



## **Technical Approach**

Our technical approach for this cabling project is to utilize a patch panel-to-patch panel upgrade methodology. This strategic approach offers numerous benefits, including enhanced organization, streamlined cable management, and improved troubleshooting capabilities.

We anticipate completing the upgrade of one patch panel per day, ensuring a steady and efficient progression throughout the project. This measured approach also facilitates daily cutover processes, allowing us to transfer connections and restore device functionality by the end of each work shift. This commitment to daily cutover minimizes downtime and ensures that your operations experience minimal disruption.

Throughout the project, our team of skilled technicians will adhere to industry best practices and employ meticulous cable management techniques. This includes proper labeling, bundling, and securing of cables to maintain a clean and organized network infrastructure. By implementing these standards, we enhance the long-term maintainability and scalability of your cabling system.

We have calculated a total of 241 patch panels required for this project. This translates to 241 days for cabling and an additional 12 days for project planning (one day per school). The project is scheduled from April 1, 2025, to March 31, 2026. This timeline ensures the structured progression of work phases, focusing on efficient pathway generation before installation activities commence.

## **1. Cabling Pathway Evaluation and Generation**

Conduct an initial assessment of the current infrastructure and propose any necessary modifications or path generations to accommodate new cabling. This involves evaluating existing pathways and generating new routes as needed to ensure efficient cable management. The pathway evaluation and any subsequent generation should precede the physical installation work to prevent overlaps and ensure swift project execution.

## **2. Fiber Optic Cable Runs**

Establish fiber optic cable runs from the Main Distribution Frame (MDF) to each Intermediate Distribution Frame (IDF) using single-mode, indoor/outdoor rated 12-strand optical fiber cables. Each fiber will be terminated on both ends with SC connectors, accompanied by a patch cable per side.

## **3. Cable Support Installation**

Install J-Hooks and other necessary support structures to facilitate the traversal of cable bundles. This process includes securing all cables with appropriate fasteners like velcro and tie-wraps. Support installations also involve constructing Chatsworth and Panduit structures within IDF/MDF rooms.

## **4. Cable Pulling**

Execute the pulling of Cat 6A plenum cables to a variety of data outlets across each location. This step includes termination with blue jacks, fitting faceplates, and conducting thorough testing and labeling.

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### Essential Materials

- **Copper Cabling**

- Commscope Category 6A U/UTP Cable, plenum, blue jacket (per ft)
- Commscope Cat 6A unshielded jack (blue)
- Commscope 2-port faceplate (white)
- Commscope blanks (white)
- Commscope 48-port Cat 6A flat patch panel, 2RU (black)
- Panduit strain relief bar
- Cat 6A patch cord, 1 ft
- Cat 6A patch cord, 10 ft

- **Fiber Cabling**

- Corning 12-strand tight buffered single-mode (OS2) indoor/outdoor plenum rated fiber optic cable (per ft)
- Corning 12F (OS2) duplex LC adapter panel
- Corning (OS2) LC Connectors
- Corning 1U fiber enclosure
- LC/APC - LC/APC Single-mode Duplex Patch Cable, 1M
- LC/APC - LC/APC Single-mode Duplex Patch Cable, 3M

- **Supporting Materials**

- Firestop putty
- STI Fire barrier sealant
- ICC 2" Batwing J-hook
- ICC 4" Batwing J-hook
- 3M Electric tapes
- 3/4" Velcro (75ft)
- Labeling kits

### Proposed Timeline Table

School	Patch Panels	Cabling Days	Project Planning (Days)	Total Project Days
Arapahoe Ridge Elementary School	12 ▾	12 ▾	1 ▾	13 ▾

