EXHIBIT C – STATEMENT OF WORK (SOW)

Statement of Work (SOW)

Issued Under

CONTRACT NUMBER ELECT-221005-SVRS
BETWEEN
DEPARTMENT OF ELECTIONS
AND
The Canton Group

Table of Contents

This Statement of Work ("**SOW**") is issued by the Department of Elections (hereinafter referred to as "ELECT") under the provisions of the Contract. The objective of the project described in this SOW is for The Canton Group (hereinafter referred to as the Canton Group, or the Supplier) to provide a implementation services for the Virginia Statewide Voter Registration and Election Management System (SVRS).

For clarification and the purposes of this SOW, ViBE is the base product. SVRS is the modified/configured version of ViBE for ELECT. Election Management System (EMS) is a genre that ViBE belongs to.

1. PERIOD OF PERFORMANCE

The initial Contract term is for a period of one year or through initial implementation and final Acceptance of Supplier's Application and Solution as provided in the Contract, whichever is later ("Initial Term"). The work authorized in this SOW will be performed within 27 months of execution of the Contract. This includes development, customization, configuration, data conversion, delivery, installation, implementation, integration, testing and acceptance of all products and services necessary to implement SRVS, training, and any support, other than on-going maintenance services, in accordance with the Project Schedule provided below. ELECT, in its sole discretion, may renew the Contract for up to ten (10) additional one (1) year renewal periods after expiration of the Initial Term (collectively with the Initial Term, the "Contract Term").

2. PROJECT SCOPE AND UNDERSTANDING OF REQUIREMENTS

a. General Description of the Project Scope

See "The Solution" below.

b. Project Boundaries

The Canton Group, along with its subcontractors Provista and Penacity, have identified a top-level summary of the most important aspects of its proposal. The Canton Group's understanding of the scope of the project and of the proposed solution(s) are as follows.

The Solution

The Canton Group is committed to delivering a completely new and modernized VERIS replacement to serve ELECT and local elections officials of the Commonwealth of Virginia for the next decade. The proposal highlights include:

- An innovative, modern, useable system with many unique one-of-a-kind features such as an extensible voter search, an Election Day Portal (EDP) plug-in for real-time electronic poll book updates, augmented analytics that embrace the future of Business Intelligence (BI), data driven decision making, and modern design to improve voter communications through email and text.
- An online portal for voter self-service supporting an unlimited number of languages.
- A visually rich approach to image storage, retrieval, and display (with metadata) for vital voter documents captured through scan, email, text, and electronic submission formats.
- A rich geographic information system interface to visualize precincts, voter addresses, election boundaries, and voting locations for early Election Day, and Central Absentee Precincts (CAP).

- Confidential [redacted]
- A government cloud-based software deployment which achieves both scalability and elasticity, meeting predictable traffic demand and sudden traffic demand.
- A highly secure voter registration system to defeat bad actors externally and internally. The Canton Group monitors SVRS 24x7x365, escalating security anomalies to ELECT for collaborative resolution of the threat.
- A system that complies with the current Federal and state election laws and is designed to be adaptable as laws change.
- "Made in America" solution, support, and storage for the new Commonwealth of Virginia SVRS.

The Project

The Canton Group assumes that the Commonwealth will sign the contract by October 21, 2022.Immediately thereafter will be a three (3) months-long project organization and planning period to conduct a kick-off meeting, finalize the scope of the project, resource and baseline the project plan, and draft the plans for Organizational Change Management (OCM), Change Management, Communications, Training, Security, and Disaster Recovery. The initial project planning phase will produce plans, details, and acceptance criteria to provide project governance for the SVRS project implementation.

Accountability to the project governance is provided by regular project status updates (weekly), 26 regular project status reporting periods (monthly), and 4 progressive elaboration (rolling wave) planning sessions during the project. The Canton Group Executive Management team will have regular briefings from The Canton Group's Engagement Director. The Canton Group Project Director will work closely with both The Canton Group and ELECT Project Managers to ensure project governance. If ELECT hires an Independent Verification and Validation (IV&V) vendor, The Canton Group will engage with IV&V vendor to further ensure project governance.

The project plan, subject to collaboration and approval by ELECT, will clearly identify the project milestones, dependencies, and critical path which lead to a successful implementation. There will be a single implementation phase. The target date for Go-live will be no later than 27 months from the signing of the contract.

The project close out will take more than two months and consist of a project closeout checklist, closeout reporting, the transfer of project documents and artifacts, and a final meeting to highlight lessons learned.

Monitoring, Maintenance, and Support Services

The Canton Group will provide maintenance and services as further described in Exhibit F: Maintenance and Services Plan.

Outside the Scope of Work

The Canton Group will not provide hardware acquisition, installation, management, support, remediation, or hardware monitoring services to ELECT or local election jurisdictions.

The Canton Group will not provide Security Operations Center (SOC) monitoring to local election jurisdictions unless mutually agreed upon.

The Canton Group will not provide service levels beyond what is provided in Exhibit J: Service Level Agreement of the Contract.

3. FUNCTIONAL AND TECHNICAL REQUIREMENTS

Supplier will fulfil each of the specific requirements of the Contract set forth in Exhibit A: Requirements.

4. METHODOLOGY AND APPROACH REQUIREMENTS

a. Project Management Methodology

The Supplier shall employ a formal project management methodology for the SRVS project.

The Canton Group applies the Agile methodology to software development as it reduces the risk of project failure and delivers software incrementally as a best practice and uses an iterative development process. The Canton Group views the SVRS project as a linear process with a sequence of phases. Each phase has dependencies, constraints, and a critical path to follow. Most phases of the project must be completed prior to advancing to the next phase of the SVRS project, while other phases of the project, like the Project Management-Tracking-Reporting phase, overlap and run concurrently with the other phases of the SVRS project.

During the development of software deliverables, The Canton Group will use Agile project management and reporting methodologies. The blended approach (combining both waterfall and Agile) has been proven to successfully deliver a project such as ELECT's SVRS.

Project Governance/Stakeholders

The Canton Group has organized the ELECT SVRS team to enhance project governance. The SVRS project team includes, ELECT's project manager and other members of ELECTS project team, proven project managers, a proven project owner from The Canton Group, and its Executive Team consisting of the Chief Executive Officer (CEO), Chief Operating Officer (COO), and Director of Elections programs. The Canton Group Executive Team will receive bi-weekly reports from its project owner and project manager. These reports will focus on the project metrics called Key Performance Indicators (KPI). The five KPI measures that will be reported on to ELECT are: schedule, quality, cost, stakeholder satisfaction, and performance against the business case. The Canton Group project owner and project manager will report on the KPI measurements monthly.

The ELECT project manager and other members of ELECT's project team and The Canton Group project managers, implementation team, and project stakeholders will review and discuss the KPI measurements at a monthly meeting. The discussion may lead to mutually agreed upon changes to scope or schedule, or quality management and project governance remedial actions. Changes that

expand or decrease scope will be formalized into a contract modification. The KPI information will be communicated to the stakeholders if a benefit to the SVRS project is achieved.

Tracking Tasks and Measuring Progress/Schedule Management/Quality Management

Project management success is often determined by whether you kept to the original timeline. The Canton Group and ELECT project managers will continuously track the status of the tasks associated with the SVRS project. The status of the timeline will be reported to ELECT weekly. There will be monthly project reports and meetings.

At the end of the stage or phase, the schedule will be formally measured as a KPI of success. The Canton Group and ELECT project managers will examine the milestones of the SVRS project and check if they still fall on the same dates as originally agreed. The Canton Group and ELECT project managers will review upcoming election events and associated blackouts and determine the slippage, if any, and how much of an impact this will have on the overall project timescales. ELECT might use the KPI measurements to grant (or withhold) approval from moving on with the next phase of the SVRS project.

Several other KPI criteria are used internally by The Canton Group during the implementation of a project. At the end of a project phase The Canton Group project manager will check the quality of project management practices such as following the change management process every time and preparation of deliverables. While the SVRS project is a fixed price engagement, The Canton Group Executive Team must evaluate how the project is performing financially against the project cost model.

Customer satisfaction is measured by the following KPIs: (i) a measure of how ELECT and local election officials adopt and use SVRS, (ii) a measure of improved communication to the voters via SMS, text, and/or email, (iii) the elimination of dependencies on existing election systems, (iv) a measure increased efficiency in the election management process, (v) successful project delivery to the go-live date of February 3, 202,5 and (vi) a measure the performance of SVRS to the business cases developed during the Project Initiation Phase activities such as Requirements Validation and the written functional and technical specifications. Overall, KPIs will show that the benefits of the SVRS project have been achieved and that the business problem has been solved.

Organizational Change Management Services

Organizational Change Management (OCM) is a process that is an essential component of development and implementation projects. The purpose of leveraging OCM is to provide seamless transitions and change to an existing work culture/environment. One of OCM's main goals is to reduce resistance to change and ensure all individuals understand and feel comfortable with the changes. This process is focused on identifying those leaders responsible for the change, facilitating open and transparent communication between stakeholder groups, and clearly demonstrating the benefits of the change as well as why change is required. OCM is different from technical or system training efforts however, it does align closely with training strategy and objectives.

<u>Overview:</u>

The Canton Group will provide the approach, guidance, and mentorship to support the customer through the successful transition to new operational and technical processes. We will help to orchestrate the change activities and guide the customer throughout the Project life cycle. The Canton Group will support the change process, where required, providing both subject matter expertise, direction, and content development.

Deliverables:

A Plan for Organizational Change Management

The Canton Group will perform the activities required to thoughtfully plan for OCM through the entire project life cycle to ensure successful end user adoption of the new system. Plans will include mechanisms to measure progress and to gather feedback from impacted stakeholders. The Canton Group will adjust plans, as necessary, based on findings.

Assess Change Readiness:

The Canton Group will assess the customer's readiness, willingness, and ability to adopt business process and system changes. In collaboration with the customer, The Canton Group will define the Change Readiness Assessment objectives, determine key change readiness indicators to be measured, and identify the key impacted stakeholders from each election bureau/group and Executive Leadership. The Canton Group will solicit input from identified stakeholders and will gather input through a variety of methods such as surveys, stakeholder interviews, and/or focus groups. We will analyze the results, identify change management gaps, and provide recommendations to improve readiness.

The Canton Group will conduct an initial baseline assessment at the beginning of the project, followed by subsequent assessments after readiness activities, communications, and/or trainings have occurred to determine progress.

Organizational Change Management Activities:

Organizational Change Management activities will begin with formal designation and alignment of an Executive Leadership/Contract Management (EL/CM) group (client), with a Super User/Functional Area Expert (FAE) group in each defined functional area (also client), with a contractor Change Management group. These three groups will work together throughout the project to provide continuing readiness assessments, and direct feedback to each system component as it is being created, to ensure actual readiness. This structure will also rely on development of a Quality Management system for the project, loosely modeled on the components of the ISO 9001/ISO 54001 Standards applicable to a project. This modeling will document project operations, roles, resources, and other key areas, to ensure the highest quality of delivered components, and the continuing alignment of the change management leadership, as noted above. It will further provide quality assurance by formalizing risk assessment and risk management, including plans for customer staff succession during the project period, and contractor staff succession. The Canton Group uses quarterly surveys of employment retention to predict and plan for transitions.

Meetings and interviews will be held with the EL/CM group, to provide an initial draft of contractor risk identification and management, and an initial communications plan. It will also identify members of the FAE groups, who will be designated in each program area for project deployment. This group will also provide input on primary information contacts of key stakeholder groups, to create a project stakeholder register.

Initial project activities will include the validation of Use Cases, and our plan would be to deploy a parallel first meeting of the FAE groups in each defined Functional area – as nominated by the EL/CM group. These group meetings would provide risk identification and will be used as a focus group on readiness using the industry standard ADKAR© model (Awareness/ Desire/Knowledge/Ability/Reinforcement). In this way a project scorecard could be created for each functional area and for the overall project. Standard questions are used and scored in each initial group meeting and tailored questions are designed for the next surveys. Initial input from these focus groups is essential in updating the project's Communications Plan, as well as development of communications materials Subsequent meetings and/or surveys will be repeated in each group at least quarterly, and as often as monthly as design review activities in each group are underway.

Focus group meetings will also allow analysis of most critical components by numbers of users, and interdependencies, so these will be matched to a schedule of planned future use to optimize development activity and plan deployment for least functional impairment.

An all-staff change management survey, deployed to all categories of future system users, will be created to provide a high-level readiness score, and to tailor future communications to the entire user group. This survey will be repeated only quarterly throughout the project. A similar survey will be structured for key stakeholder group representatives that could also be repeated quarterly.

