



"OUR CHILDREN – OUR FUTURE"

**Ravenswood City School District**  
2120 Euclid Avenue, East Palo Alto, California 94303  
(650) 329-2800 Fax (650) 327-7004

*Board Members:*  
Ana Maria Pulido, President  
Sharifa Wilson, Vice President  
Stephanie Fitch, Clerk  
Marielena Gaona-Mendoza, Member  
Tamara Sobomehin, Member

Gina Sudaria  
*Interim Superintendent*

**NOTICE INVITING PROPOSALS**  
**Phase 3-4 Backup Data Center and Primary Data Center Upgrade Project**

Notice is hereby given that the Ravenswood City School District (hereinafter referred to as "District"), is requesting proposals for the Phase 3-4 Backup Data Center and Primary Data Center Upgrade Project.

No offer of intent should be construed from this legal notice that the District intends to enter into a contract with the interested company for the acquisition of server and network infrastructure unless, in the sole opinion of the District, it is in the best interest of the District to do so. The District reserves the right to negotiate final contractual terms with the successful company.

Written proposals must be sealed and filed with the Ravenswood City School District, 2120 Euclid Avenue, East Palo Alto, CA 94303 no later than 3:00 pm on April 3, 2020. Proposals will not be opened in the public. Proposals will be opened in a non-public opening.

A site walkthrough will convene on March 11, 2020 at 1:00 pm at the District Office at 2120 Euclid Avenue.

The Board of Trustees reserves the right to reject any and all proposals and to waive any irregularity therein. Proposals will be studied, and a recommendation will be made to the Board of Trustees at its regular board meeting.

Interested companies may download the RFP #RCSD-P3IT from the District's website at [www.ravenswoodschools.org/rfps](http://www.ravenswoodschools.org/rfps). Questions should be directed to [rfps@ravenswoodschools.org](mailto:rfps@ravenswoodschools.org).



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*Interim Superintendent*

**March 2, 2020,**

To All Interested Parties:

Enclosed, please find this Request for Proposal (RFP) for the Phase 3-4 Backup DC and DC Upgrade Project, RFP #RCSD-P3IT. Please review the conditions of the RFP and if you have questions, please submit them in writing to [rfps@ravenswoodschools.org](mailto:rfps@ravenswoodschools.org). All submitted questions and responses will be compiled and posted onto the district website.

**The RFP response is due by April 3, 2020 at 3:00 pm.** E-mailed and faxed quotes will not be accepted. Original signature documents must be mailed, or hand delivered to Business Services, 2120 Euclid Ave, East Palo Alto, CA 94303 ATTN: Solomon Hill. Respondent is responsible for ensuring accurate and timely delivery of packet.

A non-mandatory site walkthrough will convene on March 11, 2020 at 1:00 pm at the District Office at 2120 Euclid Avenue.

**The following must be completed, signed, and returned with RFP Proposal; incomplete packets will not be considered:**

- 1. Response to RFP (see Bidder and Proposal Requirements)**
- 2. Completed Equipment Itemization Checklist**
- 3. List of Billable Materials and Labor Costs**
- 4. Three Client References**
- 5. Documentation of Network or Cabling Certifications**

Thank you for your interest in the Ravenswood City Elementary School District.

Sincerely,

Solomon P. Hill  
Director of Technology  
Ravenswood City Elementary School District  
2120 Euclid Ave  
East Palo Alto, CA 94303  
Ph: (650) 329-2800 x60166

[solomonh@ravenswoodschools.org](mailto:solomonh@ravenswoodschools.org)



## Ravenswood City School District

Technology Department  
2160 Euclid Avenue  
East Palo Alto, CA 94303-1799

(650) 329-2800 x60166 – phone

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### **Request for Proposal Phase 3-4 Backup Data Center and Primary Data Center Upgrade Project**

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## **2 Introduction**

The Ravenswood City Elementary School District (RCSD) is inviting proposals from qualified vendors to submit a proposal to assist with upgrading and modernizing existing data center at the District Office and adding a secondary data center at the Ravenswood Middle School. Please submit pricing on items to be furnished by the interested party in accordance with all conditions and specifications.

The Phase 3-4 Backup DC and DC Upgrade Project is part of Bond Measure H and S funds that were passed in 2018-19 for modernizing the school district. These funds for IT modernization were split into the following five phases:

**Phase 1:** Phone System Upgrade - District phone system upgrade.

**Phase 2:** RMS IT Infrastructure Upgrades – Ravenswood Middle School IT infrastructure modernization and consolidation of multiple school sites into one site.

**Phase 3:** Backup Data Center – creation of backup data center for servers and connectivity to keep IT systems running during outages.

**Phase 4:** Primary Data Center Upgrades - modernize and upgrade district servers and services.

**Phase 5:** School and District Office IT Infrastructure Upgrades - IT infrastructure upgrades for all remaining schools.

The Phase 3 and Phase 4 projects have been divided into multiple RFP's but are all part of the same project. They have been divided into the following components:

- 1) Physical Plant and Electrical – #RCSD-P3Elec
- 2) IT Infrastructure - #RCSD-P3IT
- 3) Provider and ISP - #RCSD-P3ISP

This RFP is for the IT Infrastructure portion of the project. It will require vendors to bid on the server, networking, services, and software portion of the project.

The RFP response shall be returned to the attention of: Solomon Hill by 3:00 pm on April 3, 2020. E-mailed and faxed responses will not be accepted. Documents with original signature must be hand delivered or mailed to Business Services, 2120 Euclid Ave, East Palo Alto 94303, ATTN: Solomon Hill. Vendor is responsible for ensuring accurate and timely delivery of packet.

### **2.1 RFP Selection Process**

The selection process will include review and evaluation of proposals by school district staff. Cost will be the primary factor for evaluation, and other criteria include understanding of needs as expressed in the submitted bids, and vendor experience with providing requested services. The district may bring in outside consultants and/or members of the community to assist with the review of the proposals. A breakdown of evaluation criteria is documented in section the Basis of Award section.

## ***2.2 Background***

The District serves about 2,000 students, Pre-kindergarten through eighth grades, from East Palo Alto and East Menlo Park, California. The ethnic make-up of the population is predominantly Hispanic 81%, followed by Pacific Islanders 10%, African American 6%, and other 3%. The district has embarked upon an aggressive initiative to improve the educational opportunities provided to students and their families. The District consistently strives to improve the academic, social, as well as the overall health and economic conditions for the entire Ravenswood community. Ravenswood District has about a 90% free and reduced school lunch rate.

