

Attachment A

to

RFP 4647

Mississippi Veterans' Affairs Board
(MSVA)

Nurse Call System

Technical Requirements

ITS Project No. 48483

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I. GENERAL

A. How to Respond to this Section

1. Beginning with Item 15 of this section, label and respond to each outline point in this section as it is labeled in the RFP.
2. The State is under the impression that Vendors have read and agree to all items in this RFP. Vendors should take exception to items in which they disagree.
3. The Vendor must respond with “WILL COMPLY” or “EXCEPTION” to each point in this section. In addition, many items in this RFP require detailed and specific responses to provide the requested information. Failure to provide the information requested will result in the Vendor receiving a lower score for that item, or, at the State’s sole discretion, being subject to disqualification.
4. “WILL COMPLY” indicates that the vendor can and will adhere to the requirement. This response specifies that a vendor or vendor’s proposed solution must comply with a specific item or must perform a certain task.
5. If the Vendor cannot respond with “WILL COMPLY”, then the Vendor must respond with “EXCEPTION”. (See Section V, for additional instructions regarding Vendor exceptions.)
6. Where an outline point asks a question or requests information, the Vendor must respond with the specific answer or information requested.
7. In addition to the above, Vendor must provide explicit details as to the manner and degree to which the proposal meets or exceeds each specification.

B. General Overview and Background

8. The Oxford Veterans Home provides care, on average, to approximately 115 Veterans and dependents. This facility was constructed in 1996.
9. Below is a link to the Mississippi Veterans’ Affairs Board’s website.
<https://www.msva.ms.gov/>

C. Procurement Goals and Objectives

10. Mississippi Veterans’ Affairs Board is seeking a Vendor to install a single, facility-wide, Nurse/Patient Communications Network that offers virtually unrestricted flexibility in assignment of annunciation for system patient stations, peripherals, and nurse consoles. This system shall be a single network capable of up to: 20 Tek-CARE® Module variations, supporting Master Station consoles, Patient Stations and Peripheral Stations.
11. Conventional nurse call systems that utilize limited Personal Computer operating systems or local controller/switchers shall not be accepted.
12. All system components shall be listed to the UL®1069 standard by a qualified Nationally Recognized Testing Laboratory (NRTL). Systems having a “core” system only listed shall not be acceptable.

D. Current Environment

13. The current, internally controlled and monitored Nurse Call System is 28 years old and is past its useful lifecycle and routinely requires maintenance, parts, and service,

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which creates the potential for negative outcomes. The current system is no longer commercially available, and lack of parts availability further exacerbates the complexity of system repair and sustained functionality. The Nurse Call System is an essential and extremely critical component of resident/patient care in a Long-Term Care facility. The Federal and State Life safety code and Health Care Facility Code that require this system are (ANSI/UL 1069, UL 2650, Chapter 7 NFPA 99 and NFPA 101). Additionally, the Miss. Code Ann. §41-9-17 Rule 41.84.23 and Miss. Code Ann. §43-11-13 Rule 45.40.11 apply.

14. This system is an internal (facility) use system, and it does not communicate with outside civil authorities or emergency response organizations. It does provide the Oxford Home staff (by unit) with internal response capabilities in order to provide care, in a timely manner, for its Residents. The Residents of the facility have a broad range of disabilities and needs and therefore require prompt attention to issues as they arise.

E. Vendor Qualifications

15. Vendor must be an Authorized Distributor for the product supplied. An Authorized Distributor Letter from the manufacturer is required upon request of MSVA.
16. Vendor must obtain all applicable state licenses. Vendor shall provide proof of being licensed, bonded, and insured with their proposal response.
17. Vendor must provide, with their proposal response, a current certificate of successful completion of manufacturer's installation/training school for installing technicians of the equipment being proposed.
 - a. Training recertification to occur every three (3) years.

II. FUNCTIONAL/TECHNICAL REQUIREMENTS

A. System Hardware

18. **MANDATORY** - System hardware shall be manufactured by an ISO 9001:2015 certified company. Equipment manufactured by companies that are not ISO 9001:2015 shall not be acceptable.
19. **MANDATORY** - The wired nurse call system hardware shall consist of the Tek-CARE® nurse/patient communications network, comprised of the items in the Cost Information Submission form.
20. **MANDATORY** - All necessary equipment required to meet the intent of these specifications, whether or not enumerated within these specifications, shall be supplied and installed to provide a complete and operating nurse/patient communications network.
21. **MANDATORY** - The system shall provide for full-duplex audio between master stations in the handset mode, and remote (patient, staff and duty) audio stations. Half-duplex audio shall be selectable by individual remote audio station for areas with abnormal acoustical requirements.
22. **MANDATORY** - System firmware shall be the product of a reputable firmware manufacturer with a proven history of product reliability and sole control over all source code. System firmware upgrades shall not require any exchange of parts. Any supplier whose equipment requires the exchange of parts for firmware upgrades shall not be acceptable.

