

**ARLINGTON COUNTY, VIRGINIA  
OFFICE OF THE PURCHASING AGENT  
2100 CLARENDON BOULEVARD, SUITE 500  
ARLINGTON, VA 22201**

**AGREEMENT NO. 16-311-53-RFPLW**

THIS AGREEMENT is made, on the date of execution by the County, between Spruce Technology, Inc., ("Contractor") a Virginia Corporation authorized to do business in the Commonwealth of Virginia, and the County Board of Arlington County, Virginia. The County and the Contractor, for the consideration hereinafter specified, agree as follows:

**1. CONTRACT DOCUMENTS**

The "Contract Documents" consist of:

- This Agreement
- Exhibit A – Scope of Work
- Exhibit B – Contract Pricing
- Exhibit C – County Nondisclosure and Data Security Agreement (Contractor)

Where the terms and provisions of this Agreement vary from the terms and provisions of the other Contract Documents, the terms and provisions of this Agreement will prevail over the other Contract Documents, and the remaining Contract Documents will be complementary to each other. If there are any conflicts, the most stringent terms or provisions will prevail.

The Contract Documents set forth the entire agreement between the County and the Contractor. The County and the Contractor agree that no representative or agent of either party has made any representation or promise with respect to the parties' agreement that is not contained in the Contract Documents. The Contract Documents may be referred to below as the "Contract" or the "Agreement".

**2. SCOPE OF WORK**

The Contractor agrees to perform the services described in the Contract Documents (the "Work"). As detailed in the "Scope of Work" (Exhibit A), the primary purpose of the Work is Information Technology Staff Augmentation Services. It will be the Contractor's responsibility, at its sole cost, to provide the specific services set forth in the Contract Documents and sufficient services to fulfill the purposes of the Work. Nothing in the Contract Documents limits the Contractor's responsibility to manage the details and execution of the Work.

**3. PROJECT OFFICER**

The performance of the Contractor is subject to the review and approval of the County Project Officer, who will be appointed by the Director of the Arlington County department or agency requesting the Work under this Contract.

**4. CONTRACT TERM**

Time is of the essence. The Work will commence on the date of the execution of the Agreement by the County and must be completed no later five (5) years from the date of the agreement ("Initial Contract Term"), subject to any modifications provided in the Contract Documents. Upon satisfactory

performance by the Contractor the County may, through issuance of a unilateral Notice of Award, authorize continuation of the Agreement under the same contract prices for not more than one (1) additional 72-month period, (each a "Subsequent Contract Term"). The Initial Contract Term and any Subsequent Contract Term(s) are together the "Contract Term".

**5. CONTRACT AMOUNT**

The County will pay the Contractor in accordance with the terms of the Payment section below and of Exhibit B for the Contractor's completion of the Work as required by the Contract Documents. The Contractor will complete the Work for the total amount specified in this section ("Contract Amount").

The County will not compensate the Contractor for any goods or services beyond those included in Exhibit A unless those additional goods or services are covered by a fully executed amendment to this Contract.

**6. CONTRACT PRICE ADJUSTMENTS**

The Contract Amount/unit price(s) will remain firm until the completion of the initial term of the contract ("Price Adjustment Date"). To request a price adjustment, the Contractor or the County must submit a written request to the other party not less than 60 days before the Price Adjustment Date. Adjustments to the Contract Amount/unit price(s) will not exceed the percentage of change in the Consumer Price Index (CPI-U), Table 10, U.S. City Averages, or other relevant indices; at no time, shall an annual increase exceed 2% for the 12-month period ending in November of each year of the Contract.

Any Contract Amount/unit price(s) that result from this provision will become effective the day after the Price Adjustment Date and will be binding for 12 months. The new Price Adjustment Date will be 12 months after the price adjustment.

If the Contractor and the County have not agreed on a requested adjustment by 30 days before the Price Adjustment Date, the County may terminate the Contract, whether or not the County has previously elected to extend the Contract's term.

**7. PAYMENT**

The County will pay the Contractor monthly according to the provisions of this section. By the tenth day of each month, the Contractor will submit to the Project Officer an invoice describing the total work done during the preceding month, broken out by task. The Project Officer will either approve the invoice or require corrections. The County will pay the Contractor within 30 days after receipt of an approved invoice.

The number of the County Purchase Order by which shipments have been made or services have been performed must appear on all invoices.

**8. REIMBURSABLE EXPENSES**

The County will not reimburse the Contractor for any expenses under this Contract. The amount in Exhibit B includes all costs and expenses of providing the services described in this Contract.

**9. PAYMENT OF SUBCONTRACTORS**

The Contractor is obligated to take one of the two following actions within seven days after receipt of payment by the County for work performed by any subcontractor under this Contract:

- a. Pay the subcontractor for the proportionate share of the total payment received from the County attributable to the work performed by the subcontractor under this Contract; or
- b. Notify the County and the subcontractor, in writing, of the Contractor's intention to withhold all or a part of the subcontractor's payment, with the reason for nonpayment.

The Contractor is obligated to pay interest to the subcontractor on all amounts owed by the Contractor to the subcontractor that remain unpaid after seven days following receipt by the Contractor of payment from the County for work performed by the subcontractor under this Contract, except for amounts withheld as allowed in subsection b., above. Unless otherwise provided under the terms of this Contract, interest will accrue at the rate of 1% per month.

The Contractor must include in each of its subcontracts, if any are permitted, a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

The Contractor's obligation to pay an interest charge to a subcontractor pursuant to this section may not be construed to be an obligation of the County. A Contract modification may not be made for the purpose of providing reimbursement for such interest charge. A cost reimbursement claim may not include any amount for reimbursement for such interest charge.

**10. NO WAIVER OF RIGHTS**

The County's approval or acceptance of or payment for any goods or services under this Contract will not waive any rights or causes of action arising out of the Contract.

**11. NON-APPROPRIATION**

All payments by the County to the Contractor pursuant to this Contract are subject to the availability of an annual appropriation for this purpose by the County Board of Arlington County, Virginia ("Board"). In the event that the Board does not appropriate funds for the goods or services provided under this Contract, the County will terminate the Contract, without termination charge or other liability to the County, on the last day of the fiscal year or when the previous appropriation has been spent, whichever event occurs first.

**12. ESTIMATED QUANTITIES/NON-EXCLUSIVITY OF CONTRACTOR**

This Contract does not obligate the County to purchase a specific quantity of items or services during the Contract Term. Any quantities that are included in the Contract Documents are the present expectations of the County for the period of the Contract; and the County is under no obligation to buy that or any amount as a result of having provided this estimate or of having had any normal or otherwise measurable requirement in the past. The County may require more goods and/or services than the estimated annual quantities, and any such additional quantities will not give rise to any claim for compensation other than at the unit prices and/or rates in the Contract.

The County does not guarantee that the Contractor will be the exclusive provider of the goods or services covered by this Contract. The items or services covered by this Contract may be or become available under other County contract(s), and the County may determine that it is in its best interest to procure the items or services through those contract(s).

**13. COUNTY PURCHASE ORDER REQUIREMENT**

County purchases are authorized only if the County issues a Purchase Order in advance of the transaction, indicating that the ordering County agency has sufficient funds available to pay for the purchase. If the Contractor provides goods or services without a signed County Purchase Order, it does so at its own risk and expense. The County will not be liable for payment for any purchases made by its employees that are not authorized by the County Purchasing Agent.

**14. BACKGROUND CHECK**

All employees or subcontractors whom the Contractor assigns to work on this Contract must pass the County's standard background check. The background check will include fingerprinting by the County Sheriff's Office and a credit check.

**15. REPLACEMENT OF CONTRACTOR-PLACED EMPLOYEES**

The County may end the engagement of Contractor-placed employees at any time but will attempt to give Contractors 15 calendar days' notice when a specific engagement is to be terminated.

The Contractor may not withdraw an employee assigned to the County without prior written approval of the County. The Contractor must submit to the County any such request for approval at least four weeks in advance of the requested withdrawal.

**16. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

During the performance of its work pursuant to this Contract:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age or disability or on any other basis prohibited by state law. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation will be deemed sufficient for meeting the requirements of this section.
- C. The Contractor will state in all solicitations or advertisements for employees that it places or causes to be placed that such Contractor is an Equal Opportunity Employer.
- D. The Contractor will comply with the provisions of the Americans with Disabilities Act of 1990 ("ADA"), which prohibits discrimination against individuals with disabilities in employment and mandates that disabled individuals be provided access to publicly and privately provided services and activities.
- E. The Contractor must include the provisions of the foregoing paragraphs in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

**17. EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED**

In accordance with §2.2-4311.1 of the Code of Virginia, as amended, the Contractor must not during the performance of this Contract knowingly employ an unauthorized alien, as that term is defined in the federal Immigration Reform and Control Act of 1986.

**18. DRUG-FREE WORKPLACE TO BE MAINTAINED BY CONTRACTOR**

During the performance of this Contract, the Contractor must: (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violating such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that the Contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of more than \$10,000.00 relating to this Contract so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "workplace" means the site(s) for the performance of the work required by this Contract.

**19. SAFETY**

The Contractor must ensure that it and its employees and subcontractors comply with all applicable local, state and federal policies, regulations and standards relating to safety and health, including the standards of the Virginia Occupational Safety and Health program of the Department of Labor and Industry for General Industry and for the Construction Industry and the applicable Federal Environmental Protection Agency and Virginia Department of Environmental Quality standards.

**20. TERMINATION**

The County may terminate this Contract at any time as follows: (1) for cause, if, as determined by the County, the Contractor is in breach or default or has failed to perform the Work satisfactorily; or (2) for the convenience of the County.

Upon receipt of a notice of termination, the Contractor must not place any further orders or subcontracts for materials, services or facilities; must terminate all vendors and subcontracts, except as are necessary for the completion of any portion of the Work that the County did not terminate; and must immediately deliver all documents related to the terminated Work to the County.

Any purchases that the Contractor makes after the notice of termination will be the sole responsibility of the Contractor, unless the County has approved the purchases in writing as necessary for completion of any portion of the Work that the County did not terminate.

If any court of competent jurisdiction finds a termination for cause by the County to be improper, then the termination will be deemed a termination for convenience.

**A. TERMINATION FOR CAUSE, INCLUDING BREACH AND DEFAULT; CURE**

1. Termination for Unsatisfactory Performance. If the County determines that the Contractor has failed to perform satisfactorily, then the County will give the Contractor written notice

of such failure(s) and the opportunity to cure them within 15 days or any other period specified by the County ("Cure Period"). If the Contractor fails to cure within the Cure Period, the County may terminate the Contract for failure to provide satisfactory performance by providing written notice with a termination date. The Contractor must submit any request for termination costs, with all supporting documentation, to the County Project Officer within 30 days after the expiration of the Cure Period. The County may accept or reject the request for termination costs, in whole or in part, and may notify the Contractor of its decision within a reasonable time.

In the event of termination by the County for failure to perform satisfactorily, the Contractor must continue to provide its services as previously scheduled through the termination date, and the County must continue to pay all fees and charges incurred through the termination date.

2. Termination for Breach or Default. If the County terminates the Contract for default or breach of any Contract provision or condition, then the termination will be immediate after notice of termination to the Contractor (unless the County provides for an opportunity to cure), and the Contractor will not be permitted to seek termination costs.

