3.4 PREPARATION OF TRANSITION TPSPS AND ALTPS

Working with the Agencies, Qwest will develop either a TPSP or an ALTP, as requested, and in compliance with RFP Sections C.4.2.3, C.4.2.4, C.4.4.3.1.4 and C.4.4.3.2.4. We will deliver them in the media requested by the Agencies and in the time frames specified.

3.4.1 Identifying Concrete Schedules, Milestones, and Additional Support Plans

Qwest will follow the same procedures in this plan and in the final TMP to develop the ALTPs, and when required, the TPSPs. Schedules, milestones and any additional support plans will be developed with specifics for that Agency or special project in coordination and collaboration with the Agency. Procedures described in Planning and Management (Section 2.0), Transition Cutover (Section 3.0), Transition Inventory (Section 4.0), and Communications and Reporting (Section 5.0), will be followed and tailored to the specific Agency or project.

3.4.1 1 Identifying Other Required Information

In meeting with the Agencies and while conducting any necessary site visits or information-gathering surveys, Qwest will identify, in coordination and partnership with Agencies and GSA, any other required information necessary to input into the ALTP or TPSP.

3.4.1.2 Formats

Qwest will use the format delineated in RFP Section C.4.4.3.1.3 and C.4.4.3.1.4 for the ALTP, and RFP Section C.4.4.3.2.3 for the TPSP. If required by the Agency, or if necessary for a specific project as determined during initial coordination meetings, Qwest will add any additional information or data to the formats above to accommodate Agency requirements.

3.5 CONTINUITY AND QUALITY OF SERVICES FOR PROVISIONED SERVICES USING DEDICATED ACCESS

3.5.1 Operation of Services in Parallel

[redacted]

3.5.2 Cutover of Services when Parallel Access is Available but Agency Cannot Support or Does not Want to Operate Services in Parallel

If parallel access is available (e.g., LEC facilities) but the Agency does not want to operate services in parallel, [redacted]

[redacted]

3.5.3 Cutover of Services when Parallel Access is Not Available

[redacted]

3.6 MAINTAINING CONTINUITY AND QUALITY OF SERVICES FOR PROVISIONING SERVICES USING SWITCHED ACCESS

For existing Plain Old Telephone Service (POTS) lines, the process for switched outbound Long Distance (LD) service consists of adding Automatic Numbering Identification (ANIs) to the Qwest LD switching, OSS, and billing systems. The ANIs should be provided by the Agency as part of the transition order to ensure the correct ANIs are recorded by Qwest.

If the Agency is ordering new POTS access lines and at the same time requesting Qwest LD for the new lines, Agencies should request Carrier Identification Code (CIC) 0432 as the Primary Interchange Carrier (PIC). The Agency will then communicate the new ANIs to Qwest who will add them to the Agency account.

3.6.1 Procedure for Switching the Customer ANIs Away From Another IXC to Qwest LD

The Agency must submit in writing the list of ANIs to change to Qwest. The form will be provided to the Agency and will include language ensuring that the Agency is giving permission to Qwest to change the PIC on their behalf.

The list of ANIs to move from an existing IXC to Qwest will be added to the Agency's account, and a Customer Account Record Exchange (CARE) (an industry standard system to communicate PIC changes to ILECs) outbound message will be sent to the serving LEC requesting a PIC change to the Qwest CIC (0432).

The ILECs usually will process a POTS line PIC change within 24 hours of the request. Complex local access services (for example, PRI) may take up to three days to process a PIC change.

The serving ILEC will normally return an industry standard CARE transaction code, advising of the success or failure of the PIC change request. Failures are known as CARE rejects and are reworked by the Qwest Switched LD provisioning team.

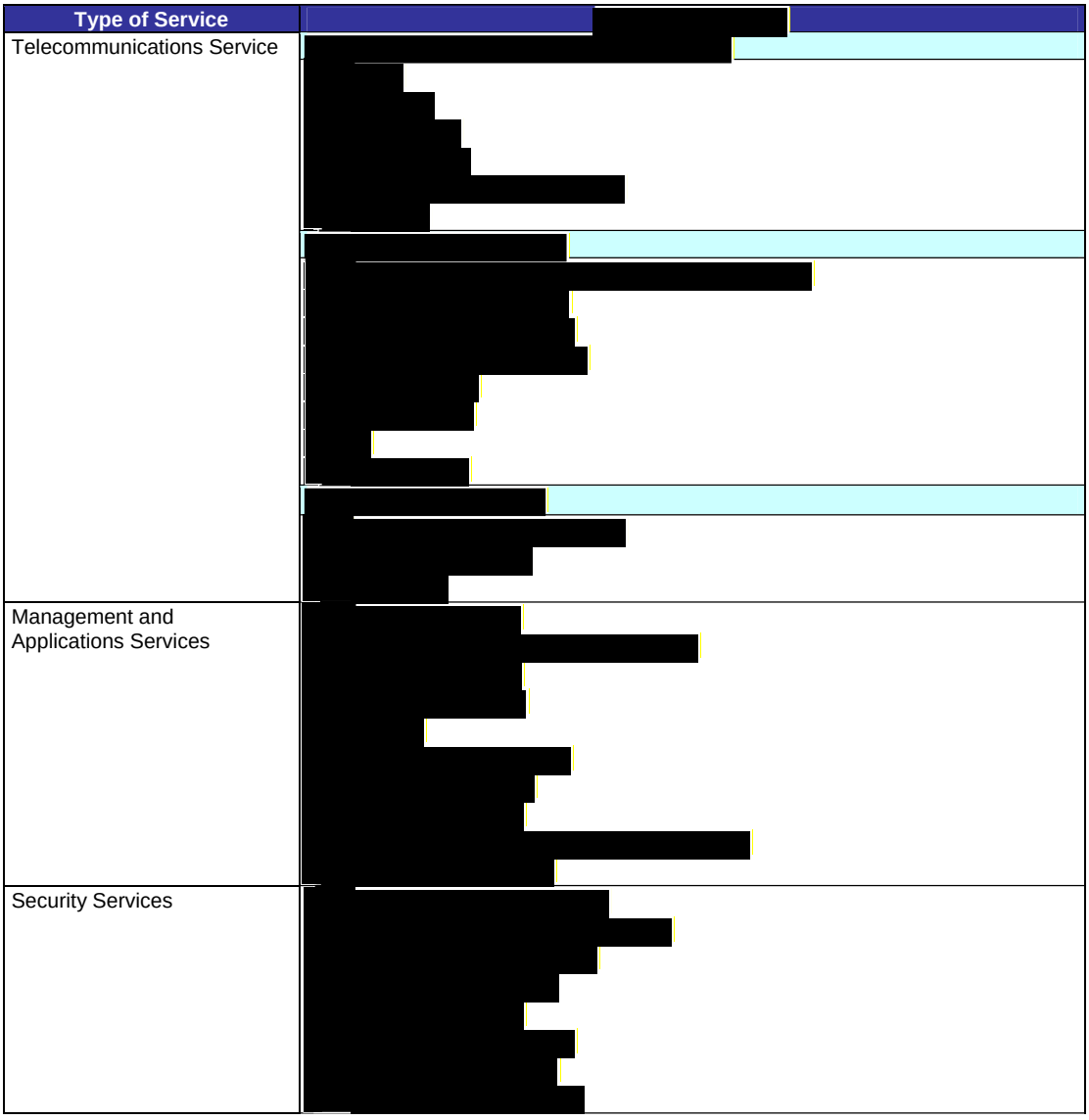
The most common CARE reject is transaction code 2166, which indicates that a LEC "PIC freeze" is on the ANI, and the LEC will not allow an IXC requested PIC change. [redacted]

3.7 REPRESENTATIVE SERVICE TRANSITION PLANS

The Qwest Team is offering the 9 mandatory services as well as [redacted] optional services shown in ***Figure A7-33.*** For each service offered, Qwest will provide a service transition plan. Each service transition plan incorporates a description of the service and a plan for transitioning up to 50 percent of the workload for that service based on the information provided in J-7. These plans include a description of site preparation, activities required to complete cutover of the service, interoperability requirements, and a plan for 100

percent fall-back capability. Our transition overarching approach described throughout this PTMP applies to each individual plan, but the individual plans highlight unique areas specific to the transition of that particular service.

Figure A7-33. Types of Services Offered



Service transition plans for all services listed in *Figure A7-33* will be submitted with the initial TMP within 30 days of Notice to Proceed.

Throughout this section, we have provided service transition plans for each of the 9 representative services listed in L.34.2.4 that Qwest is offering through the Enterprise proposal.

IP Proposal Mandatory Services

- Network-Based IP VPN Service (3.7.1)
- Voice over IP Transport Service (3.7.2)
- Managed Network Service (3.7.3)
- Managed Tiered Security Service (3.7.4)

IP Proposal Optional Services

- Voice Service (3.7.5)
- Toll-Free Service (3.7.6)
- Asynchronous Transfer Mode Service (3.7.7)
- Internet Protocol Telephony Service (3.7.8)
- Call Center/Customer Contact Center Service (3.7.9)

3.7.1 Network-Based IP VPN Service

Qwest Network-Based IP VPN (IP Networking) is a suite of wide area networking services that powers Agencies' business operations on Qwest's application-aware network. Qwest's IP/MPLS network offers a converged networking service based on leading technologies that allow Agencies to build choice networks using IP-centric, Multi-Protocol Label Switching (MPLS)-based solutions. Our IP/MPLS network is tuned to Agency applications. Not only does the Qwest IP/MPLS network provide superior technology and universal access, it offers service and support on the Agency's terms. Qwest's NBIP-VPN provides secure, reliable transport of an Agency's applications across Qwest's high-speed unified multi-service IP-enabled backbone infrastructure.