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23. **MANDATORY** - Equipment manufacture and testing shall be executed by an ISO 9001:2015 certified company. Manufacturing testing shall utilize applicable custom fixtures to assure the highest quality production.
24. **MANDATORY** - The Nurse Call System provider shall provide a Fail-Safe Network topology as described below:
 - a. The Network shall be of a closed, proprietary nature, except where routing technology is employed to provide limited, controlled access to external ancillary systems. The Network bandwidth shall be automatically monitored, and the traffic shall be automatically controlled to ensure the specified performance.
 - b. The headend equipment must be able to function as a Network using a bus topology. A single failure of one NC435G3 Tek-CARE Hub shall not affect the functioning of other NC435G3s.
 - c. The Network shall be electrically supervised and include verification protocols for all critical data transmissions.
 - d. All components on the Network shall be provided with battery backup power in the event of the loss of facility-supplied AC power.
 - e. All system data required for the Network's operation and that of its components as relates to the primary nurse call functions shall reside in non-volatile solid-state memory. In the event of catastrophic failure due to adverse environmental conditions, the system shall use the most recent data to recover to normal operation.

B. Manufacturers

25. **MANDATORY** - The products specified shall be new and of the standard manufacture of a single, reputable, ISO 9001:2015 certified manufacturer. As a reference of standard and quality, functionality and operation, it is the request of MSVA that bids be based only on equipment manufactured by TekTone Sound & Signal Mfg., Inc., Franklin, NC 28734.

C. Network Wiring

26. **MANDATORY** - There shall be five (5) types of network wiring within the system.
 - a. P5 Patient Station Bus shall be CAT5 or better cabling wired using the T568B standard. Station bus wiring shall be comprised of:
 - i. Power, 3 pair 24 AWG (2 conductors). Note: CAT5-type cable shall be acceptable for use for Power wiring.
 - ii. Data and Audio, 1 twisted pair 24 AWG (2 conductors). Note: CAT5-type cable shall be acceptable for use for Data and Audio wiring.
 - b. Dome Light Bus shall be CAT5 or better cable and 6P6C modular connectors wired straight through. One pair in the CAT5 cable shall remain unused. Wiring length of each dome light bus shall not exceed 50'. Each dome light bus shall have a maximum of two dome lights connected.
 - c. Peripheral wiring shall be two #22AWG stranded wire from the room station to the peripheral device. Each peripheral bus shall not exceed 50' of wiring.

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- d. P5 Master Station Bus shall be CAT5 or better cabling wired using the T568B standard. Station bus wiring shall be comprised of:
 - i. Power, 3 pair 24 AWG (2 conductors). Note: CAT5-type cable shall be acceptable for use for Power wiring.
 - ii. Data and Audio, 1 twisted pair 24 AWG (2 conductors). Note: CAT5-type cable shall be acceptable for use for Data and Audio wiring.
 - iii. Plus one facility LAN connection and network cable (NC404TS)
- e. Tek-CARE® network wiring shall be CAT5 or better cable and 8P8C modular connectors wired straight through according to the T568B standard. The Tek-CARE® Network shall connect the NC435G3 network ports to the NC554/XX PoE Network Switch which in turn connects to the NC475 Tek-CARE® Appliance Server.

D. Station Hub

- 27. **MANDATORY** - The Vendor shall furnish, as shown on the plans provided, a number of NC435G3 hubs to furnish each nursing unit with the listed components as needed (numbers in parenthesis reflect maximums within an NC435G3). The NC435G3 provides the following connections:
 - a. Tek-CARE Network connections (1)
 - b. Master Station Ports (2)
- 28. Each port supports up to 1 master, or;
 - a. Station Ports (4)
 - i. Each port supports 1 addressable station / zone lights address
- 29. **MANDATORY** - Battery backup shall be provided at the PoE Switch location. In the event that a switch is made to battery power, a “BATTERY” message is displayed on the fault page at all associated master stations.
- 30. **MANDATORY** - It shall be possible for each NC435G3 Tek-CARE Hub to act as a standalone controller for its local stations in the event of a loss of network communications.

E. Nurse Master Stations (Consoles)

- 31. **MANDATORY** - The Vendor shall furnish, as shown on plans provided, optional nurse console(s) Model NC404TS, a Nurse Master Station with 22" touchscreen color LCD Display. It shall be a self-contained unit, desk or wall mountable. Model NC404TS shall be capable of the following functions:
 - a. The touchscreen of the NC404TS shall be a convenient interface used to control, access, and program system features and calls displayed on the touchscreen.
 - b. The touchscreen displays current calls and other data.
 - c. Full English display with user prompts.
 - d. Ability to display data on the current locations of staff.
 - e. Connectivity for a standard USB keyboard and/or mouse shall be supported via USB ports on the rear of the NC404TS master station.

