REQUEST FOR PROPOSAL

Peralta Community College District

District-Wide Network Infrastructure Upgrade

RFP# 21-22/04

Due date: October 1, 2021

I. Introduction

Founded in 1964, the Peralta Community College District (PCCD) is a collaborative community of colleges comprised of Berkeley City College, College of Alameda, and Laney and Merritt colleges in Oakland, Calif. The Peralta Colleges provide a dynamic multicultural learning environment offering accessible, high-quality educational programs and services, including two-year degrees, certificates, and university transfer programs, to more than 30,000 students. PCCD is home to award-winning Peralta TV (Comcast ch. 27/28, AT&T ch. 99) and public radio KGPC-LP 96.9 FM. To learn more about The Peralta Colleges, visit www.peralta.edu

Peralta Community College District ("District") is seeking proposals from qualified persons, firms, partnerships, corporations, associations, or professional organizations to provide value engineering, master scheduling, cost estimating, budgeting, and construction services for the **District – Wide Network Infrastructure Upgrade** ("Project") in accordance with Public Contract Code section 20651.

All RFP proposals must be submitted electronically via Vendor Registry: Peralta Community College District Current Solicitations | Vendor Registry

Each Proposer is required to possess one or more of the following State of California contractor license(s)**:**
C-7 or C-10

The Proposer's contractor license(s) must remain active and in good standing throughout the term of the Contract.

Proposer's are required to be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code.

Each proposer is solely responsible for timely submission of its proposal; the District is not responsible for any technological issues in a vendor's ability to timely submit its proposal or portion thereof by the specified date and time as prescribed in this RFP.

ALL RESPONSES ARE DUE BY 2:00 P.M. ON October 1, 2021, Oral, telegraphic, facsimile, telephone or email RFP Packets will not be accepted. RFP Packets received after this date and time will not be accepted and will be returned unopened. The District reserves the right to waive any informalities or irregularities in the RFP Packets. The District also reserves the right to reject any and all RFP Packets and to negotiate contract terms with one or more Respondents.

A **Mandatory** Pre-proposal video meeting will be conducted via zoom on Tuesday, August 31st, 2021, at 10:00 A.M. **Conference Meeting ID 965 4350 0481. Register in advance for this meeting:**

https://cccconfer.zoom.us/meeting/register/tJIoc-qtrjsuEtUVQ9hQW2WxOHLTScfrlujK

After registering, you will receive a confirmation email containing information about joining the meeting.

A **MANDATORY** Site visit will be conducted on each of the following locations:

District Office (*outside District Administration Center Building)* - **Wednesday September 8, 2021, at 9:00 am**, 333 East 8th Street, Oakland CA, 94606

Laney College (*Laney Tower Building Lobby)* - **Wednesday September 8, 2021, at 10:00 am**, 900 Fallon Street, Oakland, CA 94607

College of Alameda (*outside A Building)* - **Wednesday September 8, 2021, at 1:00 pm**, 555 Ralph Appezzato Memorial Parkway, Alameda, CA 94501.

Berkeley City College (*2050 Main Lobby)* - **Thursday September 9, 2021, at 9:00 am**, 2050 Center Street, Berkeley, CA 94704

Merritt College (*outside S Building)* - **Thursday September 9, 2021, at 11:30am**, 12500 Campus Drive, Oakland, CA 94619

Questions regarding this RFP may be directed in writing via, Peralta Community College District Current Solicitations | Vendor Registry and must be submitted on or before 4:00 P.M. Friday, September 17, 2021

II. Table of Contents

III. RFP Schedule Summary

The District may change the dates on this schedule without prior notice.

PROCUREMENT TIMELINE	
RFP # 21-22/04	District – Wide Network Infrastructure Upgrade
RFP Documents Issued and Posted:	8/20/2021
Mandatory Pre-Proposal Zoom Meeting:	8/31/2021
Mandatory Sites Visits	9/8/21 & 9/9/21
Requests for Information	9/17/2021
Addendum/Answers to RFI	9/24/2021
RFP Deadline:	10/1/2021
Award Date: *Tentative*	11/9/2021
Project Start Date:	12/6/2021
Project End Date:	(6 Months)

IV. Project Description

A. Objective

The purpose of this RFP is to upgrade the wired and wireless network infrastructure and associated structured cabling at the District Office and Four campus locations within the Peralta Community College District. At a minimum, this project requires replacement of existing LAN infrastructure, installation, configuration, and integration of new wired and wireless LAN infrastructure including, but not limited to, campus switches, data center switches, firewalls, wireless LAN controllers, access points, copper, and fiber structured cabling. Contractor must coordinate its work with a scheduled power shut-down, as well as ongoing day-to-day operations of an active school site. For details on data communications, wireless LAN, structured cabling, and integration requirements refer to the applicable specifications herein.

B. Contractor's Qualifications

All Proposer's must have Engineer(s) on staff, and to actively participate, must be local (within 20 miles of site) a minimum of three (3) full time CCIE (Cisco Certified Internetwork Expert) in Wireless, Security and Data Center. All lead implementation Engineer(s) on project must be CCIE Certified, and the work crew must also consist of engineers with a minimum CCNP certification level. All engineers are required to be residents of Alameda County and/or local (within 20 miles of site) to this project.

All Proposer's are required to have at least 2 or more verifiable references of $1M+ projects at California Community College(s) and/or Universities.

All Proposer's are required to have a 24x7x365 Network Operation Center operating in Northern, CA for same day response time to any network issues or outages.

Contractor's Vendor Partnership: The Peralta Community College District has standardized on Cisco hardware and software throughout the district. Therefore, all Proposer's are required to be a Cisco Certified Gold Partner and must be headquartered and operating locally (within 20 miles of site).

Products: Manufacturer's names and catalog numbers are specified herein for the purpose of establishing a consistent design, quality, appearance, performance, and serviceability. All network hardware and licenses furnished within this RFP shall be new and delivered directly from an authorized Cisco distributer. Remanufactured, refurbished, open box, or used hardware and/or materials will not be accepted. All Proposer's are required to quote the exact quantities and SKUs listed within this RFP. No substitutions will be accepted under any circumstances. Any proposals submitted with discrepancies in quantities and/or product SKUs listed within this RFP will be disqualified.

The District intends to select Respondents that best meet the District's needs to perform the Projects. The criteria on which the District makes its determination will be based on the District's adopted best value methodology and criteria provided in this RFP. The District may contract immediately, or during the length of the Project, with a single or multiple developers to provide all the services for the Projects.

Contract Term: The period of performance shall be one year with an option to renew the contract for five separate 12-month option periods by providing written notice not less than ninety (90) days before the contract expiration date. The total duration of any associated contract shall not exceed five (5) years.

V. RFP Terms and Conditions

A. ACCEPTANCE and REJECTION of PROPOSALS

The District retains the sole discretion to determine issues of compliance and whether a Proposal is responsive, responsible, and qualified.

The District reserves the right to waive anyinformalities or irregularities not governed by law.

The District reserves the right to reject all Proposals or to cancel this RFP.

B. AWARD of CONTRACT

This RFP does not obligate the District to award a contract or accept or contract for expressed or implied services.

The District makes no representation that participation in the RFP process will lead to an award of a contract or any other consideration, whatsoever. The award of a contract, if at all, is at the sole discretion of the District.

The District reserves the right to contract with any person or entity responding to this RFP for all or any portion of the work described herein, to reject any Proposal as non-responsive, and/or not to contract with any Respondent for the services described herein.

If the Respondent with the highest-scoring Proposal does not agree to enter into a contract with the District, the District retains the right to negotiate with any other Respondent.

C. COST OF PROPOSAL PREPARATION

The District shall in no event be responsible for the cost of preparing or submitting a response to this RFP, including any supporting materials or participation in interviews.

D. USE OF PROPOSALS, PROPRIETARY INFORMATION

Proposals, and any other supporting materials provided to the District in response to this RFP, will not be returned and will become the property of the District, unless portions of the materials are designated as proprietary at the time of submittal, and are specifically requested to be returned. Vague designations and/or blanket statements regarding entire pages or documents will be deemed insufficient and will not bind the District to protect the designated matter from disclosure. Pursuant to Michaelis, Montanari, & Johnson v. Superior Court (2006) 38 Cal.4th 1065, submissions shall be held confidential by the District and shall not be subject to disclosure under the California Public Records Act until after either: (1) the District and the successful Proposer have completed negotiations and entered into an Agreement, or (2) the District has rejected all submissions. Furthermore, the District will have no liability to the Proposer or other party as a result of any public disclosure of any Proposal.

E. FULL OPPORTUNITY

The District hereby affirmatively ensures that Disadvantaged Business Enterprises ("DBE"), Small Local Business Enterprises ("SLBE") and Small Emerging Local Business Enterprises ("SELBE") shall be afforded full opportunity to submit Proposals in response to this RFP.

No Respondent will be discriminated against on the basis of race, color, gender, sexual orientation, political affiliation, age, ancestry, religion, marital status, national origin, medical condition, or disability in any consideration leading to the award of the contract.

F. SMALL LOCAL BUSINESS ENTERPRISE AND SMALL EMERGING LOCAL BUSINESS ENTERPRISE PROGRAM

The District is committed to ensure equal opportunity and equitable treatment in awarding and managing its public contracts and has established an annual overall program goal of 25 percent participation for small local businesses. To facilitate opportunities for small local business, the District will use a maximum five percent preference for SLBE and SELBE firms. The preference is only used for computation purposes to determine the winning proposal and not for determining the contract price.

Proposers meeting the District criteria for an SLBE and SELBE can complete the self-certification affidavit, signed under penalty of perjury (see **RFP EXHIBIT 1**). Proposers claiming SLBE and SELBE status in the self-certification affidavit will be required to submit proof of residency and revenue 48 hours after the delivery deadline forProposals. Such proof shall consist of a copy of a contract to perform work, to rent space or equipment, or for other business services, executed from their local address, and the firm's tax returns from the past three consecutive years.

G. RESTRICTIONS ON LOBBYING AND CONTACTS

From the period beginning on the date of the issuance of this RFP and ending on the date of the award of the contract, no person, or entity responding to this RFP, nor any officer, employee, representative, agent, or consultant representing such a person or entity shall contact through any means or engage in any discussion regarding this RFP, the evaluation or selection process/or the award of the contract(s) with any member of the District's Governing Board ("Board"), selection committee members, or any member of the Citizens' Oversight Committee, or with any employee of the District except for clarifications and questions as described herein. Any such contact shall be grounds for the disqualification of
the Respondent.

H. INVESTIGATIONS and CLARIFICATIONS

The District reserves the right to investigate and rely upon information from any other available sources in addition to and beyond any documents or information submitted in response to this RFP.

The District reserves the right to request, at its sole discretion, that one or more of the Respondents provide clarifications or supply additional material deemed necessary to assist in the evaluation of Proposals, and to modify or alter any of the requirements herein.

In the event that the proposal guidelines change materially, all Respondents who have submitted timely Proposals will be given an opportunity to modify their Proposal in the specific areas that are impacted.

VI. Proposal Format and Content

Proposals are to be prepared in such a way as to provide straightforward, concise delineation of the proposer's capabilities to satisfy the requirements of this RFP. Emphasis should be concentrated on conformance of the RFP instructions, responsiveness to the RFP requirements, and on completeness and clarity of content.

A. Title Page. Include the following information on the title page:

- The RFP number and name
- Firm's/Contractor's name (legal name of entity)
- Mailing address
- Telephone number(s)
- Fax number
- E-mail address
- Website address

B. Cover Letter.

- Briefly describe your understanding of the project and summarize the proposer's qualifications and capabilities to meet RFP requirements.
- Identify person(s) who will be authorized to represent the company during contract negotiations and term of contract. Include their title, address, and telephone number(s).
- Acknowledge receipt of any addenda issued for this RFP and attach signed addenda to the proposal.
- The cover letter must be signed by the person who has authority to bind the company. The name and title of the individual(s) signing the proposal must be clearly shown immediately below the signature. Please see Authorized Signatures on page 9.

C. Table of Contents. Clearly identify the materials by section, subsection, and page number using the RFP section numbers and headings.

D. Understanding the Project. Provide comprehensive narrative that illustrates your understanding of the purpose of the scope, objectives, and requirements of the project. Identify any challenges associated with implementing the work and District timeline.

E. Methodology Used for the Project. Provide a detailed, comprehensive narrative that sets out the methodology you intend to employ and demonstrate how your methodology will serve to accomplish the Scope of Work (SOW) and achieve the District's objectives. Discuss any operational plan, problem-solving approaches, techniques, standards, or creative methods to be used for getting the project completed within the District's timeline. Include the proposed project schedule and timeline, which identifies major tasks and project milestones. Be specific about how you will provide the training that will be required to allow IT staff to maintain the SIS system.

F. Management Plan for the Project. Provide a comprehensive narrative that sets out the management plan you intend to follow and demonstrate how the plan will serve to accomplish the scope of work and achieve the District's objectives. Include the following as part of your narrative:

- An organizational chart specific to personnel assigned to accomplish the work;
- The individual responsible and accountable for the completion of work (project manager) and the extent to which the individual will be available to the District;
- How this project fits into your overall organizational structure;
- Your management approach to potential contractual disputes.

G. Experience and Qualifications. Provide a comprehensive narrative describing your company's business history and proposed project team's specialized experience, capabilities, and unique qualifications for the performance of the work. Include the following:

- A list of projects with SOW description (of similar size and complexity) and previous work experience that demonstrate your ability to administer or complete this project successfully;
- References, including telephone numbers, for each project listed above, verifying that the contacts will be available to provide references during the evaluation period;
- A brief résumé of all personnel identified in your organizational chart provided in item F above.

H. Price Proposal. Provide the compensation that you expect to receive for the performance of the contract. This shall include an itemized list of all costs associated with the performance of the contract, including but not limited to:

- List hourly rates by position title, with cross-reference to key personnel and staffing plan, for reference.

- Present a schedule of values based on tangible deliverables, coordinated with the work plan and the staffing plan, to support evaluation of invoices. Invoices will be evaluated for tangible progress (and not hours expended or for percentage of time elapsed).
- Include all costs necessary to complete the scope of services, including, but not limited to, document reproduction, travel, meetings, and delivery services. The District will not process invoices on a "reimbursable" basis.
- Include a lump sum total fee. Provide detail, coordinated with the Work Plan, to show how the lump sum fee was calculated.
- All required licenses, documentation, and warranties for software.

VII. Selection Process

A. Evaluation. An evaluation committee will review, evaluate, score, and rank proposals in accordance with criteria identified below. Clarification of submitted material may be requested during the evaluation process. Oral interviews, presentations with top-ranked Proposers may also be conducted at the discretion of the evaluation committee. The District Retains the sole discretion to determine issues of compliance and to determine whether a Proposal is responsive, responsible, and qualified.

B. Criteria. The committee will consider only responsive and responsible proposals whose proposal is determined to be the most advantageous to the District, to include cost and other submittal criteria, which includes performance reliability, standardization, product life-cycle cost, delivery timetables, support logistics, minimum product specifications, added features, fitness of purchase, manufacturers' warranties, and maintenance contract of proposed Local Area Network. The District may, at its sole discretion, request additional information pertinent to the evaluation process, from one or more Proposers and/or from third parties.

C. Scoring. Points will be awarded to various categories below to help with the selection process. Award shall be made to the Proposer whose proposal meets the evaluated standards and will be most advantageous to the District with price and all other factors considered. The District is to be the sole judge in the selection process. The District, at its discretion, may reject all proposals and request new proposals. The District may, at its sole discretion, request additional information pertinent to the evaluation process, from one or more Proposers and/or from third parties.

D. The District may, at its sole discretion, require one or more Proposers to participate in interviews. Proposer's Key Personnel are expected to attend an interview (see interview date(s), if any, in Section I). District staff and other stakeholders may participate in the interview process. The interview is an opportunity for the District to review the information in the Proposal and other matters the District deems relevant to its evaluation. For example: comments or proposed changes to the form of Agreement.

Evaluation Criteria

Item	Criteria	Maximum Possible Points
1	Strength of Respondent Entity Successful performance of similar work Ability to support the project with personnel and experience	15
2	Project-Specific Team and Work Plan Understanding of project specifics Strength of project-specific team Realistic and efficient approach to project delivery	25
3	Design Skills Quality Creativity Sustainability	25
4	Fee Clarity, tangible deliverables, consistency, overall cost	15
5	Business Documentation Signatures on submitted forms (exhibit 1)	5
6	SLBE/SELBE, participation	5
7	Written Communication Skills Clarity, quality, internal consistency, ease of use Compliance with direction provided by the RFP Complete and concise ("right-sized")	10
	Total	100

A. Award of Contract:

The District retains the sole discretion to identify Proposer(s) that can provide the greatest overall benefit to the District. See also RFP Terms and Conditions.

Following the committee process, contract price and scope may be further negotiated with the Proposer recommended for contract award. If an agreement on contract price cannot be reached in a timely manner, the District may seek to reach an agreement with the next recommended entity, continuing with lower ranked entities if deemed by the District to be in the best interest of the District.

Award of contract is subject to additional administrative review and Board approval.

E. Timeline. The District's projected timeline is that all equipment and materials will be purchased in December 15, 2021, Local Area Network System installed in 3/1/2022, and will be operational on or before June 15, 2022. Training for key personnel should take place during the project and extend to post project training as needed. Exact timelines may vary based on scheduled events and personnel obligations. Training timelines must be flexible to work around scheduled school events.

F. Product Demonstration. After review of RFP responses, selected Vendors, at the District's discretion, may be asked to demonstrate their proposed solution in person and in detail to District representatives. Demonstrations will be held at the District's Administrative Office. Response to this RFP does not guarantee that any particular Vendor will be asked to demonstrate their product or be awarded a contract for any products or services with the District.

G. The Proposer to whom Contract is awarded shall execute a District and submit the following documents by 5:00 p.m. of the SEVENTH (7th) calendar day following the date of the Notice of Award. Failure to properly and timely submit these documents entitles District to reject the proposal as nonresponsive.

1) Performance Bond (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
2) Payment Bond (Contractor's Labor and Material Bond) (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
3) Insurance Certificates and Endorsements as required.
4) Criminal Background Investigation/Fingerprinting Certification.
5) Imported Materials Certification.
6) Criminal Background Investigation/Fingerprinting Certification.

END OF DOCUMENT

VIII. Scope of Work

SECTION 1:

1. DATA COMMUNICATIONS AND NETWORK EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes
   1. Furnish and Install a complete integrated Cisco IP based network upgrade to accommodate voice, video and data traffic from various disparate communications systems within LAN/WAN, Data Center, Security, and Wireless LAN at the Peralta Community College District Office, Berkeley Community College, and Laney Community College Campus locations.
   2. The contractor shall provide a complete information system in accordance with the requirements of these specifications.

1.2 DEFINITIONS AND INTERPRETATIONS

A. As used in the document herein certain non-technical words shall be understood to have specific meanings as follows regardless of indications to the contrary in other documents governing the work:
   1. Acceptance – A process used to obtain approval from Peralta District for work done on the project to date.
   2. Assembly – A defined set of elements.
   3. Backbone – Shall refer to the portion of the installation that transmits between building floors (or between telecommunications rooms). The term "Riser" may also be used interchangeably.
   4. Category 5e/6/6A copper cabling – Conforming to the guidelines issued as part of ANSI/TIA.
   5. Configure – Programming of specific and detailed installation parameters for the system operator. These details shall be discussed at various meetings throughout the pre-implementation process and shall be documented. All parameters shall be provided for the implementation of a 'turn-key' solution.
   6. Contractor – Entity which installs supports and adds value during operation or installation of a manufacturer's product.
   7. Final Acceptance – The full completion of a project signed off by all responsible parties and the finalization of all paperwork.
   8. Furnish – Purchase and deliver to the project site complete with every necessary appurtenance and support, all as part of the work. Purchasing shall include payment of all surcharges as may be required to assure that purchased items are free of all liens, claims or encumbrances.
   9. Horizontal Cable – Refers to the portions of the cable installation that are installed between the telecommunications rooms and the work area outlets. The terms "Station Cable" or "Workstation Cable" may also be used.
   10. IDF – Intermediate Distribution Frame

11. Install – Unload at the delivery point at the site and perform every operation necessary to establish secure mounting and correct operation at the proper location in the project, all as part of the work. Includes "Configure"
12. Low Voltage – Less than 50 volts as specified by Underwriters Laboratories (UL)
13. Manufacturer – Entity, which physically produces a unique, branded product.
14. MDF – Main Distribution Frame
15. MPOE – Main Point of Entry
16. Network vendor – Entity responsible, who provides, installs, supports and adds value during operation or installation of manufacturers products provided as part of this work.
17. Network – All switches, transport media, etc. required for end-to-end connectivity.
18. OFE – Owner-furnished Equipment, supplied by Owner, installed and/or integrated by the contractor as required to meet the functionality as described in this specification section.
19. Peralta District's representative – Entity representing Peralta District and Peralta District's interest during the project duration.
20. Patch Panel – A system of terminal blocks, patch cords, and backboards that facilitates administration of cross-connect fields for moves and rearrangements.
21. Provide – "Furnish", "Install" and "Configure".
22. Shall – Indicates a mandatory requirement.
23. Station Cable – See "Horizontal Cable"
24. UPS – Uninterruptible Power Supply, an auxiliary power unit for telecommunications systems that provides continuous power in the event of a commercial power failure.
25. Work Area/Workstation Outlet – The point of attachment of voice and/or data end user equipment to the cabling system.

