

HART PUBLIC SCHOOLS

Request for Proposals for District VoIP Telephone System & Voice Processing System

Date Issued: May 17, 2010

Date Due: June 18, 1:00 pm

**Contact Person: JASON GALE, Technology Director
Hart Middle School
308 Johnson St.
Hart, MI 49420
(231) 873-6215 or (231)742-8215 Cell
jaygale@hart.k12.mi.us**

To schedule a facility walk thru call the contact person.

**Bids may be submitted by mail or delivered to the address above. No faxed responses.
Bid opening: (typically 10 minutes after bids are due)**

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I. Introduction:

HART PUBLIC SCHOOLS is soliciting bids from reputable manufacturers and distributors of business telephone systems and voice mail equipment. The selected vendor will be our primary source for the following:

- Business telephone system hardware and software and voice mail equipment required to network in a distributed campus-type configuration. Feature requirements are detailed in Section IV & V and configuration requirements are detailed in section VI.
- Installation and configuration services for this equipment.
- Training of users and administrators.
- Maintenance of purchased and installed equipment and software.
- Upgrades to the installed systems as necessary.

Please note that the term “PBX” or “Key” system is used throughout this RFP for brevity purposes only, and not to specify or categorize the system as anything other than a business telephone system. The actual functionality required includes both key and PBX functionality. Please note that reference is also made to a hybrid configuration with the ability for the base bid VoIP system to be equipped for both VoIP and digital phones. Please indicate as Voluntary Alternate, hardware and software cost to equip system for 16 digital stations – unit cost for digital station, and unit cost for cards, software required to enable for digital phone.

The proposed telephone system must be capable of networking multiple systems together to work as one large system. This must include the capability to share across owner's fiber network a centralized voice mail system, centralized trunking, ability to answer incoming calls for all locations at the main location, dial between locations using a coordinated dialing plan and System Administration browser based software. Describe how these needs will be met with the proposed telephone system using both DS1 (T1) circuits to provide ISDN-type interconnectivity, or over an IP network.

Campus Buildings:

Hart High School,
Hart Middle School,
Spitler Elementary,
Hart Upper Elementary,
Transportation

The NOC is located at the Middle School, with all buildings connected via private multi mode fiber. 6PR Middle School NOC to Hart Upper Elementary and Spitler Elementary, 3 PR to Hart High School. The transportation building is connected via CAT5E back to the Main IDF in Hart Upper Elementary.

Data Electronics: It is intent for Hart Public Schools to create a separate voice network using existing mutlti-mode fiber at the NOC.

The quantity of network devices provided must be capable of supporting and powering the number of VOIP devices per location as noted elsewhere.

One Data Center Core Switch shall be provided by contractor for head end connectivity for WAN IDF and EDGE connections in the Hart Middle School Data Center. Existing data electronics is HP Procurve.

EDGE Switches: Contractors should provide Ethernet EDGE Switches based on VOIP phones count noted elsewhere. EDGE switches must provide QOS, auto detection of IP phones, and IEEE 802.3af POE capability. Propriety powered distribution shall not be acceptable. The contractor shall provide network connectivity accessories including media modules and cables to provide connect switches to owner's network.

II. RFP Instructions

A. Completing the RFP

Each question requires a written response. If you would like to attach documentation to support your answers, please do so. However, the summary answers should stand on their own. The quality of the response to the RFP will be viewed as an example of the vendor's capabilities.

The RFP asks questions about functionality, approach, and pricing. If you require any clarification, provide the questions in writing via fax to **Jason Gale, (231) 873-0245 or via email jaygale@hart.k12.mi.us** by no later than 5:00 PM local time, **June 11, 2010**.

Only existing business telephone and voice mail systems will be considered. Telephone or voice mail systems under development, in planning, or at beta test will not be considered. However, vendors can include additional information about future developments or plans under separate attachment.

Quoted prices and discounts should be guaranteed for at least 90 days from the response date.

Base Bid:

Assumes Contractor Base Bid response meets or exceeds all requirements/specifications as set forth in the RFB Base Bid and/or Addendums . Contractor Base Bid response must include a 20% growth factor – without addition of software, hardware upgrades. Note any discrepancies.

Alternate Bids

Alternate Bids must be shown as an Add/Deduct from the specified system with full description of feature additions/deletions from Base Bid. Note any discrepancies

B. Format, Due Date

Proposals are due **no later than 1:00 p.m. local time June 18, 2010**. Late responses may not be considered. Submit responses to:

**Jason Gale
Technology Director
HART MIDDLE SCHOOL OFFICE
308 W. Johnson Street
Hart, MI 49420**

NOTE: Bid Responses may NOT be submitted via fax.

All submitted proposals will be considered the property of **HART PUBLIC SCHOOLS**.

All proposals should include copies of product descriptions for the proposed equipment. All equipment proposed shall be new and latest release.

Three **(3) copies** of your completed proposal should be submitted on hard copy, and **one (1)** as a Word compatible document on diskette.

Name one person to be the coordinator for your RFP response and for any clarification activities, which might be necessary.

Contact Name: Jason Gale
Company: Hart Public Schools
Title: Technology Director
Address: 308 W. Johnson Street
Email Address: jaygale@hart.k12.mi.us
Phone: 231-742-8215
Fax: 231-873-0245

Sealed bids, 3 copies, will be received until 1:00 pm local time at the Hart Middle School Office, 308 West Johnson Street, Hart, MI 49420.

Public Bid Opening to follow at 1:15 pm in Room D110 at the Hart Middle School 308 West Johnson Street Hart, MI 49420.

Sealed Bid Label to indicate: Hart Public Schools, Phone System & Voice Mail RFB response, June 18 and 1:00 pm, Attn: Jason Gale, Technology Director.

Contractors must submit a single proposal for all the elements described; no proposal may be withdrawn after scheduled closing time for receipt of proposals for at least 90 days.

Contractor Qualifications

Contractors must be an authorized dealer for the proposed products with service facilities no less than 75 miles from site.

Prospective bidder shall be in business of providing Technology Communications Systems for no less than 5 years with a minimum of 5 installations comparable to the system described herein.

Manufacturers Dealer Agreements or Franchise Papers for all major products within this specification shall accompany the bid. Failure to include Dealer Authorization certificate shall disqualify the bid response.

Attach a detailed bill of materials and specification sheets of each device to be included in response.

Required Bonds: Bidders are required to include in proposal a bid security in the form of a Certified Check/Cashiers Check/Bid Bond in the amount of 5% of the total bid amount. The successful Bidder will be required to furnish a Labor and Materials Bond valued at the full amount of the contract. The successful Bidder will be required to furnish a Performance Bond valued at the full amount of the contract at the time of award.

C. Contract

The proposal should include a contract for all proposed equipment and services. If the vendor does not wish to submit an actual contract with the proposal, due to different alternatives proposed and pending choices from those alternatives, a sample contract should be submitted with the proposal.

D. Confidentiality

All material submitted by HART PUBLIC SCHOOLS must be treated as confidential and cannot be used for any other purpose than the response to this RFP. Information submitted by any vendor will be considered confidential to HART PUBLIC SCHOOLS and will not be used for any other purpose than evaluating vendor responses.

E. Selection Process

A number of factors will influence HART PUBLIC SCHOOLS decision in selecting the product and the vendor providing it. In addition to cost considerations, proposals will be evaluated on the basis of the following factors:

1. Functionality of standard equipment and features to meet our specific needs
2. Availability of additional optional capabilities to add as needed
3. System growth and expansion

4. Ease of use
5. Ease of System administration
6. Product quality, reliability, and warranty plan
7. A credible commitment by the vendor to the product and to ongoing enhancement of both feature capabilities and service
8. Vendor qualification including:
 - a. Overall experience and reputation in the industry
 - b. Experience with the proposed system
 - c. Service and support resources, including training of vendor installation and maintenance personnel
 - d. Verifiable quality of service provided by vendor to area customers

Please note that HART PUBLIC SCHOOLS will select the vendor based upon the best overall solution and value, and is not obligated to select the lowest price bidder.

F. Disclaimer

This RFP does not commit **HART PUBLIC SCHOOLS** to any specific course of action. **HART PUBLIC SCHOOLS** reserves the right to not select any vendor or purchase any goods and services resulting from this RFP.

III. Vendor Background

A. Company Information

1. List your company's legal name, address, and telephone number. Include parent company information if applicable.
2. How long has your company been in business under the current business license?
3. How long has your company or division been providing business telephone systems and related equipment?
4. Have you ever filed for bankruptcy?
5. Indicate whether your company is the manufacturer or the distributor of the proposed equipment. If your company is a distributor of the product, describe the terms of your agreement with the manufacturer, the manufacturer's level of support, and what contingencies they have in place should your company fail to continue to support the product for any reason.
6. If your company is a distributor of the product, how long has your company been distributing the specific products being proposed?
7. How many employees do you have?
8. How many technicians are certified on the proposed equipment?
9. When were the models of systems you are proposing first installed at customer sites?
 - Business telephone system?
 - Voice processing system?