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- f. The NC404TS shall display up to 5 incoming calls with the ability to select a call and/or scroll to any active call using the touch screen, each call with an individual elapsed timer which increments until the call is reset. Alternatively, calls and staff location may be displayed on station icons arranged by user preference into lockable positions on the touchscreen.
 - g. The Master Station shall be able to receive and display any or all calls placed in the system, including simultaneous call types from the same room. Calls shall be sorted and displayed first by call priority and then by the chronological time in which the calls were placed.
 - h. There shall be at least 256 possible unique user-definable call types.
 - i. Choice of Push-to-Talk or private conversation using the handset.
 - j. Automatic answer of highest priority call or selective answer of any displayed call.
 - k. Set/Review up to four levels of service required—STAT Assist, Staff L1 (Green), Staff L2 (Amber) & Staff L3 (Yellow).
 - l. Three user accessible tone levels for Day and Night time levels.
 - m. Audio—master page, zone page and system page with staff level filtering options.
 - n. Optional tone silence by user definable call types. Silenced tones are regenerated whenever a new incoming call is received.
 - i. Tone silence defaulted to “Routine” calls.
32. Software must require that a medical or staff member go to the room to cancel any alarm; requiring a physical check on the patient or resident. Software must not allow the master to be silenced in any way.
- a. Ability to block loudspeaker paging per patient station to facilitate a low-noise patient environment. Password protection can be enabled to allow only authorized access to audio paging.
 - b. Ability to swing an individual room using convenient per-station zoning.
 - c. Ability to zone capture an individual nursing unit, selected units, or all units in facility by using custom-defined zones, per-master zoning and per-station zoning.
 - d. Ability to do day/night transfer between consoles by selecting or dialing a master and initiating a Master Forward.
 - e. Direct messaging (canned/custom) to pocket pager(s).
 - f. Locate up to three levels of staff with remote cancel of manual staff registration: Staff L1 (Green), Staff L2 (Amber) and Staff L3 (Yellow).
 - g. Continuously supervised with self-diagnosing error messages.
 - h. ESD protected to 8kV per UL®1069.
 - i. Consoles may be located anywhere within facility nurse/patient communications network.
 - j. Pleasant sounding call tones.

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33. **MANDATORY** - The Vendor shall furnish, as shown on the plans provided, standard nurse console(s) NC415G3 compact Master Station with an integral 5-inch touchscreen display and interface. It shall be a self-contained unit, with wall or desk mount options. When desk mounted, it shall not occupy more than 55 square inches of desk space with the following specifications:
- a. This model Master Station shall be powered from the NC435G3 Tek-CARE Hub and does not require access to local AC power. Battery backup for switchover is provided at the PoE switch.
 - b. Utilizes a 5" color touchscreen display.
 - c. Display up to 3 incoming calls (with the ability to scroll to any active call), each with an individual elapsed timer that increments until the call is reset.
 - d. The Master Station shall be able to receive and display any or all calls placed in the system, including simultaneous call types from the same room. Calls shall be sorted and displayed first by call priority and then by the chronological time in which the calls were placed.
 - e. There shall be at least 256 possible unique user-definable call types.
 - f. Choice of Push-to-Talk or private conversation using the handset.
 - g. Automatic answer of highest priority call or selective answer of any displayed call.
 - h. Set/Review up to four levels of service required—STAT Assist, Staff L1 (Green), Staff L2 (Amber) & Staff L3 (Yellow).
 - i. Audio—master page, zone page and system page with staff level filtering options.
 - j. Optional tone silence by user definable call types. Silenced tones are regenerated whenever a new incoming call is received.
 - i. Tone silence defaulted to “Routine” calls.
 - ii. Software shall be able to optionally defeat Tone Silence feature.
 - k. Ability to block loudspeaker paging per patient station to facilitate a low-noise patient environment. Password protection can be enabled to allow only authorized access to audio paging.
 - l. Ability to zone capture an individual nursing unit, selected units, or all units in facility by using custom-defined zones, per-master zoning and per-station zoning.
 - m. Direct messaging (canned/custom) to pocket pager(s).
 - n. Locate up to three levels of staff with remote cancel of manual staff registration: Staff L1 (Green), Staff L2 (Amber) and Staff L3 (Yellow).
 - o. Continuously supervised with self-diagnosing error messages.
 - p. ESD protected to 8kV per UL®1069.
 - q. Consoles may be located anywhere within facility nurse/patient communications network.
 - r. Pleasant sounding programmable call tones.

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34. **MANDATORY** - Master Station firmware operates on TekTone's operating system. Master Stations which utilize an outside supplier's operating system where software failure ("lock-up") may occur due to inconsistencies and incompatibilities between operating system and equipment supplier's software, rather than operating in a firmware environment, shall not be accepted. All required software/firmware shall be supplied by TekTone.
35. **MANDATORY** - Programming of Master Stations shall be done locally, or from a ConfigTool Live configurator, or from a Tek-CARE connected PC-based configuration tool.
36. **MANDATORY** - It shall be possible to remove and/or replace any console(s) while the system is operational without the loss of any calls, damage to any system components, or reprogramming of console attributes.

F. Bedside Patient Stations

37. **MANDATORY** - The Vendor shall provide single bed Model IR431G3 or dual bed Model IR432G3 as shown on plans provided. Each IR431G3 single or IR432G3 dual bedside patient station shall be capable of the following:
 - a. At least 256 completely custom configurable call types. Configurability shall extend to call labels/priorities/levels/tone-dome light annunciations.
 - b. Full-duplex audio with the master station from the handset.
 - c. Programmable 24-character patient name or label, plus an 8-character architectural room name that display at master station with other relevant call information.
 - d. Up to three levels of staff service and a rounding function.
 - e. Include IR431G3 single DIN jack patient stations as required.
 - i. Single station shall include at minimum:
 1. One DIN jack
 2. Three buttons; 2 CALL and 1 RESET
 3. One small DIN supporting an SF432G3; "Y" cable to two ¼" phono jacks (for call cord or other dry contact)
 - f. Include IR432G3 dual DIN jack patient stations as required.
 - i. Dual station shall include at minimum:
 1. Two DIN jacks
 2. One button; RESET
 3. One small DIN supporting an SF432G3; "Y" cable to two ¼" phono jacks (for call cord or other dry contact)
 - g. Dummy plugs shall not be required to prevent calls from empty patient front panel station connectors. Systems that require dummy plugs to prevent calls are not acceptable. Patient stations must provide "cord-out" detection when call cords are used.
 - h. Full emergency and code blue supervision.