1.3 SYSTEM DESCRIPTION

A. Network Architecture Overview

1. Provide an integrated Cisco IP based network upgrade based on recognized best practices and principles.
2. Ensure network communications systems implemented are compliant with internal/external regulations and in line with Peralta District's IT standards and strategies.
3. Network Security: The network security solutions shall be developed for use by Peralta District and be capable of enforcing a **highly reliable and secure environment** for all network traffic on this integrated network communications system.
4. Redundancy: The network shall provide **service level redundancy** through (but not limited to) redundant hardware for failover and multiple instances of software installed on respective hardware in critical areas.
5. The network vendor shall install and configure a standards-based, switched, multi-gigabit Ethernet network to service end users and devices consisting of the hardware, services, and elements as described in this RFP.
6. The network vendor **shall make all provisions** to fully configure and commission the data communications network end-to-end. This may additionally include

accommodation for the following intelligent building systems:

a. Standard data traffic for facility management and office applications (e.g. BMS, word processing, email, etc.)
b. Remote Access
c. Internet/Web access
d. IP telephony –IP telephony system
e. WLAN Communications per IEEE 802.11a, b, g, n, ac, ax (Wi-Fi)
f. Physical Security and Access Control Systems
g. IP Security Video Surveillance Systems
h. Building Management Systems (BMS)
i. Video and Streaming Media (video conferencing)
j. Audiovisual systems

7. If any such systems are not currently configured in the campus, the network vendor shall accommodate these systems with strict adherence to Peralta District IT policies and procedures.
8. Management of all equipment **must be** protected by network access control lists and passwords. Where HTTP is used for equipment management and configuration, HTTP session must be secured through SSL. Use of SSH to provide encrypted and secure remote login for equipment management **is required.**

1.4 SUBMITTALS

A. Submittals addressed in this specification section is applicable specifically to the WLAN network integration requirements.

B. General Submittal requirements

1. The network vendor **shall accumulate record documentation** during the entire duration of the project. Keep the most updated version of the record documentation on the specified secure electronic repository site and at the job site at all times and mark changes, configurations or modifications which occur clearly on the documents. Documentation **shall be made available** to the Peralta District representative, at their request.
2. Submittal packages shall be submitted to the Peralta District representative for review and approval. The network vendor shall revise the documents based on **any corrections noted** and shall resubmit as required.
3. The as-built drawings for the network data equipment, port assignments, and other design documentation shall be additionally delivered in MS Visio or CAD drawings, minimally. This includes all 'stencils' required to correctly identify all equipment.
4. Any and all costs for document conversion (if necessary), printing, etc., are the **responsibility of the network vendor**. The network vendor shall submit the "as-built" documentation on an electronic storage format containing electronic versions of all files. Two (2) printed copies of all documentation are required.

   (The requirement for printed copies may only be waived by Peralta District.)

5. Items will not be accepted for review unless:
   a. They include complete information pertaining to accessories.
   b. They are submitted as a package where they pertain to related items.
   c. They are properly marked with specific service or function and intended location of use within the project.

d. They are clearly identified or highlighted to indicate all items that are applicable.
e. They indicate the project name and address along with the network vendor's name address and phone number.

C. Submittal review process

1. The purpose of the review of the submittals is to maintain the integrity of the design. Any proposals submitted with discrepancies in quantities and/or product SKUs listed within this RFP **will be disqualified**

2. It is the responsibility of the network vendor to confirm all dimensions, quantities, and the coordination of materials and products supplied by him with other trades. Approval of submittals containing errors **does not relieve the network vendor from making corrections at his expense**.

D. Proposal submittals

1. Provide product information and manufacturer's cut sheets of the following components:
   a. Physical hardware appliance/device
   b. Manufacturer's physical installation instructions
   c. Operating System, or firmware (if applicable) version number, revision number and latest patch number and date it was released.
2. Submit the organizational and workflow charts:
   a. Project Plan –Supply a complete description of the key activities required for the installation of the proposed system.
   b. Project Organization chart – Provide a project organization chart with the reporting relationships of project team members and other key personnel including an escalation matrix showing the chain of command.
   c. Responsibility Matrix – Provide a work responsibility matrix, identifying the tasks the network vendor shall perform and the tasks Peralta District is expected to perform to successfully implement the system.
3. Maintenance and Warranty submittals:
   a. Provide the original manufacturer's maintenance agreement for all hardware included in this procurement document and associated equipment as deemed by the network vendor.
   b. Provide the original manufacturer's hardware and software warranty statement.
   c. Network vendor warranty statement for a fully operational network system as specified under this procurement document and contract requirements.
   d. Provide the network vendor warranty statement to meet implementation time schedule.
4. Product Compliance:
   a. Network vendor's proposal documents pricing shall include the latest product lines in compliance with the specifications and it shall be the network vendors sole responsibility to ensure all products included in the proposal pricing will not enter "end-of-sale (EOS) state by the product manufacturer within six (3) months of submitted bind pricing date.

E. Project and Final Acceptance Submittals

1. Provide product information and manufacturer's cut sheets of the following components:
   a. Physical hardware appliance/device
   b. Manufacturer's physical installation instructions
   c. Operating System version number, revision number, firmware and latest patch number and date it was released (where applicable).
2. Submit the following network diagrams:
   a. Complete network topology diagram showing all hardware with exact interconnections.
3. Submit the organizational and workflow charts:
   a. Updated Project Organization chart – Provide a project organization chart with the reporting relationships of project team members and other key personnel including an escalation matrix showing the chain of command.
   b. Project directory – Provide a project directory with the reporting names and contact information for all project team members.
   c. Updated Responsibility Matrix – Provide a work responsibility matrix, identifying the tasks the network vendor shall perform and the tasks the Peralta District representative group is expected to perform to successfully implement the system.
   d. Equipment lead time tracking matrix in order to ensure timely delivery required throughout the project.
   e. Submittals due no later than (60) calendar days after project award.
4. Secure electronic depository site:
   a. Set up a secure electronic repository on servers owned by the network vendor to be accessible during the entire implementation phase.
   b. Provide the secure electronic repository server link and password to the Peralta District representative immediately after set up.
   c. The secure electronic repository shall be set up and link distributed to the Peralta District representative no later than (60) calendar days after project award.
5. Port matrix submittal:
   a. Submit Port Matrix versions in electronic format on network vendor's secure electronic repository with email notification to Peralta District's representative.
   b. The network vendor is responsible for keeping an updated version of the Port Matrix on the network vendor's secure electronic repository during the entire project.
   c. Submit the final as-built version of the Port Matrix to the Peralta IT Team with a spreadsheet listing all:
      1) Hardware appliances with the applicable electronic interface modules.
      2) Part numbers for each individual component.
      3) Serial numbers for each individual component.
      4) Matrix of per port to cable to IP address to VLAN identification.
      5) Testing record documented as per Testing section 3.5.
      6) Submittal due within (10) days of Network System final acceptance.
6. Submit the following schedules:
   a. Network equipment assembly and burn-in. Submittal due within (60) days of

receiving notice to proceed.

b. Network equipment shipping and delivery to project site. Submittal due within (60) days of receiving purchase order.

c. Implementation plan – Task description and timeline and resources required with critical milestone dates of the key activities required for the installation of the proposed system. Supply a complete description of the key activities and project deliverables required for the installation of the proposed system that tracks with the latest overall construction schedule. (construction schedule to be provided by Peralta District's representative) Submittal due within (60) days of receiving notice to proceed.

7. Software submittals:

a. Keep a copy of the most recent configuration files on secure electronic repository servers owned by the network vendor during the entire implementation phase.

b. The network vendor shall provide a copy of all software configuration files in '.txt' format. Sensitive information like usernames and passwords should not be posted on the secure electronic repository.

c. Submit the following software at network system final acceptance:

1) Provide one (1) copy on electronic storage format of all host names, user accounts, passwords and other applicable device access information.

2) Provide a copy of all operating systems (or firmware) for each device.

3) Provide software as required to allow Peralta District's internal IT group to configure and restore configuration settings.

4) Provide installation and operations manuals for each component.

1.5 QUALITY ASSURANCE

A. All equipment and materials for permanent installation shall be the products of specified and recognized manufacturers and shall be new.

1. New equipment and materials shall:

a. Be Underwriters Laboratories, Inc. (U.L.) labeled and/or listed where specifically called for or where normally subject to such U.L. labeling and/or listing services.

b. Be without blemish or defect.

c. Be in accordance with the latest applicable standards.

d. Be products that meet the acceptance of the approved products list.

2. The network vendor shall be responsible for ensuring that the installation of all equipment be performed in accordance with manufacturers' specifications. The necessity of special conditions required by a particular manufacturer shall be brought to the attention of Peralta District's representative prior to the installation of any equipment in the area concerned.

B. Regulatory Requirements

1. All work covered under these specifications shall meet or exceed the latest requirements of all national, state, county, municipal and other Authority having

jurisdiction over the work described.

2. The network vendor shall comply with all Public Ordinances, Building Codes, Laws, etc. Any permits and licenses required for the performance of the work shall be obtained.
3. Workmanship, material and equipment shall be in accordance with the specifications and drawings. In some instances, the requirements exceed those required by codes and standards. Where not exceeded, the codes and standards shall be considered as absolute minimum requirements.
4. Any portion of the work which is not subject to the requirements of an electric code published by a specific Authority Having Jurisdiction shall be governed by the National Electric Code and other applicable sections of the National Fire Code, as published by the National Fire Protection Association.
5. Installation procedures, methods and conditions shall comply with the latest requirements of the Federal Occupational Safety and Health Administration

C. Certifications

1. The network vendor shall obtain all permits required to proceed with the work and shall have these available for inspection as required by the authority having jurisdiction, if applicable. The network vendor shall obtain all required inspection certificates and shall make these available at the completion of the work. Inspection and certification fees levied by this agency shall be paid for as part of the work.
2. All work shall be guaranteed to be free from defects.
3. Certification shall be submitted attesting to the fact that specified performance and other criteria are met by all items of work for which such certification is required.

4. Except where modified by a specific notation to the contrary, it shall be understood that the indication and/or description of any item in the drawings and specifications for the work carries with it the instruction to furnish, install and connect the item as part of the work regardless of whether or not this instruction is explicitly stated.

1.6 ASSEMBLY SHIPPING AND DELIVERY

A. Hardware Assembly requirements:

1. Each hardware appliance shall be fully assembled at the network vendor's lab space according to the specifications.
2. The network vendor shall create an assembly log, showing serial numbers of each hardware appliance with corresponding power modules and interface modules.
3. This assembly log will be used by the network vendor at the building site to assemble the hardware appliance with the correct power and interface modules as logged at the network vendor's lab space.

B. Hardware burn-in requirements:

1. Each fully assembled hardware appliance shall be burned in at the network vendor's lab space to verify that all electronic interfaces and modules, electrical power supply units and cooling equipment are 100% functional.
2. The network vendor shall replace any hardware appliance found to be defective prior to delivery of equipment to project site.

C. Hardware packaging requirements:

1. Each fully tested and labeled hardware appliance shall be packaged individually in the appropriate hardware specific protective material and containers. Include all additional hardware fittings and the correct number of electrical power cords for each hardware appliance.

D. Shipping and Delivery requirements:
   1. The network vendor shall arrange for and coordinate the shipping, delivery and receipt of the equipment in accordance with the project schedule.
   2. Hardware appliances shall be shipped and delivered by the network vendor to the project site destination.
   3. The network vendor's assigned project manager shall coordinate the un-boxing and re-assembly of the hardware according to the assembly log created during the assembly stage at the network vendor's lab space prior to installing the hardware.

E. An accurate bill of materials shall be provided at time of delivery, encompassing all shipped equipment, hardware and software.

1.7 PROJECT CONDITIONS

A. All network vendor's staff performing work must be in compliance with project security requirements relating to field personnel.

B. The network vendor shall comply with all Peralta District's representative regulations concerning facilities access, use and security at all times.

C. At all times shall the network vendor be responsible for maintaining satisfactory standards of competency, conduct, appearance, and integrity of its employees.

D. The network vendor shall be responsible for maintaining labor harmony as well as existing Project Labor Agreements.

E. There are many other trades involved in the construction of the project. It is the network vendor's responsibility to take all reasonable precautions to protect and keep safe any equipment, accessories, documentation, tools or other items brought onto the job site. Further, it is the network vendor's responsibility to take all reasonable precautions to prevent any situation to occur which may cause harm to any individual or property on the job site.

1.8 MAINTENANCE AND WARRANTIES

A. All system work and all related equipment installed by the network vendor shall be guaranteed to be free from defects. Any defective materials or workmanship, as well as damage to the work of other trades resulting from same shall be repaired as directed for the duration of stipulated warranty periods.

B. The duration of the manufacturers' warranty period following the date of acceptance of all systems work shall be at minimum one (1) years.

C. Certification shall be submitted attesting to the fact that specified performance and other criteria are met by all items unless otherwise specified.

D. The network vendor shall provide a copy of any program required for complete system functionality in any form accepted by the Peralta District representative group. Any hardware required to download the software to the device shall be provided to Peralta District as part of the installation.

E. The issuing of operating instructions shall include:
   1. Supplying of all original operating and maintenance instruction manuals
   2. Supplying of qualified personnel to demonstrate the operation of specialized equipment

3. Submission of the name, address and telephone number of the manufacturer's representative and Service Company for each item of equipment so that service and spare parts can readily be obtained.

F. All product warranties need to meet the requirements found in this document and division one documentation.

G. A network vendor's statement, stating that the network system will be fully operational as specified under this procurement document in the allotted construction time schedule.

1.9 ACCEPTANCE AND CUT-OVERS

A. Acceptance of a fully operational network system as specified shall be termed as Network System final acceptance at which time the Peralta District representative shall take on the responsibility of the operation of the network system.

B. The network vendor shall submit all the necessary software and documentation as specified per the specified timelines.

C. The network vendor's assigned project manager **shall be required to be on site during the network system final acceptance** to assist in the coordination, hand-over and acceptance of the network system to a designated Peralta District representative.

D. Listed below are the criteria for the acceptance and final acceptance procedure:
1. It will be the responsibility of the network vendor to create and deliver any and all documents and approvals for project final acceptance and post occupancy support.

2. When the network vendor's project manager determines that the work or designated portion thereof has achieved substantial completion and secures Peralta District's representative written approval thereof, the network vendor's project manager shall:
   a. Prepare a letter of acceptance in a form required by the project team along with a statement to Peralta District's representative, which documents the date of substantial completion.
   b. Fix the time within which the network vendor shall complete the cumulative punch list items listed therein;
   c. State that the Work has been substantially completed in accordance with the contract documents to the best of the network vendor's knowledge, information and belief
   d. State that, to the best of the network vendor knowledge, information and belief, the Work is in compliance with standards and best practices, applicable codes, laws, regulations, ordinances and requirements of the

governmental authorities having jurisdiction over the Project.

3. The network vendor's project manager shall schedule the inspections necessary for the determination of acceptance within two (2) working days after receipt of the requests, notifications, and documentation required under the contract documents and shall promptly complete such inspections under observation of Peralta District's representative in accordance with the contract documents.

4. Based upon such inspection, Peralta District's representative shall approve or raise objections to the request for letter of acceptance together with a cumulative punch list agreed upon by the project team.

5. Upon receipt of written notice from the network vendor that all work per the contract documents including the punch list items is ready for a final completion inspection and acceptance, Peralta District's representative will make such inspection. When Peralta District's representative finds the Work acceptable and complete under the contract documents and the contract documents fully performed with written approval thereof, Peralta District will promptly issue a final certificate stating that to the best of Peralta District's knowledge, information and belief, and on the basis of Peralta District's representative observations and inspections, the Work has been completed in accordance with the contract documents.

6. Upon final completion of the work per the contract documents, prepare a clean set of as-built documents indicating all final "as-built" conditions according to the requirements of the contract documents.

7. The extent of the duties, responsibilities and limitations of authority of the network vendor during systems integration and installation shall not be modified or extended without the written consent of Peralta District's representative.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer's names and catalog numbers are specified for the purpose of establishing a consistent design, quality, appearance, performance and serviceability. Scheduled products are those selected as the basis for system design with respect to physical size and space arrangements, required capacity and performance characteristics and the product quality intended.

B. Listed "Approved Manufacturers" are those considered capable of manufacturing products conforming to detailed specifications conforms to the detailed specifications.

No substitutions will be accepted under any circumstances.

C. The Peralta Community College District has standardized on Cisco hardware and software throughout the district. Therefore, all Proposer's **are required to be a Cisco Certified Gold Partner** and **must be** headquartered and operating **locally** (within 20 miles) to this project. All products must be submitted for verification **and** approval after Contract award.

D. Approved Manufacturers
   a. Cisco Systems

2.2 PRODUCTS TO BE FURNISHED AND INSTALLED

A. The following is a description of the equipment the network vendor shall Furnish a n d Install. The network vendor is instructed to provide an operational solution based upon requirements and specifications set forth by the Peralta District.

a) The network vendor shall supply Peralta District with a build and support solution for each of the various components stated herein. The network vendor shall provide all hardware, software, installation and support services necessary.

B. Manufacturer's names and catalog numbers are specified herein for the purpose of establishing a consistent design, quality, appearance, performance and serviceability. All network hardware and licenses furnished within this RFP shall be new and delivered directly from an authorized Cisco distributer. Remanufactured, refurbished, open box, or used hardware and/or materials will not be accepted. All Proposer's are required to quote the exact quantities and SKUs listed within this RFP. No substitutions will be accepted under any circumstances. Any proposals submitted with discrepancies in quantities and/or product SKUs listed within this RFP will be disqualified.