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Eagleview Elementary School	10 ▾	10 ▾	1 ▾	11 ▾
Glacier Peak Elementary School	11 ▾	11 ▾	1 ▾	12
Prairie Hills Elementary School	8 ▾	8 ▾	1 ▾	9 ▾
Skyview Elementary School	7 ▾	7 ▾	1 ▾	8 ▾
Tarver Elementary School	7	7	1	8
Shadow Ridge Middle School	34 ▾	34 ▾	1 ▾	35 ▾
Silver Hills Middle School	27 ▾	27 ▾	1 ▾	28 ▾
Horizon High School	49 ▾	49 ▾	1 ▾	50 ▾
Mountain Range High School	42 ▾	42 ▾	1 ▾	43 ▾
Hunters Glen Elementary School	10 ▾	10 ▾	1 ▾	11 ▾
Century Middle School	24 ▾	24 ▾	1 ▾	25 ▾
<b>Total</b>	<b>241</b>	<b>241</b>	<b>12 ▾</b>	<b>253</b>

## Years in Operation

Founded in 2014, SYSTEC101 has been a cornerstone in the telecommunications and structured cabling industry for over a decade. During this time, SYSTEC101 has cultivated a reputation for providing high-quality, customized information and communication technology (ICT) solutions to a wide array of clients, including both businesses and educational institutions. We have exhibited consistent growth, establishing ourselves as a dependable and innovative service provider in the industry, capable of handling projects of all sizes and complexities.

## Qualifications

SYSTEC101 possesses numerous industry-recognized certifications and an extensive portfolio of experience:

- **Certifications:** SYSTEC101 holds key certifications, including the Building Industry Consulting Service International (BICSI) and Registered Communications Distribution Designer (RCDD), which highlight the technical expertise and commitment to industry standards that SYSTEC101 brings to each project. These certifications demonstrate our adherence to best practices and our ability to design and implement cabling systems that meet or exceed industry benchmarks.
- **Experience:** With over 20 years of combined industry experience, the team at SYSTEC101 has been essential in implementing complex cabling projects across various sectors, including education, healthcare, government, and commercial. Our expertise guarantees that we are well-prepared to manage the complex requirements of modern communication networks and can customize our solutions to efficiently meet the specific needs of our clients. We have a proven track record of delivering projects on time and within budget, while maintaining the highest quality standards.

## Financial Stability and Viability

SYSTEC101's completion of large-scale projects and strong financial partnerships demonstrate its financial stability and operational viability:

- **Successful Project Completion:** The successful completion of major projects, such as installing over 1,000 Cat 6a cable runs for the Adams County School District 14, emphasizes our ability to manage and maintain substantial contracts. This project involved meticulous planning, coordination, and execution, and its success is a testament to our project management capabilities and technical proficiency.
- **Diverse Project Portfolio:** Our involvement in structured cabling for numerous educational and commercial facilities further suggests sound financial health and resource management, ensuring our ability to meet financial obligations. Our diverse project portfolio demonstrates our versatility and adaptability, as well as our ability to

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tailor our services to the unique requirements of each client and industry.

- **Established Partnerships:** Our established partnerships with suppliers like Graybar will ensure our ability to procure the necessary materials for this project at competitive prices and with reliable delivery schedules. These partnerships also provide us with access to the latest technologies and industry insights, enabling us to stay at the forefront of the telecommunications and structured cabling industry.

## Personnel and Staffing

The team assigned to this project consists of seasoned professionals whose detailed resumes highlight a dedication to excellence and technical skill:

- **Team Members:** Each team member offers a wealth of experience and specialized skills, with resumes accessible upon request, showcasing individual accomplishments, experience with past projects, and key competencies in structured cabling and project management. Our team members are not only highly skilled but also passionate about their work and committed to delivering exceptional results.
- **Staffing Plan:** The staffing plan encompasses roles such as Project Managers, Cabling Technicians, and Support Staff. Project Managers will supervise all project phases to guarantee adherence to timelines and quality standards, while Cabling Technicians will manage the hands-on installation work. Support Staff will furnish the necessary logistical and administrative support to ensure the project operates smoothly and efficiently. Our staffing plan is designed to be flexible and scalable, allowing us to adjust resources as needed to meet the demands of the project.