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- i. All peripheral device wiring shall terminate at the patient station. Systems requiring additional modules shall not be acceptable.
- j. Meet or exceed UL@1069 Electrostatic Discharge (ESD) requirements with test verification performed by Underwriters Laboratories, Inc.
- k. Plug-in pigtailed peripheral connections.
- l. Provide interface to local equipment alarm contacts (i.e., ventilator, IV drip, fire detector, etc.) to notify master console of local alarm condition in patient room. Call identifications shall be programmable.
- m. Support Dome Lamp Model LI484P5, designed to connect directly to patient station via current-limited station outputs.
- n. Common call-reset button for all Routine, Priority and Upgraded calls placed from station and one call-placed LED per bed.
- o. Continuous supervision for station power and data lines as well as data communications.
- p. Ability to program on a per station basis, each bed and entertainment/call cord receptacle and/or bused peripheral input to a custom call type.
- q. Ability to service exchange station “hot” (i.e., without removing system power or powering down local Central Equipment).
- r. Patient station addressing shall be accomplished using simple dip switches. Methods that do not provide for simple dip switch addressing shall not be acceptable.
- s. If specialty bed interface is required, provide one JK431G3 mounted on a 1-gang ring and 2-gang box for each bed.
- t. Depending on constructions the patient station shall fit within a RACO 692 or 697 (or equivalent) housing or Steel City H3BD with #3GC ring (or equivalent) housing.

G. Patient Entertainment Speaker/Call Cords

- 38. **MANDATORY** - The Vendor shall provide:
 - a. One per bed, a DIN-plug strain relief cable model SF401EX.
 - b. One per bed, a Model SF401A single-pendant-type oxygen-safe/waterproof call cord complete with 7' cord, DIN plug and sheet clip.
 - c. One per bed, a Model SF401G single oxygen/geriatric pressure-ball cord set utilizing a pneumatically controlled switch for use in oxygen-enriched environment, complete with 6' cord, DIN plug and sheet clip.
- 39. **MANDATORY** - Systems requiring special adapters to convert to DIN plugs, or that use non-standard (non-DIN) cord sets, shall not be acceptable.

H. Multipurpose Station

- 40. **MANDATORY** - The Vendor shall provide as required, a universal interface Model IR434G3 Multipurpose Station for standalone peripheral stations.
- 41. **MANDATORY** - Where shown on plans, this module may be used to drive corridor paging amplifier(s) via a grounded, shielded transformer (to prevent leakage current

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from being impressed on the isolated circuits of the nurse call system). Alternately, the IR434G3 may be connected directly to a 25-volt, ½-watt speaker for paging. Always use grounded, shielded transformers to prevent current leakage to the nurse call system's isolated circuits. This unit shall also be capable of providing auxiliary alarm device contacts inputs for nurse console notification of a local alarm(s) using the PM123 Aux Input module. It shall also provide the same peripheral inputs as patient stations.

I. Staff/Duty/Resident Station

42. **MANDATORY** - The Vendor shall provide as required, a Staff / Duty / Resident Station Model IR430G3.
43. **MANDATORY** - Each IR430G3 Staff / Duty / Resident Station shall have a call button, emergency button, reset button and speaker for audio communication. Pressing the call or emergency button shall place a call to the assigned Master Station; optional programming shall allow the default staff-call type to be changed to any valid patient station call type.

J. As a Duty Station

44. In addition to the call and audio capabilities, the unit shall provide remote annunciation of assigned bedside patient stations and peripherals via two RGB indicators around the Reset button and call tones; it shall drive an LI484P5 corridor light (in a zone lamp mode). The tones generated by the duty station shall be the same as the call tones generated by the master station. Duty stations that do not generate the same tones at the system's master station shall not be acceptable.
45. The Vendor shall furnish, as shown on plans provided, an audible/visual enhanced duty station Model NC415G3. The NC415G3 is a compact station with a 5" color touchscreen LCD Display. It shall be wall mounted or used on a desk with optional desk stand. Model NC415G3 shall be capable of the following functions:
 - a. The touchscreen of the NC415G3 shall provide audible and visual display of incoming calls as well as some level of call management including at least call screen, call status, keypad, zoning and annunciation settings
 - b. The NC415G3 shall be optionally wall mounted in a 2-gang box with an IH415W bracket or desk mounted with an IH415LD bracket.