The District currently supports 6 educational sites and a District Office including nearly 2000 students and an employee base of approximately 500 staff, including 120 classroom teachers. These offices and education sites are connected by a district-supported Local Area Network (LAN) and Wide Area Network (WAN) utilizing 2 Gbps fiber EPL lines to each school site. The current use of our District LAN/WAN can be characterized as follows:

- Transmitting administrative data for managing our staff, schools and students.
- Providing resources for distributing educational content to the classroom.
- Providing access to the Internet for educational purposes.

All of these LAN sites currently have a professionally installed data network infrastructure with Internet access available in every classroom. Our network is setup in a star configuration, where sites are connected via 2 Gbps fiber EPL to the remote sites. All pre-IT upgraded classrooms contain a Cisco 2960CX or Cisco 3560 PoE switch connected to a fiber backplane. Every classroom has 6 strands (3 pairs, all 62.5 micron) of fiber and 1 CAT5e cable that connects the classroom switch to one of the school IDFs (Intermediate Distribution Frame). Because we need to have 1 access point and 1 PoE telephone in each classroom, but only have one CAT 5 going to each classroom, each room with an access point currently has a PoE switch. Each school has between one and nine professionally installed IDFs that are connected to the school MDF with fiber. Existing networked switches and routers are from Cisco Systems, (about 420 total). We have a Cisco CallManager 12.1 VOIP Telephone system.

The District has recently adopted SingleWire InformaCast as its IP-based paging system. InformaCast is a mass notification system that sends messages to on-premises devices and mobile users. We are using InformaCast Fusion 12.7.1 which is tied to our Cisco CallManager phone system.

The district currently utilizes two Cisco 5508 Wireless LAN Controllers running IOS v8.0.110.0 that connects 282 Cisco 1702i, 3502i, 1142N, and 2602i access points to provide 802.11n wireless service. Additionally a new Cisco 5520 WLC was installed in the Data Center for all newly upgraded and installed WAPs at the Ravenswood Middle School.

The district utilizes both wired desktops and mobile Chromebook carts in classrooms. There are approximately 3,000 wireless laptops and tablets in use by teachers and students at RCSD. These are by various manufacturers and include 802.11a/g/n/ac capable devices. Models in use include about 200 Apple iPads, various Windows 10 HP staff laptops, and Dell and HP Chromebooks.

The district currently utilizes Windows 2008 Servers for DNS, DHCP, print, file and other network services. Each site has two or more servers to provide primary Active Directory 2008 R2 network services, with a backup server. Staff e-mail is currently provided by a self-hosted Microsoft Exchange 2010 server.

### ***2.3 Qualifications/Minimum Requirements***

The District may award a contract to the firm(s) that, in its sole opinion, is the most capable of providing the range of services described in the RFP and in the long-term best interests of the District. To participate in the District's RFP process and to be considered for this project, the respondent must meet the following minimum requirements:

- Active general contractor's license in California.
- Minimum of \$1 million in bonding capacity for a single project.
- Adequate financial resources to support the range of alternatives anticipated.
- An established record of technical performance on typical projects within California.
- A proven record of on-time and on-budget performance.
- Excellent safety record.
- Established records of the firm's ability to perform the work.
- Qualified, trained, and knowledgeable staff.
- Ability to effectively communicate with the District Governing Board, administration, staff, students, and community, as needed.

The District reserves the right to investigate the qualifications of all firms under consideration and to confirm any part of the information furnished, or to require other evidence of managerial, financial, or technical capabilities that are considered necessary for the successful performance of the services requested as part of this RFP.

### ***2.4 Bidder Requirements***

1. The scope of this contract may be scaled up or down to meet both the amount of received funding and the Ravenswood City School District budget.
2. This Project will be a deliverable-based engagement.
3. RFP responses should be reviewed for accuracy before submission to RCSD since they may not be amended after submission to RCSD. RCSD will not be responsible for errors or omissions in any RFP responses. RCSD reserves the right to reject any and all RFP responses, or to waive any irregularities, or informalities in the RFP process.
4. The Ravenswood City School District reserves the option to terminate service, without penalty and full expectation of refund of any and all proceeds paid prior to date of termination of contract or services for balance of services not rendered.
5. The work of this project will not affect nor interfere with the functionality of the existing infrastructure or live systems until the new implementation has been thoroughly tested and documented and is ready to go into production.
6. Upon selection of a vendor, the District will provide access to various documents and key District personnel relevant to this project, as needed by the selected vendor.
7. The bidder must state their assumptions for this project, including how pricing was calculated and on what it was based. Include any other assumptions used to determine the

- amount of work necessary to ensure success.
8. Questions should be submitted in writing (preferably e-mail, see address below). Responses will be posted on the RFP webpage at the following address: <http://www.ravenswoodschools.org/rfps> and e-mailed to questioner.
  9. The District reserves the right to review resumes and credentials, and approve or disapprove the assignment or reassignment of Vendor personnel.
  10. Vendor must:
    - a. Be authorized in California to supply all requested products and services
    - b. Have current liability and workers compensation insurance
    - c. Vendor and subcontractors shall comply with all applicable provisions of the California Labor Code sections 1720-1861, including prevailing wage.
    - d. Provide documentation of wireless, switching and cabling certifications. A qualified engineer with a minimum certification of CCNP or equivalent will perform all network configurations.
    - e. Provide three client references for projects of a similar size and scope, preferably in K-12 schools.
  11. All work will be in accordance with drawings, specifications, and general contract conditions and subject to funding at a level deemed acceptable by RCSD.
  12. The vendor must maintain compliance with any and all legal requirements set forth under the California Public Utilities Commission and the Federal Communications Commission (FCC).
  13. The vendor acknowledges that all pricing and technology infrastructure information in its bid shall be considered as public and non - confidential pursuant to §54.504 (2)(i)(ii). c.
  14. Any RFP responses received after 3:00 pm on April 3, 2020 may be rejected and returned to the firm unopened.
  15. The selected vendor will be responsible for managing this project and be expected to use the PMBOK, Project Management Body of Knowledge Best Practices standard.
  16. Default by Bidder
    - The District shall hold the vendor/s responsible for any damage that may be sustained because of failure or neglect to comply with any terms or conditions listed herein.
    - If the successful vendor/s fails to furnish or deliver any of the materials, supplies or services listed herein at the prices named and at the time and place herein stated or otherwise fails or neglects to comply with the terms of the RFP, the District may, upon written notice to the vendor/s, cancel the contract/purchase order in its entirety or cancel or rescind any or all items affected by such a default, and may, whether or not the contract is cancelled in whole or in part, purchase the materials supplies or services elsewhere without further notice to the vendor.
  17. Hold Harmless Clause
    - The successful vendor agrees to indemnify, defend and save harmless the District, its governing board, its officers, agents, and employees from and against any and all claims, demands, losses, defense costs, or liability of any kind or nature which the District, its offers, agents and employees may sustain or incur or which may be imposed upon them for injury to or death of persons, or damage to property as a result of, arising out of or in subcontractor's performance under the terms of this contract, excepting only liability arising out of the sole negligence of the District.
  18. Prevailing Law



