Office of Electronic Health Record
MODERNIZATION

OEHRM Site Infrastructure and End User Device (EUD) Requirements

April 15, 2021 | Version 2.0

VA | U.S. Department of Veterans Affairs

Transforming Health Care for Veterans, Revolutionizing Health Care for All

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1 Overview

The Office of Electronic Health Record Modernization (OEHRM) Program is a large-scale, commercial Electronic Health Record (EHR) implementation. The Department of Veterans Affairs (VA) must ensure that the new EHR is supported by both proper Information Technology (IT) infrastructure and physical (i.e., facilities) infrastructure. This document is intended to outline the current set of OEHRM requirements. Specific items evaluated within this document are: Wide Area Networking (WAN), Local Area Networking (LAN), Wireless LAN (WLAN), Power, Heating, Ventilation, and Air Conditioning (HVAC), End User Devices (EUD), Networking and Voice Over Internet Protocol (VOIP).

Note: Due to the unprecedented impact of COVID-19 on the OEHRM Program schedule special accommodations have been made to adjust the infrastructure readiness schedule as outlined in the attached memo 'OEHRM COVID-19 Revised Deployment Schedule - Infrastructure Readiness Strategy (draft)'.

2 Requirements

Sections 2.1 through 2.10 outline the initial set of requirements for support to OEHRM deployment at Initial Operating Capabilities (IOC) and subsequent wave deployments. In combination with other established requirements documents and plans, these high-level requirements need to be communicated across all stakeholders.

This document provides requirements in addition to Department of Veterans Affairs (VA) existing design guides and enterprise IT requirements. Additional requirements will supplement specific areas, such as wireless networking, that may require further details. Other site-specific requirements may be issued that develop from evaluation of individual locations. This document will be updated annually over the 10-year deployment schedule to incorporate both technology improvements and lessons learned from deployments. In any area of conflict, the more stringent of the two standards will apply. In general, all included requirements apply to VA Medical Centers (VAMC). Other site type requirements are outlined in Appendix C.

2.1 Wide Area Networking (WAN)

2.1.1 WAN Requirements

2.1.1.1 VA Enterprise Data Centers

A. VA Enterprise Cloud (VAEC) service locations, including Austin Information Technology Center (AITC) and Philadelphia Information Technology Center (PITC), shall have, at minimum, Dual 10 Gbps circuit with 1 Gbps committed information rate (CIR) minimum from the facility to the Cerner Data Center (2 x 1 Gbps).
    1. Moving forward, expected utilization of Cerner EHRM plus current circuit utilization will be averaged to determine required CIR to meet 50% maximum utilization threshold.

2.1.1.2 VAMC Sites

A. Facility shall have, at minimum, dual 1 Gigabits per second (Gbps) interface available with ≥ 500 Megabits per second (Mbps) CIR (2 x 500 Mbps) circuits or bandwidth allocation of peak usage plus 50%, whichever is greater for IOC, Wave 1, 2, and 3.
    1. After that, the Office of Information & Technology (OIT), OEHRM, and Cerner will reassess for these sites and the enterprise; Moving forward, expected utilization of Cerner EHRM plus current circuit utilization will be averaged to determine required CIR to meet 50% maximum utilization threshold.
B. Facility shall have end-to-end, geographically diverse and carrier-diverse circuits with minimum fiber pathways separation: service provider public rights-of-way 75 ft, Egress 20 ft, and cabinet 10 ft. See below Figure 1.

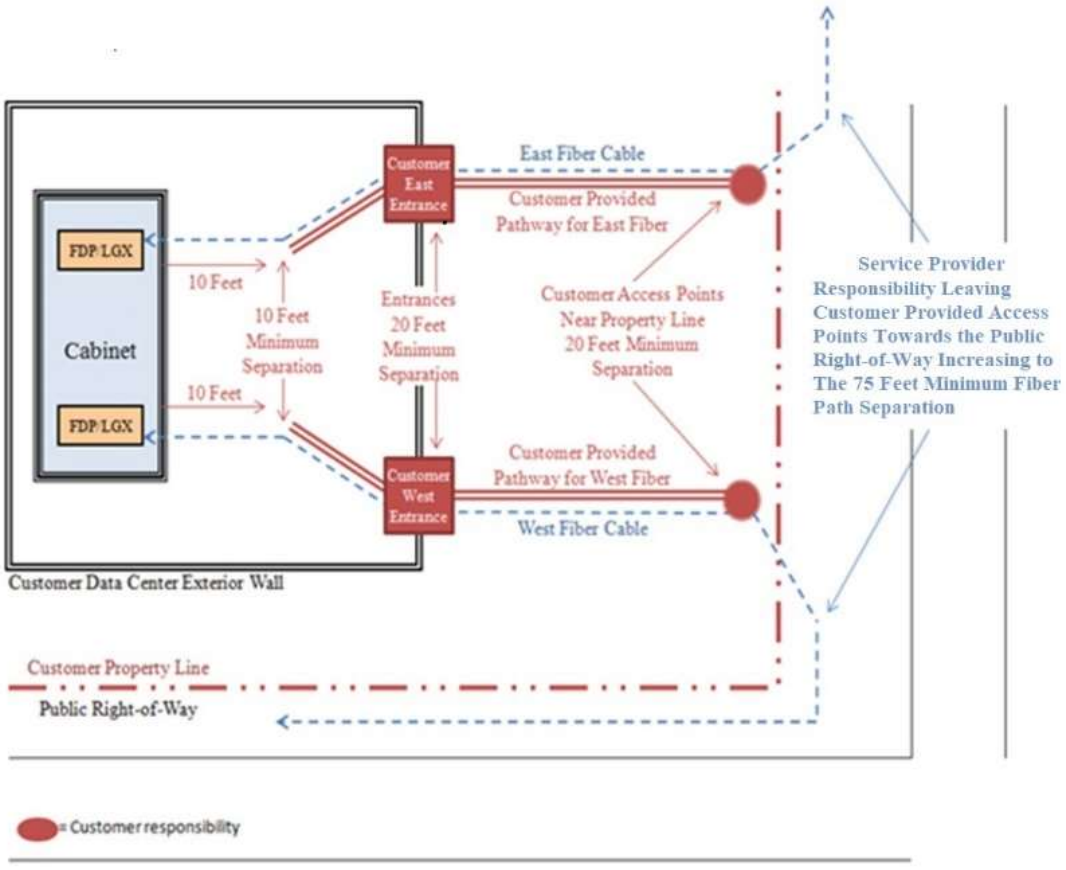

Figure 1: Minimum Geographic Diversity Circuits with Entry Points

1. The preferred entry points 180° apart, or 90° acceptable (protected preferred, unprotected acceptable), with the caveat of Veterans Health Administration (VHA) providing space; all variances to be approved by OEHRM Chief Technology & Integration Officer. See below Figure 2.
    i. Carrier provided route map shall be used to validate route diversity

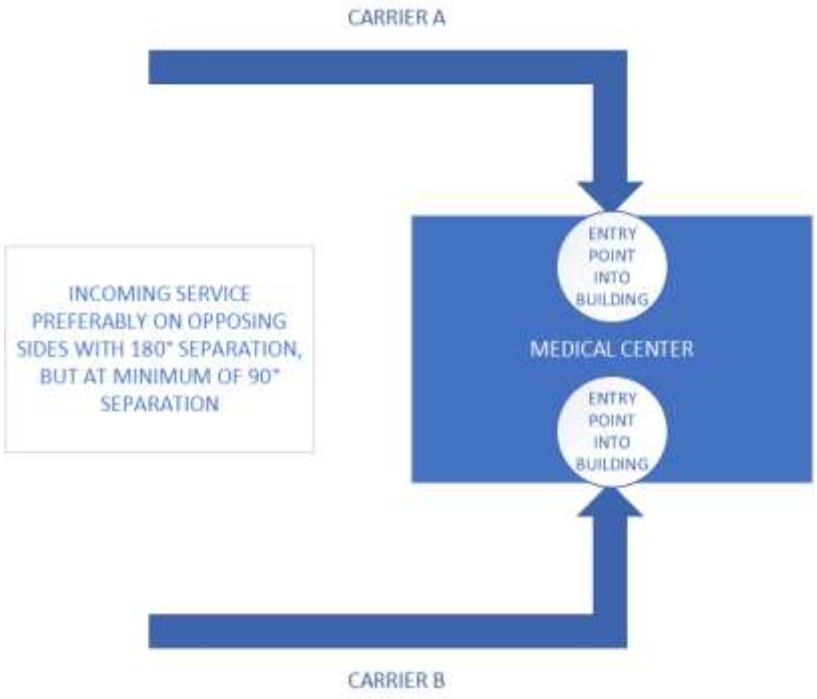

Figure 2: Preferred Geographic Diversity Circuits with Entry Points

2.1.1.3 Other Site Types as Required

A. Facility shall have, at minimum, a single 100 Mbps (1 x 100 Mbps) circuit with ≥ 50 Mbps CIR or bandwidth allocation of peak usage plus 50%, whichever is greater for IOC, Wave A, B, C and D
    1. After that OIT, OEHRM, and Cerner will reassess for these sites and the enterprise; Moving forward, expected utilization of Cerner EHRM plus current circuit utilization will be averaged to determine required CIR to meet 50% maximum utilization threshold.
        i. Following Go-Live, OIT, OEHRM, and Cerner will assess circuit utilization and adjust CIR accordingly.

2.1.2 WAN Implementation Specifications and Considerations

A. Details on Quality of Service (QoS) can be reference in the existing VA document: (ref. Veterans Affairs Enterprise Infrastructure Standard: Quality of Service (QoS)).
B. Active-Active High Availability (HA) Redundancy in accordance with facility type per the VA Enterprise Local Area Network (LAN) (ref. Technical Architecture Standard Version 2.1, February 13, 2019).
C. Encryption Protocol: OEHRM requires an end-to-end WAN encryption solution such that traffic from VA locations can go directly to Cerner enclave without having the encryption broken and re-encrypted.
D. New Campus Support Centers (CSC) construction, modification and expansion shall conform to TIA 942 Rating 3 (ref. Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces, Version 3.0, August 21, 2020).

E. Performance Service Level Agreements (SLA) 99.99% (per GSA Enterprise Infrastructure Solutions (EIS) contract SLA).
F. End-to-End latency from the user desktop to Cerner Data Center of equal to or less than 90ms for Citrix connection.