C. The basis of system design is based on the following bill of materials and **must be included** in the base proposal:

Part Number	**Smart Account Mandatory**	**LANEY COLLEGE**	**Service Duration (Months)**	**Qty**
C9800-40-K9	-	Cisco Catalyst 9800-40 Wireless Controller		2
C9800-AC-750W-R	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air		2

CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m		4
C9800-AC-750W-RED	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air		2
CON-SNT-C98004KA	-	SNTC-8X5XNBD Cisco Catalyst 9800-40 Wireless Controllers	60	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		2
SC980040K9-1612	-	UNIVERSAL		2
	-			

C9130AXI-B		Cisco Catalyst 9130AX Series		251
CON-SNT-C913BIXI	-	SNTC-8X5XNBD Cisco Catalyst 9130AX Series	60	251
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		251
AIR-AP-T-RAIL-R	-	Ceiling Grid Clip for APs & Cellular Gateways-Recessed		251
AIR-AP-BRACKET-1	-	802.11 AP Low Profile Mounting Bracket (Default)		251
SW9130AX-CAPWAP- K9	-	Capwap software for Catalyst 9130AX		251
CDNA-E-C9130	-	Wireless Cisco DNA On-Prem Essentials, 9130 Tracking		251
DNA-E-5Y-C9130	-	C9130AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	251
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		251
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	251
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		251
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	251
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		251

AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	251
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		251
AIR-AP1562D-B-K9	-	802.11ac W2 Low-Profile Outdoor AP, Direct. Ant, B Reg Dom.		25
CON-SNT-AIRAPI62	-	SNTC-8X5XNBD 802.11ac W2 Low-Prof	60	25
SWAP1560-MESH-K9	-	Cisco 1560 Series Unified Mesh Mode Software		25
AIR-ACC1530-PMK1	-	Standard Pole/Wall Mount Kit for AP1530/1560 Series		25
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		25
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	25
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		25
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	25
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		25
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		25
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	25

AIR-PWRINJ-60RGD1=	-	Power Injector, 60W, outdoor, North America plug		2
IE-1000-4P2S-LM	-	IE1000 with 4 FE Copper PoE+ ports and 2 GE SFP uplinks		2
CON-SNT-I1002SLM	-	SNTC-8X5XNBD IE1K with 2 GE SFP,	60	2
PWR-IE50W-AC-L	-	50W AC Power Supply (Lite)		4
IOT-OTHER	-	Not related to an IoT Solution; For tracking only.		29
NO-IOT-SOLUTION	-	Not related to an IoT Solution; For tracking only.		2
GLC-LX-SM-RGD=	-	1000Mbps Single Mode Rugged SFP		4

GLC-LH-SMD=	-	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM		4
SFP-H10GB-ACU7M=	-	Active Twinax cable assembly, 7m		4
SFP-10G-SR-S=	-	10GBASE-SR SFP Module, Enterprise- Class		4

C9410R-96U-BNDL-E	-	Catalyst 9400 Series 10 slot,Sup, 2xC9400-LC-48U, DNA-E LIC	N/A	2
C9400-NW-E	Yes	Cisco Catalyst 9400 Network Essential License	N/A	2
C9400-S-BLANK	-	Cisco Catalyst 9400 Series Slot Blank Cover	N/A	2
C9400-PWR-3200AC	-	Cisco Catalyst 9400 Series 3200W AC Power Supply	N/A	16
CAB-CON-C9K-RJ45	-	Console Cable 6ft with RJ-45-to-RJ-45	N/A	2
CAB-L620P-C19-US	-	NEMA L6-20 to IEC-C19 14ft US	N/A	16
C9400-SUP-1-B	-	Cisco Catalyst 9400 Series Supervisor-1 Bundle Select Option	N/A	2
C9400-LC-48UX-B	-	Catalyst 9400 Series 2xC9400-LC-48UX for Bundle Select	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2

C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
S9400UK9-1612	-	Cisco Catalyst 9400 XE 16.12 UNIVERSAL	N/A	2
C9400-DNA-E	Yes	Cisco Catalyst 9400 DNA Essential Term License	N/A	2
C9400-DNA-E-3Y	-	Cisco Catalyst 9400 DNA Essential 3 Year License	36	2
C9400-SUP-1	-	Cisco Catalyst 9400 Series Supervisor 1 Module	N/A	2
C9400-SSD-240GB	-	Cisco Catalyst 9400 Series 240GB M2 SATA memory (Supervisor)	N/A	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment	N/A	2
CON-SNT-C9410R9E	-	SNTC-8X5XNBD Catalyst 9400 Series 10 slot,Sup, 2xC940	36	2

C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		3
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		3
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		3
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		3
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		3
CAB-TA-NA	-	North America AC Type A Power Cable		6
STACK-T1-1M	-	1M Type 1 Stacking Cable		3
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		3
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		3
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	3
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		3
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		3

CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	3
C9300-SSD-NONE	-	No SSD Card Selected		3

Part Number	**Smart Account Mandatory**	**SECURITY ENTERPRISE AGREEMENT**	**Service Duration (Months)**	**Qty**
ELA2-M	-	Cisco EA BUNDLE	---	1
Initial Term - 60.00 Months | Auto Renewal Term - 0 Months | Billing Model - Annual Billing | Requested Start Date - 21-Mar-2021 | Requested End Date - 20-Mar-2026 | Advance Drawdown - 0				
E2F-SEC-ANYCONN	Yes	Cisco EA 2.0 Choice - Security Suites-Anyconnect	---	1
E2SF-A-AC-APEX-10	-	Security EA 2.0 Choice AnyConnect Apex License 10pk	---	50
SVS-EA2-ANYC-SUP-E	-	ENHANCED SUPPORT FOR ANYCONNECT WITH FTD ONLY	---	1
E2F-SEC-EMAIL	Yes	Cisco EA 2.0 Choice - Security Suites - Email	---	1
E2SF-E-CES-10	-	Sec EA 2.0 Choice Cloud Email Sec. (ESP+AMP+GSU) Lic 10pk	---	427
SVS-EA2-ESA-SUP-E	-	ENHANCED SUPPORT FOR EMAIL SECURITY	---	1
E2F-SEC-ISE	Yes	Cisco EA 2.0 Choice - Security Suites- ISE	---	**1**
E2SF-I-ISE-APEX-10	-	Security EA 2.0 Choice ISE Apex License 10pk	---	50
E2SF-I-ISE-BASE-10	-	Security EA 2.0 Choice ISE Base License 10pk	---	150
E2SF-I-ISE-PLUS-10	-	Security EA 2.0 Choice ISE Plus License 10pk	---	50

SVS-EA2-CISE-SUP-E	-	ENHANCED SUPPORT FOR IDENTITY SERVICES ENGINE	---	1
E2F-SEC-NGFW	Yes	Cisco EA 2.0 Choice - Security Suites- NGFW	---	1
E2SF-F-ASA5516	-	Sec EA 2.0 Choice ASA5516 FirePOWER IPS, AMP & URL	---	3
E2SF-F-FPR2130T	-	Sec EA 2.0 Choice FPR2130 Threat Defense Threat, Malware,URL	---	8
E2SF-F-FPR4110T	-	Sec EA 2.0 Choice FPR4110 Threat Defense Threat, Malware,URL	---	2
E2SF-F-FPR4115T	-	Sec EA 2.0 Choice FPR4115 Threat Defense Threat, Malware,URL	---	2
E2SF-F-FPRTD-V	-	Sec EA 2.0 Choice Firepower TD Virtual Threat, Malware,URL	---	2
SVS-EA2-NGFW-SUP-E	-	ENHANCED SUPPORT FOR NEXT-GEN FIREWALL	---	2
E2F-SEC-UMB	Yes	Cisco EA 2.0 - Security Suites- Umbrella	---	1
E2SF-U-EDUCATION	-	Sec EA 2.0 Choice - Umbrella Cloud Security for Education	---	500
E2SF-U-MULTIORG	-	Security EA 2.0 Choice - Multi- Org Console Add-on	---	1
SVS-UMBEA-SUPT-G	-	Umbrella and CloudLock EA Support - Enhanced	---	1

Part Number	**Smart Account Mandatory**	**PERALTA DISTRICT OFFICE**	**Service Duration (Months)**	**Qty**
C9500-48Y4C-A-BUN	-	2 x C9500-48Y4C, 8 x QSFP-40G-SR-BD		1
CON-SSSNT-C95YN84C	-	SOLN SUPP 8X5XNBD 2 x C9500-48Y4C, 8 x	60	1

C9500-48Y4C	-	Catalyst 9500 Base PID		1
C9500-DNA-48Y4C-A	Yes	C9500 DNA Advantage, Term License		1
C9500-DNA-A-3Y	-	Cisco Catalyst 9500 DNA Advantage 3 Year License	36	1
CON-SSTCM-C9524QA	-	SOLN SUPP SW SUBC9500 DNA Advantage	60	1
C9500-NW-A	Yes	C9500 Network Stack, Advantage		1
SC9500HUK9-173	-	Cisco Catalyst 9500H XE.17.3 UNIVERSAL		1

CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		2
C9K-PWR-650WAC-R	-	650W AC Config 4 Power Supply front to back cooling		1
C9K-PWR-650WAC-R/2	-	650W AC Config 4 Power Supply front to back cooling		1
QSFP-40/100-SRBD	-	100G and 40GBASE SR-Proposali QSFP Transceiver, LC, 100m OM4 MMF		4
C9K-F1-SSD-BLANK	-	Cisco pluggable SSD storage		1
C9K-T1-FANTRAY	-	Catalyst 9500 Type 4 front to back cooling Fan		2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		1
C9500-48Y4C	**-**	**Catalyst 9500 Base PID**		**1**
C9500-DNA-48Y4C-A	Yes	C9500 DNA Advantage, Term License		1
C9500-DNA-A-3Y	-	Cisco Catalyst 9500 DNA Advantage 3 Year License	36	1
CON-SSTCM-C9524QA	-	SOLN SUPP SW SUBC9500 DNA Advantage	60	1
C9500-NW-A	Yes	C9500 Network Stack, Advantage		1
SC9500HUK9-173	-	Cisco Catalyst 9500H XE.17.3 UNIVERSAL		1
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		2
C9K-PWR-650WAC-R	-	650W AC Config 4 Power Supply front to back cooling		1
C9K-PWR-650WAC-R/2	-	650W AC Config 4 Power Supply front to back cooling		1

QSFP-40/100-SRBD	-	100G and 40GBASE SR-Proposali QSFP Transceiver, LC, 100m OM4 MMF		4
C9K-F1-SSD-BLANK	-	Cisco pluggable SSD storage		1
C9K-T1-FANTRAY	-	Catalyst 9500 Type 4 front to back cooling Fan		2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		1
WS-C3560CX-12PD-S	-	**Cisco Catalyst 3560-CX 12 Port PoE, 10G Uplinks IP Base**		**1**
CAB-TA-NA	-	North America AC Type A Power Cable		1
CON-SNT-WSC312PD	-	SNTC-8X5XNBD Cisco Catalyst 3560-CX 12 Port PoE, 10G	60	1
C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		16
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		16

S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		16
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		16
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		16
CAB-TA-NA	-	North America AC Type A Power Cable		32
STACK-T1-1M	-	1M Type 1 Stacking Cable		16
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		16
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		16
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	16
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		16
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		16
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	16

C9300-SSD-NONE	-	No SSD Card Selected		16
C9407R-96U-BNDL-E	-	Catalyst 9400 Series 7 slot, Sup, 2xC9400-LC-48U , DNA-E LIC		7
C9400-S-BLANK	-	Cisco Catalyst 9400 Series Slot Blank Cover		21
C9400-NW-E	Yes	Cisco Catalyst 9400 Network Essential License		7
S9400UK9-1612	-	Cisco Catalyst 9400 XE 16.12 UNIVERSAL		7
C9400-PWR-3200AC	-	Cisco Catalyst 9400 Series 3200W AC Power Supply		56
CAB-L620P-C19-US	-	NEMA L6-20 to IEC-C19 14ft US		56
C9400-DNA-E	Yes	Cisco Catalyst 9400 DNA Essential Term License		7
C9400-DNA-E-3Y	-	Cisco Catalyst 9400 DNA Essential 3 Year License	36	7
C9400-SUP-1-B	-	Cisco Catalyst 9400 Series Supervisor-1 Bundle Select Option		7
C9400-SUP-1	-	Cisco Catalyst 9400 Series Supervisor 1 Module		7
C9400-SSD-240GB	-	Cisco Catalyst 9400 Series 240GB M2 SATA memory (Supervisor)		7
C9400-LC-48UX-B	-	Catalyst 9400 Series 2xC9400-LC-48UX for Bundle Select		7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45		7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45		7

C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45		7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45		7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45		7

NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		7
CON-SNT-C9407R9E	-	SNTC-8X5XNBD Catalyst 9400 Series 7 slot, Sup, 2xC940	60	7
FPR4115-FTD-HA-BUN	-	Cisco Firepower 4115 Threat Defense Chss,Subs HA Bundle		1
FPR4115-NGFW-K9	Yes	Cisco Firepower 4115 NGFW Appliance, 1U, 2 x NetMod Bays		2
FPR4K-PWR-AC-1100	-	Firepower 4000 Series 1100W AC Power Supply		2
CAB-TA-NA	-	North America AC Type A Power Cable		4
SF-F4K-TD6.4-K9	-	Cisco Firepower Threat Defense software v6.6 or higher for FPR4100		2
SF-F4KFXOS2.6.1-K9	-	Cisco Firepower Extensible Operating System v2.6.1 - FPR4100		2
FPR4K-SSD400-	-	Firepower 4000 Series 400GB SSD for FPR-4125		2
FPR4K-SSD-BBLKD	-	Firepower 4000 Series SSD Slot Carrier		2
FPR4K-PWR-AC-1100	-	Firepower 4000 Series 1100W AC Power Supply		2
FPR4K-S-FAN-	-	Firepower 4000 Series Fan - Siingle		12
FPR4K-RACK-MNT	-	Firepower 4000 Series Rack Mount Kit		2
FPR4K-ACC-KIT2	-	FPR4K Hardware Accessory Kit		2
GLC-TE	-	1000BASE-T SFP transceiver module for Category 5 copper wire		2
FPR4K-NM-BLANK	-	Firepower 4000 Series Network Module Blank Slot Cover		4
CON-SNT-FPR4115N	-	SNTC-8X5XNBD Cisco Firepower 4115 NGFW Appliance, 1U,	60	2
FMC1600-K9	-	Cisco Firepower Management Center 1600 Chassis		2
FMC-M5-PS-AC-770W	-	Cisco FMC 770W AC Power Supply		4
SF-FMC-6.4-K9	-	Cisco Firepower Management Center Software v6.6 or higher		2
FMC-M5-CPU-4110	-	Cisco FMC 2.1 GHz 4110 Processor, 11MB Cache, 8 Core		2

FMC-M5-MEM-16GB	-	Cisco FMC 16GB DDR4-2666-MHz RDIMM/PC4-21300/Single Rank		4
FMC-M5-MRAID-12G	-	Cisco FMC 12G Modular RAID controller with 2GB cache		2
FMC-M5-SD-32G	-	Cisco FMC 32GB SD Card Module		2
FMC-M5-TPM-2.0	-	Cisco FMC Trusted Platform Module 2.0		2
FMC-M5-HDD-1.2TB	-	Cisco FMC 1.2TB 12G SAS 10K RPM SFF HDD		4

FMC-M5-MSTOR-SD	-	Cisco FMC Mini Storage Carrier Card for SD (holds up to 2)		2
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
FMC-M5-NIC-SFP	-	Cisco FMC X710-DA2 dual-port 10G SFP+ NIC		2
CON-SNT-FCM1600K	-	SNTC-8X5XNBD Cisco Firepower Management Center 1600 C	60	2
L-FPR4115T-TMC=	Yes	Cisco FPR4115 Threat Defense Threat, Malware and URL License		2
L-FPR4115T-TMC-1Y	-	Cisco FPR4115 Threat Defense Threat, Malware and URL 1Y Subs	12	2
SFP-10G-SR-S=	-	10GBASE-SR SFP Module, Enterprise- Class		100
SFP-10G-LR-S=	-	10GBASE-LR SFP Module, Enterprise- Class		120
QSFP-H40G-CU5M=	-	40GBASE-CR4 Passive Copper Cable, 5m		20
SFP-H10GB-CU3M=	-	10GBASE-CU SFP+ Cable 3 Meter		100
SFP-H10GB-CU5M=		10GBASE-CU SFP+ Cable 5 Meter		100
SFP-H10GB-	-	Active Twinax cable assembly, 7m		20

ACU7M=				
C9800-40-K9	-	Cisco Catalyst 9800-40 Wireless Controller		2
C9800-AC-750W-R	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air		2
CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m		4
C9800-AC-750W-RED	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air		2
CON-SNT-C98004KA	-	SNTC-8X5XNBD Cisco Catalyst 9800-40 Wireless Controll	60	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		2
SC980040K9-1612	-	UNIVERSAL		2
C9130AXI-B	-	Cisco Catalyst 9130AX Series		60
CON-SNT-C913BIXI	-	SNTC-8X5XNBD Cisco Catalyst 9130AX Series	60	60
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		60
AIR-AP-T-RAIL-R	-	Ceiling Grid Clip for APs & Cellular Gateways-Recessed		60

AIR-AP-BRACKET-1	-	802.11 AP Low Profile Mounting Bracket (Default)		60
SW9130AX-CAPWAP-K9	-	Capwap software for Catalyst 9130AX		60
CDNA-E-C9130	-	Wireless Cisco DNA On-Prem Essentials, 9130 Tracking		60
DNA-E-5Y-C9130	-	C9130AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	60
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		60
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	60
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		60
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	60
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		60

AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	60
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		60
AIR-AP1562D-B-K9	-	802.11ac W2 Low-Profile Outdoor AP, Direct. Ant, B Reg Dom.		10
CON-SSSNT-AIRAPI62	-	SOLN SUPP 8X5XNBD 802.11ac W2 Low-Profile Outdoor AP, Dire	60	10
SWAP1560-MESH-K9	-	Cisco 1560 Series Unified Mesh Mode Software		10
AIR-ACC1530-PMK1	-	Standard Pole/Wall Mount Kit for AP1530/1560 Series		10
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		10
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	10
CON-SSTCM-AIRDNAE	-	SOLN SUPP SW SUBAironet CISCO DNA Es	60	10
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		10
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	10
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		10
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		10
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	10
C1-ECS-CMGT	-	C1 Enterprise Cloud Suite - Cloud Management		1
C1A2TECSCMGTK9	-	C1 Enterprise Cloud Suite - Cloud Management		1

C1A2-1Y-ECSCMGT	-	C1 Enterprise Cloud Suite - Cloud Management 1Y	12	1
C1A4TECSCMGT	-	C1 CloudCenter Manager - Solution Support		1

C1A4-1Y-ECSCMGT	-	C1 CloudCenter Manager - Solution Support 1Y	12	1
C1A5TECSCMGT	-	C1 CloudCenter Orchestrator - Solution Support		2
C1A5-1Y-ECSCMGT	-	C1 CloudCenter Orchestrator - Solution Support 1Y	12	2
C1A8TECSCMGT	-	C1 CloudCenter Virtual Machine 500 - Solution Support		1
C1A8-1Y-ECSCMGT	-	C1 CloudCenter Virtual Machine 500 - Solution Support 1Y	12	1
C1-CCM-T	-	C1 CloudCenter Manager - Solution Support		1
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1
C1-CCO-T	-	C1 CloudCenter Orchestrator - Solution Support		2
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	2
C1-CCVM-500-T	-	C1 CloudCenter Virtual Machine 500 - Solution Support		1
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1
C1-CCM-T	-	C1 CloudCenter Manager - Solution Support		1
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1
C1-CCO-T	-	C1 CloudCenter Orchestrator - Solution Support		2
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	2
C1-CCVM-100-T	-	C1 CloudCenter Virtual Machine 100 - Solution Support		1
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1
C1-CMGMT-SW-K9	-	C1 CloudCenter Software bundle for eDelivery		1
C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1

C1-1Y-SST-TRK	-	Cisco ONE Subscription - Service Contract Tracking 1-Yr	12	1
ST-FR-1Y-BUN	-	Cisco Stealthwatch 1 Year Flow Rate Bundle		1
L-ST-FR-LIC=	Yes	Cisco Stealthwatch Flow Rate License		20000

L-ST-FR-1Y-S5	-	Cisco Stealthwatch Flow Rate 1 YR Subs, 10,000-24,999	12	20000
ST-SMC2210-K9	-	Cisco Stealthwatch Management Console 2210		1
ST-M5-PWR-AC-770W	-	Cisco Stealthwatch AC Power Supply 770W		2
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		2
ST-M5-10G-NIC	-	Cisco Stealthwatch X710-DA2 dual-port 10G SFP+ NIC		1
ST-M5-RAID-12G	-	Cisco Stealthwatch 12G SAS Modular Raid Controller		1
ST-M5-TPM-2.0	-	Cisco Stealthwatch Trusted Platform Module 2.0		1
ST-M5-CPU-6130	-	Cisco Stealthwatch CPU 2.10 GHz 6130 - Cache 16C/22MB		2
ST-M5-HDD-1.2TB	-	Cisco Stealthwatch 1.2 TB 12G SAS 10K RPM SFF HDD		8
ST-M5-MEM-32GB	-	Cisco Stealthwatch 32 GB DDR4-2666 MHz RDIMM/PC4-21300		16
CON-SSSNT-STSMC22K	-	SOLN SUPP 8X5XNBD Cisco Stealthwatch Management Console 22	12	1
ST-SMC-7.3-K9	-	Cisco Stealthwatch Management Console Software v7.3		1
ST-FC4210-K9	-	Cisco Stealthwatch Flow Collector 4210		1
ST-M5-PWR-AC-770W	-	Cisco Stealthwatch AC Power Supply 770W		2
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		2

ST-FC-NF-7.3-K9	-	Cisco Stealthwatch Flow Collector NetFlow Software v7.3		1
ST-M5-10G-NIC	-	Cisco Stealthwatch X710-DA2 dual-port 10G SFP+ NIC		1
ST-M5-RAID-12G	-	Cisco Stealthwatch 12G SAS Modular Raid Controller		1
ST-M5-TPM-2.0	-	Cisco Stealthwatch Trusted Platform Module 2.0		1
ST-M5-CPU-6130	-	Cisco Stealthwatch CPU 2.10 GHz 6130 - Cache 16C/22MB		2
ST-M5-HDD-1.2TB	-	Cisco Stealthwatch 1.2 TB 12G SAS 10K RPM SFF HDD		8
ST-M5-MEM-32GB	-	Cisco Stealthwatch 32 GB DDR4-2666 MHz RDIMM/PC4-21300		16
CON-SSSNT-STFC4291	-	SOLN SUPP 8X5XNBD Cisco Stealthwatch Flow Collector 4210	12	1
ST-FS3210-K9	-	Cisco Stealthwatch Flow Sensor 3210		1
ST-M5-PWR-AC-770W	-	Cisco Stealthwatch AC Power Supply 770W		2

CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		2
ST-FS-7.3-K9	-	Cisco Stealthwatch Flow Sensor Software v7.3		1
ST-M5-1G-NIC-4CU	-	Cisco Stealthwatch i350 Quad Port 1G Copper NIC		1
ST-M5-10G-NIC	-	Cisco Stealthwatch X710-DA2 dual-port 10G SFP+ NIC		1
SFP-10G-SR-S	-	10GBASE-SR SFP Module, Enterprise- Class		2
ST-M5-HDD-600GB	-	Cisco Stealthwatch 600 GB 12G SAS 10K RPM SFF HDD		6
ST-M5-MEM-16GB	-	Cisco Stealthwatch 16 GB DDR4-2666 MHz RDIMM/PC4-21300		16
ST-M5-RAID-12G	-	Cisco Stealthwatch 12G SAS Modular Raid Controller		1
ST-M5-TPM-2.0	-	Cisco Stealthwatch Trusted Platform Module 2.0		1
ST-M5-CPU-5118	-	Cisco Stealthwatch CPU 2.3 GHz 5118 - Cache 12C/16.5MB		2

CON-SSSNT-STFS3K21	-	SOLN SUPP 8X5XNBD Cisco Stealthwatch Flow Sensor 3210	12	1
N9K-C9336C-FX2	-	Nexus 9300 Series, 36p 40/100G QSFP28		2
CON-SNT-N9336FX2	-	SNTC-8X5XNBD Nexus 9300 Series, 36p 40/100G QSFP28	36	2
MODE-NXOS	-	Dummy PID for mode selection		2
NXOS-9.3.3	-	Nexus 9500, 9300, 3000 Base NX-OS Software Rel 9.3.3		2
NXK-ACC-KIT-1RU	-	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal		2
NXA-PAC-1100W-PE2	-	Nexus AC 1100W PSU - Port Side Exhaust		4
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
NXA-FAN-65CFM-PE	-	Nexus Fan, 65CFM, port side exhaust airflow		6
C1A1TN9300XF-3Y	Yes	DCN Advantage Term N9300 XF, 3Y		2
SVS-B-N9K-ADV-XF	-	EMBEDDED SOLN SUPPORT SWSS FOR ACI NEXUS 9K		2
N9K-C93180YC-FX3S	-	Nexus 9300 with 48p 1/10/25G SFP, 6p 40/100G QSFP, SyncE		7
CON-SNT-N9KC93S1	-	SNTC-8X5XNBD Nexus 9300 with 48p	12	7
MODE-NXOS	-	Dummy PID for mode selection		7
NXOS-9.3.5	-	Nexus 9500, 9300, 3000 Base NX-OS Software Rel 9.3.5		7
NXK-MEM-16GB	-	Additional memory of 16GB for Nexus Switches		7
NXK-ACC-KIT-1RU	-	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal		7
NXA-FAN-35CFM-PE	-	Nexus Fan, 35CFM, port side exhaust airflow		28
NXA-PAC-650W-PE	-	Nexus NEBs AC 650W PSU - Port Side Exhaust		14
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		14
NXOS-ES-XF	Yes	NX-OS Essentials license for Nexus 9300 (10G+) Platforms		7

CON-ECMU-N9SWESXF	-	SWSS UPGRADES NX-OS Essentials license for Nexus 9300	12	7
C1-SUBS-OPTOUT	-	OPT OUT FOR "Default" DCN Subscription Selection		7
N9K-C93108TC-FX	-	Nexus 9300 with 48p 10G-T, 6p 100G QSFP28		4
CON-SNT-N93TCFX	-	SNTC-8X5XNBD Nexus 9300 with 48p	36	4
MODE-NXOS	-	Dummy PID for mode selection		4
NXOS-9.3.5	-	Nexus 9500, 9300, 3000 Base NX-OS Software Rel 9.3.5		4
NXK-ACC-KIT-1RU	-	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal		4
NXA-PAC-500W-PE	-	Nexus NEBs AC 500W PSU - Port Side Exhaust		8
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		8
NXA-FAN-30CFM-F	-	Nexus Fan, 30CFM, port side exhaust airflow		16
NXOS-ES-XF	Yes	NX-OS Essentials license for Nexus 9300 (10G+) Platforms		4
CON-ECMU-N9SWESXF	-	SWSS UPGRADES NX-OS Essentials license for Nexus 9300	36	4
C1-SUBS-OPTOUT	-	OPT OUT FOR "Default" DCN Subscription Selection		4
QSFP-H40G-AOC15M=	-	40GBASE Active Optical Cable, 15m		22
SFP-10G-AOC10M=	-	10GBASE Active Optical SFP+ Cable, 10M		25
SFP-10G-AOC7M=	-	10GBASE Active Optical SFP+ Cable, 7M		25
CVR-QSFP-SFP10G=	-	QSFP to SFP10G adapter		4

SNS-3655-K9	-	Medium Secure Network Server for ISE Applications		2

CON-SNT-SNS3655K	-	SNTC-8X5XNBD Medium Secure Network Server for ISE App	60	2
SNS-CPU-4116		2.1 GHz 4116/85W 12C/16.50MB Cache/DDR4 2400MHz		2
SNS-HD600G10K12N		600GB 12G SAS 10K RPM SFF HDD		8
SW-36X5-ISE-K9		Cisco ISE Software Load on SNS-36x5-K9 appliance		2
SNS-PSU1-770W		770W power supply		4
SNS-PCIE-IRJ45		Intel i350 Quad Port 1Gb Adapter		2
SNS-RAID-M5		Cisco 12G Modular RAID controller with 2GB cache		2
R2XX-RAID10		Enable RAID 10 Setting		2
SNS-MR-X16G1RT-H		16GB DDR4-2933-MHz RDIMM/1Rx4/1.2v		12
CAB-9K12A-NA		Power Cord, 125VAC 13A NEMA 5-15 Plug, North America		4
ISE-SEC-SUB	yes	Cisco Identity Service Engine Subscription		1
ISE-E-LIC	yes	Cisco Identity Service Engine Essentials Subscription		1024
ISE-A-LIC	yes	Cisco Identity Service Engine Advantage Subscription		512
SVS-ISE-SUP-B	yes	Basic Support for Identity Service Engine Subscription		1
L-ISE-TACACS-ND=		Cisco ISE Device Admin Node License		2
L-ISE-IPSEC		Identity Services Engine IPsec		2

L-FL-5921-XL1-K9		Electronic PAK for Cisco 5921 ESR - X86 Level 1 - 10 Mbps		2
CON-ECMU-L-FL-592		SWSS UPGRADES Electronic PAK for Cisco 5921 ESR - X86 Level		2

C9130AXI-B		Cisco Catalyst 9130AX Series		25
CON-SNT-C913BIXI	-	SNTC-8X5XNBD Cisco Catalyst 9130AX Series	60	25
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		25
AIR-AP-T-RAIL-R	-	Ceiling Grid Clip for APs & Cellular Gateways-Recessed		25
AIR-AP-BRACKET-1	-	802.11 AP Low Profile Mounting Bracket (Default)		25
SW9130AX-CAPWAP- K9	-	Capwap software for Catalyst 9130AX		25
CDNA-E-C9130	-	Wireless Cisco DNA On-Prem Essentials, 9130 Tracking		25
DNA-E-5Y-C9130	-	C9130AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	25
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		25
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	25
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		25
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	25
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		25
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	25
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		25

AIR-AP1562D-B-K9	-	802.11ac W2 Low-Profile Outdoor AP, Direct. Ant, B Reg Dom.		20
CON-SNT-AIRAPI62	-	SNTC-8X5XNBD 802.11ac W2 Low-Prof	60	20
SWAP1560-MESH-K9	-	Cisco 1560 Series Unified Mesh Mode Software		20
AIR-ACC1530-PMK1	-	Standard Pole/Wall Mount Kit for AP1530/1560 Series		20
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		20
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	20
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		20
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	20
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		20
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		20
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	20

C9K-PWR-650WAC-R	-	650W AC Config 4 Power Supply front to back cooling		10
C9K-PWR-650WAC-R/2	-	650W AC Config 4 Power Supply front to back cooling		10
C9400-PWR-3200AC	-	Cisco Catalyst 9400 Series 3200W AC Power Supply	N/A	10

C9400-SUP-1-B	-	Cisco Catalyst 9400 Series Supervisor-1 Bundle Select Option	N/A	10

C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	10

C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		24
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		24
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		24
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		24
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		24
CAB-TA-NA	-	North America AC Type A Power Cable		48
STACK-T1-1M	-	1M Type 1 Stacking Cable		24
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		24
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		24
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	24
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		24
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		24
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	24
C9300-SSD-NONE	-	No SSD Card Selected		24

C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		5
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		5
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		5
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		5
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		5
CAB-TA-NA	-	North America AC Type A Power Cable		10
STACK-T1-1M	-	1M Type 1 Stacking Cable		5

CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		5
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		5
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	5
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		5
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		5
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	5
C9300-SSD-NONE	-	No SSD Card Selected		5

C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		10
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		10
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		10
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		10
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		10
CAB-TA-NA	-	North America AC Type A Power Cable		20
STACK-T1-1M	-	1M Type 1 Stacking Cable		10
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		10
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		10
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	10
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		10
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		10
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	10

C9300-SSD-NONE	-	No SSD Card Selected		10

Part Number	Smart Account Mandatory	FIREWALL AND A-FLEX 3 COLLABORATION / VOICE	Service Duration (Months)	Qty
FPRTD-V-K9	-	Cisco Firepower Threat Defense Virtual Appliance	N/A	1
CON-ECMUS-FPRTDVK9	-	SOLN SUPP SWSS Cisco Firepower Threat Defense Virtual A	60	1
L-FPRTD-V-TMC=	Yes	Cisco Firepower TD Virtual Threat, Malware, & URL Licenses	N/A	1
L-FPRTD-V-TMC-5Y	-	Cisco Firepower TD Virtual Threat, Malware,URL Filter 5Y Sub	60	1
ISR4431-V/K9	-	Cisco ISR 4431 UC Bundle, PVDM4-64, UC License	N/A	8
SL-44-IPB-K9	-	IP Base License for Cisco ISR 4400 Series	N/A	8
PWR-4430-AC	-	AC Power Supply for Cisco ISR 4430	N/A	8
PWR-4430-AC/2	-	AC Power Supply (Secondary PS) for Cisco ISR 4430	N/A	8
CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	N/A	16
SL-44-UC-K9	Yes	Unified Communication License for Cisco ISR 4400 Series	N/A	8
MEM-44-4G	-	4G DRAM (1 x 4G) for Cisco ISR 4400	N/A	8
MEM-FLSH-8G	-	8G eUSB Flash Memory for Cisco ISR 4430	N/A	8
PVDM4-64	-	64-channel DSP module	N/A	8
MEM-4400-DP-2G	-	2G DRAM (1 DIMM) for Cisco ISR 4400 Data Plane	N/A	8
NIM-BLANK	-	Blank faceplate for NIM slot on Cisco ISR 4400	N/A	16
NIM-2MFT-T1/E1	-	2 port Multiflex Trunk Voice/Clear- channel Data T1/E1 Module	N/A	8

PVDM4-64	-	64-channel DSP module	N/A	8
CON-SNT-ISR4431V	-	SNTC-8X5XNBD Cisco ISR 4431 UC Bu	60	8
SISR4400UK9-169	-	Cisco ISR 4400 Series IOS XE Universal	N/A	8
BE7H-M5-K9	-	Cisco Business Edition 7000H (M5) Appliance, Export Restr SW	N/A	2
CON-SNT-BE79M5KH	-	SNTC-8X5XNBD Cisco Business Edition 7000H (M5) Applia	12	2
BE7K-PSU	-	Cisco UCS 1050W AC Power Supply for Rack Server	N/A	4
BE7K-NIC1	-	Intel i350 Quad Port 1Gb Adapter	N/A	4
BE7K-PCIERISER	-	Riser 1B incl 3 PCIe slots (x8, x8, x8); all slots from CPU1	N/A	2
BE7K-RAIDCTRLR	-	Cisco 12G Modular RAID controller with 4GB cache	N/A	2
BE7K-DISK	-	300GB 12G SAS 10K RPM SFF HDD	N/A	48
R2XX-RAID5	-	Enable RAID 5 Setting	N/A	2
BE7K-RAM	-	16GB DDR4-2666-MHz RDIMM/PC4-21300/single rank/x4/1.2v	N/A	24
BE7K-CPU	-	2.6 GHz 6132/140W 14C/19.25MB Cache/DDR4 2666MHz	N/A	4
VMW-VS6-FND-K9	-	Embedded License, Cisco UC Virt. Foundation 6.x (2-socket)	N/A	2
CON-ECMU-VMWVS6FN	-	SWSS UPGRADES Embedded License, Cisco UC Virt. Foundat	12	2
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	N/A	4
SP-INFORMACAST	-	SolutionsPlus: Informacast Subsc(MOBILE,FUSION,EPA,ADVANCED)	N/A	1
SP-FUSION-USR-50-C	-	InformaCast Fusion 50 Fusion Users Subscription	N/A	26
A-FLEX-3	-	Collaboration Flex Plan 3.0	N/A	1

SVS-FLEX-SUPT-BAS	-	Basic Support for Flex Plan	N/A	1
A-FLEX-EAPL	-	EntW On-Premises Calling	N/A	1300
A-FLEX-SME-S	-	Session Manager (1)	N/A	1
A-FLEX-SRST-E	Yes	SRST Endpoints (1)	N/A	1560
A-FLEX-P-EA	Yes	On-Premises Smart License - EA (1)	N/A	1560
A-FLEX-P-ACC	Yes	Access Smart License (1)	N/A	260
A-FLEX-P-CA	Yes	Common Area Smart License (1)	N/A	650
A-FLEX-P-UCXN	Yes	Unity Connection Smart License (1)	N/A	1560
A-FLEX-P-ER	Yes	Emergency Responder Smart License (1)	N/A	3900
A-FLEX-EXP-PAK	Yes	Expressway Product Authorization Key (1)	N/A	1
A-FLEX-SW-12.5-K9	-	On-Premises & Partner Hosted Calling SW Bundle v12.5 (1)	N/A	1
A-FLEX-C-DEV-ENT	-	Cloud Device Registration Entitlement	N/A	1560
A-FLEX-MSG-ENT	-	Messaging Entitlement	N/A	1560
A-FLEX-FILESTG-ENT	-	File Storage Entitlement	N/A	31200
A-FLEX-PROPACK-ENT	-	Pro Pack for Cisco Control Hub Entitlement	N/A	1560
A-FLEX-EXP-RMS	-	Expressway Rich Media Session (1)	N/A	65
VG310	-	Modular 24 FXS Port VoIP Gateway with PVDM3-64	---	55
CON-SNT-VG310ICV	-	SNTC-8X5XNBD Cisco VG310 - Modular 24 FXS Port Voice	60	55
SVG3XUK9-15903M	-	Cisco VG3X0 UNIVERSAL	---	55
MEM-CF-256MB	-	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR	---	55
CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	---	55
PVDM3-64	-	64-channel high-density voice DSP module	---	55
HWIC-BLANK	-	Blank faceplate for HWIC slot on Cisco ISR	---	55
SL-VG3X0-IPB-K9	-	Cisco VG3X0 IP Base License	---	55
SL-VG3X0-UC-K9	-	Cisco VG3X0 Unified Communications License	---	55
VG320	-	Modular 48 FXS Port VoIP Gateway with PVDM3-128	---	5
CON-SNT-VG320ICV	-	SNTC-8X5XNBD Cisco VG320 -	60	5

		Modular 48 FXS Port Voice		
SVG3XUK9-15903M	-	Cisco VG3X0 UNIVERSAL	---	5
MEM-CF-256MB	-	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR	---	5
CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	---	5
PVDM3-128	-	128-channel high-density voice DSP module	---	5
HWIC-BLANK	-	Blank faceplate for HWIC slot on Cisco ISR	---	5
SL-VG3X0-IPB-K9	-	Cisco VG3X0 IP Base License	---	5
SL-VG3X0-UC-K9	-	Cisco VG3X0 Unified Communications License	---	5

Part Number	**Smart Account Mandatory**	**BERKELEY CITY COLLEGE**	**Service Duration (Months)**	**Qty**
C9500-24Y4C-A	-	Catalyst 9500 24x1/10/25G and 4-port 40/100G, Advantage	N/A	2
CON-SSSNT-C95024YA	-	SOLN SUPP 8X5XNBD Catalyst 9500 24-port 25/100G only, Adva	60	2
C9500-NW-A	Yes	C9500 Network Stack, Advantage	N/A	2
SC9500HUK9-173	-	Cisco Catalyst 9500H XE.17.3 UNIVERSAL	N/A	2
C9K-PWR-650WAC-R	-	650W AC Config 4 Power Supply front to back cooling	N/A	2
C9K-PWR-650WAC-R/2	-	650W AC Config 4 Power Supply front to back cooling	N/A	2
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	N/A	4
C9K-F1-SSD-BLANK	-	Cisco pluggable SSD storage	N/A	2
C9K-T1-FANTRAY	-	Catalyst 9500 Type 4 front to back cooling Fan	N/A	4
C9500-DNA-24Y4C-A	Yes	C9500 DNA Advantage, Term License	N/A	2
C9500-DNA-L-A-3Y	-	Cisco Catalyst 9500 DNA Advantage 3 Year License	36	2
CON-SSTCM-C9512QA	-	SOLN SUPP SW SUBC9500 DNA Advantage	60	2
PI-LFAS-T	Yes	Prime Infrastructure	N/A	6

		Lifecycle & Assurance Term - Smart Lic		
PI-LFAS-AP-T-3Y	-	PI Dev Lic for Lifecycle & Assurance Term 3Y	36	6
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment	N/A	2
N9K-C93108TC-FX	-	Nexus 9300 with 48p 10G-T, 6p 100G QSFP28	N/A	2
CON-SNT-N93TCFX	-	SNTC-8X5XNBD Nexus 9300 with 48p	60	2
MODE-NXOS	-	Dummy PID for mode selection	N/A	2
NXOS-9.3.5	-	Nexus 9500, 9300, 3000 Base NX-OS Software Rel 9.3.5	N/A	2
NXK-ACC-KIT-1RU	-	Nexus 3K/9K Fixed Accessory Kit, 1RU front and rear removal	N/A	2
NXA-PAC-500W-PE	-	Nexus NEBs AC 500W PSU - Port Side Exhaust	N/A	4
CAB-9K12A-NA	-	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	N/A	4
NXA-FAN-30CFM-F	-	Nexus Fan, 30CFM, port side exhaust airflow	N/A	8
C1-SUBS-OPTOUT	-	OPT OUT FOR "Default" DCN Subscription Selection	N/A	2

NXOS-ES-XF	Yes	NX-OS Essentials license for Nexus 9300 (10G+) Platforms	N/A	2
CON-ECMU-N9SWESXF	-	SWSS UPGRADES NX-OS Essentials license for Nexus 9300	60	2
C9410R-96U-BNDL-E	-	Catalyst 9400 Series 10 slot,Sup, 2xC9400-LC-48U, DNA-E LIC	N/A	2
C9400-NW-E	Yes	Cisco Catalyst 9400 Network Essential License	N/A	2
C9400-S-BLANK	-	Cisco Catalyst 9400 Series Slot Blank Cover	N/A	2
C9400-PWR-3200AC	-	Cisco Catalyst 9400 Series 3200W AC Power Supply	N/A	16
CAB-CON-C9K-RJ45	-	Console Cable 6ft with RJ-45-to-RJ-45	N/A	2
CAB-L620P-C19-US	-	NEMA L6-20 to IEC-C19 14ft US	N/A	16

C9400-SUP-1-B	-	Cisco Catalyst 9400 Series Supervisor-1 Bundle Select Option	N/A	2
C9400-LC-48UX-B	-	Catalyst 9400 Series 2xC9400-LC-48UX for Bundle Select	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	2
S9400UK9-1612	-	Cisco Catalyst 9400 XE 16.12 UNIVERSAL	N/A	2
C9400-DNA-E	Yes	Cisco Catalyst 9400 DNA Essential Term License	N/A	2
C9400-DNA-E-3Y	-	Cisco Catalyst 9400 DNA Essential 3 Year License	36	2
C9400-SUP-1	-	Cisco Catalyst 9400 Series Supervisor 1 Module	N/A	2
C9400-SSD-240GB	-	Cisco Catalyst 9400 Series 240GB M2 SATA memory (Supervisor)	N/A	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment	N/A	2
CON-SNT-C9410R9E	-	SNTC-8X5XNBD Catalyst 9400 Series 10 slot,Sup, 2xC940	36	2