Upon any termination pursuant to this section, the Contractor will be liable to the County for costs that the County must expend to complete the Work, including costs resulting from any related delays and from unsatisfactory or non-compliant work performed by the Contractor or its subcontractors. The County will deduct such costs from any amount due to the Contractor; or if the County does not owe the Contractor, the Contractor must promptly pay the costs within 15 days of a demand by the County. This section does not limit the County's recovery of any other damages to which it is entitled by law.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt the notice of the termination.

#### **B. TERMINATION FOR THE CONVENIENCE OF THE COUNTY**

The County may terminate this Contract in whole or in part whenever the Purchasing Agent determines that termination is in the County's best interest. The County will give the Contractor at least 15 days' notice in writing. The notice must specify the extent to which the Contract is terminated and the effective termination date. The Contractor will be entitled to termination costs, plus any other reasonable amounts that the parties might negotiate; but no amount will be allowed for anticipatory profits.

Except as otherwise directed by the County, the Contractor must stop work on the date of receipt of the notice of the termination.

### **21. INDEMNIFICATION**

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless and indemnify the County and all of its elected and appointed officials, officers, current and former employees, agents, departments, agencies, boards and commissions (collectively the "County Indemnitees") from and against any and all claims made by third parties for any and all losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability, demands or exposure resulting from, arising out of or in any way connected with the Contractor's acts or omissions,

including the acts or omissions of its employees and/or subcontractors, in performance or nonperformance of the Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

**22. INTELLECTUAL PROPERTY INDEMNIFICATION**

The Contractor warrants and guarantees that in providing services under this Contract neither the Contractor nor any subcontractor is infringing on the intellectual property rights (including, but not limited to, copyright, patent, mask and trademark) of third parties.

If the Contractor or any of its employees or subcontractors uses any design, device, work or material that is covered by patent or copyright, it is understood that the Contract Amount includes all royalties, licensing fees, and any other costs arising from such use in connection with the Work under this Contract.

The Contractor covenants for itself, its employees and its subcontractors to save, defend, hold harmless, and indemnify the County Indemnitees, as defined above, from and against any and all claims, losses, damages, injuries, fines, penalties, costs (including court costs and attorneys' fees), charges, liability or exposure for infringement of or on account of any trademark, copyright, patented or unpatented invention, process or article manufactured or used in the performance of this Contract. This duty to save, defend, hold harmless and indemnify will survive the termination of this Contract. If the Contractor fails or refuses to fulfill its obligations contained in this section, the Contractor must reimburse the County for any and all resulting payments and expenses, including reasonable attorneys' fees. The Contractor must pay such expenses upon demand by the County, and failure to do so may result in the County withholding such amounts from any payments to the Contractor under this Contract.

**23. COPYRIGHT**

By this Contract, the Contractor irrevocably transfers, assigns, sets over and conveys to the County all rights, title and interest, including the sole exclusive and complete copyright interest, in any and all copyrightable works created pursuant to this Contract. The Contractor will execute any documents that the County requests to formalize such transfer or assignment.

The rights granted to the County by this section are irrevocable and may not be rescinded or modified, including in connection with or as a result of the termination of or a dispute concerning this Contract.

The Contractor may not use subcontractors or third parties to develop or provide input into any copyrightable materials produced pursuant to this Contract without the County's advance written approval and unless the Contractor includes this Copyright provision in any contract or agreement with such subcontractors or third parties related to this Contract.

**24. OWNERSHIP OF WORK PRODUCT**

This Contract does not confer on the Contractor any ownership rights or rights to use or disclose the County's data or inputs.

All work product, in any form, that results from this Contract is the property of the County and must be provided or returned to the County upon completion, termination, or cancellation of this Contract. The Contractor will not use or allow others to use the work product for any purpose other than performance of this Contract without the written consent of the County.

The work product is confidential, and the Contractor may neither release the work product nor share its contents. The Contractor will refer all inquiries regarding the status of any work product to the Project Officer or to his or her designee. At the County's request, the Contractor will deliver all work product, including hard copies of electronic files, to the Project Officer and will destroy all electronic files.

The Contractor must include the provisions of this section as part of any contract or agreement related to this Contract into which it enters with subcontractors or other third parties.

The provisions of this section will survive any termination or cancellation of this Contract.

## **25. DATA SECURITY AND PROTECTION**

The Contractor will hold County Information, as defined below, in the strictest confidence and will comply with all applicable County security and network resources policies, as well as all local, state and federal laws and regulatory requirements concerning data privacy and security. The Contractor must develop, implement, maintain, continually monitor and use appropriate administrative, technical and physical security measures to control access to and to preserve the confidentiality, privacy, integrity and availability of all electronically maintained or transmitted information received from or created or maintained on behalf of the County. For purposes of this provision, and as more fully described in this Contract and in the County's Non-Disclosure and Data Security Agreement (NDA), "County Information" includes, but is not limited to, electronic information; documents; data; images; financial records; personally identifiable information; personal health information (PHI); personnel, educational, voting, registration, tax and assessment records; information related to public safety; County networked resources; and County databases, software and security measures that are created, maintained, transmitted or accessed to perform the Work under this Contract.

- (a) **County's Non-Disclosure and Data Security Agreement.** The Contractor and its Designees (Contractor Designees shall include, but shall not be limited to, all Contractor-controlled agents or subcontractors working on-site at County facilities or otherwise performing any work under this Contract) must sign the NDA Exhibits C and D) before performing any work or obtaining or permitting access to County networked resources, application systems or databases. The Contractor will make copies of the signed NDAs available to the County Project Officer upon request.
- (b) **Use of Data.** The Contractor will ensure against any unauthorized use, distribution or disclosure of or access to County Information and County networked resources by itself or its Designees. Use of County Information other than as specifically outlined in the Contract Documents is strictly prohibited. The Contractor will be solely responsible for any unauthorized use, reuse, distribution, transmission, manipulation, copying, modification, access to or disclosure of County Information and for any non-compliance with this provision by itself or by its Designees.
- (c) **Data Protection.** The Contractor will protect the County's Information according to standards established by the National Institute of Standards and Technology, including 201



CMR 17.00, Standards for the Protection of Personal Information of Residents of the Commonwealth and the Payment Card Industry Data Security Standard (PCI DSS), as applicable, and no less rigorously than it protects its own data and proprietary or confidential information. The Contractor must provide to the County a copy of its data security policy and procedures for securing County Information and a copy of its disaster recovery plan(s). If requested by the County, the Contractor must also provide annually the results of an internal Information Security Risk Assessment provided by an outside firm.

- (d) **Security Requirements.** The Contractor must maintain the most up-to-date anti-virus programs, industry-accepted firewalls and other protections on its systems and networking equipment. The Contractor certifies that all systems and networking equipment that support, interact with or store County Information meet the above standards and industry best practices for physical, network and system security requirements. Printers, copiers or fax machines that store County Data into hard drives must provide data-at-rest encryption. The County's Chief Information Security Officer or designee must approve any deviation from these standards. The downloading of County information onto laptops, other portable storage media or services such as personal e-mail, Dropbox etc. is prohibited without the written authorization of the County's Chief Information Security Officer or designee.
- (e) **Conclusion of Contract.** Within 30 days after the termination, cancellation, expiration or other conclusion of the Contract, the Contractor must, at no cost to the County, return all County Information to the County in a format defined by the County Project Officer. The County may request that the Information be destroyed. The Contractor is responsible for ensuring the return and/or destruction of all Information that is in the possession of its subcontractors or agents. The Contractor must certify completion of this task in writing to the County Project Officer.
- (f) **Notification of Security Incidents.** The Contractor must notify the County Chief Information Officer and County Project Officer within 24 hours of the discovery of any unintended access to or use or disclosure of County Information.
- (g) **Subcontractors.** If subcontractors are permitted under this Contract, the requirements of this entire section must be incorporated into any agreement between the Contractor and the subcontractor. If the subcontractor will have access to County Information, each subcontractor must provide to the Contractor a copy of its data security policy and procedures for securing County Information and a copy of its disaster recovery plan(s).

## **26. ETHICS IN PUBLIC CONTRACTING**

This Contract incorporates by reference Article 9 of the Arlington County Purchasing Resolution, as well as all state and federal laws related to ethics, conflicts of interest or bribery, including the State and Local Government Conflict of Interests Act (Code of Virginia § 2.2-3100 et seq.), the Virginia Governmental Frauds Act (Code of Virginia § 18.2-498.1 et seq.) and Articles 2 and 3 of Chapter 10 of Title 18.2 of the Code of Virginia, as amended (§ 18.2-438 et seq.). The Contractor certifies that its proposal was made without collusion or fraud; that it has not offered or received any kickbacks or inducements from any other offeror, supplier, manufacturer or subcontractor; and that it has not conferred on any public employee having official responsibility for this procurement any payment, loan, subscription, advance, deposit of money, services or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value was exchanged.

**27. COUNTY EMPLOYEES**

No Arlington County employee may share in any part of this Contract or receive any benefit from the Contract that is not available to the general public.

**28. FORCE MAJEURE**

Neither party will be held responsible for failure to perform the duties and responsibilities imposed by this Contract if such failure is due to a fire, riot, rebellion, natural disaster, war, act of terrorism or act of God that is beyond the control of the party and that makes performance impossible or illegal, unless otherwise specified in the Contract.

**29. AUTHORITY TO TRANSACT BUSINESS**

The Contractor must, pursuant to Code of Virginia § 2.2-4311.2, be and remain authorized to transact business in the Commonwealth of Virginia during the entire term of this Contract. Otherwise, the Contract is voidable at the sole option of and with no expense to the County.

**30. RELATION TO COUNTY**

The Contractor is an independent contractor, and neither the Contractor nor its employees or subcontractors will be considered employees, servants or agents of the County. The County will not be responsible for any negligence or other wrongdoing by the Contractor or its employees, servants or agents. The County will not withhold payments to the Contractor for any federal or state unemployment taxes, federal or state income taxes or Social Security tax or for any other benefits. The County will not provide to the Contractor any insurance coverage or other benefits, including workers' compensation.

**31. ANTITRUST**

The Contractor conveys, sells, assigns and transfers to the County all rights, title and interest in and to all causes of action under state or federal antitrust laws that the Contractor may have relating to this Contract.

**32. REPORT STANDARDS**

The Contractor must submit all written reports required by this Contract for advance review in a format approved by the Project Officer. Reports must be accurate and grammatically correct and should not contain spelling errors. The Contractor will bear the cost of correcting grammatical or spelling errors and inaccurate report data and of other revisions that are required to bring the report(s) into compliance with this section.

Whenever possible, proposals must comply with the following guidelines:

- printed double-sided on at least 30% recycled-content and/or tree-free paper
- recyclable and/or easily removable covers or binders made from recycled materials (proposals with glued bindings that meet all other requirements are acceptable)
- avoid use of plastic covers or dividers
- avoid unnecessary attachments or documents or superfluous use of paper (e.g. separate title sheets or chapter dividers)

**33. AUDIT**

The Contractor must retain all books, records and other documents related to this Contract for at least five years after the final payment and must allow the County or its authorized agents to examine the

documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request, at the Contractor's expense. Should the County's examination reveal any overcharging by the Contractor, the Contractor must, within 30 days of County's request, reimburse the County for the overcharges and for the reasonable costs of the County's examination, including, but not limited to, the services of external audit firm and attorney's fees; or the County may deduct the overcharges and examination costs from any amount that the County owes to the Contractor. If the Contractor wishes to destroy or dispose of any records related to this Contract (including confidential records to which the County does not have ready access) within five years after the final payment, the Contractor must give the County at least 30 days' notice and must not dispose of the documents if the County objects.