- In the event of any conflict or ambiguity between these instructions and state or federal law or regulations, the latter shall prevail. Additionally, all equipment to be supplied or services to be performed under the RFP proposal shall conform to all applicable requirements of local, state, and federal law.

19. Taxes and Insurance:

- All insurance that may be required shall be included in all bid response quotations. The District is not exempt from California State sales and use taxes. The District is exempt from paying Federal Excise Taxes. California sales tax shall be included in the bid response quotations as a separate line item.

20. Governing Law and Venue

- In the event of litigation, the RFP documents, specification and related matters shall be governed by and construed in accordance with the laws of the State of California. Venue shall be with the appropriate state or federal court located in Santa Clara County.

21. Permits and Licenses

- The successful vendor/s and all of his employees or agent shall secure and maintain in force such licenses and permits as are required by law, in connection with the furnishing of materials, articles or services herein listed. All operations and materials shall be in accordance with the law.

22. Proposal Terms and Conditions

- Nothing in this proposal shall be construed to prohibit either party from proposing additional terms and conditions during negotiation of the resulting Contract.
- Any contract that may be developed as a result of this proposal will not become legally binding until it has been approved by the Ravenswood City School District Board of Trustees and signed by the Superintendent or designee.

## ***2.5 Completion Date / Notice to Proceed***

Contractor agrees that all work required to be performed by the Contract Documents shall be completed by the milestone dates specified in the “Scope of Work” documents and above in the “Project Timeline”. Contractor acknowledges that it shall be liable for liquidated damages as set forth in this Agreement if the Project is not completed by these dates.

## ***2.6 Liquidated Damages***

The completion date and date of milestones is the essence of the Agreement. The Contractor shall complete the Project by the dates specified in the Project Timeline section unless the District agrees in writing to an extension of time through the documented Change Order Process.

Failure to complete the Project within the time and in the manner provided for by the Contract Documents shall subject the Contractor to liquidated damages. The actual occurrence of damages and the actual amount of the damages which the District would suffer if the Project were not completed within the specified times set forth are dependent upon many circumstances and conditions which could prevail in various combinations and, from the nature of the case, it is impracticable and extremely difficult to fix the actual damages. Damages which the District would suffer in the event of delay include, but are not limited to, loss of the use of the Project, disruption of school activities, costs of administration, inspection, costs incurred for project management, supervision and the loss suffered by the public within the District.

Accordingly, the parties agree that the amount herein set forth shall be presumed to be the amount of damages which the District shall directly incur upon failure of the Contractor to complete the Project within the time specified: Five Hundred Dollars (\$500.00), plus 50% of all project management costs, during or as a result of each calendar day by which the substantial completion of the Project is delayed beyond the date specified in Project Timeline.

If the Contractor becomes liable for liquidated damages under this section, the District, in addition to all other remedies provided by law, shall have the right to withhold any and all retained percentages of payments, and to collect the interest thereon, which would otherwise be or become due the Contractor until the liability of the Contractor under this section has been finally determined. If the retained percentage is not sufficient to discharge all liabilities of the Contractor incurred under this Article, the Contractor and its sureties shall continue to remain liable to the District until all such liabilities are satisfied in full.

If the District accepts any work or makes any payment under this Agreement after a default by reason of delays, the payment or payments shall in no respect constitute a waiver or modification of any Agreement provisions regarding time of completion and liquidated damages.

## ***2.7 Disqualification of Bidder***

A bidder may be disqualified for such reasons as:

1. Having defaulted on a previous contract.
2. Having performed unsatisfactorily on a previous contract, including failure to fulfill the warranty obligations of a previous contract with the District.
3. Failure to include documentation for required proposal certifications
4. Failure to provide at least three client references for projects of a similar size and scope
5. Failure to comply with general proposal specifications as stated below.
6. Failure to meet the dates documented in the Project Timeline without an agree upon change order

## ***3 Project Timeline***

- 3/2 - RFP Posted
- 3/11 - 1 pm - Site Walk
- 4/3 - 3 pm - Proposal Submittal Deadline
- 4/7 - Expected Proposal Selection
- 4/30 - Project Commencement
  - a. 5/29 - Milestone 1: Backup data center online
  - b. 6/12 - Milestone 2: Primary data center cluster and failover working
  - c. 6/19 - Milestone 3: Firewall installation and configuration
  - d. 6/30 - Milestone 4: Remaining items completed
- 7/30 - Project Completion Date

## ***4 Project Executive Summary***

The IT Infrastructure portion of the project will need vendors to include server hardware, storage, networking, software, and services to build a backup data center and upgrade the existing primary data center. In a previous project, referred to as Phase 1, some server and networking equipment was installed that will need to be utilized in this project. The critical IT services that the District provides will need to have the ability to failover between the primary and secondary data centers.

Some of the critical IT services include:

- 1) Internet Access
- 2) Network and Wireless Connectivity
- 3) Phone Services
- 4) Paging

The solution vendors should allow all of these services, and any dependencies, to automatically failover and failback if a school loses access to the primary data center.

## ***5 Project Key Objectives***

- 1) Upgrade and modernize existing Ravenswood Data Center at the District Office.
- 2) Create a new backup Data Center at the Ravenswood Middle School.
- 3) Some recently purchased equipment from Phase 1 should be utilized for this new infrastructure.
- 4) All equipment and solutions should provide redundancy.
- 5) Primary and backup data center hardware should be identical.
- 6) Top of rack switches will be needed for management connectivity.
- 7) Wireless connectivity at remote sites should function if connectivity lost to the controller.
- 8) A new HA firewall solution will be setup in the primary data center.
- 9) A firewall should be setup in the backup data center to support a future internet connection.
- 10) Phone service should be migrated from PRI to cloud SIP service.
- 11) Phone servers should allow endpoints to failover to the secondary data center.
- 12) Vendors should be prepared to provide training for the new systems.
- 13) All solutions should provide support and servers for as long of terms as possible (7 years preferred).