Overall, throughout the project, focus group meetings paired with a structured survey could be used with FAE groups initially, and then from semi-monthly to monthly based on the immediacy of design review activities. The output of each such meeting will include an update of the project performance scorecard, and a written report of significant issues that will be relayed to the project manager. This feedback will provide the ability to tailor and modify development or User Acceptance activities, or to modify the project tasks or activities on an as-needed and agreed upon basis.

Supplier shall complete the following deliverables and artifacts as a result of the OCM requirements:

1. Formally designated EL/CM and FAE groups in each defined functional area.
2. Initial focus groups with each of the above and readiness assessment.
3. Initial risk identification and risk management plan.
4. All-staff change management survey, deployed to all categories of future system users. Deployed quarterly.
5. Key stakeholders change management survey.
6. Initial project Communications Plan.
7. Continuing monthly or semi-monthly focus group meetings paired with a structured survey with FAE groups to provide routine on-going readiness feedback to project manager and the EL/CM group.

8. Performance metrics scorecard, maintained throughout the project.

Define OCM and Communications Strategy:

In collaboration with the customer, The Canton Group will define the OCM and Communications Strategy to establish the direction and purpose for all OCM and communications activities. This strategy will define the approach for how both the customer and The Canton Group will effectively manage change resulting from the new SVRS.

At a minimum, the strategy will include the following elements:

- Vision, goals, and objectives.
- Benefits of the new system.
- OCM framework and approach.
- Guiding principles that will govern OCM and communications activities.
- Change Management and Communications team(s) structure, including change sponsors/champions.
- Project risk and risk factors specific to organization change.
- Stakeholder groups/audiences.
- Communication methods including processes to gather feedback.
- Key Performance Indicators (KPIs) for the OCM effort.

The Canton Group will review the draft OCM and Communications Strategy with the customer, gather feedback, and provide a final version for ELECT approval.

Development of the OCM and Communications Plan:

The Canton Group will develop and deliver an OCM and Communications Plan to implement the strategy as described above. This plan will articulate the activities and structure used to support stakeholders impacted by the new system throughout the change journey and enable successful end-user adoption.

At a minimum, the Plan will include the following elements:

- Roles, responsibilities, and assignments of the personnel ELECT and The Canton Group) who will execute the OCM and Communications Plan.
- Communications Schedule Matrix to manage ongoing stakeholder communications, including:
    - Key messaging by stakeholder group/audience.
    - Timeline and frequency of communications.
    - Communication delivery mechanisms with recommendations of when to use.
- Stakeholder feedback loops including the process to review feedback and reflect changes to the OCM and Communications Plan, as necessary.

- Mechanisms to measure against and report on Key Performance Indicators (KPIs) for the OCM effort.

The plan will be adjusted or updated as necessary and at any point throughout the project life cycle as agreed by the parties.

OCM and Communication Plan Deliverables:

A specific outline of the planned OCM activities, regular project communications, and related information will be developed in this phase. It will include a work breakdown structure and timeline for OCM activities as noted above, as well as a Communications Plan. Development of the content areas will begin with strategy development in the initial meetings with the EL/CM and FAE groups and will continue in parallel as the Quality Management System plan is completed and approved. The FAE groups will operate in each primary deployment area and strategies for each user/stakeholder group will be specific to those needs. Important additional information will be obtained from the all-staff change management survey and the survey of key stakeholders

At that time, sufficient evidence and perspectives will have been gathered to develop a specific draft Communications Plan. The Communications Plan will need to include roles, responsibilities, and assignments of all project personnel (both ELECT and The Canton Group). The plan will include a Communications Schedule Matrix to show the nature and frequency of communications to each key group, and the mediums and means of communicating with each key group. As noted, each channel of communication will seek feedback as a means of evaluating its effectiveness, and the feedback will be used as a key performance indicator of the overall effort. These key performance indicators will be included in the project dashboard.

The needed communication types and audiences will be the focus of this plan and it will be designed to obtain high interest and attention. As a minimum, quarterly updates to the communication plan and resultant refinement of communication activities will be provided to the EL/CM group. Feedback will be incorporated and submitted for ELECT approval. As the project transitions, it may be necessary to further update the plan.

Communication Materials:

Communication materials will be tailored to the delivery mechanism and the stakeholder group/audience. At a minimum, communications will answer the following questions:

- “What is changing?”
- “Why is it changing?”
- “How will this impact me?”
- “How will this benefit me?”

The AKDAR framework – as described above – focuses on:

- **Awareness**: To answer possible user questions about things they may want to know, before they need to know, and in time so appropriate personal and unit planning will take place.
- **Desire**: To ensure employees are motivated to seek the greater good of the organization, to soldier through difficult periods of change and overcome transitional inconveniences, and to help each other through to successful adoption.
- **Knowledge**: Employees needs to know what changes are coming, and how to respond. They need to understand the role and expectations that are coming, the schedule and steps, and where to get any training or support to step into that new role.
- **Ability**: The actual uptake of plans and training in individuals so that project change flows smoothly into future operations.
- **Reinforcement**: The communication of positive feedback and recognition for performance. If support of planned and expected actions occurs and is recognized, positive behaviors can be expected to continue. If others ignore planned and expected actions, and there are no consequences, others may also be diverted from the required changes. Results in using new systems must also receive recognition to be sustained.

These materials will be based on the principal that individuals must see what is changing, why it is changing, how it will impact them, and that there is a benefit for them – at least through a more effective job and organization. A quality assurance group for both understanding these issues and seeing they are addressed will come through our continuing use of the FAE groups in each defined functional area. Specific feedback from each focus group meeting, from the scheduled surveys, and from the communications plan feedback will result in advisements to the Project Manager regarding tasks and activities, and revisions both in the approach and deployment of project activities, but also of the communications plan itself.

The development and distribution of each set of communications materials will include review and comment by both the relevant FAE groups, as well as by the EL/CM group. The overall Communications Plan will also seek to develop a role for second level managers, as another means of ensuring that critical messages get out and are appropriately explained.

Communications Updates:

The Canton Group will support the customer in its communications to impacted stakeholders. Communications will occur throughout the Project life cycle to ensure awareness leading up to critical points in the Project and to enable successful adoption of the new system. The Canton Group will track and report quarterly to ELECT on communications engagement metrics (e.g., number of stakeholders reached with messaging, participation in events, etc.).

Communications will also provide opportunities to gather stakeholder feedback for continuous improvement of the OCM and Communications Plan as well as Communication Materials.

Change Management Plan/Scope Management

The Canton Group will develop and submit a Change Management Plan (CMP) to ELECT for approval prior to implementation. ELECT will review the CMP in the context of the Commonwealth of Virginia (COV) standards for Change Management. The CMP will be delivered at the completion of the planning and initiation phase. The CMP will define how change requests are initiated and managed during the SVRS project. Change is inevitable, and a well-managed CMP process can bring many benefits to the SVRS project. Appropriate management of this process allows greater internal efficiency, reduction of associated risks, and better alignment with the business requirements.

The Canton Group recognizes that a change request can come from: (1) an anomaly that has been corrected; (2) an improvement of an application requested by a user; (3) a change in the underlying structure or within the standards; or (4) an event in the development of other applications. That said, there are challenges and significant risks in making a change request.

1. Sufficiently document the Change Requests (CRs): To be able to properly start a CR, it is essential to know and gather all the necessary information. Otherwise, the next steps for the estimation or the assessment will not be accurate enough. The assessment poses the greatest challenge of the change management process. CRs can be costly and time consuming, and therefore it is important to provide ELECT with all the relevant facts.
2. Correctly evaluate the effort of a change: As previously mentioned, this step is crucial in the management of the CR. The CMP and CR must delineate all the factors that can influence the start of the production of the change. With these details, The Canton Group will make an estimate of the effort required for the implementation of the change request. This step can be critical as this defines the needs' requirements and creates ELECT's expectations. An estimate or assessment of a request for change should understand and document the means to achieve the change.
3. Identify and analyze the impacts of the change: Impacts should be analyzed before implementation of a change. The challenge is to clearly identify the risks and impacts of the CR since they will make the project a success or a failure. To do this, The Canton Group will use the information provided in the original application and identify risks at the following levels: (a) customers, infrastructure, and customer service; (b) consequences if we do not implement this change; (c) resources required for this implementation; and (d) the implementation schedule and the interruption of service. This allows The Canton Group and ELECT to question the advantage of this change in comparison to excessive risks and allows a documentable determination of choosing the risks versus the benefits that come with the change.
4. Implementing the Request for Change in a structured way: There are also several challenges in the implementation of a change request, such as the approval stage. The Canton Group recommends the use of an Advisory Committee of Changes (Change Advisory Board or CAB) to decide either to approve or not to approve the change.
5. Post-Implementation Monitoring: This process is performed after the beginning of production to test and verify the change. This is to identify, troubleshoot, and determine whether to move forward with the plan or rollback. At this stage, it is especially important to identify lessons learned and benefit from them for future implementations.

The Canton Group Project Methodology and Project Management Tools

The Canton Group will utilize Microsoft Project, which is a project management software product, developed and sold by Microsoft (MS). It is designed to assist a project manager in developing a schedule, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads. Other project management tools the team will use include:

- MS Teams is a proprietary business communication platform developed by Microsoft, as part of the MS 365 family of products. Teams primarily competes with the similar service Slack, offering workspace chat and videoconferencing, file storage, and application integration.
  Teams are replacing other MS-operated business messaging and collaboration platforms, including Teams for Business Meetings and MS Classroom. Throughout the COVID-19 pandemic, Teams has gained much interest as many meetings have moved to a virtual environment.
- MS SharePoint is a web-based collaborative platform that integrates with MS Office. Launched in 2001, SharePoint is primarily sold as a document management and storage system, but the product is highly configurable, and usage varies among organizations.
- MS Office or simply Office, is a family of client software, server software, and services. MS Office contains Word, Excel, Visio, and PowerPoint. Over the years, Office applications have grown closer with shared features such as a common spell checker, OLE data integration and Visual Basic for Applications scripting language. MS also positions Office as a development platform for line-of-business software under the Office Business Applications brand. Office is used by over a billion people worldwide. .

The project methodology provides a process for Change Management. The Canton Group will work with ELECT to manage change requests to the SVRS project, which if properly submitted and evaluated can bring many benefits. Appropriate management of this process allows greater internal efficiency, reduction of associated risks, and better alignment with business unit's requirements.

Solution Implementation Approach:

1. Implementation Approach

Requirements Validation

During the Planning Phase, The Canton Group will facilitate working sessions with ELECT to review and validate the SVRS' Functional and Non-Functional Requirements, making revisions as needed to ensure they reflect the optimal target state while adhering to Elections laws and any other applicable laws or regulations/official guidance documents. At the completion of working sessions, The Canton Group submits to ELECT for approval both the baseline and validated requirements.

The Canton Group will create and provide a Requirements Traceability Matrix (RTM) for ELECT's review and approval. The objectives of the RTM are to:

- Define the approach linking functional requirements so they can be linked backward to non-functional requirements and forward through design, coding, and testing.
- Aid in the management of Functional and Non-functional Requirements that encompass the needs and scope of SVRS Project and support the development and configuration of ViBE EMS solution.

- Prevent features from being implemented unless they are derived from approved requirements and receive the appropriate level of review and control.
- Ensure that changes to requirements are evaluated for their impact on schedule, budget, resources, and quality through the formal project change control process.

Several types of traces that will be created and maintained by Supplier include:

- Baseline to Validated Requirement.
- System Use Case to Functional Requirement, User Story, and Test Case.
- Functional Requirement to User Story, Non-Functional Requirement, and System Use Case.
- Non-Functional Requirement to User Story, Functional Requirement, and Test Case.
- User Story to Design, Code, and Test Case.
- Design to Code.
- Code to Defect.
- Test Case to Defect.

RTM is managed on Azure DevOps with Modern Requirements4DevOps plugin. ELECT team members will be provided user licenses to access the Azure DevOps. The Canton Group creates custom queries on Azure DevOps to show coverage across the different requirement types. This includes Requirement to System Use Case and User Story. The reports reveal any inconsistencies and redundancies as well as provide coverage of the requirements. This must include removing and adding requirements as the scope changes through CRs.

In addition to traceability, RTM captures how each Functional and Non-Functional Requirement will be met by the system (e.g., out of the box, configuration, new development/customization, etc.).

Throughout the project lifecycle, The Canton Group project manager will update the RTM.