2.2 Local Area Networking (LAN)

A. Horizontal cabling shall be Category 6 (CAT6) or higher (ref. ANSI/TIA-1179 Healthcare Facility Telecommunications Infrastructure).
    1. No immediate action required for existing Category 5e (CAT5e) cabling. Must be replaced prior to OEHRM project close per Electronic Health Record Modernization Cabling Infrastructure (VIEWS 01426385) Memorandum - September 23, 2019.
B. Telecommunications outlets/connectors and the horizontal cross-connects (patch panels) shall be of equal or greater Category to connected horizontal cable.
C. New installations shall be compliant with ANSI/NECA/BICSI 568, Standard for Installing Commercial Building Telecommunications Cabling and ANSI/TIA-1179-A Healthcare Facility Telecommunications requiring Category 6A (CAT6A) cable.
    1. New cable installations additionally shall be compliant with TIA 568.2-D, TIA TSB-184-A, and NFPA-70 Section 725.144 to prevent Power Over Ethernet (PoE) heat accumulation.
        i. Alternatively, new unshielded twisted pair (UTP) cabling shall carry a UL listed "LP" (Limited Power) rating.
D. All patch cables shall be Category 6A for copper, OM4 for multi-mode fiber or OS2 level for single mode fiber.
E. Cable management shall be implemented for all patch cables in accordance with VA OIT Infrastructure Standards for Telecommunications Spaces ensuring proper bend radius, bundling, airflow, support and labeling.
F. Gigabit Ethernet (GbE) connectivity to desktops, and other EUDs.
G. End-to-End latency from the user desktop to Cerner Data Center of equal to or less than 90ms for Citrix connection.
H. Available data drops and network ports in Telecommunication Rooms (TR) to support addition of required network printers and medical devices per Cerner Current State Review (CSR)[1].
I. HA Redundancy in accordance with facility type per the VA Enterprise Local Area Network (LAN) (ref. Technical Architecture Standard Version 2.1, February 13, 2019).
J. Utilize high-performance network switches with low latency and minimal packet loss for appropriate infrastructure job function and growth per VA business growth forecast.
    1. No site shall go-live with any switch that is within one (1) year of Last Day of Support (LDoS) or End of Software Maintenance (EoSW).
    2. Switches that are “stacked” or daisy-chained together sharing an uplink to the core shall have an interconnection speed of 10 Gigabits per second (Gbps) or greater.

[1] Requirement contingent on timely delivery of the CSR as noted in the OEHRM Infrastructure Readiness Playbook

K. Copper structured cabling shall be certified as meeting or exceeding TIA-EIA-568.1-D (max fixed cable length 90M/295Ft) independent of media type.
L. Inside Plant (ISP) Fiber (Horizontal and First Level Backbone).
    1. Performance Category: OM4 up to 400M (1312 ft.) in length; OM3 up to 300M (984 ft.) in length will be grandfathered.
        i. Performance Specifications: Laser Optimized 50/125 µm fibers with effective modal bandwidth of at least 4,700 MHz·km at 850 nm.
        ii. Mode: Multimode.
        iii. Smoke Rating.
            a. Communications Riser (CMR) rated for vertical runs through floors
            b. Communications Plenum (CMP) rated for plenum spaces
            c. Communications minimum (CM) jacket rating suitable when riser or plenum are not required
            d. Or as per Authority Having Jurisdiction (AHJ) requirement
        iv. Jacket Color: Aqua.
        v. Termination Method: Pre-terminated (Long run cables and campus network cables will have terminations completed in the field, as required).
        vi. Media Connector: Multi-fiber Push On (MPO).
        vii. Strand Count: 12 or 24 per assembly.
        viii. Bundling: Dielectric, Tight Buffered.
        ix. Polarity: Straight (or Type A-Key up one end & key down on the other) for LC cassette breakout.
    2. Performance Category: OS1 for distances greater than 400M when used as an alternative to OM4, 300M for OM3.
        i. Performance Specifications: Laser Optimized 9/125 µm with effective modal bandwidth of at least 850 MHz·km at 1310 nm.
        ii. Mode: Singlemode.
        iii. Combustion Rating.
            a. Riser cable for vertical runs through floors
            b. Plenum rated for plenum spaces
            c. Tight-buffered
            d. Or as per AHJ requirement
        iv. Jacket Color: Yellow.
        v. Termination Method: Factory pre-terminated (Long run cables and campus network cables will have terminations completed in the field, as required).
        vi. Media Connector: MPO.
        vii. Strand Count: 12 or 24 per assembly.
        viii. Bundling Dielectric: Tight Buffered.
        ix. Polarity: Straight (or Type A-Key up one end & key down on the other) for LC cassette breakout.
    3. For new construction, intrabuilding connectivity needs to be 24 strand fiber on both the A and B sides diversely routed to each TR in the building.
M. Outside Plant (OSP) Fiber (Backbone).

1. Performance Category: OS2.
    i. Performance Specifications: Laser Optimized 9/125 µm with effective modal bandwidth of at least 850 MHz·km at 1310 nm.
    ii. Mode: Singlemode (SM).
    iii. Combustion Rating.
        a. Riser cable for vertical runs through floors
        b. Plenum rated for plenum spaces
        c. Loose-tube gel-filled OS2 riser rated for OSP indoor/outdoor transition
        d. Or as per AHJ requirement
    iv. Jacket Color: Yellow.
    v. Termination Method: Factory pre-terminated (Long run cables and campus network cables will have terminations completed in the field, as required).
    vi. Media Connector: MPO.
    vii. Strand Count: 12 or 24 per assembly.
    viii. Bundling Dielectric: Loose-tube gel-filled.
    ix. Polarity: Straight (or Type A-Key up one end & key down on the other) for LC cassette breakout.
    x. For new construction, interbuilding connectivity needs to be in 24 strand fiber groups on both the A and B sides diversely routed to each TR in the building.
        a. Twenty percent of new fiber shall remain uncommitted to support future need, break/fix and equipment lifecycle management.

N. All Campus Area Network (CAN) fiber connections shall be home run back to the main distribution area/fiber distribution panel (FDP).
    1. Fiber connections at building shall not be run through additional buildings unless pass-through; do not use daisy-chained segments.

O. CAN shall have minimum of 10 Gbps LAN links between buildings NOTE: Not required for Go Live at IOC facilities.

P. Connections for Core, Distribution and uplink from Access Switch shall provide a minimum of 10 Gigabit Ethernet (GbE) fiber or better; NOTE: Not required for Go Live at IOC facilities.

Q. New CSC construction, modification and expansion shall conform to TIA 942 Rating 3 (ref. Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces, Version 3.0, August 21, 2020).

R. Network Infrastructure devices supported by Uninterruptible Power Supply (UPS) and Emergency Power / Backup Generator.

S. Performance SLA 99.9% excluding scheduled downtime.

2.3 Wireless LAN (WLAN) Design Requirements

Requirements in this section serve to clarify and augment previously signed OEHRM program requirements (ref. Wireless Network Infrastructure Systems Requirements v1.1) In the event there is a conflict the previously signed requirements take precedent.

A. 802.11ac & when commercially available next-generation 802.11ax; 802.11g is acceptable to support legacy devices; 802.11b shall be disabled on Access Points (AP).
B. Primary coverage signal strength shall be at least -65 dBm in all patient care areas and Signal-to-Noise Ratio (SNR) minimum of 25 dB.
C. Secondary signal strength shall be at least -67 dBm in all patient care areas.
D. APs shall be configured with 802.11k/v/r to facilitate roaming.
E. End-to-End latency from a connected device to Cerner Data Center of equal to or less than 90ms for Citrix connection.
F. All wireless network infrastructure shall be validated as Federal Information Processing Standards (FIPS 140-2) compliant.
G. APs shall be assigned frequency bands such that adjacent and co-channel interference is minimized.
H. PoE, 802.3at PoE+ (30W per channel at PoE source, 25.5W at PoE device).
I. CAT6A cable to AP compliant with VA Telecommunications and Special Telecommunications Systems Design Manual and TIA TBS-162-A, Telecommunication Cabling Guidelines for Wireless Access Points.

2.4 Power and Space Design Requirements

Deployment includes a Joint Security Architecture (JSA) security stack (also known as Network Protection Suite (NPS)) and a Forward Deployed Server (FDS) equipment element in the overall infrastructure requirement. "Stack" is defined as each grouping of server and network equipment. FDS equipment is provided by Cerner. JSA security stack is provided by OIT. The Enterprise Supply Chain Modernization (ESCM) program is enterprise-wide deployment of the Defense Medical Logistics Standard Support (DMLSS) supply chain management solution, and its successor, LogiCole. DMLSS and LogiCole are dependent on the Joint Security Architecture that is installed in sequence with the Cerner wave schedule. DMLSS and LogiCole have power requirements that should be considered during scope development of VHA EHRM physical infrastructure upgrades Server equipment is provided by the DMLSS program office.

A. VAMC JSA Security Stack estimated power and space requirements are based on equipment provided to Seattle IOC site as follows:

Expected Continuous Power Consumption - 208VAC, 11.5A, 2,395W[2]
Maximum Utilization Power Consumption - 208VAC, 15.3A, 3,185W

1. Rack space of 11U, contiguous shall be provided in the Main Distribution Area (MDA), near core switches or with the VA LAN Security stack.
    i. WAN demarc must be extended to installation location if the JSA is not co-located.
    ii. Fiber cabling shall be provided between the JSA, Core switches and FDSS if not co-located.

[2] Power estimates allow 20% additional capacity to allow for lifecycle management including supporting infrastructure, such as network switches

2. Power supporting the JSA Security Stack equipment shall be supplied in accordance with sheet 19 or 20 of the OIT Design Guide templates dated 27 December 2018.
    i. A/B redundant 3-phase 208V Rack Power Distribution Units (PDU) providing 7 A-branch and 7 B-branch IEC type C-13 outlets.
    ii. A and B branch shall be attached to diverse data center UPSs, each capable of supporting Expected Continuous Power Consumption in 2.4 A.
3. Request for variance shall follow the exemption process outlined in Appendix D: JSA and FDS Power, Space and HVAC Requirement Exemption Process.

B. FDS equipment estimated power and space requirements are based on Seattle IOC deployment as follows:

Expected Power Consumption - 208VAC, 33.5A, 6,876W[2]
Maximum Utilization Power Consumption - 208VAC, 47.5A, 9,880W

1. Site shall provide:
    i. Space for 3, 7.5 ft. maximum height, 24 in wide, up to 48 inches deep cabinets.
        a. At least 2 cabinet spaces shall be located side by side
        b. Cabinets shall be secured to floor at facilities where seismic bracing is required (Appendix E: Facilities Requiring Seismic Mitigation in Cabinets)
        c. Cable pathway shall be supplied between JSA, FDS and Core switches to support interconnection in accordance with CFM Telecommunications and Special Telecommunications Systems Design Manual
        d. Facilities using high density containment designs dependent upon uniform cabinet styles shall provide or reserve site-compatible empty cabinets sufficient for FDS deployment
    ii. Zone PDUs shall be provided to distribute power to cabinet PDUs, one per two cabinets (ref. ref. Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces, Version 3.0, August 21, 2020 Appendix B).
        a. Zone PDU shall be configured with dual L21-30P connectors
        b. Zone PDU shall provide at least 4 L21-20R outlets to support cabinet PDUs
        c. Zone PDUs shall receive power from L21-30R outlets located within 6 feet of the base of the cabinet
        d. CSCs with busway power distribution systems are exempt from this requirement
    iii. Power distribution configuration shall provide paths to diverse data center UPSs, each capable of supporting the Expected Continuous Power Consumption of 3.5 kW per cabinet.
    iv. Request for variance shall follow the exemption process outlined in Appendix D: JSA and FDS Power, Space and HVAC Requirement Exemption Process.
2. Cerner shall provide up to 3 cabinets housing the FDS equipment.

