# Appendix A Solution Requirements

In the following tables, indicate the solution’s ability to meet each function today by entering a 1, 2, 3, or 4 in the *Able to Provide* column, where:

#### 1 = No 2 = Qualified No 3 = Qualified Yes 4 = Yes

#### City of Camas Ranked requirements using the MoSCoW method:

#### M = Must Have S= Should Have C= Could Have W= Wont Have

For any function with a response of 2, 3, or 4, describe how the requirement is met. If provided by a third party or partner, provide product name, description, and how it integrates with vendor’s technology.

Required Functions

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| **Operations Function (Today)** | **MoSCoW** | **Able to Provide?** | **Describe capability: how is it accomplished? (Required for 2, 3, or 4 response)** |
| 1. Administration, global changes – allows an administrator to implement global programming and configuration changes across the network | M |  |  |
| 2. Administration, scheduled changes – allows an administrator to schedule and implement programming changes across the network based on time of day, day of the week, and month or year | M |  |  |
| 3. Anonymous caller rejection – allows line to reject external calls from numbers that are blocked from caller ID but allows internal calls from numbers that are blocked (anonymous callers/unknown) | M |  |  |
| 4. Authorization codes – require a code to make certain kinds of calls, e.g., to prevent unauthorized international or regional billed calls | C |  |  |
| 5. Automated attendant – this feature presents callers with a voice menu of options, then routes calls according to the keys the caller presses; menu must be able to accommodate multiple languages | M |  |  |

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| 6. Automated attendant options – allows callers to be transferred to an extension based on their selection from a menu, without help from a person; how many levels does the proposed system allow? | M |  |
| 7. Automated attendant, dial by extension – global or menu option that enables callers to reach a user by dialing his or her extension | M |  |
| 8. Automated attendant, dial by name – enables a caller to reach a user by dialing the first three letters of the last name or first name | S |  |
| 9. Automated attendant, individual greetings – capable of answering individual ports/DIDs with differentgreetings | S |  |
| 10. Automated attendant, personal – unanswered calls to a number or extension aredelivered to a voice prompt that allows callers to choose from multiple options (e.g. another extension, an external number) or voicemail\*\* | M |  |
| 11. Automated attendant, personal greetings – users can instruct the system to greet their callers with a personal message or prerecorded message | M |  |
| 12. Automated attendant, single digit menu – the menu capability provided by the auto- attendant must provide single key access to menu choices | M |  |
| 13. Call auditing – allows a system administrator to track an outbound call, placed from any location on the network, by the originating extension number, date, time, number dialed, trunk used, and duration | S |  |
| 14. Call blocking – an administrator can block calls from specific exchange or area code, e.g., 976 exchange or 900 area code | C |  |

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| 15. Call coverage (find-me follow-me) – users can route incoming calls to another location or locations, and to route multiple numbers to a single phone or answering service; e.g., incoming calls can be routed to all user devices simultaneously, to different locations based on a preset schedule, or sequentially to any combination of user’s office, cell, home phone, etc. | M |  |
| 16. Call forward – users can send incoming calls to another number (internal or external to the network, landline or cellphone); all calls, when line is busy, and when call is not answered | M |  |
| 17. Call forward, permanent – virtual number with permanent call forward to another number, i.e., so it appears to be calling a local number | S |  |
| 18. Call pickup – allows users to dial a feature code or press a button to answer a call ringing any other phone, within a predefined pickup group or a specific extension | S |  |
| 19. Call rejection – ability to block calls from specific numbers; caller hears a recording the number called is not accepting calls from them at this time; state how many numbers can be rejected | S |  |
| 20. Call waiting – user will hear a call waiting tone if they are on another call | M |  |
| 21. Caller ID, inbound – the name and number of the calling party, whether internal or external, appears in the user’s display | M |  |
| 22. Caller ID, outbound – can be configured to announce individual DID numbers or the company’s main number, or it can be blocked entirely | M |  |
| 23. Caller ID, outbound block– selected users may block/unblock outbound caller ID on a per station basis | M |  |
| 24. Centralized administration– a platform that supports centralized administration and maintenance of the network from one facility | M |  |