C9407R-96U-BNDL-E	-	Catalyst 9400 Series 7 slot, Sup, 2xC9400- LC-48U , DNA-E LIC	N/A	7
C9400-NW-E	Yes	Cisco Catalyst 9400 Network Essential License	N/A	7

C9400-S-BLANK	-	Cisco Catalyst 9400 Series Slot Blank Cover	N/A	14
C9400-PWR-3200AC	-	Cisco Catalyst 9400 Series 3200W AC Power Supply	N/A	56
CAB-CON-C9K-RJ45	-	Console Cable 6ft with RJ-45-to-RJ-45	N/A	7
CAB-L620P-C19-US	-	NEMA L6-20 to IEC-C19 14ft US	N/A	56
C9400-SUP-1-B	-	Cisco Catalyst 9400 Series Supervisor-1 Bundle Select Option	N/A	7
C9400-LC-48UX-B	-	Catalyst 9400 Series 2xC9400-LC-48UX for Bundle Select	N/A	7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	7
C9400-LC-48UX		Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	**7**
S9400UK9-1612	-	Cisco Catalyst 9400 XE 16.12 UNIVERSAL	N/A	7
C9400-DNA-E	Yes	Cisco Catalyst 9400 DNA Essential Term License	N/A	7
C9400-DNA-E-3Y	-	Cisco Catalyst 9400 DNA Essential 3 Year License	36	7
C9400-SUP-1	-	Cisco Catalyst 9400 Series Supervisor 1 Module	N/A	7
C9400-SSD-240GB	-	Cisco Catalyst 9400 Series 240GB M2 SATA memory (Supervisor)	N/A	7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	7
C9400-LC-48UX	-	Cisco Catalyst 9400 Series 48Port UPOE w/ 24p mGig 24p RJ-45	N/A	7
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment	N/A	7
CON-SNT-C9407R9E	-	SNTC-8X5XNBD Catalyst 9400 Series 7 slot, Sup, 2xC940	36	7
QSFP-H40G-AOC1M=	-	40GBASE Active Optical Cable, 1m	N/A	4
QSFP-H40G-AOC7M=	-	40GBASE Active Optical Cable, 7m	N/A	4

SFP-H10GB-ACU7M=	-	Active Twinax cable assembly, 7m	N/A	4
SFP-H10GB-CU3M=	-	10GBASE-CU SFP+ Cable 3 Meter	N/A	20

C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		2
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		2
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		2
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		2
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		2
CAB-TA-NA	-	North America AC Type A Power Cable		4
STACK-T1-1M	-	1M Type 1 Stacking Cable		2
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		2
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		2
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	2
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		2
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	2
C9300-SSD-NONE	-	No SSD Card Selected		2

C9800-40-K9	-	Cisco Catalyst 9800-40 Wireless Controller	N/A	2
LIC-C9800-DTLS-K9	-	Cisco Catalyst 9800 Series Wireless Controller DTLS License	N/A	2

C9800-AC-750W-R	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air	N/A	2
CAB-AC	-	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	N/A	4
C9800-AC-750W-RED	-	Cisco Catalyst 9800-40 750W AC Power Supply, Reverse Air	N/A	2
CON-SNT-C98004KA	-	SNTC-8X5XNBD Cisco Catalyst 9800-40 Wireless Controll	60	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero-touch device deployment	N/A	2
SC980040K9-1612	-	UNIVERSAL	N/A	2
C9130AXI-B	-	Cisco Catalyst 9130AX Series	N/A	110
CON-SNT-C913BIXI	-	SNTC-8X5XNBD Cisco Catalyst 9130AX Series	60	110
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero-touch device deployment	N/A	110
AIR-AP-T-RAIL-R	-	Ceiling Grid Clip for APs & Cellular Gateways-Recessed	N/A	110
AIR-AP-BRACKET-1	-	802.11 AP Low Profile Mounting Bracket (Default)	N/A	110
SW9130AX-CAPWAP- K9	-	Capwap software for Catalyst 9130AX	N/A	110
CDNA-E-C9130	-	Wireless Cisco DNA On-Prem Essentials, 9130 Tracking	N/A	110
DNA-E-5Y-C9130	-	C9130AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	110
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic	N/A	110
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	110
PI-LFAS-AP-T	Yes	Prime AP Term Licenses	N/A	110
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	110
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic	N/A	110
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	110
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack	N/A	110

SFP-10G-SR-S=	-	10GBASE-SR SFP Module, Enterprise- Class	N/A	24

C9300-48U-A	-	Catalyst 9300 48-port UPOE, Network Advantage	N/A	2
C9300-NW-A-48	Yes	C9300 Network Advantage, 48-port license	N/A	2
S9300NPE-173	-	Cisco Catalyst 9300 XE 17.3 UNIVERSAL - NPE	N/A	2
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply	N/A	2
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply	N/A	2
CAB-TA-NA	-	North America AC Type A Power Cable	N/A	4
SSD-120G	-	Cisco pluggable USB3.0 SSD storage	N/A	2
STACK-T1-50CM	-	50CM Type 1 Stacking Cable	N/A	2
CAB-SPWR-30CM	-	Catalyst Stack Power Cable 30 CM	N/A	2
C9300-DNA-A-48	Yes	C9300 DNA Advantage, 48-Port Term Licenses	N/A	2
C9300-DNA-A-48-3Y	-	C9300 DNA Advantage, 48-Port, 3 Year Term License	36	2
C1-ADD-OPTOUT	-	Cisco ONE Add-On Session Opt Out (No Fulfillment)	N/A	2
PI-LFAS-T	Yes	Prime Infrastructure Lifecycle & Assurance Term - Smart Lic	N/A	2
PI-LFAS-AP-T-3Y	-	PI Dev Lic for Lifecycle & Assurance Term 3Y	36	2
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module	N/A	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment	N/A	2
CON-SNT-C93004UA	-	SNTC-8X5XNBD Catalyst 9300 48-port UPOE, Network Adva	36	2
SFP-10G-AOC7M=	-	10GBASE Active Optical SFP+ Cable, 7M	N/A	2

Part Number	Smart Account Mandatory	MERRITT COLLEGE	Service Duration (Months)	Qty
C9300-48UN-E	-	Catalyst 9300 48-port of 5Gbps Network Essentials		2
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license		2
S9300UK9-1612	-	Cisco Catalyst 9300 XE 16.12 UNIVERSAL		2
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply		2
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply		2
CAB-TA-NA	-	North America AC Type A Power Cable		4
STACK-T1-1M	-	1M Type 1 Stacking Cable		2
CAB-SPWR-150CM	-	Catalyst Stack Power Cable 150 CM - Upgrade		2
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses		2
C9300-DNA-E-48-3Y	-	C9300 DNA Essentials, 48-port - 3 Year Term License	36	2
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module		2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		2
CON-SNT-C93004UN	-	SNTC-8X5XNBD Catalyst 9300 48-port of 5Gbps Network E	60	2
C9300-SSD-NONE	-	No SSD Card Selected		2

C9130AXI-B		Cisco Catalyst 9130AX Series		2
CON-SNT-C913BIXI	-	SNTC-8X5XNBD Cisco Catalyst 9130AX Series	60	2
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero- touch device deployment		2

AIR-AP-T-RAIL-R	-	Ceiling Grid Clip for APs & Cellular Gateways-Recessed		2
AIR-AP-BRACKET-1	-	802.11 AP Low Profile Mounting Bracket (Default)		2
SW9130AX-CAPWAP- K9	-	Capwap software for Catalyst 9130AX		2
CDNA-E-C9130	-	Wireless Cisco DNA On-Prem Essentials, 9130 Tracking		2
DNA-E-5Y-C9130	-	C9130AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	2
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		2
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	2
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		2
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	2
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		2
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	2
AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		2
AIR-AP1562D-B-K9	-	802.11ac W2 Low-Profile Outdoor AP, Direct. Ant, B Reg Dom.		2
CON-SNT-AIRAPI62	-	SNTC-8X5XNBD 802.11ac W2 Low-Prof	60	2
SWAP1560-MESH-K9	-	Cisco 1560 Series Unified Mesh Mode Software		2
AIR-ACC1530-PMK1	-	Standard Pole/Wall Mount Kit for AP1530/1560 Series		2
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic		2
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	2
PI-LFAS-AP-T	Yes	Prime AP Term Licenses		2
PI-LFAS-AP-T-5Y	-	PI Dev Lic for Lifecycle & Assurance Term 5Y	60	2

AIR-DNA-NWSTACK-E	Yes	AIR CISCO DNA Perpetual Network Stack		2
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic		2
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	2

AIR-PWRINJ-60RGD1=	-	Power Injector, 60W, outdoor, North America plug		2
IE-1000-4P2S-LM	-	IE1000 with 4 FE Copper PoE+ ports and 2 GE SFP uplinks		2
CON-SNT-I1002SLM	-	SNTC-8X5XNBD IE1K with 2 GE SFP,	60	2
PWR-IE50W-AC-L	-	50W AC Power Supply (Lite)		4
IOT-OTHER	-	Not related to an IoT Solution; For tracking only.		29
NO-IOT-SOLUTION	-	Not related to an IoT Solution; For tracking only.		2
GLC-LX-SM-RGD=	-	1000Mbps Single Mode Rugged SFP		4
GLC-LH-SMD=	-	1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM		4
SFP-H10GB-ACU7M=	-	Active Twinax cable assembly, 7m		4
SFP-10G-SR-S=	-	10GBASE-SR SFP Module, Enterprise- Class		4

PART 3 - EXECUTION

3.1 EXAMINATION – GENERAL

A. Examination procedures
   1. The network vendor shall be responsible for examining hardware and software to ensure that all specified quantities and correct models are present**.**
   2. The network vendor shall conduct a limited burn-in test of hardware to ensure a basic level of functionality.

3.2 IMPLEMENTATION – GENERAL

A. IP Addressing
   1. Network segregation guidelines:
      a. The network vendor shall configure all new and existing systems provided under this tender and adhere to the VLAN and IP addressing scheme. The network vendor shall work closely with Peralta IT to optimize existing IP address subnetting scheme and receive Peralta District's approval prior to implementation by the network vendor.
      b. Peralta District will provide the IP address subnet blocks to be assigned to any new systems.
      c. The network vendor will set up the DHCP scopes and DNS server addressing.

3.3 LOCAL AREA NETWORK (LAN) IMPLEMENTATION

A. The network vendor **shall provide all equipment and materials required** for the provisioning, delivery, rack installation, configuration and support of a complete LAN system as specified.

B. Implement at a minimum the following base switching security key steps to securing and preserving the switching infrastructure:
   1. Restrict broadcast domains
   2. Spanning Tree Protocol (STP) security
   3. Port Security
   4. VLAN best common practices to the following:
      a. Traffic and protocol ACLs or filters
      b. QoS marking and prioritization
      c. Configuration of in-band management port(s) only in dedicated VLAN(s)
      d. Always use a dedicated VLAN ID for all trunk ports
      e. Disable all unused ports and put them in an unused VLAN

f. Do not use VLAN 1 for anything
g. Configure all user-facing ports as non-trunking (DTP off)
h. Explicitly configure trunking on infrastructure ports
i. Use all tagged mode for the native VLAN on trunks
j. Set the default port status to disable.

C. The network vendor shall work closely with Peralta District's representative IT engineering group to develop a detailed Layer 3 routing implementation to limit access to and from various VLANs and provide inter-networking where appropriate.

D. Perform all necessary programming for the LAN Systems to comply with Peralta District's IT operating and management requirements.

E. The network vendor shall work closely with Peralta District's representative IT engineering group to migrate all existing firewall rules into the new hardware firewall platforms. This includes, but not limited to, a re-design and optimization of existing firewall rules per Peralta District IT policies and standards based on new or existing firewall feature sets.

F. Perform all necessary programming to enable 802.1X on all access layer switchports. The network vendor shall provision 802.1X campus-wide for secure connectivity to authorized devices only. A network end device audit may need to be performed at network vendors' expense. Ensure sufficient time to monitor all switchports for any authentication errors that may occur before going live.

3.4 TESTING

A. General Testing Requirements
1. The following are general testing requirements applicable to all testing to be done by the network vendor:
a. Before an application for final acceptance of the equipment will be considered, all tests deemed necessary by Peralta District's representative to show the proper execution of the installation work shall have been performed in the presence of Peralta District 's representative.
b. Scheduling of all testing procedures shall be arranged to suit the convenience of Peralta District's representative and conform to the project schedule.
c. Tests performed are intended to verify the functionality of all equipment and the quality of workmanship for the equipment, physical installation and systems implementation.
d. All test equipment for the demonstration shall be network vendor supplied.
e. **Network vendor shall provide documented test results**.
f. Completion of the indicated tests does not imply acceptance of the equipment or the installation.

g. Both parties shall mutually agree upon any additional procedures and/or criteria for acceptance testing of any equipment, software, and/or services.
h. Equipment, software and services shall be tested in order to ensure that the implementation has been installed in accordance with design parameters and manufacturer specifications.
i. Acceptance test criteria shall include but not be limited to the following areas:

- Equipment and network testing
- Successful integration with existing network infrastructure
- Equipment testing to manufacturers' specifications
- Logical features & functionality demonstration
- Protocol support & feature-set
- Network management testing
- Link latency time
- End-to-end response times
- Identification of any equipment/network problems
- Verify software/hardware/firmware revisions are up to date
- Verify all required IP addresses are correct
- Latency test of network link to establish baseline
- Verify system parameters are installed correctly and recorded
- Response times during various network traffic loads
- Security device to host connectivity
- Authentication and encryption parameters
- Testing of overall systems within the site to ensure that a level of interoperability and redundancy exists and performs to Peralta District's and manufacturers specifications.

j. Test results to be provided shall contain the following minimum information:
   - Project name
   - Description of test
   - Component tested
   - Test date
   - Tester (individual responsible for conduct of the test)

k. While it is recognized that tests will be performed in the field, it is important to note that they will serve as record documents. Therefore, care should be taken in the recording of the test results. The final documented test record product is to be provided to Peralta District in the final Port Matrix document MS Excel (.xlsx) format.

l. Upon completion of testing and problem resolution, all equipment and devices are to be certified as 100% error free.

B. Functional Testing requirements
1. Functional Testing Requirements:
   a. Upon receipt, the Peralta District representative will review the completed connectivity testing results and may randomly request proof testing until the Peralta District representative is satisfied that all work is in accordance as specified. The connectivity test results shall be posted on FTP site and provided on electronic storage format.

   b. The network vendor shall meet with the Peralta District representative to review the required reporting elements in the test suite prior to conducting any testing.

   c. The network vendor shall meet with the Peralta District representative to review the required test instrument and final reporting elements in the test suite prior to conducting any testing.

   d. The connectivity tests shall be posted on the Network Vendor's FTP site and provided on electronic storage format.

C. General Training
1. Post final acceptance, it shall be the contractor's responsibility to instruct Peralta District personnel on the base operational use and configuration of major Network Services and Management equipment functions.
2. For more training details, section 27 26 26 Data Communication Integration Requirements.

END OF SECTION

SECTION 2:

2. DATA COMMUNICATIONS INTEGRATION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. The overall systems configuration services work for the project **shall at a minimum include:**

a. Local Area Network (LAN)
b. Wireless Local Area Network (WLAN)
c. Network Security Systems
d. Master Clock / NTP System.
e. Voice over IP (VoIP) Telephony System.
f. DNS, DHCP, Active Directory and RADIUS Services.
g. Network Management
h. Project Submittals of the required information.
i. Provision, assembly, and racking of network components, as required ensuring that the design specifications included herein are met.
j. Identifying and labeling each device with the nomenclature specified herein.
k. Interconnection between the network equipment and the structured cabling system, including providing, labeling, placing and testing of patch cables to the port level.
l. Insure that directly connected systems are able to communicate and function as desired, per their vendor configuration and operation instructions.
m. Commissioning and testing of the network, as specified, per section 27 21 00.
n. Provision of engineering and project management staff during the start-up and initial use of the system.
o. Provision of network services
p. Preparation of as-built documentation as specified.
q. Local training on network hardware and configuration of software systems to the Owner's representative-designated personnel
r. Provision of Maintenance Service Agreements and Warranties through the Original Equipment Manufacturer(s) with committed response times on hardware and software upgrades or Enhanced Limited Lifetime Warranties on qualifying hardware

PART 2 - PRODUCTS

2.1 PRODUCT INFORMATION–

A. For product, device, software, and service information, refer to respective IT specifications.
   1. Section 27 21 00 - Data Communications Network Equipment

PART 3 - EXECUTION

3.1 EXAMINATION

A. Site Requirements: The network integration contractor shall indicate the space requirements, electrical requirements and environmental conditions that must be met within the equipment room(s) where the technology systems shall be installed. The Peralta District representative shall be responsible for ensuring that these provisions are met unless otherwise indicated.

B. Site Verification of Conditions: The network integration contractor shall visit the site a minimum of two (2) weeks prior to the hardware installation scheduled date and examine the conditions in the equipment room(s) where the technology equipment is to be installed. The network integration contractor shall issue a report within two (2) business days of the site visit to either:

C. Confirm that all provisions have been made for the installation of the technology systems (i.e., power is installed and operating, location for technology solution is clean and ready to accept equipment, etc.) and that the site is acceptable for the installation.
   1. Describe the items that need to be completed or corrected in order for the site to be acceptable for the installation.
   2. In the case that items need to be completed or corrected, the network integration contractor shall make a second such visit upon notification that all items have been addressed. The network integration contractor's scheduled installation of the technology systems shall not be delayed due to the completeness (or lack thereof) of the site preparation.

3.2 IMPLEMENTATION – GENERAL

A. Racking requirements
   1. Each hardware appliance shall be rack mounted in their respective MDF or IDF in telecom racks and cabinets and or wall mounted racks according to the rack elevations provided.
   2. The hardware appliance shall be mounted with manufacturer supplied rack

screws. The network integration contractor shall ensure that all mounting holes provided in the network equipment mounting brackets are used. Stripped screw threads and stripped screw heads are not acceptable.

3. Coordinate final rack mounting locations with provided rack elevation drawings prior to rack mounting network equipment.
4. Power cords shall be routed per the Peralta District telecommunication standards and representatives' direction.
5. Dispose of all packing materials, boxes, etc. per the project requirements.
6. Any off-site storage necessary in order to stage the installation of the system shall be the network integration contractor's responsibility.

B. Power-Up requirements
   1. The network integration contractor shall be required to go through a complete Power-On Self-Test (POST) for each fully assembled hardware appliance
   2. An electronic copy text (.txt) file saved for each specific chassis shall be made during the start-up procedure to show the OS software release date, serial numbers for all interface and power modules and that all interface and power modules specified are present and functioning without any defects.
   3. The network integration contractor's assigned project manager or network engineer shall be required to upload these start-up procedure files to secure repository servers owned by the network integration contractor on the same date that the systems were started up. Provide the server link to the Peralta District representative.

C. Identification and Labeling
   1. Asset tagging:
      a. Each hardware appliance, modular or otherwise, shall be identified with the Peralta District representative approved asset tag, provided by the contractor.
      b. Contractor shall propose tag and label naming convention and submit to the Peralta District representative for approval.
      c. The network integration contractor is responsible to install all contractor provided asset tags. Verify position of asset tags with the Peralta District representative prior to installing to ensure tags are installed for maximum visibility.

   2. Hardware identification and labeling:
      a. Labeled per the Peralta District IT and telecom labeling scheme.
      b. Labels shall be laser printed self-adhesive, permanent labels.
      c. The font of the labels shall be preapproved by the Peralta District representative, in bold, black on white background and shall be minimum

12- point font or larger. Coordinate final identification and labeling scheme with Peralta District representative prior to labeling hardware.

3. Additional Labeling content Details:
   a. Asset tags may include information as below:
      1) Equipment description
      2) Identification number
      3) Serial number
      4) Acquisition date
      5) Other data as required by the Peralta District representative

4. Power cord identification and labeling:
   a. Power cords for each power module shall be labeled at both ends with wrap around labels per the Peralta District representative's identification and labeling scheme.
   b. Labels shall be laser printed self-adhesive, permanent labels.
   c. Coordinate final identification and labeling scheme with the Peralta District representative's Representative prior to labeling hardware.
5. The Network Integrator shall provide all materials required for labeling.