Based on the information in Section J.7, Qwest is prepared to transition [redacted] sites over an 18 month period.

3.7.1.1 Site Preparation Requirements

Required steps include:

1. Obtain accurate site information:

[redacted]

2. Work with Agency site contacts to inventory the sites:

[redacted]

3. Work with an Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then Qwest will make sure the site can meet the following requirements prior to the transition.

– Dedicated 120VAC, 15amp isolated ground circuit/receptacle including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, an additional rack(s) will be provided.

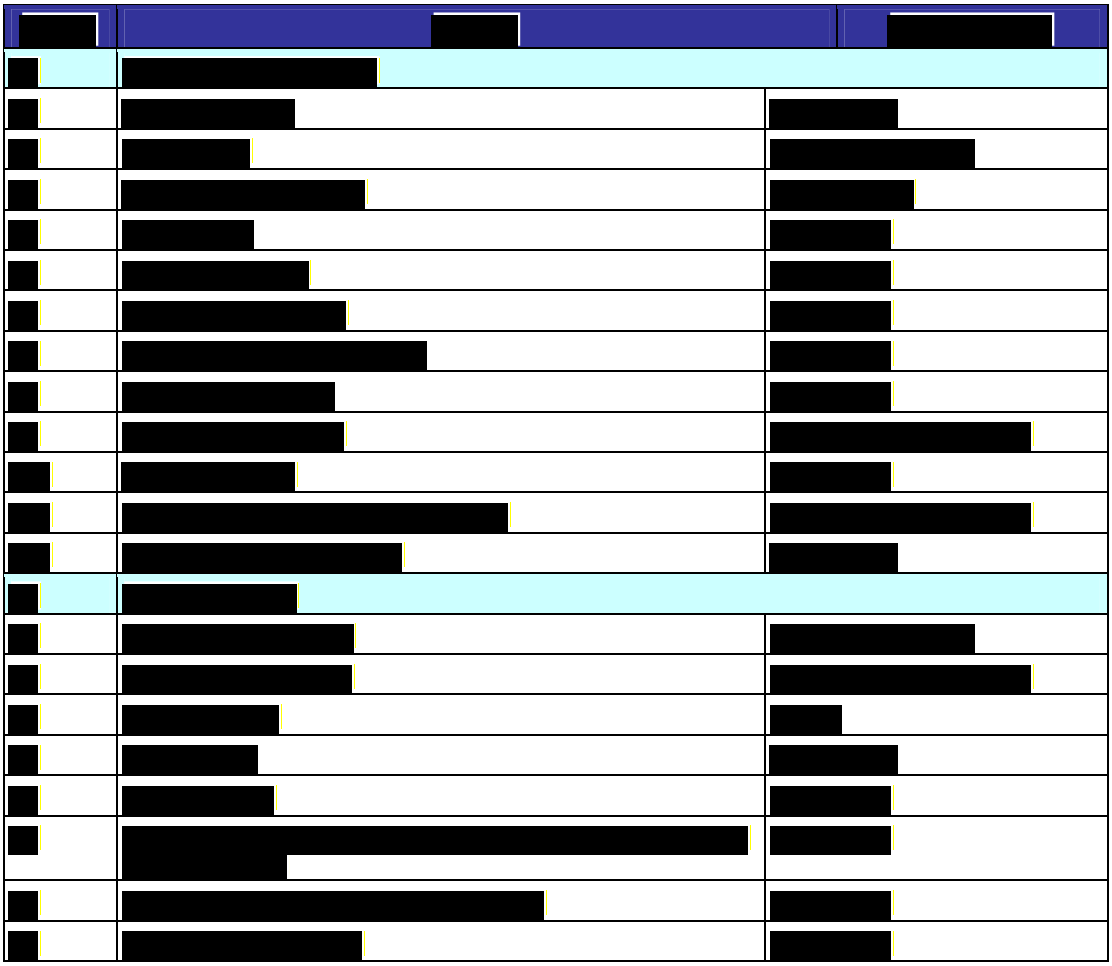
– Plywood backboard mounted on the wall with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable or new backboard is necessary.

– Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent – 65 percent relative humidity, non-condensing.

- Use a spare Wide Area Network (WAN) port on existing SED
- Re-use existing WAN port if the above options are not available.

[redacted]

[redacted]



[redacted]

Network Design

Required steps include:

1. Work with an Agency to understand current network topology and future requirements:

[redacted]

2. Perform detailed design of the new network and private peering points:

3. Conduct lab testing and network simulations to validate the proposed design

4. Coordinate a field trial with GSA to verify performance. Need to order pilot connections

Transition Cutover

Required steps include:

1. Jointly develop an ALTP or TPSP with Agency
2. Establish private peering points with incumbent service provider
3. Install equipment and establish new connectivity to sites per the detailed transition plans

3.7.1.2 Arrangements Needed to Achieve Interconnectivity Between Incumbent Provider Network and Qwest During Transition of Service

Required steps include:

1. Finalize private peering sites, connection type, size, and quantity with incumbent service provider
2. Exchange peering configuration information:

[redacted]

3. Install and test peering connections

3.7.1.3 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

Required steps for sites with new circuits provisioned to Qwest:

1. Capture SED configuration prior to the site transition
2. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration

Required steps for sites with circuits that require a hot cut to Qwest:

1. Capture SED configuration prior to the site transition
2. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration and move the access circuit back to the incumbent network

If issues are encountered during the transition, Qwest will work with GSA and the incumbent service provider immediately to troubleshoot and resolve the issues.

3.7.2 Voice Over IP Transport Service

Qwest's Voice Over Internet Protocol Transport Service (VOIPTS) integrates local and long distance voice with IP access on a single connection. It uses Voice over IP (VoIP) technology to give Agencies the advantage of using the entire circuit for Internet access when phones are not in use. [redacted] Voice traffic is converted to IP and carried across the Qwest IP backbone to a Qwest VoIP gateway nearest the final destination of the call. The traffic is then converted from the IP format to the Time Division Multiplexing (TDM) format accepted by the terminating local service provider and then delivered to the desired location.

Based on volumes in Section J.7, Qwest is prepared to transition [redacted] minutes of traffic monthly to our IP backbone.

3.7.2.1 Site Preparation Requirements

Site preparation is required to support the Integrated Access Device (IAD), the necessary SED, which will be provided by Qwest. No additional equipment will be required on the part of end users who currently have VoIP Key or PBX systems deployed.

Required steps include:

1. Obtain accurate site information:

2. Work with Agency site contacts to inventory the sites:

3. Work with Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then make sure the site can meet the following requirements prior to the transition:
  - Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle, including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks can be provided.

- Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable or new backboard is necessary.
- Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent – 65 percent relative humidity, non-condensing.

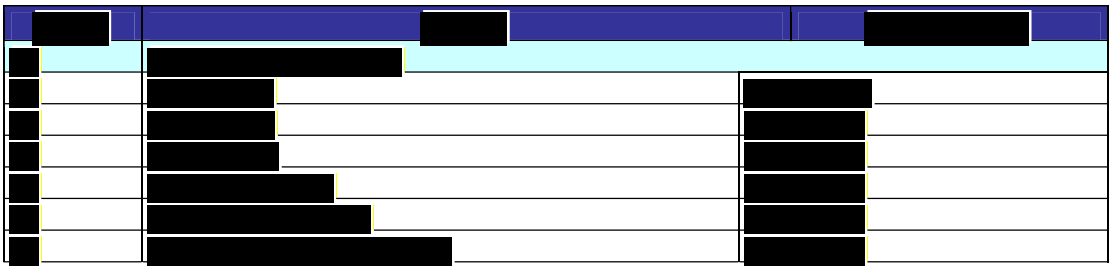
- Use a spare WAN port on existing SED
- Reuse existing WAN port if the above options are not available

911 Emergency Services Management: VOIPTS does not support local services 911, E911, V911, operator services, local number portability, or directory listings.

3.7.2.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent service provider. [redacted] is a Work Breakdown Structure (WBS) that lists all activities required for transition of VOIPTS. [redacted]. For each transition, the Qwest Team will customize the activities listed within this WBS, in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[redacted]



[redacted]

[redacted]

Project execution will commence with the placement of network and equipment orders. Identified site-specific responsibilities will be started and completed. Coordination of network and equipment delivery will take place for each phase and each site. Network and equipment testing will be conducted. Upon successful testing for each phase, training at the specific sites in that phase will occur prior to cutover.

Cutover: Throughout each phase prior to actual cutover, the Qwest Transition Project Manager will schedule pre-cut meetings with the appropriate resources, including the Agency local contact. The cutover plan will identify the maintenance window or time the cut should occur, on-site and off-site support needed to facilitate the cut activity, as well as a contingency plan in the event that service needs to be restored.

Cutover Approach: In preparation for the cutover, Qwest will pre-test and loop-back the circuit in the Agency equipment rooms at all locations.

Qwest encourages Agency participation in pre-testing, where feasible. Potential technical problems can be identified and resolved prior to the official cutover by pre-testing the new Qwest circuits, and new or reconfigured Agency SEDs.