B. Manufacturing Quality Certification

Is the manufacturer of the proposed systems ISO 9001 certified as compliant with quality manufacturing standards? Is the manufacturer of the proposed systems ISO 14001 certified as compliant with environmental manufacturing standards?

C. References

Provide a minimum of 5 references for customers with operations similar to ours that use the equipment being proposed. Include contact names, telephone numbers, and addresses.

IV. Business Telephone System Product Requirements

A. General Requirements

1. Use the product requirement information listed in this document to provide detailed pricing for the proposed digital business telephone system configuration specified in section VII.
2. Please provide product descriptions and brochures for the proposed business telephone system, voice mail system, telephone sets, attendant consoles, and other related equipment.
3. Describe any special environmental considerations with regards to installation of hardware, such as power requirements, minimum and maximum acceptable temperature and humidity ranges, power consumption, heat dissipation, wall mounting or floor space requirements, etc.
4. The proposed system must be UL approved and listed. Please state the UL listing number of the proposed system.

B. System Requirements

1. System Capacities

The proposed system must be able to accommodate at least 600 ports at full capacity. This includes capacity for at least 250 CO lines or 500 stations in universal port configurations. List these capacities of the proposed system.

2. Station Configuration Flexibility

The proposed system must be able to configure at its full capacity whether using digital telephones, IP telephones, analog telephones, or any combination of each. List the maximum capacities using each of these type telephones.

3. Traffic Rating Characteristics

The proposed system must be able to accommodate heavy call traffic volumes. This is defined as a minimum traffic rating of 9 CCS per station system-wide or equivalent. List the CCS traffic rating characteristics of the proposed system. Also state the maximum busy hour call attempts and busy hour call completion capabilities of the proposed system.

4. North American Transmission Standards

The proposed system must have complete compliance with the North American Numbering Plan standards. Describe the attributes of the proposed system as it relates to this.

5. Multiple FCC Registration

The proposed system must be FCC registered. Our organization uses various types of trunk services so the business telephone system must be capable of being classified or tarified as a Key system, Hybrid system, or PBX system as defined by the FCC. List the types of FCC registration available with the proposed system.

6. DTMF and Dial Pulse Compatible

The proposed system must support both dial pulse (rotary) and DTMF transmission. Is the duration of DTMF tones sent programmable? Can the station send continuous DTMF tone by pressing and holding a button on the dial pad?

7. Hearing Aid Compatible

All proposed station equipment must comply with rules adopted by the Federal Communications Commission that specify all telephones in workplaces of 20 employees or more must be hearing aid compatible. Describe the attributes of the proposed system and telephone sets as it relates to this.

8. Manufacturer's Support

All hardware and software must be the current offering provided by the manufacturer, and that which receives the highest level of support available from the manufacturer. State whether the proposed system is the latest available version of both hardware and software and if not, explain what is being proposed and why.

9. Mean Time Between Failure

What are the manufacturer's stated "Mean Time Between Failure" statistics for the digital business telephone system and telephone sets being proposed? Explain the methodology for how these statistics are calculated. Explain any design factors that promote product reliability.

C. System Architecture

1. Stored Program Control

The switching system for the proposed platform must be of an architecture using a software-based stored program control, rather than unreliable disk drive storage. Describe the attributes of the proposed system as it relates to storage of system operating software, programming and customer database.

2. System Processor

Describe in detail the type processor your system employs. Is the processor that operates a 50 port configuration the same processor and software that runs a 200 port configuration or a 500 port configuration? Is the processor expandable in the event an application might require more processing capability or support more capacity in the future? Is it upgradeable to support ongoing future versions of software?

3. Modular Design and Expansion

The proposed system must be modular in design, with little or no loss of equipment utility resulting from physical or software expansion. Physical capacity must be expandable by the simple addition of shelves, cabinets, and network and station interfaces. Describe the attributes of the proposed system as it relates to modular design and expansion.

4. Remote Expansion Cabinet Configuration

The proposed system must be able to locate expansion cabinets apart from the base cabinet in a distributed campus-type configuration. Indicate the maximum distance expansion cabinets can be from the base and how they are connected.

5. Cabinet Mounting Options

The proposed system must have a cabinet design that accommodates either wall mounting, floor mounting, or rack mounting in a standard 19" rack. Describe the attributes of the proposed system as it relates to cabinet mounting options.

6. Card Slot Flexibility

The proposed system must have a universal "backplane" enabling either station or trunk/network interfaces to be inserted into the card slots. This type universal port design provides flexibility in configuring CO line and station combinations. Describe the attributes of the proposed system as it relates to this.

7. IP and Digital Switch Matrix

The proposed business telephone system must accommodate connection of both IP telephones and digital telephones. Describe the proposed system's switch matrix as it relates to this. Is the system completely non-blocking?

8. System Memory Backup

Describe the proposed system's main memory backup. How long is memory retained during power loss or storage? What is the advantage of the proposed system's memory backup scheme? What system programming and customer database is stored?

9. Software Configuration

What features does the standard software provide? Is the software expandable by application? List the applications that require additional software and list additional hardware components required to support them. What is the program language of the operating software?

10. Server Requirements

As part of our server consolidation efforts to ease maintenance and control, our IT department seeks to keep the number of servers required to support voice applications to a minimum. Describe the number and type of servers required to support the proposed system.

D. System Power

1. Power Consumption

What AC voltage is required to run the system? What amp circuit is required? Does it require a dedicated circuit? Provide the estimated maximum power consumption of the telephone system.

2. Power Surge Protection

Is the proposed telephone platform equipped with a regulated power supply that provides a line filtering capability which would prevent damage to the system as a result of a power surge due to lightning or other voltage spikes? What other safeguards are built into the proposed system to protect against power surges? Does the system require external power surge protectors?

3. System Battery Backup

Describe the type battery backup your company would recommend to power the proposed system for 2 hours at peak traffic load during an AC power outage. What type batteries are required? Does the system immediately switch over from AC to battery power, or does the system have to be restarted? What occurs to the calls in progress during a loss of AC power? How long will the battery hold the system up before a complete shut down occurs? How long does the restart process take after a complete loss of power and system shut down?

4. Power Failure Transfer

Does the proposed system have a power failure transfer capability to switch CO lines to standard analog telephones if AC power fails? Describe the type interface used and how many ports are available on the interface. Is the transfer immediate after a loss of power, or is a manual transfer procedure required?

5. Grounding

Discuss what grounding alternatives are available to protect the proposed system from "ground loops", "pickup noise", and excessive "ground current." Are secondary protectors required?

E. System Administration

1. Maintenance Administration

Describe how the service technicians, system administrator, and individual station users accomplish maintenance administration. Can live system programming be done? Can both programming and trouble shooting be performed remotely? Does the proposed system allow for programming from a designated telephone or is programming exclusively performed at a maintenance administration terminal? Describe the programming interface for the proposed system and what attributes make it user-friendly.

2. System Fault Finding and Diagnostics

Describe the system's diagnostic capabilities. Can system faults be detected, alerted, logged, and traced? How are fault alarms alerted and to whom?

3. Traffic Measurements and Reporting

Describe the system's traffic measurement and reporting capabilities. What additional hardware or software, if any, is required to support these capabilities?

F. System Customization

1. Features

The proposed business telephone system must be adaptable to our specific needs. This means the ability to tailor the system well beyond standard system and administrative options and basic programmable features. Are there system utilities or development tools we can use to modify existing features and create new ones? Describe how this works.

2. Services

Does the vendor offer customization services if we can't or don't want to do it ourselves? Describe available services.

G. System Interfaces

1. Analog CO Line/Trunk Interface

Can the proposed system support both ground start and loop start lines? Can both be supported from the same interface card? Are both DTMF and dial pulse modes supported?

2. Digital Trunk T1 Interface

Can the proposed system support T1 interface? Can the T1 digital interfaces support Super Framing (ESF), Extended Super Framing (ESF), B8ZS framing, and Alternate Mark Inversion (AMI)? Will the T1 interface provide both Automatic Number Identification (ANI) and Dialed Number Identification Service (DNIS)? How many T1 interfaces and trunks will the system support in relation to the maximum trunk capacity?

3. Digital Trunk ISDN Primary Rate Interface

Can the proposed system support ISDN Primary Rate Interface? How many PRI interfaces and trunks will the system support in relation to the maximum trunk capacity?

4. Digital Trunk ISDN Basic Rate Interface

Can the proposed system support ISDN Basic Rate Interface? Can the BRI digital interface support both station-side and trunk-side connections? Can the BRI interface support both S/T (4-wire) and U (2-wire) connections? Can the BRI support Calling Number Services?

5. DID Interface

Does the proposed system support Direct Inward Dialing? How does it work? Does the DID interface support both incoming and outgoing calls? Are DID trunks available on an analog interface as well as the proposed system's digital T1 interface? What additional system equipment is required?

6. E&M Tie Lines

Can the proposed system support E&M Tie line connection to other telephone systems? Can the E&M interface accommodate both 2 wire and 4 wire transmissions? Are both type I and type II signaling is supported? Are both wink start and immediate start functions supported? Are Tie lines available on an analog interface as well as the proposed system's digital T1 interface? What additional system equipment is required for tie line operation?