Fit/Gap Analysis

The Canton Group's Business Lead – in coordination with the ELECT project manager – will prepare a schedule for gap analysis sessions. Gap analysis sessions are conducted separately at the domain level with the Subject Matter Experts (SMEs). Similar sessions are conducted for Non-functional requirements. During gap analysis sessions, The Canton Group will conduct demos of ViBE functionality. ELECT Users will assess how well ViBE meets their goal(s) and provide feedback on any necessary modifications to ViBE functionality. Sessions also clarify the context of the requirements and help to determine how requirements will be met by the system (e.g., out of the box, configuration, new development/customization, etc.).

The Canton Group will use gap analysis session notes to develop System Use Cases that represent the high-level interaction between the user and system to accomplish the user's goal. Walkthrough of the Use Case is conducted to identify any defects before it is officially submitted to ELECT for approval

After a gap analysis session, The Canton Group begins backlog grooming sessions with SMEs. Here System Use Cases and Requirements are further decomposed into the Product Backlog of User Stories that should be completed to close the gaps identified with ViBE functionality. A User Story is a brief explanation of a product feature written from the end user's perspective that articulates how the user

will experience value. This is captured in the format of, “As a <who>, I want <what> so that <why>.”

- Who: The job role or user type, also known as the user persona.
- What: The goal that the user wants the EMS to accomplish or implement.
- Why: The reason the user needs the feature or functionality.

With the RTM as the input, the team reviews each requirement that is identified as requiring modification to EMS. ELECT users describe what the EMS needs to accomplish to complete the requirement. The Canton Group facilitators capture them as first-cut User Stories.

The first-cut User Stories are grouped and categorized into what are known as Epics. A feature large enough that it takes multiple sprints (development iteration) can be considered an Epic. By that definition, User Stories that are large features are re-categorized as Epics. A collection of User Stories that describes a common feature is also grouped as an Epic. This provides the team with the Product Backlog of Epics and User Stories.

First-cut User Stories and Epics are not necessarily detailed enough or prioritized for development and require further refinement and triaging. Using the Agile scrum methodology, The Canton Group will conduct periodic product backlog grooming sessions. The goals of product backlog grooming sessions include:

- Assign priority, risk, and target sprint to User Stories and Epics.
- Decompose Epics and User Stories into more detailed User Stories as needed. As new User Stories are added, The Canton Group maintains a backward traceability to Functional Requirements, Non-Functional Requirements, and Use Cases.

The product backlog is maintained in Azure DevOps using Modern Requirements4DevOps plugin. At the end of elicitation of First-Cut User Stories and Epics, The Canton Group publishes the product backlog to ELECT for review and approval. As needed, The Canton Group will conduct deliverable walkthrough with reviewers to promptly resolve any findings. The approved product backlog becomes the baseline for tracking development progress throughout the project.

Solution Design

The Solution Design will follow the requirements and gap analysis stages. The Solution Design follows the Reactive Architecture Principles: The solution is responsive, scalable, resilient, and message driven. These principles are embedded in all the steps of the Solution Design. When we implement the Solution Design, we will see the benefits of the Reactive Architecture:

- A responsive system that always timely responds to user requests.
- A resilient system with high availability (99.99%).
- Confidential [redacted]
- Confidential [redacted]

The Canton Group follows Agile methodology and uses Azure DevOps as the tool to capture design documentation and for product management. The Canton Group creates Epics, Features, User Stories, Tasks, and Issues to capture the work to be performed during development. All these elements are stored logically on a backlog of items.

The Canton Group's design process has two parts: Functional Design and Technical Design.

Functional Design

This is the process where we define, from the functional requirements, the solution domain, and the components (sub domains that functionally make up the domain).

Methodology. The Canton Group will use Domain Driven Design (DDD) for its Functional Design. In DDD, we focus on strategy design and tactical design. Strategic design is about modeling the problem domain and segregate the domain models using Bounded Context design pattern and "ubiquitous language" related to the business domain. The tactical design goes into more detail and uses Aggregation patterns to find "aggregates" which are an aggregation of entities and value objects of the domain.

Bounded Context. The Canton Group refers to bounded context as a semantic bounded context which means that each component of the software has a specific meaning and performs specific tasks (e.g., Voter Registration, Elections, etc.) and the elements in the bounded context are semantically specific in the context. Within the multiple bounded contexts found in this phase The Canton Group also defines sub-domains that are used to break up complex domains. The design incorporates the concept of Domain events, which are asynchronous messages between domains so they can communicate with each other.

Aggregate. Entity and Value Object. The tactical Design in DDD is about finding the aggregates end entities in the context domain. Entities model things that have identities and unique identifiers and can be distinguished individually amongst other entities. Entities are mutable and their state changes over time. In the Voter Registration bounded context we find the Voter as an entity. Value Objects are immutable and model only values. An Aggregate is an aggregation of multiple entities and value objects, being one entity the root aggregate. Aggregates are transactional, meaning that the state of the aggregate changes when all the entities of the aggregation can change without losing entity integrity (Atomic property).

Domain Storming. This is a technique that allows us to engage domain experts and developers to collaborate in the design of the system using DDD. The design members define events that occur in the system and start associating entities/aggregates on which a command is executed to trigger the events. We focus on business processes while other design models create entity relationships first.

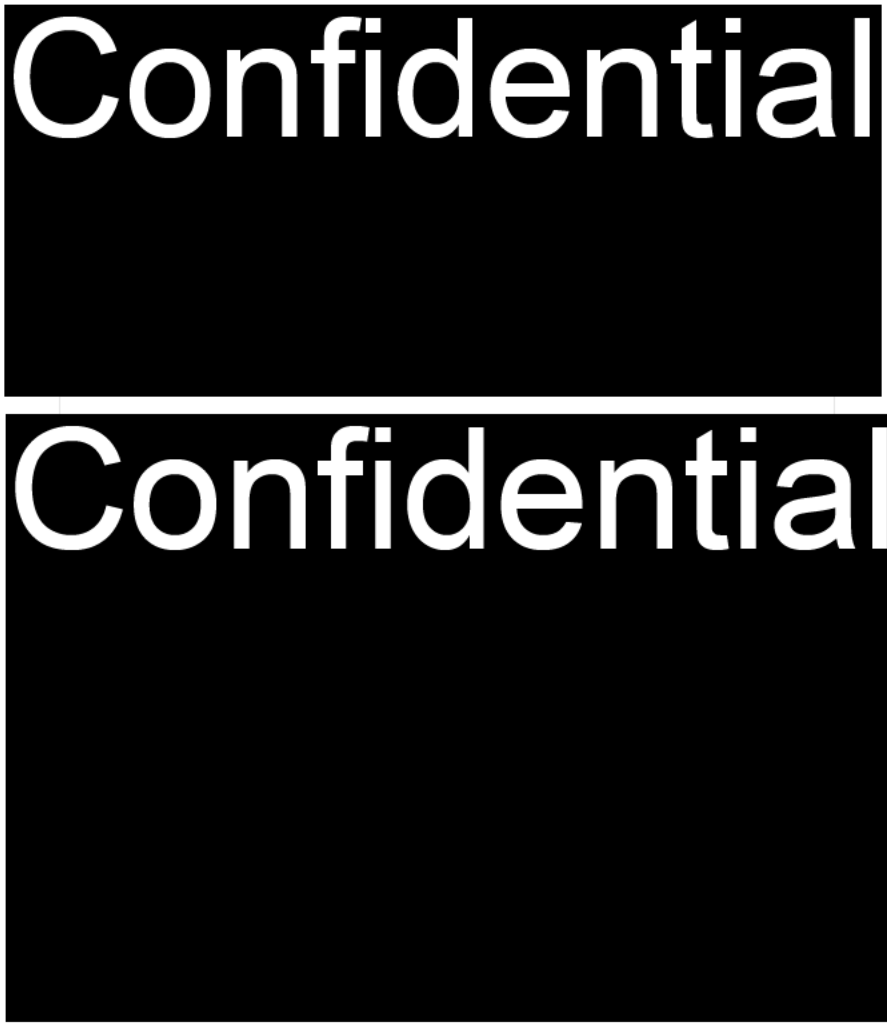
The result of this process is functional architecture/design. The following image shows some of the functional domains of The Canton Group's Elections Management System (ViBE) and their

associated sub domains. For example, Voter domain has several sub domains (Voter Search, List Management, and Correspondence Management).

These functional domains are supported by common business services such as User Administration, System Administration, etc.

Technical Design

In technical design, we define Confidential that support the business domains and subdomains defined in the Functional design. The following graphic shows how the Voter microservice supports one to one the Voter Domain.



The process we follow is a layered architecture in which we represent the technical solution in different views. We show in the next image how we "map" the business processes to the User Interface (UI) and Confidential . The process flows in the Confidential

System View

The system view consists of three layers of the system: presentation, application, and data. We design the system as follows:

- Presentation Layer: Used to represent the stakeholders and any interested party that interacts with the system.
    - UI Design. This is where we do the UI/UX design (GUI or interface design).
    - Workflow Design. We design sequences of Views that make up a process or workflow.
- Application Layer: Used to represent the "backend" services of the application. Confidential
    - Confidential
    - Confidential .

    - Technical Services. These are the technical common services that support the business services. For example, Error Handling is a common functionality for all the business services, so it is implemented as a technical service and reused by the business services.
- Data Layer. This layer contains the data services, which implement the data model.
    - Data Services. These are the services that know how to connect to the database, execute reads and writes and transform the results into a data object.
    - Object Relational Mapping (ORM). It is the Entity Relationship Map layer that decouples the business model from the actual database implementation. We should be able to swap relational databases without affecting the upper layers, only the ORM changes. The ORM is a library that generates an object representation of the data model.

Information View

This view shows the database and the data model.

- Data Model: It is the entity representation of the object model when using a Code First approach with the ORM.
- Analytics: In this section we describe the replication of the transactional database to a database that is used for reporting and data analytics. The Canton Group created a series of Data marts in its data lake (Snowflake) to provide data analytics functions such as Voter 360, Historical Voters, Auditing, etc.

Infrastructure View

In this view, Confidential [redacted]

- Environment: In this section, we define the environments needed to support the DevOps (operations). The solution is built as infrastructure as code, so we automatically build and release (Continuous Integration, Continuous Deployment (CI/CD)) using the respective pipelines. The releases are from source code branches associated with the environments. The Canton Group will use Dev, Test, UAT, and Production environments. Given the scripts and use of tools like Terraform, The Canton Group can easily create new environments from scratch or as copy from Production for example and assign it to be the Training environment if needed.

Security. The Canton Group takes pride in how it views security across the entire Software Development Life Cycle (SDLC). At the design level, The Canton Group designs the security (authentication and authorization) based on the technical requirements.

- Application Security: The Canton Group designs the application-level security in this section. It designs integrations with Corporate Directories like LDAP or Active Directory, design Multi Factor Authentication, etc. Additionally, The Canton Group designs Audits, and obfuscates or encrypts Personally Identifiable Information (PII) and voter confidential data.
- Platform Security: The Canton Group designs infrastructure security such as Firewall rules, data security (data rest and in flight), network security, OS security, VM security, VPNs, etc. The Canton Group designs security tests such as dynamic and static vulnerability tests.

The outcome of this effort is a series of Functional Design Documents and Technical Design Documents. These documents are submitted for review and approval by ELECT.

Configuration

We consider that Software Development is Software Engineering, therefore we not only envision developing software but also how to successfully sustain and maintain the software for its expected life span. The SDLC is about software sustainability. This property depends on three elements: time, change, and scale. For the life span of the software, The Canton Group reacts to business or technical changes. We use the term scale in this context to denote the capacity to scale the project team during the software development. The same as we scale the software, we also scale the developer work with the size of the code base. ELECT will benefit financially when we identify defects or changes earlier in the process, which is why being Agile is so effective.

We use Agile Development Process with scrum methodology to manage and implement the SDLC. The Agile with scrum Methodology, shown in Exhibit - Agile Process with SCRUM below, describes the Development process as a series of increments called sprints. Each sprint is another iteration of concept (requirements), design, development, testing, integration, delivery (deploy), and retrospective evaluation (evaluate). Within each iteration there is a deliverable, which is a functional service that is a part of the end product.

The Agile team captures the product requirements such as Epics, User Stories, and Tasks. The product backlog is the complete set of requirements. The sprint backlog is a subset of User Stories selected in the sprint planning for development in each sprint. A sprint lasts between two and three weeks. During the sprint, daily scrum sessions (known as stand-ups) are held to review the progress of the work in development. The team answers the following questions:

- What did I do yesterday?
- What am I going to do today?
- Are there any impediments that are stopping my work?

At the end of the sprint, the team presents a demonstration of deliverables using the last release to the Develop branch to the persons involved – both directly and indirectly – in the project (stakeholders, users, SMEs, product owner, etc.). The product owner accepts or rejects the User Stories based on their acceptance criteria. It is important to avoid technical debt (rejected User Stories) as they will be introduced in the next sprint, or the product owner may decide not to implement them at all.