[redacted]

[redacted]		

3.7.2.3 Arrangements Needed to Achieve Interconnectivity Between Incumbent Provider Network and Qwest During Transition of Service

Interconnectivity with the incumbent service provider is satisfied through both the peering relationships on the IP side and through the PSTN on the voice side.

3.7.2.4 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

If the data migration is not successful, the Qwest Implementation group will follow the trouble through to resolution. To ensure that any scheduled number porting will not be impacted, the Qwest Implementation group will contact Qwest's supplier to cancel the pending Local Number Porting (LNP) order. In situations where porting has occurred, but service needs to fall back to the incumbent service provider, the Qwest Implementation group will initiate the "snap back" process with the supplier to reverse the number porting action.

If routers or PBX programming have been reconfigured, the previous configurations will need to be restored by the Agency technical support.

3.7.3 Managed Network Service

Qwest Managed Network Service (MNS) is a complete network management offering that can be used to build a new Agency network and manage it or to take over the management of an existing network. Included in the standard service are 24x7x365 monitoring of equipment and transport links, complete fault and performance management, complete network analysis, configuration backup, online reports, and total Agency support.

Qwest currently manages devices on [redacted]. MNS can be bundled with Qwest transport, equipment, and maintenance packages, or offered as a stand-alone network management solution.

To provide Qwest MNS services, Qwest uses a Simple Network Management Protocol (SNMP)-enabled, proactive management service with the ability to store and retrieve historical data from devices located worldwide. The service is provided by the highly trained engineering staff at the Qwest

NOCs [redacted] Qwest has the capability and knowledge to effectively manage any Networx MNS requirement.

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for MNS to accommodate the cutover of [redacted] sites per month for an 18 month period.

3.7.3.1 Site Preparation Requirements

In order for Qwest to manage an Agency network using MNS, the network should meet the following criteria:

- An IP-capable routed network using publicly-routable IP addresses or privately-routable IP addresses (RFC 1918) for all covered devices.
- Agencies using addresses from the pool of private addresses may be required to implement loop-back interfaces or Network Address Translation (NAT).
- The Agency network can have protocols other than IP running on it. Qwest does not report on traffic patterns by Layer 3 protocol, but will support networks running network layer protocols other than IP (as long as IP is included). Qwest uses IP for its network management traffic, so the network must be capable of routing IP traffic.
- Includes only Qwest-approved devices with SNMP activated.
- The devices have been approved for management by Qwest MNS or were provided to Qwest for certification testing.

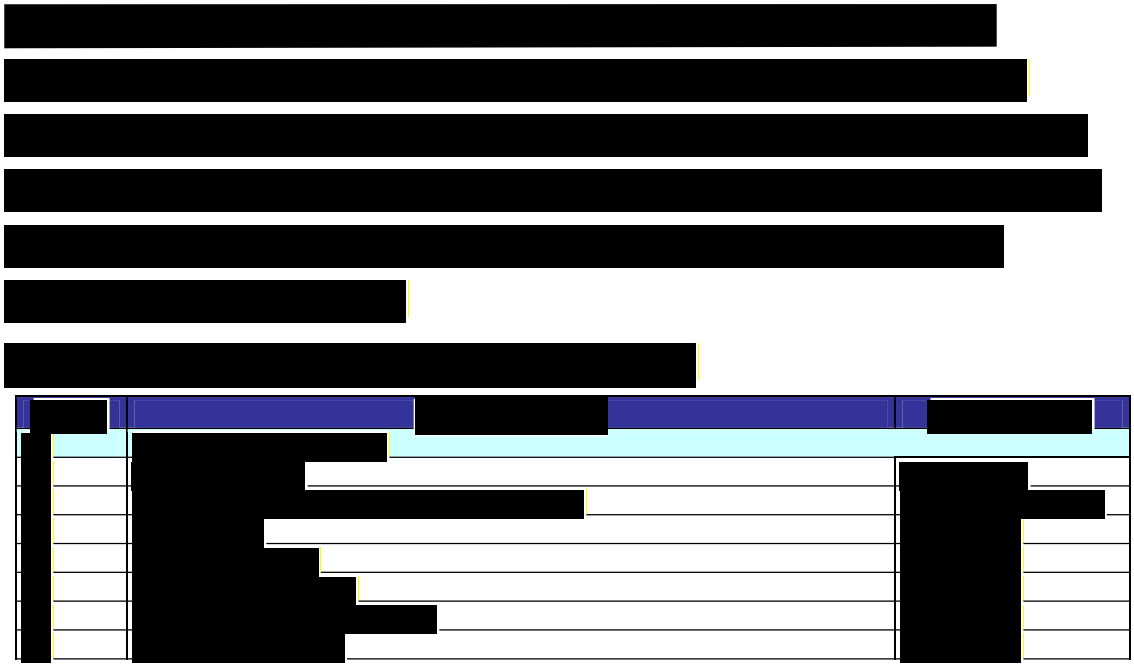
[redacted]

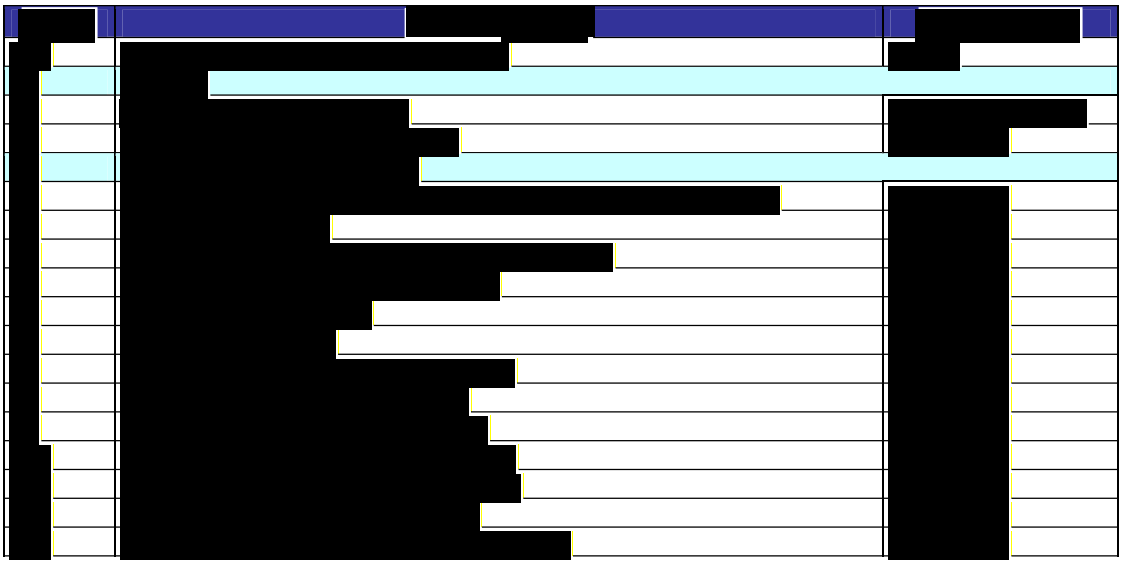
All devices to be managed by Qwest must be certified or approved in advance by Qwest MNS Product Management. If an Agency device is not currently certified, Qwest MNS will certify new devices. Within 24 hours, the Agency will receive the MNS Team's initial assessment of the manageability of the device and information about any certification efforts already underway.

For SED installations, the Agency must provide a safe and secured location in which to place it. The room environmentals must meet equipment manufacturers' specifications (this will be determined during the planning process). In addition the electrical requirements must be determined during the planning process. Site access, security, and LGC information must also be provided to the Qwest Transition Project Manager for scheduling (especially in a 24x7x365 maintenance arrangement).

3.7.3.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent service provider.





3.7.3.3 Arrangements Needed to Achieve Interconnectivity Between Incumbent Provider Network and Qwest During Transition of Service

The nature of Managed Network Services is such that there are no dependencies between a current and new provider of Managed Network Services. The network management traffic uses a separate network from the incumbent service provider.

3.7.3.4 Process and Procedure for 100 Percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

Qwest's Managed Network Services offering is designed in such a way that the implementation of Qwest's service does not impact the ongoing management of a network by the incumbent service provider. Qwest's service allows for more than one entity to manage the devices in the Agency's network, and can be configured in a manner that is not exclusive. However, Qwest would not recommend allowing more than one management operation to have access to and control of the routing schemes in an Agency network. In the event that a problem occurs and it is necessary to halt the transition of

service from the incumbent provider's service to Qwest, the existing provider could continue to have the ability to manage the network. [redacted] the process step that halts the incumbent service provider's ability to manage the network does not occur until after the Agency accepts the Qwest MNS functionality.

3.7.4 Managed Tiered Security Service

Our goal for the transition plan is to provide a seamless transition of service without disruption. The service required is critical to the Agency and cannot be interrupted. Therefore, a collaborative, cooperative, and coordinated transition must occur between the Agency, any incumbent service provider, and the Qwest Team. The activities reflected in a Transition Plan are based on lessons learned in successfully transitioning similar services.

The Qwest Team understands how to respond to security threats and how to effectively provide Managed Tiered Security Service (MTSS). We work across the public and private sectors in both cyber and physical environments. The Qwest Team supports Agencies from policy to practice, from prevention to response, from detection to remediation, including the transition of any of these services.