D. System Integration Planning
1. Coordinate all necessary work with the Peralta District representative
2. The Network Integrator is responsible to keep and distribute detailed records (Agenda Items and Meeting Notes) of all scheduled meetings during the entire project duration
3. During pre-installation (the time period between award and installation), the Network Integrator **shall hold weekly design review meetings** with the Peralta District representative group during which **configuration information and parameters shall be decided**. During this period, all the necessary information needed for the converged IP network implementation shall be gathered and affirmed. This information shall include, but is not limited to: IP addressing schemes; routing protocols and configurations; VLAN configurations, DNS and DHCP issues
4. Network Integrator is also tasked to gather from – and provide to – all the necessary interfacing information with the other entities responsible for the building systems (such as the BMS, mechanic, electric, and security systems) that require the IP network as transport medium.
5. Network Integrator shall request scheduled meetings through the Peralta District representative to meet with the various entities as listed above. The information exchanges with the entities need to be completed in a timeline that meets the critical construction milestones.

E. Device hardening
1. Follow the Peralta District provided policies and procedures manual for usage

access restriction.

2. Implement at a minimum the following device hardening best practices:
    a. Restrict device accessibility—Limit the accessible ports and restrict the permitted users and methods of access.
    b. Present legal notification banners—Display legal notice developed in conjunction with the Peralta District representative
    c. Authenticate access—Ensure access is only granted to authenticated users, groups, and services.
    d. Authorize actions—restrict the actions and views permitted by any particular user, group, or service.
    e. Ensure the confidentiality of data—Protect locally stored sensitive data from viewing and copying.
    f. Log and account for all device access.
    g. Disable unnecessary services
    h. Implement and Enable Network Time Protocol (NTP) on all network components

3.3 CONTINUED INTEGRATION SUPPORT

A. Base Support
    1. The System integrator shall provide (30) days of base system support (post final acceptance) and include at a minimum the following services:
        a. Full time Network Engineer available to respond one-site, from Network System final acceptance date for a period of one week, tasked, but not limited to assisting with the following services:
            1) Act as first point of contact for all network related issues.
            2) Identify Layer 1 cable connectivity problems and report such problems to the Peralta District representative.
            3) Make configuration changes to network as directed by the Peralta District representative.
            4) Update record documents to reflect any changes made to the network.
            5) Install software update patches as needed on newly installed network equipment.
            6) Be outfitted with an industry standard network tester instrument to troubleshoot network connectivity problems. (E.g. Fluke EtherScope Series II Network Assistant or equal)
            7) Be outfitted with cellphone and laptop with email capability to provide helpdesk services at all times during helpdesk hours.
            8) Responsible for Return Merchandise Authorization (RMA) for defective network hardware.

9) Act as network knowledge resource to designate the Peralta District representative personnel.

b. The System integrator shall respond to troubles and outages and repair such problems without regard to whether or not the contractor was at fault in causing such trouble or outage as the following table.

1) "Response Time" begins to be counted at the time that an authorized user notified the contractor of a trouble or outage, or the network management system determines that such a trouble or outage exists on the network.

2) "Restoral Time" also begins to be counted at the time that an authorized user notifies the contractor of a trouble or outage, or the network management system determines that such a trouble or outage exists on the network. Restoral time ends when the trouble is cleared and the authorized user confirms service restoration.

TYPE OF TROUBLE	RESPONSE TIME	RESTORAL TIME
Non-Critical	2 hours or less	5 hours or less
Critical with multiple lines/circuit	1 hours or less	4 hours or less
Critical with single line/circuit	1 hours or less	3 hours or less
Catastrophic	Immediate	1 hour or less

3.4 TRAINING

A. On-site and Off-site Training

1. Systems training shall consist of systems administrator training.
2. Prior to the start of any training, the Network Integrator shall provide copies of all operations manuals, maintenance manuals, quick reference cards and any custom guides to the systems administrator(s).
3. The training program must be designed to meet the requirements of preparing system administrators for the use, programming, maintenance and troubleshooting of the systems.
4. The training classes must be flexibly scheduled to accommodate training for Peralta District IT personnel.
5. The Network Integrator shall develop a complete training schedule including all the items listed in this section. The Network Integrator shall provide a schedule to the Peralta District representative for approval prior to the commencement of training.
6. The Network Integrator shall provide "over-the-shoulder' training during the configuration of the various systems including the LAN access, distribution and core switches and other components. This informal ‘training’ shall also provide the Peralta District representative with configuration parameter updates during the build out of the components.
7. After all final tests and adjustments have been completed, the Network Integrator shall fully instruct the Peralta District representative in all details of operation for equipment installed.
8. System Administrator training:
    a. System administrator training shall apply to all of the installed systems.
    b. The Network Integrator shall cover the topics listed below (#9) for each system.
    c. The Network Integrator will provide a training class for a minimum of three (3) administrators until the topics are sufficiently covered to a maximum of six (6) hours.
9. System administrator training must include but be not limited to the following

topics:

a. System startup, shutdown and reboot
b. Identifying system failures
c. Typical troubleshooting and common solutions
d. User sign-on and access procedures
e. Usage reports
f. User support procedures
g. Escalation procedures
h. Security issues response procedure.
i. Review of As-built documentation

END OF SECTION

SECTION 3:

3.COMMUNICATIONS GENERAL PROVISIONS

DISTRICT WIDE NETWORK INFRASTRUCTURE UPGRADE SITE LOCATIONS

Site Name	Site Address
PERALTA DISTRICT OFFICE	333 E 8th St, Oakland, CA 94606
COLLEGE of ALAMEDA	555 Ralph Appezzato Pkwy, Alameda 94501
LANEY COLLEGE	900 Fallon St, Oakland, CA 94607
BERKELEY CITY COLLEGE	2050 Center St, Berkeley, CA 94704
MERRITT COLLEGE	12500 Campus Dr, Oakland, CA 94619

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Applicable requirements of General Requirements/Provisions – Communications shall be considered a part of this section and shall have the same force as if printed herein full.

B. This document describes the products and execution requirements relating to the end- to-end communications of Copper and Fiber structured cabling.

C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful Contractor shall meet or exceed all requirements described in this document.

D. The work to be done under this section of the Specifications shall include the furnishing of design, engineering, labor, material, equipment and tools required for the complete installation of the work indicated on the project documentation or as specified herein.

E. All materials as part of the Communications Infrastructure and necessary to its proper operation, but not specifically mentioned or shown, shall be furnished and installed without additional charge.

F. The Specifications are complementary to each other and what is called for by one shall be as binding as if called for by both. If a discrepancy exists between the

Specifications, the Owner shall be notified of the discrepancy prior to ordering or installing any materials or committing any resources

SECTION 4:

4 COMMUNICATIONS COPPER STRUCTURED CABLING

PART 1 - GENERAL

1.2 GENERAL REQUIREMENTS

A. This document describes the products and execution requirements relating to Communications Copper Structured Cabling.

B. Product specifications, general design considerations, and installation guidelines are provided in this document. **The successful vendor shall meet or exceed all requirements described in this document**.

1.3 QUALITY ASSURANCE

A. National Electric Code Compliance: Comply with all NEC articles that apply to construction and installation practices applicable to this section

B. ANSI/TIA: Comply with all ANSI/TIA articles that apply to construction and installation practices applicable to this section

C. UL Compliance: Provide products that are UL and or cUL-classified.

D. NFPA Compliance.

E. All items of a given type shall be the products of the same manufacturer.

F. Supply all equipment and accessories new and free from defects.

1.4 WORK INCLUDED

A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material **whether specifically addressed in the Specification or not**.

PART 2 – PRODUCTS AND SCOPE

3.1 COPPER CAT6A CABLING

A. Furnish and Install all structured station and backbone cabling per the manufacturer's recommended installation instructions, under the guidelines of TIA/EIA 568B and BICSI, and in quantities indicated at the following sites at a minimum:

Site Name	COPPER CAT6A
PERALTA DISTRICT OFFICE	New 10 drops CAT6A to all WAPs. New 64 drops in Foundation Portables. New 12 drops to Fire Alarm Panel (SO). New 24 drops to Security Office Console, (need Full or half rack install).
LANEY COLLEGE	173 Drops 21 Outoor Drops (Weather Rated) 152 standard drops
BERKELEY CITY COLLEGE	80 DROPS 10 Drops – Basement – WAPs 3 Drops - 1st Floor - WAPs 12 Drops – 2nd Floor – Offices, WAPs 2 Drops - 3rd Floor - WAPs 2 Drops - 4th Floor – WAPs 8 Drops – 4th Floor – Offices (Repairs) 2 Drops - 5th Floor – WAPs 30 Drops - Classrooms – WAPs (Repairs) 10 Drops - Campus - Un-assigned (New/Repairs) 94 Jacks – Disassemble / Re-route / Re-terminate / Re-install on Patch Panels at 4th Floor IDF
COLLEGE of ALAMEDA	24 DROPS (Bookstore and Engineering)
MERRITT COLLEGE	6 DROPS FOR 3 APs 8 DROPS FOR Grounds Keeper Offices

B. Acceptable cable manufacturers
   1. Panduit; BCC requires Panduit jack
   2. Berk-Tek (w/Leviton Terminations)
   3. Or approved equal

C. Category 6A Balanced Unshielded Twisted Pair Cable (UTP)
   1. The horizontal balanced twisted pair cable shall meet or exceed the Category 6A transmission characteristics per issue of ANSI/TIA/EIA-568.2-D
   2. Four balanced pairs of 23AWG solid copper conductors.
   3. Combined with Category 6A series termination hardware, the channel assembly must be capable of supporting 10GBASE-T operation over 100-meters.
   4. Cables shall be rated (CMP) per the installation environment as required by the local AHJ and local codes.
   5. Select an appropriate cable construction, including external jacket properties, when installing cables in aerial, outdoor, underground and corrosive environments.
   6. Jacket shall be color coded:
      a. For Data
      b. For Security

PART 3 – EXECUTION

3.2 COPPER STRUCTURED CABLING

A. Copper and fiber cables shall be installed separately at a minimum to the following:
   1. Route through separate conduits and sleeves.
   2. Route through separate re-enterable fire stopping devices.
   3. Copper and fiber optic cables shall be separated on cable trays outside communications rooms.
   4. Copper and fiber optic cables shall be separated in bundles inside communications rooms on the cable runways.

B. Slack loops shall be provided on each copper cable segment and shall be supported on racking in accessible space.
   1. Leave minimum 15-feet of slack loop at each end of copper backbone cable.
   2. Slack coils shall have at least two points of support on the racking support.

C. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cable installed in any conduit.

D. Cable raceways shall not be filled greater than the ANSI/TIA/EIA-569-B maximum fill for the particular raceway type.

E. Cables shall be installed in continuous lengths from origin to destination (no splices).

F. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to manufacturer's requirements.

G. Structured distribution cables shall be bundled in groups of no more than 50 cables.

Cable bundle quantities in excess of 50 cables may cause deformation of the bottom cables within the bundle and degrade cable performance.

H. Cables shall not be attached to any building features other than specific communications support pathways. Where support for Structured cable is required, the **Contractor shall install appropriate communications pathways to support the cabling**.

I. **All cables shall be visually inspected** for insufficient bend radius during and after pulling. Damaged cables, or those installed under questionable methods and/or circumstances shall **be replaced at no additional cost to the Owner**.

J. Contractor shall ensure that all TIA/EIA and industry standards are met with special regards to maximum stripping length of cable jackets. No four (4) pair cables shall have more than three-eight inch (⅜") of cable jacket removed beyond the termination points.

K. Cables shall be dressed and terminated in accordance with the recommendations made in the ANSI/TIA/EIA-568-C.2 document, manufacturer's recommendations and best industry practices.

L. Leave a minimum of 12" of slack for twisted pair cables at the outlet. Cables shall be coiled in the in-wall box, surface-mount box or modular furniture raceway without exceeding the manufacturers bend radius. In hollow-wall installations where box-eliminators are used, excess wire can be stored in the wall. Excess slack shall be loosely coiled and stored in the ceiling above each drop location when there is not enough space present in the outlet box to store slack cable.

M. Cables shall be neatly bundled and dressed to their respective termination device. Each terminating device shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.

N. All cables shall be clearly labeled on both ends and in an accessible location no more than six inches (0'-6") from the cable ends.

O. The Owner reserves the right to **specify an alternate location for any outlet or equipment without increasing contractor unit cost** – providing that the alternate location is specified prior to roughing-in of pathway.

P. Cables shall be neatly dressed in bundles with hook-and-loop ties in all areas where the telecom pathways are exposed and visible (not covered by ceiling, wall structures or enclosed wireways and conduits) right up to the rear of the termination blocks.

Q. Allow slack in cable bundles at entrances and exits of conduit sleeves and at transitions

to cable wireways and trays. Never pull cables tight at cable tray transitions; doing so may damage the cables by crimping them on the cable tray side of the bundles.

R. Provide hook and loop ties loosely around cables every ten feet only as a measure of keeping cables inside enclosed cable wireways to avoid cables spilling out of wireways when cover is opened.

S. Do not allow the cables to be pulled tight against the corner edges or to be unevenly balanced on one side of the cable trays or wireways.

3.3 COPPER PATCH PANELS AND TERMINATION JACKS

A. Furnish and Install all Copper Patch Panels and Jacks

1. Modular Inserts and Jacks
2. Category 6 Data/Voice Jack
3. Jacks shall meet the Category 6 Standard
4. Jacks shall be 8 position un-keyed
5. Each Jack shall be an individually constructed unit and shall snap in mount

B. Acceptable manufacturers

1. Panduit (BCC requires Panduit jacks and patch panels)
2. Leviton

C. Category 6A UTP patch panel

1. The patch panel shall be compatible with 19" equipment racks, cabinets or wall mount brackets.
2. The patch panel should be flat.
3. The patch panel shall be equipped with 8-position modular ports and shall allow for termination using both T568A and T568B wiring schemes.
4. The patch panel shall be equipped with front labeling space to facilitate port identification.
5. The connector module shall meet or exceed the Category 6 performance criteria per ANSI/TIA-568-C.2.

D. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practice.

E. Pair untwist at the termination shall not exceed 13 mm (0.5 inch).

F. Bend radius of the cable in the termination area shall not exceed 4 times the outside

diameter of the cable.

G. Cables shall be neatly bundled and dressed to their respective patch panel. Each patch panel shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.

H. Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

I. Each termination jack at the patch panel and wall plate should be labeled according to Peralta District's standards.

3.4 CABLE PATHWAY/RACEWAY

A. Furnish and Install all Cable Pathway/Raceway

1. Install Pathway in a minimum of 10 locations
2. Contractor to provide any ladder racks, j-hooks, seismic-tie wires, and misc. material required to execute the cabling pathways

B. Acceptable manufacturers

3. Chatsworth
4. B-Line
5. Or approved equal

C. Use: Support pathway for cables and patch cords inside technology rooms.

D. Material: High strength, lightweight 6063-T6 aluminum alloy.

E. C-channel cable runway: 1.5"x 0.375" aluminum side rails, with 17/64" diameter holes at 1.571" intervals and rungs on 9" centers.

F. Provide complete with all required mounting hardware, fittings and cables needed to form a bonded (grounded) system. Provide for bonding and grounding to meet TIA/EIA 606 Standards.

G. Provide any accessory products related to the cable runways system to a complete and functional infrastructure system. The cable runway accessories include, but are not limited to:

a. Cable runway bend radius drop assemblies (sized per runway section)
b. Runway butt-splice, swivel splice and foot kits; Heavy duty stringer splice kits and brackets shall be used to attach end to end horizontal cable runway segments
c. Cable runway corner brackets (sized per runway and site conditions)
d. Rack-to-runway mounting plates (sized per runway section)

e. Threaded rod assemblies with rod protectors for overhead attachment
f. Slotted Support brackets for runway attachment to threaded rod assemblies; Runway end termination kits
g. Vertical wall-mounting brackets
h. Cable retaining posts (6" as required)
i. Protective end caps. Provide necessary runway accessory products to support cable runway
j. Mounting brackets with pre-punched holes corresponding to NEMA electrical junction box and EIA/TIA mounting panel hole patterns

3.5 CONDUIT

A. Furnish and install all required conduit
1. Install conduit where required
2. All outdoor conduit **must-have** outdoor rated weather-tight connectors
3. Concrete or brick utility scanning is **required** before coring in any walls
4. **Include pricing** for any concrete coring required for cable runs
5. Firestop any new pathways created during the cabling process
6. Contractor to provide all necessary materials

B. Rigid Steel Conduit
1. Acceptable manufacturers:
   a. Allied Tube and Conduit
   b. Cal Pipe Industries
   c. Wheatland Tube Company
   d. Or approved equal
2. Rigid steel conduit shall be hot dipped galvanized inside and outside conforming to ANSI and UL. Conduit shall have standard threaded type couplings and fittings.
3. Threads on the uncoupled ends shall be covered by industry color-coded thread protectors.
4. Teflon tape shall be used on all galvanized rigid steel conduit thread joints.

C. Non-Metallic (PVC) Conduit
1. Acceptable PVC conduit and fitting manufacturers
   a. Carlon
   b. PW Pipe
   c. Georgia Pipe Company
   d. Or Approved Equal
5. Non-metallic conduit shall be heavy wall, Schedule 40 PVC.
6. Couplings and connectors for non-metallic conduit shall be of the same material and be the product of the same manufacturer of the conduit furnished.
7. Colored primer and solvent cement designed to be used with Schedule 40 PVC conduit shall be utilized in the assembly of all PVC conduit joints.

8. Straight Schedule 40 PVC conduit shall have an expanded bell on one end and an insertion depth line on the spigot end to facilitate inspection for completeness of joint. All bell end joints shall be interference types.
9. Schedule 40 PVC conduit couplings and rigid bends:
    a. Molded couplings with an internal stop as required for the joining of two non-bell end Schedule 40 PVC conduits,
    b. Sleeve couplings without an internal stop,
    c. Factory-made bends with bell or coupling ends with minimum radius and curvature to meet communications bend radii standards.

D. Non-Metallic (PVC) Conduit
1. Acceptable PVC conduit and fitting manufacturers
    a. Allied Tube and Conduit
    b. Cal Pipe Industries
    c. Wheatland Tube Company
    d. Or approved equal
2. Additional acceptable EMT conduit fitting manufacturers:
    a. Thomas & Betts
    b. Steel City
    c. Or Approved Equal
3. EMT shall be hot galvanized steel O.D. with an organic corrosion resistant I.D. coating, and shall be listed and manufactured in accordance with UL Safety Standard 797 and ANSI C80.3.
4. Electrical metallic tubing (EMT), couplings and connectors shall be steel. Malleable iron, pressure-cast or die-cast fittings are not permitted.
5. Fittings for 2” EMT and smaller shall be steel set screw type, except where otherwise noted. Fittings for 2.5” and larger shall be steel set screw type with two
(2) screws for connectors and four (4) screws for couplings. All connectors shall be insulated throat type.

E. Conduit Support
1. Acceptable manufacturers:
    a. B-line
    b. Unistrut
    c. Or approved equal
2. Supporting devices: Strut trapeze assemblies sized for the amount of conduit to be supported with minimum ⅜” threaded rods, clamps, conduit straps, C-clamps and retainers.
3. Provide fittings and accessories that match with the strut of the same manufacturer.

3.6 CONDUIT INSTALLATION

A. Install individual and multiple trapeze hangers and riser clamps as necessary to support the conduits. Provide U-bolts, clamp attachments and other necessary hardware for hanger assemblies and for securing hanger rods and conduits. Space supports for conduits on maximum 10-foot centers. Support individual conduits 1½ inch and smaller

with ¼ inch threaded steel rods and use ⅜ inch rods for 2 inch and larger.

B. Conceal all conduits, except in unfinished spaces such as equipment rooms or as indicated elsewhere.

C. Conduits shall be clearly labeled at both ends designating the opposite locations(s) served. The numbering scheme shall be room number plus a suffix to guarantee uniqueness, e.g., 143-1. Labeling must be machine generated.

D. Leave all empty conduits with a 200-pound test nylon cord pull line.

E. Flattened, dented, or deformed conduits are not permitted and shall be removed and replaced.

F. Conduit shall be run parallel or at right angles to walls, ceilings, and structural members.

G. Provide appropriate fittings, flex conduit with slack for minimum movement as required and any expansion and deflection couplings needed where conduit passes over a building expansion joint.

H. Service entrance conduit elbows shall be galvanized rigid steel. Service entrance conduits installed exposed or concealed in walls or above ceilings shall be galvanized rigid steel (G.R.S.). Service entrance conduits shall be installed in outdoor duct banks, trenches or direct buried as defined by the N.E.C.

I. Communications cables shall not occupy conduits with power cables.

J. Metallic conduits shall be grounded in accordance with ANSI/TIA-607-B and the NEC.

K. Article 344 of the National Electrical Code® (NEC) Rigid metal conduit (RMC) shall be used for entrance conduits that exceed 50 feet into the building.