## ***6 Description of Current Environment***

The below section describes the environment that will need to be utilized from the Phase 1 portion of the project. The details of the current solution and hardware part numbers are below:

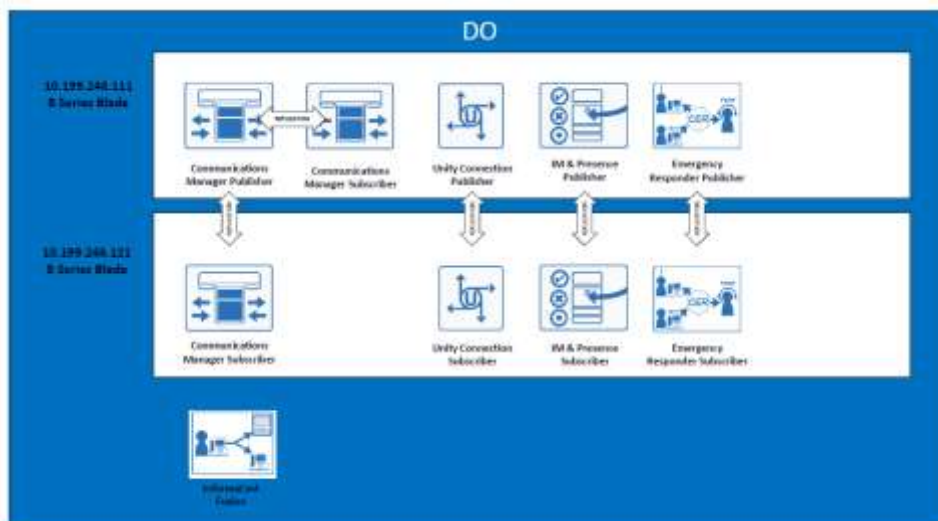
- 1) **Figure 1** shows District Office (DO) Data Center layout. Showing where current equipment is located.



**Figure 1: Data Center Server Rack Elevation**

- 2) Currently installed Two Cisco UCS 5108 with the following specs in each (middle of right two racks):
- Blade chassis with 1 used blade and 7 open blade slots
  - (4) 2500W power supplies with IEC C19
  - (2) N01-UAC1 – Single Phase AC Power module
  - (2) UCS 2208XP fabric extender modules
    - Used 4 total 10GBASE-CU SFP+ slots (12 still open)
  - The used blade slot has the following specs:
    - UCS B200 M5 w/2x5118, 6x16 GB RAM, VIC1340
    - Dual Xeon 5118 CPUs (12 core)
- 3) Connectivity of the UCS 5108 is to a set of UCS SP FI 6332 – 16UP
- Installed two licenses for 40 GbE and 8 licenses for 10 GbE (7 licenses in use)
  - Physical network connectivity shown in **Attachment 4**. If too small to read the Visio document will be posted to the RFP website shown in 2.4 #8.
- 4) The full list of physical servers, VM Host servers, and Virtual Machines in the RCSD environment are shown in **Attachment 5** for the list of servers.
- 5) Licensing
- (4 total licenses) VMware vSphere 6 Standard (1 CPU) with 5 year support.
  - Standalone VMW license for UCS Servers
- 6) Summary of Current Physical and Virtual Server Footprint
- Current B200 M5 blade houses VM's for the phone system (DO-SRV-ESXi-1-1/DO-SRV-ESXi-2-1)
  - District Office ESXi Servers (DO-SRV-ESX01/DO-SRV-ESX02)
  - VM's Running on DO ESXi Servers are shown in **Attachment 5**

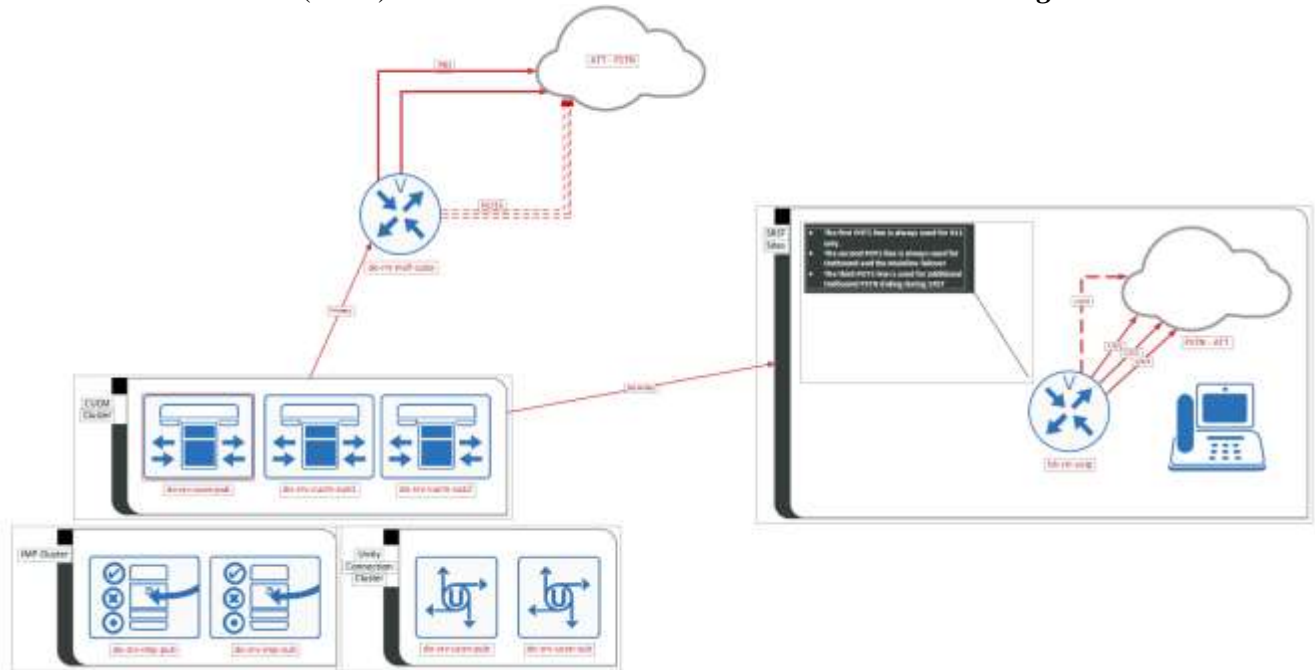
- d. Other VM's to be P2V'ed or moved to the new environment are shown in **Attachment 5 – Physical Servers.**
- 7) Wireless LAN Controller:
  - a. Current WLC is a CT5520 with 88 AP licenses
- 8) Existing Network description
  - a. Existing core switches are 1 Gbps connectivity
  - b. Replacement / upgrade of these will occur in Phase 5 (Summer of 2020)
- 9) Existing Firewall description
  - a. Fortigate 600D
    - i. Options for 1 Gbps and 10Gbps connectivity
- 10) Existing phone environment
  - a. RCSD currently has the following installed at the RCSD District Office.
    - i. Cisco CUBE ISR 4451 system installed at the RCSD District Office (DO)
    - ii. Two Cisco UCSB-5108-AC2 servers running the following applications:
      1. Cisco Unified Communications Manager
      2. Cisco IM and presence
      3. Cisco Unity Connection
      4. InformaCast Fusion Paging Server
      5. Emergency Responder
    - iii. The two Cisco servers are purpose for application redundancy. See **Figure 2** below.