After the demonstration, the Agile team performs a retrospective, where they evaluate their work by listing what went wrong and what went well, so they can improve in the next sprint. This cycle repeats until the product owner decides that they have the desired product or external forces cause the project to end.

The Agile team is comprised of the following:

- Product Owner: In this role, a person drives the requirements and functional design of the product. A member of ELECT will be involved in the project.
- Scrum Master: A role of facilitator leader. The scrum master helps write User Stories and facilitates the resolution of any impediments that the team encounters. This is not a Project Management role.
- Full Stack Developers: There are separate roles in this area such as Technical Architect, Senior Developer, and DevOps Engineer. Full stack means the developer can develop front end, back end, and database. The DevOps Engineer develops the build and release pipelines, stands up the environments and maintains the CI/CD process. Some tests are part of the CI/CD such as Unit tests and Static Code Analysis.
- Testers: Design and perform tests strategically. The testers execute different Test types as per the Test Plan.

Interface Design

The solution is built on a reactive UI framework that dynamically adapts based on the screen size. The result is a smooth transition to mobile device touch screens, whether a tablet, cell phone, desktop, or laptop, the site will adjust their display accordingly. The Canton Group uses native tools within browser such as Google Chrome's Device Mode to confirm mobile friendliness.

The solution’s public webpages are scalable and extensible to support up to 25 languages. The language choices are supported by the ELECT-supplied translations of the web page instructions, static labels, and static data. The language support provides compliance with the Voting Rights Act, Elec. Code 2300(a)(8).

The SVRS solution complies with applicable state and Federal laws and regulations for accessibility, including Section 508 of the Rehabilitation Act and the Americans with Disability Act.

The UI design process focuses on a strong user experience, ease of use, and uniform look and feel of the application. The UI design process includes artifacts such as buttons or widgets, text, images, sliders, and other interactive elements. The UI designers ensure that every visual element, transition, and animation included within a product or service is setting the stage for a fluid, positive experience. ELECT is involved throughout the UI design process and active feedback is elicited. We create wireframes and testable prototypes as needed to achieve the best user experience. We also define the JavaScript libraries that work best with the prototypes.

Data Migration

The Canton Group has extensive knowledge regarding the design and operational procedures of the voter registration systems such as VERIS. Many of The Canton Group's technical team members have experience supporting states who use a variety of voter registration database systems. The Database Administrator (DBA) on the SVRS project actively manages several statewide voter registration database systems and has expert knowledge of a variety of schema. The Canton Group and ELECT will collaborate to ensure data mapping from source tables to target tables is accurate.

The Canton Group's Data Conversion and Migration process approach is to deliver data conversion in progressive phases using a SDLC process. The data conversion process starts early in the proposed project plan January 9, 2023. The data conversion process is iterative, consisting of data conversion passes 1-3, plus a training database pass, plus a go-live practice data pass, and the final data conversion pass and migration immediately prior to the go-live date February 3, 2025.

The Canton Group will create an SVRS database that contains all Commonwealth of Virginia data from VERIS, the data conversion process develops a "Lossless" data migration from the VERIS data sources to SVRS data destination. Lossless is defined as a team agreement that all data has been moved in a way that enables SVRS software to host and process ELECT voter registration, voter registration list maintenance, and election operations for all agreed upon operational processes (e.g., retention of unique VERIS voter ids, worker attributes, precinct identification, etc.).

Supplier shall provide the following Key Deliverables for the Data Conversion:

1. The Data Roadmap consists of data review and target identification, including a gap analysis designed to identify data elements that may be unique to the ELECT SVRS project. Interviews during a site-visit by The Canton Group Data Conversion Specialist will enable us to lock down a review schedule for the Data Roadmap.
2. The Data Conversion Engine. The "Engine" is a program and some related SQL processes that enable the SVRS input data to be automatically Extracted-Transformed-Loaded into the SVRS system environment. The engine includes constraints and transformations to ensure data quality and integrity. The engine is run several times (data passes) throughout the project, with each iteration including new or modified elements, and translations that we refine as we work with the project team. The final engine run is conducted after data freezes and completes within 72 hours to minimize ELECT VERIS downtime during the

transition to the new SVRS.

3. The Data Conversion Statistical Report enables ELECT staff to determine that the conversion processed the correct number of records and the quality of those records.
4. No double entry is needed. Because the data conversion engine is run many times leading up to go-live, and because the data is converted in a 72-hour period, The Canton Group does not recommend double entry of data into the VERIS and SVRS systems. It recommends that the final data conversion be scheduled for a weekend to minimize the downtime during the transition from VERIS to SVRS. Additionally, The Canton Group recommends that the user community perform all the work necessary on VERIS up until the Thursday evening freeze of data processing on VERIS. The VERIS data should be provided in its native database format (SQL Server database backup).

For proofing the Data Migration, The Canton Group will execute custom SQL Scripts which display the voter counts on VERIS compared to the voter counts on SVRS. The custom SQL Scrips also provides a full list of additional record counts, so ELECT is assured of a high-quality comprehensive data conversion process. We recommend ELECT include looking up voters that are one of a kind (fringe testing) or including fringe details such as assistance needs of a voter. Identifying fringe cases in the current and new system will assure ELECT of a high-quality comprehensive data conversion process. The Data Conversion testing will be conducted after each conversion and immediately before go-live. ELECT must accept the conversion prior to proceeding to go-live.

Integration

We have reviewed the integration requirements and understand the integrations are a combination of file and service based where some of them have bi-directional data flows. The ViBE Partner Interface is a modern standards-based integration platform built on Talend Data Fabric that supports API, event, file-based integration with a low/no code user interface. It also has a robust API library to simplify design, development, and testing. APIs are published as Web Services and closely align with application business functions.

Consistent with Enterprise Application Integration (EAI), the best practices The Canton Group uses include:

- Agile scrum for development and release of changes to interfaces.
- Iteratively design, build, and release complex integrations.
- Maintain a high percentage of automated test cases and update with changing Use Cases.

The Canton Group used the above approach to deliver the complex integration in the State of California.

During the Planning phase of the project, The Canton Group will hold a series of discovery workshops with ELECT to review the interfaces in detail and gather sufficient information to define detailed specifications. The detailed specifications will capture:

- Scrum Team: ELECT designated product owner (can be a combination of business and IT), Vendor Support/Subject Matter Expert, and The Canton Group development, and Technical Teams.

- Interface Documentation Library: Maintains interface assets such as DLLs, Business Rules, WSDLs, Sample files, etc.
- Technical Approach: Reuse capabilities of ViBE Partner Interface to build file-based and API Integrations.
- Design Specification: Source System, Target System, Interface Type, and Exchange Frequency (as shown in examples below).
- Service Specifications: For each Operation, captures the name of the operation and the parameters to include the Parameter name, Type, Description, Return Value Type, and Description. (As shown in example below).
- File Specification: Format, Specifications, Parsing, and Validation (As shown in example below).
- Interface Environment: Document the integration environments, on target and source systems, used for development, testing, and production.
- Testing Tools: Apart from Nunit, Jmeter, and Selenium for automation, we built custom tools to generate test data.

The Canton Group updates the design specification throughout the project as transformations, operation, rules, etc. change. The drafts and revisions are submitted for ELECT's review and approval. At the end of interface testing for readiness, The Canton Group will submit a validation report to ELECT for approval.

Solution Testing

The basis of The Canton Group's test methodology is a software lifecycle model that supports early defect detection throughout the software lifecycle. The testing methodology promotes comprehensive test coverage in an organized fashion traced back to requirements and design. This allows the teams to conduct "the right test at the right time." The Canton Group will use eight test phases that together, provide comprehensive test coverage to the ViBE solution:

- Unit Testing.
- System Testing.
- Performance Testing.
- Penetration Testing.
- Backup and Recovery Testing.
- Sandbox Testing.
- User Acceptance Testing (UAT).
- Regression/Smoke Testing.

The Canton Group Test Team is responsible for planning and executing all test phases except for UAT which is planned and executed by ELECT (or other designee), with support from the Test Team. Throughout testing, The Canton Group's technical team and application development team will collaborate with ELECT, the ELECT Partners (other vendors), and the Business Continuity and Disaster Recovery vendor (Microsoft Azure) for the Backup and Recovery testing.

An integrated testing effort builds quality into the test process through more thorough test planning and improved buy-in and acceptance of test outcomes. More input, suggestions, and reviews during test

planning help improve planning accuracy and thoroughness. Additionally, if the various levels of participants support the test effort during each step of the testing process – and transparency is maintained – integrity is preserved.

Leveraging expertise improves effectiveness and furthermore, leveraging the different expertise of various groups will improve the effectiveness of ViBE testing. Detailed roles and responsibilities for each team member will be provided in the Test Plan.

A variety of tools are used to support the test effort. The Canton Group proposes the following tools to support the planning, execution, and reporting for the testing effort:

- Azure DevOps: Used to support defect management. Defects are logged for discrepancies between expected and actual test results for all test phases except for Unit Test. In addition, this tool will serve as the requirements repository for the project.
- Azure Test Plans: Maintains the test cases and execution status for System testing, Performance testing, Sandbox testing, and UAT. Test cases trace to Use Cases and project requirements.
- Selenium: A popular testing framework we use for automated testing of ViBE on presentation layer (web browsers).
- NUnit: Unit Testing Framework for .NET. Primary tool in the Test-Driven Development (TDD) approach.
- Apache JMeter: Used from performance testing of the APIs.
- SonarQube: Static Code Analyzer used to enforce code quality and security requirements.
- SharePoint: Document library to store Test Assets.

During the Planning Phase, The Canton Group develops a draft Test Plan. The Test Plan is a collaborative effort between The Canton Group and ELECT to be submitted for review and approval by ELECT.

Test Scripts, Test Scenarios, and Test Data

The Test Team will design and construct test cases from Use Cases, Requirements, and design documents, procedure manuals, and other available information. The set of master test cases is maintained in Azure Test Plans.

In designing test cases, the Test Team considers the overall objective of the test, including which Use Cases are being covered, and the types of test cases needed to satisfy a test scenario. The Test Team will coordinate interdependencies between test cases with the testers so that hand-offs can be managed.

The test case design will include:

- Positive tests that follow the exact process and prescribed steps as designed and described in the requirements.
- Negative tests deviate from the prescribed path to confirm or determine how the system will react when the user does not provide the expected values or responses.
- Creating multiple small, single purpose test scripts that can be linked to achieve a complete business cycle or to demonstrate an end-to-end business process rather than a single large test case (this facilitates test result analysis).
- Identification of input and output files, specific data needs, and appropriate sources of data.

- Identification of expected results, including citations to system documentation such as file format specifications and design documents.

The testers will schedule a peer review when a set of test cases is complete. Information about the peer review is recorded in the test case. Once the test cases have been updated and the peer review is complete, a walkthrough of the test cases (typically in groups) is conducted with ELECT.

To conduct comprehensive testing, thorough test data sets are needed. The teams obtain a variety of data from multiple, independent sources. This improves the ability to detect errors that arise only with a particular type of test data. Test data are obtained in the following ways:

- Pristine Data: Create specific data from scratch (either before or during the test). The teams either enter data using completed portions of the application, using SQL, or enter the data directly into the database. This test data setup is described during the test planning activities and takes place prior to test execution.
- Generate Data Using Automated Tools: This is most important for performance and load testing, which require large data sets. In these cases, data volume is important, but content (such as functional details) generally is not.
- Converted Data: The system must work with both system-generated and converted data. It is critical to fully exercise the system using converted data.

The Test Team will work collaboratively with ELECT staff to create test scripts, scenarios, and test data. The Canton Group will submit the test scripts and scenarios for each phase for review and approval. Test data is submitted to ELECT as requested by ELECT.

Test Environments

Installation, configuration, and maintenance of the test environments are important aspects of test success. The Canton Group's Technical Team will manage and monitor the test environments. The table below details the test environments planned for the project.

Testing Phase	Environment
Unit Testing	Development Environment
System Testing	Testing Environment
Performance Testing	Production Environment (prior to Cutover)
Penetration Testing	Production Environment (prior to Cutover)
Backup and Recovery Testing	Production Environment (prior to Cutover)
Sandbox Testing	User Acceptance Test Environment (prior to UAT)
User Acceptance Testing	User Acceptance Test Environment

Dedicated testing environments will be provided for distinct testing phases. These environments are independent installations of the application, each with its own database, configuration data, and application code.