7. SIP Trunk Interface

Can the proposed system support SIP trunk connection? What additional system equipment is required to support SIP trunks?

8. Digital Station Interface

Digital stations must be capable of operating over 1 pair of Cat 3 cable Do additional options require additional pairs? How far can a digital station be placed from the CPU?

9. Analog Station Interface

Is the analog station interface a card with its own time slot address, or is it a digital port converter?

10. Off-premises Station Interface

Where IP networks may not be available, do the proposed system support off-premises analog stations over the public network? How many off-premises stations are supported? Are off-premises digital telephones supported?

H. Unified Communications (UC)

Unified communications helps improve business efficiency by imbedding communications capabilities within commonly used business applications. Describe the UC applications available with the proposed telephone system and any and all hardware (server) platforms required to support them. ***The proposed system shall include Unified Messaging feature for all users. Hart Public Schools utilizes Google Mail as their mail provider for the district.***

I. Computer Telephony Integration (CTI)

Both desktop CTI applications and system-wide CTI applications must be supported on the proposed telephone system. Desktop CTI would typically be TAPI applications running on individual PCs. System-wide CTI applications would typically be CSTA applications running on a PC server connected to the telephone system, that all user PCs access through the LAN.

1. Desktop CTI

Describe desktop Computer Telephony Integration (CTI) capabilities available with the proposed telephone system. Elaborate on the hardware interfaces and software necessary to run a computer application with the proposed telephone system. Indicate what PC based software the proposed system presently supports.

2. System-wide CTI

Describe system-wide CTI capabilities available with the proposed telephone system. Discuss the proposed system's compliance with the CSTA standards. Elaborate on the hardware required to interface the CTI server to the telephone system. Is a software developer's kit available for third party custom development?

J. Voice Over Internet Protocol (VoIP)

In addition to SIP Trunks discussed in the "System Interfaces" section, the proposed business telephone system must support simultaneous voice and data transmission over the same IP network. This includes VoIP trunk applications that support toll bypass cost savings, and IP telephone remote user applications that support employees working off-site or at home with the same feature/function capabilities as if they were locally connected extensions in the telephone system.

1. VoIP Trunk Applications

Describe VoIP trunk applications supported. Describe the additional hardware/software options required to support these VoIP trunk applications. Is the proposed telephone system field upgradeable to these VoIP capabilities at a later date if not originally installed with the system?

2. IP Telephone Local Users

Describe how local IP telephones are connected to the Local Area Network (LAN) and the proposed telephone system. Describe the additional hardware/software options required to support these locally connected IP telephones. IP telephones shall use Megaco transmission for reduced packet size.

3. IP Telephone Remote Users

Describe how remote IP telephones are connected to the Wide Area Network (WAN) and the proposed telephone system. Describe the additional hardware/software options required to support these remotely connected IP telephones.

4. Remote User Setup

Can a remote user install and setup their own IP telephone? What does a remote user need to do to make their IP telephone work?

5. Virtual Private Network (VPN)

Is a VPN required to support remote IP telephone communication via the private IP network or the Internet? What is gained/lost by using a VPN? What VPN router is recommended/required?

6. Network Address Translation (NAT)

Does the proposed system support NAT for remote IP telephone communication via the private IP network or the Internet? What are the advantages/disadvantages of NAT vs. VPN?

7. Virtual Local Area Network (VLAN)

Does the proposed system support 802.1Q Virtual Local Area Network (VLAN) capabilities? How is VLAN used in the proposed system?

8. IP Protocols Supported

System shall support the following protocols: MEGACO, MGCP, H.323, SIP, SCCP.

9. IP Telephone Auto-registration

When either new IP telephones are added to the IP network or existing IP telephones are relocated, does the proposed telephone system provide auto-registration to automatically assign or move the telephone in system programming?

10. Powering IP Telephone Sets over LAN

Can IP telephones be powered over the LAN, as an alternative to local power for each telephone? What equipment is required?

11. IP Telephones

Describe the features and attributes of the proposed IP telephones proposed. Can these telephones be used as an Ethernet hub/switch for connection of a PC? How is this connected?

12. IP Softphone

Is a softphone version of the IP telephone available? Is it compatible with computers and PDAs? What functionality does it provide compared to a desktop IP telephone? What is required for connection and use of the softphone locally or remotely?

13. Bandwidth Requirements and CODECs

How much bandwidth on the IP network is required for each IP telephone? If multiple choices, what are the advantages/disadvantages? What CODECs are supported? Can the proposed system support the use of multiple CODECs simultaneously? (For example, a call originating and terminating within the same LAN segment uses G.711, while another call that traverses the WAN uses G.729a.)

14. Quality of Service (QOS)

Discuss how quality of service is handled in the proposed system. What QOS protocols/standards does the proposed system support?

15. IP Telephone Survivability

Can the IP telephones fail over to an alternative or backup system if the primary VoIP system fails? Can all the IP telephones fail over to the backup system? Will the telephones be able to both make and receive calls from their new location? Will the trunks be automatically switched to the backup system or does it require manual intervention by the CO trunk provider? Can the telephones automatically fail back to the primary system when it becomes operational again? What special equipment or setup is required to enable survivability?

16. VoIP Network Readiness Assessment IF REQUIRED, include in cost of proposal.

Describe any network readiness assessment required or recommended to make sure our network will handle the addition of voice traffic over the IP data network. Do you provide this service? If not, who does?

17. IP Interoperability Standards

Indicate in the chart below the IP interoperability standards supported by the proposed telephone system.

	Interoperability Standard:	Support: Yes/No?	Comments or Explanation: (Partial, Future, etc.)
1.	802.11b		
2.	802.1d		
3.	802.1p		
4.	802.1q		
5.	802.3		
6.	802.3af		
7.	CBWFQ		
8.	Committed Access Rate		
9.	CRTP		
10.	DCL		
11.	DHCP		
12.	DiffServ		
13.	DNS		
14.	FAX - Group 3		
15.	FAX - Group 4		
16.	G.711		
17.	G.723.1		
18.	G.726		
19.	G.728		
20.	G.729		
21.	G.729a		
22.	H.225		
23.	H.245		
24.	H.323		
25.	IP Precedence		
26.	Ipv6		
27.	MEGACO		
28.	MGCP		
29.	Policy Based Routing		
30.	PQWFQ		
31.	Q.931		
32.	Q.SIG		
33.	RED		
34.	RSVP		
35.	RTCP		
36.	RTP		
37.	RTSP		
38.	SCCP		
39.	SIP		

40.	SNMP		
41.	T.120		
42.	T.37		
43.	T.38		
44.	TAPI		
45.	TFTP		
46.	TCP/IP		
47.	UDP/IP		
48.	Weighted Fair Queuing		
49.	Weighted RED		

K. System Features

1. Account Codes

Describe the use of account codes on a voluntary, forced, and forced & verified basis for the proposed system. Indicate the maximum number of digits and the minimum number of digits. Where in the dialing sequence is the code input? Discuss account codes as they relate to SMDR or call accounting.

2. Automatic Call Distribution (ACD) *Not required at this time.*

3. Automatic Off-hook Line Selection

Can stations automatically select a specific line, line group, or directory number when the handset is lifted or the speaker button is depressed? Is it programmable by station?

4. Easy Station Relocation

Can a station be easily relocated within the proposed system by the system administrator without reprogramming? Specify which features and characteristics are retained and lost in the move.

5. Automatic Number Identification (ANI)

Does the proposed system support Automatic Number Identification, to display the caller's telephone number on the telephone LCD? Will it send the ANI digits to an attached computer or voice mail system? What type ANI format is supported (Sprint, MCI, AT&T, etc.)? What type CO lines or trunks are required for ANI? Can ANI digits be received simultaneously with Dialed Number Identification Service (DNIS) called number digits? Does the system capture call history for both abandoned (unanswered) and answered calls for later viewing or speed dialing? What additional equipment is required to support these ANI capabilities?

6. Caller ID

Can the proposed system interface with Caller ID offered from the local operating company. Does Caller ID display name, number, or both? Is Caller ID supported on both analog and digital lines? Is Caller ID supported on both analog and digital telephones and IP telephones? Does the system capture call history for both abandoned (unanswered) and answered calls for later viewing or speed dialing? If a second call rings while on the first call, can the Caller ID

display the second call information? Describe the hardware and software requirements to add Caller ID to the proposed system. If appropriate, specify the number and type of trunks or lines the unit covers.

7. Dialed Number Identification Service (DNIS)

Does the proposed system support DNIS? Are DNIS digits passed through the system as calls are transferred or forwarded? Is DNIS routing sensitive to day/night modes? Can DNIS route calls outside the system? Can DNIS digits be received simultaneously with ANI digits? What additional equipment is required to support DNIS?

8. Background Music and Music On Hold

What type of music interface is provided or available with the proposed system? Is additional equipment required? Are there separate interfaces for background music and music on hold? How many music source interfaces are supported on the proposed system? Can individual stations turn on/off background music playing over telephone set speakers? Can they turn it on/off over external page speakers? Do they have volume control?