**Figure 2: Application failover on each server**

- b. There are currently 550 DID numbers.
- c. Sample size call volume: 15,194 inbound/outbound calls were made January 20, 2020 to February 19, 2020.
- d. There are four active school sites for the 2020-2021 academic year with the following integrated services routers installed:
  - i. Ravenswood Middle School – Cisco 2851 ISR (Backup data center)
  - ii. Belle Haven Elementary – Cisco 2851 ISR
  - iii. Los Robles McNair – Cisco 2821 ISR
  - iv. Costano Elementary School – Cisco 2821 ISR

- e. There are three active school sites that will not be open for the 2020-2021 academic year with the follow integrated services routers installed:
  - i. Willow Oaks School – Cisco 2821 ISR
  - ii. Brentwood Academy – Cisco 2821 ISR
  - iii. Ravenswood Child Development Center – Cisco 2821 ISR
- f. Currently, Incoming/outgoing calls are routed through the Cisco unified border element (Cube). POTS lines are used for mainline failover. See **Figure 3** below.



**Figure 3: Call flow**

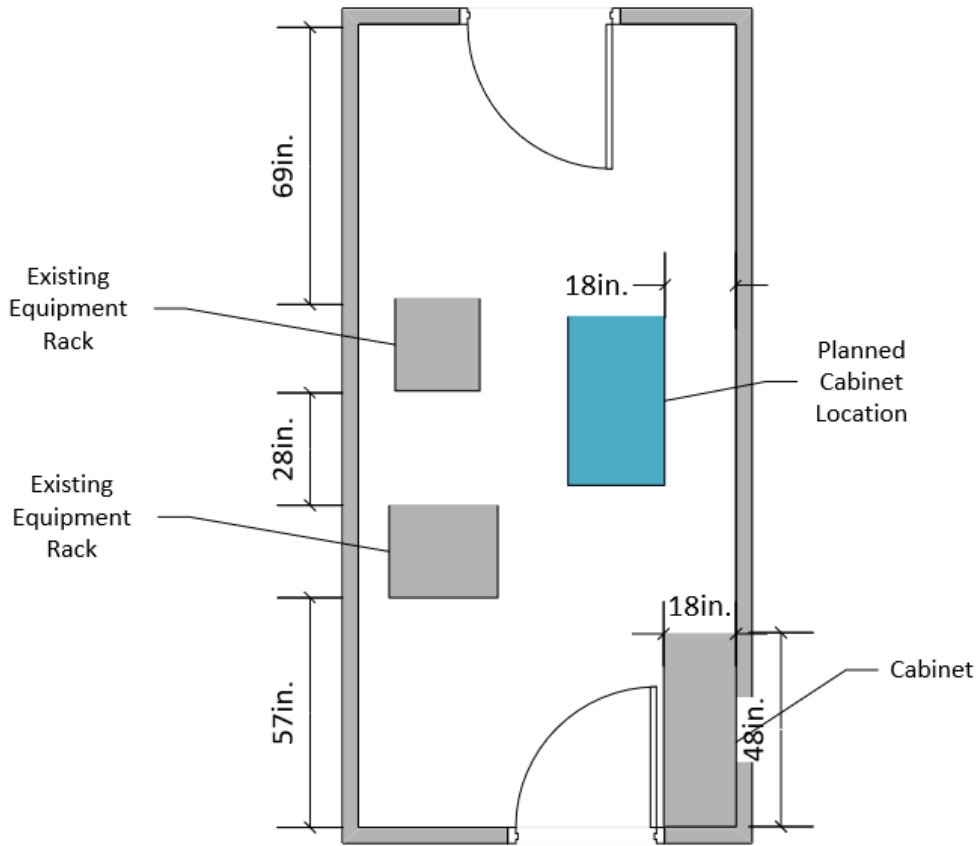
## 7 Project Scope of Work and Specifications

The below section describes the work that will be required for the solution.

1. All warranty, service, and support terms should be at least five years and seven year terms is preferred. Vendors will need to provide all warranty and support information at the close of the project.
2. Inventory and documentation will be needed. An inventory template will be provided listing out what information will be needed.

### 7.1 Primary Data Center – District Office

The primary data center will be temporarily setup at the District Office in a single 42U four post rack located in the MPOE. The rack location is shown in *Figure 4*. The rack will later be moved into the District Office data center once some remodeling of the data center can be completed. This work will be part of the Phase 5 project and not included in this RFP.



**Figure 4: MPOE Layout (Rack in Blue)**

Vendors responding to this bid should include a description of how the existing equipment will be moved into this new space. Cabling between the locations will be provided and power will be provided. The details of what is provided is listed in the Project Exclusions section. A rack elevation of where the equipment in the new rack is shown in **Figure 5**.