One of the key coordination activities for the environment is release management. The Technical Team will coordinate with the Test Team in managing releases into the applicable test environments. The Canton Group will submit the details of the test environments for ELECT to review when they are ready to go for testing activities.

Testing

Prior to executing a test script, the tester confirms the test environment is configured as expected and that the test data is available, either by creating the test data or using existing test data. The tester executes the test in accordance with the test script and procedures. Then, the tester records the results of each step as they execute that step to include approved deviations, actual results/comments, and whether the test step passed or failed. If defects are discovered during the test, the tester will log a defect in Azure DevOps and includes the defect number in the test result. The tester attaches documentation such as screenshots and reports that demonstrate the actual results of executing the test script.

Once test script execution is complete, the tester reviews the actual results against the expected results to determine if the overall test script passed or failed. If the test script failed due to an error in the test procedure, the tester corrects the test procedure and re-executes the test script.

In general, the overall execution status of a test script is:

- "Pass" if each step in the test case has been executed and actual results match the expected results.
- "Pass" if each step in the test case has been executed and if one or more test steps have failed and any resulting defects are severity 4 (Low).
- "Fail'' if each step in the test case has been executed and if one or more test steps have failed and any resulting defects are severity 3 (Medium) or higher.
- ''Fail'' if one or more of the test steps could not be executed.

Each tester records the overall test case execution results based on the above criteria. The tester has the authority to modify the execution results; however, they must record the reason for the modification.

For managing defects, Azure DevOps provides a robust set of fields to record defect details. The table below shows the set of information that is available to define defects:

Field	Usage
Defect ID	Defect reference ID
Defect Title	Short description of the defect
Repro Steps	Steps to reproduce the defect

Found in Build	Release version the defect was found in
Integrated in Build	Release version the defect was fixed in
Priority	Priority of the defect
Severity	Severity of the defect
Planned Fix Iteration	Targeted iteration for resolution of defect
Domain Area(s)	Domain areas impacted by defect
State	Current state of the defect
Reason	Current state reason of the defect
Assignee	Person or team currently assigned to
Linked Work Items	Test cases/User Story/Requirements linked to
Attachments	Supporting documents

When ELECT and The Canton Group are triaging a defect, The Canton Group uses a severity priority defect rating. Severity rating is the impact of a defect on the project or application. The following table details the definitions of the severity ratings that will be used during testing.

Value	Severity
1 - Critical	Prevents the accomplishment of an Essential Function. Jeopardizes safety, security, or causes unrecoverable data loss. No work around solution is known.
2 - High	Adversely affects the accomplishment of an essential function and no known work-around solution. Causes recoverable data loss but with high impact to users. Impacts reliability of public-facing functionality or data.
3 - Medium	Adversely affects the accomplishment of an essential function and a workaround solution is known or adversely affects the accomplishment of SVRS functions. Causes recoverable data loss.
4 - Low	Results in user/operator inconvenience or annoyance but does not affect a required operation or mission essential function. Cosmetic or documentation issue to non-public facing functionality.

The Defect Priority is a value from 1 to 4, giving equal weighting to both Impact and Severity. The defect prioritization below provides a consistent, objective way to set the initial priority based on impact and severity of the defect.

Once defects have been triaged, they are assigned to the Development Team to get fixed. After the defect is fixed, it is tested and closed. The Test Team reviews the impact of the defect on other active test cases. If there are other test cases that cannot be executed, then they are suspended from test execution and tracked as "blocked." A test case can be blocked by one or more defects, with each defect linked to affected test case(s). Test case execution resume when the defects blocking it are all resolved.

The Canton Group uses the reporting capabilities within Azure DevOps to report on status and completion of testing. Test reports are created for each phase and support the following questions:

- How many and what percentage of Test Cases were never run vs blocked vs failed vs passed grouped by functional domain?
- How many defects by severity and priority are open vs closed?
- How long have those defects been open (age)?
- How many and what percentage of Use Cases and requirements are not linked to any Test Cases (Coverage)?

Test status and reports are submitted at the end of each testing phase to ELECT. When the entry criteria for UAT testing is met, ELECT begins the UAT.

2. Solution Upgrades

During the implementation, The Canton Group monitors and manages all licensed software and any third-party products used throughout the solution; notifying ELECT of any reported issues and relevant next steps; monitoring and managing interface activities; and reviewing and providing feedback to proposed changes to the SVRS.

3. Training

Training Plan

The SVRS project training plan focuses on how ELECT and local elections officials are trained on SVRS to meet the operational and procedural goals of ELECT. Training will be delivered directly to ELECT by The Canton Group trainers. Local election officials may come to Richmond or attend training remotely (distance learn). Training materials include self-guided training materials developed during the analysis and assessment stage. After go-live, ELECT and local election officials will receive ongoing support and coaching from The Canton Group training team. The Training Plan will provide deliverables which will include the following depending upon the final format: (1) Develop Classroom and On-Line Training Materials; (2) Deliver Classroom Training; (3) Assess Training Effectiveness; and (4) A training database environment that will be used for implementation training as well as training for post-implementation onboarding staff and remedial training.

The SVRS user training materials will be provided in a common format and include SVRS business process manuals Quick Reference Guides, and other related materials. The user training team will develop the materials in conjunction with ELECT and local elections officials. Materials will be made available in hard copy for classroom training participants, as well as in electronic format in a location to be determined. The content of SVRS user training materials derives from the business functional and technical requirements of the Contract. The user training materials focus on understanding the new and changed voter registration operations and procedures that SVRS requirements introduced. In addition, the materials walk SVRS users and locality users through the new and changed voter registration business processes. The intent is to provide the necessary training to users based on group roles and responsibilities.

At the end of each user training session, the instructor will collect evaluations of the course content and delivery from each participant. In addition, after the localities complete the SVRS user training, the training team will survey staff who went through training class to assess the effectiveness of the training. Based on the lessons learned from these evaluations and surveys, especially related to the locality training, the training team will modify and adapt the training materials and/or revise the structure, content, or delivery methodology of the classroom training. Similar assessments will be completed after each user training wave.

Overview of Other Training Options

No additional training options are identified at this time.

5. PERSONNEL

a. Supplier Staff

The roles listed in Table 1 – Supplier Personnel outline the Supplier's team members who will be assigned to the project, the role(s) each will perform and the estimated time that each will be available to work on the project.

Supplier shall staff the project with the personnel identified in Table 1 below. Roles designated with a "Yes" in the Key Personnel column indicate team members who are considered by ELECT to be essential to this Project. Supplier shall notify and obtain written approval from ELECT at least five (5) business days prior to any proposed substitution. Written justification for the proposed substitution shall include documentation of the circumstances requiring the change and sufficient detail to permit evaluation of the qualifications of the proposed replacement and impact on the project. ELECT, at its discretion, may accept or not accept personnel of equal or superior qualifications if circumstances necessitate the replacement of previously assigned personnel. Additionally, ELECT reserves the right to reject any proposed team members throughout the duration of the project.

Proposed Staff Resource Name	Project Role & Brief Description	Company Employed By	Key Personnel (Y/N)	% Of Time Allocated to Project	Yrs. Of Experience	Certifications
Ethan Kazi	CEO Executive Management Team Monitors KPI Performance Monthly	The Canton Group	Y	<5%	23	BS, Biology & Chemistry
Confidential [redacted]	Confidential [redacted]	The Canton Group	N	<5%	22	Confidential [redacted]

						[redacted]
[redacted]	[redacted]	The Canton Group	N	<5%	17	[redacted]
[redacted]	[redacted]	The Canton Group	Y	50%	15	[redacted]
[redacted]	[redacted]	The Canton Group	Y	100%	22	[redacted]

	Authors Reports, Team Leader					Confidential [redacted]
TBD	Project Coordinator Provides substantial administrative support required for a successful implementation. Reports to The Canton Group Project Manager	The Canton Group	Y	100%	3-4	PMP (preferred) BA (preferred)
Confidential [redacted]	Confidential [redacted]	The Canton Group	Y	50%	20	Confidential [redacted] Confide [redacted]
Confidential [redacted]	Confidential [redacted]	Confidential	Y	25%	20	Confidential [redacted] Confidential [redacted]

	Group Project Manager					
Confidential [redacted]	Confidential [redacted]	Confidential	Y	50%	15	Confidential
Confid [redacted]	Confidenti [redacted]	Confidential	Y	50%	15	Confidential Confidential
Confidential [redacted]	Confidential [redacted]	The Canton Group	N	50%	22	Confidential [redacted]
Confidential [redacted]	Confidenti Confidential Confidential [redacted]	Confidential	Y	50%	25	Confidential [redacted]

Table 1- Supplier Personnel

b. ELECT Staff

Table 2 – ELECT Roles details the Supplier's expectations of the roles to be performed by ELECT staff in support of the project, the level of effort as defined in FTE units, and the iterations during which a time commitment will be needed for each role. In addition, the Virginia

Information Technology Agency Project Management Division will provide consultation, governance and oversight to ELECT on this project.

ELECT Role	Description	Iteration	Level of Effort
Internal Agency Oversight Committee	Provides project sponsorship and oversight.	All	As Needed
Product Owners	Business Leads that provide product guidance to the project team on Voter registration, Election Administration Absentee Voting Election Results and Certification, Online Citizen Portal, Maintain Geographic Data; manage and engage stakeholders; and collaborate with the technology team.	All	3 FTE, 100% allocated
Project Manager/Scrum Master	Provides project management oversight.	All	1 FTE, 100% allocated
Quality Assurance Lead	Testing lead, manages QA team, manage and facilitate UAT, Automated UAT script developer.	All	1 FTE, 100% allocated
SRVS Project Core Team	Assists the ELECT Project Manager in providing direction regarding project approach, planning and execution activities; ensures strategic direction is correctly translated into tactical tasks.	All	4 FTE, each 100% allocated

SMEs	Provide input to the project and perform project tasks as assigned.	All	As needed

Table 2 – ELECT Personnel

6. TOTAL PROJECT PRICE

Pricing for project shall be based upon the project pricing provided in Exhibit B: Pricing. Invoices are be submitted upon acceptance of associated deliverables and in accordance with the Contract, including Table 3 – Iteration and Payment schedule below and in §8 Milestones, Deliverables, Payment Schedule and Holdbacks. ELECT will hold back the amount of 10% of each invoice as retainage that will be paid in accordance with the Contract. All expenses that Supplier intends to pass on to ELECT must be included in the total fixed price of the Solution.

7. PROJECT SCHEDULE

The Project Schedule provided in Appendix A to this Exhibit provides an overview of the proposed timeline for implementation. The proposed timeline is a draft that will be discussed with the ELECT Project Team during the Project Planning phase and can be updated upon written agreement of the parties without a modification to the Contract when the change(s) made results in no increase or decrease in scope or price. The project planning phase will begin within 30 days of the contract signing.

Project Planning and Reporting Milestone Phase

This phase of the project begins immediately upon the signing of the contract. ELECT and The Canton Group will jointly plan and conduct a kick-off meeting within the first month of signing of the Contract t. The Canton Group will update the organizational chart and staffing plan. The Work Breakdown Schedule (WBS) will be fully resourced and baselined into a Project Plan. The Canton Group will update the proposed Project Schedule and develop several important project plans which will be submitted to ELECT for approval. If approved, these project plans will guide The Canton Group and ELECT through a successful implementation of the SVRS project. These plans include a Change Management Plan (CMP), Quality Control Plan (QCP), Communication Plan (CP), Training Management Plan (TMP), Organizational Change Management Plan (OCMP), Security Plan (SP), Testing Plan (TP), Disaster Recovery & Business Continuity Plan (DRBCP), Data Migration Plan (DMP), Reporting, Deployment, and Project Closeout Plan.

Project Initiation Milestone Phase

This phase of the project begins within a month of signing the Contract. During this phase, The Canton Group will perform Requirements Validation and prepare a Gap Analysis including an analysis of the business' needs and recommending a solution. Any plan brought forward will have to be reviewed by the stakeholders, the project manager, and the project sponsor. Once the requirements are determined, The Canton Group project manager will give options to meet those needs. This phase includes the design phase which solidifies and documents the functional and technical design of SVRS. It lays out

everything that will be needed to bring the project to life: technical specifications, procedures, processes, testing criteria, and KPIs to measure success. The design documents are critical to system development, OCM, Data Migration, testing and UAT, system configuration, implementation, and go-live activities.

System Development and Implementation Milestone Phase

The Canton Group project manager and team will create the design documents. We will adhere to the specifications, procedures, and timelines laid out in the previous phases of the SVRS Project. The core system includes some customization of the voter registration system software to meet the functional and technical requirements of SVRS. The Canton Group has achieved success in similar projects by adding an Agile Sprint Plan for the implementation phase of this project. In effect, the Agile Sprint Plan for custom software development becomes a sub-plan of the overall project plan. Thus, The Canton Group's project plan methodology is a modified waterfall project containing Agile sprint cycles for the successful development of software to meet the functional and technical requirements of SVRS. Go-live for the implementation of the core system is planned for February 3, 2025.

