



ADVANCED NETWORK MANAGEMENT INC.

City of Fort Collins

SIP Migration

Statement of Work

Version 1.0

October 12th, 2017

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About This Statement of Work

The purpose of this Statement of Work is to define tasks, deliverables, timeline, responsibilities and any additional terms for this project for City and County of Denver (“Customer”) provided by Advanced Network Management (“ANM”).

Change Authority	Advanced Network Management
ANM Account Manager	Brian Von der Heydt
ANM Solution Architect	Garrick Barnett
ANM Engineering Approver	James Arnold
Customer Project Sponsor	

Table 1: Document History

Version	Date	Status	Reason for Change
1.0	10/12/17	Draft	Initial Version
2.0	10/13/17	Final	Final
3.0	10/19/17	Revised Final	Adjusted Assumption BVDH

Omissions

ANM reserves the right to correct any error or omission in this Statement of Work and will do so by utilizing a Change Request process. The initial project kick-off meeting and design workshop (Customer Requirements Validation) might uncover unforeseen items that impact this Statement of Work and will be addressed (if necessary) by the Change Request process.

Confidentiality

This Statement of Work is confidential and must not be disclosed outside of ANM and Customer unless agreed upon by both parties.

Executive Summary

City of Fort Collins (CoFC) are engaging ANM to assist with migrating away from legacy PSTN services to a centralized SIP service. Currently they are using eight PRI's to provide PSTN access. The current environment is utilizing SIP as the primary protocol for communication back to the VoIP infrastructure. ANM will work with the client to help design and implement a solution which will accommodate the requirements, and aid in putting the SIP trunks into production.

Project Deliverables

Table 2: Project Deliverables

Name	Customer Acceptance Signatures Required
Project Plan	Yes
Acceptance Test Plan	Yes
Any other applicable documentation (e.g. sample config, diagram)	Yes
Project Completion & Survey (Final Signoff)	Yes

Project Tasks

Plan and Design Session

ANM will conduct a design session with Customer to discover, plan, design, and validate how the solution will be configured and tested. The session will require few sessions to complete and the Customer technical point of contact will need to be available throughout the process to the ANM Engineering team.

Some of the items that will be covered and documented include (but not limited to):

- IP addresses
- Call Routing & Dial plan
- Test and Validation: (testing to include, but not be limited to)
 - Inbound, Outbound
 - Local, LD, International, Toll-Free
 - Main numbers
 - Standard Users
 - Contact Center call-flows, numbers, and agents
- Cutover and Transition strategy
- Go-live support strategy

Implementation

The following applications and infrastructure components will be deployed, configured, and tested per the agreed upon design between ANM and Customer:

The ANM engineer will deploy the agreed design and dial plan configuration items within the border element, and the Communication Manager. Additionally, they will work within the agreed Change Control process to implement all configuration items needed for SIP service.

CUBE Configuration and Validation:

- Review existing configuration on the CUBE
- Work with provider and client to make any changes necessary CUBE for SIP services
- Update the dial plan and configure the CUBE to allow for new SIP services to be implemented without impact to legacy environment, and allow for a full battery of testing as required prior to rolling out into production.
- Work with client and provider to schedule porting of existing numbers from PRI's to SIP trunks.

Systems Acceptance:

- Full testing of the SIP solution to ensure no issues will arise during the migration. Including but not limited to:
 - Emergency Services
 - Toll-Free
 - Local and Long Distance
 - DTMF
 - Inbound call center access
 - Faxing

** The ANM team will work with the CoFC team to define the SAT plan. ANM has a standard SAT, but there may be testing needed on applications or call flows that the client has more intimate knowledge.*

Project Timeline

Table 3: Project Timeline

Phase	Task
Phase 1	Plan and Design
Phase 2	Transition Planning and Implementation
Phase 3	Test and Validation
Phase 4	Solution Go-live and Day 2 Support

Customer Responsibilities

The following are responsibilities that will need to be performed/provided by Customer.

- Provide onsite physical access to required systems and space to work
- Provide remote access (VPN) or other agreed upon remote access solution
- Provide any required hardware and/or software that was not procured by ANM
- Provide diagrams of existing environment if required
- Provider (coordination and meetings/planning porting, etc.)
- WAN/LAN configuration and updates
- Change Control coordination and process
- Management and coordination of 3rd party for ordering of SIP services and Porting activity.