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for MTSS to accommodate the cutover of [redacted] user seats per month for an 18 month period.

3.7.4.1 Site Preparation Requirements

In general, the Qwest MTSS components require a secure wiring closet or room that provides a dry, clean, well-ventilated, and air-conditioned environment that meets the criteria shown in ***Figure A7-38***.

Figure A7-38. MTSS General Environmental Requirements

Item	Specification
Temperature, ambient operating	0° to 40°C (32° to 104°F)
Temperature, ambient non-operating	40° to 70°C (-40° to 158°F)
Humidity (RH), ambient (non-condensing) operating	10% to 90%
Non-operating relative humidity (non-condensing)	5% to 95%

The Qwest Team will use rack-mounted components to implement MTSS. The equipment room must be an enclosed, secure area that limits access to authorized qualified personnel and protects equipment from excessive dust and foreign conductive material. The physical space for the equipment must allow adequate ventilation and ambient air flow to prevent high temperature conditions and allow easy access to equipment panels for maintenance. Environmental monitoring of chassis components will provide early warning indications of possible component failures to avoid network interruptions.

The MTSS components rely on the building's installation for short-circuit (over-current) protection and use a fuse or circuit breaker no larger than 120VAC, 15amp U.S. (240VAC, 10amp international) for all current-carrying conductors to the MTSS. The specific power requirements for the site will be verified during the site visit before installation of MTSS. Detailed power and fuse requirements will depend on the equipment required to implement Agency MTSS requirements.

The Qwest Team will connect each MTSS equipment rack to separate wiring on a dedicated circuit that provides a branch circuit connection with sufficient over-current protection and direct grounding to the branch circuit. To guard against loss of input power, the Team will verify that the maximum load on each MTSS equipment circuit is within the rating of the installed wiring and breakers.

The following general checklist outlines the environmental and power requirements areas that will be verified by the Qwest Team as [redacted]

[redacted]

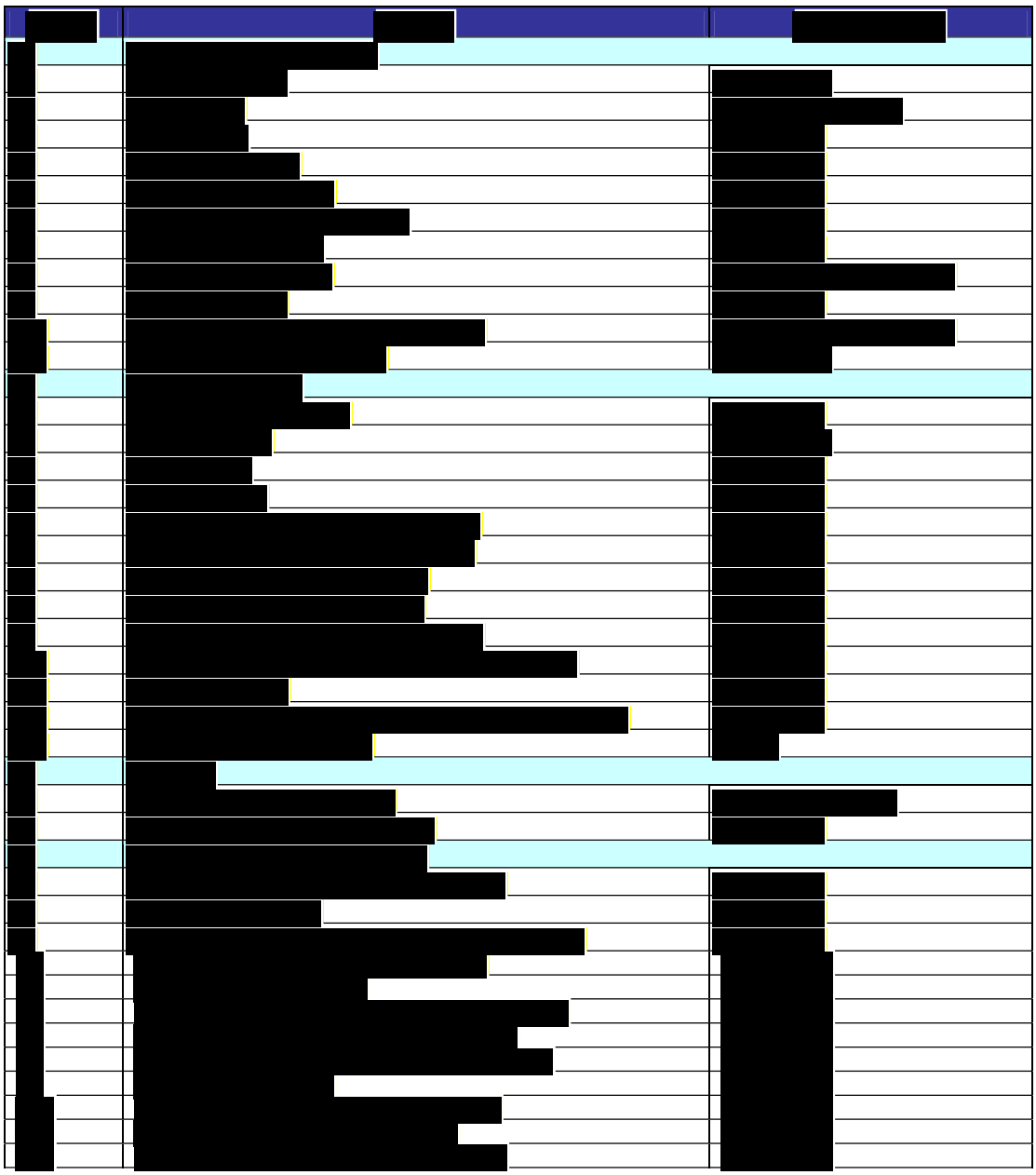
Detailed site requirements will be prepared based on the Agency MTSS order.

3.7.4.1 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent service provider. [redacted] lists all activities required for transition of services. [redacted]

[redacted]. For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[redacted]



[redacted]

Test Plan: The format for each security service test procedure (test case) will consist of the identification of the Agency requirement(s) and the pass/fail criteria. The security testing verification procedures will consist of the generation of "real world" security events to simulate threats and risk of the type and proportion that the Agency can reasonably expect to see when the MTSS is operational. The following methods will be used to verify the MTSS requirements:

- Analysis (A) – [redacted]
- Demonstration (D) – [redacted]
- Test (T) – [redacted]

[redacted]

- Exception (E) – [redacted]

Data Testing: To verify data exchange integrity, traffic will be passed from Service Delivery Point (SDP) to SDP across a circuit configured at the appropriate tier security level configured in accordance with Agency security requirements. [redacted]

Figure A7-41. Security Enhancement Services

Security Enhancement Services	Test Plan
Agency Sponsored Type 1 Encryption	[redacted]
Anti-virus	[redacted]
Firewall	[redacted]

Security Enhancement Services	Test Plan
Intrusion Detection/ Prevention (IDS/IPS)	[redacted]
Incident Response	[redacted]
Network Isolation (Air Gap)	[redacted]
Premises-based Virtual Private Network (VPN)	[redacted]

3.7.4.3 Arrangements Needed to Achieve Interconnectivity between Incumbent Provider Network and Qwest during Transition of Service

Interconnectivity between the incumbent and Qwest is not applicable for the MTSS service.

3.7.4.4 Process and Procedure for 100 Percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

After contract award, Qwest will coordinate fall-back contingencies with the incumbent. [redacted]

[redacted] The Qwest Help Desk and Network Operations Center (NOC) will monitor live traffic flow and trouble tickets to provide early warning of conditions that may signal problems with service. Qwest will notify the Government, incumbent service provider, and Qwest personnel of potential problems. If Qwest cannot correct detected problems, or the Government requests fall-back to the incumbent service in accordance with inspection and acceptance criteria, Qwest will execute site-specific contingencies developed as part of the transition plan. Close coordination and early notification with the incumbent will help ensure availability of resources to fall back successfully within the four hour window.

3.7.5 Voice Service

Qwest provides high quality voice service over our [redacted]

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for Voice Service (VS) to accommodate the cutover of [redacted] dedicated access loops per month for an 18 month period. With the information provided it is difficult to determine the number of ANIs that would have to be transitioned for Voice Service using switched access. Qwest understands, through our experience with the Metropolitan Area Acquisitions (MAAs), that there are thousands of ANIs that would be a part of this transition, and we are prepared to support this activity. [redacted]

[redacted]

3.7.5.1 Site Preparation Requirements

Minimal equipment (for example, a channel service unit) is normally all that is required to support the transition for VS with dedicated access. The following must be available at the site to support the SED:

- Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks can be provided.
- Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable or new backboard is necessary.
- Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent to 65 percent relative humidity, non-condensing.

3.7.5.2 Activities Required to Complete Cutover of Service

Each transition includes activities that must be accomplished by the Qwest Team, Agency, GSA, LGC, and the incumbent service provider. [redacted] is a WBS that lists [redacted]. For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[redacted]

[redacted]

3.7.5.3 Arrangements Needed to Achieve Interconnectivity Between Incumbent Provider Network and Qwest During Transition of Service

[redacted]

3.7.5.3.1 Interconnectivity Using the Agency PBX as a Gateway

If there is no capability to establish a gateway between Qwest and the incumbent provider, the Agency may opt to use their own PBX as a gateway. This would take the responsibility and control of the gateway out of the incumbent service provider and give the Agency more control over the transition. This method will require a PBX on the Agency's premise with the capability and excess port capacity to terminate both Qwest and the incumbent's service into it. This will avoid completing calls via off-net during transition and ensure that only Networx rates apply to the calls (versus off-net rates).