The Data Migration Plan (DMP) is based on the traditional Extract, Transform, and Load (ETL) process. ETL is a data integration process that combines data from multiple data sources into a single, consistent data store that is loaded into a data warehouse or other target system. The data migration plan features an iterative approach involving a minimum of three passes against the data in the current VERIS system. In the first pass, the data from the current VERIS system is completely mapped to the new SVRS system. The data migration map includes the source of data, the destination of each data element, and any transformations that take place against the data from the current VERIS system. The data migration plan includes the generation of a report to prove that all data was migrated successfully. The data migration proofing report may include additional checks for logic.

During this phase of the SVRS project, The Canton Group will conduct 3-week sprints/iterative development cycles to complete the core system. The ELECT project manager, ELECT key staff, and SMEs will participate in several sprint cycle software demonstrations which highlight the requirements of the Contract. Converted data from the current VERIS system is used for demonstration after ELECT has validated the quality of converted data. Once the sprint cycles and data migration passes are complete, the users will be trained, and ELECT can perform UAT.

The Canton Group works closely to support the training needed for UAT. This testing phase checks the deliverable against the standards and metrics determined by the stakeholders and documented in the design document. To ensure project success, the team may be required to go back to the implementation phase for further rework.

The Canton Group anticipates 10 days of end user training delivered on site. The training sessions will also be available online for those who prefer to participate in training remotely. The Training Plan will be broken down into modules or sub-systems of the SVRS (e.g., Voters, Streets, Precincts, Districts, Polls, Workers, and Elections).

After, UAT, End User Training and the Mock Election are completed, ELECT and The Canton Group will jointly confirm (i) the remaining actions required to be completed, (ii) the anticipated time for completion, and (iii) the target Go Live date. ELECT will make the final Go-No Go decision.

After the Warranty Period, the SVRS project will transition to Maintenance and Support (M&S) so the project team can assist end users with any training, maintenance, or operations issues that arise. Third-party software requiring regular updates or upgrades will also be covered under M&S.

8. MILESTONES, DELIVERABLES, PAYMENT SCHEDULE, AND HOLDBACKS

A copy of the following table is completed in Exhibit B: Pricing, and identifies milestone events and deliverables, the associated payment schedule, any retainage amounts, and net payments. Pricing for the project shall be based upon the project pricing provided in Exhibit B: Pricing. Invoices will be submitted upon Elect's acceptance of associated deliverables and in accordance with the table below and the Contract.

Milestone Event	Associated Milestone Deliverable(s)	Payment	Retainage	Net Payment

Table 3- Iteration and Payment Schedule

9. ACCEPTANCE CRITERIA

Acceptance of each deliverable will be accomplished in accordance with §8 Testing and Cure of the Contract.

10. PROJECT ASSUMPTIONS AND PROJECT ROLES AND RESPONSIBILITIES

Project Assumptions

The following assumptions are specific to this project:

- The schedule of Milestones, Deliverables, and Payment Schedule is based on a project start date of November 4, 2022.
- Changes in scope will be mutually agreed upon by ELECT and The Canton Group and documented in an approved change order prior to beginning additional work.
- The Commonwealth will sign the contract by October 21, 2022.
- There will be a three (3) month-long project organization and planning period to conduct a kick-off meeting, confirm the scope of the project, resource and baseline the project plan, and draft the plans for Organizational Change Management (OCM), Change Management, Communications, Training, Security, and Disaster Recovery.
- The detailed plans provided in this document will provide project governance.

- Accountability to the project governance is provided by regular project status updates (bi-weekly), 24 regular project status reporting periods (monthly), and 3 progressive elaboration (rolling wave) planning sessions during the project.
- The Canton Group Executive Team will have regular (daily, weekly, and/or monthly) briefings from The Canton Group Project Director. Based on the phase of the project, the cadence of briefings will be adjusted as needed. Project stages and activities that are more critical will have daily briefings whereas steady work progression phases of the project will tend to have weekly and/or monthly briefings.
- The Canton Group Project Director will work closely with The Canton Group and the ELECT Project Manager to ensure project governance.
- If ELECT utilizes Independent Verifications and Validations (IV&V), The Canton Group will work with the IV&V Vendor upon request and authorization by the ELECT Project Manager.
- The project plan identifies the project milestones, dependencies, and critical path which lead to a successful implementation. Any required deviations will be communicated to the ELECT Project Manager for ELECT review and approval. Time-sensitive and/or critical communications requiring decisions will receive feedback from ELECT in accordance with the timeframe described in the project schedule.
- There will be one single period for development and implementation.
- The system will undergo significant testing, training, and User Acceptance prior to go-live.
- The system will go-live on February 3, 2025.
- The final project close out will take more than two months and consist of a project closeout checklist, closeout reporting, the transfer of project documents and artifacts, and a final meeting to highlight lessons learned.

Project Roles and Responsibilities

The following roles and responsibilities have been defined for this project. Additional detailed tasks will be identified and assigned during the project planning process:

Responsibility Matrix	Supplier	ELECT
ELECT Statewide Voter Registration (SVRS) Project		
Contracting		
Contract Signed		
Project Planning & Reporting		
Planning	Responsible	Participate
Kick off meeting with ELECT Officials	Responsible	Participate
Organize and plan meeting		
Hold pre-meetings with Advance Team		
Hold Kickoff Meeting with Stakeholders	Responsible	Assist
Kickoff Meeting Complete		
Organization and Staffing		

Responsibility Matrix	Supplier	ELECT
Identify tasks and responsibilities for PMO and Project Leads	Responsible	Responsible
Develop Chart for Project Organization	Responsible	Review
Develop position descriptions for each of the required staff	Responsible	Review
Determine number of resources required for each position and timing	Responsible	Review
Determine project lead staffing and fill positions	Responsible	Review /Approve Key Personnel
On Board Identified Project Leads	Responsible	
Staffing posts openings and fills positions	Responsible	
Review candidates for posted jobs	Responsible	Review /Approve Key Personnel
Project leads on board work stream consultants		
Staffing Complete		
Scope of Work Detail Definition		
Resource Loading		
Resource Tasks	Responsible	
Resourcing Complete		
Baseline Project	Responsible	Review
Set Milestones	Responsible	Review /Approve
Critical Path	Responsible	
Baseline Complete		Review
Develop Project Plans		
Organization Change Management Plan		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible
Approve Plan		Responsible
Communication Plan		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible

Responsibility Matrix	Supplier	ELECT
Approve Plan		Responsible
Change Request Plan		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible
Approve Plan		Responsible
Training Plan		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible
Approve Plan		Responsible
Security Plan		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible
Approve Plan		Responsible
Disaster Recovery and Business Continuity Plan (Solution)		
Prepare Plan	Responsible	
Review Plan		Responsible
Revise Plan	Responsible	
Review Plan		Responsible
Approve Plan		Responsible
Periodic Reviews		
Project Plan Progressive Elaboration 1	Responsible	Participate
Project Plan Progressive Elaboration 2	Responsible	Participate
Project Plan Progressive Elaboration 3	Responsible	Participate
Reporting		
Project Status Report		
Project Status Report 1	Responsible	Review /Approve
Project Status Report 2	Responsible	Review /Approve

Responsibility Matrix	Supplier	ELECT
Project Status Report 3	Responsible	Review /Approve
Project Status Report 4	Responsible	Review /Approve
Project Status Report 5	Responsible	Review /Approve
Project Status Report 6	Responsible	Review /Approve
Project Status Report 7	Responsible	Review /Approve
Project Status Report 8	Responsible	Review /Approve
Project Status Report 9	Responsible	Review /Approve
Project Status Report 10	Responsible	Review /Approve
Project Status Report 11	Responsible	Review /Approve
Project Status Report 12	Responsible	Review /Approve
Project Status Report 13	Responsible	Review /Approve
Project Status Report 14	Responsible	Review /Approve
Project Status Report 15	Responsible	Review /Approve
Project Status Report 16	Responsible	Review /Approve
Project Status Report 17	Responsible	Review /Approve
Project Status Report 18	Responsible	Review /Approve
Project Status Report 19	Responsible	Review /Approve
Project Status Report 20	Responsible	Review /Approve
Project Status Report 21	Responsible	Review /Approve
Project Status Report 22	Responsible	Review /Approve

Responsibility Matrix	Supplier	ELECT
Project Status Report 23	Responsible	Review /Approve
Project Status Report 24	Responsible	Review /Approve
Project Status Meetings		
Project Status Meetings 1	Responsible	Participate
Project Status Meetings 2	Responsible	Participate
Project Status Meetings 3	Responsible	Participate
Project Status Meetings 4	Responsible	Participate
Project Status Meetings 5	Responsible	Participate
Project Status Meetings 6	Responsible	Participate
Project Status Meetings 7	Responsible	Participate
Project Status Meetings 8	Responsible	Participate
Project Status Meetings 9	Responsible	Participate
Project Status Meetings 10	Responsible	Participate
Project Status Meetings 11	Responsible	Participate
Project Status Meetings 12	Responsible	Participate
Project Status Meetings 13	Responsible	Participate
Project Status Meetings 14	Responsible	Participate
Project Status Meetings 15	Responsible	Participate
Project Status Meetings 16	Responsible	Participate
Project Status Meetings 17	Responsible	Participate
Project Status Meetings 18	Responsible	Participate
Project Status Meetings 19	Responsible	Participate
Project Status Meetings 20	Responsible	Participate
Project Status Meetings 21	Responsible	Participate
Project Status Meetings 22	Responsible	Participate
Project Status Meetings 23	Responsible	Participate
Project Status Meetings 24	Responsible	Participate
Project Initiation		
OCM Gap Analysis		
Develop gap analysis	Responsible	Participate
Review Gap Analysis Document		Responsible
Revise Gap Analysis Document	Responsible	
Review Final Gap Analysis Document		Responsible
Approve Gap Analysis		Responsible
Requirements Verification and Analysis		

Responsibility Matrix	Supplier	ELECT
Develop gap analysis	Responsible	Participate
Review Gap Analysis Document		Responsible
Revise Gap Analysis Document	Responsible	
Review Final Gap Analysis Document		Responsible
Approve Gap Analysis		Responsible
Functional Design		
Develop Design Document	Responsible	
Review Design Documents		Responsible
Revise Design Documents	Responsible	
Review Design Documents		Responsible
Technical Design		
Develop Design Document	Responsible	
Review Design Documents		Responsible
Revise Design Documents	Responsible	
Review Design Documents		Responsible
System Development and Configuration		
Sprint Cycle		
Sprint Cycle 1	Responsible	Participate
Sprint Cycle 2	Responsible	Participate
Sprint Cycle 3	Responsible	Participate
Sprint Cycle 4	Responsible	Participate
Sprint Cycle 5	Responsible	Participate
Sprint Cycle 6	Responsible	Participate
Sprint Cycle 7	Responsible	Participate
Sprint Cycle 8	Responsible	Participate
Sprint Cycle 9	Responsible	Participate
Sprint Cycle 10	Responsible	Participate
Sprint Cycle 11	Responsible	Participate
Sprint Cycle 12	Responsible	Participate
Sprint Cycle 13	Responsible	Participate
Sprint Cycle 14	Responsible	Participate
Sprint Cycle 15	Responsible	Participate
Sprint Cycle 16	Responsible	Participate
Sprint Cycle 17	Responsible	Participate
Sprint Cycle 18	Responsible	Participate
Sprint Cycle 19	Responsible	Participate
Sprint Cycle 20	Responsible	Participate