i. Estimates of Expected Power Consumption and Maximum Utilization Power Consumption shall be calculated per cabinet and provided to OEHRM 13 months prior to Go-Live.
ii. The FDS equipment shall be installed with systems mounted in agreed upon locations such that cabinets from different facilities have identical layouts.
    a. 2U of contiguous space at the base of Rack 1 (and Rack 3 if necessary) shall be reserved for installation of the Zone PDU
iii. Equipment shall be labeled with environment type and network name.
iv. Cabinets shall be used exclusively to support EHRM equipment.
v. Installed equipment will not exceed total Expected Power Consumption of 3.5 kW per cabinet.
vi. Each cabinet shall provide redundant cabinet PDUs.
    a. Cabinet PDUs shall be configured with L21-20P connectors, consistent with the power distribution topology in the Infrastructure Standards for Telecommunications Spaces v3.0
    b. Cabinet mounted equipment shall have redundant power supplies that shall be connected to redundant cabinet PDUs
vii. Provided cabinets shall be at maximum 45RU, 24" nominal width, no more than 48” deep with perforated front and rear door.
    a. Facilities using high density containment designs dependent upon uniform cabinet styles shall provide or reserve site-compatible empty cabinets sufficient for FDS deployment
viii. Blanking panels shall be installed in all open rack units.
ix. Cabinets shall be equipped with seismic mitigation meeting GR-63-CORE seismic Zone 4 standard when deployed in facilities categorized as Critical and earthquake risk is confirmed by the VA Seismic Safety Coordinator (Veterans Affairs OCFM H-18-8 Seismic Design Requirements, November 1, 2019). Note: All qualifying facilities are listed in Appendix E: Facilities Requiring Seismic Mitigation in Cabinets.

C. UPS Functional Requirements
1. All UPS units are to be functional and adequate providing 10-minute run-time (ref. Physical Security and Resiliency Design Manual OCTOBER 1, 2020, Revised January 1, 2021, Infrastructure Standard for Telecommunications Spaces Version 3.0 August 21, 2020).
    i. Runtime shall be calculated based on 100% of rated UPS Output (kW).
    ii. Actual load on the UPS shall be limited to 85% of load capacity.
2. All components within one (1) year of end of life by Facility Go-Live are to be replaced with new.
    i. End of Life for stand-alone units is six (6) years from date placed into service.
    ii. End of Life for UPS batteries is three (3) years from date replaced.
3. All equipment in TR shall be connected to the critical electrical branch and Emergency Power / Backup Generator, where required in Mission Critical facilities, in accordance

with VHA Directive 1028 FACILITY ELECTRICAL POWER SYSTEMS, dated February 24, 2020.

4. UPS shall support both monitoring and remote management to include:
    i. Full compliance with RFC-1628 - UPS Management Information Base.
    ii. Support for Simple Network Management Protocol (SNMP) v3.0, BACnet and Modbus protocols.
5. Be connected to a monitoring system by ethernet (wired or wireless) connection or serial interface (RS-232 or RS-485).
6. UPS shall be managed and report the following information to a management system:
    i. Overload (critical).
    ii. Battery temp (critical).
    iii. Low Battery.
    iv. Battery Failure (critical.)
    v. Other Critical Conditions as available (fan failure, internal fault, bypass).

D. All Network Switch, JSA and FDS equipment shall be supported by adequate UPS power whether located in Data Center, MDA or TR.

E. All grounding shall comply with ANSI/NECA/BICSI 607-C, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises, November 2015. Bonding for telecommunications equipment must be performed per manufacturer's specifications. Upstream bonding requirements to the SBB or PBB must use two lugs.

F. The main facility power feed to the data center must support additional power requirements listed above at paragraph 2.4.A combined with 2.4.B and 2.4.G.

G. DMLSS equipment estimated power and space requirements are based on Seattle IOC deployment as follows:

Expected Continuous Power Consumption - 208VAC, 1.5A, 320W
Maximum Utilization Power Consumption - 208VAC, 2.4A, 500W

1. Rack space of 4U, contiguous, not in Cerner supplied cabinets, shall be provided in the data center near Cerner Top of Rack switches.
2. A/B redundant 208V Rack PDUs providing 2 A-branch and 2 B-branch IEC type C-13 outlets.
3. This requirement is superseded by DMLSS Technical Requirements when published and will be deprecated when cloud based platform LogiCole becomes available.

2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements

A. Room temperature and relative humidity values shall adhere to the U.S. Department of Veterans Affairs Office of Construction & Facilities Management HVAC Design Manual, dated May 1, 2019.

1. VA data center environmental requirements are classified as Environmental Class A1 per American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

TC9.9 modified for the VA operating environment, IT equipment inlet temperature range of 72°F to 81°F, humidity ≤ 60 percent noncondensing.

i. Environmental Monitoring and Management solution shall be provided for data centers.

2. TR Class B space temperature range 41°F to 95°F, relative humidity: 8 to 80% noncondensing.
    i. Racks with powered OIT equipment shall have an environmental monitor sensor within 6 feet of rack.
        a. Temperature and Humidity Sensors shall be centrally monitored for compliance with environmental requirements
    ii. In areas where there are environmental issues (e.g., steam pipes, lack of ventilation, etc.), the use of thermal curtains and additional vents will be considered as a temporary alternative, not permanent resolution.

B. Provide N+1 redundant cooling capacity for the new total thermal load in data centers; Equal to the existing thermal load plus the following additional heat releases as measured in Watts.
    1. JSA, expected thermal load 2,395W[3].
    2. FDS, expected thermal load 6,876W[3], potential thermal load 10,500W (3 full cabinets).
    3. DMLSS, expected thermal load 320W.
    4. Request for variance shall follow the exemption process outlined in Appendix D: JSA and FDS Power, Space and HVAC Requirement Exemption Process.
C. Top-of-rack network equipment shall be configured to receive supply air from the front (cold) face of the cabinet. Airflow control measures shall be used to prevent hot air recirculation to device intakes.
D. Continuous thermal load shall not exceed 3.5 kW for any existing or additional rack or cabinet.

[3] Cooling estimates allow 20% additional capacity to allow for lifecycle management including supporting infrastructure, such as network switches

E. Blanking panels shall be installed in all open rack units, in Data Center cabinet and racks, to prevent hot exhaust air recirculating to the cold air equipment intake side of the rack. This requirement is shown in the following figure:

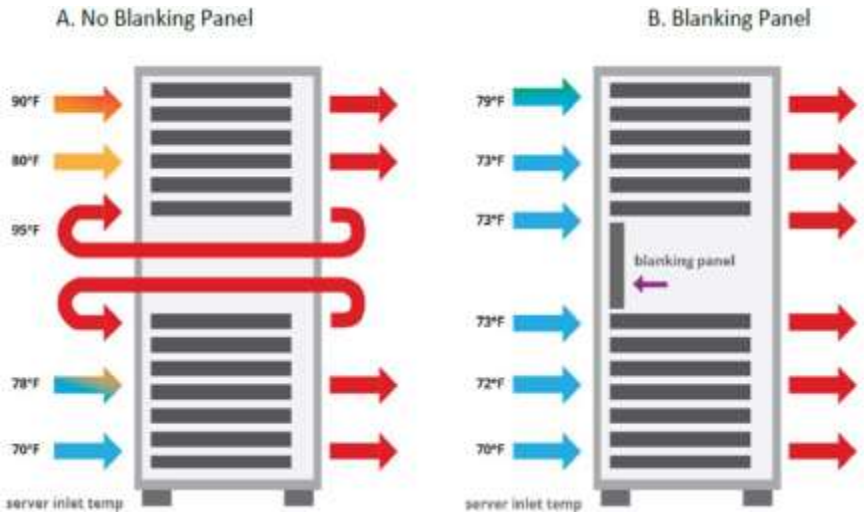

Figure 3. Blanking Panel Applications

Reference: (ref. Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces, Version 3.0, August 21, 2020).

2.6 End-User Devices (EUD) and Peripherals

A. All devices assessed as not meeting the requirements in this section shall be replaced with devices meeting or exceeding the most current specification as attached to the OEHRM End User Device (EUD) Deployment Plan.

2.6.1 Personal Computer (PC) and Tablet Requirements

All EUD PCs and Tablets must meet the recommended or greater requirement levels.

A. General EUD PC and peripherals:
   1. Processor: Dual or more Core Processor (i5, i7 or equivalent) running at 2.0GHz or greater, Support for AES-NI.
   2. RAM: 16GB DDR4 SDRAM 2,400MHz, 32Gb preferred.
   3. Hard Drive: 512 GB NVMe PCIe M.2 SSD (preferred) or 512 GB SSD.
   4. Display/Graphics: Integrated High Definition (HD) graphics with of 512 MB shared. memory or more provided, dedicated memory preferred, Dual Monitor Support.
   5. Monitor: 22” (minimum) or 24” (recommended), Resolution of 1920 x 1080 or higher and 32-bit color.
      i. Appropriate monitor size for locations where physical limitations restrict the use of recommended monitor sizes will be determined on a case by case basis.
      ii. Display size for laptops and tablets shall meet the end user’s requirements for their intended use. Must support resolution of at least 1920 x 1080.

a. Laptops may be requested with up to 17 inch display

iii. If a docking station is provided the docked monitor shall meet the requirements stated above.

6. Network: Network Port 1 GbE, RJ-45. Wireless interface shall support 802.11a/n/ac (2x2)/ax, 802.11ax preferred.
7. Peripheral: 101-key keyboard and mouse or equivalent.
8. O/S: Windows 10 Pro 64 with Internet Explorer 11.
9. Citrix Receiver: Workspace 1912 LTSR as required by TRM.
10. Access: Personal Identification Verification (PIV) Card Reader in the body of the tablet, or laptop. For EUD desktop PC PIV reader in the keyboard preferable or as an attachment.
11. Other Software: VA Image as appropriate.

2.6.2 Other EUD and Peripheral Requirements

All peripheral devices must be validated for use with Cerner Millennium. Use the Cerner Validated Peripheral List (VPL) to assess compatibility.

Copy of Cerner VPL hosted by OIT (preferred):
OTI Integration SharePoint - Validated Peripheral List
The Original Cerner VPL from Cerner's Support Website:
https://wiki.cerner.com/display/public/Peripherals/VPL (Requires login)
Version at signing:

Cerner Validated
Peripheral List v02202

2.6.2.1 Laser Printer and Multi-Function Printers (MFP) Requirements

A. Laser Printers and Multi-Function Printers (MFP) devices shall be network attached with a static IP address.
   1. Laser printers directly attached to the 724 DTV PC for use during a WAN/LAN outage are exempted from this requirement.
B. Laser Printers and MFP devices shall be compatible with (OIT) Printer and Multifunction Device Secure Configuration Baseline.

2.6.2.2 Wireless EUD Requirements

A. VA sensitive information, as defined by VA Directive and Handbook 6500, must not be transmitted via wireless technologies unless the data is encrypted by a FIPS 140-2 validated cryptographic library. (VA Directive 6512 - Secure Wireless Technology) Exemptions from this requirement are allowed for IOC and Waves A-H. A Plan of Action and Milestones (POAM) must be completed and approved by the facility Information System Security Officer (ISSO) prior to deploying a non-compliant wireless device.