**34. ASSIGNMENT**

The Contractor may not assign, transfer, convey or otherwise dispose of any award or any of its rights, obligations or interests under this Contract without the prior written consent of the County.

**35. AMENDMENTS**

This Contract may not be modified except by written amendment executed by persons duly authorized to bind the Contractor and the County.

**36. ARLINGTON COUNTY PURCHASING RESOLUTION AND COUNTY POLICIES**

Nothing in this Contract waives any provision of the Arlington County Purchasing Resolution, which is incorporated herein by reference, or any applicable County policy.

**37. DISPUTE RESOLUTION**

All disputes arising under this Agreement or concerning its interpretation, whether involving law or fact and including but not limited to claims for additional work, compensation or time, and all claims for alleged breach of contract must be submitted in writing to the Project Officer as soon as the basis for the claim arises. In accordance with the Arlington County Purchasing Resolution, claims denied by the Project Officer may be submitted to the County Manager in writing no later than 60 days after the final payment. The time limit for a final written decision by the County Manager is 30 days. Procedures concerning contractual claims, disputes, administrative appeals and protests are contained in the Arlington County Purchasing Resolution. The Contractor must continue to work as scheduled pending a decision of the Project Officer, County Manager, County Board or a court of law.

**38. APPLICABLE LAW, FORUM, VENUE AND JURISDICTION**

This Contract is governed in all respects by the laws of the Commonwealth of Virginia; and the jurisdiction, forum and venue for any litigation concerning the Contract or the Work is in the Circuit Court for Arlington County, Virginia, and in no other court.

**39. ARBITRATION**

No claim arising under or related to this Contract may be subject to arbitration.

**40. NONEXCLUSIVITY OF REMEDIES**

All remedies available to the County under this Contract are cumulative, and no remedy will be exclusive of any other at law or in equity.

**41. NO WAIVER**

The failure to exercise a right provided for in this Contract will not be a subsequent waiver of the same right or of any other right.

**42. SEVERABILITY**

The sections, paragraphs, clauses, sentences, and phrases of this Contract are severable; and if any section, paragraph, clause, sentence or phrase of this Contract is declared invalid by a court of competent jurisdiction, the rest of the Contract will remain in effect.

**43. ATTORNEY'S FEES**

The County is entitled to attorney's fees and costs that it incurs to enforce any provision of this Contract.

**44. SURVIVAL OF TERMS**

In addition to any statement that a specific term or paragraph survives the expiration or termination of this Contract, the following sections also survive: INDEMNIFICATION; INTELLECTUAL PROPERTY INDEMNIFICATION; RELATION TO COUNTY; OWNERSHIP OF WORK PRODUCT; AUDIT; COPYRIGHT; DISPUTE RESOLUTION; APPLICABLE LAW AND JURISDICTION; ATTORNEY'S FEES, AND DATA SECURITY AND PROTECTION.

**45. HEADINGS**

The section headings in this Contract are inserted only for convenience and do not affect the substance of the Contract or limit the sections' scope.

**46. AMBIGUITIES**

The parties and their counsel have participated fully in the drafting of this Agreement; and any rule that ambiguities are to be resolved against the drafting party does not apply. The language in this Agreement is to be interpreted as to its plain meaning and not strictly for or against any party.

**47. NOTICES**

Unless otherwise provided in writing, all legal notices and other communications required by this Contract are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

**Contact Information for the Contractor:**

**Kristan Mazza, Director of Sales  
Spruce Technology, Inc.  
1149 Bloomfield Avenue  
Suite G  
Clifton, New Jersey 07012  
Telephone: 862-225-9302**

**Contact Information for Arlington County**

**Ishai Trani, Procurement Officer  
Department of Technology Services  
2100 Clarendon Boulevard  
Arlington, Virginia 22201  
Telephone:703-228-34208**

AND

**Cynthia Davis-(Legal Authorization)  
Officer of the Purchasing Agent  
2100 Clarendon Boulevard  
Suite 500  
Arlington, Virginia 22201  
Telephone: 703-228-3401**

**48. ARLINGTON COUNTY BUSINESS LICENSES**

The Contractor must comply with the provisions of Chapter 11 ("Licenses") of the Arlington County Code, if applicable. For information on the provisions of that Chapter and its applicability to this Contract, the Contractor must contact the Arlington County Business License Division, Office of the Commissioner of the Revenue, 2100 Clarendon Blvd., Suite 200, Arlington, Virginia, 22201, telephone number (703) 228-3060.

**49. NON-DISCRIMINATION NOTICE**

Arlington County does not discriminate against faith-based organizations.

**50. ADA COMPLIANCE**

The Contractor is solely responsible for its compliance with the ADA and must defend and hold the County harmless from any expense or liability arising from the Contractor's non-compliance. The Contractor also must respond promptly to and cooperate fully with all inquiries from the U.S. Department of Labor.

The Contractor's responsibilities related to ADA compliance include, but are not limited to, the following:

- a. Access to Programs, Services and Facilities: The Contractor must ensure that its programs, services and facilities are accessible to persons with disabilities. If a particular facility or program is not accessible, the Contractor must provide equivalent services in an accessible alternate location or manner.
- b. Effective Communication: Upon request, the Contractor, must provide appropriate communication aids and services so that qualified persons with disabilities can participate equally in the Contractor's programs, services and activities. Communication aids and services can include, but are not limited to, qualified sign language interpreters, Braille documents and other means of facilitating communications with people who have speech, hearing or vision impairments.
- c. Modifications to Policies and Procedures: The Contractor must modify its policies and procedures as necessary to ensure that people with disabilities have an equal opportunity to enjoy the Contractor's programs, services and activities. For example, individuals' service animals must be allowed in the Contractor's offices or facilities, even if pets are generally prohibited.

- d. No Extra Charges: The Contractor may not charge a person with a disability or any group of individuals with disabilities to cover the cost of providing aids or services or of reasonable modifications to policies and procedures.

**51. SERVICE CONTRACT WAGE REQUIREMENTS**

a. LIVING WAGE

The County has determined that the provisions of Section 4-103 of the Arlington County Purchasing Resolution (regarding “Service Contract Wage” or “Living Wage”) apply to this Contract. All employees of the Contractor and any subcontractors working on County-owned or County-occupied property therefore must be paid no less than the hourly Living Wage rate that is published on the County’s web site on the date of Contract execution.

b. COMPLAINTS BY AGGRIEVED EMPLOYEES

If the Contractor fails to pay the Living Wage rate, an aggrieved employee or subcontractor may file a complaint with the County Purchasing Agent within six months of the underpayment. If the Purchasing Agent determines that the Contractor has failed to comply with the Living Wage rate provisions of the Purchasing Resolution, the Contractor will be liable to the employee for the unpaid wages, plus interest at the current judgment rate set by Virginia law. The Contractor must not discharge, reduce the compensation of or otherwise retaliate against any employee who files a complaint with the County Purchasing Agent or takes any other action to enforce the requirements of this section.

c. ADDITIONAL COMPLIANCE REQUIREMENTS

At all times during the term of the Contract, the Contractor must:

1. Post the current Living Wage rate, in English and Spanish, in a prominent place at its offices and at each location where its employees perform services under this Contract (see sample notice in Attachment E);
2. Within five days of an employee’s request, provide a written statement of the applicable Living Wage rate, using the same form provided in Attachment F;
3. Include the provisions of this section in all subcontracts for work performed under the Contract; and
4. Submit to the Purchasing Agent, within five working days of the end of each quarter, certified copies of quarterly payroll reports for each employee working under the Contract during the quarter and a completed Arlington County Contractor Living Wage Quarterly Compliance Report (Attachment F).

d. CONTRACTOR RECORD KEEPING

The Contractor must preserve for five years after the expiration or termination of this Contract records of wages and benefits provided to each employee who worked under the Contract and must allow the County or its authorized agents to examine the documents during this period and during the Contract Term. The Contractor must provide any requested documents to the County for examination within 15 days of the request at the Contractor’s expense.

e. VIOLATIONS

Violation of this section, as determined by the Purchasing Agent, will be a ground for termination of this Contract and debarment of the Contractor from consideration for future County contracts.

## **52. INSURANCE REQUIREMENTS**

Before beginning work under the Contract or any extension, the Contractor must provide to the County Purchasing Agent a Certificate of Insurance indicating that the Contractor has in force at a minimum the coverage below. The Contractor must maintain this coverage until the completion of the Contract or as otherwise stated in the Contract Documents. All required insurance coverage must be acquired from insurers that are authorized to do business in the Commonwealth of Virginia, with a rating of "A-" or better and a financial size of "Class VII" or better in the latest edition of the A.M. Best Co. Guides. See Attachment D.

- a. Workers Compensation - Virginia statutory worker's compensation (W/C) coverage, including Virginia benefits and employer's liability with limits of \$100,000/100,000/500,000. The County will not accept W/C coverage issued by the Injured Worker's Insurance Fund, Towson, MD.
- b. Commercial General Liability - \$1,000,000 per occurrence, with \$2,000,000 annual aggregate covering all premises and operations and including personal injury, completed operations, contractual liability, independent contractors, and products liability. The general aggregate limit must apply to this Contract. Evidence of contractual liability coverage must be typed on the certificate.
- c. Business Automobile Liability - \$1,000,000 combined single-limit (owned, non-owned and hired).
- d. Additional Insured – The County and its officers, elected and appointed officials, employees and agents must be named as additional insureds on all policies except worker's compensation and automotive and professional liability; and the additional insured endorsement must be typed on the certificate.
- e. Cancellation - If there is a material change or reduction in or cancellation of any of the above coverages during the Contract Term, the Contractor must notify the Purchasing Agent immediately and must, with no lapse in coverage, obtain replacement coverage that is consistent with the terms of this Contract. Not having the required insurance throughout the Contract Term is grounds for termination of the Contract.
- f. Claims-Made Coverage - Any "claims made" policy must remain in force, or the Contractor must obtain an extended reporting endorsement, until the applicable statute of limitations for any claims has expired.
- g. Contract Identification - All insurance certificates must state this Contract's number and title.

The Contractor must disclose to the County the amount of any deductible or self-insurance component of any of the required policies. With the County's approval, the Contractor may satisfy its obligations under this section by self-insurance for all or any part of the insurance required, provided that the

Contractor can demonstrate sufficient financial capacity. In order to do so, the Contractor must provide the County with its most recent actuarial report and a copy of its self-insurance resolution.

The County may request additional information to determine if the Contractor has the financial capacity to meet its obligations under a deductible and may require a lower deductible; that funds equal to the deductible be placed in escrow; a certificate of self-insurance; collateral; or another mechanism to guarantee the amount of the deductible and ensure protection for the County.

The County's acceptance or approval of any insurance will not relieve the Contractor from any liability or obligation imposed by the Contract Documents.

