO-FW01	X1	CVSD-DO-CF01	Bridge-OUT	DAC / Twinax	10 Gbps		1 m			Physical: District and School
DO-C002	CVSD-DO-CF01	Bridge-IN	CVSD-DO-CORE01	Te1/0/24	DAC / Twinax	10 Gbps		1 m		Inline filter	Physical: District and School
DO-C010	CVSD-DO-CORE01	Te1/0/1	CVSD-DO-HV01	NIC1	DAC / Twinax	10 Gbps	99,100	2 m			Physical: District and School
	CVSD-DO-CORE01		CVSD-DO-NPS01		Logical					VM on HV01	Physical: District and School
CVSD-WAN-02	CVSD-DO-CORE01	Te1/1/1	CVSD-LES-CORE01	Te1/1/1	Single-Mode Fiber OS1/OS2	10 Gbps		6.2 km	Pass, 3.1 dB	Leased dark fiber, 6.2 km, 10GBASE-LR, routed /31	Physical: District and School
LES-C010	CVSD-LES-CORE01	Te1/0/20	CVSD-LES-NVR01	SFP+1	DAC / Twinax	10 Gbps	50	2 m			Physical: District and School
LES-F-A01	CVSD-LES-CORE01	Te1/0/1, Te2/0/1	CVSD-LES-IDFA	Te1/1/1, Te2/1/1	Multi-Mode Fiber OM3/OM4	2 x 10 Gbps	10,20,30,40,50,60,99	85 m	Pass, 1.1 dB	2 x 10G LACP, OM4, 85 m	Physical: District and School
LES-F-B01	CVSD-LES-CORE01	Te1/0/2, Te2/0/2	CVSD-LES-IDFB	Te1/1/1, Te2/1/1	Multi-Mode Fiber OM3/OM4	2 x 10 Gbps	10,20,30,40,50,60,99	140 m	Pass, 1.4 dB	2 x 10G LACP, OM4, 140 m	Physical: District and School
LES-A101-118	CVSD-LES-IDFA	Mg1/0/1-18	CVSD-LES-AP-A	PoE	Copper	2.5 Gbps	99 native, 10, 20, 30		Pass		Physical: District and School
LES-A201-224	CVSD-LES-IDFA	Gi1/0/25-36, Gi2/0/25-36	Cameras	PoE	Copper		50		Pass		Physical: District and School
LES-B101-116	CVSD-LES-IDFB	Mg1/0/1-16	CVSD-LES-AP-B	PoE	Copper	2.5 Gbps	99 native, 10, 20, 30		Pass		Physical: District and School
LES-B301-325	CVSD-LES-IDFB	Gi2/0/1-25	IP Phones	SW	Copper		40 tagged		Pass		Physical: District and School
LES-B240	CVSD-LES-IDFB	Gi1/0/40	CVSD-LES-BMS01	eth0	Copper		60	64 m	Pass		Physical: District and School
	CVSD-LES-AP-A		Student Chromebooks		Wireless Link						Physical: District and School
	CVSD-LES-AP-A		Staff Laptops		Wireless Link						Physical: District and School
	CVSD-LES-AP-B		Guest / BYOD		Wireless Link						Physical: District and School
	Internet		CVSD-DO-FW01	WAN1	WAN Circuit	2 Gbps					Logical: VLANs and Subnets
	CVSD-DO-FW01	X1	CVSD-DO-CF01	Bridge-OUT	DAC / Twinax						Logical: VLANs and Subnets
	CVSD-DO-CF01	Bridge-IN	CVSD-DO-CORE01	Te1/0/24	DAC / Twinax						Logical: VLANs and Subnets
	CVSD-DO-CORE01		CVSD-DO-HV01		Logical						Logical: VLANs and Subnets
	CVSD-DO-CORE01		CVSD-DO-NPS01		Logical						Logical: VLANs and Subnets
	CVSD-DO-CORE01	Te1/1/1	CVSD-LES-CORE01	Te1/1/1	Single-Mode Fiber OS1/OS2					Routed 10.255.0.0/31	Logical: VLANs and Subnets

Link / Cabling Schedule (continued) 35 links

Cable ID	End A	Interface	End B	Interface	Media	Speed	VLANs	Length	Test	Label / notes	Page
	CVSD-LES-CORE01		CVSD-LES-IDFA		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		CVSD-LES-IDFB		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		CVSD-LES-AP-A		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		CVSD-LES-AP-B		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		Staff Laptops		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		Student Chromebooks		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		Guest / BYOD		Logical					Internet only	Logical: VLANs and Subnets
	CVSD-LES-CORE01		IP Phones		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		Cameras		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		CVSD-LES-NVR01		Logical						Logical: VLANs and Subnets
	CVSD-LES-CORE01		CVSD-LES-BMS01		Logical					ACL: BMS vendor VPN only	Logical: VLANs and Subnets

VLAN / Subnet Table 8 VLANs

VLAN	Name	Subnet	Gateway	DHCP scope / helper	Devices	Page
10	Staff	10.2.10.0/24	10.2.10.1	CVSD-DC01 via ip helper, 8 h	1	Logical: VLANs and Subnets
20	Students	10.2.20.0/22	10.2.20.1	CVSD-DC01 via ip helper, 4 h	1	Logical: VLANs and Subnets
30	Guest / BYOD	172.16.0.0/22	172.16.0.1	CVSD-DC01, 1 h, client isolation	1	Logical: VLANs and Subnets
40	Voice	10.2.40.0/24	10.2.40.1	CVSD-DC01, option 66	1	Logical: VLANs and Subnets
50	Cameras	10.2.50.0/24	10.2.50.1	Reservations	2	Logical: VLANs and Subnets
60	Building Systems	10.2.60.0/24	10.2.60.1	Static	1	Logical: VLANs and Subnets
99	LES Management	10.2.99.0/24	10.2.99.1	CVSD-DC01, reservations only	4	Logical: VLANs and Subnets
100	DO Servers	10.1.100.0/24	10.1.100.1	Static	2	Logical: VLANs and Subnets