2.6.2.3 Mobile EUD Requirements

Devices must be on the list of approved mobile devices in the latest signed OEHRM Mobile Devices for Clinical Care Requirements Specifications Document, Mobile Device Requirement section.

2.7 Voice Over Internet Protocol (VOIP) Device Requirements

A. VOIP Phone / Device network interface shall be capable of 1GbE pass-through.
B. Network switches supporting VOIP Phone / Device shall PoE, 802.3at PoE+ (30W per channel at PoE source, 25.5W at PoE device).
C. VOIP Phone / Device shall utilize Category 6A or higher patch cable for both connection of EUD to phone and phone to network.

2.8 BioMedical Device Requirements

2.8.1 PC and Tablet Requirements

A. Clinical Imaging-Diagnostic Viewing EUD PC and peripherals:
    1. Processor: Intel Skylake Hexa Core w/HT Technology 3.7GHz or better.
    2. RAM: 32GB.
    3. Hard Drive: 512 GB PCIe NVMe M.2 SSD.
    4. Display/Graphics: Barco MXRT-5600 or NVIDIA Quadro P2000, Dual Monitor Support.
    5. Monitor:
        i. 22” (minimum), Resolution of 1920 x 1080 or higher, and 32-bit color.
        ii. 27” monitors, Resolution of 2560 x 1440 or higher, total of 3 monitors is suggested for the optimal workflow, 2 for viewing images and 1 for charting.
        iii. Appropriate monitor size for locations where physical limitations restrict the use of recommended monitor sizes will be determined on a case-by-case basis.
    6. Network: Network Port - 1 GbE RJ-45. Wireless is not recommended.
    7. Peripheral: 101-key keyboard and mouse or equivalent.
    8. O/S: Windows 10 64-bit.
    9. Access: PIV Card Reader.
B. Clinical Imaging-Technologist EUD PC and peripherals:
    1. Processor: Intel Skylake Quad Core w/HT Technology 3.0GHz or better.
    2. RAM: 16GB.
    3. Hard Drive: 512 GB PCIe NVMe M.2 SSD.
    4. Display/Graphics: Barco MXRT-5600 or NVIDIA Quadro P2000, Dual Monitor Support.
    5. Monitors:
        i. 22” (minimum), Resolution of 1920 x 1080 or higher, and 32-bit color.
        ii. 27” monitors, Resolution of 2560 x 1440 or higher.
        iii. Appropriate monitor size for locations where physical limitations restrict the use of recommended monitor sizes will be determined on a case-by-case basis.
    6. Network: Network Port - 1 GbE RJ-45. Wireless is not recommended.

7. Peripheral: 101-key keyboard and mouse or equivalent.
8. Operating system (OS): Windows 10 64-bit.
9. Access: PIV Card Reader.

C. Anesthesiologist EUD PC and peripherals:
   1. Processor: Intel Skylake Quad Core w/HT Technology 2.4 GHz or better, Support for AES-NI and TPM 2.0.
   2. RAM: 32 GB DDR4.
   3. Hard Drive: 512 GB PCIe NVMe M.2 or U.2 SSD.
   4. Display/Graphics: Intel HD Graphics 530 with 512MB memory, Dual Monitor Support.
   5. Monitor:
      i. 24" touchscreen Resolution of 1920x1080, and 32-bit color.
      ii. PCAP multi-touch support.
   6. Network: Wireless 802.11a/n/ac (2x2)/ax, 802.11ax preferred, Bluetooth 4.3LE.
   7. Enclosure:
      i. Meet IP65 standard for protection from dust, oil and other non-corrosive materials from the front.
      ii. Meet IPx1 standard for protection from falling or dripping water from the rear.
      iii. Antimicrobial and washable.
      iv. Fanless Chassis.
   8. Operating system (OS): Windows 10 Pro 64-bit.
   9. Access: PIV Card Reader.

2.9 Physical Security Design Requirements

Rooms undergoing modifications and upgrades shall comply with current physical security design requirements as follows:

A. U.S. Department of Veterans Affairs Office of Construction & Facilities Management Telecommunications and Special Telecommunications Systems Design Manual, February 2016.
B. Physical Security and Resiliency Design Manual OCTOBER 1, 2020, Revised January 1, 2021 U.S Department of Veterans Affairs Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces Version 3.0 August 21, 2020.

2.10 Joint Security Architecture Requirements

A. JSA shall be required to provide network connectivity to the Medical Community of Interest (MEDCOI) network for access to Joint Electronic Health Record system hosted within Cerner's data centers. Additional functionality includes providing advance network protection and visibility into network traffic. Specific technical requirements are found in the OEHRM Joint Security Architecture (JSA) Requirements Specifications Document (RSD).
B. Power, space and HVAC shall be provided in support of the current "Small" JSA form factor for all assessed locations not receiving Forward Deployed Server equipment.

1. In the event equipment planned for deployment exceeds Expected Continuous Power Consumption of 400 W, or 3 Rack Unit (3U) of physical space an assessment of UPS, power distribution and rack configuration shall be required prior to deployment.

Appendix A: Acronyms

Acronym	Description
AHJ	Authority Having Jurisdiction
AITC	Austin Information Technology Center
ANSI	American National Standards Institute
ASHRAE	The American Society of Heating, Refrigerating and Air-Conditioning Engineers
AP	Access Point
BICSI	Building Industry Consulting Service International
CAN	Campus Area Network
CAT5e	Category 5e cable or Category 5 enhanced cable
CAT6	Category 6 cable
CAT6A	Category 6A cable
CBOC	Community Based Outpatient Clinic
CIR	Committed Information Rate
CLC	Community Living Center
CMR	Communications Multipurpose Cable, Riser
CMOP	Consolidated Mail Order Pharmacy
CMP	Communications Multipurpose Cable, Plenum
CM	Communications Multipurpose Cable, Minimum
CPAC	Consolidated Patient Account Center
CRH	Clinical Resource Hub
CSC	Campus Support Center
CSR	Current State Review
CVT	Clinical Video Telehealth
CWDM	Coarse Wavelength Division Multiplexing
CWT	Compensatory-Work Therapy
DCHV	Domiciliary Care for Homeless Veterans
DMLSS	Defense Medical Logistics Standard Support
DRRTP	Domiciliary Residential Rehabilitation Treatment Program
EHR	Electronic Health Record
EIS	Enterprise Infrastructure Solutions
ESCM	Enterprise Supply Chain Modernization
EoSW	End of Software Maintenance
EUD	End User Device
FIPS	Federal Information Processing Standards
FDP	Fiber Distribution Panel
FDS	Forward Deployed Servers
GbE	Gigabit Ethernet
Gbps	Gigabits per second
HA	High Availability

Acronym	Description
HBPC	Home-Based Primary Care
HCC	Health Care Center
HD	High Definition
HEFP	Healthcare Environment and Facilities Programs
HT	Home Telehealth
HVAC	Heating, Ventilation and Air Conditioning
IOC	Initial Operating Capabilities
ISSO	Information System Security Officer
ISP	Inside Plant
IT	Information Technology
JSA	Joint Security Architecture
LAN	Local Area Network
LDoS	Last Day of Support
Mbps	Megabits per second
MDA	Main Distribution Area
MEDCOI	Medical Community of Interest Network
MFP	Multi-Function Printers
MH RRTP	Mental Health Residential Rehabilitation Treatment Program
MPO	Multi-fiber Push On
NECA	National Electrical Contractors Association
NFPA	National Fire Prevention Association
NPS	Network Protection Suite
OEHRM	Office of Electronic Health Record Modernization
OIT	Office of Information & Technology
OOS	Other Outpatient Services
OS	Operating system
OSP	Outside Plant
PC	Personal Computer
PDU	Power Distribution Unit
PITC	Philadelphia Information Technology Center
PIV	Personal Identification Verification
POAM	Plan of Action and Milestones
POE	Power Over Ethernet
PRRTP	Psychosocial Residential Rehabilitation Treatment Programs
PTSD-RRTP	Post-Traumatic Stress Disorder Residential Rehabilitation Program
QoS	Quality of Service
RSD	Requirements Specifications Document
SARRTP	Substance Abuse Residential Rehabilitation Treatment Program

Acronym	Description
SFP	Small Form Pluggable
SFT	Store and Forward Telehealth
SLA	Service Level Agreements
SNMP	Simple Network Management Protocol
SNR	Signal-to-Noise Ratio
SM	Single Mode
TIA	Telecommunications Industry Association
TR	Telecommunications Room
	Transitional Residence
UPS	Uninterruptible Power Supply
UTP	Unshielded twisted pair
VA	Department of Veterans Affairs
VAEC	VA Enterprise Cloud
VAMC	VA Medical Centers
VAST	VHA Site Tracking
VHA	Veteran's Health Administration
VOIP	Voice Over Internet Protocol
VPL	Verified Peripheral List
VTP	Veterans Transportation Program
WAN	Wide Area Network
WLAN	Wireless LAN

Appendix B: References

The following were used as references for this document:

1. U.S Department of Veterans Affairs Office of Construction & Facilities Management Telecommunications and Special Telecommunications Systems Design Manual February 2016 https://www.cfm.va.gov/til/dManual/dmTelecomm.pdf
2. U.S Department of Veterans Affairs Office of Information & Technology (OIT) Infrastructure Standards for Telecommunications Spaces Version 3.0 August 21, 2020 https://www.cfm.va.gov/til/dguide/OIT-InfrastrucStdsTelecommSpaces.pdf
3. ANSI/NECA/BICSI 568, Standard for Installing Commercial Building Telecommunications Cabling
4. ANSI/TIA-1179, ANSI/TIA-1179-A Healthcare Facility Telecommunications Infrastructure
5. TIA TBS-162-A, Telecommunication Cabling Guidelines for Wireless Access Points
6. ANSI/NECA/BICSI 607-C, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises November 2015
7. 802.3at-2009 - IEEE Standard for Information technology-- Local and metropolitan area networks-- Amendment 3: Data Terminal Equipment (DTE) Power via the Media Dependent Interface (MDI) Enhancements
8. 802.11ac-2013 - IEEE Standard for Information technology--Telecommunications and information exchange between systems— Amendment 4: Enhancements for Very High Throughput for Operation in Bands below 6 GHz.
9. VA OEHRM Wireless Network Infrastructure Systems Requirements v1.1 https://dvagov.sharepoint.com/sites/VACO.OEHRMoffice/Misc/Construction_ANCMTS/
10. U.S Department of Veterans Affairs Office of Information and Technology CFM/OIT DESIGN GUIDE TEMPLATES FOR CRITICAL TELECOMMUNICATIONS SPACES IN CLINICAL AND NON-CLINICAL ENVIRONMENTS Dec 27, 2018 https://www.cfm.va.gov/TIL/dGuide/OIT-DGTemplates-CriticalTelecommSpaces.pdf
11. Physical Security and Resiliency Design Manual OCTOBER 1, 2020, Revised January 1, 2021 https://www.cfm.va.gov/til/PhysicalSecurity/dmPhySec.pdf
12. U.S Department of Veterans Affairs Enterprise Infrastructure Standard: Quality Of Service(QoS) version 1.14 https://vaww.vashare.oit.va.gov/sites/itops/svcs/sma/BCM/Approved_Baselines/VA%20Enterprise%20IT%20Infrastructure%20(QoS)_1-14.pdf
13. U.S. Department of Veterans Affairs Office of Construction & Facilities Management HVAC Design Manual dated Revised March 1, 2020 https://www.cfm.va.gov/til/dManual/dmHVAC.pdf
14. U.S Department of Veterans Affairs Enterprise Local Area Network (LAN) Technical Architecture Standard, Version 2.1, February 13, 2019 https://vaww.vashare.oit.va.gov/sites/itops/svcs/sma/BCM/Supporting_Documents/Enterprise%20Local%20Area%20Network%20(LAN)%20Technical%20Architecture%20Standard_v2.1.pdf
15. VHA Directive 1028 FACILITY ELECTRICAL POWER SYSTEMS, dated February 24, 2020 https://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=8723