3.7.5.3.2 Interconnectivity via Inbound Call Routing

Routing inbound calls via LEC facilities is the less desirable option for transitioning services to Qwest, due to the inherent risks associated with external support, as well as loss of overall management of the process.

In addition, there may not be enough access circuit capacity to carry the calls during the transition. Thus, the incumbent service provider capacity must be verified during the planning stage. If it is determined that there is not enough capacity, the Agency may be required to order additional bandwidth from the incumbent service provider to support the transition efforts. This may result in additional costs for the transition effort.

Once sufficient facilities are in place, the transition can occur via a flash cut of services. Independent of the option chosen, Qwest will build the on-net numbering plan into the Qwest systems prior to the transition.

3.7.5.4 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

There are three options to physically cut the service from Qwest back to the incumbent:

- Parallel Cutover
- Flash PBX Port Cutover
- Facility Hot Cut

Parallel Cutover: In this scenario, the restoration of service back to the original configuration could be accomplished by a software change commanding the PBX/Centrex that redirects the calls back to the original trunk group.

Flash Port PBX Cutover: This option can also quickly revert to the old configuration if the transition is not successful. While no change would be required in the PBX since the original port is being reused, a cross-connect back from the PBX port to the original SED would have to be made. For a Centrex service, the provider of the Centrex service would have to perform the reconnect to the original trunk group.

Facility Hot Cut: If the service was not functioning properly, and a fallback was necessary, reconnection to the original service would be required at both the PBX/Centrex and the LEC.

3.7.5.4.1 Process to Transition Voice Service with Switched Access

For existing POTS lines, the process for switched outbound LD service consists of adding ANIs to the Qwest LD switching, OSS and billing systems. The ANIs should be provided by the Agency as part of the transition order to ensure the correct ANIs are recorded by Qwest.

If the Agency is ordering new POTs access lines and at the same time requesting Qwest LD for the new lines, the Agency should request CIC 0432 as the PIC. The Agency will then communicate the new ANIs to Qwest to add to the Agency's account.

3.7.5.4.2 Procedure for Switching the Customer ANIs Away from Another IXC to Qwest LD

The Agency must submit in writing the list of ANIs to move to Qwest. The form will be provided to the Agency, and will include language ensuring the Agency is giving permission to Qwest to change their PIC on their behalf.

The list of ANIs to change from an existing IXC to Qwest will be added to the Agency's account, and an outbound CARE message will be sent to the serving LEC requesting a PIC change to the Qwest CIC (0432).

The ILECs usually will process a POTS line PIC change within 24 hours of the request. Complex local access services (for example, PRI) may take up to three days.

The serving ILEC will normally return an industry standard CARE transaction code advising of the success or failure of the PIC change request. Failures are known as CARE rejects, and are reworked by the Qwest Switched LD provisioning team.

The most common CARE reject is transaction code 2166, which indicates that a LEC "PIC freeze" is on the ANI and the LEC will not allow an IXC requested PIC change. When "PIC freezes" are encountered, the Switched LD provisioning team will take the following action:

Contact the serving LEC and advise of the written request from the Agency to change their PIC. In some cases, the serving LEC will manually change the PIC (manually overriding the PIC freeze) if Qwest can provide the name of the requestor. Qwest will provide the requestor's name to the LEC.

If the serving LEC will not take the request from Qwest LD, Qwest will advise the Agency of the PIC change failure and advise the Agency to call their LEC directly.

Remaining CARE rejects are addressed by Qwest to ensure the Agency's LD traffic is moved to the Qwest network as quickly as possible.

3.7.6 Toll-Free Service

Qwest Toll-Free Service (TFS) is a technologically-advanced offering helping Agencies maintain close contact with citizens. TFS provides a cost-effective method for citizens to access and communicate with Agencies. Qwest TFS offers standard or custom toll-free packages that allow Agencies to maximize customer satisfaction and Department efficiency. These competitive products are easily configured, using either switched or dedicated access. Value is maximized with the simple integration of other Qwest voice and IP products and services, to give Agencies a wide variety of solutions appropriate to their current and future needs.

Based on the information provided in Table J.7 of the solicitation Qwest has developed a transition plan for TFS to accommodate the cutover of [redacted] dedicated access loops per month for an 18 month period. With the information provided, it is difficult to determine the number of toll-free numbers associated with switched access that would have to be transitioned.

3.7.6.1 Site Preparation Requirements

To complete the installation of the equipment, the following site preparation must be completed:

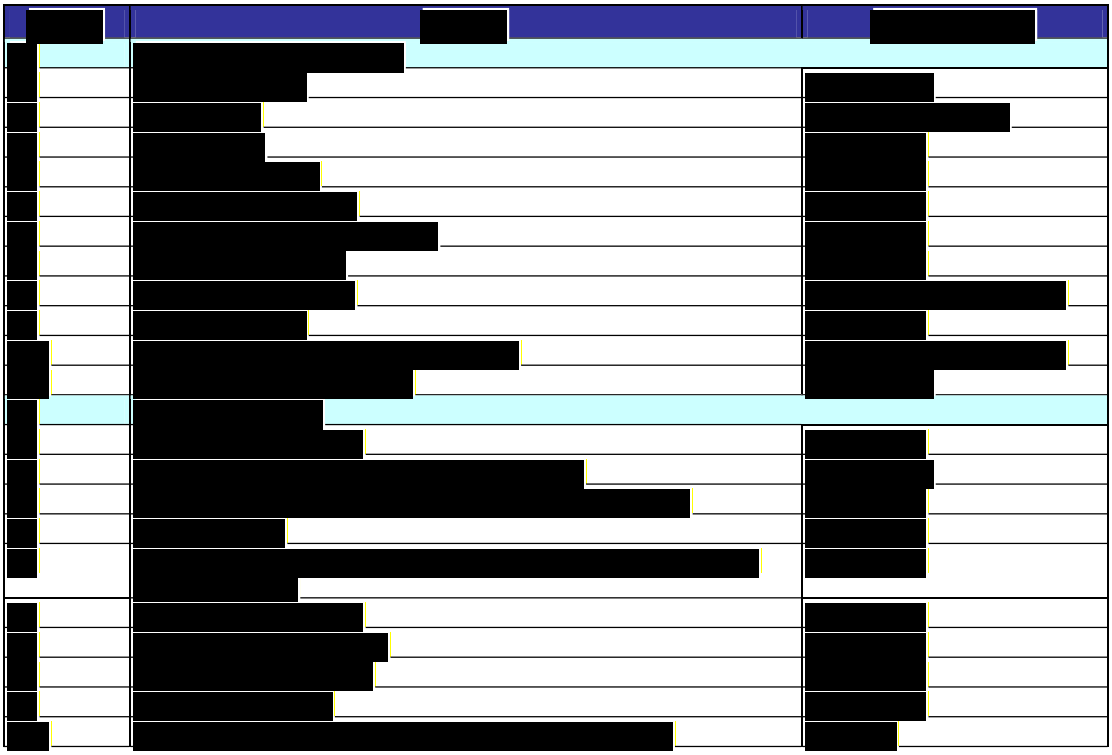
- Dedicated 120VAC, 15amp IG (isolated ground) circuit/receptacle including separate equipment ground wire per cabinet

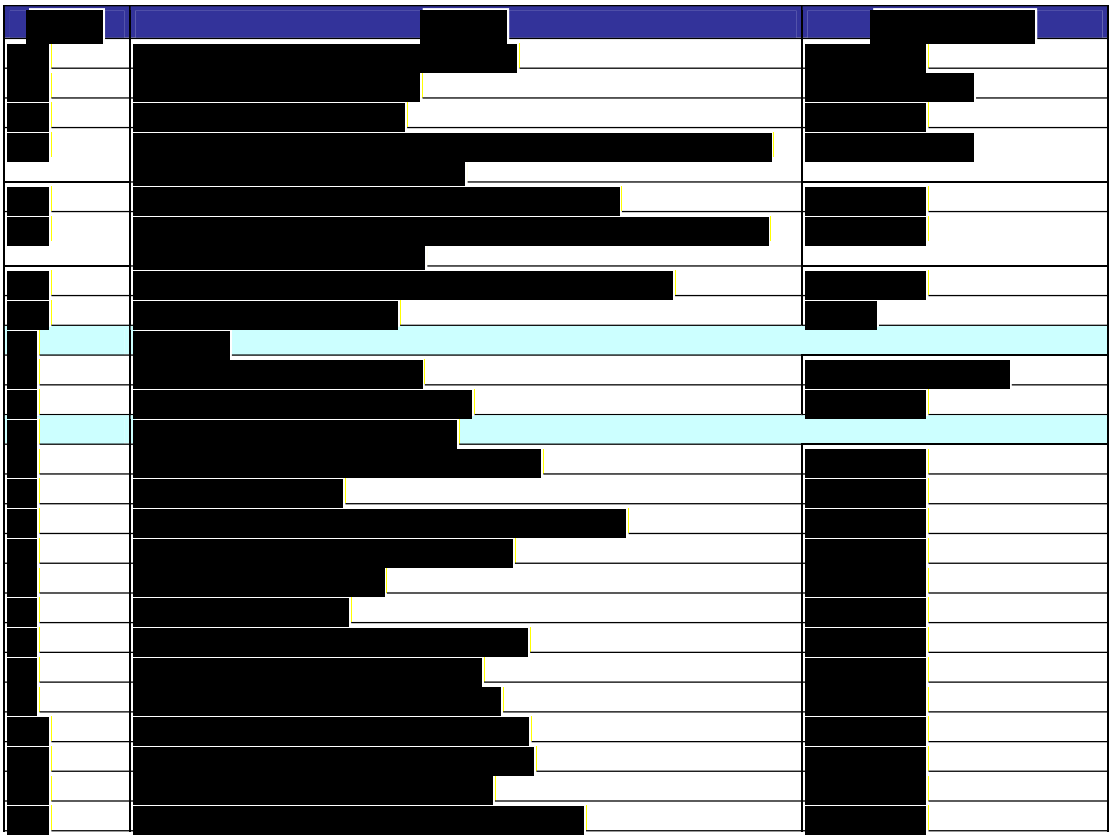
- Plywood backboard mounted on the wall, with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable or new backboard is necessary.
- Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent - 65 percent relative humidity, non-condensing.