K. Peripheral Stations

46. **MANDATORY** - The Vendor shall provide, as shown on plans provided, peripheral devices associated with multipurpose stations, bedside, staff, or duty stations that are wired via plug-in connectors. Individual peripheral devices shall be:
 - a. Waterproof Emergency pull-cord switch Model SF123 built in a single-gang ABS plastic Bezel with matching mounting plate. The SF123 utilizes a waterproof membrane faceplate with two button actuators and an optional 6-foot pull cord for call placement. Inserting optional button labeling allows the SF123 to be a code, emergency, bath or check-in switch.
 - b. Staff presence switch Model SF124 shall have four push buttons one each for three staff levels (i.e., Nurse, Aide and CNA) and one for a Staff Emergency call. When a staff member pushes the button, the associated LED and corridor lamp shall light. An existing patient call or service requirement shall be

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automatically canceled at time of registration and the staff may be located from any assigned nurse console.

- c. Auxiliary input module Model PM123 shall provide two inputs capable of monitoring normally open dry contacts allowing the Tek-CARE400 G3 Nurse Call Systems to monitor devices such as device alarm contacts, door contacts, security panel outputs, and more. There shall be two programmable behaviors; Follower and Acknowledge, which are programmable using the LS450 Config Tool.
- d. Remote speaker station IR160 can be used where audio might be needed away from the station.

L. Corridor Light Sets

47. **MANDATORY** - The Vendor shall:

- a. Provide corridor lights model LI484P5 as shown on plans. The corridor light shall be sectional in design, with a flame-retardant translucent plastic lens mounted on a flame retardant (UL@94 HB) plastic base panel. Dome light indications shall be provided by four multicolored LEDs that indicate patient call priority and staff presence. The dome light shall be programmable to produce any of eight colors: white, pink, red, orange, yellow, green, blue and purple. Each section of the LI484P5 shall be programmable with a primary and secondary color per any of 256 user definable call types. Wiring connections shall be plug-in.
- b. It shall be possible to connect a secondary LI484P5 Corridor Light to the Primary LI484P5. The Secondary LI484P5 mimics the call indications of the primary LI484P5 so that calls from a single room can be displayed in two locations. Systems that do not support secondary corridor lights are not acceptable.

48. **MANDATORY** - The LI484P5 may be used as a zone light by adding a PM424ZP5 Zone Light Module or an IR430G3 Duty Station. The PM424ZP5 shall support one Bath and one Code input to be used when a standalone switch is required.

M. Tek-CARE® Appliance Server

49. **MANDATORY** - The Vendor shall:

- a. Furnish an NC475 Tek-CARE® Appliance Server with Tek-CARE software as required.
 - i. Proprietary nurse call appliance server running the Tek-CARE OS. The Tek-CARE® Appliance. Server is available in two variants.
 - 1. The NC475 is a headless appliance server.
 - 2. The NC475DESK is supplied with a touchscreen monitor, and wireless keyboard and mouse.
 - ii. The NC475 can function as the primary master station for a Tek-CARE system.
 - iii. The Tek-CARE® Appliance Server shall sound an audible alarm when a call is placed, and staff shall be notified via the LCD display or touchscreen monitor if installed of the call type and room number.

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- iv. Includes paging software module for automatic and manual pages to staff.
- v. Software module choices include event monitoring, reporting, Staff App, Apple TV displays, email output, Tek-CARE® Event Monitor App for Windows, and more.
- vi. The Tek-CARE System with NC475 shall be able to support up to 254 Tek-CARE® Event Monitor App for Windows, 255 Apple TVs, and 255 Mobile Apps.
- vii. Tek-CARE® Appliance Server shall interface with the optional Tek-PAGING® Radio Pocket Paging System.
- viii. Backup power for the Tek-CARE® Appliance Server shall be supplied by an uninterruptable power supply (UPS). The UPS shall be TekTone PK250B.
- ix. The Tek-CARE® Appliance Server shall be capable of being configured to provide the features shown in the following sections.

N. Tek-CARE® Event Monitor App for Windows Software

- 50. **MANDATORY** - The Nurse Call System shall support an optional remote Tek-CARE® Event Monitor App for Windows that may be installed on any networked facility personal computer running Windows 10 or higher. The Tek-CARE® Event Monitor App for Windows requires that the Tek-CARE® Appliance Server be connected via LAN and properly licensed.
- 51. **MANDATORY** - The Tek-CARE® Event Monitor App for Windows shall display all calls from connected Nurse Call Systems as well as Nurse Call System faults. The Tek-CARE® Event Monitor App for Windows software shall be TekTone LS623-series.
- 52. **MANDATORY** - The Tek-CARE® Appliance Server shall be configured using LS450 configuration software for setup and programming. The configuration software shall enable programming of all licensed system features.

O. Configuration Software; ConfigTool LS450

- 53. **MANDATORY** - The Tek-CARE® Appliance Server shall be configured using LS450 configuration software for setup and programming. The configuration software shall enable programming of all licensed system features.

P. Configuration Software; ConfigTool Live LS454

- 54. **MANDATORY** - The LS454 software shall also enable users to view information about the system, including patients, staff, staff groups, staff assignments, and scheduled messaging and make limited changes to the system configuration while the system is up a running (Live).
- 55. **MANDATORY** - The LS454 may also be used as a remote monitor from one location.