16. OEHRM Joint Security Architecture (JSA) Requirements Specifications Document (RSD) – https://dvagov.sharepoint.com/sites/VACO.OEHRMoffice/Misc/SitePages/Construction_Admn.aspx
17. OEHRM Mobile Devices for Clinical Care Requirements Specifications Document – https://dvagov.sharepoint.com/sites/VACO.OEHRMoffice/Misc/SitePages/Construction_Admn.aspx
18. U.S Department of Veterans Affairs Electronic Health Record Modernization Cabling Infrastructure (VIEWS 01426385) Executive Decision Memorandum, dated September 23, 2019 (attached)
19. VA Systems Engineering Solution, Cerner EHRM Forward Deployed Servers, dated April 12, 2019 (attached)
20. VA DIRECTIVE 6500 VA CYBERSECURITY PROGRAM Reissue 4 dated January 29, 2019
21. VA DIRECTIVE 6512 SECURE WIRELESS TECHNOLOGY dated October 12, 2017
22. U.S Department of Veterans Affairs Office of Information & Technology (OIT) Printer and Multifunction Device Secure Configuration Baseline Version 1.4 August 5, 2019 https://vaww.vashare.oit.va.gov/sites/itops/svcs/sma/BCM/Approved_Baselines/Printer%20and%20Multifunction%20Devices%20Secure%20Configuration%20Baseline.pdf
23. VHA Handbook 1006.02 VHA SITE CLASSIFICATIONS AND DEFINITIONS dated December 30, 2013
24. U.S Department of Veterans Affairs Pharmacy Benefits Management Services https://www.pbm.va.gov/PBM/CMOP/VA_Mail_Order_Pharmacy.asp
25. Consolidated Patient Account Center (CPAC) Supports VA's commitment to Veteran Healthcare https://www.va.gov/CBO/cbo/cpac/docs/fs_veterans_01.pdf
26. U.S Department of Veterans Affairs Clinical Resource Hub Training and Operations Guide https://vaww.portal2.va.gov/sites/PERC/CR_HUB/CRH_Documents/CRH%20Guidance%20and%20Overview/Clinical%20Resource%20Hub%20Training%20and%20Operations%20Guide.docx?Web=1
27. U.S Department of Veterans Affairs VA Health Now "Your Clinical Contact Center" https://www.visn8.va.gov/VISN8/Documents/V08_CCC_InfoSheet_3.pdf
28. OPM Frequently Asked Questions: "What is telework?" https://www.opm.gov/FAQs/QA.aspx?fid=b48bf83b-440c-4f1e-a88c-3cdc9d802ac8&pid=75346675-3b92-4aec-831d-58cf5b0e86d2
29. OEHRM Infrastructure Readiness Playbook v2.0 https://dvagov.sharepoint.com/sites/VACO.OEHRMoffice/Misc/Construction_ANCMTS/
30. OEHRM End User Device (EUD) Deployment Plan v2.0 March 2020 https://dvagov.sharepoint.com/sites/VACO.OEHRMoffice/Misc/Construction_ANCMTS/
31. Veterans Affairs OCFM H-18-8 Seismic Design Requirements, November 1, 2019 https://www.cfm.va.gov/til/etc/seismic.pdf
32. VHA DIRECTIVE 1044 ASSIGNMENT AND MAINTENANCE OF STATION NUMBERS AND ATTRIBUTES dated March 15, 2016
33. CHAMPVA Pharmacy Benefits – Meds by Mail https://www.va.gov/COMMUNITYCARE/programs/dependents/pharmacy/index.asp

34. VA Telehealth Services Fact Sheet
https://www.va.gov/COMMUNITYCARE/docs/news/VA_Telehealth_Services.pdf

Appendix C: Site Type Definitions and Requirements

Definitions and requirements for VHA sites are described in the following sections. VBA sites will be covered in a separate document. All sites are assigned a Requirement Type aligning with this appendix in the OEHRM Users by Site List managed here: EHRM Facilities Implementation Center (EFIC) - Facilities Infrastructure List - All Items (sharepoint.com).

A. VA Medical Center (VAMC)

A VA medical center (VAMC) is a VA point of service that provides at least two categories of care (inpatient, outpatient, residential, or institutional extended care).

B. Health Care Center (HCC) Definition

The Health Care Center (HCC) is a VA-owned and leased clinic. It is contracted or shared and operates at least 5 days per week. Services provided include primary care, mental health care, and on-site specialty services. They perform ambulatory surgery and/or invasive procedures which may require moderate sedation or general anesthesia.

i. The HCC designated as an ambulatory surgery clinic (ASC) must meet the requirements of the assigned surgical complexity level and provide all associated support infrastructure, such as pharmacy, laboratory, and x-ray, to perform these health care services safely and effectively.
ii. The HCC not designated as an ASC but performing invasive procedures under moderate sedation must meet criteria established by VHA Directive 2006-023, Moderate Sedation by Non-Anesthesia Providers.
iii. The HCC either assigned an ASC designation or performing invasive procedures under moderate sedation or anesthesia must comply with external accrediting bodies' standards for ambulatory surgery centers and/or provision of anesthesia or moderate sedation.

C. VAMC and HCC with no VAMC Parent Specific Requirements

Requirement Section	Applicable Items
2.1 Wide Area Networking (WAN)	2.1.1.2, 2.2
2.2 Local Area Networking (LAN)	All
2.3 Wireless LAN (WLAN) Design Requirements	All
2.4 Power and Space Design Requirements	All
2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements	All
2.6 End-User Devices (EUD)	All
2.7 Voice Over Internet Protocol (VOIP) Device Requirements	All
2.8 Medical Device Requirements	All
2.9 Physical Security Design Requirements	All
2.10 Joint Security Architecture Requirements	All

D. Community-Based Outpatient Clinic (CBOC) Definitions

A community-based outpatient clinic (CBOC) is a VA-operated, VA-funded, or VA-reimbursed site of care, which is located separate from a VA medical facility. A CBOC can provide primary, specialty, subspecialty, mental health, or any combination of health care delivery services that can be appropriately provided in an outpatient setting. CBOCs are further classified as two types:

i. A **Multi-Specialty CBOC** is a VA-owned, VA-leased, mobile, contract, or shared clinic that offers both primary and mental health care and two or more specialty services physically on site. Access to additional specialty services may be offered by referral or telehealth. These clinics may offer support services, such as pharmacy, laboratory, and x-ray. These clinics are permitted to provide invasive procedures with local anesthesia or minimal sedation, but not with moderate sedation or general anesthesia.

ii. A **Primary Care CBOC** is VA-owned, VA-leased, mobile, contract, or shared clinics that offer both medical (physically on site) and mental health care (either physically on site or by telehealth) and may offer support services such as pharmacy, laboratory, and x-ray. Access to specialty care is not provided on site, but may be available through referral or telehealth. A Primary care CBOC often provides home-based primary care (HBPC) and home telehealth to the population it serves.

E. CBOC and HCC with VAMC Parent Specific Requirements

Requirement Section	Applicable Items
2.1 Wide Area Networking (WAN)	2.1.1.3 A, 2.1.2 A,C,F
2.2 Local Area Networking (LAN)	2.2.A-H, J-K, P, R-S
2.3 Wireless LAN (WLAN) Design Requirements	2.3 A-C, E-K
2.4 Power and Space Design Requirements	2.4 C, E-F
2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements	2.5.A.2
2.6 End-User Devices (EUD)	2.6.1 A-C, 2.6.2 All
2.7 Voice Over Internet Protocol (VOIP) Device Requirements	All
2.8 Medical Device Requirements	None Applicable
2.9 Physical Security Design Requirements	2.9.2
2.10 Joint Security Architecture Requirements	None Applicable

F. CHAMPVA Meds by Mail Definition

Veterans who receive care in the VISN network can call around the clock to get their health questions answered from the convenience of their home, or elsewhere. Services include general administrative support, nurse advice and triage, virtual visits with a doctor or nurse practitioner via telephone or VA Video Connect. There are no co-payments for using the VA Health Now “Your Clinical Contact Center”.

G. Consolidated Mail Order Pharmacy (CMOP) Definition

There are seven VA Consolidated Mail Order Pharmacy (CMOP) locations serving the country. VA Mail Order Pharmacies processed 119.7 million outpatient prescriptions in fiscal year 2016. The Department of Veterans Affairs provides approximately 80% of all outpatient prescriptions to Veterans via mail order utilizing the VA Mail Order Pharmacy, a system of 7 highly automated pharmacies. The VA Mail Order Pharmacy processes 470,000 prescriptions daily and every work day over 330,000 Veterans receive a package of prescriptions in the mail.

H. Consolidated Patient Account Center (CPAC) Definition

Consolidated Patient Account Centers (CPAC) were created by congressional mandate to consolidate traditional VHA business billing and collections office functions into seven regional centers. Veterans or family members with private health insurance or with federally funded coverage through the Department of Defense (TRICARE) can make payments or ask questions in person, by phone, online and by mail. Facilities are located in Asheville NC, Smyrna TN, Middleton WI, Orlando FL, Lebanon PA, Leavenworth KS and Las Vegas NV. Each center supports a specific region of the United States.

I. Extended Care Site Community Living Center (CLC) (Stand-Alone) Definition

Extended care is defined by encounters between Veterans and providers within the VHA health care system either in VA institutional care or VA non-institutional care. Extended care services include geriatric evaluation, nursing home care, domiciliary services, adult day health care, other noninstitutional alternatives to nursing home care, and respite care. VA institutional extended care is provided in beds associated with overnight institutional extended care programs. VA institutional extended care beds are defined by the treating specialty. There are three subtypes of institutional extended care beds: Community Living Center (CLC) short-stay, CLC long-stay, and CLC hospice.