3.7.6.2 Activities Required to Complete Cutover of Service

[redacted] is a WBS that lists all activities required for transition of Qwest TFS. [redacted] For each transition, the Qwest Team will customize the activities listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[redacted]





3.7.6.3 Arrangements Needed to Achieve Interconnectivity between Incumbent Provider Network and Qwest during Transition of Service

To accommodate a seamless transition from the incumbent service provider to the Qwest network, the following process will be followed:

3.7.6.4 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

If the Agency would like to first provision one number to allow them to do end-to-end verification testing, they can enter all 8XX numbers and schedule the turn-up at two separate times. The Agency may first turn up and accept their test number and, at a later coordinated turn-up date, accept the remainder of the numbers. The plan outlined above does not move traffic to Qwest routing until the service is tested and accepted. If service is never accepted, orders would need to be cancelled and the 8XX numbers ported back to the previous incumbent service provider.

3.7.7 Asynchronous Transfer Mode Service

Qwest Asynchronous Transfer Mode Service (ATMS) is a powerful broadband, network transport product that provides a very high-speed, efficient way to electronically move large quantities of information over a highly reliable, scalable, secure network with inherent Quality of Service

(QoS) guarantees. ATMS uses logical connections that support the different ATMS categories:

- Constant Bit Rate (CBR)
- Variable Bit Rate real-time (VBRrt)
- Variable Bit Rate non-real-time (VBRnrt)
- Unspecified Bit Rate (UBR)

ATMS uses high-speed ATM networking technology to bundle information into fixed segments, called cells. ATM is based on industry standards governed by the ATM Forum, which is now part of the new MFA Forum. MFA Forum is a combined entity of the Multi Protocol Label Switching (MPLS) and Frame Relay Alliance plus the ATM Forum. The ATM protocol is designed to support many different business applications within an enterprise network, treating each business application based on its bandwidth and QoS needs. ATMS supports speeds from T-1 through OC-12.

ATMS requires the use of Agency or Qwest-provided SEDs that put Agency data into cells suitable for transmission over the Qwest ATM network.

Based on the information provided in Table J.7 of the solicitation, Qwest has developed a transition plan for ATMS to accommodate the cutover of [redacted] ports and [redacted] Permanent Virtual Circuits (PVCs) per month over an 18 month period.

3.7.7.1 Site Preparation Requirements

1. Obtain accurate site information, including:

- Location and site profile (for example, key contact information, physical and shipping address)
- Access information (badge, escort, and visiting hours)

2. Work with the LGC to inventory site information including:

- Site locations (network end-points and computer rooms, for example, MDF and IDF)
- Facility infrastructure and topology
- Floor plans and rack/cabinet layouts
- Circuit and demarc inventory
- Equipment inventory

3. Work with the Agency to select one of the following three options for each location:

- Install a new SED. If this option is selected, then the site must meet the following requirements prior to the transition.
- Dedicated 120VAC, 15amp isolated ground circuit/receptacle, including separate equipment ground wire per cabinet. Often there is adequate space on an existing rack to support the SED. If not, additional racks can be provided.
- Plywood backboard mounted on the wall with the minimum dimensions of 8'x 8' x ¾". The site visit will determine if the current location is acceptable or new backboard is necessary.
  - Environmental Specifications: The equipment room should be maintained within 41-80 degrees F and 25 percent - 65 percent relative humidity, non-condensing
- Use a spare WAN port on the existing SED
- Reuse the existing WAN port if the above options are not available.

3.7.7.2 Activities Required to Complete Cutover of Service

[redacted] is a WBS that lists activities required for transition of ATMS. [redacted]. For each transition, the Qwest Team will customize the activities

listed within this WBS in partnership with the affected stakeholders to incorporate any special requirements that may exist.

[redacted]

3.7.7.2.1 Network Design (if required)

Required steps include:

1. Coordinate with the Agency to understand and determine current network topology and future requirements

2. Perform detailed design of the new network and NNIs

3. Conduct lab testing and network simulations to validate the proposed design

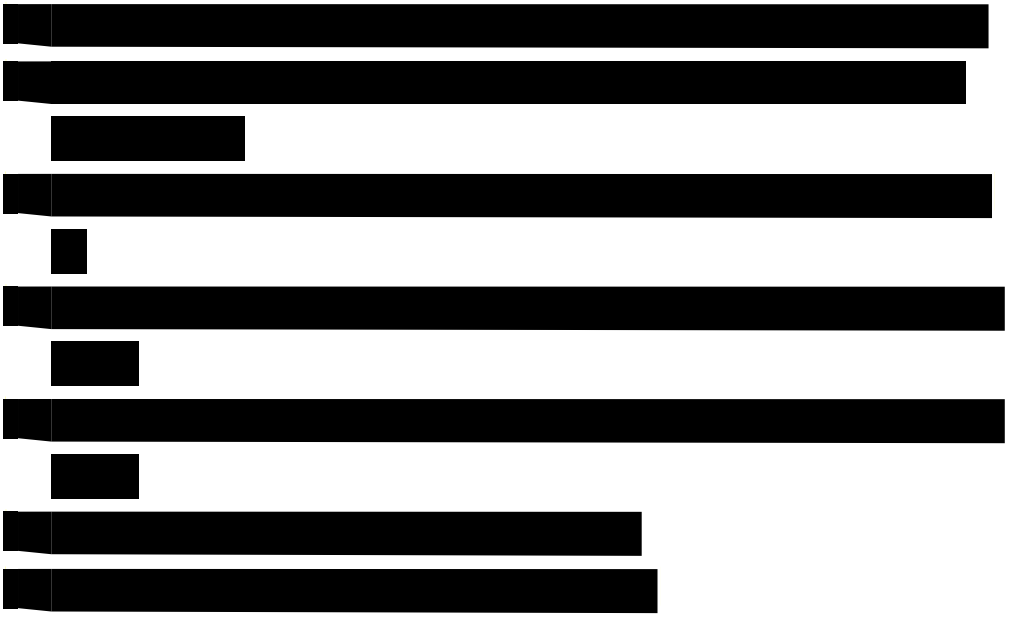
4. Coordinate a field trial with the Agency to verify performance. Order trial connections

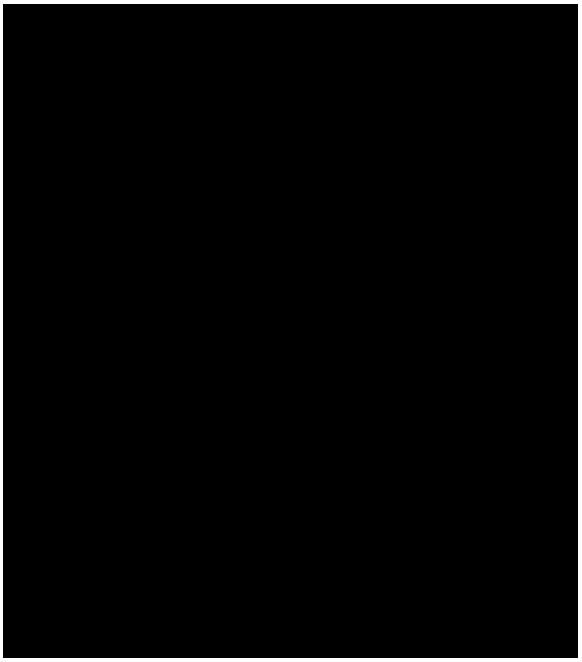
3.7.7.2.2 Transition Cutover

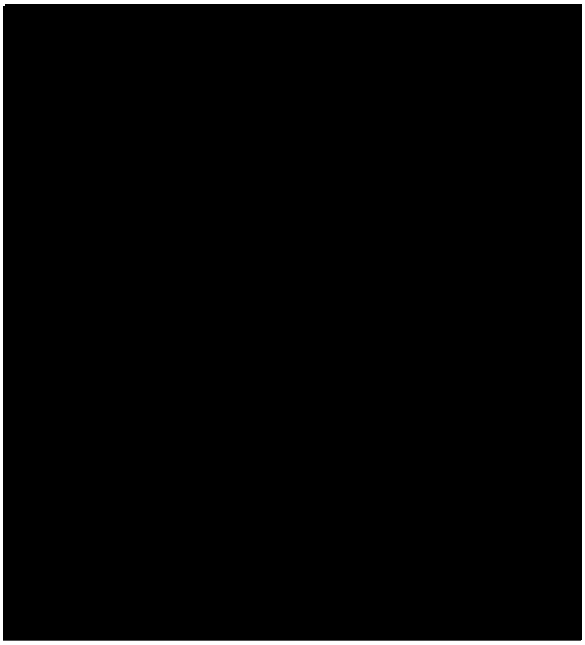
Required steps include:

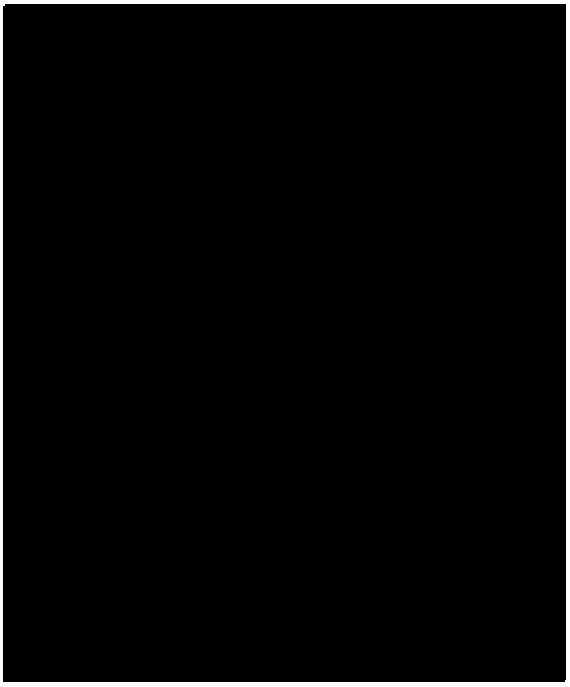
1. Jointly and collaboratively develop an Agency-specific ALTP or TPSP with the Agency
2. Establish ATM NNI connections with incumbent service provider
3. Install equipment and establish new connectivity to sites per the detailed transition plans

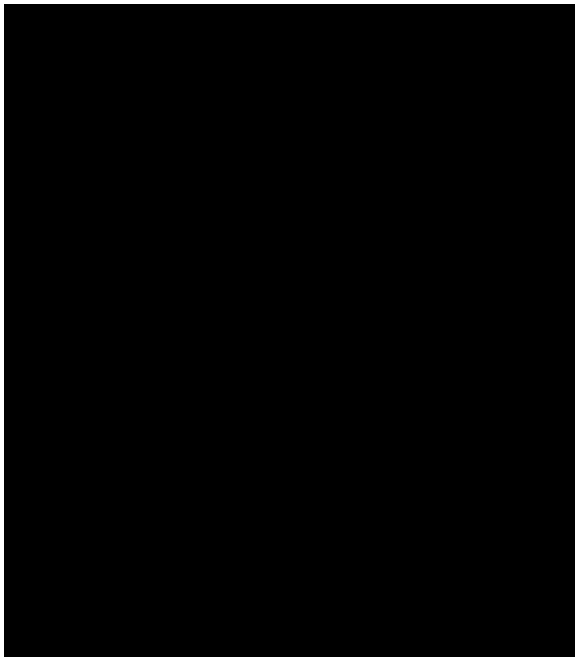
The following diagrams illustrate the different stages of a transition cutover for a typical large-scale network [redacted]. This cutover plan maintains service continuity during the transition period and also minimizes the cost of the transition. Only a limited number of sites are shown due to space limitations. Figures include:

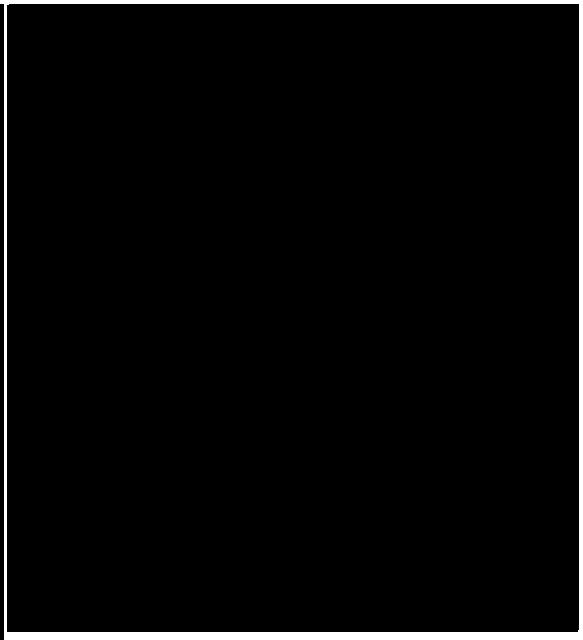


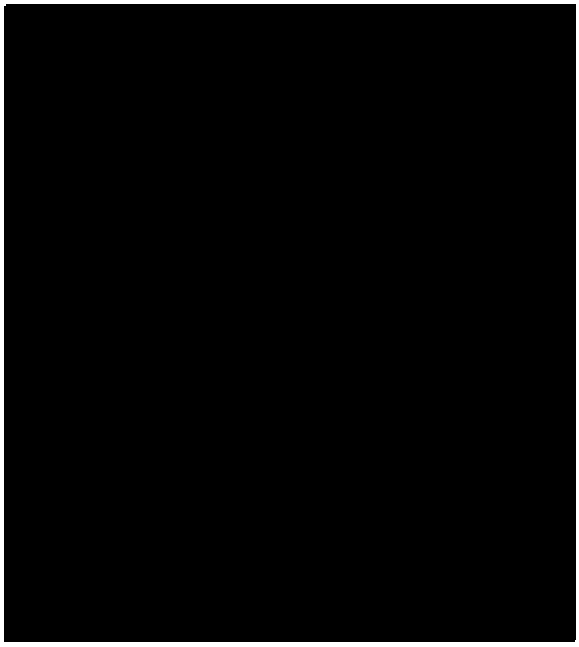












3.7.7.1 Arrangements Needed to Achieve Interconnectivity between Incumbent Provider Network and Qwest during Transition of Service

Required steps include:

1. Finalize sites, connection type, size, and quantity with incumbent provider
2. Negotiate ATM NNI configurations

3. Install and test NNI connections

3.7.7.2 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

Required steps for sites with new circuits provisioned to Qwest:

1. Capture SED configuration prior to the site transition
2. Leave the old physical circuit and PVCs from the incumbent side intact until the new circuit and PVCs from the Qwest side have passed End-to-End (E2E) verification testing
3. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration

Required steps for sites with circuits requiring hot cut to Qwest:

1. Capture SED configuration prior to the site transition
2. Leave the PVCs from the incumbent side intact until the circuit has been hot cut successfully to the Qwest side and service has passed E2E verification testing

3. If the redirected service over the Qwest network does not pass E2E verification testing, then roll back the SED configuration and move the access circuit back to the incumbent network

If issues are encountered during the transition, Qwest will work with the Agency and incumbent service provider immediately to troubleshoot and resolve the issues.

3.7.8 IP Telephony Service

The Qwest Internet Protocol Telephony Service (IPTelS) is an application that provides real-time, two-way voice capability via IP over a broadband connection. Qwest's IPTelS offers a fully-hosted service that replaces the need for a premises-based phone system and the multiple vendors required to provide popular applications like voice mail and integrated messaging. The features and applications are delivered to a Agency's handset via a single dedicated Internet access pipe. These features can be individually customized by the user through a personalized Web portal. For the Agency, this solution provides centralized management and control, allowing the Agency to perform Moves, Adds, and Changes (MACs) from an Internet connection.

This solution is hosted on Qwest's carrier-grade network, not the Internet. The applications were built with a browser-based model in mind, making it easy for the Agency to administer, manage and update their features (such as speed dial keys, handset templates, and MACs). Therefore, a PBX is no longer needed, only phones. Qwest IPTelS gives Agencies the same voice quality to which they are accustomed with their own PBX, unlike other VoIP solutions that may transport voice traffic over the Internet.

Qwest IPTelS requires Dedicated Internet Access (DIA) with QoS, a certified voice router, and IP handsets. To support the Agency, Qwest IPTelS has four seat types available:

- IAFXS for Agencies with a Key System
- IAFXS_VM for Agencies with a Key System (with Voicemail)
- IAPRI for Agencies with a PBX System
- IAPRI_VM for Agencies with a PBX System (with Voicemail)

There are over 35 Qwest IPTelS features available to Agencies. The following features come standard with the Qwest IPTelS:

- On-Site Installation
- Office Administrator Portal Account Profile and Related On-Site Training
- Unlimited Local and 8XX Outbound Calling
- Enhanced 911
- Free On-net Calling
- Business White/Yellow Pages listed on main TN
- Usage Based Functionality (for example, per occurrence charges for Directory Assistance, Operator Service, and International calls)
- 24x7x365 customer support
- DIA Transport and Local Loop

3.7.8.1 Site Preparation Requirements

Site Certification: Certification of the Agency facility is important to properly deploy the VoIP solution. The Agency representative's approval (along with GSA concurrence) on the implementation plan serves as acknowledgement of the site "readiness" for VoIP deployment. The certification check sheet is reflected below:

Requirement	Status
CAT5 support to all specified VoIP workspaces?	
Sufficient power outlets for specified VoIP workspaces?	