The Contractor is responsible for the Work and for all materials, tools, equipment, appliances and property used in connection with the Work. The Contractor assumes all risks for direct and indirect damage or injury to the property used or persons employed in connection with the Work and for of all damage or injury to any person or property, wherever located, resulting from any action, omission, commission or operation under the Contract or in connection in any way whatsoever with the Work. The Contractor's insurance shall be the primary non-contributory insurance for any work performed under this Contract.

The Contractor is as fully responsible to the County for the acts and omissions of its subcontractors and of persons employed by them as it is for acts and omissions of persons whom the Contractor employs directly.

**WITNESS these signatures:**

**THE COUNTY BOARD OF ARLINGTON  
COUNTY, VIRGINIA**

**CONTRACTOR**

**AUTHORIZED  
SIGNATURE:**

*Cynthia Davis*

**AUTHORIZED  
SIGNATURE:**

*Kristan M. Mazza*

**NAME: CYNTHIA DAVIS  
TITLE: PROCUREMENT OFFICER**

**NAME: KRISTAN MAZZA  
TITLE: DIRECTOR OF SALES** *Vice President of Contracts*

**DATE:** January 21, 2019

**DATE:** 11/19/19



**EXHIBIT A**  
**SCOPE OF WORK**

**A. OVERVIEW**

1. The Contractor will provide Information Technology (IT) Staff Augmentation on an as-needed basis for the following services:
  - a. Application Development;
  - b. Data Analytics and Decision Support;
  - c. Electronic Records Management;
  - d. ERP HR and Financial Support;
  - e. Hosting and Server Administration;
  - f. Project/Program Management Support;
  - g. Network/Telecommunications Systems and Infrastructure;
  - h. Security; and
  - i. Technical Support.
2. The Contractor must name a designated representative as the sole point of contact to receive position requests. The Contractor will be responsible for notifying the County Project Officer with any change in the point of contact.
3. The Contractor must submit responses before the deadline stipulated in the position request.
4. The Contractor must include in their proposals to position requests 1) resumes for candidates for the proposed position; 2) a summary of qualifications in response to advertised minimum qualifications; and 3) a proposed rate (not to exceed the contract rates).
5. As requested by the County, the Contractor must make candidates available for interviews within ten business days of an interview request or risk being disqualified from consideration. The County reserves the right to negotiate the proposed hourly rate and the ability to negotiate a lower rate may impact the position request award.
6. The Contractor's selected candidate must be available to begin work within 15 business days from the date of the position request award or risk being disqualified. The Contractor's candidate will not begin work until the County has executed an approved Purchase Order issued by County's the Purchasing Division.

The Contractor's ability to negotiate the proposed hourly rate to a lower rate may impact the award for a position request.

**B. OPERATIONS INFORMATION AND REQUIREMENTS**

1. The Contractor will perform the work under this agreement during County business hours from 8:00 AM-5:00 PM, Monday through Friday, except for County-recognized holidays.

2. As determined by the County, the Contractor may be required to perform work outside of normal business hours, including weekends or holidays.
3. The Contractor's staff must be available to work temporary, part-time and full-time assignments.
4. The Contractor's staff must follow the County's holiday calendar and inclement weather policies, unless otherwise directed by authorized County personnel. The Contractor must provide time sheets for employees. The Contractor's staff may not work for other customers during the same hours that they are working for the County.
5. All of the Contractor's staff must have the certifications, documented performance experience and capabilities, and employment eligibility verifications that are applicable to the services being requested by the County.
6. The Contractor must ensure that the employees assigned to all County requests will practice appropriate professional behavior and uphold high ethical standards. The Contractor must address any personnel issues within 24 hours of notification by the County. The Contractor's staff must sign the County's Nondisclosure and Data Security Agreement and other documents related to County policies and regulations upon request and must complete a County background check, if necessary, prior to performing work.
7. As determined by the County, the Contractor's staff shall work from workspaces at 2100 Clarendon Boulevard, other County sites and off-site locations.
8. Unless otherwise specified by the County, the Contractor shall use County issued equipment that is necessary to perform required tasks and services. The Contractor shall use computer-related equipment, printer access via a shared network, network access and a County-provided e-mail account. The Contractor shall use necessary County-issued work supplies, a workspace and a standard telephone for County business purposes. All communications and data that are transmitted on the County network become the property of Arlington County.

### **C. LABOR CATEGORIES**

1. The Contractor's staff shall be assigned to a wide variety of projects or operational support assignments that align with a Labor Category.
2. The Contractor shall provide staff to fill Labor Categories in accordance with the Labor Categories and Position Descriptions as defined below in Section E.
3. When the County modifies Position Descriptions and Labor Categories, the Contractor must provide a rate for new or modified Position Descriptions or Labor Categories or the Contractor will not be allowed to respond to resulting position requests.
4. The Contractor's staff must meet the following qualifications and work requirements:
  - a. **Level 1** - Level 1 professionals must have a minimum of one (1) to four (4) years' relevant work experience.

- b. **Level 2** - Mid-level professionals must have as a minimum five (5) years' relevant work experience and are expected to have appropriate certification in the associated field of work and/or equivalent experience relevant to the position.
- c. **Level 3** - Senior level professionals must have as a minimum ten (10) years' relevant work experience and are expected to have appropriate certification in the associated field of work and/or equivalent experience relevant to the position.

**D. POSITION REQUEST EVALUATION**

The County will evaluate all position request responses from pre-qualified Contractors prior to awarding position requests and will make multiple awards for a position request if doing so is in the County's best interest.

Position requests will be evaluated using the following methodology:

1. A panel of County staff, led by a manager who will oversee the position, will be formed for each position request. The manager will select the applicants for evaluation.
2. The panel will conduct oral interviews with one or more candidates. The order of any such interviews will be assigned randomly. Each candidate will be scored based on uniform evaluation criteria.
3. The panel will recommend one or more candidates for the award of the position request, based on an aggregate score from all panel members.
4. The County may reject any proposed personnel from further evaluation if the proposed hourly rate is deemed excessive by the County.

**E. LABOR CATEGORIES AND POSITION DESCRIPTIONS**

The Contractor's proposed candidates' resumes must demonstrate experience consistent with the following Position Descriptions. Each position request will be specific in nature and will include additional details for the selection of a candidate or candidates that best fit the County's needs.

**Application Development**

1. **Application Developer/Software Engineer** - Software engineer must have strong technical experience in all phases of the software development life-cycle (SDLC) with a demonstrated technical expertise in one or more areas of state-of-the-art software development technology. Provide activities related to enterprise full life-cycle software development projects. Able to develop detailed functional and technical requirements for client server and web applications and conduct detailed analyses and module-level specification development of software requirements. Must be able to define and

implement high performance and highly scalable product/application architectures, and able to lead integration activities for operational, tactical, and strategic systems.

Perform complex programming and analysis tasks for batch and on-line applications; define requirements; write program specifications; design, code, test and debug programming assignments, document programs. May supervise the efforts of other developers in major system development projects; determine and analyze functional requirements; determine proposed solutions information processing requirements; and optimize system performance. Work task may include total custom development, customization as needed for COTS, development of reports, data conversion and support of legacy applications.

Examples of required skillset:

- a. Understanding of principles of software development - Object Oriented Design, Design Patterns, Single Page Applications, Test-Driven Development
- b. Expert-level development skills in ASP.NET, C#, VB.NET, MVC, Visual Studio, JavaScript, Node.js, SQL, Open Source platforms such as Knock Out, Angular, Elastic Search
- c. Integration experience using interfaces and Web API's in JSON and XML formats
- d. Experience with distributed source control systems – GIT
- e. Understanding of and experience working on SQL Server platform

2. **Mobile Application Developer** - Mobile App Developer must have strong experience in building mobile applications for iOS, Android and Windows devices using native programming and hybrid development technologies. Must have strong technical experience in all phases of the software development life-cycle (SDLC) with a demonstrated technical expertise in one or more areas of state-of-the-art software development technology.

Examples of required skillset:

- a. Experience with building native iOS applications using XCode, Swift, Cocoa Touch and Objective-C
- b. Experience in developing Android applications using Java and Android SDK
- c. Experience building hybrid mobile apps in HTML5 and Cordova (formerly PhoneGap)
- d. Have published at least one or more apps in Google play store and Apple Store
- e. Strong development experience in JavaScript, jQuery, Angular, Knockout
- f. Integration experience using interfaces and Web API's in JSON and XML formats
- g. Understanding of Object Oriented Principals, and its implementation in JavaScript and other open source technologies
- h. Experience with distributed source control systems - GIT

3. **Software Tester** - Software tester will work closely with business analysts and business owners to define testing strategies, plans, scenarios and test cases. Conduct and manage the execution of the tests, verify results and seek resolution to test result discrepancies. Advise on system readiness for production implementation. May include

unit testing, system testing, integration testing, performance testing, usability testing and user acceptance testing. Prepare data or scripts for input, validate results, document discrepancies, retest after patches are applied, perform regression test when code is modified. Work with developer to analyze potential bugs and document steps to recreate them.

Examples of required skillset:

- a. Ability to quickly gain an understanding of the business functions of the software application
- b. Develop test plans, scenarios and test cases for unit test, system test, integration test, performance test, regression test, and user acceptance test.
- c. Manage a team of testers or to test independently, as appropriate
- d. Monitor, analyze and report on test results in a manner understandable to the business users and system sponsors.
- e. Ensure resolution of test discrepancies
- f. Develop data or scripts that will test the conditions specified in the test plan
- g. Verify results to determine if the test was successful or not
- h. Document successful and successful test attempts
- i. Work with developer to communicate failed tests and to seek appropriate resolutions
- j. Experience working with industry standard issue tracking software, such as JIRA

**4. GIS Programmer** - GIS programmer will work on projects related geospatial mapping.

Examples of required skillset:

- a. Prior experience working with ArcGIS ESRI software (especially ArcGIS Server and ArcGIS Desktop)
- b. Solid experience in JavaScript and Python (including ArcPy)
- c. Integration experience using Web API's in JSON, XML, ESRI Javascript API, and HTML 5
- d. Knowledge of Microsoft.NET platform and C#
- e. Knowledge of relational, spatial databases especially Microsoft SQL Server (including spatial datatypes)
- f. Knowledge of data translations (especially spatial formats.)
- g. Knowledge of spatial formats such as file/personal geodatabase, SDE, raster, and shapefile UX

**5. User Experience (UX) Developer** - The UX Developer will be responsible for creating front-end design solutions for both web and mobile platforms. The role involves working closely with project managers, analysts, developers and testers to determine ideal design solutions. Conduct usability testing to make sure design satisfies all project requirements.

Examples of required skillset:

- a. Design mock-up templates using a combination of tools such as HTML, CSS, Photoshop and other standard industry design tools.
- b. Develop responsive design in HTML5 and CSS3 for mobile compatibility

- c. Experience with JavaScript
- d. Experience designing graphics and UI for mobile development
- e. Expertise in Adobe Creative Suite
- f. Design custom logos and images
- g. Understanding of up to date web standards and specifications
- h. Experience with distributed source control systems – GIT

6. **Web Graphic Designer-** The Web Graphic Designer will be responsible for developing layout, font types, design logos, custom images and other visuals for responsive web site design.