Q. Reporting System

- 56. **MANDATORY** - A reporting system that is operationally transparent to the Nurse Call System shall be provided with the system. The reporting database shall automatically log system events and store them for retrieval at a later date.

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57. **MANDATORY** - Any event that is annunciated by the system shall be automatically logged in the reporting database. The database shall record all system activity for review at a later time using the optional Reporting software. The database shall record all information about the event, including response time and the time and date of the event. No action by the user shall be necessary to record system events. The database shall not require any maintenance or periodic cleanup by the user.
58. **MANDATORY** - The reporting system can be accessed by any of the following: a PC on the network accessing the NC475 Tek-CARE® Server, a Tek-CARE® Event Monitor App for Windows and the ConfigTool Live running on networked PCs.
59. **MANDATORY** - Report creation shall be simple and completely customizable. Reports shall be viewable in a web browser as an HTML file or exported as a CSV file. The reporting system shall have quick links for creating commonly requested report ranges (last day, last week, etc.) as well as offering fully customizable report creation.
60. **MANDATORY** - Using the optional LS453 Email Output software, the reporting system shall be capable of generating reports and distributing them automatically via email.
61. **MANDATORY** - The reporting system shall be available as an optional feature and shall be TekTone LS610 series.

R. Email Output

62. **MANDATORY** - The Vendor shall provide:
 - a. An interface to the facility's mail server that routes calls via an unauthenticated SMTP route from the nurse call system to email addresses as required.
 - b. The email output software shall enable real-time event notifications to be sent to email addresses and any device with an email gateway.
 - c. The email output software shall allow users to create scheduled reports that are emailed directly to the specified users.
 - d. The email output software shall be available as an optional feature and shall be TekTone LS453.

S. System Diagnostics

63. **MANDATORY** - All Network modules and Apps, Nurse Master Stations and IR400-series stations in the system shall be continuously supervised for power and data. Each IR400-series station shall in turn monitor its peripheral bus devices and dome lamps as previously specified. All system faults shall be annunciated on a Nurse Master Station with pertinent information as to the type and location of fault.

T. Performance

64. MSVA requires specific assurances that the proposed system will meet performance standards. Listed below are MSVA's desired performance standards. Vendor must agree to these performance standards or propose alternate standards that will be evaluated to determine acceptability in meeting this requirement.
65. The system must perform successfully in accordance with the RFP functional requirements, at the judgment of MSVA.

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66. The system must perform successfully in accordance with all manufacturer and Vendor's technical and user specifications.

III. IMPLEMENTATION REQUIREMENTS – STATEMENT OF WORK

A. Vendor Acknowledgement

67. This section outlines the minimum expectations of the awarded Vendor for implementation of the selected solution. Implementation deliverables will reveal the Vendor's expertise in project management, data conversion/migration, and acceptance testing, etc. MSVA expects the preliminary implementation plans to be refined by the awarded Vendor and MSVA project managers during the implementation process. Whether the awarded Vendor will need to be onsite at any time will be determined by the implementation project demands. MSVA reserves the right to require onsite Vendor participation if it would be in the best interest of MSVA.
68. The State expects the awarded Vendor to be responsible for design, configuration, implementation, testing, training, hosting, maintenance, and support of the awarded solution.
69. The State expects implementation with limited interruption to incumbent MSVA business operations. Any interruption to such operations must be approved by MSVA and conducted in a way to prevent loss of service.
70. Upon award, MSVA intends for the requirements set forth in RFP 4647, Attachment A to RFP 4647, and the awarded Vendor's proposal, including any subsequent, agreed upon provisions and revisions, to act as the Implementation Statement of Work.

B. Project Work Plan and Schedule

71. Vendor must propose a project work plan that includes an implementation plan and schedule. The plan must include, but not be limited to, tasks (all phases), estimated hours per task, major project milestones, quality assurance checkpoints, etc. Provide an estimated timetable detailing all phases of implementation from the point of contract execution through completion of go-live, final system acceptance, and user training to MSVA staff and end users.
72. Upon award, the Vendor and MSVA will jointly modify the proposed plans as appropriate to meet implementation objectives. MSVA expects the Vendor to work with the MSVA Project Manager to ensure effective project management during all phases.
73. Vendor will be responsible for any integration or implementation issues that may arise during implementation.
74. As it relates to this procurement, Vendor must state all assumptions or constraints regarding the proposed solution and overall project plan, timeline, and project management.
75. Vendor must identify any potential risks, roadblocks, and challenges you have encountered in similar implementations that could negatively affect a timely and successful completion of the project. Vendor must recommend a high-level strategy that MSVA can take to mitigate these risks.
76. The implementation plan must include multiple environments, including Development, User Testing, Final Acceptance Testing, and Production.

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77. In the testing environments, all customizations, integrations, and interfaces must be tested and validated.
78. It is the responsibility of the Vendor to coordinate all work with the other trades for scheduling, rough-in, and finishing all work specified. MSVA will not be liable for any additional costs due to missed dates or poor coordination of the supplying Vendor with other trades.

C. Samples

79. The owner/MSVA reserves the right to request one each, samples of terminal (station) equipment for the purpose of coordinating colors, aesthetics, trim-plate sizing, etc. These samples would be supplied at no cost to the owner after bid is awarded.