Responsibility Matrix	Supplier	ELECT
Sprint Cycle 21	Responsible	Participate
Sprint Cycle 22	Responsible	Participate
Sprint Cycle 23	Responsible	Participate
Sprint Cycle 24	Responsible	Participate
Sprint Cycle 25	Responsible	Participate
Sprint Cycle 26	Responsible	Participate
Sprint Cycle 27	Responsible	Participate
Sprint Cycle 28	Responsible	Participate
Sprint Cycle 29	Responsible	Participate
Sprint Cycle 30	Responsible	Participate
Sprint Cycle 31	Responsible	Participate
Sprint Cycle 32	Responsible	Participate
Sprint Cycle 33	Responsible	Participate
Sprint Cycle 34	Responsible	Participate
Sprint Cycle 35	Responsible	Participate
Sprint Cycle 36	Responsible	Participate
Sprint Cycle 37	Responsible	Participate
Sprint Cycle 38	Responsible	Participate
Sprint Cycle Software Demos		
Sprint Cycle Software Demos 1	Responsible	Participate
Sprint Cycle Software Demos 2	Responsible	Participate
Sprint Cycle Software Demos 3	Responsible	Participate
System Testing		
Develop Testing Scenarios		
Write testing scenarios	Responsible	
Review Test Scenarios	Responsible	Responsible
Revise Test Scenarios	Responsible	Responsible
Review Final Test Scenarios	Responsible	Responsible
Approve Test Scenarios	Responsible	Responsible
System Documentation Updates from Testing		
Write updates to System Documentation	Responsible	
Review Update	Responsible	Responsible
Revise Updates	Responsible	
Review Final Revisions	Responsible	Responsible
Approve System Documentation from Testing	Responsible	Responsible
Execute Testing scenarios		
Execute scenarios and record test results	Responsible	Responsible

Responsibility Matrix	Supplier	ELECT
Provide feedback on problem notices	Responsible	Responsible
Re-test corrected problem notices	Responsible	
Approve and Testing Complete	Responsible	Responsible
OCM Training Strategy		
OCM Kick-off		
Organize and plan meeting	Responsible	
Hold pre-meetings with Advance Team	Responsible	
Hold Kickoff Meeting with Stakeholders	Responsible	Participate
Kickoff Meeting Complete	Responsible	
As-Is To-Be Analysis		
Develop As-Is To-Be Document	Responsible	
Review Design Documents	Responsible	Responsible
Revise Design Documents	Responsible	
Review Design Documents	Responsible	Responsible
Review Final Design Documents	Responsible	Responsible
OCM Implementation Meeting		
Organize and plan meeting	Responsible	
Hold pre-meetings with Advance Team	Responsible	
Hold As-Is To-Be Meeting with Stakeholders	Responsible	Participate
As-Is To-Be Meeting Complete		
Data Conversion and Migration		
ELECT Transports Data for Conversion		Responsible
Begin to receive data files from the ELECT	Responsible	
SQL DB Backup Files Received	Responsible	
Data Migration Mapping		
Develop Data Mapping to Table and Column levels	Responsible	
Review Data Mapping	Responsible	Responsible
Revise Data Mapping	Responsible	
Review Final Data Mapping	Responsible	Responsible
Data Mapping Complete		
Data Migration Report	Responsible	
Conversion team converts ELECT data and develops errors list	Responsible	
ELECT Reviews Data	Responsible	Responsible
ELECT Data Review Error List	Responsible	Responsible
Conversion Team Corrects Errors	Responsible	
First pass conversion complete		

Responsibility Matrix	Supplier	ELECT
ELECT Transports Data for Conversion		Responsible
Second Data Transfer	Responsible	
SQL DB Backup Files Received	Responsible	
User Migration		
Convert the data and fix errors	Responsible	
ELECT reviews Second Pass Data Conversion	Responsible	Responsible
ELECT Data Error Review List	Responsible	Responsible
Conversion Team Corrects Errors	Responsible	
Second Pass review compete		
ELECT Transports Data for Conversion		Responsible
Third Data Transfer	Responsible	
SQL Data files received	Responsible	
3rd Pass Convert data for Training DB		
Convert the data and fix errors	Responsible	Review
Training Database Pass Complete	Responsible	
Training		
Training		
System Operations Documentation		
Customize System Operations Documentation	Responsible	
Review System Operations Manual		Responsible
Revise System Operations Document	Responsible	
Review Final System Operations Document		Responsible
System Operations Document Acceptance		Responsible
Customized Training Materials		
Customized Training Materials	Responsible	Participate
Training Materials complete		
In Person and Online Advanced Training		
Training Days		
Training Days 1	Responsible	Responsible for training facility
Training Days 2	Responsible	Responsible for training facility
Training Days 3	Responsible	Responsible for training facility

Responsibility Matrix	Supplier	ELECT
Training Days 4	Responsible	Responsible for training facility
Training Days 5	Responsible	Responsible for training facility
Training Days 6	Responsible	Responsible for training facility
Training Days 7	Responsible	Responsible for training facility
Training Days 8	Responsible	Responsible for training facility
Training Days 9	Responsible	Responsible for training facility
Training Days 10	Responsible	Responsible for training facility
Advanced Training Complete		
Acceptance and Performance Testing		
User Acceptance Testing Day		
User Acceptance Testing Day 1	Responsible	Participate
User Acceptance Testing Day 2	Responsible	Participate
User Acceptance Testing Day 3	Responsible	Participate
User Acceptance Testing Day 4	Responsible	Participate
User Acceptance Testing Day 5	Responsible	Participate
User Acceptance Testing Day 6	Responsible	Participate
User Acceptance Testing Day 7	Responsible	Participate
User Acceptance Testing Day 8	Responsible	Participate
User Acceptance Testing Day 9	Responsible	Participate
User Acceptance Testing Day 10	Responsible	Participate
User Acceptance Testing Day 11	Responsible	Participate
User Acceptance Testing Day 12	Responsible	Participate
User Acceptance Testing Day 13	Responsible	Participate
User Acceptance Testing Day 14	Responsible	Participate

Responsibility Matrix	Supplier	ELECT
User Acceptance Testing Day 15	Responsible √	Participate
User Acceptance Testing Complete		
Mock Election and Disaster Recovery Test		
Mock Election Day 1 – Pre-Primary Election Activities	Participate	Responsible
Mock Election Day 2 – Primary Election Day Activities	Participate	Responsible
Mock Election Day 3 - Post Primary Election Activities	Participate	Responsible
Mock Election Day 4 – Pre-General Election Activities	Participate	Responsible
Mock Election Day 5 – General Election Day Activities	Participate	Responsible
Mock Election Day 6 - Post General Election Activities	Participate	Responsible
Disaster Recovery Test	Responsible	Responsible
Mock Election Complete		
Load and Stress Test		
Load and Stress Test Planning	Responsible	Participate
Load and Stress Test Day 1	Responsible	Participate
Load and Stress Test Day 2	Responsible	Participate
Load and Stress Test Complete		
System Deployment		
Data Freeze		Responsible
ELECT Stops Data Processing		Responsible
Begin to receive data files	Responsible	Responsible
SQL DB Backup Files Received for Data Freeze	Responsible	
Load Final Frozen Files		
Process final frozen files	Responsible	
Final Load complete		
Final Data Conversion Signoff		
ELECT Reviews Final Pass Data Conversion		Responsible
Go-Live		
Back up Master files	Responsible	
Post Go-Live Support		
Assist ELECT in new processing onsite	Responsible	
Identify issues/corrections during Warranty Period	Responsible	Responsible
Correct issues/corrections identified during Warranty Period	Responsible	
Test and Approve Corrections for issues identified during Warranty Period		Responsible
Project Transition and Close Out		
Conduct Closeout Meetings		
Project Closeout Checklist	Responsible	

Responsibility Matrix	Supplier	ELECT
Develop Closeout Report	Responsible	
Review Closeout Report		Responsible
Archive Project Documents and Artifacts	Responsible	
Prepare Meeting	Responsible	
Transfer of Project Documents, Artifacts and Other Materials	Responsible	
Conduct Meeting	Responsible	

Table 4- Responsibility Matrix

11. PLACE OF PERFORMANCE

Tasks associated with this project will be performed at ELECT's location in Richmond, VA., or other locations as required by the effort.

The Canton Group will work onsite at ELECT's location in Richmond, Virginia to:

1. Conduct or participate in meetings deemed appropriate or necessary by ELECT.
2. Conduct or participate in meetings deemed beneficial by The Canton Group.
3. Accept data migration transfers from ELECT unless secure alternatives are available.
4. Conduct user training.
5. Support user acceptance, mock election, and load-stress testing.
6. Process final go-live data migration unless secure alternatives are available.
7. Assist ELECT for the first week of implementing the new system.

Confidential [redacted]

12. ELECT AND SUPPLIER-FURNISHED MATERIALS, EQUIPMENT, FACILITIES, AND PROPERTY

Provided by ELECT

ELECT will provide office space and use of copier and other office equipment, meeting space, projector, projection screen, and contractor badges for building access as required. ELECT will supply Commonwealth-owned laptops which shall be used to access the Commonwealth network.

Provided by the Supplier

Supplier is responsible for providing and maintaining the facilities, infrastructure, personnel, equipment, software, materials, and other resources necessary to provide the SRVS

Solution, except as otherwise expressly provided in the Contract, including this Statement of Work.

13. SECURITY REQUIREMENTS

Security procedures include but are not limited to background checks, records verification, photographing, and fingerprinting of Supplier's employees or agents. In addition, Supplier may be required to execute and complete additional forms including non-disclosure agreements, to be signed by each of Supplier's employees or agents, acknowledging that all ELECT information with which such employees and agents come into contact while at the ELECT site is confidential and proprietary. Any unauthorized release of proprietary information by the Supplier, or an employee or agent of Supplier, will constitute a breach of the Contract.

Supplier shall comply with all requirements in the Security Compliance section of the Contract.

14. REQUIRED STANDARDS, CERTIFICATIONS, AND SPECIFICATIONS

In addition to any standards and specifications included in the Contract, Supplier shall follow the standards and specifications listed below during performance of this effort.

- COV ITRM Policies and Standards: https://www.vita.virginia.gov/policy--governance/policies-standards--guidelines/
- NIST

15. RISK MANAGEMENT & REPORTING

The Supplier will monitor risks and impediment of the project throughout the project and report to ELECT as warranted. The Supplier is required to regularly report on the status of the project and will meet with ELECT to discuss risks, impediments and the status of the project as requested by the ELECT and set by established and approved by the ELECT reporting cadence.

Risk Management Plan and Strategy

Risk Identification Process

The Canton Group has found that a robust risk management process is comprised of three parts, which include risk analysis and assessment, the treatment of risk, and monitoring the risk outcomes. Under risk assessment and analytics, the ELECT and The Canton Group implementation team will need to brainstorm and figure out the risks the SVRS project faces.

Risk Evaluation and Prioritization

Once a list of risks is developed, The Canton Group and ELECT implementation team will analyze each risk and describe the risk characteristics in a Risk Matrix Document (RMD). The RMD will help the team describe the magnitude of the different risks, ranking them, and help the team to limit the impact of each to the project. The Risk Management Team (RMT) will determine the likelihood of occurrence for each risk, which is expressed as a number between 1 (not likely) and 5 (highly likely). The RMT will determine the impact of a risk should it occur, which is expressed as a number between 1 (minor impact) to 5 (high impact). The two numbers will be multiplied against each other (likelihood x impact)

to state the Risk Quotient for each risk described in the RMD. The RMD will be sorted in descending order by Risk Quotient so that the most likely and biggest impact risks are viewed at the top of the list.

For an example of The Canton Group's risk management methodology please see Figure 1 - Sample Risk Matrix Document. Note that there is a risk titled Failure in Online Voter Registration Portal which was assigned the number five (highly likely) for Likelihood and the number five (high impact) for Impact. The risk quotient was 25 (5x5 [likelihood x impact]), which is the highest risk to this sample project.

Each risk may change over the period of the implementation timeline. For example, the Failure of the Online Voter Registration Portal would have a high impact on SVRS. The likelihood of failure may be reduced over time as the OVR system is tested, implemented, and the system demonstrates the capability to run flawlessly. The likelihood of some risks may even turn to zero over the period of the implementation timeline, which might mean that the RMT can drop the risk entirely from the RMD since there is 0% chance of a risk happening at that time.

Risk Mitigation Options

The RMD will document how the team intends to treat each risk. The team can opt to avoid the risk, accept it, transfer it to more able businesses, or even mitigate it. The choice trickles down to the impact and likelihood of risk occurrence and the team's capacity in handling the risk. Lastly, the implementation team will need to monitor the outcomes of the risk treatment options. While some choices might not have been the best, the business inclinations towards risk might change with time. Regular monitoring of the risk management program will help keep the SVRS project running both in the face of present and future business threats.

Risk Plan Maintenance

The RMT will meet once a month to document and analyze the risks to the project. The RMT will share the RMD within the Monthly Project Report and discuss new and changed risks during the monthly project meetings.

Risk Management Responsibilities

Any member from ELECT and The Canton Group implementation team can identify a potential risk. The RMT will consist of the ELECT project team, The Canton Group Project Owner and Project Manager.

16. DISASTER RECOVERY

The Canton Group solution for SVRS is agnostic to on premise or cloud hosting. We are hosting the solution in Microsoft Azure Government as Azure provides compliance with many security standards and monitoring at the infrastructure layer. We anchor the solution on this platform to take advantage of those inherent properties, compliances, and related managed services that Azure offers. We select Microsoft Azure Government, also for its capabilities to provide Business Continuity and Disaster Recovery services.