L. Bond conduits to cable tray sections where conduits terminate to meet up with cable tray sections. Provide grounding and bonding for conduits and pull boxes as indicated by NEC code and instructed by manufacturer.

M. Conduit installations within concrete walls or floor slabs:

1. Conduit shall be run following the most direct route between points.
2. Conduit shall not be installed in concrete where the outside diameter is larger than ⅓ of the slab thickness.
3. Conduits shall not be installed within shear walls unless specifically indicated on the Drawings. Conduit shall not be run directly below and parallel with load bearing walls.
4. Protect each metallic conduit installed in concrete wall or slab or conduits 1½ inch and smaller passing through a concrete slab against corrosion where conduit enters and leaves concrete by wrapping conduit with vinyl all-weather electrical tape.

5. Protect all conduits entering and leaving concrete walls or floor slabs from physical damage during construction.

N. Conduit termination guidelines

6. Join conduits with fittings designed and approved for the purpose. Make the joints tight without protruding lips that can snag cable pulling inside the conduits.
7. Where conduits are terminated with locknuts and bushings align the conduit to enter squarely and install the locknuts with dished part against the box. Use two locknuts, one inside and one outside the box.
8. Ream all conduit ends and fit them with an insulated bushing to eliminate sharp edges that can damage cables during installation or service.
9. Conduits that enter a telecom room should terminate near the corners to allow for proper cable racking.
10. Terminate conduits penetrations through the floor slabs a minimum of 3-inches above the surface.

O. Conduit protection guidelines

11. Remove burrs, dirt and construction debris from conduits and pull boxes.
12. Conduits should be left capped for protection.
13. Provide final protection and maintain conditions in a manner acceptable to the Owners Representative to ensure that coatings and finishes are without damage or deterioration at completion. Repair damage to galvanized finishes with zinc- rich paint recommended by the manufacturer.

3.7 CONDUIT, CABLE TRAY AND RACEWAY IDENTIFICATION

A. Conduit identification

1. Acceptable manufacturers
   a. Panduit
   b. Hellermann Tyton
   c. Or approved equal
2. Larger sized conduits (2” to 4”) shall be labeled with large decal tags.

d. Decal tags shall be of a non-adhesive polyester and polyolefin combination.
e. The decal tags shall be at least be 2” x 1” with two holes punched at each end.
f. The decal tags shall be attached to conduits with tie wraps.
g. Tags shall be labeled using thermal transfer.

3. Horizontal cabling conduits between outlets and cable trays in corridors shall be hand marked underneath at the point of attachment to the cable tray or at the ceiling stub end with a permanent marker indicating the room of origin.

B. Cable tray identification

4. Acceptable manufacturers
   a. 3M Scotchlite
   b. Tech Products, Everlast series
   c. Or approved equal
5. Cable trays shall be labeled with large reflective lettering.
   d. The reflective lettering shall be screen-printed on a vinyl base with adhesive backing.
   e. Labels shall be individual letters and numbers.
   f. Individual characters shall be self-spacing by simply butting the individual characters against each other in a row.
   g. Characters shall be black on a reflective safety orange background.
   h. Characters shall be minimum 1” x 1.5”.
   i. Characters shall be black on a reflective safety orange background.
   j. Characters shall be minimum 1” x 1.5”.

3.8 CABLE IDENTIFICATION

A. Copper, and optical fiber horizontal cable identification

1. Acceptable manufacturers
   a. Panduit
   b. Hellermann Tyton
   c. Or approved equal
2. Horizontal cable sheaths shall be vinyl based with the capability to rotate for visibility from any angle.
3. Labels shall be white in color.
4. Labels shall be at least 1” x 2.25” with a 0.75-inch high printable area.
5. Labels shall be printed with thermal transfer printers.

B. Indoor copper, optical fiber and coaxial backbone cable identification.

1. Acceptable manufacturers
   a. Panduit
   b. Hellermann Tyton

c. Or approved equal

2. Indoor optical fiber backbone cables shall be fitted with optical fiber warning tags:
   a. Warning tags shall be black and yellow in color.
   b. Warning tags shall be a minimum of 3.5” x 2” in size
3. Indoor copper, optical fiber and coaxial backbone cable sheaths larger than 1½” shall be labeled with large decal tags that shall be tie wrapped to the cable sheath.
   a. Decal tags shall be of a non-adhesive polyester and polyolefin combination.
   b. The decal tags shall be at least be 2” x 1” with two holes punched at each end.
   c. The decal tags shall be attached to cable sheaths with tie wraps with neoprene rubber cushion sleeves. Tags shall be labeled using thermal transfer
4. Indoor copper, optical fiber and coaxial backbone cable sheaths smaller than 1½” shall be labeled with laser-printed polyester self-laminating wrap-around labels.
   a. Horizontal cable sheaths shall be vinyl based.

   b. Labels shall be white in color.
   c. Labels shall be at least 1” x 2.25” with a 0.75-inch high printable area.
   d. Labels shall have an adhesive backing.
   e. Labels shall be attached to cable sheaths by wrapping around the sheath with the adhesive back self-laminating portion.
   f. Labels shall be printed with thermal transfer printers.

C. Outdoor Copper, and optical fiber horizontal cable identification
   1. Acceptable manufacturers
      a. Panduit
      b. Hellermann Tyton
      c. Or approved equal
   2. Outdoor optical fiber backbone cables shall be fitted with optical fiber warning tags:
      a. Warning tags shall be black and yellow in color.
      b. Warning tags shall be a minimum of 3.5” x 2” in size.
   3. Outdoor copper, optical fiber and coaxial backbone cable sheaths shall be labeled with large reflective lettering on decal holders that shall be tie wrapped to the cable sheath.
      a. The polyethylene decal holders shall be at least be sized to match the numbering sequence with two holes punched at each end.
      b. The decal holders shall be attached to cable sheaths with tie wraps with neoprene rubber cushion sleeves.
      c. The reflective lettering shall be screen-printed on a vinyl base with aluminum backing plate that can easily slide into the decal holders.

d. Labels shall be individual letters and numbers.
e. Individual characters shall be self-spacing by simply butting the individual characters against each other in a row.
f. Characters shall be black on a reflective safety orange background.
g. Characters shall be minimum 1" x 1.5".
h. Labels shall be designed for exposed outdoor applications

D. Outdoor Copper, and optical fiber horizontal cable identification
1. Acceptable manufacturers
a. Panduit
b. Hellermann Tyton
c. Or approved equal
2. Copper patch cord labels shall be vinyl based with the capability to rotate for visibility from any angle
3. Labels shall be white in color
4. Labels shall be at least 1" x 2.25", with a 0.75" high printable area
5. Labels shall be printed with thermal transfer printers

E. Optical Fiber Patch Cord Identification
6. Acceptable manufacturers
d. Panduit
e. Hellermann Tyton
f. Or approved equal
7. Optical fiber patch cord labels shall be vinyl based in flag style
8. Labels shall be white in color
9. Labels shall be at least 1" x 1.5", with a 0.75" high printable area
10. Labels shall be printed with thermal transfer printers
11. Patch Panel Identification – Panduit Labeling at BCC
12. Wall Plate Identification – Panduit Labeling at BCC

3.1 CLOSEOUT AND ACCEPTANCE

A. No additional burden to the Owner regarding costs, network down-time and/or end user interruption shall result from the re-installation of specified components. Scheduling for reinstallation work shall be coordinated, in writing, with the Owner prior to beginning the work.

B. All specified Communications systems indicated on the drawings and specifications shall be complete.

C. Issues and deficiencies identified in field reports and punch lists shall have been resolved. Final as-built drawings shall have been submitted, reviewed and found to

meet the requirements of the specifications.

D. Contractor shall provide written notice of final completion of the telecom infrastructure. Upon receipt, the Owner's Representative will review/observe the completed installation. Once the Owner's Representative is satisfied that all work is in accordance with the Contract Documents, the Contractor will be notified in writing.

END OF SECTION

SECTION 5:

5.COMMUNICATIONS OPTICAL FIBER BACKBONE CABLING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. This document describes the products and execution requirements relating to Communications Optical Fiber Backbone Cabling.

B. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.2 QUALITY ASSURANCE

A. National Electric Code Compliance: Comply with all NEC articles that apply to construction and installation practices applicable to this section

B. ANSI/TIA: Comply with all ANSI/TIA articles that apply to construction and installation practices applicable to this section

C. UL Compliance: Provide products that are UL and or cUL-classified.

D. NFPA Compliance.

E. All items of a given type shall be the products of the same manufacturer.

F. Supply all equipment and accessories new and free from defects.

G. Verification: The Contractor needs to ensure that the Owner has verified the installation and materials being enclosed within building features, buried, or otherwise hidden from view. The Contractor shall bear costs associated with uncovering or exposing installations or features that have not been inspected.

All fiber cable sheaths shall be delivered to the site on reels. The reels shall be lagged, wrapped or boxed to protect the fiber cable sheath during shipping. All reels shall include the manufacturer's OTDR traces and power meter attenuation data

1.3 WORK INCLUDED

A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install **all of the required material whether specifically addressed in the Specification or not**.

PART 2 – PRODUCTS AND SCOPE

2.1 INDOOR OPTICAL FIBER BACKBONE CABLE

A. Install all indoor fiber optic single-mode backbone cabling per the manufacturer's recommended installation instructions, under the guidelines of TIA/EIA 568B and BICSI, and in quantities indicated at the following sites at a minimum:

SITE NAME	SINGLE-MODE FIBER
PERALTA DISTRICT OFFICE	Approx. 84 Strands (new fiber to all IDFs)
LANEY COLLEGE	Approx. 24 Strands
BERKELEY CITY COLLEGE	Approx. 48 Strands
MERRITT COLLEGE	Approx. 12 Strands – Ground Keeper

B. Acceptable cable manufacturers
1. Corning Cable Systems
2. Panduit
3. Berk-Tek
4. Or approved equal

C. Single mode optical fiber cable (Armored)
1. Type: Single mode
2. Fiber optic glass grade: Zero water peak
3. Cable construction:
   a. Outer sheath is flame-retardant.
   b. Have integrated dielectric central strength member.
   c. TIA-598 color-coded buffered fibers in subunits for easy identification.
   d. Protected by a flexible, spiral wrapped interlocking armored metal made of aluminum or galvanized steel without interruption from end to end for protection and strength. The metallic armor shall be wrapped in the industry standard color, outer sheath to designate the type of optical fiber.
4. Outer cable sheath marking must be legible and shall contain the following information:
   a. Manufacturer's name.
   b. Fiber strand count.
   c. Fiber type: Single mode
   d. Fiber optic glass grade: Zero waterpeak
   e. UL listing: OFCR or OFCP

f. Sequential foot markings

5. UL listed: OFCR or OFCP
   a. Cables shall be rated (OFCR or OFCP) per the installation environment as required by the local AHJ and local codes.
   b. Select an appropriate cable construction, including external jacket properties, when installing cables in aerial, outdoor, underground and corrosive environments.
6. Meets ICEA S-83-596 test criteria.
7. Maximum attenuation:
   a. 0.7 dB/km @ 1,310 nm
   b. 0.7 dB/km @ 1,550 nm
8. Guaranteed Ethernet distances supported:
   a. 1 Gbps: 5,000 meters @ 1,310 nm
   b. 10 Gbps: 10,000 meters @ 1,310 nm & 40,000 meters @ 1,550 nm

D. Single mode optical fiber cable (Non-armored)

1. Type: Single mode
2. Fiber optic glass grade: Zero water peak
3. Cable construction:
   a. Outer sheath is flame-retardant.
   b. Have integrated dielectric central strength member.
   c. TIA-598 color-coded buffered fibers in subunits for easy identification.
4. Outer cable sheath marking must be legible and shall contain the following information:
   a. Manufacturer's name.
   b. Fiber strand count.
   c. Fiber type: Single mode
   d. Fiber optic glass grade: Zero waterpeak
   e. UL listing: OFNR or OFNP
   f. Sequential foot markings.
5. UL listed: OFNR or OFNP
   a. Cables shall be rated (OFNR or OFNP) per the installation environment as required by the local AHJ and local codes.
   b. Select an appropriate cable construction, including external jacket properties, when installing cables in aerial, outdoor, underground and corrosive environments.
6. Meets ICEA S-83-596 test criteria.
7. Maximum attenuation:
   a. 0.7 dB/km @ 1,310 nm
   b. 0.7 dB/km @ 1,550 nm
8. Guaranteed Ethernet distances supported:
   a. 1 Gbps: 5,000 meters @ 1,310 nm

b. 10 Gbps: 10,000 meters @ 1,310 nm & 40,000 meters @ 1,550 nm

2.2 SPLICE CLOSURES

A. Acceptable splice closure manufacturers
   1. Corning Cable Systems
   2. Superior Essex
   3. 3M
   4. Or approved equal

B. Canister Splice Closures
   1. Splice closures shall be designed for splicing fibers in aerial, duct and buried outside plant applications.
   2. Waterproof
   3. UV resistant
   4. All splice trays, seals and hardware shall be from the same manufacturer as the splice case.

2.3 19" Universal Rack System

A. Acceptable manufacturers
   1. Chatsworth

B. Seismic Retrofit
   1. Vendor provides fastener hardware to bold rack to floor.
   2. Install bracing systems.

C. Cable Management
   1. Install horizonal cable management.
   2. Install Vertical cable management.

D. Power Distribution
   1. Install Power distribution units PDU (horizontal).

PART 3 - EXECUTION

3.2 OPTICAL FIBER BACKBONE CABLES

A. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practices.

B. Cables shall be installed separately from horizontal distribution cables at minimum to the following.
   1. Route through separate conduits and sleeves.
   2. Route through separate re-enterable fire stopping devices.
   3. Copper and fiber optic cables shall be separated on cable trays outside communications rooms.
   4. Copper and fiber optic cables shall be separated in bundles inside

communications rooms on the cable runways.

C. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cable installed in any conduit.

D. Slack loops shall be provided on each fiber optic cable segment and shall be supported on racking in accessible space.
   1. Leave minimum 15-feet of slack loop at each end of fiber backbone cable.
   2. Leave minimum 10-feet of slack loop at each splice closure location.
   3. See drawings for additional slack loop requirements.
   4. Slack coils shall have at least two points of support on the racking support.

E. Backbone cables shall at all times be securely attached to horizontal and vertical mounted cable trays and cable runways.

F. Large bundles of cables and/or heavy cables shall be attached using metal clamps and/or metal banding to support the cables.

G. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to manufacturer's requirements.

H. Install all horizontal station cabling per the manufacturer's recommended installation instructions, under the guidelines of TIA/EIA 568B and BICSI, and in quantities indicated on the drawings.

I. Cable raceways shall not be filled greater than the NEC or ANSI/TIA/EIA-569-B maximum fill allowed for the particular raceway type.

J. Cables shall not be attached to any building features other than specific communications support pathways. Where support for horizontal cable is required, the Contractor shall install appropriate communications pathways to support the cabling.

K. All cables shall be visually inspected for insufficient bend radius during and after pulling. Damaged cables, or those installed under questionable methods and/or circumstances shall be replaced at no additional cost to the Owner.

L. Cables shall be neatly bundled and dressed to their respective termination device.

M. All cables shall be clearly labeled on both ends and in an accessible location no more than six inches (0'-6") from the cable ends.

N. Cables shall be neatly dressed in bundles with hook-and-loop ties in all areas where the telecom pathways are exposed and visible (not covered by ceiling, wall structures or enclosed wireways and conduits).

O. Allow slack in cables at entrances and exits of conduit sleeves and at transitions to cable wireways and trays. Never pull cables tight at cable tray transitions; doing so may damage the cables by crimping them on the cable tray side of the bundles.

P. Keep the cables evenly distributed and neatly combed within the cable wireways and trays located outside the communications rooms.

Q. Do not allow the cables to be pulled tight against the corner edges or to be unevenly balanced on one side of the cable trays or wireways

R. The backbone cable sheaths shall be clamped at the side of the fiber termination panels with a backbone cable sheath clamp, or equal, designed for the size of the cable sheath outside diameter and the termination panel. The clamps shall be staggered to allow for a tight cable configuration entering the fiber shelves.

3.3 CLOSEOUT AND ACCEPTANCE

A. No additional burden to the Owner regarding costs, network down-time and/or end user interruption shall result from the re-installation of specified components. Scheduling for reinstallation work shall be coordinated, in writing, with the Owner prior to beginning the work.

B. All specified Communications systems indicated specifications shall be complete.

C. Issues and deficiencies identified in field reports and punch lists shall have been resolved. Final as-built drawings shall have been submitted, reviewed and found to meet the

requirements of the specifications.

A. Contractor shall provide written notice of final completion of the telecom infrastructure. Upon receipt, the Owner's Representative will review/observe the completed installation. Once the Owner's Representative is satisfied that all work is in accordance with the Contract Documents, the Contractor will be notified in writing.

END OF SECTION

SECTION 6:

6 COMMUNICATIONS PATCH CORDS AND STATION CORDS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Applicable requirements of Division 27 – Communications shall be considered a part of this section and shall have the same force as if printed herein full.

B. This document describes the products and execution requirements relating to Communications Patch Cords and Station Cords.

C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.2 QUALITY ASSURANCE

A. National Electric Code Compliance: Comply with all NEC articles that apply to construction and installation practices applicable to this section

B. ANSI/TIA: Comply with all ANSI/TIA articles that apply to construction and installation practices applicable to this section

C. UL Compliance: Provide products that are UL and or cUL-classified.

D. NFPA Compliance.

E. All items of a given type shall be the products of the same manufacturer.

F. Supply all equipment and accessories new and free from defects.

1.3 WORK INCLUDED

A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.1 COPPER PATCH/STATION/ZONE CORDS

A. Furnish and install in quantities indicated below at a minimum:

SITE NAME	CAT6A
MERRITT COLLEGE	DC Cable Rep. Approx. 20
PERALTA DISTRICT OFFICE	DC Cable Replacement/Cleanup - TBD DC Cable Rep. Approx. 2000
LANEY COLLEGE	DC Cable Rep. Approx. 2000
BERKELEY COLLEGE	DC Cable Rep. Approx. 3000
College of Alameda	DC Cable Rep. Approx. 100

SITE NAME	SINGLE-MODE PATCH CORDS
PERALTA DISTRICT OFFICE	Include for Hardware Interconnections
LANEY COLLEGE	Include for Hardware Interconnections
BERKELEY CITY COLLEGE	Include for Hardware Interconnections

B. Acceptable manufacturers
1. Berk-Tek
2. Panduit
3. Leviton
4. Or approved equal

C. Category 6A Shielded Cords
4. Shielded Category 6A patch cords and workstation cords shall be provided for UTP and FTP Category 6A installations.
5. The Category 6A patch cord/workstation cord shall be 4-pair, with 24 AWG solid or stranded copper conductors with a modular RJ45 male plug connector equipped with (8) eight gold anodized pins factory terminated at each end of the patch cord. Modular plug connectors will be snag free in design or will utilize a molded plastic boot to cover the modular plug tab.
6. Copper patch cords for zone cable patching: Category 6A FTP Solid CMP Cable with an eight position RJ45 style male connector on one end and a female style Jack Module on the other end.
7. The Category 6A modular cord cable shall be UL Listed as Type CMR.
8. The Category 6A patch cord/workstation cord shall meet or exceed the requirements of ANSI/TIA-568-C.2.
9. The Category 6A copper patch cords shall match the manufacturer's

cable assembly of the horizontal cable specified.

10. Jacket colors shall be:
    a. Blue for data.
    b. Black for analog voice.
    c. Green for Security.
    d. White for Wireless Access Points

2.2 OPTICAL FIBER PATCH/STATION CORDS

A. Acceptable manufacturers
   1. Corning Cable Systems
   2. Leviton
   3. Panduit
   4. Or approved equal

B. Multimode 50/125-Micron (OM3) cords
   1. The 50/125-micron fiber used in the multimode fiber patch cord/station cord shall have a maximum attenuation of 3.5 dB/km@ 850 nm and 1.5 dB/km @1,300 nm.
   2. The 50/125-micron 850nm laser optimized multimode fiber patch cord/station cord shall meet or exceed the requirements of ANSI/TIA-568-C.3.
   3. The optical fiber cord connector shall be LC.
   4. The multimode fiber cord assembly shall be dual zip jacketed.
   5. The optical fiber patch cords shall match the manufacturer's cable assembly of the backbone and horizontal cable specified.