Examples of required skillset:

- a. Experience working with website for a responsive design using HTML5 and CSS3
- b. Expertise in Adobe Creative Suite
- c. Design custom logos and images
- d. Understanding of up to date web standards and specifications

7. **IoT Developer** - This position requires the developer to have a strong understanding of machine-to-machine communications and big data analysis in order to enable smart Internet of Things applications.

Examples of required skillset:

- a. Understanding of principles of software development - Object Oriented Design, Design Patterns, Single Page Applications, Test-Driven Development
- b. Solid experience working in Java and .NET platforms
- c. Utilize software tools for M2M applications
- d. Experience working with sensors, end-points, and big data
- e. Experience in big data analytics tool such as SPLUNK for data exploration
- f. Demonstrated experience with hardware interfaces using Raspberry Pi or another programmable SOC
- g. Integration experience using interfaces and Web API's in JSON and XML formats
- h. Experience with distributed source control systems – GIT

**Data Analytics & Decision Support**

- A. **Data Scientist** - Data Scientist must have the necessary statistical modelling, mathematical, big data analytics and predictive modelling skills to build required algorithms necessary to ask right questions and build objective visualizations and findings from it. Data Scientist must have knowledge of integrating multiple systems and datasets to provide new insights.

Examples of required skillset:

- a. Prior experience working as a data architect and managing information schema for large organizations;
- b. Experience with big data analytic tools such as Hadoop, Hive, MapReduce, SPLUNK, Elastic Search;
- c. Understanding and good working knowledge of SQL and NoSQL;
- d. Experience in machine learning, statistical modelling, and predictive analysis; and
- e. Extensive experience with a statistical programming language.

- B. **Business Intelligence (BI) Analyst** - Business Intelligence Analyst will gather data from a number of sources for comparative analysis to solve business-related data problems. BI Analyst will develop solutions, reporting and visualizations using Business Intelligence tools.

Examples of required skillset:

- a. Experience in data solutions, information architecture and data warehousing concepts;
- b. Understanding and good working knowledge of SQL and NoSQL;
- c. Knowledge of data transformation using ETL tools; and
- d. Experience developing dashboards and reports using standard industry tools.

- C. **Big Data Analyst** - Big Data Analyst will be required to turn datasets into meaningful and actionable items. Must have experience with data mining, big data tools such as SPLUNK, and a data analytical mind.

Examples of required skillset:

- a. Configure and setup dashboards for meaningful viewing by management;
- b. Work with a variety of data including applications and network related;
- c. Experience with big data analytics tools such as SPLUNK;
- d. Establish growth plan for long-term sustainability; and
- e. Develop business cases and other useful metrics related to big data.

- D. **Big Data Solutions Architect** - Responsible for building big data solutions using big data engines such as Hadoop. Big Data Solutions Architect will be responsible for managing full life-cycle of big data solution. This will include creating requirements analysis, platform selection, design of technical architecture, design of the application design and developing, testing, and deployment of proposed solution.

Examples of required skillset:

- a. Experience developing big data solutions and implementations using tools such as Hadoop, MapReduce, Hive;
- b. Experience in programming with SQL and NoSQL;
- c. Extensive experience in data normalization and developing information schema for large scale database solutions;
- d. Firm understanding of modern programming languages; and
- e. Experience with ETL tools and extraction of data.

- E. **SQL Developer** - SQL Developer shall provide skills and expertise in database programming for new and existing SQL Server based applications.

Examples of required skillset:

- a. Database programming for SQL Server platforms (2008 and up);
- b. Tune up and rewrite efficient queries for performance optimization;
- c. Prior experience working in software development team environment;
- d. Database modeling and design using Erwin and Visio;
- e. Experience with SQL Analytics, SQL Profiler and XML Programming;

- f. Experience building reports using SSRS; and
- g. Experience with distributed source control systems – GIT.

F. **Report Developer** - Report developer must have extensive experience in designing reports and write SQL queries.

Examples of required skillset:

- a. Gather requirements and working with application owners to understand business processes;
- b. Experience developing reports in standard industry reporting tools;
- c. Strong experience writing SQL procedures and queries;
- d. Testing, support and troubleshoot report errors; and
- e. Possess analytical skills and experience with financial data and numbers.

**Electronic Records Management**

1. **OnBase System Administrator/Advanced System Administrator** - OnBase System Administrators will be responsible for maintaining a secure, accessible, and recoverable OnBase operating platform installed in multiple environments (development, test, Q/A, production) and typically across more than one OnBase version and/or build. Administrators must have broad skill sets across multiple computing disciplines, including networks and operating environments. Administrators must apply a strong understanding of OnBase technology, OnBase Community input, and best practices to insure the health and operational readiness of the OnBase platform. Close collaboration with other IT professionals from both the County and third-party providers is essential to the growth and interoperability of OnBase within the County's dynamic technical environment and Information Management structure. Administrators will plan, schedule, test, and execute OnBase software version upgrades on a regular basis. Administrators will also perform the same functions when changes are made to connecting technology platforms, ensuring OnBase operability throughout the change management process.
2. **OnBase Support Engineer** - OnBase Support Engineers will be the first line of support to record, diagnose, troubleshoot, and solve OnBase user support issues across a broad portfolio of OnBase solutions. They also will perform move/add/change tasks for a host of OnBase related peripheral hardware and software. OnBase Support Engineers must maintain close collaboration across technology discipline, including OnBase developers and administrators, network engineers, end-user computing engineers, database administrators, and others as needed to resolve support issues. Documentation and knowledge transfer to Tier 2 support resources is required for issue escalation as needed. A strong understanding of OnBase technology and the County's OnBase portfolio, experience with end user computer environments, and excellent customer support skills will be essential for candidates who fill this role.
3. **OnBase Solution Developer** - OnBase Solution Developers will build and launch OnBase solutions and serve as Tier 2 solution support. They must possess an OnBase competency with a broad complimentary technology skill set in databases, custom scripting languages, operating environments, and other third-party tools to develop customized OnBase solutions. Relevant OnBase certifications are required, most



notably OnBase API and/or OnBase Workflow. OnBase Solution Developer must have experience with a broad range of OnBase modules. Developers must stay up to date with OnBase software versions and associated capability in order to bring the best technology available into their solution designs. Developers must work closely with Business Analysts, Project Managers, and users on solution design and function. They must also partner with OnBase product leads, engineers, and support staff throughout the development process to fix OnBase software issues and request software enhancements.

4. **OnBase Business Analyst** - OnBase Business Analysts will guide users, managers, budget specialists, solution developers, and other groups through the entire OnBase solution development and launch lifecycle. Analysts must understand the current business and technical environment and identify areas for efficiency and compliance gains. Analysts must maintain a broad understanding of the OnBase product suite. They also require competency in requirements analysis, process mapping, project management, relationship management, and project reporting to various levels of County staff. Analysts will work side by side with solution developers, project managers, and solution contributors to ensure user requirements and expectations are met. Analysts will be the liaisons between solution developers and end users. Analysts will provide product education and demonstrations and assist solution developers with product testing.

#### **ERP HR and Financial Support**

1. **Functional Analyst** – Will be responsible for support core HR and Financial system modules and building strong business partnerships. Business analysis role will involve working with business users to create business requirement documents and functional process design and testing documents. Work with development team to convert business requirements into technical design documents and user guides. Configuration of ERP system modules. Develop test plans, support and coordinate user acceptance testing and training. Lead small projects and ERP system enhancement efforts from conception through deployment using standard SDLC methodology. Manage on time project delivery and business expectations and ensure customer satisfaction.
2. **Technical Developer** – Will be responsible for functional and technical implementation, configuration and setup of Oracle applications/modules and development and support of RICE (Reports, Interfaces, Conversions & Extensions) components. Provide technical support and expertise in the design, implementation, and maintenance of core ERP systems and databases that support the data analysis, research, and reporting. This includes designing and developing databases and processing large volumes of data using databases and data from disparate data systems. The developer will also perform Extract, Transform, and Load (ETL) processes, modification and development of workflows, and run ad-hoc queries against databases and generate custom and ad-hoc reports.
3. **Database Administrator (DBA)** – Will be responsible for creating and maintaining all databases required for development, testing, training and production usage. Perform the capacity planning required to create and maintain the databases. Perform ongoing tuning of the database instances. Plan and implement backup and recovery of the Oracle database. Control migrations of programs, database changes, reference data changes and menu changes through the development life cycle. Put standards in place to ensure that all application design and code is produced with proper integrity, security

and performance. The DBA shall perform reviews on the design and code frequently to ensure adherence to the site standards. Evaluate releases of Oracle and its tools and third-party products to ensure that the site is running the products that are most appropriate. Administer all database objects, including tables, clusters, indexes, views, sequences, packages and procedures. Plan and implement backup and recovery of the Oracle database. Implement and enforce security for all of the Oracle Databases. Troubleshoots with problems regarding databases, applications and development tools.

### **Hosting and Server Administration**

1. **Server Administrator** – Will be responsible for providing server support to ensure operational efficiency by installing, maintaining software updates, designing and implementing new system structures, monitoring server activity, and auditing server security. This includes planning for and responding to service outages and other server related problems. Administrators will manage and monitor drive space and provide high level training and technical support to others. Must be able to work with Network and direct attached storage configuration and management, including iSCSI and fiber attached storage. Analyze and advise on software and hardware upgrades. Develop a comprehensive domain structure for County and maintain activity logs and statistics. Knowledge should include a professional understanding of Windows Active Directory, DHCP, DNS, IIS, rights management, basic networking, anti-virus and enterprise storage management.
2. **Virtual Machine Administrator** – Will provide the foundation of virtual infrastructures and thin OS independent architecture for enhanced reliability and robustness. Make optimal use of available hardware resources, including upgrades. Deliver performance acceleration features that support mission critical applications and enable advanced capabilities. Must be able on use bare metal restore. Install, configure and analyze virtual servers with VM hosts on server operating systems environment to meet current and future requirements for enterprise computing solutions. Explore and provide information about Cloud Migration VM Strategies and technologies, such as Clustering and Network Load Balancing, is also essential. Provide the Failover architect for host failures. Examples of virtual solutions are Hyper-V and VMWare.
3. **O365 Engineer** – Will be responsible for day-to-day operations related to Microsoft O365 onboarding and offboarding. Able to work with Active Directory and Active Directory federation services related to email, Exchange on premises, and single sign-on. Able to work with users to fix their issues related to SharePoint, Skype for Business and Microsoft Exchange Online. Communicate changes to the user community. Proven design, planning and implementation experience on a technical level with Microsoft Exchange, Active Directory, and Infrastructure technologies, including DirSync and AADS. Extensive automation experience (i.e.PowerShell, VBScript).
4. **O365 Administrator** – Will be responsible for providing services to create, maintain, and upgrade the O365 environment, which includes Microsoft online exchange email and SharePoint online. Define complex system requirements and objectives based on business needs and deliver high quality solutions based on single sign-on technologies and secure gateways. Troubleshoot and resolve system service failures by identifying and analyzing the situation and provide corrective actions. Provide senior-level expertise on decisions and priorities regarding systems architecture. Facilitate the establishment and implementation of standards, processes, and documentation that guide the design

of technology solutions, including architecting and implementing solutions. Manage and maintain AD and ADFS (Active Directory Federation Services) services. Work closely with development teams to test applications and assist in providing direction for defect fixes and system enhancements. Simplify complex ideas and present the information in group settings. Advanced knowledge of Power Shell.