D. Installation

80. Only TekTone factory-certified installers shall install, service, and maintain the specified network system.
81. The manufacturer shall have the equipment manufacturer's engineer, or their designated agent inspect the installation and operation of this network to determine that the network complies with all standards listed in Section II – Functional/Technical Requirements, Item C – Network Wiring.
82. The Vendor shall terminate all wiring with manufacturer's approved connectors. The use of wire nuts is prohibited.
83. All wiring shall be free from shorts and faults. Wiring shall be UL® Listed, and installed in accordance with ANSI/NFPA 70, Article 25 and applicable sections of ANSI/NFPA 99, and compliant with the manufacturer's installation and maintenance manual and specifications.
84. Nurse patient communications network wiring shall not be run in the same conduit with other systems (e.g.: Class 1 AC power distribution, fire alarm, entertainment systems, lighting controls, etc.).
85. It shall be the responsibility of the facility to provide a dedicated 120 VAC, 60 Hz conduit feed into the equipment cabinet. This power feed shall not have any other devices connected to it. A 20-amp circuit breaker shall be located in the electrical sub-panel. This circuit breaker shall be labeled "Nurse Call" along with identification of the Nursing Unit that shall be controlled by this circuit breaker. This electrical circuit shall be connected to the facility's emergency power system for automatic power switchover during loss of utility power.
86. Vendor must connect all network system power supplies and equipment cabinets to a common earth ground approved for the application utilizing a 14 AWG or larger solid conductor which is at minimum the same conductor size as the AC feed wires.
87. The installing Vendor shall make certain that all central equipment is accessible for service. Vendor shall notify MSVA if designated equipment closet does not meet manufacturer's requirements for heat, radiation, or static electricity.
88. The Vendor shall protect network devices during unpacking and installation by wearing manufacturer-approved ESD wrist straps tied to earth ground. The wrist strap shall meet OSHA requirements for prevention of electrical shock if technician comes in contact with high voltage.

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89. It shall be the responsibility of the Vendor to keep the work area clear of debris and to clean area daily at completion of work.
90. It shall be the responsibility of the Vendor to patch and paint any wall or surface that has been disturbed by the execution of this work.
91. Vendor must provide as-built drawings of all installed network components and associated wiring on building plans. Final payment for work will not be authorized unless these drawings are supplied.

E. Removal of Existing Products

92. The Vendor shall remove all existing product and deliver to the owner, or at the direction of the owner, properly dispose of same.
 - a. MSVA will vacate a nursing unit at a time, making it available on a timetable for the installation of the new equipment.
 - b. MSVA will continue to occupy the nursing units where equipment will be replaced. Supplying Vendor will need to coordinate work with nursing administration for each nursing unit to obtain a minimum group of four rooms at a time for replacement of equipment. The existing nurse call equipment or a temporary wireless call system must be maintained and operational during this replacement period, except for the four rooms being renovated.

F. Training Requirements

93. The Vendor must provide thorough in-person training of up to ten (10) nursing staff assigned to those nursing units receiving newly networked nurse/patient communications equipment. This training shall be developed and implemented to address two different types of staff: floor nurses/staff shall receive training that is specific to their tasks and responsibilities, and similarly, unit secretaries (or any person whose specific responsibilities include answering patient calls and dispatching staff) shall receive operational training from their perspective. A separate training room shall be set up that allows this type of individualized training utilizing in-service training unit, prior to the turning over of the new system.

G. Acceptance Test Plan

94. The purpose and net result of the acceptance test is to determine that the system proposed and installed meets the technical and functional requirements outlined in these specifications. A system considered 'acceptance test ready' is defined as a system that has completed a full system test with no known outstanding material defects.
95. The Vendor must provide a proposed 'Acceptance Test Plan' (ATP) prior to implementation of the system. The ATP must show events, sequences and schedules required for acceptance of the system. MSVA must provide written approval that the proposed ATP is complete and acceptable.
96. MSVA personnel will conduct acceptance testing of the system after system testing has been completed and certified by the Vendor. The Vendor must participate in the acceptance testing of the system by providing technical staff at MSVA's office location to provide assistance in demonstrating all functions of the system. The system must be demonstrated to be operational by MSVA employees to ensure that proper training has been received.

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97. The Vendor must agree to and allow for an acceptance period of 30 working days in accordance with the work plan delivery schedule.
98. In the event that one or more modules is not accepted based on the test criteria, the Vendor must provide, at his own expense, whatever software or remedy may be required to meet the acceptance criteria within 30 working days.
99. The system must meet performance requirements as stated in Section T Performance of this RFP. MSVA and the Vendor will mutually define the criteria for the performance test.
100. The Vendor must provide all documentation for the module being tested before acceptance testing will begin.
101. The Vendor must conduct an operational systems test of the proposed system and certify, in writing, that the system is ready for use and will perform in accordance with the requirements stated in this document. The Vendor must ensure that the system in general and each module of the system in particular operates according to specifications before turning the system over to MSVA. MSVA will not debug modifications for the Vendor.