J. Residential Care Site (MH RRTP/DRRTP) (Stand-Alone) Definition

Two programs are classified as “residential care” in the site classification: Residential Rehabilitation and Domiciliary Care (most residential rehabilitation programs are types of domiciliary care). Specifically, a Mental Health Residential Rehabilitation Treatment Program (MH RRTP) provides residential rehabilitative and clinical care to eligible Veterans who have a wide range of problems, illnesses, or rehabilitative care needs. These can be medical, psychiatric, SUD, homelessness, vocational, educational, or social services. The term RRTP refers to the bed category and includes the following programs: Domiciliary Residential Rehabilitation Treatment Programs (DRRTP), Domiciliary Care for Homeless Veterans (DCHV), Health Maintenance Domiciliary, Psychosocial Residential Rehabilitation Treatment Programs (PRRTP), PTSD Residential Rehabilitation Treatment Program (PTSD-RRTP), Substance Abuse Residential Rehabilitation Treatment Program (SARRTP), and Compensatory Compensated-Work Therapy (CWT)-Transitional Residence (TR).

K. CHAMPVA Meds by Mail, CMOP, CPAC, CLC and MH RRP/DRRTP Specific Requirements

Requirement Section	Applicable Items
2.1 Wide Area Networking (WAN)	2.1.1.3 A, 2.1.2 A, C, F
2.2 Local Area Networking (LAN)	2.2 A-H, J-K, R-S
2.3 Wireless LAN (WLAN) Design Requirements	None Applicable
2.4 Power and Space Design Requirements	2.4 C, E-F
2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements	2.5.A.2
2.6 End-User Devices (EUD)	2.6.1 A, 2.6.2 All
2.7 Voice Over Internet Protocol (VOIP) Device Requirements	None Applicable
2.8 Medical Device Requirements	None Applicable
2.9 Physical Security Design Requirements	2.9.2
2.10 Joint Security Architecture Requirements	None Applicable

L. Clinical Resource Hub (CRH)

A repository of staff who serve a VISN and provide clinical services via virtual and in-person care to VA facilities that are experiencing clinical gaps or are recognized as underserved facilities. Staff within a Clinical Resource Hub (CRH) include, but are not limited to: Primary Care Providers, Clinical Pharmacy Specialist providers, Psychologists, Psychiatrists, Licensed Clinical Social Workers, Registered Nurses, Administrative Associates, etc.

M. Other Outpatient Services (OOS) Definition

Many of the services provided at Other Outpatient Service (OOS) sites are like those provided in Veteran Centers. Other clinical services are provided to remote areas through a Telehealth clinic or other arrangement. If any other services are provided in this venue (external to a VA clinic or facility), they must be associated with, attached to, and coordinated by a health care delivery site located in a clinic or facility.

N. Shared TeleHealth Services Definition

Telehealth increases access to high quality health care services by using information and telecommunication technologies to provide health care services when the patient and practitioner are separated by geographical distance. VA is committed to increasing access to care for Veterans, and has placed special emphasis on those in rural and remote locations. VA Telehealth Modalities Include:

i. **Clinical Video Telehealth** (**CVT**) is defined as the use of real-time interactive video conferencing, sometimes with supportive peripheral technologies, to assess, treat and provide care to a patient remotely. Typically, CVT links the patient(s) at a clinic to the provider(s) at another location. CVT can also provide video connectivity between a provider and a patient at home. CVT encompasses more than 50 clinical applications in VA such as specialty and primary care.

ii. **Home Telehealth** (**HT**) is defined as a program into which Veterans are enrolled that applies care and case management principles to coordinate care using health informatics, disease management

and technologies such as in-home and mobile monitoring, messaging and/or video technologies. The goal of Home Telehealth is to improve clinical outcomes and access to care while reducing complications, hospitalizations, and clinic or emergency room visits for Veterans in post-acute care settings, high-risk Veterans with chronic disease or Veterans at risk for placement in long-term care.

iii. **Store and Forward Telehealth** (**SFT**) is generally defined as the use of technologies to asynchronously acquire and store clinical information (e.g. data, image, sound and video) that is then forwarded to or retrieved by a provider at another location for clinical evaluation. VA's national Store-and-Forward Telehealth programs operationalize this definition to cover services that provide this care using a clinical consult pathway and a defined information technology platform to communicate the event/encounter between providers, as well as enabling documentation of the event/encounter and the associated clinical evaluation within the patient record.

O. CRH, OOS and Shared TeleHealth Services Site Specific Requirements

Requirement Section	Applicable Items
2.1 Wide Area Networking (WAN)	2.1.2 A,C,F
2.2 Local Area Networking (LAN)	None Applicable
2.3 Wireless LAN (WLAN) Design Requirements	None Applicable
2.4 Power and Space Design Requirements	None Applicable
2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements	None Applicable
2.6 End-User Devices (EUD)	2.6.1 A, 2.6.2 All
2.7 Voice Over Internet Protocol (VOIP) Device Requirements	None Applicable
2.8 Medical Device Requirements	None Applicable
2.9 Physical Security Design Requirements	None Applicable
2.10 Joint Security Architecture Requirements	None Applicable

P. Vet Center Definition

Services provided at these sites are contacts made by VA or VHA personnel to provide information, social services, homelessness outreach services, activities to increase Veteran awareness of benefits and services, and support services.

Q. Sites with planned Termination or Expiration of lease agreement

Facilities, as defined above, that requires infrastructure upgrades, however, OEHRM has received a documented plan of lease termination or expiration within 2 years of go-live date fall in this category.

R. Call Center Definition

VA utilizes multiple Call Centers across the enterprise to provide services to Veterans and callers. The most notable call center is the MyVA311 Call Center which was deployed in 2016 as part of VA modernization efforts to serve as “one number to call to reach VA.” Many Call Centers are specialized to particular niches. Other examples of Call Centers include:

Caregivers Support Line	Homeless Veterans Call Center
VHA Client Relations	Women Veterans Call Center
VEO White House Hotline	Health Resource Center
Veterans Crisis Line	Clinical Contact Center

S. Remaining VHA Locations Definition

Sites falling in to this category include Regional Offices, Research Facilities, Logistics Centers, Veterans Transportation Program (VTP) Offices and other locations not noted explicitly in Appendix C, excluding training and other temporary spaces.

T. Teleworker with Printer Definition

VA employees can follow established VA policy and procedures to be deemed eligible for telework by their supervisor. The term 'telework’, or 'teleworking' refers to a work flexibility arrangement under which an employee performs the duties and responsibilities of such employee's position, and other authorized activities, from an approved worksite other than the location from which the employee would otherwise work. Telework is an innovative business solution that may enable VA employees in suitable positions to work productively away from the traditional office.

U. Vet Center, Lease Expiration or Termination, Call Center, Remaining VHA Locations and Teleworker with Printer Specific Requirements

Requirement Section	Applicable Items
2.1 Wide Area Networking (WAN)	None Applicable
2.2 Local Area Networking (LAN)	None Applicable
2.3 Wireless LAN (WLAN) Design Requirements	None Applicable
2.4 Power and Space Design Requirements	None Applicable
2.5 Heating, Ventilation, and Air Conditioning (HVAC) Design Requirements	None Applicable
2.6 End-User Devices (EUD)	2.6.1 A, 2.6.2 All
2.7 Voice Over Internet Protocol (VOIP) Device Requirements	None Applicable
2.8 Medical Device Requirements	None Applicable
2.9 Physical Security Design Requirements	None Applicable
2.10 Joint Security Architecture Requirements	None Applicable

Appendix D: JSA and FDS Power, Space and HVAC Requirement Exemption Process

Request for variance in power, space or HVAC for the JSA Stack or FDS Server Equipment shall be addressed to and approved by Solution Delivery Data Center Infrastructure Engineering. The memo shall be delivered by the Director of Healthcare Environment and Facilities Programs (HEFP) no later than 26 months prior to go-live. The process is outlined in Figure 5 below.

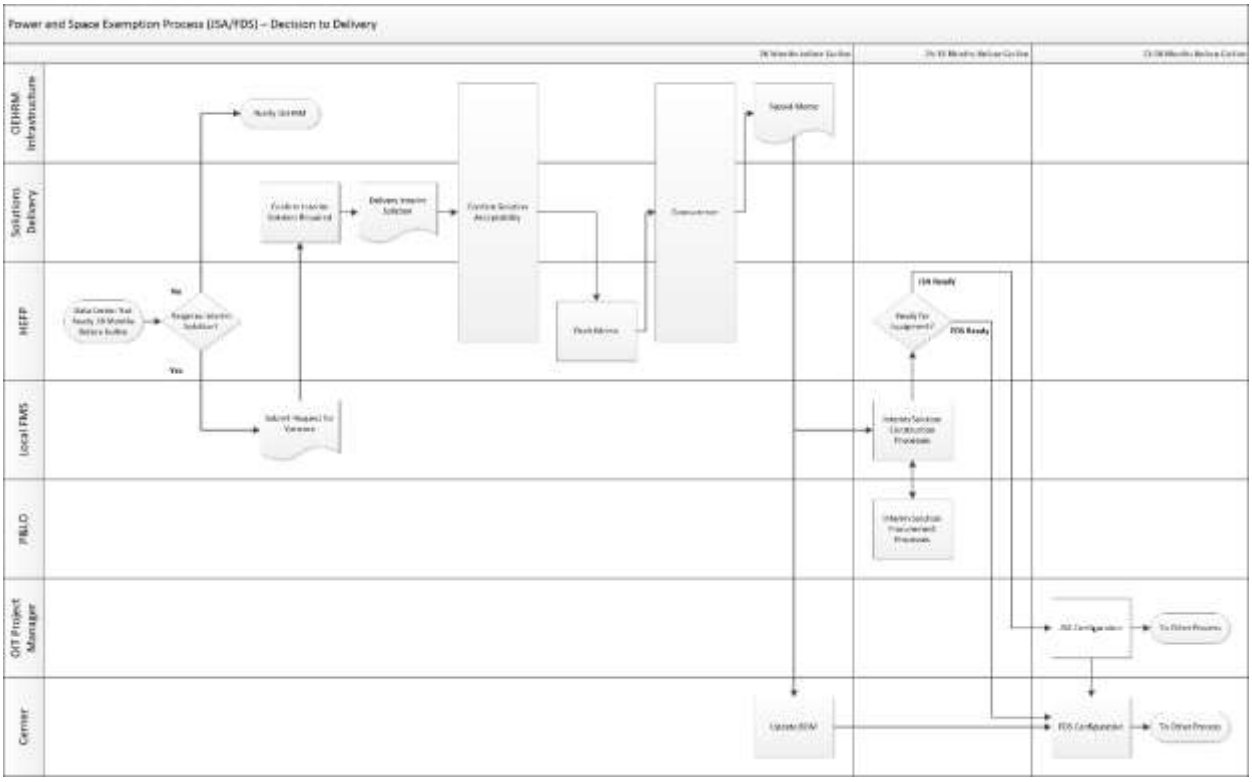

Figure 5: JSA and FDS Power, Space and HVAC Exemption Request Process

Supporting Documents:

Request for Variance Application

JSAandFDS-PowerSpaceHVACExemptio

Appendix E: Facilities Requiring Seismic Mitigation in Cabinets

The table field heading descriptions are as follows:

- **VISN:** Veterans Integrated Service Networks – 19 geographic regions of the Veterans Health System.
- **STA6N**: The combination of Station Number and Suffix Modifier used to track individual care locations from the VHA Site Tracking (VAST) system.
    - Station Number: The station number identifies unique points of service within VHA. The station number is used by the VHA site classification process to identify the workload associated with individual sites of care. The station number list is maintained by the VA Office of Financial Services Center and is tracked by point of service using the VAST database.
    - Suffix Modifier: A suffix modifier is an appendage to the station number of up to three positions used to identify substation elements attached to a parent station.
- **Official Station Name:** VAST name of VHA Station.
- **City:** STA6N US Postal Service address City.
- **State:** STA6N US Postal Service address State.
- **Zip:** STA6N US Postal Service address Zip.