5. **Active Directory Administrator** – Will be responsible for supporting and maintaining the Microsoft Active Directory, Microsoft Exchange, Microsoft Windows Server and other applications in the County by providing installation, maintenance, troubleshooting, security, administration, account management and resolution of software and hardware issues as well as developing new system designs. Extensive knowledge of Windows Server operating systems and Active Directory and AD synching schemas.
6. **Active Directory Engineer** – Will be responsible for installing, securing, maintaining, troubleshooting, administering and upgrading Microsoft Windows Server operating systems with all required server roles on assigned servers and Microsoft Exchange. Assist other System Administrators as needed. Work with O365 engineer to assist in Domain Controller and resolving any issues related to sync process between the domain controllers. Provide daily, weekly and yearly reports and follow the policies related to user management, shared mail box accounts, and delegation.
7. **Cloud Engineer** – Must have experience with cloud services - including open source technology, software development, system engineering, scripting languages and multiple cloud provider environments. Additionally, Cloud engineers need to be familiar with one or more of the following: OpenStack, Amazon Web Services, Rackspace, Google Compute Engine, Microsoft Azure and Docker. Experience with APIs, orchestration, automation and DevOps are also important.
8. **Storage Engineer** - Systems Engineer will plan and manage the installation, configuration and tuning of SAN and storage hardware and software upgrades. Maintain partnerships and leveraging market technologies associated with SAN vendors, product enhancements and product roadmap. Develop, implement and oversee policies and procedures to ensure consistent storage provisioning, uptime, regulatory compliance and data protection. Manage and provide current disk/tape storage usage statistics and providing future projected growth estimates. Responsible for management of all centralized storage technologies. This technology includes the various NAS environments, storage networks, DAS environments and all other technologies classified as a storage technology. Manage and maintain the company's storage-based systems and the deployment of these storage technologies. Understand business objectives and seek ways to help the company meet these goals with storage technology.
9. **Storage Architect** – The Enterprise Storage Architect duties will include installation, configuration, management and troubleshooting of storage systems and management of Storage Area Network, Network Attached Storage, Direct Attached Storage devices and related software. Develop a thorough understanding of the competitive enterprise storage market. Effectively translate enterprise storage product features and functions into relevant IT solutions that support a customer's business initiatives. Architect solutions for high availability and robust disaster recovery using virtualization software or third-party technologies to support critical enterprise services.

10. **Backup Engineer** – Must have extensive knowledge of storage, server, and blade technology, processes, industry expertise and educate customers on value of storage infrastructure and management. Build in-depth knowledge of clients' technical and business priorities, challenges and initiatives that can be translated into Storage and Virtualization solution opportunities. Perform complex analysis of storage, backup and DR environments under limited supervision. Exercise initiative in architecting enterprise data storage designs, programming, and modifications of backup storage applications programs for small, mid-size and large environments using a variety of different operating systems (UNIX, Windows, Linux etc.). Perform product evaluations and comparative deep dive analysis and make recommendations to customers for best of breed product and offerings. Design and implement backup de-duplication and recovery plans. Design and implement health check operations for storage and backup environments. Resolve and troubleshoot technical issues on data storage and backups. For the data storage backup environment, provide written deliverables for action plans, long-term strategies, migration plans, best-practice recommendations, and capacity planning. Plan the implementation of recovery of systems and services and participate in scheduled disaster recovery exercises.
11. **Data Center Manager** – Will be responsible for preparing plans for development and installation of data center according to present and future requirements. Monitor all software and hardware products and ensure compliance to data center standards and systems. Administer installation and maintenance of the data center. Monitor all activities related to analysis and implement all data center plans. Supervise design and evaluation of all server systems according to measurement of process. Perform troubleshooting on data center, identify issues and assist in timely resolution of same. Manage and perform research to design new advanced data center. Ensure adherence to all established guidelines and management practices for employees. Coordinate with various departments and perform integration of critical systems into infrastructure. Coordinate with IT, enhancement and business teams and develop strategies to ensure achievement of data center capacity.
12. **Microsoft System Center Administrator** – Will be responsible for managing medium to large environments. Should be able to manage effectively and troubleshoot all aspects of System Center, including Operations Manager, Configuration Manager and additional modules as requested, and understand the product configuration, flow and logging in detail. The candidate must understand fully the base OS and SCOM Management Packs and be able to discuss in detail Management Packs: Active Directory, Exchange, IIS or SQL, including configuration, tuning and customization. In addition, experience in other Microsoft Management technologies, including Active Directory services (AD), SMS, System Center Essentials and WSUS. Manage the installation of new software releases, system upgrades, and patch installs that resolve monitoring-related software problems. Assist in the installation, maintenance, and general support of monitoring systems. Routinely review monitoring systems and services to ensure stability and security. Assist in interpretation of diagnostic data obtained from monitoring solutions.

Define and recommend monitoring standards for fault-detection, availability, capacity and performance trending for assigned applications and services. Develop and distribute trend reports detailing availability, performance and capacity metrics for assigned applications and services. Engineer methods to optimize the availability, capacity,

performance and cost of assigned applications and services. Analyze, define, develop, test and implement monitoring standards for platforms and applications utilizing relevant scripting languages.

### **Project/Program Management Support**

- A. **Program Manager** – The Program Manager will be responsible for managing one or more highly complex or enterprise-wide IT program(s) consisting of multiple projects. Develop the program strategy, support business case and enterprise-wide high-level project plans. Ensure integration of projects and adjust project scope, timing, and budgets based on the needs of the business. Communicate with IT leadership, business leadership and IT business consultants to communicate program strategy, direction and changes. Responsible for delivering all projects contained in the IT project portfolio on time, within budget and meeting the strategic and business requirements. Responsible for tracking key project milestones and recommending adjustments to project managers. Partners with senior leadership of the business community to identify and prioritize opportunities for utilizing IT to achieve the goals of the enterprise.
- B. **Project Manager** – The Project Manager will conduct, plan, coordinate, and track information technology projects and full lifecycle tasks. Examples include assessing customer requirements and advising on appropriate solutions; identifying technology solutions and conducting an assessment of fit; identifying resources; facilitating and directing multi-disciplinary teams; planning and developing schedules. The Project Manager will be responsible for overall coordination, status reporting and stability of project-oriented work efforts. The Project Manager will establish and implement project management processes and methodologies for the IT community to ensure projects are delivered on time, within budget, adhere to high quality standards and meet customer expectations. Assemble project plans and teamwork assignments, direct and monitor work efforts on a daily basis, identify resource needs, perform quality review and escalate functional, quality, timeline issues appropriately. Coordinate communication with all areas of the enterprise that impact the scope, budget, risk and resources of the work effort being managed. Organize and publish project-related documentation in various sources.
- C. **Business Analyst** – Will work with County staff to provide analysis in defining, planning, managing, and implementing methodologies, techniques and tools for the complete life-cycle of both business process reengineering and information systems development projects. Conduct analysis and evaluation of programs, operations and procedures. Support strategic planning, develop benchmarks and metrics, and conduct research on emerging technologies. Participate in the development and implementation of performance measures, as well as cost benefit and performance analysis. Conduct research and ensure the use of proper terminology. Translate technical information into clear readable documents to be used by technical and non-technical personnel. Oversee collation of information into meaningful reports and presentation materials.
- D. **Procurement Analyst** – Will be responsible for overseeing the collection and organization of information for preparation of reports, proposals, guidebooks, procurement documents (e.g., RFI, RFP, contracts), memos, training materials and user manuals as needed. Write and edit customer deliverables and utilize information

technology procurement regulations and industry best practices. Work with staff to analyze business and technical solutions to meet client goals. Gather, analyze, and compose technical information. Conduct research and ensure the use of proper terminology. Translate technical information into clear readable documents to be used by technical and non-technical personnel.

- E. **Project Lead** – Will be responsible for overall coordination, status reporting and stability of project-oriented work efforts. Establish and implement project management processes and methodologies for the IT community to ensure projects are delivered on time and within budget, adhere to high quality standards and meet customer expectations. Responsible for assembling project plans and teamwork assignments, directing and monitoring work efforts on a daily basis, identifying resource needs, performing quality review; and escalating functional, quality, timeline issues appropriately. Responsible for tracking key project milestones and adjusting project plans and/or resources to meet the needs of customers. Coordinate communication with all areas of the enterprise that impact the scope, budget, risk, and resources of the work effort being managed. Assist Project Manager(s) and/or Program Manager(s) in identifying and prioritizing opportunities for utilizing IT to achieve the goals of the enterprise.
- F. **Communications Specialist** - Work with technology teams to develop communications and marketing materials supporting ongoing development and operations, as well as online and web-based projects, for internal and external customers. Execute marketing campaigns and customer/community outreach, survey customers, create reports/presentations as-needed and engage in market research and analysis. Communicate verbally, written and electronically to small and large audiences. Recommend communication/marketing strategies to management. Activities include creation and design of content of multiple media types that includes video and social media communications.
- G. **Documentation and Training Specialist** - Coordinate and participate in collection, interpretation, writing and dissemination of technical documentation in support of communications and information systems projects. Establish procedures for data acquisition and administration. Translate technical information into clear, readable documents to be used by technical and non-technical audiences. Write and edit procedural manuals for users. Create and maintain on-line tutorials and learning materials. Conduct technology training sessions. Resolve level-one computer glitches that occur in a lab environment security communication plans as required and directed by designated County staff. Translate designs and programs to documentation.
- H. **Records Conversion Specialist** - The Records Conversion Specialist will operate scanning equipment to perform efficient storage and retrieval of records, documents and drawings. This position will prepare internal and external documents for scanning, including box intake, tracking, disassembly (removal of staples, paper clips, and other binding) and reassembly of document packages. The Records Conversion Specialist will also determine appropriate scanner and scanner settings based on document type, planned processing and document characteristics. The Records Conversion Specialist will perform optical character recognition and text correction on documents requiring content-based retrieval. In addition, this position will perform image, text, and property

reviews to confirm loading, quality, and location of documents stored in various County systems. In addition, the Records Conversion Specialists will store image and text files within County Electronic Records Management Systems create/update properties to enhance retrieval, and perform quality control on scanned images, checking for missing pages, skewed and low-quality images.

- I. **Records Management Analyst** - The Information Management Analyst will oversee the creation, dissemination, research, storage and disposition of County records and information. The Records Management Analysts will formulate policy, perform strategic analysis and planning, conduct program outreach, coordinate training, develop metrics, and ensure that sound information governance and accountability measures are in place. The Information Management Analyst will ensure compliance with public records laws, regulations, and guidance and advise staff on any issues in this area. Additionally, the Information Management Analyst will be familiar with agency goals, objectives, and priorities and ensure that the Records and Information Management program supports the organization's mission and needs.

**Accounts Payable Specialist** – Will process invoices and perform administrative office duties. Follow procurement guidelines to purchase and track County information technology orders.