- Provide an SFTP server in the event any IOS upgrades are needed
- Ensure WAN bandwidth is adequate and devices have applicable QoS configurations
- Maintain valid support contracts with all product manufacturers involved in the solution

Assumptions

The overall scope and related work estimates for this engagement were developed based on the following assumptions. Material changes to these assumptions and exclusions may impact the estimated effort and cost associated with completing the work and therefore would require a Change Request.

- Customer has adequately met all of their responsibilities
- Unless otherwise specified, the following services are not included:
 - Network infrastructure (LAN, WAN, Wireless LAN, QoS)
 - Security infrastructure (firewalls and other perimeter security)
 - Environmental requirements: Electrical/Power & Air Conditioning services
 - Network cabling services
- During this project any software or hardware changes on systems and applications not covered by this Statement of Work will have to be addressed with a Change Request Form.
- Unless it is explicitly stated in this Statement of Work, Customer is responsible for installation, configuration or re-configuration of any additional equipment not provided by ANM.
- Any services provided in the reconfiguration or troubleshooting as a result of existing faulty equipment, software compatibility or systems interoperability will be considered out of scope and billed at the Time and Material rates provided in this Statement of Work.
- Customer understands that any onsite delays due to support issues related to equipment procured by Customer will be billed at the Time and Material rates provided in this Statement of Work.
- Customer will manage all oversight and communication with third party vendors not directly contracted by ANM (for example, service providers, other equipment manufacturers, etc.).
- All standard work to be completed during business hours. Live migration and porting activity to be completed during associated change control windows, afterhours change window migrations are expected and included.

Billing Milestones

Services for this project will be billed at a fixed fee. Below are the billing milestones for this project.

Table 4: Billing Milestones

Milestones	Description	Payment Percent
#1	Project Kick-off	10%
#2	SIP Turn-up and Testing completed	40%
#3	Project Completion	50%
	Total Project Investment	\$29,520

Appendix A - Operational Transition and Acceptance Criteria

ANM is committed to Customer's long term success with the newly implemented solution. ANM is eager to continue to support Customer and has a variety of support options available after the project completion. Customer's Account Manager can provide additional information.

Operational Transition

Operational Transition occurs when the solution has been fully deployed, Customer training has occurred (if applicable), and the solution has been cutover/migrated to with an executed Acceptance Test Plan. During the Operational Transition phase, any applicable as-built documentation will be provided and ANM will attempt to resolve any outstanding issues.

Outstanding Issues – Severity Levels

ANM deploys thoroughly tested software and solutions for customers. But as with all complex technology solutions, product issues can arise. During the project ANM will document such issues. The following table describes the severity levels of issues.

Table 5: Outstanding Issues – Severity Levels

Severity Levels	Description
1	These issues have an operational impact and no work-around. These issues might require a rollback to the old system if necessary until a fix or work-around is determined.
2	These issues have an operational impact, but a work-around exists that allows the solution to go live or be cutover. Production rollout or cut-overs can occur with outstanding Severity 2 issues. The issues will be addressed on an individual basis and resolution time frames will be specified at that time based on complexity of proposed interim and final resolutions.
3	These issues have a minor operational impact. These issues are often cosmetic in nature and do not prevent any functionality with the new system.

Acceptance Criteria

The project and Statement of Work will be deemed complete upon the following:

- Completion of all project deliverables and the project in Operational Transition
- Signing of the Project Completion & Survey, with the following caveats:
 - No Severity 1 defects outstanding
 - Severity 2 & 3 defects can be outstanding as long as ANM has made a reasonable attempt to resolve the issues and the current status is pending a manufacturer's resolution to the issues (for example, bug fixes)

Note: until project completion and final signoff, it is expected that Customer will not make any changes to the system without the consent/supervision of ANM.

Appendix B – Change Management Process

Change Request Process

A project Change Request Form (CRF) will be used to document and communicate any changes to this Statement of Work. The CRF will describe the change, the reason for the change, and the impact that the change will have on the project. The CRF will also specify any additional charges (if necessary).

Should changes be necessary or requested by Customer, ANM will investigate the effect of such changes and determine an impact on price, schedule, and other terms and conditions. A completed CRF will be the output and Customer and ANM must both sign it to authorize the changes. A change control log will be maintained throughout the project to track all approved changes and record them (if applicable) in the successive approved versions of the Project Plan. All versions will be tracked using a strict document version control mechanism maintained by the Project Managers. For reference, an example CRF is provided in Appendix A.