9. Barge-in

Does the proposed station have the capability of monitoring another station engaged in a telephone conversation? Is the barge-in tone detected? By both parties? Describe how barge-in would be controlled by class of service. Can the barge-in tone be activated or deactivated?

10. Busy Override Tone

Can a station that calls a busy station, override a busy signal with a tone burst, indicating a call is waiting?

11. Busy Station Transfer Ringing

Can a busy station optionally provide ringing to an incoming or transferred call when the station is busy on an existing call? The desire is to use this feature in lieu of camp-on at some stations, and the concern is to not send a busy tone and transfer the call back to the auto attendant or voice mail from which it just came.

12. Call Duration Display

Does the LCD display of the proposed telephone display the amount of time the call has been in progress? Is it updated on a real-time basis on the display? Can call duration display be turned on/off while on a call?

13. Call Forward

Describe the call forward options available from the station. Include the options of All Calls, Busy, No Answer, Busy No Answer, Fixed, System-wide default, etc. Can calls be forwarded externally? Can the call forward external destination be changed remotely by the user? Can call forward be overridden? **It is the intent of the District to implement CFW to cell phone and/or other devices, please include in Base Bid any additional cost if applicable to enable.**

14. Call Pickup

Can a station pickup calls ringing at other stations? Can a station pickup calls ringing at other stations when the station number is unknown? How many station pickup groups are available? How many CO line pickup groups are available? Is a station capable of picking up calls from hold, park, and the paging system?

15. Call Transfer Options

Can calls be transferred either immediately, without waiting for the destination party to answer, or after announcing the call to the answering party? Will a transferred call recall to the transferring station if the destination does not answer within a programmable amount of time?

16. Camp-on (Station)

Does the station user have the ability to send transferred calls to a busy or idle station? If the recipient's telephone is busy can the station user be sent a ringing tone or camp-on tone? Can the frequency that the camp-on tone is heard be programmed? Can calls to either idle or busy stations recall after a preprogrammed number of seconds?

17. CO Line Identification

Can individual CO lines be assigned an alphanumeric identifier that displays at the station where the call is ringing? How many characters long can the identifier be? How does work in conjunction with ANI or DNIS display?

18. CO Line/Trunk Groups

How many CO line or trunk groups are supported on the proposed system? How are they accessed? Can individual CO line appearances be programmed on buttons on the telephone for easy "key system" type line access?

19. Conference

A minimum of 8-party conferencing capabilities must be built-in to the system, with at least 6 parties being external. How many internal and external parties can be on a conference in the proposed system? How many simultaneous conferences can occur? Is amplified conference available to compensate for network volume loss during multi-external party conference calls? Can voice mail be included in a conference call to play messages for another party? Can a conference call be split between two outside callers to speak to them separately, and switch between them?

20. Trunk-to-Trunk Connections

Does the proposed system support trunk-to-trunk connections that are left joined from a conference? How does this work? How many such connections can be simultaneously supported on the system? How does the system compensate from volume loss over the public network between the two connected parties? Can standard analog telephones and voice mail/auto attendant ports also set up trunk-to-trunk conferences?

21. Credit Card Calling

Does the proposed system allow “0+” dialing to bypass toll restriction for credit card calls? What safeguards are built into the system to help prevent this feature from being used to circumvent toll restriction?

22. Centrex Features

Is the proposed system capable of being used behind Centrex? Can it repeat Centrex ringing cadences received from outside lines when it rings to stations on the system? Is flexible station numbering, up to 4-digits, available for Centrex extension numbering? Can station buttons be programmed to store and send flash, pause, and the appropriate Centrex feature access code to the central office through the touch of one button?

23. Delayed Ringing

Describe the delayed ring assignments that can be programmed into the system.

24. Direct Inward System Access (DISA)

Indicate whether the proposed system provides DISA. Specify the maximum number of digits that can be used to password protect DISA. Can the DISA port be turned off in software?

25. Disconnect Supervision

What type of disconnect supervision does the proposed system provide, if a holding caller hangs up? What type of calls does it work with? Is it programmable by CO line? What additional software or equipment is required to use this capability?

26. Distinctive Ringing

Can station ringing be different for incoming line calls and internal calls? State the number of different station ring settings available with the system. Is the ring setting programmable by the user or system administrator or both?

27. Do Not Disturb

Discuss the proposed stations use of Do Not Disturb. How are intercom calls treated versus external calls from an inbound and outbound perspective? Is there any additional messaging that can accompany a Do Not Disturb message that intercom callers might see in their display?

28. Do Not Disturb Override

Can Do Not Disturb be overridden? Does class of service or some other method determine which stations have the do-not-disturb override abilities?

29. Door Phones

Does the proposed system interface with door phones? Are the door phones proprietary? How do they interface with the system? Does connection of door phones decrease CO line or station port capacity? Describe the features available from the door phone.

30. Door Lock Control

Does the proposed system interface with electronic door lock devices to provide remote unlock functions? Can a button be programmed on a telephone to remotely unlock the door at the press of a single button? How many door locks can be controlled? Does the connection of door lock controls decrease CO line or station port capacity? What additional system equipment is required for this capability?

31. DSS Buttons with Busy Lamp Field

Are buttons available on the proposed station that give direct station auto dialing to other stations within the system? Do DSS buttons have an LED that can indicate station busy/idle status? How many buttons on a station can be programmed for “DSS/BLF”?

32. Enhanced 911 Operation

Does the proposed system support Enhanced 911 operation to provide locator information to Public Safety 911 Agencies? How does this work? What additional equipment is required?

33. Flexible Button Assignment

Discuss how features are assigned to programmable buttons at the station. Can most, if not all, features be assigned under feature buttons? Which features cannot be assigned under a feature button? Can individual station users program their own feature buttons on their telephone?

34. Feature Sequence Buttons

Does the proposed system allow telephone set buttons to be programmed to perform a sequence of operation like a “macro key” on a computer? What type of features, numbers, digit length, etc. can be programmed on these buttons? Are they user programmable?

35. Flexible Intercom Directory Number Assignments

Can intercom directory numbers be flexibly assigned as any numbers? Discuss how intercom directory number assignments are made. What are the available digit lengths? Can the intercom directory number assignment match a DID assignment and voice mailbox assignment?

36. Flexible Line Ringing Assignments

Can CO lines be programmed to ring any station or group of stations? Describe the programming parameters of a line ringing assignment.

37. Hands-free Intercom

Is a station user able to answer an intercom call without lifting the handset? Can each station be programmed uniquely to use this feature?

38. Headset Compatible

Are the proposed telephone sets capable of connecting a headset? What additional equipment or interface is required?

39. Hold Options

Can a station be programmed to either automatically place an existing call on hold or release the existing call when a button is pressed to answer another incoming call? Is it programmable by station? Can a station put a call on exclusive hold so it can only be picked up by that station or another station using directed call pickup? Will a holding call recall the station after a programmable amount of time?

40. Hot Desk

Can any user use a shared office telephone by signing in with his/her own directory number and have the telephone take on their specific identity and programming? Explain how this feature works.

41. LED Indicators

Describe all the different LED indications available from the proposed telephones. Describe the flash rates and colors used for In Use, Incoming Call, On-Hold, Camp-On, and Busy Station Ringing, etc. conditions.

42. LCD Alphanumeric Messaging

Is the proposed station capable of displaying messages on the LCD of another internal calling telephone? How many messages are available by station? Can the station user customize the messages?

43. LCD Feature Prompting

Does the station's LCD provide instructions to the user during feature operation? Can the user press "soft" keys to make selections during feature operation? Describe how this procedure works.

44. LCD Integrated Directory Dialing

Does the station's LCD provide an integrated directory dialing capability for display and speed dialing of names and telephone numbers? Describe how this procedure works.

45. Least Cost Routing (LCR)

Does the proposed system provide full least cost routing that includes individual route plans, time schedules, and station LCR classes? How many route plans, time schedules, and station LCR classes are available? Describe the internal procedures that take place in the routing of calls. Does LCR conform to all current North American Numbering Plan requirements? Does LCR require any additional software or equipment?

46. Lost Call Treatment

Can calls that are not answered with the usual calling patterns be routed to an alternate destination for call handling on the proposed system? Is there a timer for routing calls lost in the system to a specified destination?

47. Message Waiting

Can a message waiting light be set on both digital electronic and standard analog stations on the proposed system? How does the station user retrieve a message? How many messages can each station store? Can a digital station also display message waiting on the LCD? If a message waiting light cannot be set on a standard analog telephone, is stutter dial tone supported?

48. Microphone Control

Can the proposed digital telephone's microphone be turned off/on by the press of a button? Is a microphone sensitivity control available to compensate for different room noise levels?

49. Multiple Directory Number Call Coverage

Describe how multiple appearing directory numbers and flexible-ringing patterns can be used for call coverage and group answering applications.

50. Multiple Language Choices

Can the proposed system display telephone LCD information in multiple language choices? What languages are supported (minimum requirements English and Spanish)?