Business Continuity and Disaster Recovery (BC/DR) is an especially important process we implement in the solution. For the solution to be available 99.99% uptime, the strategy started at design time, development and during implementation following a Reactive Architecture: Fault Tolerant, Responsive and Elastic using Messaging for inter service communication. Confidential [redacted]

Recovery Point Objectives (RPO) refer to the backup frequency of data and other persistence resources that hold the state of the system. The Canton Group solution implements a replica of the Production environment in a Recovery Site physically located in a different Azure Geographical Region. We will implement Azure Recovery Site (ARS) to replicate Virtual Machines, Azure Backup to replicate the Data Bases and Data Repository, resulting in an RPO of 15 minutes. To achieve an RPO of zero minutes, the backup frequency must be in real time. In this case, we use replication methods (stored procedures and triggers) in the transactional database to send the new or modified records in real time. As a record is created, updated, or removed in the transactional database, a trigger is initiated to send the record(s) to insert, update, or delete in the replica database. The DevOps Release Pipelines will create a copy of the container images in the Recovery Site. The Recovery Site maintains the same Production resources created, implemented, and configured as a mirror of the Production Environment.

Recovery Time Objective (RTO) refers to the duration of time needed to recover the application after a disaster occurs. Confidential [redacted]

17. REPORTING

Bi-Weekly Status Update.

The bi-weekly status report, to be submitted by Supplier to ELECT, will include accomplishments to date as compared to the project plan; any changes in tasks, resources, or schedule with new target dates, if necessary; all open issues or questions regarding the project; action plan for addressing open issues or questions and potential impacts on the project; reporting on risk management. OCM, and any other ongoing implementation activities.

Performance Auditing

At the option of ELECT, IV&V services may be performed during the implementation phase. ELECT may also have the option to have one or more IV&Vs performed.

18. POINT OF CONTACT

For the duration of this project, the following project managers shall serve as the points of contact for day-to-day communication:

ELECT: David Birkelien

Supplier: Confidential

APPENDIX A TO EXHIBIT C: STATEMENT OF WORK

PROJECT SCHEDULE

Task Name	Duration	Start	Finish	Predecessors	Resource Names
ELECT Statewide Voter Registration (SVRS) Project	**638 days**	**Tue 10/25/22**	**Thu 4/3/25**		
Contracting	**0 days**	**Fri 11/04/22**	**Fri 11/04/22**		
Contract Signed	0 days	Fri 11/04/22	Fri 11/04/22		Virginia Board of Elections
Project Planning & Reporting	**590 days**	**Fri 10/21/22**	**Wed 3/12/25**		
Planning	**371 days**	**Fri 10/21/22**	**Mon 4/29/24**		
Kick off meeting with State Officials	**18 days**	**Fri 10/21/22**	**Thu 11/17/22**		
Organization and Staffing	**9 days**	**Tue 10/25/22**	**Fri 11/4/22**		
Scope of Work Detail Definition	**33 days**	**Mon 11/7/22**	**Fri 12/23/22**		
Periodic Reviews	**243 days**	**Mon 4/17/23**	**Mon 4/15/24**		
Reporting	**590 days**	**Tue 10/25/22**	**Wed 3/12/25**		
Project Status Report	**551 days**	**Wed 12/21/22**	**Wed 3/12/25**		
Project Status Meetings	**338 days**	**Wed 12/21/22**	**Wed 3/12/25**		
Project Initiation	**76 days**	**Tue 12/13/22**	**Mon 4/3/23**		
OCM Gap Analysis	**17 days**	**Tue 12/13/22**	**Fri 1/6/23**		
Develop gap analysis	10 days	Tue 12/13/22	Tue 12/27/22	76	CG Subject Matter Expert, CG Doc Writer 1
Review Gap Analysis Document	5 days	Wed 12/28/22	Wed 1/4/23	136	ELECT Core Team, External QA Consultant
Revise Gap Analysis Document	1 day	Thu 1/5/23	Thu 1/5/23	137	CG Subject Matter Expert, CG Doc Writer 1
Review Final Gap Analysis Document	1 day	Fri 1/6/23	Fri 1/6/23	138	ELECT Core Team, External QA Consultant

Approve Gap Analysis	0 days	Fri 1/6/23	Fri 1/6/23	139	ELECT Core Team, External QA Consultant
Requirements Verification and Analysis	**17 days**	**Tue 12/13/22**	**Fri 1/6/23**		
Develop gap analysis	10 days	Tue 12/13/22	Tue 12/27/22	76	CG Subject Matter Expert, CG DBA, CG Doc Writer 1, CG Product Owner
Review Gap Analysis Document	5 days	Wed 12/28/22	Wed 1/4/23	142	ELECT Core Team, External QA Consultant
Revise Gap Analysis Document	1 day	Thu 1/5/23	Thu 1/5/23	143	CG Subject Matter Expert, CG DBA, CG Doc Writer 1, CG Product Owner
Review Final Gap Analysis Document	1 day	Fri 1/6/23	Fri 1/6/23	144	ELECT Core Team, External QA Consultant
Approve Gap Analysis	0 days	Fri 1/6/23	Fri 1/6/23	145	ELECT Core Team, External QA Consultant
Functional Design	**59 days**	**Tue 12/13/22**	**Thu 3/9/23**		
Develop Design Document	45 days	Tue 12/13/22	Thu 2/16/23	76	CG Subject Matter Expert, CG DBA, CG Doc Writer 1, CG Product Owner
Review Design Documents	10 days	Fri 2/17/23	Fri 3/3/23	148	ELECT Core Team, External QA Consultant
Revise Design Documents	2 days	Mon 3/6/23	Tue 3/7/23	149	CG Subject Matter Expert, CG DBA, CG Doc Writer 1, CG Product Owner
Revise Design Documents	2 days	Wed 3/8/23	Thu 3/9/23	150	ELECT Core Team, External QA Consultant
Review Final Design Documents	0 days	Thu 3/9/23	Thu 3/9/23	151	ELECT Core Team, External QA Consultant
Technical Design	**59 days**	**Mon 1/9/23**	**Mon 4/3/23**		
Develop Design Document	45 days	Mon 1/9/23	Tue 3/14/23	140	CG DBA, CG Doc Writer 1, CG Technical Lead, CG Dev Lead
Review Design Documents	10 days	Wed 3/15/23	Tue 3/28/23	154	ELECT Core Team, External QA Consultant
Revise Design Documents	2 days	Wed 3/29/23	Thu 3/30/23	155	CG Subject Matter Expert, CG DBA, CG Doc Writer 1, CG Product Owner
Revise Design Documents	2 days	Fri 3/31/23	Mon 4/3/23	156	ELECT Core Team, External QA Consultant
Review Final Design Documents	0 days	Mon 4/3/23	Mon 4/3/23	157	ELECT Core Team, External QA Consultant

System Development & Implementation	537 days?	Tue 12/13/22	Wed 2/12/25		
System Development and Configuration	383 days	Fri 1/13/23	Fri 8/2/24		
Sprint Cycle	380 days	Fri 1/13/23	Tue 7/30/24		
Sprint Cycle Software Demos	246 days	Tue 8/1/23	Fri 8/2/24		
System Testing	442 days	Fri 1/13/23	Mon 10/28/24		
Develop Testing Scenarios	407 days	Fri 1/13/23	Fri 9/6/24		
System Documentation Updates from Testing	407 days	Fri 1/13/23	Fri 9/6/24		
Execute Testing scenarios	35 days	Mon 9/9/24	Mon 10/28/24		
OCM Training Strategy	240 days	Tue 12/13/22	Wed 11/29/23		
OCM Kick-off	8 days	Tue 12/13/22	Thu 12/22/22		
As-Is To-Be Analysis	74 days	Mon 1/9/23	Mon 4/24/23		
OCM Implementation Meeting	9 days	Wed 11/15/23	Wed 11/29/23		
Data Conversion and Migration	387 days	Mon 1/9/23	Fri 8/2/24		
State Transports Data for Conversion	3 days	Mon 1/9/23	Wed 1/11/23		
Data Migration Mapping	78 days	Thu 1/12/23	Wed 5/3/23		
Data Migration Report	151 days	Thu 5/4/23	Tue 12/12/23		
State Transports Data for Conversion	3 days	Fri 1/12/24	Wed 1/17/24		
User Migration	18 days	Thu 1/18/24	Mon 2/12/24		

State Transports Data for Conversion	**3 days**	**Wed 3/6/24**	**Fri 3/8/24**		
3rd Pass Convert data for Training DB	**3 days**	**Wed 7/31/24**	**Fri 8/2/24**		
Training	**90 days?**	**Wed 7/31/24**	**Tue 12/10/24**		
Training	**90 days?**	**Wed 7/31/24**	**Tue 12/10/24**		
Acceptance and Performance Testing	**15 days**	**Wed 12/11/24**	**Tue 12/31/24**		
User Acceptance Testing Day	**15 days**	**Wed 12/11/24**	**Tue 12/31/24**		
User Acceptance Testing Complete	0 days	Tue 12/31/24	Tue 12/31/24	299	
Mock Election and Disaster Recovery Test	**8 days**	**Thu 1/9/25**	**Mon 1/20/25**		
Mock Election Day 1 - Primary Pre-Election Activities	1 day	Thu 1/9/25	Thu 1/9/25	300FS+6 days	ELECT Core Team, External QA Consultant, CG Doc Writer 1, CG Subject Matter Expert, CG Training Coordinator
Mock Election Day 2 - Primary Election Day Activities	1 day	Fri 1/10/25	Fri 1/10/25	302	ELECT Core Team, External QA Consultant
Mock Election Day 3 - Post Primary Election Activities	1 day	Mon 1/13/25	Mon 1/13/25	303	ELECT Core Team, External QA Consultant
Mock Election Day 4 - General Pre-Election Activities	1 day	Tue 1/14/25	Tue 1/14/25	304	
Mock Election Day 5 - General Election Day Activities	1 day	Wed 1/15/25	Wed 1/15/25	305	
Mock Election Day 6 - Post	1 day	Thu 1/16/25	Thu 1/16/25	306	

General Election Activities					
Disaster Recovery Test	2 days	Fri 1/17/25	Mon 1/20/25	307	ELECT Core Team, External QA Consultant, CG DBA
Mock Election Complete	0 days	Mon 1/20/25	Mon 1/20/25	308	
Load and Stress Test	**4 days**	**Thu 1/9/25**	**Tue 1/14/25**		
Load and Stress Test Planning	2 days	Thu 1/9/25	Fri 1/10/25	300FS+6 days	ELECT Core Team, External QA Consultant, CG DBA, CG Technical Lead
Load and Stress Test Day 1	1 day	Mon 1/13/25	Mon 1/13/25	311	ELECT Core Team, External QA Consultant, CG DBA
Load and Stress Test Day 2	1 day	Tue 1/14/25	Tue 1/14/25	312	ELECT Core Team, External QA Consultant, CG DBA
Load and Stress Test Complete	0 days	Tue 1/14/25	Tue 1/14/25	313	
System Deployment	**21 days**	**Wed 1/15/25**	**Wed 2/12/25**		
Data Freeze	**2 days**	**Wed 1/15/25**	**Thu 1/16/25**		
Load Final Frozen Files	**9 days**	**Fri 1/17/25**	**Wed 1/29/25**		
Final Data Conversion Signoff	**0 days**	**Wed 1/29/25**	**Wed 1/29/25**		
Go-Live	**3 days**	**Thu 1/30/25**	**Mon 2/3/25**		
Post Go-Live Support	**7 days**	**Tue 2/4/25**	**Wed 2/12/25**		
Project Transition and Close Out	**36 days**	**Thu 2/13/25**	**Thu 4/3/25**		
Conduct Closeout Meetings	**36 days**	**Thu 2/13/25**	**Thu 4/3/25**		
Project Closeout Checklist	10 days	Thu 2/13/25	Wed 2/26/25	330	CG Project Manager
Develop Closeout Report	10 days	Thu 2/27/25	Wed 3/12/25	333	CG Project Manager
Archive Project Documents and Artifacts	10 days	Thu 3/13/25	Wed 3/26/25	334	CG Project Manager
Prepare Meeting	3 days	Thu 3/27/25	Mon 3/31/25	335	CG Project Manager

Transfer of Materials	2 days	Tue 4/1/25	Wed 4/2/25	336	ELECT Project Manager
Conduct Meeting	1 day	Thu 4/3/25	Thu 4/3/25	337	

*The Canton Group resources are notated in this project schedule as “CG”