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| 25. Classes of service – allows restriction of outbound calls, either entirely, or by calling areas (local, toll, domestic, international) on a per-user basis | C |  |
| 26. Conference capability – provides call conferencing, internal or external with both meet-me (no password codes) and administrator/moderator (with password codes); note the maximum number of lines that can beconferenced | S |  |
| 27. Cost allocation and reporting – an administrator can view and export to CSV inbound and outbound call details by originator, destination, rate centers, billing code (up to 24- character GL code, e.g., 001- 1754201, assigned to each user or outbound call), duration, and cost; describe how billing codes are used in the solution | C |  |
| 28. Diagnostic tools – allows an administrator to run a series of procedures and diagnostic tools to isolate and troubleshoot component and software level failures | M |  |
| 29. Directory, nonpublished number – number is not published in the phone directory or available thru operator services | M |  |
| 30. E911 – location information (facility and zone) provided when user dials 911:1. Describe how your system supports enhanced 911
2. Does your system have the capability of providing a unique identifier for each handset location, including those that do not have an assigned DID?
3. Does your system have the capability to alert a console, specified phone station when a 911 call is dialed?
 | M |  |
| 31. Extension assignment – every phone or user is assigned an extension, the last 4 four digits of that user or phone’s DID number; extensions can be used for internal calling, transferring, or in conjunction with dial- by-extension functionality in the auto- attendant | M |  |

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| 32. Feature administration – an administrator can enable/disable features at the user level | M |  |
| 33. Fiber – system supports direct fiber connectivity | C |  |
| 34. Headsets – allows users to make and receive calls with a headset instead of a handset | M |  |
| 35. Hold – a user may pause the current conversation, and retrieve the call from the same phone | M |  |
| 36. Hot line – when phone is picked up, line autodials a pre- programmed number (e.g., 911 for emergencies, a service desk, etc.) | M |  |
| 37. IP soft phones – supports an IP soft phone | M |  |
| 38. Message management – when listening to messages, user has the ability to rewind, forward, and pause the message | M |  |
| 39. Message, forward – ability to forward messages, with or without additional comment. | M |  |
| 40. Multiple call appearance – allows a user to have the opportunity to take more than a single call at one time | M |  |
| 41. On hold reminder ring – if user is not on another call while a call is on hold, they will hear a reminder ring; describe the intervals | S |  |
| 42. Passwords – required for system administration tools | M |  |
| 43. Quality of Service – system supports industry standards for QoS | M |  |
| 44. Redial – a user can call the previous internal or external phone number dialed without re-entering the number | M |  |
| 45. Remote access to administration – allows an administrator to remotely access the network for administration and maintenance purposes | M |  |

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| 46. Report, call detail – an administrator can view and export inbound and outbound call details by originator,destination, rate centers, duration, and cost | S |  |
| 47. Ring tone selection – user can choose between distinctive ring tones to help distinguish their phone from neighboring phones | S |  |
| 48. Route selection, automatic – route calls out trunk groups terminated on any system in the network | S |  |
| 49. Routing flexibility – dynamically route a call over various network paths to avoid congestion at any location | S |  |
| 50. Speakerphone – provides full-duplex speakerphone capability | C |  |
| 51. Speed dial – a user can program internal or external numbers as two-digit speed dials accessed using a feature code, or as programmed buttons | M |  |
| 52. Speed dial – allows a user to press a button pre- programmed with a phone number; both system wide and user speed dial numbers must be accommodated | M |  |
| 53. Station administration – allows an administrator to setup, configure, and troubleshoot any station on the network from the centralized administration platform | M |  |
| 54. Temporary deletion – user can retrieve a deleted message during current session | C |  |
| 55. Toll restriction – the capability to block long distance calls from specific stations | C |  |
| 56. Transfer – allows user to transfer an active call to another extension or external/cellphone number | M |  |
| 57. Transfer directly to voicemail – user has ability to easily transfer a caller directly to another user's voicemail | M |  |
| 58. Unified messaging – how does the solution integrate with Microsoft Exchange | M |  |

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| 59. Voicemail distribution groups – users can send voicemail to a predefined group of users | S |  |
| 60. Voicemail envelope information – incoming messages are automatically labeled with date, time, duration, and Caller ID | M |  |
| 61. Voicemail notification – notification of a new voicemail message can be sent to an external number (e.g., cell phone) | M |  |
| 62. Voicemail transcription – voice messages are transcribed to text and emailed to the user along with a WAV file | M |  |
| 63. Wireless headset – an integrated wireless headset with the capability to answer and release calls without returning to a hard-wired phone | S |  |
| 64. Wireless phones – supports wireless (cordless) phones | S |  |

# Preferred functions

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| **Operations Function (Today)** | **Able to Provide?** | **Describe capability: how is it accomplished?** |
| 65. Alarm notification – in the event of a system failure, an alarm notification can be sent to an administrator via cell phone, email, or network broadcast | S |  |
| 66. Audio text – callers can listen to a greeting / announcement, but do not have the capability to leave a message | M |  |
| 67. Auditing, change history report – provides a report of all programming changes and the source for documentation and authorization purposes | S |  |