The following seismic mitigation list is sorted by "VISN" implementation:

VISN	STA6N	Official Station Name	City	State	Zip
10	757	Chalmers P. Wylie Veterans Outpatient Clinic	Columbus	OH	43219
20	687	Jonathan M. Wainwright Memorial VA Medical Center	Walla Walla	WA	99362
20	692	White City VA Medical Center	White City	OR	97503
20	653	Roseburg VA Medical Center	Roseburg	OR	97471
20	463	Anchorage VA Medical Center	Anchorage	AK	99504
20	531	Boise VA Medical Center	Boise	ID	83702
20	668	Mann-Grandstaff Department of Veterans Affairs Medical Center	Spokane	WA	99205
20	663	Seattle VA Medical Center	Seattle	WA	98108
20	663A4	American Lake VA Medical Center	Tacoma	WA	98493
20	648	Portland VA Medical Center	Portland	OR	97239

VISN	STA6N	Official Station Name	City	State	Zip
20	648A4	Portland VA Medical Center-Vancouver	Vancouver	WA	98661
10	538	Chillicothe VA Medical Center	Chillicothe	OH	45601
10	610	Marion VA Medical Center	Marion	IN	46953
10	610A4	Fort Wayne VA Medical Center	Fort Wayne	IN	46805
10	506	Ann Arbor VA Medical Center	Ann Arbor	MI	48105
10	515	Battle Creek VA Medical Center	Battle Creek	MI	49037
10	553	John D. Dingell Department of Veterans Affairs Medical Center	Detroit	MI	48201
10	539	Cincinnati VA Medical Center	Cincinnati	OH	45220
10	583	Richard L. Roudebush Veterans Administration Medical Center	Indianapolis	IN	46202
12	556	Captain James A. Lovell Federal Health Care Center	North Chicago	IL	60064
12	550	Danville VA Medical Center	Danville	IL	61832
12	537	Jesse Brown Department of Veterans Affairs Medical Center	Chicago	IL	60612
12	578	Edward Hines Junior Hospital	Hines	IL	60141
12	695	Clement J. Zablocki Veterans Administration Medical Center	Milwaukee	WI	53295
12	607	William S. Middleton Memorial Veterans' Hospital	Madison	WI	53705
23	636	Omaha VA Medical Center	Omaha	NE	68105
23	568A4	Hot Springs VA Medical Center	Hot Springs	SD	57747
15	589A4	Harry S. Truman Memorial Veterans Hospital	Columbia	MO	65201
15	589	Kansas City VA Medical Center	Kansas City	MO	64128
15	589A7	Robert J. Dole Department of Veterans Affairs Medical and Regional Office Center	Wichita	KS	67218
15	657A4	John J. Pershing Veterans Administration Medical Center	Poplar Bluff	MO	63901
15	657A5	Marion VA Medical Center	Marion	IL	62959
15	657	John Cochran Veterans Hospital	St. Louis	MO	63106
15	657A0	St. Louis VA Medical Center-Jefferson Barracks	St. Louis	MO	63125
19	442	Cheyenne VA Medical Center	Cheyenne	WY	82001
19	554	Rocky Mountain Regional VA Medical Center	Aurora	CO	80045
19	660	George E. Wahlen Department of Veterans Affairs Medical Center	Salt Lake City	UT	84148

VISN	STA6N	Official Station Name	City	State	Zip
19	575	Grand Junction VA Medical Center	Grand Junction	CO	81501
19	436	Fort Harrison VA Medical Center	Fort Harrison	MT	59636
19	666	Sheridan VA Medical Center	Sheridan	WY	82801
19	623	Jack C. Montgomery Department of Veterans Affairs Medical Center	Muskogee	OK	74401
19	635	Oklahoma City VA Medical Center	Oklahoma City	OK	73104
21	570	Fresno VA Medical Center	Fresno	CA	93703
21	654	Ioannis A. Lougaris Veterans Administration Medical Center	Reno	NV	89502
21	593	North Las Vegas VA Medical Center	North Las Vegas	NV	89086
21	640	Palo Alto VA Medical Center	Palo Alto	CA	94304
21	640A0	Palo Alto VA Medical Center-Menlo Park	Menlo Park	CA	94025
21	640A4	Palo Alto VA Medical Center-Livermore	Livermore	CA	94550
21	662	San Francisco VA Medical Center	San Francisco	CA	94121
21	612A4	Sacramento VA Medical Center	Mather	CA	95655
21	459	Spark M. Matsunaga Department of Veterans Affairs Medical Center	Honolulu	HI	96819
22	605	Jerry L. Pettis Memorial Veterans' Hospital	Loma Linda	CA	92357
22	600	Tibor Rubin VA Medical Center	Long Beach	CA	90822
22	664	San Diego VA Medical Center	San Diego	CA	92161
22	691	West Los Angeles VA Medical Center	Los Angeles	CA	90073
22	691A4	Sepulveda VA Medical Center	Sepulveda	CA	91343
22	644	Carl T. Hayden Veterans Administration Medical Center	Phoenix	AZ	85012
22	678	Tucson VA Medical Center	Tucson	AZ	85723
22	649	Bob Stump Department of Veterans Affairs Medical Center	Prescott	AZ	86313
22	501	Raymond G. Murphy Department of Veterans Affairs Medical Center	Albuquerque	NM	87108
17	549A4	Sam Rayburn Memorial Veterans Center	Bonham	TX	75418
17	504	Thomas E. Creek Department of Veterans Affairs Medical Center	Amarillo	TX	79106
17	674A4	Doris Miller Department of Veterans Affairs Medical Center	Waco	TX	76711
17	756	El Paso VA Clinic	El Paso	TX	79930

VISN	STA6N	Official Station Name	City	State	Zip
16	520	Biloxi VA Medical Center	Biloxi	MS	39531
16	586	G.V. (Sonny) Montgomery Department of Veterans Affairs Medical Center	Jackson	MS	39216
16	629	New Orleans VA Medical Center	New Orleans	LA	70119
16	564	Fayetteville VA Medical Center	Fayetteville	AR	72703
16	598	John L. McClellan Memorial Veterans Hospital	Little Rock	AR	72205
16	598A0	Eugene J. Towbin Healthcare Center	North Little Rock	AR	72114
16	502	Alexandria VA Medical Center	Pineville	LA	71360
16	667	Overton Brooks Veterans Administration Medical Center	Shreveport	LA	71101
9	621	James H. Quillen Department of Veterans Affairs Medical Center	Mountain Home	TN	37684
9	614	Memphis VA Medical Center	Memphis	TN	38104
9	626	Nashville VA Medical Center	Nashville	TN	37212
9	626A4	Alvin C. York Veterans Administration Medical Center	Murfreesboro	TN	37129
9	596	Franklin R. Sousley Campus	Lexington	KY	40511
9	596A4	Troy Bowling Campus	Lexington	KY	40502
8	672	San Juan VA Medical Center	San Juan	PR	00921
8	573	Malcom Randall Department of Veterans Affairs Medical Center	Gainesville	FL	32608
8	573A4	Lake City VA Medical Center	Lake City	FL	32025
7	508	Atlanta VA Medical Center	Decatur	GA	30033
7	521	Birmingham VA Medical Center	Birmingham	AL	35233
7	619	Central Alabama VA Medical Center-Montgomery	Montgomery	AL	36109
7	619A4	Central Alabama VA Medical Center-Tuskegee	Tuskegee	AL	36083
7	679	Tuscaloosa VA Medical Center	Tuscaloosa	AL	35404
7	509	Charlie Norwood Department of Veterans Affairs Medical Center	Augusta	GA	30904
7	509A0	Augusta VA Medical Center-Uptown	Augusta	GA	30904
7	557	Carl Vinson Veterans' Administration Medical Center	Dublin	GA	31021
7	544	Wm. Jennings Bryan Dorn Department of Veterans Affairs Medical Center	Columbia	SC	29209
7	534	Ralph H. Johnson Department of Veterans Affairs Medical Center	Charleston	SC	29401

VISN	STA6N	Official Station Name	City	State	Zip
6	637	Charles George Department of Veterans Affairs Medical Center	Asheville	NC	28805
6	558	Durham VA Medical Center	Durham	NC	27705
6	565	Fayetteville VA Medical Center	Fayetteville	NC	28301
6	652	Hunter Holmes McGuire Hospital	Richmond	VA	23249
6	658	Salem VA Medical Center	Salem	VA	24153
6	659	W.G. (Bill) Hefner Salisbury Department of Veterans Affairs Medical Center	Salisbury	NC	28144
5	512A5	Perry Point VA Medical Center	Perry Point	MD	21902
5	688	Washington VA Medical Center	Washington	DC	20422
5	517	Beckley VA Medical Center	Beckley	WV	25801
5	581	Hershel "Woody" Williams VA Medical Center	Huntington	WV	25704
5	540	Louis A. Johnson Veterans Administration Medical Center	Clarksburg	WV	26301
4	542	Coatesville VA Medical Center	Coatesville	PA	19320
4	642	Corporal Michael J. Crescenz Department of Veterans Affairs Medical Center	Philadelphia	PA	19104
4	595	Lebanon VA Medical Center	Lebanon	PA	17042
4	460	Wilmington VA Medical Center	Wilmington	DE	19805
4	646	Pittsburgh VA Medical Center-University Drive	Pittsburgh	PA	15240
4	646A4	H. John Heinz III Department of Veterans Affairs Medical Center	Pittsburgh	PA	15240
4	693	Wilkes-Barre VA Medical Center	Wilkes-Barre	PA	18711
2	561	East Orange VA Medical Center	East Orange	NJ	07018
2	561A4	Lyons VA Medical Center	Lyons	NJ	07939
2	526	James J. Peters Department of Veterans Affairs Medical Center	Bronx	NY	10468
2	632	Northport VA Medical Center	Northport	NY	11768
2	620	Franklin Delano Roosevelt Hospital	Montrose	NY	10548
2	620A4	Castle Point VA Medical Center	Wappingers Falls	NY	12590
2	630	Manhattan VA Medical Center	New York	NY	10010
2	630A4	Brooklyn VA Medical Center	Brooklyn	NY	11209
2	630A5	St. Albans VA Medical Center	Queens	NY	11424

VISN	STA6N	Official Station Name	City	State	Zip
2	528A8	Samuel S. Stratton Department of Veterans Affairs Medical Center	Albany	NY	12208
2	528A7	Syracuse VA Medical Center	Syracuse	NY	13210
1	518	Edith Nourse Rogers Memorial Veterans Hospital	Bedford	MA	01730
1	631	Edward P. Boland Department of Veterans Affairs Medical Center	Leeds	MA	01053
1	689	West Haven VA Medical Center	West Haven	CT	06516
1	405	White River Junction VA Medical Center	White River Junction	VT	05001
1	523	Jamaica Plain VA Medical Center	Boston	MA	02130
1	523A4	West Roxbury VA Medical Center	West Roxbury	MA	02132
1	523A5	Brockton VA Medical Center	Brockton	MA	02301
1	608	Manchester VA Medical Center	Manchester	NH	03104
1	650	Providence VA Medical Center	Providence	RI	02908
1	402	Togus VA Medical Center	Augusta	ME	04330

Appendix F: RACI Matrix - Organizational Expectations

***Note**: This appendix is a copy of the RACI matrix included in the OEHRM Infrastructure Readiness Playbook v2.0 section 4.7 and is provided as a convenience. Please review the most current version in the original document when possible.