#### **Network/Telecommunications Systems and Infrastructure**

1. **Network Engineer** – Will be responsible for assisting in the planning, forecasting, implementation, and identification of resource requirements for network systems (including wireless, video, remote access and VoIP) of moderate complexity. Participate in planning, architecture design and engineering. Integrate and schematically depict communication architectures, topologies, hardware, software, transmission and signaling links and protocols into complete network configurations. Evaluate new products, perform network problem resolution and assist in the development and documentation of technical standards and interface applications. Monitor protocol compatibility, perform system tuning and make recommendations for improvement. Senior level may require experience with infrastructure of network systems internal to government organizations, or as supplied by cable franchise companies, as well as a P.E. license issued by an accredited state board.
2. **Network Administrator** - Monitor, troubleshoot and maintain network (LAN, WAN, wireless and VoIP) multiplexers, hubs and routers, and uses remote monitoring tools. The duties of this position can be broad and may include such tasks as installing new workstations and other devices, adding and removing individuals from the list of authorized users, archiving files, overseeing password protection and other security measures, monitoring usage of shared resources, and handling malfunctioning equipment. Select, develop, integrate and implement network management applications for Internet components.
3. **Network/Telecommunications Analyst** – Will be responsible for designing, installing and troubleshooting network systems (including wireless and VoIP) to meet the functional objectives of the business. Involved with the configuration and maintenance of physical and logical network components. Assist in the design of the network architecture, design the network infrastructure, plan and design LAN/WAN/wireless/VoIP/video solutions, gather, analyze and compose technical information, and collate information into

meaningful reports and presentation materials. Perform capacity and resource planning, assessing network risks and contingency planning. Responsible for the implementation and maintenance of network management software; research, analyze and implement software patches or hardware changes to fix any network deficiencies. Provide Tier 2 support. Will be involved in the evaluation of new products and services; may manage vendor service level agreements and billing analysis.

4. **Telecommunications Engineer** – Will be responsible for engineering and/or analytical tasks and activities associated with areas within the telecommunications function (e.g., network design, engineering, implementation, diagnostics or operations/user support). The scope of responsibility for this position includes, but is not limited to, the configuration, deployment, testing, maintaining, monitoring and troubleshooting of telecommunications and cable TV network components to provide a secure, high performance network. Perform complex tasks relating to telecom network operations, installation, and/or maintenance for local, off-site and/or remote locations. Duties will also include quality assurance and testing of transmission mediums and infrastructure components. Experience should include: moves, adds and changes (MACs), fault isolation and resolution, and end-user support. Requires broad knowledge of telecom systems, dial plans, switching architecture, telephony and wiring.
5. **Telecommunications Technician** - Technical position supporting enterprise infrastructure systems, including voice/data network, telecommunications systems, and legacy vendor communications interfaces, and related software and hardware, with a main focus on coordinating and performing technical moves, adds and changes (MACs) throughout the County. Acts as liaison to the telephone and cable TV companies and troubleshoots internal telecommunications issues as well as external interface issues between vendors, County network and cable TV subscribers. Duties will also include quality assurance and testing of transmission mediums and infrastructure components.
6. **Controls Specialist** - Monitors performance of Distributed Control Systems, Supervisor Control and Data Acquisition (SCADA), Programmable Logic Controllers and Advanced Process Control applications. Analyzes and resolves problems due to process and control system interactions. Coordinates with system vendors for system maintenance/repair, upgrades to hardware or software, etc. Tunes base levels and advanced control loops. Maintains multi-variable and custom control strategies at levels necessary to achieve optimum unit performance. Develops and analyzes predictive/trend reports and required performance reports to measure and ensure compliance with regulatory requirements. Documents system changes. Develops training programs and/or organizing technical training for operations staff on control system applications.
7. **Field Engineer** - Researches, develops and designs underground outside plant (OSP) conduit infrastructure and fiber optic cabling. Plans and prepares drawings for construction of new, and removal or relocation of existing, overhead or underground lines, cables, and conduits. Prepares detailed construction and installation drawings, schedules, and estimates for equipment, labor, and material costs. Oversees construction and maintenance of OSP infrastructure according to industry standards and local, state and federal regulations. Maintains records of fiber splicing and topography. Develops mitigation and restoration procedures for emergency conditions such as fiber damages, power failures and other disasters. Performs routine inspection of OSP



networks. Supports construction supervision of physical cable and fiber plant with: pre-construction walk-outs, problem area identification, make-ready construction, cable requirements, determination, splice locations, break-out locations, aerial and underground cable installation, construction crew supervision, construction quality control inspection, fiber splice coordination and review of as-built maps.

8. **Field Operations Technician** - Installs, provisions, tests, troubleshoots, splices and maintains high-speed fiber optic transmission infrastructure and equipment. Performs and assists with maintenance and configuration of all core technologies deployed. Performs final acceptance and testing of all newly installed equipment and rings. Works with related test tools and equipment, such as optical time-domain reflectometer (OTDR), polarization mode dispersion (PMD), optical spectrum analyzer, sniffers, etc. Performs hardware and software updates or changes to equipment. Documents new and existing fiber such as pathways/conduits, termination points, splice matrixes, usage, and customers. Uses GPS device to give an exact location of hand holes, as well as splice points, and demarcation points into buildings. Contacts customers in the event of a fiber cut, dispatches and oversees fiber sub-contractors. Helps with the selection of a fiber management program/vendor.
9. **Engineering Aide** - Provides administrative support to engineers on projects as needed.
10. **Inspector** - Responsible for safety and code compliance of service provider cable sites. Performs inspection of physical site and creates documentation related to those inspections and verified repairs by network operators. Supports engineering tasks with site surveys, testing of installed fiber optic cable using optical power meters, proof of performance and monitor testing of cable and broadband communications systems.
11. **Computer Aided Design (CAD) Operator** - Designs and completes CAD documents to industry standards. Works with staff to produce plans and drawings to convey instructions and location of fiber infrastructure. Uses CAD software tools, such as AutoDesk, GIS software and site package information to create accurate drawings with design data and metadata. Creates full zoning and construction sets and corrects red lines.
12. **Field Representative** - Provides customer support, including answering inbound calls and email; manages the monthly documentation process; performs data entry, product troubleshooting and service issue resolution. Handles problem resolution and escalations for customers, including billing inquiries and documentation issues, and maintains established SLAs at all times. Collects, organizes and reports moderately complex information and may provide recommendations to management to facilitate the improvements. Detailed monthly reports along with occasional ad hoc reporting will be required.
13. **Infrastructure Business Analyst** - Serves as a liaison between the business community and the IT organization in order to provide technical solutions to meet user needs. Possesses expertise in the business unit(s) they support, as well as an understanding of the IT organization's systems and capabilities. Analyzes business partners' operations to understand their strengths and weaknesses to determine opportunities to automate processes and functions. Assists in the business process redesign and documentation as needed for new technology. Translates high level business requirements into functional specifications for the IT organization and manages changes to such specifications.

Educates the IT organization on the direction of the business. Negotiates agreements and commitments by facilitating communication between business unit(s) and IT from initial requirements to final implementation. Possesses an understanding of technological trends and uses this knowledge to bring solutions to business units supported to enhance the enterprise's competitive edge. May make recommendations for buy versus build decisions.

14. **Cable TV Analyst** - Contributes high-level tasks on business consulting and research projects relating to County cable TV franchise terms and conditions and is responsible for the completion of identified tasks. Oversees the collection and organization of information for preparation of reports, proposals, guidebooks and related documents, memos, training materials and user manuals as needed. Writes and edits customer deliverables and works with County staff and analysts to analyze business and technical solutions to meet client goals. Oversees collation of information into meaningful reports and presentation materials, some of which may be presented to County Board Advisory Commissions. Conducts research and ensures the use of proper terminology in delivered results. Translates technical information into clear readable documents to be used by technical and non-technical personnel. Directs project administrative functions. Provides expertise and supports evaluations of program results and potential changes to program results related to telecommunications investments, along with analysis and presentations of alternatives. Senior Level requires demonstrated understanding of Telecommunications, Broadband, and Cable TV industry.
15. **Radio Operations Manager** - Interface with County Leadership and department directors on the direction of the County-wide radio system. Operational and technology planning of the County-wide radio system. Budget/resource planning and cost recovery. Manage customer relationships and negotiate agreements. Report on performance and health of the system. Track emerging trends, including conference participation. Outreach to federal, state and local partners/support to regional initiatives.
16. **Radio Technical Lead** - Support radio infrastructure (Including BDAs). Manage physical infrastructure/ancillary of radio systems. Documentation of entire radio system. Network and physical security planning. Continuity/disaster recovery planning. Coverage management and radio network testing. Asset management and replacement strategy. Oversight of maintenance (radio system, assets, and physical infrastructure). Fault management of radio systems throughout the entire County.
17. **Radio Operations Administrator** - Process Design and implementation of radio systems throughout the County. Asset allocation and tracking. Measures, Analysis, and Reporting. Communications of information related to the County-wide radio system. Training end users and partners. Contract management. Customer satisfaction surveys. User agreements and invoicing. FCC license management.
18. **Intelligent Transportation Systems (ITS) Engineer** - Serves as Task Lead in the development of traffic studies and design plans, including ITS infrastructure, traffic signal, and integration of traffic control systems. ITS Engineer will be responsible for integrating various data streams and configuring databases to organize and archive data. This position will also assist in managing the fiber-optic traffic signal communications network, CCTV system and other ITS systems.

19. **Senior Intelligent Transportation Systems (ITS) Engineer** - Assist in review and management of a variety of ITS projects. This includes the systems engineering, ITS database management, and technical review required to design, maintain, and evaluate ITS assets. Specific project responsibilities will include but are not limited to Systems engineering; GIS asset management for system planning; Database management; Developing Specifications for implementation of new systems; Design/Build of Bluetooth Data Collection systems, dynamic messaging systems, permanent count programs, and other ITS applications; and review/design fiber splicing for traffic signal.
20. **Traffic Engineer** - Assist in review and management of a variety of traffic analysis projects. This includes the VISSIM model development/review, traffic analysis using Synchro, signal optimization and technical review required to evaluate transportation alternatives. Specific project responsibilities will include but are not limited to coordination of traffic signals; developing complex signal timing plans; traffic simulation development/review; developing specifications for traffic signal systems; safety studies, signal warrants and corridor analysis.
21. **Signal Design Engineer** - Assist in review and management of a variety of traffic signal projects. This includes the signal design development/review, site plan reviews and coordination with developers' projects and technical review required to evaluate transportation alternatives. Specific project responsibilities will include but are not limited to developing complex signal design plans in AutoCAD; traffic simulation development / review; developing specifications for traffic signal systems; safety studies, signal warrants and corridor analysis.
22. **Streetlight Engineer** - Assist in review and management of streetlight projects in the County. This includes the streetlight design development/review, site plan reviews and coordination with developers' projects and technical review required to evaluate streetlight alternatives. Specific project responsibilities will include but are not limited to developing complex street lighting plans in AutoCAD; photometric analysis/review; developing specifications for streetlight systems.
23. **Traffic Signal Specialist** – Maintains, repairs, inspects and installs traffic signals to include associated traffic control devices, Intelligent Transportation Systems (ITS), video detection/observation systems, and fiber-optic Ethernet networks. Bench tests, troubleshoots, and repairs traffic signal equipment to component level; modifies and/or updates existing traffic control devices and equipment to improve traffic flow; Manages County's Intelight-based signal system and responds to citizen complaints; experience in CCTV troubleshooting; knowledge of fiber communication, patch panels and layer 2 switches.