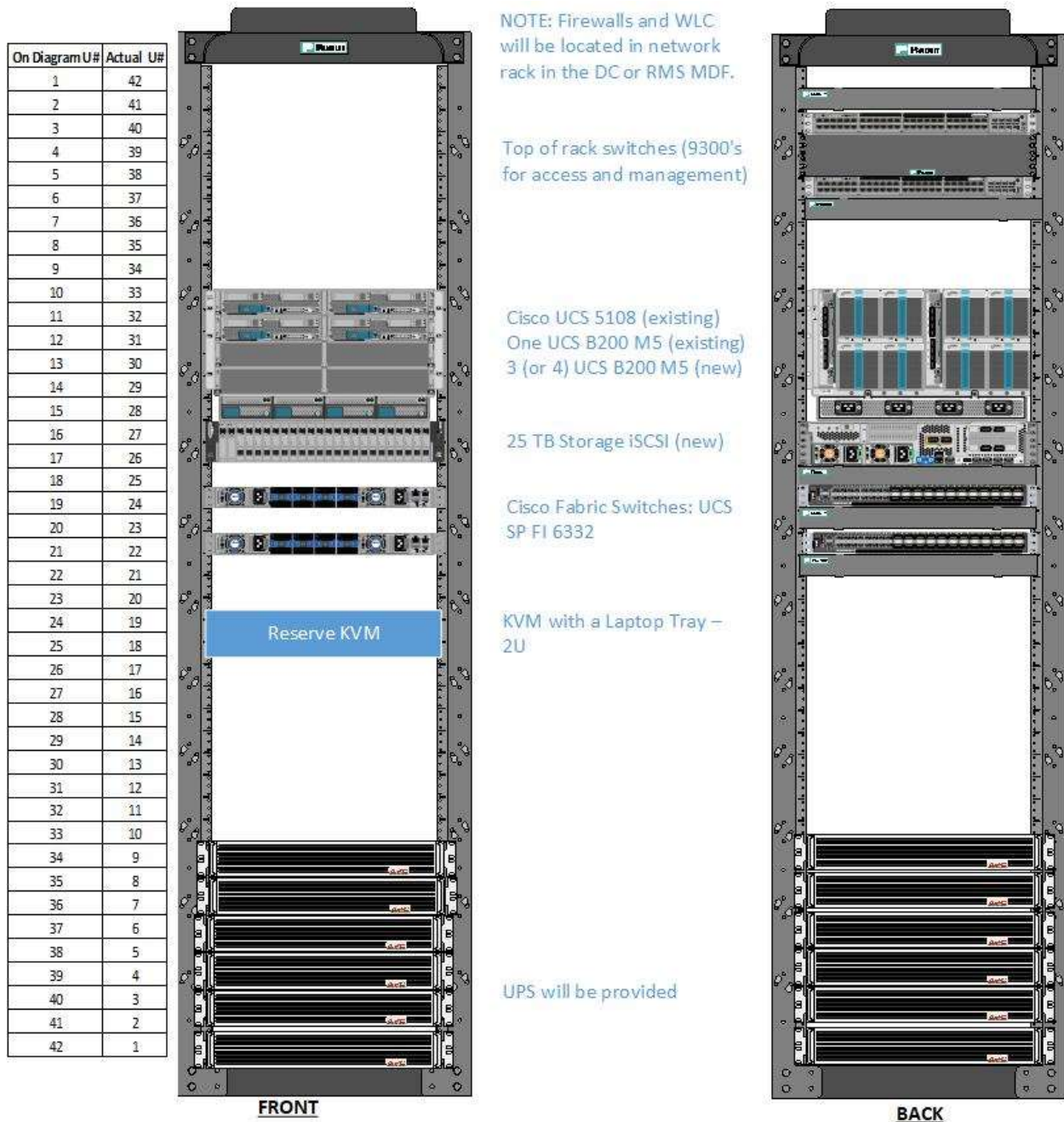


Figure 5: District Office Server Rack Layout

The virtual environment will need to be a cluster with data stores configured on a storage area network device provided by the vendor. The solution should include some assistance helping the district setup a method to move existing VMs to the new cluster. However, vendors will not need to move any virtual machines or perform any data migrations.

The district office high available firewalls will be installed in the network rack and not in the server rack.



## ***7.2 Secondary Data Center – Ravenswood Middle School***

The secondary data center is located in IDF 20 at the Ravenswood Middle School. One of the 5108's will be moved to the backup data center along with the new equipment needed to be identical to the primary data center. This includes the fabric switches, SAN, top of rack switches, and KVM with laptop tray.

The firewall will need to be setup and configuration in the MDF. Currently there is no ISP at this location. The ISP install is part of the #RCSD-P3ISP RFP. Vendors will need to preconfigure the rules, settings, and configurations in preparation for the ISP install, but the circuit install might be done after the completion of the project.

This proposal seeks for vendors to provide a redundancy solution for the Wireless LAN controller (5520) at the District Office. An ideal solution will provide a second Cisco 5520 unit at the Ravenswood Middle School site that WAPs across the district can register to in a failover event. Failover and failback should occur automatically.

## ***7.3 Server, Storage, and Networking Infrastructure***

The server infrastructure component will ideally have the same physical hardware in both the primary data center and the backup data center. During the Phase 1 portion of the project some hardware was purchased, which can be utilized for this purpose. The hardware available is documented above in the current environment. The plan will be to move the secondary Cisco 5108 chassis over to the RMS backup data center and setup failover from the primary data center to the secondary data center.

The recommended hardware for an ideal solution is listed below. Vendors should use this as a guide, but also be prepared to include any items such as hardware, licensing, or support that may be missing:

- 1) Recommended equipment needed for the primary data center
  - a. Utilize existing UCS 5108 and UCS B200 M5
  - b. Add three UCS B200 M5's to the Chassis to meet the following:
    - i. Dual XEON Gold CPUs with 12 cores each and a core frequency of at least 2.7GHz same or equivalent to UCS-CPU-I6226
    - ii. At least 256 GB of RAM (combining for a total of 768 GB RAM)
  - c. Network storage solution:
    - i. 25 TB of usable RAID 6 storage
    - ii. Ability to add more drives (12 open bays) or add another storage tray. Any additional bays should be licensed.
    - iii. Redundant controllers
    - iv. All flash storage solution required
    - v. 10 GbE (or faster) solution
    - vi. Redundant network connections to all hosts
    - vii. Solution to provide redundant iSCSI switches