Required Hardware: Listed below is a summary of hardware and accessories that are required for successful installation of the VoIP solution. Existing hardware in the Agency's network may be used and would be defined within the network diagram.

Function	Model	Quantity
Router		
Switch		
VoIP Phone		
Accessories		
Ethernet Cables		
Accessory Switches		

Bandwidth Requirements

Does the installation require Voice and Data/Internet shared on the new circuit?	Yes or No
Do all participants in VoIP require Data/Internet at the workspace?	Yes or No
Will data migration take place at the time of Voice installation?	Yes or No

This table below captures the bandwidth requirements needed for either the voice or data, or combined data requirements. A blank field for data equates to a voice only installation on a dedicated circuit.

Utilization	Bandwidth Requirement (kbps)
Voice	
Data	
Combined Total (if required)	

Toll Free Numbers: Many Agencies prefer the continued use of toll-free numbers for logical reasons. The table below defines the function of the

toll-free number, and the process of managing a seamless transition of the phone number to the VoIP solution.

Toll Free Number Function	Toll Free Number	Toll Free Translation Number	LNP to Tenant?	Identify Bridged Line Appearances if Required

POTS Phone Numbers: Many Agencies prefer the continued use of their POTS numbers. The table below defines the process of managing a seamless transition of the POTS to the VoIP service.

Phone Number	Will Customer Initiate Remote Call Forwarding Service with Existing Service Provider?	LNP Phone Number to Tenant?	Identify Bridged Line Appearances if Required	Destination of Number (Phone Number or Text Description)

VoIP Phone Numbers: This table defines the NPA-NXX to be used for the VoIP service. If the requested NPA-NXX is not available, then another NPA-NXX will be provided from same rate center. The ranges and phone numbers and quantity should reflect the Agency's immediate and mid-term business needs, accounting for potential growth.

Current NPA-NXX	Available NPA-NXX	Quantity or Complete Range of Phone Numbers Required

Requested Extensions: This table defines the preference of 4- or 5-digit dialing (5-digit dialing is recommended); currently, 3-digit dialing is unavailable. Extensions should not begin with zero. By default, the extension format used is four digits, representing the last four numbers of the associated VoIP phone number.

Extension Format Requested (4- or 5- digit)	Extension Range

User and VoIP Feature Assignments: This table defines the user information that is required to populate the office administrator tenant for the VoIP service.

First Name	Last Name	E-mail	Phone Model Assigned	Feature Package Required

Common Area Phones: This table defines the phone locations and phone numbers that are not deployed in personal employee workspace areas. This includes conference rooms, printer, lobby, and empty workspace areas. These areas commonly have calling restrictions that should be defined in the Feature Packages section of the table.

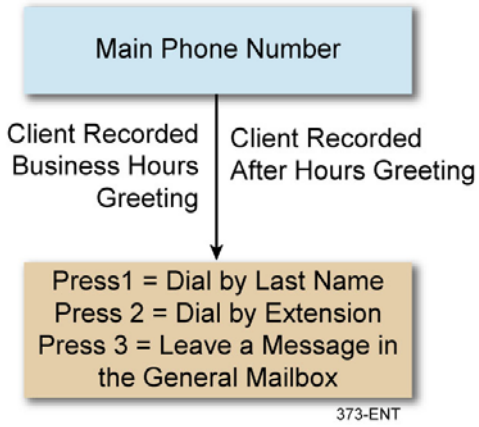
Phone Location	Phone Model Assigned	Feature Package Required

Automated Attendant: The Automated Attendant supports logical call management during business hours, or after hours for improved call handling efficiency and Agency satisfaction. The client should provide detailed information regarding the call handling expectations for business and non-business hours of operation, and departmental expectations. This ideally should be defined by use of a flow chart diagram. The default Automated Attendant shown in ***Figure A7-52*** will be used if specific information is not available.

Browsers supported include:

- On Windows platforms, Internet Explorer 5.5 and higher and/or Netscape 6.2 and higher
- On the MAC Operating System, version 10.1.3 or 9.2.2 running Internet Explorer 5.1 and/or Netscape 6.2 and higher
- All computers used for Office Administrator (OA) Portal Access should be upgraded to the versions stated above or higher

Figure A7-52. Automated Attendant



911 Emergency Services Management: Emergency 911 support involves ensuring that a person who places a 911 call is properly identified and that the call gets routed to the correct Public Safety Answering Point (PSAP) location via a Class 5 or soft-switch facility. The PSAP Automatic Location Identification (ALI) database contains phone numbers for the geographic region it serves.

The numbers provided by the VoIP service and the location of the initial installation are registered in the ALI database. When 911 calls are made, they will be routed to the correct PSAP, and location information will be automatically displayed.

[redacted]

[redacted]

911 Activation Requirements: 911 calls will be translated to the E.164 number for the PSAP servicing the Agency and routed through the PSTN. The PSAP is the answering location for 911 calls originating within a specified area. It is also responsible for answering 911 calls and either dispatching an emergency response under its direction or transferring the call to the appropriate PSAP or emergency responder. These values are important to support 911 on a VoIP-enabled phone.

PSAP Phone Number	POTS Phone Number Supplied	LAN Subnet Mask

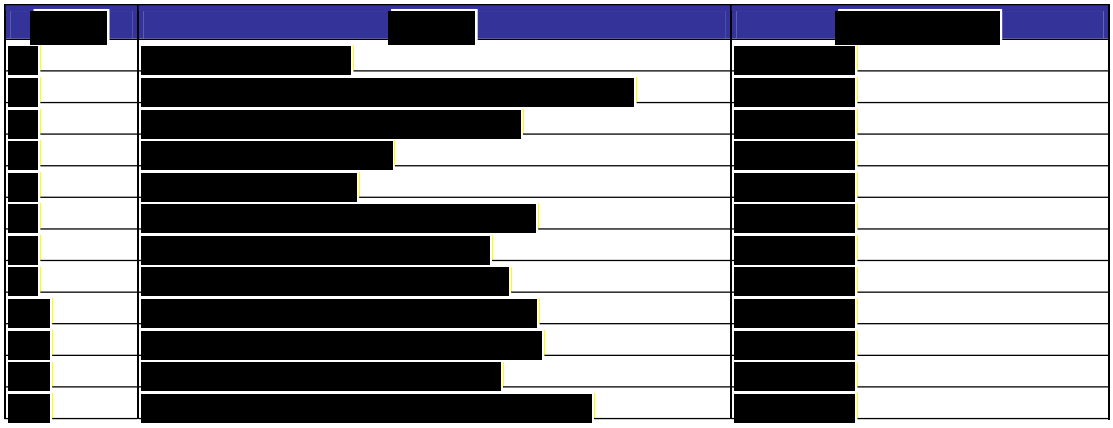
The volumes in Section J.7 indicate there is no service in Year One. Fifty percent of the volume for Year Two is [redacted] with growth in the out years.

3.7.8.2 Activities Required to Complete Cutover of Service

[redacted] lists all activities required for transition of IPTelS.

[redacted]

[redacted]



Coordination between the following Qwest organizations [redacted] is necessary for the successful installation, testing, and activation of the Qwest IP Telephony Service.

Figure A7-54. Qwest Coordination.

Group	Test and Turn Up Role
SED Work Effort Manager (WEM)	[redacted]
SED Field Technician	[redacted]
Provisioning Order Manager (OMG)	[redacted]
IP Implementation	[redacted]
VoIP Implementation	[redacted]
Advanced Customer Engineering Support (ACES)	[redacted]
Technology Management	[redacted]
Networx NOC	[redacted]

Activation Day – Installation and Training: The activation of the Qwest IPTelS orders begins with the field technician arriving on site, installing

the IAD/router, and contacting IP Implementation to test DIA connectivity. The field technician then installs each of the IPTelS handsets and verifies all phones are active on the IPTelS the network and the Agency is properly configured [redacted]

The following test calls (on either assigned or temporary test numbers) are to be performed from the Agency's handsets or a technician's butt set:

[redacted]

After IPTelS testing is complete, the field technician provides training to the Agency's designated OA on the IPTelS OA portal, verifies the Agency has the 24x7x365 support number, and leaves the site.

Activation Day – Number Porting: For Agencies who are porting their numbers, a second day of service activation (approximately 72 hours after the initial installation) is necessary to complete the porting. On this last day of activation, no field technician is required. The incumbent service provider executes the porting on the scheduled FOC date. The next day, Qwest verifies porting success by calling the ported numbers.

If porting is successful, Qwest manually closes the appropriate job step. Qwest initiates the update to activate the status of the assigned and ported telephone numbers. This process will then automatically trigger the SOCN, which will be sent to the Agency representative and auto-fed into the Qwest Control Networx Portal. Agency acceptance of service is then verified.

3.7.8.3 Arrangements Needed to Achieve Interconnectivity between Incumbent Provider Network and Qwest during Transition of Service

Interconnection between systems would be accomplished using an IP device at the Agency premises. Qwest can support conversion of a TDM-based voice trunk into IPTelS via a gateway device, such as Qwest's IPTelS Integrated Access SED.

[redacted]

3.7.8.4 Process and Procedure for 100 percent Fall-Back to Incumbent if Service does not Pass End-to-End Verification Testing

- If a new SED is ordered with a new loop, this event will not be service-impacting
- If routers or PBX programming have been reconfigured, the previous configurations will need to be restored by Agency technical support