## **Security**

1. **Security/System Architect** – Will be responsible for the development and implementation of enterprise information security architectures and solutions. Serve as a security expert in application development, database design, network, and/or platform (operating system) efforts. Help project teams comply with enterprise and IT security policies, industry regulations, and best practices. Research, design, and advocate new technologies, architectures, and security products that will support security

requirements for the enterprise and its customers, business partners, and vendors. Contribute to the development and maintenance of information security strategy and architecture. Evaluate and develop secure solutions based on approved security architectures. Analyze business impact and exposure based on emerging security threats, vulnerabilities, and risks. Work with other functional area and security specialists to ensure adequate security solutions are in place throughout all IT systems and platforms to mitigate identified risks sufficiently and to meet business objectives and regulatory requirements. Communicate security risks and solutions to business partners and IT staff as needed.

2. **Security Analyst** - Analyze security measures for more than one IT functional area (e.g., data, systems, network and/or Web) across the enterprise. Develop, implement, communicate and provide training on security assessments, policies and procedures. Track, monitor, and enforce security policies; review security violation reports; and investigate possible security exceptions and updates. Maintain and document security controls. Prepare reports on security matters to develop security risk analysis scenarios and response procedures. Evaluate and recommend products and/or procedures to enhance productivity and effectiveness.
3. **Security Specialist** – Will be involved in the operations of network security management for systems across the enterprise. Ensure systems are in compliance and enforce policies against unauthorized access, modification and/or destruction. Configure and support security tools such as firewalls, anti-virus software, patch management systems, etc. Define access privileges, control structures and resources. Perform vulnerability testing, risk analyses and security assessments/audits. Identify abnormalities and report violations. Research and recommend security upgrades. Oversee and monitor routine security administration. Develop and update business continuity and disaster recovery protocols. Respond immediately to security incidents and provide post-incident analysis. Assist in the development and implementation of security policies, procedures and enforcement measures. Review networking initiatives for security compliance. Prepare status reports on security matters to develop security risk analysis scenarios and response procedures. Involved in the continual improvement of the network infrastructure and implementation of new security-based technologies. Evaluate and recommend security products for various platforms in the networking environment. Educate users about network security policies and consults on security issues.

#### **Technical Support Services**

1. **Technical Support Specialist** - A Technical Support Specialist Level 1 must provide first level technical support to internal customers. Assess and work to resolve incidents related to account administration, hardware and software performance, and mobile computing. Enter, track and document resolution via an incident/request tracking system. If unable to resolve requests at first contact, collect and document necessary information for appropriate escalation to technical teams. A Technical Support Specialist Level 1 must be experienced in Windows, iOS and Android operating systems, as well as on premise and cloud platforms, such as Microsoft's O365.

A Technical Support Specialist Level 2 must receive and resolve second level technical support for internal customers requiring analysis and application of multiple technical skills in computing or mobile problem resolution and network connectivity or other

associated hardware or application support areas. Simulate or re-create user problems to identify and document exact nature of problems and resolve difficulties. Assist in testing or providing technical advice about new technology, including evaluation of new or upgraded software to determine usefulness to the organization.

2. **Order and Provisioning Specialist** – An Order and Provisioning Specialist must process requests and complete orders for computing and mobile devices, interface with vendors for price quotes and order tracking, record and track assets from vendor delivery to end-user delivery and support asset manager with regular reporting and analysis of vendor accounts, as well as asset inventory, tracking and disposition.
3. **Asset Manager** – An Asset manager must manage IT equipment and software from procurement to end of life cycle. Maintain and update asset inventory system, track assets and report on inventory for audit purposes. Maintain or update internal asset management processes following industry best practices, as well as County policies and guidelines. Maintain a centralized library/database of agreements and contracts for current and historical purposes.
4. **Application Support Specialist** – An Application Support Specialist must provide end-user support related to enterprise-level applications. Analyze issues, provide training and solutions, and coordinate with internal groups and vendors. Assist in testing or providing technical advice about updates or changes to existing applications and help assess impacts on users. Contribute solutions for new/unique problems to the group knowledge base. Assist in evaluating new technologies and products.
5. **End-User Device Deployment** – This position is responsible for the receipt, installation and remediation of new end-user devices. Technicians transport the equipment to the user sites, install and test equipment, and remove old equipment while following the operating procedures for asset deployment and asset disposition. Technicians must provide basic post-installation end-user support as required.
6. **Image Management Technician** – An Image Management Technician must create/update and deploy standard and specialized Windows 8 and above images across a user base of 4,000+ using Microsoft System Center Configuration Manager and Symantec Ghost. An Image Management Technician must be experienced with a variety of technologies used for imaging and deployments in a Windows-based environment.
7. **Customer Service Coordinator** – A Customer Service Coordinator will be responsible for customer service practices for the Technical Service Center. Develop and implement strategies to increase the quality and efficiency of support, track and report on metrics, build strong relationships with departmental customers, and ensure alignment of IT initiatives and procedures with customer needs.
8. **Desktop Virtualization Engineer** – A Desktop Virtualization Engineer will be responsible for the implementation, management and top-level support of virtual desktop technologies. Provide analysis and consultation and work with County IT staff in development of appropriate supporting infrastructure. Coordinate all work with network and application teams, as well as internal customers across the enterprise.
9. **Microsoft SCCM Administrator** – A Microsoft SCCM Administrator will support software distribution, security patch management, operating system deployment, scripting technologies, and group policy management in an Active Directory infrastructure.

10. **Audio Video (A/V) Technician** – An A/V Technician will install and maintain audiovisual systems by following specifications, schematics, codes, and safety protocols. Administer installation process logistics. Maintain and troubleshoot audiovisual systems and equipment. Provide end user training and support. Complete small projects.

**Audio Video (A/V) Control Systems Programmer** – An A/V Control Systems Programmer will install, program and configure various audio-visual control systems (i.e. AMX, Creston). Write code for audio visual control systems and equipment. Create and develop graphic universal interfaces for touch panels. Troubleshoot and diagnose control programming and equipment problems. Contribute on projects from initial estimating phase through final i

**EXHIBIT – B**  
**SPRUCE TECHNOLOGY, INC.**

**(Issued Separately)**

**EXHIBIT C**

**NONDISCLOSURE AND DATA SECURITY AGREEMENT**  
**(CONTRACTOR)**

The undersigned, an authorized agent of the Contractor and on behalf of Spruce Technology, Inc., (“Contractor”), hereby agrees that the Contractor will hold County-provided information, documents, data, images, records and the like confidential and secure and protect them against loss, misuse, alteration, destruction or disclosure. This includes, but is not limited to, the information of the County, its employees, contractors, residents, clients, patients, taxpayers and property as well as information that the County shares with the Contractor for testing, support, conversion or other services provided under Arlington County Agreement No. 16-311-53-RFPLW (the “Project” or “Main Agreement”) or that may be accessed through other County-owned or -controlled databases (all of the above collectively referred to as “County Information” or “Information”).

In addition to the DATA SECURITY obligations set in the County Agreement, the Contractor agrees that it will maintain the privacy and security of County Information, control and limit internal access and authorization for access to such Information and not divulge or allow or facilitate access to County Information for any purpose or by anyone unless expressly authorized. This includes, but is not limited to, any County Information that in any manner describes, locates or indexes anything about an individual, including, but not limited to, his/her (“his”) Personal Health Information, treatment, disability, services eligibility, services provided, investigations, real or personal property holdings and his education, financial transactions, medical history, ancestry, religion, political ideology, criminal or employment record, social security number, tax status or payments, date of birth, address, phone number or anything that affords a basis for inferring personal characteristics, such as finger and voice prints, photographs, or things done by or to such individual, or the record of his presence, registration, or membership in an organization or activity, or admission to an institution.

Contractor also agrees that it will not directly or indirectly use or facilitate the use or dissemination of County information (whether intentionally or by inadvertence, negligence or omission and whether verbally, electronically, through paper transmission or otherwise) for any purpose other than that directly associated with its work under the Project. The Contractor acknowledges that any unauthorized use, dissemination or disclosure of County Information is prohibited and may also constitute a violation of Virginia or federal laws, subjecting it or its employees to civil and/or criminal penalties.

Contractor agrees that it will not divulge or otherwise facilitate the disclosure, dissemination or access to or by any unauthorized person, for any purpose, of any Information obtained directly, or indirectly, as a result of its work on the Project. The Contractor shall coordinate closely with the County Project Officer to ensure that its authorization to its employees or approved subcontractors is appropriate and tightly controlled and that such person/s also maintain the security and privacy of County Information and the integrity of County-networked resources.

Contractor agrees to take strict security measures to ensure that County Information is kept secure; is properly stored in accordance with industry best practices, and if stored is encrypted as appropriate; and is otherwise protected from retrieval or access by unauthorized persons or for unauthorized purposes. Any device or media on which County Information is stored, even temporarily, will have strict security and access control. Any County Information that is accessible will not leave Contractor’s work site or the County’s physical facility, if the Contractor is working onsite, without written authorization of the County Project Officer. If remote access or other media storage is authorized, the Contractor is responsible for the security of such storage device or paper files.



Contractor will ensure that any laptops, PDAs, netbooks, tablets, thumb drives or other media storage devices, as approved by the County and connected to the County network, are secure and free of all computer viruses, or running the latest version of an industry-standard virus protection program. The Contractor will ensure that all passwords used by its employees or subcontractors are robust, protected and not shared. The Contractor will not download any County Information except as agreed to by the parties and then only onto a County-approved device. The Contractor understands that downloading onto a personally owned device or service, such as personal e-mail, Dropbox, etc., is prohibited.

Contractor agrees that it will notify the County Project Officer immediately upon discovery or becoming aware or suspicious of any unauthorized disclosure of County Information, security breach, hacking or other breach of this agreement, the County's or Contractor's security policies, or any other breach of Project protocols concerning data security or County Information. The Contractor will fully cooperate with the County to regain possession of any Information and to prevent its further disclosure, use or dissemination. The Contractor also agrees to promptly notify others of a suspected or actual breach if requested.

The Contractor agrees that all duties and obligations enumerated in this Agreement also extend to its employees, agents or subcontractors who are given access to County information. Breach of any of the above conditions by Contractor's employees, agents or subcontractors shall be treated as a breach by the Contractor. The Contractor agrees that it shall take all reasonable measures to ensure that its employees, agents and subcontractors are aware of and abide by the terms and conditions of this agreement and related data security provisions in the Main Agreement.

It is the intent of this *Non-Disclosure and Data Security Agreement* to ensure that the Contractor has the highest level of administrative safeguards, disaster recovery and best practices in place to ensure confidentiality, protection, privacy and security of County information and County-networked resources and to ensure compliance with all applicable local, state and federal laws or regulatory requirements. Therefore, to the extent that this *Non-Disclosure and Data Security Agreement* conflicts with the Main Agreement or with any applicable local, state, or federal law, regulation or provision, the more stringent requirement, law, regulation or provision controls.

At the conclusion of the Project, the Contractor agrees to return all County Information to the County Project Officer. These obligations remain in full force and effect throughout the Project and shall survive any termination of the Main Agreement.

Authorized Signature: \_\_\_\_\_

Printed Name and Title: Kristen Mazza, VP, Contracts

Date: 9/15/2020