C. Single-mode cords
   1. The 8.3/125-micron fiber used in the single mode fiber patch cord shall have a maximum attenuation of 1.0 dB/km @ 1310 nm and 1.0 dB/km @ 1550 nm.
   2. The optical fiber cord connector shall have a maximum insertion loss of 0.5 dB and a reflectance of -30 dB.
   3. The 8.3/125-micron single mode fiber patch cord/station cord shall meet or exceed the requirements of ANSI/TIA-568-C.3.
   4. The optical fiber cord connector shall be LC.
   5. The single mode fiber patch cord assembly shall be dual zip jacketed.
   6. Angle polish connectors shall be used for video distribution.
   7. The optical fiber patch cords shall match the manufacturer's cable assembly of the backbone and horizontal cable specified.

PART 3 - EXECUTION

3.1 COPPER PATCH/STATION/ZONE CORDS

A. Copper patch cords/workstation cords shall be installed as per the requirements specified by the manufacturer's installation guidelines.

B. Copper patch cord lengths for patching inside the communications spaces are to be provided appropriate to patching from network hardware equipment ports to the copper patch panels ports within the spaces.

C. Verify lengths and counts of copper patch cords with Owner's representative prior to purchase.

D. Patch and workstation cords: Provide (2) copper patch cords (one for each end of the cable termination) for every cable installed.

E. Zone Cords: Provide the corresponding number of zone patch cord cables for every copper station cable installed in floor mounted outlet that needs to be connected with a zone patch cord to a table surface mounted monument. See architectural and AV documents for locations.

F. Provide unit pricing for one (1) each of the following patch cords:
1. Three-meter (3m) copper cords
2. Five-meter (5m) copper cords
3. Seven-meter (7m) copper cords
4. Seven-meter (10m) copper cords
5. Seven-meter (15m) copper cords

G. Install copper patch cord cables between the Owner provided network equipment and the horizontal station cabling patch panel according to the Owner provided patching matrix.

H. Install copper patch cord cables at the workstation and other IP end device locations. (e.g. Security cameras, servers, touch panel AV devices etc.)

I. The bundling and dressing of the copper patch cord cables is as follows:
1. Bundle patch cord cables in sequential order of multiples of twelve (12).
2. Use Velcro strips to dress copper patch cord bundles to within ten (10) inches of each end of the bundle.
3. Route copper patch cord bundles along the cable runway sections connecting the patch panel style data termination field with the telecommunications racks containing the network equipment.
4. At all times route the copper patch cord bundles inside the vertical- wire minders provided at the patch panel data termination field and the telecommunications racks containing the network equipment.
5. At all times provide clear access to all power and fan tray modules installed in the network equipment.
6. At all times provide clear access to all power receptacles located in the telecommunications racks.

J. The Contractor shall provide a checklist for each box of above owner supplied components which will include a listing and final count of the contents pre-installation and post installation, test results of the individual patch cords, signature

of the Owner's Representative verifying the contents, signature of the Contractor, date of the inspection of the box, date of the testing of the patch cords, date of acceptance of the box, and the location where the box is to be stored. The Contractor will be responsible for the contents of the box until the Owner's Representative signs for final acceptance.

3.2 OPTICAL FIBER PATCH/STATION CORDS

A. Fiber patch cords/workstation cords shall be installed as per the requirements specified by the manufacturer's installation guidelines.

B. Optical fiber cord lengths for patching inside the communications spaces are to be provided appropriate to patching from network hardware equipment ports to the optical fiber termination panel ports within the spaces.

C. Verify lengths and counts of optical fiber patch cords with Owner's representative prior to purchase.

D. Install appropriate lengths to provide for **one (1) fiber optic 2-strand, 50/125 multimode patch cord cable for every Gigabit or 10Gigabit multimode fiber optic LAN backbone uplink port to be connected on the Owner provided network equipment switch chassis**.

E. Install the number of fiber optic patch cord cables with appropriate lengths.

F. Install fiber optic patch cord cables between the Owner provided network equipment switch chassis and/or the fiber optic termination panel according to the Owner provided fiber optic patching matrix.

G. The bundling and dressing of the fiber optic patch cord cables is as follows:
   1. Use Velcro strips to dress fiber optic patch cord bundles to within twelve (12) inches of each end of the bundle.
   2. At all times route the patch cords inside the vertical- wire minders provided at the patch panel data termination field and the telecommunications racks containing the network equipment.
   3. At all times provide strain relief according to EIA/TIA standards for fiber optic cables.
   4. At all times provide clear access to all power and fan tray modules installed in the network equipment.
   5. At all times provide clear access to all power receptacles located in the telecommunications racks.

H. The Contractor shall provide a checklist for each box of above owner supplied components which will include a listing and final count of the

contents pre- installation and post installation, test results of the individual patch cords, signature of the Owner's Representative verifying the contents, signature of the Contractor, date of the inspection of the box, date of the testing of the patch cords, date of acceptance of the box, and the location where the box is to be stored. The Contractor will be responsible for the contents of the box until the Owner's Representative signs for final acceptance.

3.3 TESTING

3.4 All structured cabling components provided and installed will be under a manufacturer's warranty throughout the installation period and as indicated on the warranty contract. Any components of the Permanent Link or connecting hardware patch cords supplied under this project that fail the test parameters during the active onsite testing that will be done by others (the Professional Services of the supplier of the network equipment LAN hardware) after this contract shall be replaced at no cost to the Owner by the Contractor under the warranty requirements of this project.

3.5 CLOSEOUT AND ACCEPTANCE

A. No additional burden to the Owner regarding costs, network down-time and/or end user interruption shall result from the re-installation of specified components. Scheduling for reinstallation work shall be coordinated, in writing, with the Owner prior to beginning the work.

B. All specified Communications systems indicated on the drawings and specifications shall be complete.

C. Issues and deficiencies identified in field reports and punch lists shall have been resolved. Final as-built drawings shall have been submitted, reviewed and found to meet the requirements of the specifications.

D. Contractor shall provide written notice of final completion of the telecom infrastructure. Upon receipt, the Owner's Representative will review/observe the completed installation. Once the Owner's Representative is satisfied that all work is in accordance with the Contract Documents, the Contractor will be notified in writing.

END OF SECTION

SECTION 7.

7.COMMUNICATIONS RACK MOUNTED POWER DISTRIBUTION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. This document describes the products and execution requirements relating to Communications Rack Mounted UPS.

B. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.2 QUALITY ASSURANCE

A. National Electric Code Compliance: Comply with all NEC articles that apply to construction and installation practices applicable to this section

B. ANSI/TIA: Comply with all ANSI/TIA articles that apply to construction and installation practices applicable to this section

C. UL Compliance: Provide products that are UL and or cUL-classified.

D. NFPA Compliance.

E. All items of a given type shall be the products of the same manufacturer.

F. Supply all equipment and accessories new and free from defects

1.3 WORK INCLUDED

A. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.1 RACK MOUNTED UPS

A. Furnish and install Rack Mounted UPS in quantities indicated below at a minimum:

SITE	QUANTITY
PERALTA DISTRICT OFFICE	20+
LANEY COLLEGE	37
BERKELEY CITY COLLEGE	10 - 120V UPS 5 - 120V UPS Battery Pack 1 - 240V UPS with Battery Pack for Network and Servers

A. Acceptable manufacturers
   1. APC (BCC prefers APC)
   2. Tripp Lite
   3. Or approved equal

2.2 RACK MOUNTED UPS

A. 3,000VA Rack Mounted UPS
   1. Topology – True online, double conversion capable
   2. Local interface – Graphical LCD display with status indicating LEDs.
   3. Battery type
      a. VRLA 12V/9Ah
      b. Hot swappable
   4. Minimum backup time of 3 minutes at 100% load.
   5. Network Management
      a. Full-featured network management interfaces that provide standards- based management via Web, SNMP, and Telnet.
      b. Remote emergency power off capability.
   6. The UPS shall be able to mount to a two-post telecom rack or four post equipment cabinet with the use of rack rails without modification.
   7. Conformance and Regulatory Approvals
      a. FCC Class B,
      b. EN 55022 Class B

B. 6000VA Rack Mounted UPS
   1. Topology – True online, double conversion capable

2. Local interface – Graphical LCD display with status indicating LEDs.
3. Battery type
    a. VRLA 12V/9Ah
    b. Hot swappable
4. Minimum backup time of 3 minutes at 100% load.
5. Network Management

    a. Full-featured network management interfaces that provide standards- based management via Web, SNMP, and Telnet.
    b. Remote emergency power off capability.
6. The UPS shall be able to mount to a two-post telecom rack or four post equipment cabinet with the use of rack rails without modification.
7. Conformance and Regulatory Approvals
    a. FCC Class B,
    b. EN 55022 Class B

PART 3 - EXECUTION

3.1 RACK MOUNTED UPS

A. Check actual site conditions prior to start of any work. Ensure all preceding trade work associated with the communications system is accurate and complete before proceeding with installation or use of products specified in this section.

B. Coordinate final electrical requirements (electrical outlet installation and voltage/amp rating)

C. UPS devices shall be installed as per the requirements specified by the manufacturer's installation guidelines.

D. Secure UPS units and other accessories using appropriate factory manufactured rails and screws. Align devices with rack or cabinet screw hole patterns to allow for installation of screws in all mounting holes. Tighten screws to factory limits being careful not to over tighten, cross thread or strip screw heads.

E. Final location of each UPS unit to be coordinated with the Owner's representative.

F. See drawings for quantity and installation locations of rack mount UPS devices.

G. Quantities listed herein are estimates and are subject to change.

3.2 CLOSEOUT AND ACCEPTANCE

A. No additional burden to the Owner regarding costs, network down-time and/or end user interruption shall result from the re-installation of specified components. Scheduling for reinstallation work shall be coordinated, in writing, with the Owner prior to beginning the work.

B. All specified Communications systems indicated on the drawings and specifications shall be complete.

C. Issues and deficiencies identified in field reports and punch lists shall have been resolved. Final as-built drawings shall have been submitted, reviewed and found to meet the requirements of the specifications.

D. Contractor shall provide written notice of final completion of the telecom infrastructure. Upon receipt, the Owner's Representative will review/observe the completed installation. Once the Owner's Representative is satisfied that all work is in accordance with the Contract Documents, the Contractor will be notified in writing.

END OF SECTION

EXHIBIT 1 – CONTRACT FORMS

The following Contract Forms must be submitted with the RFP:

1. Workers' Compensation Certification
2. Prevailing Wage and Related Labor Requirements Certification
3. Small Local Business and Small Emerging Business Enterprise Affidavit
4. Drug-Free Workplace Certification
5. Tobacco-Free Environment Certification
6. Non- Collusion Declaration

WORKERS' COMPENSATION CERTIFICATION

PROJECT/CONTRACT NO.: _____ between Peralta Community College District ("District") and _____ ("Contractor" or "Proposer") ("Contract" or "Project").

Labor Code section 3700, in relevant part, provides:

> Every employer except the State shall secure the payment of compensation in one or more of the following ways:
>
> a. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state; and/or
>
> b. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

(In accordance with Labor Code sections 1860 and 1861, the above certificate must be signed and filed with the awarding body prior to performing any Work under this Contract.)

END OF DOCUMENT

PREVAILING WAGE AND
RELATED LABOR REQUIREMENTS CERTIFICATION

PROJECT/CONTRACT NO.: _____ between Peralta Community College District ("District") and _____ ("Contractor" or "Proposer") ("Contract" or "Project").

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Work on the above Project including, without limitation, labor compliance monitoring and enforcement by the Department of Industrial Relations.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

SMALL LOCAL BUSINESS ENTERPRISE and SMALL EMERGING LOCAL BUSINESS ENTERPRISE PROGRAM

The District is committed to ensure equal opportunity and equitable treatment in awarding and managing its public contracts and has established an annual overall program goal of twenty-five percent participation for small local businesses. To facilitate opportunities for small local business, the District will use a maximum 5% bidding preference for SLBE and SELBE firms. The preference is only used for computation purposes to determine the winning bidder, the contract is awarded at the actual bid amount. Please review the following guidelines to see if your firm qualifies for the preference.

The 5% bidding preference for an SLBE and SELBE firms are for construction, personal and professional services, goods and services, maintenance, repairs, and operations where responsibility and quality are equal. The preference will be 5% of the bid amount of the lowest responsive responsible bidder, and may not exceed $50,000.00 for any bid.

A Non-SLBE/SELBE Prime Contractor who utilizes 25% of total bid amount, with SLBE or SELBE subcontractors (who meet the District's Definition of an SLBE and SELBE), can also receive a maximum of 4% bidding preference, not to exceed $50,000.00 for any bid. (See below Subcontractor section.)

Definitions:

SLBE: A Small Local Business Enterprise is a business that has not exceeded gross annual revenue of 8.5 million dollars for a construction firm, or 6 million dollars for goods and non-professional services firm, or 3 million dollars for architecture, engineering and professional services firm, for the past three consecutive years and meets the below geographic location requirements.

SELBE: A Small Local Emerging Business Enterprise is a business that has not exceeded gross annual revenue of 1.5 million dollars for the past three consecutive years and meets the below geographic location requirements.

Commercially Useful Function: Shall mean a business is directly responsible for providing the materials, equipment, supplies or services to the District as required by the contract solicitation. The business performs work that is normal for its business services and carries out its obligation by actually performing, managing, or supervising the work involved. The business is **not** Commercially Useful if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of SLBE or SELBE participation.

Geographic Location Requirements:

- The business must be located at a fixed, established commercial address located in the District's market area of Albany, Alameda, Berkeley, Emeryville, Oakland, or Piedmont, and not a temporary or movable office, a post office box, or a telephone answering service.

- If the business has an office outside of the District's market area as well as an office within the market area, the office within the District's market area must be staffed on a full time permanent basis with someone employed by the business.

- If requested, the business that has an office outside of the District's market area must provide proof of one or more past contracts citing the business address (such as contracts to perform work, to rent space or equipment, or for other business services) was within the District's market area at least one (1) year prior to the date of contract award. The one-year requirement does not apply to businesses whose sole establishment is located within the District's market area.

Subcontractors:

Non-SLBE/SELBE Prime Contractors who use subcontractors, who meet the district definitions of SLBE and SELBE, may receive a maximum of 4% bidding preference if the following conditions are met:

1. 25% of total bid amount is with Subcontractors who meet the District's definition of an SLBE and SELBE. The Prime Contractor must list each Subcontractor on the Subcontractor List form, clearly identifying the SLBE and SELBE status and the Dollar Amount of work each subcontractor will perform.
2. The Subcontractors must provide a Commercially Useful Function.
3. The Prime Contractor must maintain the Subcontractor percentages (based on the quoted dollar amounts) indicated in the Subcontractor List form at the time the Contract is awarded and throughout the term of the Contract.
4. The Prime Contractor must fill out sign the SLBE/SELBE Self Certification Affidavit and return it with the bid documents, and 48 hours after the bid opening the Prime Contractor must submit signed SLBE/SELBE Self Certification Affidavit from each of the SLBE and SELBE subcontractors listed in the Subcontractor form. The Subcontractor must agree to provide the requested documentation to verify the SLBE/SEBLE status.
5. No Substitutions can be made to the SLBE and SELBE subcontractor without the prior written approval of the District. The District will approve a subcontractor substitution on the following conditions:
    a. A written statement from the subcontractor agreeing to the substitution.
    b. When the subcontractor has been given a reasonable opportunity to execute the subcontract, yet fails to, or refuses to execute the subcontract, or refuses to satisfy contractual obligations.
    c. When the subcontractor becomes insolvent.

d. When the District determines the work performed by the subcontractor is not in accordance with the contact agreement, or the subcontractor is substantially and unduly delaying or disrupting the progress of work.

Firms that meet the District criteria for an SLBE and SELBE can complete the below self-certification affidavit signed under penalty of perjury. Firms claiming SLBE and SELBE status in the self-certification affidavit will be required to submit proof of residency and revenue 48 hours after bid opening. Such proof shall consist of a copy of a contract to perform work, to rent space or equipment, or for other business services, executed from their local address, and the firm's tax returns for the past three consecutive years.

I certify under penalty of perjury that my firm meets the District's definition of a Small Local Business Enterprise or a Small Emerging Local Business Enterprise and resides in the geographic location of the District's market area and qualifies for the below preference. The maximum preference will be five percent of the bid amount of the lowest responsible bidder and may not exceed $50,000.00 for any bid. The preference is only used for computation purposes to determine the winning bidder; the contract is awarded at the actual bid amount. The District's Contract Compliance Office will determine whether this requirement has been fulfilled**.** Bidders may only claim one of the below preferences.

Certification Status	**Preference**	**Preference Claimed (check only one)**
SLBE	5% of lowest bid	
SELBE	5% of lowest bid	
25% of Subcontractors are SLBE/SELBE	4% of lowest bid	
Not Applicable	None	

1. I acknowledge and am hereby advised that upon a finding of perjury with the claims made in this self-certification affidavit the District is authorized to impose penalties which may include any of the following:

    a) Refusal to certify the award of a contract
    b) Suspension of a contract
    c) Withholding of funds
    d) Revision of a contract for material breach of contract
    e) Disqualification of my firm from eligibility for providing goods and services to the Peralta Community College District for a period not to exceed five (5) years

2. I acknowledge and have been advised and hereby agree that my firm will be required to provide proof (and if applicable, my SLBE and SELBE Subcontractors will provide proof) of the status claimed on this self-certification affidavit 48 hours after bid opening. Proof of status claimed includes tax returns from the previous three years and past contracts to determine the size and geographical location of my firm.

3. I declare that the above provisions are attested to under penalty of perjury under the laws of the State of California.

RFP Number: _____ RFP Name: _____

_____ _____
Signed Date

_____ _____
Printed or typed name Title

_____ _____ _____
Name of Company Telephone

END OF DOCUMENT

DRUG-FREE WORKPLACE CERTIFICATION

PROJECT/CONTRACT NO.: _____ between the Peralta Community College District ("District") and _____ ("Contractor" or "Proposer") ("Contract" or "Project").

This Drug-Free Workplace Certification form is required from the successful Proposer pursuant to Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

The District is not a "state agency" as defined in the applicable section(s) of the Government Code, but the District is a local agency and community college district under California law and requires all contractors on District projects to comply with the provisions and requirements of the Drug-Free Workplace Act of 1990.

Contractor must also comply with the provisions of Health & Safety Code section 11362.3 which prohibits the consumption or possession of cannabis or cannabis products in any public place, including on campus.

Contractor shall certify that it will provide a drug-free workplace by doing all of the following:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition.

b. Establishing a drug-free awareness program to inform employees about all of the following:

   (1) The dangers of drug abuse in the workplace.

   (2) The person's or organization's policy of maintaining a drug-free workplace.

   (3) The availability of drug counseling, rehabilitation, and employee-assistance programs.

   (4) The penalties that may be imposed upon employees for drug abuse violations.

c. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required above, and that, as a condition of employment on the contract or grant, the employee agrees to a proposal by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by section 8355(a), and requiring that the employee agree to a proposal by the terms of that statement.

I also understand that if the District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of section 8355, that the Contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of the aforementioned Act.

I acknowledge that I am aware of the provisions of and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990 and Health and Safety Code section 11362.3.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

TOBACCO-FREE ENVIRONMENT CERTIFICATION

PROJECT/CONTRACT NO.: _____ between Peralta Community College District ("District") and _____ ("Contractor" or "Proposer") ("Contract" or "Project").

This Tobacco-Free Environment Certification form is required from the successful Proposer.

Pursuant to, without limitation, 20 U.S.C. section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq.,Business and Professions Code section 22950 et seq. and District Board Policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school owned vehicles and vehicles owned by others while on District property. The prohibition on smoking includes the use of any electronic smoking device that creates an aerosol or vapor, in any manner or in any form, and the use of any oral smoking device for the purpose of circumventing the prohibition of tobacco smoking. Further, Health & Safety Code section 11362.3 prohibits the smoking or use of cannabis or cannabis products in any place where smoking tobacco is prohibited.

I acknowledge that I am aware of the District's policy regarding tobacco-free environments at District sites, including the Project site and hereby certify that I will adhere to the requirements of that policy and not permit any of my firm's employees, agents, subcontractors, or my firm's subcontractors' employees or agents to use tobacco and/or smoke on the Project site.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

NON-COLLUSION DECLARATION
(Public Contract Code Section 7106)

THE UNDERSIGNED DECLARES:

I am the _____ of _____, the party making the foregoing proposal.
[Title] [Name of Firm]

The proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The proposal is genuine and not collusive or sham. The proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal. The proposer has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or to refrain from submitting a proposal. The proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer. All statements contained in the proposal are true. The proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, proposal depository, or to any member or agent thereof, to effectuate a collusive or sham proposal, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a proposer that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the proposer.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration is executed on _____,
[Date]

at _____, _____.
[City] [State]

Date: _____
Proper Name of Proposer: _____
Signature: _____
Print Name: _____
Title: _____

END OF DOCUMENT