51. Networking of Multiple Systems

The proposed telephone system must be capable of networking multiple systems together to work as one large system. This must include the capability to share a centralized voice mail system between all locations, answer incoming calls for all locations at the main location, and dial between locations using a coordinated dialing plan. Describe how these needs will be met with the proposed telephone system using both DS1 (T1) circuits to provide ISDN-type interconnectivity, or over an IP network.

52. Night Service

Indicate the number of day and night modes available. State the differences between day and night ringing and answering. Indicate which stations can place the system in the night mode and which stations can answer night calls. Can different trunk groups be placed into night service at different times? Can night ringing occur over the paging speakers? Can system switching between day and night modes be programmed for automatic activation by time of day and day of week?

53. Off-hook Call Announce

Describe how off-hook call announce is initiated and received from the station. Does this feature work with both digital and IP telephones? Does the announcement come through the handset or the speaker on the telephone? Does each station user have a choice of the speaker or handset method? How is control provided over the use of off-hook voice announce? Is additional equipment required to send or receive off-hook call announcements? Can this feature be programmed by station?

54. On-hook Dialing with Hot Dial pad

Is the station user able to dial and monitor an external number before having to lift the handset? Is this feature available on all digital telephone models or only on speakerphones? Do the proposed digital telephones have a hot dial pad, meaning that it is not necessary for the station user to press an intercom or outside line button first to begin on-hook dialing?

55. Paging – Internal Indicate whether the proposed system offers paging through the telephone sets. Can the ability to receive a page be programmed by individual telephone? How many internal page zones are available?

56. Paging - External

State whether the proposed system offers overhead paging through speakers. Can overhead paging be accomplished by each individual station using their telephone? How many external page zones are available? What additional equipment is required for these paging capabilities?

57. Park Zones

Does the proposed system offer park orbit zones? How many zones are available system wide? Do individual station user have access to the park zones as well as the attendant? Can calls be parked at single line telephones as well as digital telephones? How are calls retrieved from Park?

58. Pooled Line Button Access

Can a group of lines be grouped under a single button? Is there any limit to the number of lines that can be grouped under a button? How many line groups are available?

59. Private CO Lines

Can the proposed telephones support private lines, so that they only ring and can only be answered by that telephone?

60. Privacy/Non-Privacy

Can the proposed system be set as either private or non-private? Can CO line buttons be either private or non-private on an individual station basis? Can privacy/non-privacy be changed at a station by pressing a button or dialing a code on a call-by-call basis? Can certain users be programmed to override privacy?

61. Release/Answer Button

Can a call be disconnected by pressing a Release button? Can it also be programmed to release the current call and answer the next at the press of one button?

62. Redial Capabilities

Can the proposed station store a specified number dialed in memory and offer the station user the opportunity to redial the number by pressing a key? Can the station store the last number dialed in memory and offer the station user the opportunity to redial the number by pressing a key? Does the proposed system afford the station user the ability to automatically redial busy outside telephone numbers at preprogrammed intervals? Does this auto busy redial feature work through Least Cost Routing?

63. Ringing Line Preference

Can a station be programmed to answer the ringing line by simply depressing the speaker button or lifting the handset? Is it programmable by station?

64. Station Hunting

Describe the different types of station hunting available with the proposed system. Can a station be in more than one hunt group simultaneously? How many hunt groups can be defined within the proposed system? Can calls to busy hunt groups camp on?

65. Station Message Detail Recording (SMDR)

Can the proposed system output SMDR data on all calls made and received to a printer or call accounting application? What information does the SMDR output contain? What additional system equipment is required for printer connection or call accounting interface?

66. Station Speed Dial

How many station speed dial numbers does the proposed system provide per station? How many characters per speed dial bin? Can speed dial bins be logically linked to one another? How is the station speed dial accessed, by code, by button, or by LCD directory? If an LCD internal directory is available, describe its operation.

67. System Speed Dial

How many system speed dial numbers does the proposed system provide? How many characters per speed dial bin? Can speed dial bins be logically linked to one another? How is the system speed dials accessed, by code, by button, or by LCD directory? If an LCD internal directory is available, describe its operation.

68. Station Queuing

Can an internal caller to a busy station in the proposed system set queuing to automatically call when the busy station becomes idle? How is this set?

69. Trunk Queuing

Can an internal caller trying to access a busy CO line or line group set queuing? How does this work?

70. Toll Restriction

Describe all the toll restriction alternatives available with the proposed system. How many levels are available? Does the system conform to current North American Numbering Plan requirements?

71. Toll Restriction Override

Can toll restriction be overridden by entering an authorization code? By speed dial? By through dialing, in which a non-restriction station can connect a toll restricted station?

72. Outgoing Call Restriction

Can selected stations on the proposed system be restricted from making any outgoing calls? Is flexibly programmable by station and by CO line?

73. Tenant Service

Our organization may in the future wish to share the system with another division in our building. Does the proposed system support multi-tenant applications in which each organization can operate their portion of the system as if it were their own separate system? What functions of the system can be kept separate between tenants? How many tenants are supported?

74. Volume Control

Are individual station volume settings available for the handset, speaker, and ringing? How does the station user adjust these volume settings?

75. Voice or Tone Calling Option

Can the proposed system be programmed for either ringing or voice signaling when an internal station calls another? Can individual station users switch between methods?

76. Voice Mail Integration

Describe the voice mail integration features supported from the telephone system. Describe the hardware or software interfaces required.

L. *PC Attendant Console Features* Owner preference is Direct Support Buttons (DSS), add on modules. PC Attendant Console not applicable for this bid.

M. *Station Equipment*

1. Telephones, consoles, and accessories

List the different type IP, digital, and analog telephones available with the proposed system. Identify which telephones offer a speakerphone capability and which telephones offer a display. Include DSS consoles, data interface units, and other accessories that can be used in conjunction with these telephones.

2. Wireless telephone equipment

Describe wireless telephone equipment that can be used with the proposed system. Owner's intent is not to include in pricing base or alternates for this feature but indicate IF the proposed system could add in the future. If so, please describe.

3. *Fixed Mobile Convergence (FMC)*

Describe the FMC application and if available with the proposed system if the owner should choose to enable at a later date. FMC is presumed to enable the user of smart cellular telephones to use these devices as PBX extensions both locally via the wireless LAN and remotely via a cellular network, and have the ability to handoff between the WLAN and cellular networks during an active call.

N. Telephone System Feature Summary Chart

The chart that follows summarizes feature availability of the digital business telephone system. Answer with a check mark signifying feature availability as Standard (Std), Optional (Opt.), or Not Available (N/A). The column to the far right is provided for comments if needed.

System Features:	Standard	Optional	Not Available	Comments:
Account Codes - Voluntary				
Account Codes - Forced				
Account Codes – Verified				
Automatic Call Distribution (ACD)				
ACD Multiple Group Agent Login				
ACD Priority Queuing				
ACD Skills-based Routing				
Automatic Number Identification (ANI)				
Automatic Off-hook Line Selection				
Automatic Recall (Hold, Transfer)				
Easy Station Relocation				
Background Music Interface				
Backgr. Music/MOH Separate Interfaces				
Background Music Through Telephones				
Battery Backup - System				
Battery Backup - Memory				
Barge-in Override				
Busy Override Tone				
Busy Station Transfer/Ringing				
Call Duration Display				
Call Forward - All Calls				
Call Forward - Busy				
Call Forward - No Answer				
Call Forward - Busy/No Answer				
Call Forward - Fixed				
Call Forward - External & Remote Change				
Call Forward - System-wide Default				
Call Forward Override				
Call Pickup - Directed Station				
Call Pickup - Station Group				
Call Pickup - Ringing CO Line				
Call Pickup - Ringing CO Group				
Call Pickup - Holding/Parked				
Call Transfer Immediate				
Call Transfer with Announcement				
Call Transfer with Camp-on				
Call Transfer Recall				
Call Record to Voice Mail				
Call Waiting with Camp-On Tone				
Caller ID				
Caller ID History				
Centrex/PBX Feature Buttons				
Centrex Ringing Repeat				
Class of Service - Station				

Class of Service - Traveling				
CO Line Identification				
CO Line/Trunk Groups				
CTI Desktop TAPI Support				
CTI System-wide CSTA Link				
Conference				
Conference - Amplified				
Conference Split				
Continuous DTMF Signal Tone				
Credit Card Calling ("0+" Dialing)				
Delayed Ringing				
Dialed Number ID Service (DNIS)				
Direct Inward Dialing (DID)				
Direct Inward System Access (DISA)				
Disconnect Supervision				
Distinctive CO/Intercom Ringing				
Distinctive Station Ringing				
Do Not Disturb				
Do Not Disturb Override				
Door Lock Control				
Door Phone Interface				
DSS/BLF Buttons				
DTMF and Dial Pulse Compatible				
DTMF Continuous Tone				
Enhanced 911 Operation				
Flash Button				
Feature Customization Tools				
Feature Sequence Buttons				
Flexible Button Assignment by User				
Flexible Station Numbering				
Flexible Port Assignment				
Flexible Line Ringing Assignment				
Hands free Answerback on Intercom				
Handset Volume Control				
Headset Compatible				
Hearing Aid Compatible				
Hold - Automatic				
Hold - Exclusive				
Hold - Recall				
Hot Desk				
Least Cost Routing				
Live System Programming				
LED Two-Color Indicators				
LED Flash Rates By Condition				
LED Line in Use (I-Use) Indication				
LED Line on Hold (I-Hold) Indication				
LCD Alphanumeric System Messages				
LCD Alphanumeric Personal Messages				
LCD Absence Messaging				
LCD Busy Station Messaging				
LCD Feature Prompting with Soft Keys				