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| 68. Automated attendant, greeting toggle – user has the ability to toggle between a standard greeting and a special greeting | M |  |
| 69. Automated attendant, personal – users can record multiple personal greetings and have the system play a single greeting for all calls or play specific greetings for different types of calls based on the call type, source or origination, and user’s station status | S |  |
| 70. Backup across the network – allows an administrator to backup any PBX or other Telephony Platform on the network from a centralized management position | M |  |
| 71. Browser agnostic – works on all major browsers (IE, Chrome, Firefox) | M |  |
| 72. Browser based system management – allows an administrator to access the centralized system administration tools from any web-enabled browser | M |  |
| 73. Browser based user administration – allows any user on the network to access telephone programming information and change or modify predefined station set features | S |  |
| 74. Browser, non-Java – administration functions are not Java based | M |  |
| 75. Call auto hand-off – enables automatic Wi-Fi/cellular call handover | S |  |
| 76. Call back – allows users to press a button to activate a call back from a busy station when it returns to the idle state | S |  |
| 77. Call logs, on phone - display the date and time of user’s missed, received, and placed calls | M |  |

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| 78. Call park – user pauses a current conversation, and she or another user, can retrieve the call from any phone using a menu | M |  |
| 79. Call screening – users can treat calls differently depending on the caller ID; e.g., specific incoming Caller-IDs can always be forwarded to a cellphone, whereas others can always be sent to voicemail or disconnected | S |  |
| 80. Call treatment, time dependent – functionality that enables different call treatment depending on the day of the week or time of day; users can enable or disable this functionality | M |  |
| 81. Chat/instant messaging – chat client ability to disable archiving and block users or groups | W |  |
| 82. Computer based administration – does the system provide a GUI based utility for system administration and programming; describe available options | M |  |
| 83. Computer based phone – users can manage their calls via computer rather than phoneset; state whether installation of this application requires licensing, and if this pricing is reflected in your proposal | M |  |
| 84. Computer based reception consoles – receptionists can manage calls within their group via computer rather than an attendant console; state whether installation of this application requires licensing, and if this pricing is reflected in your proposal | M |  |
| 85. Desktop sharing – users can launch a desktop sharing session during an audio or video chat and share their entire screen or a chosen portion | C |  |
| 86. Diagnostics, internal – the ability for internal self- detection, diagnosis, reporting and resolution of component and software level failures on any PBX or other Telephony Platform or peripheral equipment of the network | S |  |
| 87. Dial ahead/through – allows subscriber to enter keypad commands through the system voice prompts | M |  |

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| 88. Do not disturb – users can temporarily prevent incoming calls from ringing their extension, and route them automatically to voicemail or another pre-programmed destination | M |  |
| 89. Dual persona – allows users to separate business and personal communications on a single device | S |  |
| 90. External access – allows subscribers to access the voicemail system through a separate DID or 800 number | M |  |
| 91. Intercom groups – a user can communicate hands- free with multiple users via their speakerphones | M |  |
| 92. Intercom one-to-one – two users can communicate hands-free via speakerphone | S |  |
| 93. LDAP directory synchronization – allows an administrator to utilize LDAP to synchronize the PBX or other Telephony Platform database with a directory server | M |  |
| 94. Message waiting indicator – users are given visual notification of voicemails through on-screen alerts and the handset | M |  |
| 95. Mobile app – client extends full desk phone call handling and capabilities to Android and iOS mobile and wearable devices, including single touch conferencing from these devices | M |  |
| 96. Music on hold – an administrator can choose a song, or upload one at no charge, and play that audio for callerson hold | M |  |
| 97. Paging groups – users can page (one-way speakerphone) groups of phones throughout the enterprise, regardless of physical location | M |  |
| 98. Password administration – an administrator can manage phone and voicemail passwords online | M |  |
| 99. Password aging – force users to change passwords at pre-determined intervals | M |  |