- d. The primary data center location should reuse the existing fabric switches (UCS SP FI 6332 – 16UP)
  - i. Port licensing will need to be included if required
- e. Redundant top of rack switches for general connectivity and management same or equivalent to the C9300-48UN (no PoE required)
  - i. Stacked and LAG uplinks into the core with 1 Gbps copper.
  - ii. C9300-NM-8X network module for future 10 GbE uplinks to the core.
- f. Network KVM and Laptop tray compatible with the Cisco 5108 and B200 M5 servers.
- g. Edge firewall with HA at DC
  - i. HA Firewall solution
  - ii. 10GbE ports (optional fiber or copper)
  - iii. 2 Gbps throughput or higher
  - iv. Content Filtering services with over 5 years subscription
  - v. IDS/IPS Capabilities
- 2) Microsoft Licensing
  - a. Licenses for Windows Server Standard 2019 should be included to support the proposed infrastructure.
- 3) Recommended equipment needed for the backup data center
  - a. Utilize existing UCS 5108 and UCS B200 M5 (located at the district office and should be moved)
  - b. Network KVM and Laptop tray compatible with the Cisco 5108 and B200 M5 servers.
  - c. All hardware and licensing should be a mirror of the primary data center
  - d. Cisco 5520 WLC with support and licensing to be a failover for WAPs
  - e. The existing core infrastructure at RMS is already 10 GbE. The top of rack switches should include uplinks to the core switch. SFP modules will be needed.
  - f. Edge firewall
    - i. 10GbE ports for internal and external communication
    - ii. 1 Gbps throughput or higher
    - iii. Content Filtering
    - iv. IDS/IPS Capabilities
- 4) Cables and miscellaneous supplies
  - a. Vendors will be responsible for any cables and SFP modules needed to connect the equipment.

## ***7.4 Phone Server Specifications***

There are currently a two circuit PRI phone system in place at the district office running on a Cisco Unified Border Element ISR. There are two blade servers beneath that handling the management applications. We will need to move the services off PRI and install SIP service for the district. The solution will require the ability to failover to the secondary data center.

The primary path for inbound and outbound calls is the primary data center. The SIP service is to be delivered so that service can failover to the secondary when needed. The SIP trunks will service the entire district.

RCSD will maintain its existing dialing plan as well as direct inward dial (DID), emergency location identification numbers (ELIN) and locally assigned numbers. The vendor is responsible for all programming and configuration of the system to maintain the existing district standard. The service must properly route 911 emergency numbers to the appropriate public safety answering point (PSAP). The service must be able to properly map and provide specific room information during a 911 call.

Willow Oaks School, Brentwood Academy, and Ravenswood Child Development Center will not be open during the 2020-2021 academic year, but will continue to need active phone service. The proposed solution must account for this.

Phone server requirements:

- 1) A cloud hosted SIP service is needed to replace the existing PRI circuits.
- 2) The cloud SIP provider must have a primary and secondary internal network for redundancy.
- 3) There are currently two Cisco UCSB-5108-AC2 servers installed the district office. Vendor will be responsible for all equipment needed for relocation and configuration of one of these servers at the backup data center for seamless failover/failback.
- 4) An integrated services router is needed at each school site to support the service. The existing Cisco 2821/2851 ISRs at each school site can be reused if possible.
  - a. The ISR at each school site will need to have 4 POTS lines for emergency calls.

## ***7.5 School Site Servers***

Each school site (three schools total) will need a new server that will be a single VMware host. The server will be delivered to the technology team at the district office. The server will be configured with the RCSD technology team to host a few VMs for the purpose of providing AD Services, Print Services, DNS, File/DFS, and FOG for imaging computers. This server will only be used in the event that the school site lose access to either data center. All VMs will be created and installed by the District.

School Site Server Specifications:

1. VMware vSphere Enterprise on the latest release version with 5 year licensing.
2. At least two 10 GbE connections and two 1 GbE connections
  - a. Vendor to provide the SFP modules if the solution requires it.
3. 64GB RAM
4. 2TB Flash storage with additional drive bay's available for expansion
5. CPU with at least 12 cores same or equivalent to Xeon Gold 6226.
6. Enterprise OOB management

## ***7.6 Virtual Environment Specifications***

The below lists key points that solutions should include for the virtual environment. The District requires a solution running on VMware technologies.

- 1) Virtual hypervisor required is VMware vSphere Enterprise and additional licensing will be needed for both the Primary and Backup Data Centers.
- 2) All nodes on the 5108 should be setup as a cluster.
- 3) The pre-existing node will need to be added to the cluster.
- 4) A solution should not include any single point of failure.

## ***7.7 Device Endpoint Management and Mobile Device Management***

The District is also looking for vendors to recommend a solution for Device Endpoint Management (DEM) and Mobile Device Management (MDM). The solution should either have perpetual licensing or should be able to pay in multi-year terms of over 5 years.

- 1) Breakdown of the endpoints:
  - a. Windows machines: 1,100
  - b. Chromebooks: 3,200
  - c. Apple Devices: 320
  - d. Apple iOS Devices: 600
- 2) Features needed for MDM/DEM
  - a. Ability to have security policy to control passwords, screen locking, and other common security settings.
  - b. Remotely wipe and lock the device.
  - c. Track the device location.
  - d. Deploy and restrict Apps on devices.
  - e. Threat detection and mitigation features.
- 3) Including licensing and support for over 5 years

## ***7.8 Disaster Recovery and Backups***

The below lists key points that solutions should include for the backups and disaster recovery.

- 1) Software and licensing will be needed for a backup solution.
- 2) The District has an existing 25 TB SAN that can be utilized for backup storage.
- 3) Vendors will need to provide a solution for getting a backup system running utilizing the pre-existing SAN.
- 4) The backup data center should be configured as a disaster recovery site. A Disaster Recovery Plan should be included in the proposal.
- 5) The District requires a Disaster Recovery Plan that utilizes VMware solutions.
- 6) A test of the failover and failback should be included in all proposals.

## ***7.9 Monitoring and Alerting***

Vendor should be prepared to assist the District with setting up monitoring for the firewall, UCS, VMware, and all network devices in the primary and secondary data center. The monitoring platform is Zenoss and the following will be needed at a minimum:

- 1) Monitoring:
  - a. Up/Down ping sensors to all interfaces and endpoints with IPs.

- b. Netflow on the firewall external interfaces.
  - c. SNMP traffic monitoring for all active ports on the fabric switches.
- 2) Alerting thresholds
  - a. Any devices with a down status.
  - b. SNMP traffic thresholds per the Districts specifications.