H. Final Acceptance Review

102. Vendor agrees that upon the successful completion of all implementation phases, including end user training, MSVA will conduct a Final Acceptance Review (FAR) to determine whether or not Vendor has satisfied the terms and conditions of the awarded contract, which includes the requirements of RFP No. 4647, and Attachment A to RFP 4647.

IV. WARRANTY

A. Warranty Requirements

103. The warranty shall include all necessary labor and equipment to maintain the system(s) in full operation for a period of one year from the date of installation. Equipment only, manufactured by the manufacturer shall be warranted for five years; provided the installation is performed by factory-certified technicians, and an inspection of the installation is done by a person(s) designated by the factory. The Vendor shall maintain a service department, necessary spare parts, telephone answering services, and call dispatching required to implement the service standard stated below as part of this contract. After the acceptance of the system(s), service shall be provided within 4 business hours (24 hours a day, 7 days a week, 365 days a year).
104. The Vendor shall:
 - a. Provide necessary spare parts, as needed, after commissioning of system(s) and before final payment.
 - b. Provide sponsorship for at least one person designated by the owner to attend a service school held by the equipment manufacturer. Transportation to this school, meals, and lodging will be borne by MSVA. The equipment manufacturer shall provide school free of charge at TekTone.
 - c. MSVA may choose to have the supplying Vendor maintain the system(s). The level of service provided during the maintenance contract period would be the same as the warranty period for routine and emergency service. All labor and

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equipment costs shall be covered under this contract. Supplying Vendor must state exact billing amounts, billing periods and all costs associated with this maintenance agreement and list any items that would not be covered under the service/maintenance agreement.

V. OTHER

A. Other Requirements

105. ITS acknowledges that the specifications within this RFP are not exhaustive. Rather, they reflect the known requirements that must be met by the proposed solution. Vendors must specify, here, what additional components may be needed and are proposed in order to complete each configuration.
106. If any component(s) necessary for operation of the requested system is omitted from Vendor's proposal, Vendor must be willing to provide the component(s) at no additional cost.

VI. APPENDIX 1 – SUBMITTALS

107. The system described by this specification is the Tek-CARE400 G3 system using the NC435G3 Tek-CARE Hubs, manufactured by TekTone Sound and Signal Mfg., Inc. The Tek-CARE400 G3 system using NC435G3 modules meets all requirements outlined in this specification. The Tek-CARE400 G3 system using NC435G3 modules shall be considered the basis for all submitted bids.
108. Any supplying Vendor proposing equipment which is not the base standard for this specification must provide full submittals at the time of bid. This option shall be exercised at the discretion of the owner/MSVA.
109. In the event the MSVA decides to reject the submittals of a supplying Vendor, the MSVA may ask the Vendor to resubmit if the discrepancies are minor. Otherwise, rejection of submittals means the specified product must be supplied.
110. Prior to commencement of work, the supplying Vendor shall submit six (6) complete submittal sets. These sets are to be submitted in three-ring binders, continuous spiral binders, or plastic bindings that allow the booklets to lie flat while open. Each booklet shall consist of the following:

Pages	Description
Page 1	Name of supplying contractor and project name.
Page 2	In the following order, a listing of: component quantities, equipment manufacturer, model number, and description of each component being supplied. If equipment being supplied is not the specified equipment manufacturer's model, alongside the submitted model number and description, list the specification paragraph that corresponds to the equivalent specified model. Failure to provide this information shall result in the rejection of submittals.
Page 3	Recently dated (within one year from submittal date) support letter from manufacturer stating that the supplying contractor is an Authorized Distributor of the product being supplied.
Page 4	A statement of warranty policy from manufacturer.

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Page 5	A copy of the installing technician(s) certificate of completion from the manufacturer's training school (within three years from submittal date) for the equipment being proposed.
Page 6	A written statement by contractor of how and when they will complete In-Service Training, including the minimum number of hours being provided per system, procedures they will follow, what training aids are provided (technical and user manuals, data sheets, etc.) and how contractor will conduct training.
Page 7	A written statement from contractor of: (a) exactly how the contractor will test installed equipment and wiring, and (b) exactly how all the tests recommended by manufacturer will be performed by the contractor, prior to commissioning of system.
Page 8	Provide a written copy of the manufacturer's list of all of the recommended spare parts to maintain all systems specified after the warranty period. Provide the purchase price and turnaround cost (i.e., Facility's) associated with each item. List separately the cost of an annual maintenance. Show the hourly, purchased labor rates for both regular and emergency service. State any additional charges that may accompany labor charges (such as, but not limited to, travel charges, lodging, etc.).
Pages 9+	One catalog sheet per product of equipment listed on page 2, in the exact order as listed on page 2. Each catalog sheet shall describe mechanical, electrical and functional equipment specifications. Photocopy duplications of the manufacturer's original equipment catalog sheets will be allowed as long as they provide adequate clarity of all printed words, graphics, pictures, illustrations and other information material to the evaluation of the submittal. Submittals that are not of adequate clarity or content may be rejected and resubmission may not be allowed.
Last Page(s) or Separate	Provide all inter-equipment wiring diagrams and drawings necessary to install the equipment being supplied. These drawings will show, in detail, all wiring types by wire gauge, conductors and wire manufacturer. These drawings must be updated prior to completion of any work to reflect changes that may have been made during actual installation.