Message Waiting - Digital Sets				
Message Waiting - 2500 Sets				
Message Stutter Dial Tone - 2500 Sets				
Microphone Control Button				
Microphone Sensitivity Control				
Modular Expansion System Design				
Multiple Directory Numbers				
Multi-language LCD Display				
Multiple FCC Registration (KF,MF,PF)				
Networking of Multiple Systems				
Network Coordinated Numbering				
Network Centralized Attendant Service				
Network Centralized Voice Mail				
Network Centralized Network SMDR				
Network Distributed Network SMDR				
Night Service Scheduled Auto Activation				
Night Ringing Call Pickup				
Night Ring Over External Page				
Night Ring Over External Page Zones				
Non-blocking Architecture & Dialing				
Off Premises Analog Extensions (OPX)				
Off Premises Digital Extensions				
Off-Hook Call Announce - Speaker				
Off-Hook Call Announce - Handset				
On-hook Dialing with Hot Dial pad				
Outgoing Call Restriction				
Paging - Internal Telephone Speakers				
Paging - Internal Telephone Groups				
Paging - External Interface				
Paging - External Zones				
Park Zones				
Personal Admin for Individual Users				
Pooled Line Keys				
Power Failure Transfer				
Privacy/Non Privacy Option				
Privacy Button				
Privacy Release Button				
Private CO Lines				
PC Programming & Upload/Download				
Redial - Last Number Dialed				
Redial - Automatic Busy Redial				
Release Key				
Release/Answer Key				
Remote Maintenance/Administration				
Ringing Line Preference				
Speakerphone				
Speed Dial Buttons				
Speed Dial Directory Dialing on LCD				
Station Hunting - Voice Calls				
Station Hunting - Data Calls				
Station Message Detail Recording (SMDR)				

Station Queuing				
Station Speed Dialing				
System Speed Dialing				
System Fault Finding & Diagnostics				
System Alarms				
Telephone Set Upward Compatibility				
Tenant Service				
Through Dialing				
Toll Restriction				
Toll Restriction Override Codes				
Toll Restriction Speed Dial Override				
Traffic Measurement & Reporting				
Trunk Queuing				
Trunk-to-Trunk Connections				
Trunk types:				
- Analog Loop-start				
- Analog Ground-start				
- Analog DID				
- E&M Tie Lines				
- Primary Rate Interface (PRI)				
- Basic Rate Interface (BRI)				
- T1 Interface				
- SIP Trunks				
Uniform Call Distribution (UCD)				
Voice Mail Integration - In Band DTMF				
Voice Mail Integration - SMDI				
Voice Mail Conference				
Voice Mail LCD Feature Display/Prompts				
Voice or Tone Calling Options				
Voice Over Internet Protocol (VoIP)				
Volume Control - Handset				
Volume Control - Ringing				
Volume Control - Speaker				
Wireless Fixed Mobile Convergence (FMC)				
Attendant Console Features:				
Answer Button with Priority				
Answer Prompting by Type of Call				
Attendant Conference Setup				
Auto Dialing - Internal Stations				
Auto Dialing - Outgoing Speed Dial				
Busy Lamp Field Display				
Call Transfer				
Call Waiting Count Display				
Caller ID/ANI Display				
Color CRT Display				
Dial "0" For Attendant				
Dial Outside Number for Station User				
Direct Station Selection				
Directory Display and Dialing				
DTMF Tone Signaling from Dial pad				

Emergency Call				
Emergency Page				
Feature Help On-line				
Headset Compatible				
Hold Button and Display				
Hold Timer Display				
Hold/Park and Page Combined				
Incoming Call Identification				
Incoming Attendant Call Statistics				
Multiple Console Operation & Load Share				
Keyboard or Mouse Operation				
Maint./Admin. from Attendant Console				
Message Center				
Message Waiting				
Multi-tasking				
Night Transfer				
Overflow				
Override				
Position Busy Mode				
Release Button				
Split Button				
Selective Answering by Call Type				
System Speed Dial Access				
Through Dialing				
Transfer Direct to Voice Mail Box				
Volume Control				

V. Voice Processing Product Requirements

This section presents questions regarding the voice processing requirements. Refer to configuration requirements in Section VI. The pricing should be presented in Section VII.

A. *General Requirements*

1. System Environmental Requirements

Indicate the environmental requirements of the proposed platform (operating temperatures, relative humidity, power considerations, grounding requirements, etc.)

2. System Registration

The proposed system must be both UL approved and FCC registered.

B. *System Requirements*

1. System Integration

The proposed voice processing system must provide seamless integration with the proposed telephone system, and both must be from the same manufacturer.

2. System Expansion

The proposed voice processing system must be expandable for future growth. Describe the expansion path of the system. Describe how expansion is packaged (i.e. by ports, mailboxes, disk storage, growth from smaller models to larger models, etc.).

3. System Capacities

The proposed system must be able to accommodate the minimum capacities shown below. Please indicate maximum capacities of the proposed system:

Capacity Criteria	Minimum Capacity	Maximum Capacity
Number of voice mail ports	8	16
Number of mailboxes	200	350
Length of message	Unlimited	Unlimited
Amount of message storage	40 hours	100 hours

C. *System Architecture*

1. System Internal Components

Describe in detail the processor type, operating system, data storage type and capacities, and other internal components your system employs.

2. System Flexibility

IF APPLICABLE - Indicate whether the analog ports serving as the interface can be dynamically allocated to different concurrent applications or must applications be assigned dedicated ports. Additionally, indicate whether different applications can reside on the same hard drive or are different drives required to run different applications.

3. Redundancy

Describe disk and storage redundancy functionality.

4. System Hard Drive Efficiency

Does the proposed system compress long pauses in recorded messages to efficiently utilize space on the hard drive?

D. System Administration

1. Security Features

Describe the security features of the voice processing system.

- Minimum/maximum password length? Who controls the length?
- Can they be viewed by the system administrator?
- Can passwords be reset? By who?
- Can they be locked after a certain number of invalid attempts?

2. Internal Maintenance

Describe the system's internal maintenance operations.

- How are message indicators activated/deactivated? Are ports dedicated for this function? Shared?

3. System Volume Control

What measures can be taken to adjust the gain affecting the audio input and output?

4. System Alarms & Notifications

Describe what sort of notifications can be generated for the system administrator.

E. Features

1. Audiotex (Information Only Mailboxes)

Does the proposed system have mailboxes designed only to dispense information without the option for the caller to reply to the message? Will the system automatically disconnect the caller after the information has been delivered? Could the caller be transferred to another mailbox/extension at the conclusion of the message? Are the mailboxes capable of being password protected? How many mailboxes can be created to dispense information. Is the message length programmable?

2. Automated Attendant

The voice mail system is required to have automated attendant as part of its platform. Will the automated attendant offer supervised and unsupervised transfers, which could be automatically changed by time of day, day of week, and holidays? If a caller, using the automated attendant, finds they are going into voice mail, what must they do to call another extension or return to the operator?

3. Broadcast Messages

Does the system administrator have the ability to create and deliver system wide messages? Does the individual subscriber have that same capability? Can that be controlled through class of service?

4. Called Identification

Does the proposed system offer the capability of announcing the called party prior to connecting a call?

5. Call Screening

Describe the call screening capabilities of the proposed system.

6. Directory

Indicate whether the proposed system offers a directory of all extension/mailboxes within the system? How and when can the directory be accessed? How are the names logged into the directory? Does the system do a numeric to alpha translation seeking to narrow the choices? Describe the procedure undertaken by the system to look for a match.

7. Distribution Lists

Indicate whether the proposed system offers group distribution lists. How many system-wide lists can be created? How many group distribution lists can be created by an individual subscriber from their mailbox? Is there any limit to the number of mailboxes that can be included in either distribution list? Can a mailbox be in any number of different group distribution lists both personal and system wide? How are changes such as the addition and deletion of mailboxes performed?

8. Do Not Disturb

Does the proposed system provide do-not-disturb feature capabilities? Describe.

9. Forwarding Messages

Does the proposed system enable the subscriber to forward a message with or without comments to another subscriber or group of subscribers? Will the system provide verification of the party sent the copy of the message? Can the message be re-forwarded by other subscribers upon their receipt? How many times can that message be re-forwarded? Will all the introductory remarks attached to the message be retained?

10. Greetings

How many different greetings are available with the proposed voice mail? Can the greetings be affected by time of day, day of week, holiday, and emergency? Can the greetings change automatically or must they be manually activated? Are the greetings programmed by the mailbox user or the system administrator? Can the mailbox subscriber create an extended absence greeting to be heard by callers calling the subscriber's mailbox? Additionally, can callers hearing the extended absence greeting be blocked from leaving a message or automatically transferred to another extension?