Table 6: Appendix B – Change Request Form (CRF)

CHANGE REQUEST FORM For the use in the event of a change to the Scope or Time periods contained in the Statement of Work between <Customer> and ANM.		Change Request No. CRXXX Date
1 - CHANGE REQUEST		
From: (Name of Company)	To: (Name of Company)	
Description and Objective of Proposed Change:		
Cost Implications (fixed and/or recurring) Additional to the Initial Agreement: Value (USD): Total cost to the project of \$		
Please note this will be fully invoiced upon delivery of the equipment and/or additional service, and is subject to the signed Purchase Order between <Customer> and ANM.		
Responsibilities for the Implementation of the Proposed Change:		
Time Impact, Duration and key Milestones for the Proposed Change:		
Change Request Proposed by: Company: Name:	Signature: Date:	
<i>Note: This Change Request is not authorized for action until approval by the other party in Section 3 below.</i>		
2 – CHANGE REQUEST REFUSAL		
Company: Name:	Signature: Date:	
Reasons:		
3 – CHANGE ORDER AUTHORIZATION		
Company: Name:	Signature: Date:	
Comments:		

Appendix C – Project Management Office Overview

Project Review Meetings

A communication plan will be designed and agreed to at the project kick-off meeting along with a project contact list of all stakeholders. The purpose of the communication plan and contact list is to ensure relevant information is distributed to the appropriate parties in a timely manner.

The project review meetings will be undertaken on a reoccurring basis; to be attended by Customer Project Manager, the ANM Project Manager and other project team members as required in order to review the progress of work being undertaken, any issues experienced, scope and cost changes, and future expected target dates for the completion of activities. The meetings will take the form of face-to-face meetings or through a conference bridge, whichever is deemed appropriate.

During the project review meetings, ANM will provide:

- Status Updates
- Progress, Milestones Achieved, Issues Raised
- Planned and Scheduled Activities
- Review and update minutes
- Agreed Actions ANM Key Staff Participation

ANM Project Manager

The Project Manager is the strategic contact at ANM and directs the service towards its aims and ensures it meets or exceeds them. The Project Manager will manage the roles and responsibilities of the people within ANM and liaise and report to the pertinent members of the Customer team. The Project Manager will develop the project plan used to track progress against schedule and resources. ANM standard practice is to meet at key milestones to review the project status. The progress information from each meeting will be used to update the actual activity against the plan, enabling the Project Manager to identify any issues or concerns and to take corrective action.

- Provides a single point of contact for all issues relating to delivery of the project
- Designates a backup contact when the ANM Project Manager is not available
- Produces the Project Management Plan incorporating project schedules, dependencies, roles, responsibilities and risk and issue management process
- Manages the review process for all deliverables with Customer as they relate to project
- Participates in regularly scheduled meetings with Customer to discuss the status of the implementation
- Reviews logical/physical schematics received from Customer
- Reviews all pertinent site information received from Customer

ANM Solution Architect

The Solution Architect has responsibility for the quality assurance of all technical aspects of the solution. This person will not necessarily be responsible for delivering technical aspects of the project, but will be a point of reference for all technical engineers working on the project. This role is key to providing a cohesive solution with consistent documentation and clear interfaces between different vendor products.

ANM Consulting Engineer(s)

The Consulting Engineer has responsibility for deploying and configuring all technical aspects of the solution. The Consulting Engineer is responsible for the following:

- Configuration of the system in-line with the agreed approach as signed off in the Customer Requirements Validation (CRV)
- Execution of the Acceptance Test Plan in conjunction with Customer
- Completion of as-built documentation (if applicable)

Customer Key Staff Participation

Customer will guarantee the participation of key personnel to ensure that requirements can be defined expeditiously. Customer will provide access to technical and functional subject matter experts on a timely basis to work in a collaborative manner with ANM engineering team. Key staff participation includes the following:

Customer Project Sponsor(s)

The Project Sponsor(s) ensure funding is provided for the project. The individual(s) must be able to make critical decisions in regards to budget and unknown risks that could impact the project.

- A route for escalation (relating to project decisions, risks, issues, changes)
- Advice, guidance and support to the Project Manager
- Ensuring that the project remains in line with the business environment and needs

Customer Project Manager / Coordinator

- Elicitation and specification of requirements from all end users and administration staff
- Co-ordination of Customer staff to ensure 100% efficiency in delivery of the Project
- Communication of accurate and complete system requirements
- Liaison to all third parties

Customer Technical Contact(s)

- Act as voice/data technical resources for the Customer
- Retain technical ownership and responsibility for the configuration of the Customer voice/data environment
- Work with the ANM engineering team to ensure key requirements and dependencies are understood and documented