2.3 SCOPE OF WORK MATRIX TO BE INCLUDED IN DISTRICT PROJECTS

For each project, a Scope of Work Matrix is to be created by the construction manager and updated by District IT Group. It identifies the five areas of telecommunication construction for each project: Telephone, Computer Network, Broadband Television, Security Surveillance, and Security Access systems. It also defines any specific tasks to be completed and who is responsible for completing each task, the District or the Contractor. This document is not intended for publication in project prints or bid documents. It is, however, intended to clearly define for the design team the Contractor's role and responsibilities for the Telecommunication portion of any given project.

Item / or Material	District Purchased	District Installed	Contractor Purchased	Contractor Installed	Note
Determine the telephone system type for this project (VoIP or Standard)					1
Telephone System (select one: VoIP | Standard)					
Site conduits and boxes (If VoIP, coordinate with site)			X	X	
Interior raceways and boxes (If VoIP, coordinate with site)			X	X	
Copper cables (If VoIP, coordinate with site)			X	X	
Termination boxes and terminals (If VoIP, coordinate with site)			X	X	
Modular jacks and plates (If VoIP, coordinate with site)			X	X	
Cable testing and reports (If VoIP, coordinate with site)			X	X	
Telephones	X	X			
Telephone cords	X	X			
Programming	X	X			
Account setup, voicemails, etc.	X	X			
Final As-built drawings and documentation			X	X	
Computer Network Wiring					
Site conduits and boxes			X	X	
Interior raceways, cable trays and boxes			X	X	
Fiber optic cable tube cells			X	X	

Item / or Material	District Purchased	District Installed	Contractor Purchased	Contractor Installed	Note
Fiber optic cables			X	X	
Copper backbone cables			X	X	
Copper station cables			X	X	
Fiber patch panels			X	X	
Category 6A patch panels			X	X	
Jacks and faceplates			X	X	
Patch cords	X	X			
BDF/IDF (racks, backboards, A/C, wiring, etc.) Per specifications.			X	X	
Cable testing and reports (both copper & fiber)			X	X	
Active electronics, including network switches	X	X			
Programming and network implementation	X	X			
Final "As-built" drawings and documentation			X	X	
Broadband Television System					
Site conduits and boxes			X	X	
Interior raceways, cable trays and boxes			X	X	
Fiber optic cable tube cells			X	X	
Single mode fiber optic cables			X	X	
Coax cables			X	X	
Splitters, directional couplers at new building			X	X	
Line extender amplifier at new building			X	X	
Fiber optic transceivers, terminations			X	X	
Connection to head-end				X	5
Testing and reports			X	X	
Final As-built drawings and documentation			X	X	
CCTV Surveillance System					
Site conduits and boxes			X	X	
Interior raceways, cable trays and boxes			X	X	

Item / or Material	District Purchased	District Installed	Contractor Purchased	Contractor Installed	Note
Fiber optic cable tube cells			X	X	
Fiber optic cables from new building to MDF			X	X	
Category 6A cables w/PoE for new building			X	X	
Power testing and reports			X	X	
Cable testing and reports (both copper & fiber)				X	
Camera low voltage power supplies	X	X			
Head-end recorders, switchers, monitors & controls	X	X			
Cameras	X	X			
Camera brackets	X	X			
Final As-built drawings and documentation			X	X	
Security & Access					
Site conduits and boxes			X	X	
Interior raceways, cable trays and boxes			X	X	
Fiber optic cable tube cells			X	X	
Fiber optic cables			X	X	
New building interior wiring (Category 6A, AWG) per specifications.	X	X			6
Schedule interior building wiring			X	X	
Cable testing and reports (both copper & fiber)			X	X	
Head-end equipment and software at MDF/BDF	X	X			
Electric door hardware			X	X	2,3,4
Card readers	X	X			3,4
Door switches	X	X			3,4
BDF/IDF electronic control enclosures/logic boards	X	X			
Connection to head-end, programming, implementation	X	X			
Final As-built drawings and documentation			X	X	

Note 1 The Architect and Engineers shall design the telephone system to meet the specifications/requirements as defined in the District Telecommunication Infrastructure Technical Standards for that type; see section 1.02 for clarification of cabling needs. VoIP telephones will use the data cabling system and thus will not require separate horizontal telephone cables and outlets. All telephone system jacks should be red and labeled appropriately. All data cables should be blue and labeled appropriately.

Note 2 Will initially be key-operated until access control head-end connectivity has been completed.

Note 3 Will not be operational until head-end is connected.

Note 4 Hardware type, location and installation to be coordinated with the campus/security vendor. The contractor MUST work with the campus/security vendor PRIOR to installation to procure input to ensure that the installed system will work as expected.

Note 5 The video contractor must work with District IT Group in establishing connections to the existing campus backbone cable system. A District IT Group representative must be present when the contractor makes the connection to the head-end.

Note 6 These items must be coordinated with the Security Contractor by the campus.

The Architect shall be the focal point for coordinating the various engineering consultants during the design process. In order to provide an effective architectural design, the Architect needs to understand what the specific requirements are to support current and future telecommunication connectivity and services. The Architect shall engage the District IT Group in design meetings and coordination sessions beginning with the design phase to help define IT requirements in each location. The District IT Group is eager to assist in providing a detailed list of requirements that will aid in programming the required connectivity and telecommunication spaces.

It is the expectation of the District IT Group that the Architect will supply background drawings to the various members of the design team. It is very important for the proper design of the Information Technology Infrastructure that the drawings for the Electrical and Telecommunication Consultants contain furniture information. This will be needed by the Electrical and Telecommunication design team members to correctly locate power and telecommunication outlets.

The Architect shall ensure that, wherever Design Engineers or Consultants for other disciplines require a separate wiring infrastructure to support their systems, those consultants coordinate their design and infrastructure requirements and efforts with the District IT Group. This includes but is not limited to design parameters such as cable type, cable color, use of supplemental or common pathways and support systems. For any Design Engineers or Consultants that require any communication connection of any sort from the building to any other place on or off the campus, the Architect will ensure that these Engineers/Consultants request and coordinate with the District IT Group for this connectivity. No other system cable(s) that is included in the building will be allowed to use pathway(s) under the District IT Group control without prior approval.

The Architect shall coordinate with the Design Engineers or Consultants for the support of any required video and audio visual (AV) systems. Of particular concern is that installation of the Video and AV systems do not conflict with installation or potential installation of Information Technology Infrastructure. There are to be no local switches that connect to the network. A local switch for a Dante audio or HDMI over IP per room is ok, but the local network may not connect to the campus network.

This document does not include a standard for AV cabling and only references AV installations as they may interfere with or affect the voice/data infrastructure.

All video systems shall be designed with the participation of District IT Group.

As full participants in the design process, comments and requests submitted by the District IT Group must be incorporated into the reviewed documents in full for the next review of documents, or an explanation must be provided to the District IT Group, regarding the status of comments and requests. The District IT Group will postpone further reviews until all comments and requests have been addressed or incorporated into current documents and drawings.

2.4 TELECOMMUNICATION CONSULTANT/DESIGNER ROLE

At its option, is the District IT Group may either contract with a Telecommunication Consultant to perform its own communication design or request the Architect to retain the services of a Telecommunication Consultant. Regardless of the approach taken by the District IT Group, the Architect is expected to ensure that communication design input from a qualified Telecommunication Consultant is part of each phase of the design process. The Architect shall incorporate all comments from the Telecommunication Consultant into the various design document packages.