

Narrative: Internally build Single Mode Fiber Backbone covering all racks. with state of the art structured cable management									
Utilizing new wall-mounted racks near existing racks, Fully tested fiber terminations of 4 strands to each rack identified as IDF which are integrated in to top of rack cabinets									
All Copper will be re-pulled in entire building (every classroom to have 2 drops) to use Light Blue Cat6a. Cable ladders, Management/ Ladders/Signage will be required. Ladders will provide management from rack extending toward main run/trunk. At a suitable point (based on number and type of cables), J hooks and/or equivalent may be used. A service loop of 10ft on both ends required.									
Use existing Drops at end points if available (in wall boxes, or existing raceway) New Cat 6 Green KeystoneS and remove abandoned wiring after cut-over, existing wire is to be protected from damage.									
Goal: Future Proof the wiring infrastructure for 25 years.									
Fiber will run from each MDF to every IDF rack to provide 10GB backbone throughout buildings									
New Wall mount racks will be required for MDF/IDF racks, including top 1u termination of fiber and Rack mounted UPS sufficient to keep rack online for 30 minutes									

**1-4-10 rules**  
Chris & Skip came up with this simple rule.  
1 GB last mile (endpoint)->4GB  
4x1Copper Trunk -> 10GB Backbone

WIRELESS EQUIPMENT

Equipment	QTY	Make/Model
Antennas, Connectors and Related Components	0	
Cabling	~200, as needed	
Caching Server	0	
Firewall Service and Components	0	
Racks	15	wall mount if possible
Router	0	
Switches	as needed	Aruba
UPS/Battery Backup	15	any
Wireless Access Points	200	Aruba Wireless Access Points/
Wireless Controller	0	n/a

WIRED EQUIPMENT

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AHS	desc	capability	qty	features	Wired -- Type of Equipment	Quantity Vendor Should Bid	Preferred Make/Manufacturer and specifications (example: switches must be 48 port POE)
101 E Main ST	rack 1/15 Office Switch/Stack of	MDF 10GB, 40GB, 100GB capable		8 10 GB Fiber Port 96 1gbe POE	Antennas, Connectors and Related Components	0	
1000 drops estimated					Cabling (150 avg run x 1000 runs maximum)	150000 feet	none
					Caching Server	0	
					Firewall Service and Components	0	
	rack 2/15 1400 Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 144 1gbe POE	Racks	15	
					Router	0	
					Switches, assuming 48 ports/switch	25	Aruba
					Modules, GBIC, transceivers --10GB SM	15	
	rack 3/15 110 Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 192 1gbe POE	UPS/Battery Backup	15	
					Wireless Access Points	200	Aruba
					Wireless Controller	0	
	rack 3/15 Green Room Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 48 1gbe POE			
	rack 5/15 Fieldhouse Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 48 1gbe POE	10 GB Fiber Port 1gbe POE	15 952	
	rack 6/15 AOS Switch/Stack of	10GB, 40GB, 100GB capable		24 1gbe POE			
	rack 7/15 PressBox Switch/Stack of	10GB, 40GB, 100GB capable		48 1gbe POE			
New Construction 2021	rack 8/15 Agri Switch/Stack of	10GB, 40GB, 100GB capable		48 1gbe POE			
	rack 9/15 1105 Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 24 1gbe POE			
	rack 10/15 ROTC Switch/Stack of	10GB, 40GB, 100GB capable		64 1gbe POE			
	rack 11/15 Water Room Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 24 1gbe POE			
	rack 12/15 805 Switch/Stack of	IDF 10GB, 40GB, 100GB capable		1 10 GB Fiber Port 24 1gbe POE			
	rack 13/15 SW Arena Switch/Stack of	10GB, 40GB, 100GB capable		24 1gbe POE			
New Construction 2021	rack 14/15 Activity Center Switch/Stack of	10GB, 40GB, 100GB capable		96 1gbe POE			
	rack 15/15 PAC Sound Switch/Stack of	10GB, 40GB, 100GB capable		48 1gbe POE			