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| 100. Presence, on-phone – users can view the on or off phone status of other users’ lines | M |  |
| 101. Priority message – subscribers can send priority messages that are specifically marked and preferentially presented to recipients | S |  |
| 102. Receipt – ability to generate receipt information for messages sent | C |  |
| 103. Remote phone use – users can use a phone from any location with a cable/DSL broadband connection, such asa home office; describer how this would be accomplished | M |  |
| 104. Ring group – allows calls to a single number to ring on multiple phones simultaneously or in series | M |  |
| 105. Scheduled delivery of messages – subscriber can send voice messages to other subscribers at a designated time and date | M |  |
| 106. Scheduled maintenance – a set of procedures or tools run at regular intervals to maintain and optimize system performance | M |  |
| 107. Security, invalid login threshold – creates a record of all invalid attempts to log into the system administration package and locks out the user after 3 invalid attempts in a specified time period | M |  |
| 108. Shared line appearances – allows a set of extensions or DID numbers to appear on a group of phones in addition to each phone’s primary number | M |  |
| 109. Simple Network Management Protocol – the system provides SNMP information that can be used to report system alarms and performance data? | M |  |
| 110. Time dependent greetings– user has the ability to record a special greeting for after business hours | M |  |

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| 111. Toll fraud – allows an administrator to customize call accounting reports to analyze call traffic for toll fraud for all locations in the network | S |  |
| 112. Toll fraud alert – automatically notifies an administrator of toll fraud | S |  |
| 113. Traffic analysis – an administrator is able to gather traffic information related to both quantity and length of calls, as measured in CCS | S |  |
| 114. Transfer, announced – user can send a current call to another extension or phone number after conferring with the recipient | M |  |
| 115. Transfer, unannounced – user can send a current call to another extension or phone number without first speaking to the recipient | M |  |
| 116. Undelete message – allows a subscriber to press specific keys on the keypad at any time during message retrieval process to “undelete” the last message deleted | M |  |
| 117. Video conferencing – user can video chat with other users | C |  |
| 118. Voicemail broadcast – an authorized user can forward a voicemail to the entire user base | M |  |
| 119. Voicemail review and re- record – provides the ability to review and re-record a message prior to being sent | M |  |
| 120. Voicemail to email group notification – multiple email addresses can receive notification of voicemail receipt | S |  |
| 121. Voicemail, message creation – subscribers can access the system from any touch-tone telephone, record messages, and send them to other subscribers on the system | M |  |
| 122. Voicemail, on-screen – users can navigate the phone screen to retrieve and otherwise handle voicemail messages | M |  |

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| 123. Voicemail, reply by calling – users can reply to a voicemail message from the voicemail system by calling back the Caller ID, when available | S |  |
| 124. Web & app dialer – users can automatically dial a number from the web or app by clicking on it | C |  |
| 125. Administration, scheduled changes – allows an administrator to schedule and implement programming changes across the network based on calendar events such as Holidays that vary year to year | MM |  |
| 126. Seamless Transition for end users between Desk Phone, Softphone and App. End user can login from softphone and override their desk phone to work from home and there is no difference to call flow, abilities and functions. | M |  |
| 127. Handsets must support VOIP and be capable of pass through of at least 1Gbps, VLAN tagging, VOIP encryption, manual and DHCP configurations. | M |  |
| 128. VOIP trunks supported as well as Analog and traditional PRI trunks | M |  |
| 129. System supports softphone clients other then system branded. | M |  |
| 130. Backup and Recovery can be performed by industry standard backup solutions such as VEAM | M |  |
| 131. Support parts and handsets will be available at least 10 years from install date. | M |  |
| 132. Deployment of Softphones can be done over Intune or through Active Directory | M |  |
| 133. Work from home Softphones either work over Internet or from City's standard VPN client. | M | Page 29 |
| 134. Documentation for managing and maintaining phone system will be made available to the client | M |  |
| 135. Phone system will be optimized for a multi facility deployment and with some buildings be able to function on an its own. | M |  |
| 136. Trunking solution must present local numbers and be easy to manage DID's and forward to temporary numbers | M |  |
| 137. SMS through trunking to handsets and devices with DID# | S |  |
| 138. Ability to record conversations may be useful to some departments but with respect for privacy.  | C |  |
| 139. Interested in AI and what that can add to a phone system- auto attendant  | C |  |

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## Environmental specifications

1. Provide the physical dimensions of the proposed system as configured for each site. Include width, height, and depth, and rack space requirements.
2. Describe the mounting options of the proposed system-rack, floor, or wall. If more than one option exists, please describe the available options and costs, and provide a recommendation.
3. Provide power specifications of the proposed equipment.
4. Provide the required cabling specifications for the proposed system. Note any special requirements due to station type.
5. Describe the environmental considerations of the proposed system, including operational temperature, humidity, and heat dissipation.