11. Group Partitions—Call Blocking

Discuss whether the system can be partitioned into groups of subscribers. Can class of service deny access when one group attempts to message another group? How many partitioned groups can be established within the system?

12. Guest Mailboxes

Describe the use of guest mailboxes (guest ID) on the proposed system. Is there a limit to the number of guest mailboxes a system subscriber might have tied to their mailbox? What sort of functionality does the subscriber of the guest mailbox enjoy? Can the system administrator control subscriber's use of guest mailboxes through class of service?

13. LCD Feature Prompting with Soft Key Operation

Does the proposed system support LCD feature prompting display of voice mail features? Is soft key functionality provided to facilitate easy operating of these visual control features? Does LCD operating replace or supplement voice prompts?

14. Message Delivery Options

Does the proposed system offer the delivery of messages at a preprogrammed time in the future? How far into the future can the message be delivered? Can the message be canceled? Can the future delivery be used with external parties to the voice mail system, in addition to other mailboxes within the system? Is there confirmation back to the sender of the message that the message was sent and received? Can a message be marked as “private?”

15. Message Notification

Will the proposed system offer the user the ability to differentiate between regular, urgent, private, fax, etc.? Indicate how many different options and priorities of messages a subscriber might receive.

16. Message Playback Controls

Can the subscriber skip messages, pause during messages, speed up or down during messages? Can the subscriber skip a predetermined number of seconds ahead or behind? Can the subscriber replay or cancel the review of messages? Can the volume of the message be adjusted during review?

17. Message Playback Options

Are saved messages separated from new messages enabling the subscriber to not be burdened by listening to both? How are pending messages handled, for those that have been partially listened

to? Will urgent messages be sent to the head of the message queue to ensure expeditious treatment by the subscriber?

18. Message Purging

Describe the system's procedure for purging messages. When does purging occur?

19. Message Reply

Will the proposed system enable the subscriber to reply to a message sent within the system by simply depressing a single digit, thus eliminating the need to input the message originator's mailbox number? Does the message have all the same delivery options that a newly created message has, i.e., urgent and confidential?

20. Message Copy / Message Delete

Describe the message copying feature capabilities of the proposed system.

21. Message Date and Time

Does the proposed voice processing system play the time and date of messages?

22. Message Length Control

Can the system administrator control the length of incoming messages in an effort to manage hard disk space usage?

23. Message Notification

Describe the proposed system's message notification capabilities. Can a user have more than one type of message notification?

24. Message Retrieval Control

What order are messages played when retrieving messages from a user mailbox? Can this be changed?

25. Message Waiting Indication

Indicate whether message waiting lights and or stutter dial tone work with the proposed system's integration. Describe the process as the voice mail tries to communicate to the telephone system and ultimately the station user that a message has been left. Is there a delay or is the message delivered immediately?

26. Multiple System Languages

What languages does the proposed voice mail system offer? Can different languages run concurrent? How many? Describe how a caller might move from one language to another. Is there a choice between male and female voices for the provided prompts?

27. Networking (AMIS)

Describe the networking capabilities of the proposed voice processing system to link multiple voice processing systems. Does it use the Audio Messaging Interchange Specification (AMIS) networking method? If not, what?

28. Port Monitoring

Indicate whether your system can monitor a port and differentiate between "busy" and "no answer" conditions and change the greeting appropriately. Will the system differentiate between internal and external callers and give them different alternatives? Can the proposed system monitor a busy extension and place the caller into a queue and inform the caller of the busy status of the extension? Could the system then give the holding caller the option to continue hold, leave a message, or dial another party's extension number?

29. Receiving Messages/Message Review

Will the proposed system notify the mailbox user of the total number of messages to be heard upon the request for the password? How will the system treat messages that have been listened to but not acted upon?

30. Recording Telephone Calls in Voice Mailbox

Can the proposed system record telephone calls in voice mail and store them as messages in a voice mailbox? Does the user have start/stop controls? Can the recorded calls be listened to and processed as any other voice message? Does the record feature also work on conference calls?

31. Remote Administration

Describe the remote administration capabilities of the proposed system.

32. Reports

Discuss your system's ability to provide reports. Discuss what reports could be used for securing the voice mail system. Can reports be stored and printed on demand?

33. Shared Extensions

Can multiple mailboxes support a single shared extension? If so, how is this accomplished?

34. Single Digit Call Processing

Is there the capability of single digit dialing to specified groups or departments? Can multiple menu layers be accessed by single digit selections? How many menu layers are offered?

35. System Backup

Describe system backup procedures available with the proposed voice processing system. The proposed system must provide an auto backup capability to automatically save the database on a scheduled basis.

36. Varied Sampling Rates

Describe the sampling rate process of the proposed system.

37. Voice Forms

Does the proposed system give the caller the ability to listen to questions and reply to each question individually? Can the responses be separated from the questions to be delivered in an edited format for the administrator to later retrieve? Will the system automatically disconnect the caller after the information has been received? Could the caller be transferred to another

mailbox/extension at the conclusion of the form? Are the mailboxes capable of being password protected?

F. Facsimile Services

1. Fax Platform and Overview

Describe the architecture of the fax platform. Can all the fax applications run concurrently? Does the fax platform run on top of the voice mail platform?

2. Fax Messaging Hardware

Discuss the hardware required to implement fax messaging. What baud rates can the fax modems support?

3. Memory

What considerations must be given to memory if fax is implemented? Is a RAM upgrade required, and at what stage?

4. Hard Drive

Discuss the involvement of the hard drive. Is the hard drive the same storage site for voice messages as for fax messages? Where on the hard drive are the faxes stored relative to the voice messages. Are there any redundant storage capabilities for fax on the proposed system?

5. Fax Messaging Features

When using fax mail, can the user send a message to another subscriber? Can a user receive messages from other subscribers which would have "header" information indicating who sent it (if it came from within the system), when it was received, and how many pages were in the transmission? Could the messages be forwarded or copied to other users with an annotated voice comments? Could "class of service" restrictions be placed by fax mailbox on the forwarding or copying of messages?

6. Fax Reply/Editing/Delivery

Can a reply to a fax message be a simple one or two keystroke procedure when forwarded from another internal user? Will the proposed system have the same editing features as voice mail enabling the user to skip, save, or delete messages? Will the system have the same delivery options as voice mail, enabling the user to tag the messages urgent, confidential or even for future delivery?

7. Fax on Demand

Does the proposed system offer the Fax on Demand feature capability? Describe how callers wishing to receive a fax would go about making that request on the proposed system.

8. Fax Tone Detect

Does the proposed system offer Fax Tone Detect capabilities? Describe how this feature works.

H. Unified Messaging

1. Describe the Unified Messaging (UM) capabilities of the proposed voice processing system.
2. Does Unified Messaging on the proposed voice processing system support IMAP4 Synchronization?
3. Does Unified Messaging on the proposed voice processing system support remote user access using just an Internet web browser without requiring the host Outlook application (from PCs at an Internet Café or hotel kiosk PC)?
4. Does Unified Messaging on the proposed voice processing system support Microsoft Outlook Integration?
5. Does Unified Messaging on the proposed voice processing system support other email servers in addition to Outlook?
6. Does Unified Messaging on the proposed voice processing system support Internet Protocol Integration?
7. Does the UM application run on the same hardware platform as the voice mail and other applications? Can all of these applications run concurrent on the same hardware platform?
8. What considerations must be given to memory or additional processing power if UM is implemented? Is a RAM upgrade required, and if so, at what stage? What other additional hardware, if any, does UM require?

K. Feature Summary Chart

The chart that follows summarizes feature availability of the voice processing system. Answer with a check mark signifying feature availability as Standard (Std), Optional (Opt.), or Not Available (N/A). The column to the far right is provided for comments if needed.

Voice Processing System Features:	Standard	Optional	Not Available	Comments:
Audiotex				
Automated Attendant				
Automatic Gain Control				
Automatic Speech Recognition				NA
Busy Greeting				
Busy Greeting Length Control				
Called Identification				
Caller Confirmation prior to Transferring				
Call Queuing				
Call Screening				
Call Transfer				
Directory				
Disk Redundancy				

Disk Space Notification				
Distribution Lists				
Do Not Disturb				
Fax Messaging				
Fax Messaging - Immediate Retrieve				
Fax Messaging - Send Retrieve				
Fax on Demand / Fax Back				
Fax Tone Detection				
Future Delivery				
Greeting - Company				
Greeting Length Control				
Greeting - Personal				
Greeting - Port Selectable				
Group Partitions - Call Blocking				
Guest Users				
Guest Users Limit				
Integration - Dual				
Integration - In band				
Integration - SMDI/RS-232				
Interactive Voice Response				NA
LCD Feature Prompting with Soft Keys				
Message and Prompt Speed Control				
Message Copy				
Message Copy w/Delete				
Message Date & Time by Request				
Message Date & Time Control				
Message Delete - Continuous				
Message Forwarding				
Message Length Control				
Message Pause During Playback				
Message Playback - Continuous				
Message Playback Control				
Message Purging				
Message Receipt Verification				
Message Reply				
Message Retrieval Control				
Message Undelete				
Message Volume Control				
Messages - New & Saved				
Messages - Private				
Messages - Urgent				
Messaging - Voice				
Multiple System Languages				
Name & Extension Control				
Networking (AMIS)				
Notification - Message				
Notification - Urgent Messages				
Notification - Disk Space				
Office Paging				
Programmable Dial Actions				
Real Time Screen Information				

Record to Voice Mailbox				
Relay Paging				
Remote Administration				
Reports				
Ring Duration				
Screen Saver				
Shared Extensions				
Single-Digit Menus				
System Backup				
Text-to-Speech				NA
Token Programming				
Plug and Play				
Unified Messaging				
Universal Ports				
User ID Option Locks				
User ID Security Code				
User ID - Variable/Fixed Length				
Varied Sampling Rates				
Voice Forms				

VI. System Requirements

A. *Required Capacities of Proposed Business Telephone System*

The following are the stated capacities of the system to be installed at HART PUBLIC SCHOOLS.