In conjunction with the identified communication tools, the RACI matrix will be used to outline organizational expectations based upon infrastructure requirements from an enterprise level. A RACI matrix helps set clear expectations about project roles and responsibilities. There is a distinction between a role and individually identified person. A role is a descriptor of an associated set of tasks which may be performed by many people. In contrast, one person can perform many roles.
The RACI developed by OEHRM and entities will specify one (or more) of the following per requirement:

- **Responsible (R)** – Assigned to complete the activities/artifacts associated with the integration area. Additional team members may be assigned. Each task must have someone responsible.
- **Accountable (A**) – Has ownership of the result and process; final decision-making authority and accountability for activities/artifacts associated with the integration area. There is only one Accountable person assigned to each task or deliverable.
- **Consulted (C)** – Is involved throughout by providing input or knowledge and information; could be an adviser, stakeholder, or subject matter expert for an integration area. Consulted parties typically provide input based on either how their future project work is impacted or domain expertise for the deliverable.
- **Informed (I)** – Receives information and must be informed about integration activities.
- **Capita**l – Building improvements managed by VHA.
- **Non-Capital** – IT improvements managed by OEHRM and OIT.
- **Funding** – OEHRM's budget funds improvements for equipment and patch cables.

Tasks shown are associated with VHA Building/Facility and IT Infrastructure. These are the elements necessary to upgrade the building infrastructure to prepare for EHR deployment or "Go-Live". Typical improvements would include telecommunications closet upgrades (e.g., Power, Cabling, HVAC), server room upgrades, etc. Office of Management and Budget (OMB) would refer to these as the Real Property components and improvements funded out of NRM. IT Infrastructure represents OIT projects and IT activities needed to support the technical aspects for site activation. This RACI Matrix is valid for activities for pre-Go Live Infrastructure Readiness activities and the Post Go Live RACI will be developed as part of the Sustainment Guide.

Capital – Building projects/improvements managed by VHA, as shown in the following RACI Diagram:

CAPITAL									
Area	Task	VHA				OEHRM		OIT	
		HEFP	VISN	VAMC	P&LO	TIO	CMO	OTI	ITOPS
Building Infrastructure Readiness	Determine Pre-Planning Activities	**A**	**R**	**R**	**C**	**C**		**I**	**C**
	Execution of Plans	**A**	**R**	**R**	**R**	**I**		**I**	**C**
	Conduct Validation/Testing	**A**	**R**	**R**	**I**	**R**		**I**	**C**
Building Infrastructure Assessment	Develop EHRM Infrastructure Requirements	**R**	**C**	**C**	**I**	**A**		**C**	**C**
	Conduct EHRM Readiness Infrastructure Self-Assessment Checklist (VHA/OIT TRs and DCs)	**A**	**R**	**R**	**I**	**C**		**C**	**C**
	Publish Enterprise Self-Assessment Schedule	**A**	**R**	**R**	**C**	**I**		**C**	**C**
	Identify and Document Physical Assessment and Gap Analysis	**A**	**R**	**R**	**I**	**C**		**C**	**C**
	Determine Cost Estimation	**A**	**R**	**R**	**I**	**I**		**I**	**C**
	Prepare Budget and Submission	**A**	**R**	**R**	**I**	**I**		**I**	
Project Development (Non-Recurring Maintenance)	Identify Gap Integration and Project Scope Definition	**A**	**R**	**R**	**C**	**C**			
	Conduct Submission of Project Plan (SCIP)	**A**	**R**	**R**	**C**	**I**			
	Identify and Document Physical Assessment and Gap Analysis	**A**	**R**	**R**	**I**	**C**			
	Determine Cost Estimation	**A**	**R**	**R**	**I**	**I**			
	Prepare Budget and Submission	**A**	**R**	**R**	**I**	**I**			
Physical Security and Space	Determine Physical Security Components	**R**	**A**			**C**	**I**	**I**	**C**
	Wall penetration, conduit and asbestos remediation	**A**	**R**	**R**	**R**				**C**
HVAC	Identify Additional BTU cooling for Cerner Equipment	**R**	**A**			**C**	**I**	**I**	**I**

CAPITAL									
Area	Task	VHA				OEHRM		OIT	
		HEFP	VISN	VAMC	P&LO	TIO	CMO	OTI	ITOPS
Power	Provide Power for Cerner Equipment	R	A			C	I	I	I
	Provide Uninterrupted Power Supply	R	A			C	I	I	I
	Provide Emergency Backup Power	R	A			C	I	I	I
	Single Point Facilities Grounding	R	A			C	I	I	I
	Determine Main Facility Power Feed	R	A			C	I	I	I
	Monitor and maintain UPS devices	R	A			C	I	I	I
LAN (Network)	Installation and Maintenance of Network Cables in Walls	A	R	R		C	I	I	I
	Installation and Maintenance of Fiber Backbone and distribution	A	R	R		C	I	I	I
EUD	Installation of Data Drops, Power outlets, and Wall mounts	A	R	R	R	I	I		C
Project Execution (Non-Recurring Maintenance)	Determine Design Procurement Strategy	A	R	R	R	I			
	Review Design (Architect/Engineer)	A	R	R	R	C			C
	Determine Construction Procurement Strategy	A	R	R	R	I			
	Perform Construction Period of Performance	A	R	R	R	I			
	Ongoing Risk Identification and Reporting	A	R	R	C	C			
	Conduct Routine and Ad-Hoc Reporting	A	R	R	C	I		I	I
	Conduct Readiness Status and Project Reporting	A	R	R	I	I		I	I

Non-Capital is defined as OIT projects/upgrades managed by OEHRM and OIT, as seen in the following RACI Diagram:

NON-CAPITAL									
Area	Task	VHA				OEHRM		OIT	
		HEFP	VISN	VAMC	P&LO	TIO	CMO	OTI	ITOPS
WAN (Network)	Assess Interface Availability		I			C	I	I	A, R
	Assess Circuit Monitoring (bandwidth/utilization)		I			C	I	I	A, R
	Design (Redundancy)		I			C	I	I	A, R
	Obtain Funding for LAN/WAN/ WLAN Refresh					A, R		C	C
LAN (Network)	Define Patching Cable Requirements	I	I	I	I	A, R		C	C
	Provide Funding and Determine Procurement Strategy		I	I		A, R		C	C
	Supplying of Network Patch Cables	I	I			A, R	I	I	C
	Supplying of Network Switches		I			A, R	I	I	C
	Installation of Network Patch Cables and Switches	I	I	I	I	A		I	R
	Assessments of LAN switches end of life Refresh					I			A, R
	Provide Environmental Central Monitoring in Telecom Rooms	A	R	R		C	I	I	C
	Build the LAN Topology Design		I			C	I	I	A, R
WLAN (Network)	VA Wireless Design, Equipment and Operation		I			C	I	I	A, R
	Determine PoE to access point					C	I	I	A, R
	Install Network Cable to access point		A			C	I	I	R
EUD and Peripherals	Obtain Funding for EUDs and Deployment Support		I			A, R	I	C	C
	Acquire EUDs					A, R	I	I	C

NON-CAPITAL									
Area	Task	VHA				OEHRM		OIT	
		HEFP	VISN	VAMC	P&LO	TIO	CMO	OTI	ITOPS
	Installation and Deployment of EUD and peripherals						I	I	A, R
Medical Devices	Procurement of Medical Devices	R	A	R	R	R	C	C	I
	Installation of Cerner Bio- Medical Devices	R	A	R	R	I	I	C	
Cerner supplied connectivity engines (CCE)	Procure CCE	I	I	I	I	A, R	I		
	Install CCE	R	A	R		I	I	I	
VOIP	Determine Gigabit Data Rate pass through to EUD		I			C	I	I	A, R
	Obtain Funding for VoIP					A, R	I	C	C
Cerner Go Live Help Desk	Incident and Problem Ticket Reporting					A, R	I		
	Provide space to support Go Live	A	R	R	R	I	C	I	I
	National ACD Configuration					C	C	I	A
	Provide GFE and network to support the Help Desk					A, R	I	I	R
	Obtain PIV card for Cerner Help Desk staff					A, R	C	I	C
VA Enterprise Service Desk (ESD)	Fund and Implement Remedy Interface to ServiceNow			C		A, R	I	I	C
	Implement ACD Configuration			C				I	A, R
	IVR Configuration / Call Routing					I	I	I	A, R
Millennium Service Desk (Post Go Live)	Incident and Problem Ticket Reporting					A, R	I	I	I
	Develop Standard Operating Procedures		I	I		A, R	C	I	C
	Acquire Help Desk Staffing					A, R	I	C	C

NON-CAPITAL									
Area	Task	VHA				OEHRM		OIT	
		HEFP	VISN	VAMC	P&LO	TIO	CMO	OTI	ITOPS
	Provide Knowledge Documents					A	C	I	C
Training Space*	Installation of Monitors/Teleconferencing	I	I	I, R	I	A, R	I	I	R, C
	Obtain Funding for VA Workstation PC/Monitor/Keyboard/Mouse and installation	I	I	I	I	A, R	I	C	C
	Installation of VA Printers	I	I	I	I	C	I	I	A, R
	Installation of Projectors	I	I	I	I	A, R	I		C
	Breakroom/Microwave/Refrigerator	I	I	A	R	C	I		
	Provide space for Training	A	R	R	R	I	C	I	I
Command Center *	Installation of Monitors/Teleconferencing	I	I	I	I	A, R	I	I	R
	Obtain Funding for VA Workstation PC/Monitor/Keyboard/Mouse and installation	I	I	I	I	A, R	I	C	C
	Installation of VA Printers	I	I	I	I	C	I	I	A, R
	Installation of Projectors	I	I	I	I	A, R	I		C
	Breakroom/Microwave/Refrigerator	I	I	A	R	C	I		
	Provide space for Command Center	A	R	R	R	I	C	I	I
	Fund and Procure VoIP and telephony supply and cable	R	R	R	R	A, R	I	I	I
Cloud **	Provide and operate VA enterprise Cloud								
	Consider hosting of any VA								

** For facilities that are not at the VAMC/VISN, the OEHRM Infrastructure Readiness RACI will need to be adjusted*

*** Cloud Strategy and Approach will be defined in the Sustainment Guide*