## Vendor support

1. Implementation work plan – provide an implementation work plan for a complete system installation. Include project milestones and outline expected customer roles/responsibilities. Estimate the amount of time City personnel can expect to spend working with you on this project.
2. QoS configuration and implementation – describe how you will assist the City in configuring and implementing QoS.
3. Implementation team – provide a description of your implementation team, including engineering staff, technical installation staff, project management staff, and trainers. Include the years of experience implementing similar solutions for each team member.
4. User training – the City is requesting live on-site comprehensive phone and voicemail training for approximately 50 power users, and pre-recorded (e.g., video or PowerPoint) basic training for approximately 200 that will be hosted on the City’s Intranet. Include training description and documentation.
5. System administrator training – the City intends to manage the system and requires adequate training for

IT staff that meets manufacturer requirements; you must provide installation, maintenance, administration, and programming training; note who will provide training and at what location, and if manufacturer certification is required for customer system support. Include training documentation. Pricing should include training for 5 administrators.

1. Vendor warranty service – provide a description of your warranty service, including guaranteed response times, preventive maintenance schedules, and any added service offerings.
2. Manufacturer warranty service – provide a description of the manufacturer’s warranty on the products proposed.
3. Remote diagnostics – describe your company’s ability to provide remote diagnostics and provide a list of your fees and the minimum billing increment.
4. Help Desk - describe your help desk function to support this product.

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1. Maintenance support program – provide a description and pricing of all available maintenance plans for service after the warranty period. Provide pricing for any extended warranties available.
2. Response time – describe your response time to post-warranty support; include the time for each category of response (e.g. emergency, standard, add, move & change, etc.).
3. Describe in detail the service level for support.
4. What is the average response time for technical and end-user support questions?
5. What is the average resolution time for technical and end-user issues?
6. What hours are the support personnel available? Are they available 24/7/365? Is there a toll free number for support calls?
7. How many members make up the support team?
8. What is the average number of years of experience for current personnel providing technical and end-user support for the proposed application?
9. Which support is provided by the vendor and which is escalated to the manufacturer or a third-party?

## System security

1. Describe the proposed approach to system and application security (City of Camas may require completion of cyber security checklist, if you are not able to meet the security standards outlined in the cyber security checklist the product may be ineligible for selection.)
	1. Methods for identification and authentication
	2. User access to data
	3. Audit trails
	4. Firewall, proxy and gateway servers
	5. TCP port 80 for HTTP and TP port 443 for HTTPS
	6. SSL and TLS
2. Describe the security architecture of the application and system.
3. Describe the process for identifying and addressing hardware and software security vulnerabilities.
4. Describe what network services will be utilized by the solution. How will access be controlled?
5. What network protocols will be used?
6. Provide samples and process maps of the transmission file format, definitions and procedures?
7. How do you protect IP voice against unauthorized recording, playback and other forms of electronic snooping?
8. How do you protect audio conferences and the information discussed?
9. How do you improve voice quality in less than ideal Internet conditions?

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## Solution lifecycle

1. Describe the product's history since introduction in terms of its age and any major revisions/release.
2. Has the manufacturer announced an end-of-support date for the proposed equipment? If so, please provide this information.
3. How do you ensure backwards compatibility with new devices?
4. Describe the expected life-cycle of each type of device/equipment.
5. Describe and provide the product documentation.

## Technical question

1. Describe how users connect to the system when they are off site (over the Internet).
2. Is the phone hardware open source or proprietary?
3. Is there an API for the phone system? If yes, please describe.
4. Please list if any on premise equipment or software will be required for implementation (for example, servers, virtual servers, SQL, Windows Server OS etc.)
5. The scope of work for this project is for an on-premises, cloud or hybrid solution. Describe your proposed trunk routing solution as well as any optional (off-premises/cloud) installation solutions (include cost differences):
6. Does your solution support trunks to both providers in both service areas, i.e. both areas keep their existing local numbers?
7. Does your solution support one trunk for all locations, i.e. some locations keep their existing local numbers and others get new numbers?
8. Does your solution route trunks over the Internet, e.g. MPLS, i.e. all numbers will change?
9. Describe any other trunk routing options you support.
10. Describe how faxing works in your proposed solution. Do you have a centralized faxing component (not required)?
11. Describe how long distance charges are calculated on calls, how access to make long distances calls is controlled, and if users can enter access number on phones that restrict toll calls.

## Telephone descriptions

Please recommend the telephone model best suited for each category and provide a description of its functionality.

1. Standard – moderate call volume and selective coverage position
2. Manager/reception – high call volume user; primary answering position for a particular department
3. Soft phone/Headsets
4. video – has video conference capabilities (not required)
5. Conference phones (not required).
6. Public access – locked down to single number dial with no long distance.

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