## ***7.10 Training***

Vendors should be prepared to provide a training plan and outline for the following topics at a minimum:

- 1) Cisco UCS management
- 2) VMware infrastructure and management
- 3) Firewall solution training
- 4) MDM and Endpoint Management
- 5) Disaster Recovery and Failover

## ***7.11 Project Exclusions***

The following is what the District will be providing to vendors during the install of the project.

- 1) One 42 U – 7' rack with ladder rack installed
- 2) Two Vertical PDU's (APC - AP8870) with the following types of connectors:
  - a. (32) 5-20R plugs
  - b. (24) C13 plugs
  - c. (4) C19 plugs
- 3) The vertical PDU's will be connected independently to two UPS's and provide a least 30 minutes of runtime.
- 4) The UPS's will connect to separate 30 amp circuits.
- 5) The Primary Data Center site will have a backup power generator located in the existing data center and the MPOE.
- 6) Provide and setup the backup storage solution.
- 7) Configure the backups for each server with the vendor's instructions.
- 8) A new internet connection at RMS, which may be installed at a later date.
- 9) Cabling between the MPOE and Data Center at the district office, but the solution should provide all the patch cables and SFP modules needed for both the fiber switches and top of rack switches.
- 10) The District is will not need an ISR router at the district office data center.

## ***8 Equipment Itemization Checklist***

- 1. Vendors should include a list of billable materials.
- 2. Vendor can use the below tables to verify all items are included.
- 3. Vendor should include a breakout of labor costs.
- 4. Taxes need to be included.

### ***8.1 Server, Storage, and Networking Components***

Equipment and labor checklist	

### ***8.2 Phone System Components***

Equipment and labor checklist	

### ***8.3 Licensing Software and Services***

Equipment and labor checklist	


#### ***8.4 Status Meetings and Project Updates***

Vendors will be required to keep the District updated on the progress of work with status meetings and email progress updates. One hour status meetings will be scheduled each week typically at the beginning of the week. Vendor shall be prepared to join these meetings. These meetings will be scheduled based on the vendor's availability. In addition, all subcontractors actively working on tasks shall be required to join the calls and provide regular status updates to the work being performed. At the end of the week vendors should email a high level status update on tasks completed during the week.

### ***9 Contract***

A sample contract is shown in the section **Attachment 1: Contract**. All vendors should be ready to agree to the terms of this contract. Changes to the contract can be requested in the RFP response.

### ***10 Payment***

The District agrees to pay the Contractor in current funds for the performance of the Agreement the amount proposed in this bid, including approved change orders, and to make payments on account thereof as follows:

1. 5/29 - Milestone 1: 25% - Backup data center online
2. 6/12 - Milestone 2: 20% - Primary data center cluster and failover working
3. 6/19 - Milestone 3: 15% - Firewall installation and configuration
4. 6/30 - Milestone 4: 20% - Remaining items completed
5. 7/30 – Final Completion - 20% - All remaining loose ends completed

All equipment will be paid once receipt of a tracking number and a list of the inventory is provided to the District. The district can approve payment for equipment up front, but this cannot exceed 50% of the value documented in the Bill of Materials (BOM).

### ***11 Performance Billing***

This project will require labor to be billed based on progress of completion. When submitting invoices, vendors should document to which milestone the cost of labor applies.

### ***12 Invoice Submission Process***

All invoices will be sent to the following email address: [rcsd-phase3@ravenswoodschools.org](mailto:rcsd-phase3@ravenswoodschools.org). To ensure timely turnaround please be sure to have the information below included and the form attached. Please see the form in the section **Attachment 3: Invoice Form**.

All invoices must include the following:

- 1) Project ID #

- 2) Project Section or Milestone # (see timeline)
- 3) PO#
- 4) Amount invoiced
- 5) Work performed or BOM
- 6) Tracking number of equipment ordered (optional)
- 7) Amount remaining to be invoiced

### ***13 Equipment Ordering***

Equipment should be ordered immediately upon acceptance of the project so that any delay in ordering or shipping can be scheduled. If delays in ordering or delivery of equipment occur, the district must be notified immediately. If the delay causes a timeline change, submit a Change Order request using the below process.

### ***14 Change Order Process***

Any changes to materials, services, or milestone dates after contract award shall be documented in writing using the form shown in **Attachment 2: Change Order Form** and shall be considered valid when approved in writing by the District. The form should be filled out and emailed to: [rcsd-phase3@ravenswoodschools.org](mailto:rcsd-phase3@ravenswoodschools.org). Key information that needs to be included:

- 1) Nature of the change
- 2) Name of the person and company requesting the change
- 3) What items or section in the SoW will be changed
- 4) Costs associated with the change
- 5) Impact on the total cost of the project
- 6) Estimated impact on the timeline of project

### ***15 Basis of Award***

1. The District will not award this project based solely on lowest bid, but rather lowest qualified bidder and the following weighted criteria will be taken into account:
 

a. Price of the goods and services	40%
b. Prior melinewith vendor and references	15%
c. Vendor Project Technical Design	30%
d. Vendor Local Support	10%
e. Environmental	5%
2. The Ravenswood City Elementary School District reserves the right to reject any and all quotations.



## ***16 Appendix A: Submittal Form***

**COMPANY NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**PHONE #:** \_\_\_\_\_ **FAX #:** \_\_\_\_\_

**AUTHORIZED AGENT SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

### **Reference 1:**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE #: \_\_\_\_\_

### **Reference 2:**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE #: \_\_\_\_\_

### **Reference 3:**

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE #: \_\_\_\_\_

### **Submittal**

1. All proposals must be submitted with 1 original hard copy, and 5 stapled or bound copies in 8-1/2" x 11" binders with any supporting documentation.
2. In addition to the aforementioned paper copies, please provide an electronic (preferably PDF) copy of the proposal via USB flash or e-mail to [rfps@ravenswoodschools.org](mailto:rfps@ravenswoodschools.org).
3. Responses must be submitted via mail or delivered by **April 3, 2020 by 3:00 pm** to:

**ATTN: Solomon Hill  
Business Office  
Ravenswood City School District  
2120 Euclid Avenue  
East Palo Alto, CA 94303**

***17 Attachments***  
***17.1 Contract***

## ***17.2 Change Order***

### ***17.3 Invoice Submittal***