VOIP PHONES

High School: 300 West Johnson St. Hart, MI 49420

1. analog station ports active to PSTN – 4
2. analog station ports – 4
3. VoIP Stations: **30 classroom type** phones -- Minimum ten (10) programmable buttons, full duplex, 4 line LCD display
4. VoIP Stations: **8 Administrative/Office** phones - - Minimum twenty (20) programmable buttons, full duplex, 4 line LCD display.

Middle School: 308 West Johnson St. Hart, MI 49420

5. analog station ports active to PSTN – 4
6. ISDN PRI circuits to connect to PSTN - 1
7. analog station ports – 4
8. VoIP Stations: **29 classroom type phones** -- Minimum ten (10) programmable buttons, full duplex, 4 line LCD display
9. VoIP Stations: **7 Administrative/Office phones** - - Minimum twenty (20) programmable buttons, full duplex, 4 line LCD display.

Spitler Elementary: 302 West Johnson St. Hart, MI 49420

10. analog station ports active to PSTN – 4
11. analog station ports – 4
12. VoIP Stations: **32 classroom type phones** -- Minimum ten (10) programmable buttons, full duplex, 4 line LCD display
13. VoIP Stations: **4 Administrative/Office phones** - - Minimum twenty (20) programmable buttons, full duplex, 4 line LCD display.

Hart Upper Elementary: 306 West Johnson St. Hart, MI 49420

14. analog station ports active to PSTN – 4
15. analog station ports – 4
16. **VoIP Stations: 20 classroom** type phones -- Minimum ten (10) programmable buttons, full duplex, 4 line LCD display
17. VoIP Stations: **5 Administrative/Office phones** - - Minimum twenty (20) programmable buttons, full duplex, 4 line LCD display. Note HUE includes phones for Transportation building.

PAGING

Provide 4 zone paging interface for each building.

OTHER REQUIREMENTS

- Message waiting lamps on all telephones
- System administration hardware and software
- Soft key LCD display phone and voice mail
- LCR software
- Complete System Battery backup, 2 hours minimum.
- Bid should provide for 10 spare classroom phones and 3 spare administrative phones.
- Provide a list of recommended spare parts or equipment that will be needed to keep the system operational in the future.

B. Voice Processing System Configuration Requirements

- Message Storage Capacity: 40 hrs minimum 100 hrs maximum
- Voice mail ports: 8 minimum 16 maximum
- Number of Mailboxes: 250 minimum 350 maximum
- Maximum Message Length: Unlimited
- Unified Messaging users 25 minimum Unlimited maximum

VII. Pricing

A. Equipment & Installation

Provide a full equipment and software listing with component pricing.

NOTE mandatory alternate to provide unit price for VoIP classroom and administrative/staff phones. Should the district choose to add phones in the future, cost to add 1 VoIP phone should include any materials, software, licenses.

NOTE: mandatory alternate to provide price to add digital classroom phones. Should the district choose to use digital phones or add in the future, cost should include interface to support **sixteen** digital ports, materials, labor, and software.

Note: mandatory alternate to provide price to add 1 Digital phone should include any materials, software, licenses.

B. Training

End user training will be required. Final pricing should include pre- and post-cutover training costs for 134 users. Users will be trained in 2 hour sessions, 16 users per group according to classroom user or administrative/staff user.

VIII. Installation Service and Maintenance

Base Bid to include 5 yr Warranty. Complete installation shall be free from defect and/or failure for a period of 5 years. Manufacturer's warranty shall include all components of the system, including hardware and all software updates to maintain most current operation. Warranty shall begin at acceptance of completed system.

1. After the warranty period, what does your company offer in regards to service arrangements.

2. What are your standard maintenance hours? What are your optional plans, if any? Cost?

Break down service costs as follows:

- Per call basis (Service Call without Maintenance Agreement)
- Per call basis (Moves, Add, or Changes without Maintenance Agreement)
- Annual Maintenance Agreement (quote should be for the year immediately following expiration of warranty)

3. If the long-term service agreements are subject to price increases, please state the basis on which these increases can be made.

4. Explain in detail how additional equipment added to the basic system will increase service costs.

5. How often would service rates be adjusted due to additions to the system?

7. Does your company offer a software maintenance plan which assures the user will have the most current version of system features installed?

8. What are your response times during and after the warranty period? Any differences? Explain.

9. Service Calls — What are your guaranteed *response times* for:

- Complete system failure (defined as loss of normal functionality for 20% or more of users).
- Minor system malfunction (defined as a loss not meeting the 20% criteria noted above.)
- Loss of digital or analog trunk services.

10. Explain in detail your *service capabilities* on:

- A major problem. (as defined above)
- A minor problem. (as defined above)

11. Is service available 24 hours a day, 7 days per week? If so, additional charges after normal service hours? Indicate “normal service hours”. Additional charges for standard national holidays?

12. What is your guaranteed response time for Move and Change activity? Define exceptions, if any.

13. Where is your local installation/maintenance office located?

14. How many installation/maintenance personnel do you have located within the local area that are factory authorized to work on the system(s)?

15. Do you stock adequate spare parts to meet your service agreement commitments? Explain.

16. Explain how system upgrades are managed. Are there mandatory hardware, software, or maintenance upgrades? If so, please explain, and cost to do so.

17. Please explain what costs are associated with licensing of hardware or software. Please explain and indicate costs and frequency of license renewal, eg annual?. Is license renewal mandatory, i.e. if owner chooses not to renew is the associated equipment, software or hardware, rendered inoperable?

HART PUBLIC SCHOOLS

BID FORM PROPOSAL FORM

BID TO: Hart Public Schools
Attn: Jason Gale
Hart Middle School
308 Johnson St.
Hart, MI 49420

FROM: _____ Contractor
_____ Address
_____ City, State, Zip

PROJECT: HART PUBLIC SCHOOLS PHONE SYSTEM & VOICE MAIL

Contractors submitting a response having familiarized themselves with all conditions affecting the cost of work, and having examined all applicable bid documents are providing a proposal to include all materials, equipment, services, and taxes if applicable.

Base Bid: Phone, Data, and Voice Mail System

_____ Dollars (\$ _____)
Please print. Constitutes base bid.

Addendum: Number ____ Date: _____ Number _____ Date _____

Alternates: Mandatory

#1 Unit Cost classroom VoIP phone: Base Bid _____ Post Bid _____

#2 Unit Cost admin/staff VoIP phone: Base Bid _____ Post Bid _____

#3 Unit Cost 16 port digital interfaces: Base Bid _____ Post Bid _____

#4 Unit Cost classroom digital phones: Base Bid _____ Post Bid _____

#5 Unit Cost classroom digital phones: Base Bid _____ Post Bid _____

Bid Security:

Accompanying this bid, as required herein, is a bid security in the form of Certified Cashiers Check/Certified Check/Bidder's Bond in the amount of:

_____ Dollars (\$ _____)
payable to the owner which shall be retained as liquidated damages, not as a penalty, by the owner if the undersigned fails to execute the Contract in conformity with the contract represented herein and fails to furnish specified bonds with ten(10 days) after issuance of Letter of Intent to the undersigned.

Exceptions:

Bidder takes no exceptions to terms, conditions, specifications and/or any other requirements herein unless expressly noted, and specifically identified below:

Contract exceptions:

AGREEMENT:

The undersigned agrees to provide any post bid information required within ten (10) days after notification of a Letter of Intent, and to execute an agreement for work covered by this bid proposal on the Owner's standard purchase order which terms and conditions are to include all Bidding Documents and any subsequent addenda's. Contractor agrees to submit

In submitting this bid, it is understood that the owner reserves the right to reject any or all bids. This bid is binding for a period of Ninety (90) days from opening.

Submitted:

Name of Company _____ Date: _____

By: Pls print _____

Signature: _____

Title: _____

Official Address: _____

Telephone Number: _____

Primary contact email address: _____

If corporation: affix seal

Subscribed and sworn this _____ day of _____ 2010.

In the county of _____ State of _____

By _____ Seal or Stamp:

Notary Public Signature

My commission expires on: _____